# The Effect of Transcribing on Beginning Learners'
# Phonemic Perception

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## Abstract

A large number of studies dealing with phonology have focused their attention on phonological production at the expense of phonological perception which provides the foundation stone for phonological production. This study focuses on phonological perception at phonemic level. The purpose of the study is helping beginning learners improve their perception of the English phonemes which are confusable for them. To this end, we propose transcribing as an aural input enhancement device and examine its effect on learners phonemic perception. Thirty one females who were randomly assigned to experimental and control groups participated in this study. The experimental group had transcribing exercise during the experiment while the control group did not. The results of the study show that transcribing improves beginning learners phonemic perception significantly. Therefore, EFL teachers are advised to include transcribing exercise as one of the techniques to improve learners phonemic perception and, hence, their listening comprehension.

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## Introduction

Pronunciation, which includes both perception and production of phonological features, has been recognized as an important area in SLA studies (Burgess & Spencer, 2000). However, it has received the least attention in many classrooms (Gilakjani & Ahmadi, 2011).  It has been either neglected or restricted to a particular problem that has arisen in the classroom rather than being strategically planned  (Kelly, 2000, p. 13). This may be rooted in teachers  uncertainty about  how to incorporate it into the curriculum   (Levis & Grant, 2003, p. 13).

To date, different methods have been suggested for including pronunciation practice in classroom and developing learners pronunciation (Flege & Fletcher, 1992; Celce-Murcia, Brinton, & Goodwin, 1996; Kelly, 2000; Gilakjani & Ahmadi, 2011). Kelly (2000), for example, has mentioned several techniques for teaching pronunciation including, drilling, minimal pairs, pronunciation and spelling activities, taping students  English, listening activities, reading activities, and tongue twisters.

However, the techniques suggested for developing learners phonological awareness have given more weight to learners production. This emphasis on phonological production has led to an underestimation of phonological perception while it builds the foundation for phonological production (Mayberry, 2006).Moreover, a considerable amount of difficulty which learners encounter in listening activities is related to perception. Goh (2000) has listed 10 problems that EFL learners experience while listening. Half of these problems are related to perception. This reveals the need for more emphasis on perception phase of pronunciation. In the light of the aforementioned, the focus of this study is on the development of learners  phonological perception.

One of the sources contributing to the difficulty experienced by language learners in perceiving L2 is the difference between the sound systems of their L1 and L2. To perceive aural stimulus, the first step is extracting salient features of aural input. Although these features are the same in all languages, the combinations of these features differ from language to language (Randall, 2007). Therefore,  the first

job of second language learner is to adjust to the new combination of features used in the second language  (Randall, 2007, p.51).

In order to extract the salient features of L2 aural input, the initial step that beginners need to take is paying attention to the input. In other words, they should focus their attention on recognizing L2 sounds (Randall, 2007). Kelly (2000) asserts that the concept of noticing is important in pronunciation work. A language item needs to be relevant to the student at a particular time in order for there to be conscious intake and before the student can use it consistently. These reveal the need for techniques which enhance learners  awareness towards how sounds are pronounced in English. To this end, the current study suggests transcribing as an aural input enhancement device. This technique attracts learners  attention to the incoming aural stimuli at the lowest level which leads to their noticing the L2 sounds which are different from those of their L1.

The main significance of this study lies in the technique used to achieve its purpose. Although the method is not new, the purpose for which it is employed is novel. Transcription has been used for different purposes. For example, as Chiari (2007) mentioned, transcription is used in conversation analysis, ethnographic studies, and qualitative research. In all these areas, transcribing is usually done by researchers for research purposes. In other words, until recently, transcribing has been more at the service of research/teaching and less directly related to learning.

However, self-transcription tasks which have been recently used by some researchers are more related to learning (Mennim, 2012; Stones, 2013). Self-transcription in these studies has been used as input enhancement techniques to attract learners  attention to language form. In these tasks transcribing is done by learners. In all of the studies mentioned above, the final product of transcribing, transcription is more important than the process of transcribing. That is, in these studies learners  oral performance is transcribed to be analyzed and manipulated for one purpose or another.

Unlike self-transcription studies in which transcription is used to raise learners  awareness of their own errors in speaking, this study

attempts to attract learners  attention to incoming aural stimuli in order to raise their awareness of the sound features of English. In the current study transcribing is directly at the service of learning and practiced by language learners themselves. Moreover, the process of transcribing is more important than the transcript.

Compared to the aforementioned techniques used for teaching pronunciation, transcribing has a number of advantages. First, by using transcribing, learning process is individualized and learners can learn at their own pace. Second, it provides the opportunity for focusing on only problem phonemes. If learners don  share the same native language, the problem phonemes are not the same for all of them. Consequently, although useful for some learners, the phonemes which are included by the teacher for pronunciation work in classroom may be easy for other learners. This makes the class boring for them. Third, since class time is limited and in most classes more than one skill/sub-skill is addressed, transcribing provides the opportunity for teachers to devote more time to other activities without ignoring pronunciation. Forth, as mentioned earlier, by transcribing more emphasis is placed on learners  perception rather than production. Successful perception paves the way for successful and intelligible production.

*Transcribing exercise*
Before starting the transcribing exercise, it is necessary to find the phonemes which are causing perception problems for learners. Based on the hierarchy of difficulty hypothesis, the phonemes which are shared by L1 and L2 are transferred from L1 to L2. Therefore, they will less likely cause perceptual problems. On the other hand, the phonemes which are not transferred from L1 to L2 are considered to be confusable. These phonemes, which are usually language specific, have been determined for most languages. A good source which provides lists of problematic phonemes for EFL learners with different language backgrounds is the book  English Pronunciation in Use (Hancock, 2012).Teachers  observation of learners  difficulties while listening can alternatively be used for determining problem phonemes.

Teachers can also use learners  reports of the difficulties they experience while listening.

After determining problematic phonemes, the teacher collects examples of those phonemes occurring in different contexts. This can be achieved by using sentences from authentic recordings. Then transcribing these sentences is assigned as homework. The subsequent session the teacher asks one student at a time to read his/her transcription while others check their own work. If the student who is reading makes a mistake or fails to provide the correct word(s), other students help him/her. If learners failed to do so, the teacher would provide the word/phrase. It is better to focus on two to three phonemes each session. After achieving some progress in learners  perception of those phonemes, new phonemes can be introduced in subsequent sessions.

Collecting examples of problematic phonemes for learners at higher levels is achievable since the number of problematic phonemes for them is limited. Collecting example sentences for beginning learners, who are less familiar with the sound system of the L2 they are learning, does not seem to be an easy job due to numerous difficulties they experience. Instead, transcribing the listening sections of their course book can be alternatively used.

The effectiveness of the above-mentioned procedure for beginning learners has been examined with a sample of beginning Iranian EFL learners. The research question to be answered is:

Does transcribing help beginning Iranian EFL learners improve their perception of phonemically contrastive pairs of words?

## Methodology

*Participants*
The participants of this study were 31 females, aged 15-16, who were attending TICE English School in Sabzevar, Iran. The subjects, who were placed into elementary level by the placement test given by the institute were randomly assigned to two groups of control (N=15) and experimental (N=16). The classes met for a total of 27 sessions, three sessions a week two hours each, with a 10-minute recess in the middle. The researcher taught both the control and experimental groups.

*Instrument*

A minimal pair test chosen from Hancock s(2012) book English Pronunciation in Use served as the instrument of the study. The minimal pairs used in the test are presented in Table 1.The test which served as both pretest and posttest was judged to be valid by two English teachers holding MA in TEFL. The Cronbach s Alpha reliability of the test was found to be high, .80.

Table 1

*Problematic Minimal Pairs for Iranian Learners of English as a Foreign Language*

| 1. /æ/ /e/ | 2. /ʌ/ /ɑː/ | 3. /ɪ/ /iː/ | 4. /e/ /ɜː/ |
|---|---|---|---|
| 5. /ɒ/ / ʊ/ | 6. /ʊ/ /uː/ | 7. /ɔː/ /ɒ/ | 8. /ɜː/ /ɪ / |
| 9. /ɜː/ /e / | 10. /t/ / // / | 11. /v/ /w/ | 12. /n/ / / / k/ |

*Procedure*

To ensure homogeneity of learners at the onset of the study, in addition to the placement test given by the institute, the subjects were also given the minimal pair pretest on the first session. Analysis of the pretest scores revealed that the participants were homogeneous. After the pretest the experiment, which included transcribing exercise assigned as homework, started. The experimental group s homework consisted of learners transcribing of the listening sections in their course book as well as the video for each unit (the script of these parts were not available for the students). The participants in the experimental group were instructed to listen/watch 2-4 times sentence by sentence. In other words, they were told to listen to each sentence 2-4 times before moving on to the next sentence. Participants homework was checked at the beginning of each session. The teacher randomly called one student at a time to read her transcription. Other students were supposed to check their own transcriptions and correct the reader s mistakes. If the students couldn t understand a word/phrase, the teacher would play that section again and ask

learners to listen more carefully. If they couldn t understand the word/phrase after the repetition, the teacher himself would provide the learners with them.

The control group had as its homework only listening to/watching the same files as the experimental group with the difference that the control group didn t have any transcription homework. To make sure that they listened to the files, at the beginning of each session they were randomly asked some questions related to the files. Each session every student answered at least one question. After the experiment which lasted for 25 sessions, the posttest was given to the learners on the 27th session.

*Data analysis*

In order to find an answer to the research question, the data collected through the instrument were scored and then entered into Statistical Package for Social Sciences (SPSS, Version 19). After that, in order to determine the appropriate procedure for comparing means, the data underwent several statistical procedures. Normality tests of Kolmogorov˚Smirnov and Shapiro˚Wilk were used to ensure that the data were normally distributed. Then Levene s test was employed to examine homogeneity of variances in the two groups. The results of these tests revealed that the data obtained from both the control and experimental were parametric. Therefore, independent samples *t* test was used for comparing the two groups.

## Results and Discussion

A cursory examination of the descriptive statistics of the two groups on minimal pair posttest in Table 2 revealed that the two groups had different means.

Table 2
*Descriptive Statistics for Minimal Pair Pretests and Posttests*

|  | Group | N | Minimum | Maximum | Mean | Std. Error | Std. Deviation |
|---|---|---|---|---|---|---|---|
| Minimal Pair posttests | Experimental | 16 | 108 | 129 | 116.62 | 1.56 | 6.27 |
|  | Control | 15 | 102 | 122 | 111.93 | 1.46 | 5.68 |

In order to determine if the observed difference was statistical, an independent samples *t*-test was computed for the scores of the minimal pair posttest.

The results from the *t* test revealed a significant difference between the two groups, *t* (28.93) = 2.18, *p* = .037. In addition, the effect size, the magnitude of the difference between two groups, for this analysis was large (*d*= .81). These results suggest that transcribing has had a positive effect on learners  noticing and has raised their phonemic perception.

The results verified that the participants of the experimental group outperformed their counterparts in the control group.  Therefore, better performance of the experimental group as compared to the control group in perceiving and discriminating minimally paired words can be attributed to their having had transcribing exercise. Consequently, we can conclude that transcribing operates well as an aural input enhancement (consciousness raising) device. It attracts novice learners  attention to the incoming input at the lowest level (sounds) which results in their noticing the phonological features of the new language they are learning which, in turn, leads to their perception of the problematic sounds. Thus, the results of this study corroborate the belief that noticing is essential for learning to take place (Schmidt, 2001). Considering consciousness as attention and noticing, the results also support the claim that  consciousness and language may be intimately connected  (Schmidt, 1994, p. 22).

The findings also support Schmidt (2001, p. 30) who believes that  intentionally focused attention may be a practical (though not theoretical) necessity for successful language learning.  The experimental group of this study who had to deliberately focus on

aural input in order to write it down was more successful than the control group in perceiving confusable phonemes. This can be accounted for by their intentional focus of attention on aural stimulus.

In addition to the aforementioned, the study also gives support to Schmidt (1995) Noticing Hypotheses. It holds that what is noticed in the input by learners is what becomes intake, language that is internalized. Transcribing, as an input enhancement device, results in learners noticing the phonemes which are different from those of their L1 and, hence, in better perception of those phonemes.

The study also provides support for other some hypotheses. The twelve minimal pairs used in this study were suggested by Hancock (2012) to be confusable for those who speak Farsi as their L1. They were predicted to be problematic most probably by comparing the sound systems of Farsi and English through *contrastive analysis*. Considering the production of L2 sounds, Lado (1957, p. 11) stresses the need for comparing native and foreign sound systems as a means of predicting and describing the pronunciation problems of the speakers of a given language learning another. If these phonemes are determined through contrastive analysis, one more step needs to be taken in order to rank order them based on their level of difficulty. This can be achieved by using the *hierarchy of difficulty* and *speech learning model*. The results of this study are discussed in terms of these hypotheses in the subsequent paragraphs.

Prator (as cited in Brown, 2007) proposed a hierarchy with six categories of difficulty. The categories in an ascending order of difficulty are: transfer, coalescence, under-differentiation, reinterpretation, over-differentiation, and split. The easiest category, transfer, happens when there is no difference between a feature in NL and TL. Therefore, the phonemes which are not included in the list of confusing minimal pairs for EFL learners by Hancock (2012) may have been judged to be existing in both Farsi and English, and hence, transferred from Farsi to English. A closer examination of the phonemes suggested by him shows that they mostly belong to the last three categories of hierarchy of difficulty. Table 3 shows the rank order of the problematic phonemes based on the results of this study.

Table 3
*Mean Scores of the Problematic Sound Pairs for Iranian EFL Learners*

| rank | Sound pair | Mean |
|------|------------|------|
| 1 | Sound pair 2 /ʌ/  /ɑː/ | 7.48 |
| 2 | Sound pair 11 /v/  /w/ | 8.12 |
| 3 | Sound pair 12 /n/  /  /  /  k/ | 8.67 |
| 4 | Sound pair 6 /ʊ/   /uː/ | 8.93 |
| 5 | Sound pair 9 /ɜː/  /e  / | 9.19 |
| 6 | Sound pair 3 /ɪ/    /iː/ | 9.54 |
| 7 | Sound pair 4 /e/    /ɜː/ | 9.84 |
| 8 | Sound pair 7  /ɔː/  /ɒ/ | 10.22 |
| 9 | Sound pair 10 /t/  /  /  /  / | 10.22 |
| 10 | Sound pair 5 /ɒ/  /  ʊ/ | 10.25 |
| 11 | Sound pair 1 /æ/  /e/ | 10.51 |
| 12 | Sound pair 8 /ɜː/  /ɪ   / | 11.29 |

The current study confirms Partor hierarchy of difficulty since the order of difficulty of phonemes found in this study corresponds to the categories of the hierarchy. The most difficult pair to be distinguished was Sound pair 2, /ʌ/ and /ɑː/. After that, /v/ and /w/ (Sound pair 11) have been the most difficult. For each of these pairs there is one phoneme in Farsi. This is an example of the last category, split, which includes the presence of two or more items in TL corresponding to only one item in NL. After them, we have/n/, / /, and / k/ (Sound pair 12). The last two, especially / k/, which are absent as

one phoneme in Farsi are examples of over-differentiation, the existence of a feature in L2 which has no counterparts in L1 (Brown, 2007).

By contrast, the hierarchy order is violated by Sound pair 10. / / and /ð/ are examples of over-differentiation. That is, they do not exist in spoken Farsi while they are present in English sound system. This can be accounted for by the fact that Farsi is greatly influenced by Arabic language (Sadeqi, 1986; Perry, 2002) which includes the sounds / / and / ./ Although these sounds are present in Farsi orthography, they are absent in spoken Farsi and are not pronounced the way they are pronounced in English. The former, / /, is pronounced as either /s/ or /t/ in spoken Farsi and the latter, /ð/, is pronounced as either /d/ or /z/. The fact that these sounds are easier than what they should be based on the hierarchy of difficulty may be attributed to learners  partial acquaintance with these sounds.

The results can also be discussed in the light of speech learning model (Flege, 1995). In this model it is proposed that the more the distance between an L2 sound and the closest L1 speech sound is, the easier the L2 speech sound will be perceived or produced. An L2 sound which is similar, but not the same as an L1 sound may enjoy an advantage at the beginning of learning because it is simply substituted by the closest L1 sound. On the other hand, an L2 sound which is phonetically different from the closest L1 sound may have the disadvantage of being substituted by different L1 sounds. However, according to the speech learning model (Flege, 1995, 1999, & 2002), the initial disadvantage of the dissimilar L2 sound will finally be an advantage in a later stage. A high degree of dissimilarity will lead to formation of a new phonetic category which results in accurate perception/production of the L2 sound.

The results of this study lend partial support to this hypothesis. The phonemes / / and / / which are absent in spoken Farsi are more easily perceived and discriminated than /ʌ/ and /ɑː/ as well as /v/ and /w/ since each of these pairs have one counterpart in Farsi. In other words, the distance between / / and /  /and the closest L1 sounds to them is more than the distance between /ʌ/ and /ɑː/ as well as/v/ and /w/ from their closet L1 sounds. This supports the researcher  s personal experience. Correct pronunciations of / /and /   /emerge in the production of Iranian EFL learners earlier than those of /ʌ/ and /ɑː/

as well as /v/ and /w/. In some cases /w/, which is absent in Farsi, does not appear in the production of even advanced speakers although it may be perceived by them. In such situations it is substituted by /v/.

Based on the findings of this study and also considering the advantages of transcribing exercise, it is recommended to EFL teachers, especially teachers of elementary levels, to include transcribing exercise assigned as homework in order to improve learners phonemic perception. Since, as mentioned in the introduction, most of the problems experienced by learners in listening are perceptual, transcribing helps not only to learners better perception of phonemes but also to their listening ability.

One limitation of the current study which can be addressed by further research is its focus on learners at only elementary level. Future research is needed to examine the effectiveness of transcribing exercise with learners at higher levels.

## Conclusion

The purpose of this study was to introduce transcribing as an aural input enhancement device and to investigate its effect on beginning learners phonemic perception. The result of the study shows that transcribing has a significant positive effect on learners phonemic perception. In fact, transcribing helps learners focus their attention on incoming aural input in order to extract its main features and perceive it, a necessary step before trying to produce them. Consequently, listening teachers of elementary levels are advised to assign transcribing exercise in order to help beginning learners improve their phonemic perception.

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