The pronunciation of the inter-dental sounds of English: an articulation problem for Turkish learners of English and solutions

Murat Hismanoglu*
European University of Lefke, Gemikonagi, Lefke, North Cyprus

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Abstract

The inter-dental consonant phonemes like /θ/ and /ð/ have always created pronunciation problems for Turkish learners of English in that these two sounds are non-existent as phonemes or sounds in the sound system of the Turkish language. The aim of this study is to rehabilitate the pronunciation mistakes caused by [θ] and [ð] sounds of English to Turkish learners of English by making use of a pronunciation teaching method called the audio-articulation method developed by Demirezen (2004) as a fossilized pronunciation mistake breaker. The result of the study indicated that the audio-articulation method helps Turkish students of English overcome their interdentalization problem in the target language.

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1. Introduction

Pronunciation teaching is a significant part of foreign language teaching. Since sounds play an important role in communication, foreign language teachers must attribute proper importance to teaching pronunciation in their classes. However, this fact is very much neglected by foreign language teachers in our country. There may be several underlying reasons as to why pronunciation is disregarded by foreign language teachers in EFL classes in Turkey. The first reason may be that pronunciation is not incorporated directly into their programs or into the textbooks. The second reason may be that teachers believe learners will develop their pronunciation via the other activities included in the syllabus without any direct focus on pronunciation (Seferoğlu, 2005). The third reason may be that teachers, especially non-native ones, do not have phonological competence to teach both segmental features (consonants, vowels, and diphthongs) and suprasegmental features (stress, intonation, rhythm, and connected speech) of the target language.

E-mail address: hismanoglu@yahoo.com.
It is a commonly accepted viewpoint that foreign language learners cannot acquire a native-like accent after a certain age at ease. Besides the so-called physiological difficulties, it has also been argued that many foreign language learners wish to employ their own accent in that that is a part of their identity (Harmer, 2001). At that point, the foreign language learner may not want to speak the target language just like native speakers do. However, there have been researches which stress that there are negative attitudes towards those L2 speakers with a strong foreign accent placing such speakers in a socially or professionally disadvantages position (Morley, 1991).

There have been many researchers arguing against the recognition of native speaker norms as the sole bases in teaching English in view of both the unrealistic nature of expectations from the learners and the impossibility of the acquisition of native speaker phonological systems (MacArthur 1998; McKay 2002; Alptekin 2002; Jenkins 2002). Alptekin (2002) states that a native speaker-based notion of communicative competence is unrealistic because it fails to reflect the status of English as an international language. He proposes a new notion of communicative competence viewing English as a world language, containing local and international contexts as settings of language use, involving native-nonnative and nonnative-nonnative discourse participants, and taking successful bilinguals with intercultural insights and knowledge as pedagogic models.

In our times, English is no longer in the hegemony of monolingual native speakers (Crystal, 1998). It is mostly spoken in international contexts where the speakers are nonnative speakers of English and the status of English as an international language brings with it some key concepts like international pronunciation, international intelligibility, and mutual intelligibility to provide learners with optimum number of requirements for communication.

Determining goals and standards in pronunciation teaching is very important in deciding what is acceptable and what is unacceptable. If the goal is communicative efficiency or intelligibility rather than native like pronunciation, not all deviations from native speaker pronunciation can be viewed as errors but a reflection of a nonnative speaker regional accent. However, there are some fossilized pronunciation errors which give rise to misunderstandings or breakdowns during the communication. These fossilized pronunciation errors are chronic articulation mistakes made by language learners in the acquisition of the sound system of the target language which continue for a long time and cannot be easily solved. Because language learners apply the phonological rules of their mother tongue to those of the target language, they make fossilized pronunciation errors. Fossilized pronunciation errors are one of the most significant obstacles to second language phonological acquisition. As Demirezen (2005:83) states, “… fossilized pronunciation problems cannot be ignored since fossilization slows down the improvement of the communicative competence and fluency, intonation advancement and other related skills.”

To Turkish learners of English inter-dental consonant phonemes like /θ/ and /Δ/ continually lead to the emergence of fossilized pronunciation errors, the main reason of which is that these two sounds are non-existent as phonemes or sounds in the sound system of the Turkish language. Hence, learners, being under the negative influence of Turkish, are inclined to articulate [θ] as [t] and [Δ] as [d] disregarding the required inter-dental feature in articulation, which reduces the pronunciation intelligibility of language learners.

The aim of this study is to rehabilitate the pronunciation mistakes caused by [θ] and [Δ] sounds of English to Turkish learners of English by making use of a pronunciation teaching method called the audio-articulation method developed by Demirezen (2004) as a fossilized pronunciation mistake breaker.

The following research question was investigated:
1. Can the pronunciation mistakes caused by [θ] and [Δ] sounds of English to Turkish learners of English be rehabilitated by using the audio-articulation method?

2. Method

2.1. Subject

Thirty first-year students at European University of Lefke, Faculty of Arts and Sciences, Department of English Language Teaching participated in this study.
In this study, a dialogue taken from Bowler and Parminter’s (2001) book entitled *New Headway Pronunciation Course* was chosen to diagnose the [θ] and [Δ] sounds of English as problematic cases for Turkish learners of English.

2.3. Data Collection Procedure

After selecting the data collection instrument, the researcher recorded thirty subjects’ voices as they read aloud a dialogue at the beginning of the Fall Semester of 2008-2009 Academic Year.

2.4. Data Analysis Procedure

The researcher listened to the recordings and wrote the impressionistic transcriptions of the words with the [θ] and [Δ] sounds on previously drawn tables. Then, the researcher counted (a) speech sounds produced correctly, (b) speech sounds produced incorrectly, and (c) speech sounds that are not produced (ignored by the subjects) and for scoring purpose, he gave one point for each correct production. Incorrect productions and those ignored by the subjects were not taken into consideration. As a following step, the sum of the correct productions for each problematic sound was divided into the number of subjects to find out the average rate of correct productions as the test performance of these thirty students for the relevant problematic sound. Thus, he determined [θ] and [Δ] sounds as problem causing cases for Turks through concrete proofs. The researcher noticed that the subjects made use of substitution as a strategy when encountering difficulty in articulating words with [θ] and [Δ] sounds. They used [t] instead of [θ] and [d] instead of [Δ] sounds.

2.5. Treatment

After that, the researcher asked these thirty students to participate in a 50 minute pronunciation lesson designed in parallel to the audio-articulation method developed by Demirezen (2004). In the practice lesson, the researcher applied the previously prepared sample lesson plan relevant to the teaching of [θ] and [Δ] sounds. Thus, he tried to help students to have an easily understandable pronunciation in relation to these two problematic English phonemes through using a wide variety of techniques, activities, exercises, drills, and pedagogically-developed texts. After the treatment, the pretest administered to all the students was given as the posttest to all of them to measure whether the treatment given to them lead to high level of correct pronunciation at segmental level or not. Following this procedure, pre and post test performances of the subjects were obtained for [θ] and [Δ] sounds. Then, in order to see the progress of the subjects, post test and pre test performances of the subjects were compared and contrasted for these two problematic sounds. To compare and contrast the progresses in the performances of the subjects, first of all, pre test scores were subtracted from the post test scores for these two problematic sounds and improvement rates were obtained for each problematic sound. After obtaining improvement rates of the subjects in relation to two problem causing sounds, it was clearly seen that the treatment produced the expected result in teaching [θ] and [Δ] sounds to Turks.
2.6. Data analysis

2.6.1. /T/ as a Problem-Causing Phoneme

In the pretest, the students having role A read aloud 15 words having /T/ phoneme word-initially, word-medially, and word-finally in a dialogue, whereas the students having role B read aloud 19 words having the same phoneme in the same distribution. While the average number of words with /T/ phoneme mispronounced by the students having role A was 14.47 (% 96.5), the average number of words with /T/ phoneme correctly pronounced by the students having role B was 16.47 (% 87). The following examples exhibit how the subjects having either role A or role B mispronounced the words having /T/ phoneme:

Judith was pronounced as [ðyecto], [φydi], [φ YðIσ], [ZYðI] or [ðYðI]

instead of [ðYðI]

Timothy was pronounced as [τθu], [τθu→ττ], [τθu στ], [τθu :ττ] instead of [τθu :ττ]

Thorpe was pronounced as [τθ :ρτσ], [τθ :ρτσ←σ], [τθ :ρτσ←στ], [σ :ρτσ] instead of [Τρ :ρτσ]

with was pronounced as [θιτ] instead of [θιΤ]

Matthew was pronounced as [μετιΤγσ], [μετιΤγσ], [μετιΤγσ], [μετιΤγσ] instead of [μεΤφγσ]

thirteen was pronounced as [τθρσντινθι], [τθρσντινθι] instead of [Τε :ρτινθι]

month was pronounced as [μυρντι], [μκντστσ], [μυ :τστσ] instead of [μυρνΤ]

thought was pronounced as [τθ :ττ] instead of [Ττ :ττ]

anything was pronounced as [ενυτιΝκ], [ενυτιΙΝ] instead of [ενυτΙΝ]

birthday was pronounced as [βθερυτιαι] instead of [βθερΤιαι]

three was pronounced as [θρτθτ], [τθττ] instead of [Τττ]

both was pronounced as [βθ :ττ] instead of [βθ :Ττ]

Cathy was pronounced as [κεθτι], [κεντι] instead of [κετι]

healthy was pronounced as [ηελτι], [ηελτι], [ελτι] instead of [ηελΤι]

think was pronounced as [θιτινκ], [θιτθι] instead of [θιΤινκ]

thirtieth was pronounced as [τθρθτινθιθι], [τθρθτινθιθι] instead of [Τθρθτινθιθι]

thirty-first was pronounced as [τθρθφιθστι], [τθρθφιθστι] instead of [Τθρθφιθστι]

After the specification of /T/ phoneme as problematic for Turkish learners of English according to the results of the pretest performances of the students in relation to this sound, the researcher applied a previously prepared sample lesson plan containing various teaching techniques, activities, and exercises to these thirty students. Using minimal pairs, tongue twisters, contextualized drills (sentences with contextual clues and minimal sentences), exercises (same-different exercise, 1-2 exercise, 1-2-3 exercise), pictures, proverbs, riddles, and songs, the teacher tried to teach this problematic sound to the students.

In the posttest, likewise the case described above, the students having role A read aloud the same 15 words having /T/ phoneme word-initially, word-medially, and word-finally in a dialogue again, whereas the students having role B read aloud 19 words having the same phoneme in the same distribution. While the average number of words with /T/ phoneme correctly pronounced by the students having role A was 6.86 (% 46), the average number of words with /T/ phoneme correctly pronounced by the students having role B was 7.93 (% 42).

The following tables exhibit the improvement rates observed in the students having role A and role B in relation to the articulation of the /T/ phoneme. In the table, average correct pronunciation and mispronunciation rates and percentages of the students having role A and role B in both the pretest and the posttest in relation to /T/ phoneme are shown:

| APPLICATION | ACPP | AMPV | AMPP | ACPP | AMPV | AMPP | IV | IP |
|-------------|------|-------|------|------|-------|------|----|----|
| PRE-TEST | ACPV | % 3.5 | 14.47 | % 96.5 | 6.86 | % 46 | 8.14 | % 54 | 6.33 | % 42.5 |
Table 2. Average correct pronunciation and mispronunciation rates and percentages of students having role B in relation to /\τ/ phoneme

| APPLICATION | PRE-TEST | POST-TEST | IMPROVEMENT |
|-------------|----------|-----------|-------------|
| ACPV | ACPP | AMPV | ACPV | ACPP | AMPV | AMPP | IV | IP |
| 2.53 | % 13 | 12.47 | % 87 | 7.93 | % 42 | 7.07 | % 58 | 5.4 | % 28.7 |

2.6.2. /\Δ/ as a Problem-Causing Phoneme

In the pretest, the students having role A read aloud 7 words having /\Δ/ phoneme word-initially and word-medially in a dialogue, whereas the students having role B read aloud 13 words having the same phoneme in the same distribution. While the average number of words with /\Δ/ phoneme mispronounced by the students having role A was 7 (% 100), the average number of words with /\Δ/ phoneme mispronounced by the students having role B was 12.99 (% 99.6). The following examples exhibit how the subjects having either role A or role B mispronounced the words having /\Δ/ phoneme:

- the was pronounced as [δ↔] instead of [Δ↔]
- teething was pronounced as [τι:τΙΝ], [τι:τΙΝκ] instead of [τι:ΔΙΝ]
- they was pronounced as [δέι] instead of [Δέι]
- than was pronounced as [δέν] instead of [Δέν]
- that was pronounced as [δέτ] instead of [ΔΘτ]
- them was pronounced as [δέμ], [δ↔μ] instead of [Δεμ]
- those was pronounced as [δ↔ζ], [δν:ζ], [δν:] instead of [Δ:ζ]
- Heather was pronounced as [ηεδ↔], [ηεδ↔ρ], [ηετ↔ρ], [ηι:τ↔ρ], [ηι:Δ↔ρ] instead of [ηεΔ↔ρ]
- then was pronounced as [δε↔ν], [δ↔ν] instead of [Δε↔ν]
- their was pronounced as [δε↔ρ] instead of [Δε↔ρ]

After the determination of /\Δ/ phoneme as problematic for Turkish learners of English according to the results of the pretest performances of the students in relation to this sound, the researcher applied a previously prepared sample lesson plan containing a variety of teaching techniques, activities, and exercises to these thirty students. Using minimal pairs, tongue twisters, contextualized drills (sentences with contextual clues and minimal sentences), exercises (same-different exercise, 1-2 exercise, 1-2-3 exercise), pictures, proverbs, riddles, and songs, the teacher tried to teach this problematic sound to the students.

In the posttest, likewise the case described above, the students having role A read aloud the same 7 words having /\Δ/ phoneme word-initially and word-medially in a dialogue again, whereas the students having role B read aloud 13 words having the same phoneme in the same distribution. While the average number of words with /\Δ/ phoneme correctly pronounced by the students having role A was 1.33 (% 19), the average number of words with /\Δ/ phoneme correctly pronounced by the students having role B was 3.00 (% 23).

The following tables show the improvement rates observed in the students having role A and role B in relation to the articulation of the /\Δ/ phoneme. In the table, average correct pronunciation and mispronunciation rates and percentages of the students having role A and role B in both the pretest and the posttest in relation to /\Δ/ phoneme are shown:

Table 3. Average correct pronunciation and mispronunciation rates and percentages of students having role A in relation to /\Δ/ phoneme

| APPLICATION | PRE-TEST | POST-TEST | IMPROVEMENT |
|-------------|----------|-----------|-------------|
| ACPV | ACPP | AMPV | ACPV | ACPP | AMPV | AMPP | IV | IP |
| 0 | % 0 | 7 | % 100 | 1.33 | % 19 | 5.67 | % 81 | 1.33 | % 19 |
Table 4. Average correct pronunciation and mispronunciation rates and percentages of students having role B in relation to /Δ/ phoneme

| APPLICATION       | PRE-TEST | POST-TEST | IMPROVEMENT |
|-------------------|----------|-----------|-------------|
| ACPV              | ACPP     | AMPV      | ACPV        | ACPP     | AMPV      | IV  | IP  |
| 0.004             | % 0.4    | 12.99     | % 99.6      | 3.00     | 10.00     | % 77 | 2.94 | % 22.6 |

3. Results

The analysis of the pre-test scores revealed that the subjects having role A and those having role B were similar to one another in terms of pronouncing words with [θ] and [Δ] sounds before being exposed to treatment (see Table 1-4).

The analysis of the post-test scores indicated that while the subjects having role B performed better than those having role A in relation to the correct articulation of /Δ/ phoneme, the subjects having role A performed better than those having role B in relation to the correct articulation of /θ/ phoneme (see Table 1-4).

To summarize, the results of the tests indicated that the audio-articulation method helps Turkish students of English overcome their interdentalization problem in the target language.

4. Conclusion

This study aimed to investigate whether the pronunciation mistakes caused by [θ] and [Δ] sounds of English to Turkish learners of English can be rehabilitated by using the audio-articulation method. The findings of the study revealed that a fifty minute pronunciation lesson designed in line with the above mentioned method rehabilitated students’ inter-dentalization problem.

The audio-articulation method, which is a real fossilized pronunciation mistake eraser, may be utilized by teachers who are sensitive to developing students’ phonetic competence, communicative fluency and articulatory accuracy in the target language. This method contributes to beautifying the articulations of non-native speakers of English by providing them with a lively, colorful and motivating pronunciation lesson. In this method, the teacher explains how to produce a problematic sound by using the technique of exhortation. That is, s/he gives clear-cut examples orally in class and uses charts and diagrams when explaining how a particular sound is made in English. Students try to mimic after the teacher. Especially, problem causing individual consonants and vowel phonemes may be taught effectively through using this technique.

Based on my observation of the treatment done in the classroom, I can stress that the students benefited from audio-articulation method based treatment. They were very active and cooperative during the application in the classroom. This supports the studies of Demirezen (2005) and Hismanoglu (2007) who state that the audio-articulation method is effective for solving pronunciation problems of students.

As another observation, I am to cite that psychological factors like anxiety, excitement, etc. influenced the students’ articulation of the inter-dental sounds in an undesired way while their voices were being recorded in the radio studio. In other words, their pronunciation performance was affected negatively since they were under the pressure of the possibility of making the same error diagnosed before the treatment, so I must say that the results would surely be better if the recordings took place in a more natural setting. Further, this success rate can be maximized through focused training.

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