

**A Model to Rehabilitate a Fossilized Pronunciation Error of Turkish English
Language Teachers: the English Consonant Phoneme /ŋ/ Wrongly Articulated
as /ŋk/ Through Nasal Devoicing**

Mehmet DEMİREZEN

md49@hacettepe.edu.tr

Abstract

Turkish English language teachers have a general affinity to mispronounce the word-final /ng/ sound combination as /ŋk/ form, but not in an /ɪŋ/ form, which is the right case. This is a typical case of a fossilized pronunciation. The result of the articulation is a bad sounding articulation that gives a serious hardship to the foreign language teacher. It must be borne in mind that bad pronunciation impedes and obscures intelligibility, accuracy, fluency, and automatic control of pronunciation in the target language. The fossilized pronunciation errors keep bothering the communicative fluency of the teacher trainees and novice foreign language teachers who are on the job. Since teaching foreign languages is a vocational job, developing a good intelligible pronunciation skill is an integral part of the profession. In this study, a very common and wrong articulation of /ŋ/ phoneme as /ŋk/ by Turkish English teachers will be tried to be rehabilitated by using the *audioarticulation model*.

Key words: audioarticulation method, intelligibility, accuracy, communicative fluency, mother tongue interference

Özet

Türk İngilizce Öğretmenlerinin Kemikleşmiş Sesletim Hatalarını Düzeltmek İçin Bir Model: İngilizcenin Burunsu /ŋ/ Sesbiriminin Yanlış Olarak /ŋk/ Biçiminde Ötümsüz Sesletilmesi

Türk İngilizce Öğretmenleri, İngilizcedeki sözcük sonu /ng/ ünsüz birlikteliğini genellikle /ŋ/ olarak değil de /ŋk/ olarak yanlış bir sesletim biçiminde kullanmaktadırlar. Bu durum tipik bir kemikleşmiş sesletim olayıdır. Böyle bir sesletim, anadili İngilizce olmayan Türk öğretmenlerine ciddi zorluklar çıkarmaktadır. Unutulmamalıdır ki böyle yanlış bir sesletim sessel olarak anlaşılabilirliği, doğruluğu, akıcı konuşmayı ve sesletimin otomatik denetimini engellemektedir. Kemikleşmiş sesletim hatalarının varlığı, stajyer öğretmenlerin ve şu anda yabancı dil öğretmenliği yapan Türk öğretmenlerin iletişimsel akıcılığına zarar vermektedir. Yabancı dil öğretmenlerinin düzgün ve doğru sesletim becerisi, mesleğin ayrılmaz bir parçasıdır. Bu çalışmada, Türk İngilizce öğretmenlerinin sesletiminde yaygın biçimde yer alan /n/ burunsu ünsüzünün /ŋk/ olarak yanlış sesletimi, *duyseslet modeli* kullanılarak düzeltilmeye çalışılacaktır.

Anahtar Sözcükler: duyseslet yöntemi, anlaşılabilirlik, doğruluk, iletişimsel akıcılık, anadilden işe karışmalar,

INTRODUCTION

Appropriate pronunciation is a self-investment in the teachers' phonological development. Non-native teacher trainees of the English language need to listen to a series of micro-listening sub-skills and macro-listening activities and do practice on the fossilized pronunciation mistakes to promote their conversational skills in communicative fluency in and outside of the classroom, but there is not a suitable method that provides them with these activities by taking into consideration the interactional dynamics and classroom climate, appropriate feedback and reward systems. That is why an advanced level pronunciation teaching method, called the *audio-articulation model*, is devised by Demirezen (2003b, 2004a), which lies at the heart of modern communicative and learner-centered pronunciation teaching methodology.

The Phonetic Structure of the English Nasal Phonemes

In English there are three nasal phonemes, namely /m, n, ŋ/. Since there are /n/ and /m/ phonemes in the Turkish consonant inventory, the English /n, m/ phonemes cause no pronunciation problems to the Turkish students of the English language. But

the /ŋ/ phoneme, which is a *voiced velar nasal*, and which does not exist as an independent phoneme in modern standard Turkish, causes a nagging pronunciation problem for Turkish teacher trainees and teachers-on-the-job, who tend to articulate this phoneme in a form of [ŋk] word-initially.

The following data represent the phonetic distribution of the English / ŋ / phoneme:

Word-medial	Word-final	Word-Medial and Word-final
springs [spɾŋgɹz]	spring [spɾŋ]	springing [spɾŋ gɾŋ]
longed [lɔŋgəd]	long [lɔŋ]	longing [lɔŋgɾŋ]
singer [sɾŋ gəɾ]	sing [sɾŋ]	singing [sɾŋgɾŋ]

Because there is no word-final voiced consonant in Turkish, they tend to devoice the word-final positioning of the [ŋ] phoneme as [ŋk], through a word-final devoicing. The result is a terrible sounding speech. Again, the following data demonstrate this problem:

<u>Expected Articulation</u>	<u>The Fossilized Pronunciation of Turkish Teachers</u>
song [sɔŋ]	*song [sɔŋk]
wrong [wɾɔŋ]	*wrong [wɾɔŋk]
sting [stɾŋ]	*sting [stɾŋk]
bring [brɾŋ]	*bring [brɾŋk]
young [jʌŋ]	*young [jʌŋk]

Obviously, this a typical case of mother tongue interference, created through a neutralization process of word-final English [ŋ] phoneme as [ŋk] in the articulations of the Turkish learners of the English language. Thus, the word-final /ng/ consonant cluster is converged into a pronunciation case like [ŋk], which highly bothers the acoustic understanding and the beauty of this English phoneme. The incorrect articulations of

such words like *holding, building, boxing, something, everything, evening, nothing, meeting, briefing, eating, sleeping* with a word-final [ŋk] get to be highly bothering articulations for the native speakers of English.

Method: The Application of the Audio-articulation Model

There is no specific method that handles a fossilized pronunciation errors for 45 to 50 minutes in foreign language teaching. The *audio-lingual mode*, presented here, stresses the importance of teaching of the pronunciation of the vocabulary items correctly. The *social learning method* also attaches some importance to the teaching of some sounds. The *audio-articulation* method (Demirezen 2003a, 2004b) attempts to cure the fossilized pronunciation mistakes of the teacher trainees and the teachers on-the-job. The model given below was explained by Demirezen (2007c) via certain examples and practice types.

Basic steps in applying the audio-articulation method (Demirezen 2003a, 2004b):

1. The foreign language teacher specifies the pronunciation problem-causing phoneme. In this case, this phoneme happens to be the English /ŋ/ phoneme.
2. He prepares a general corpus of words of 50-100 words that include the problem causing phoneme and its pair in articulation.
3. S/he specifies the words into minimal pairs within contrastive analysis (Baker and Goldstein 1990). For example, in this case the problem causing sound is the /ŋ/ phoneme, and /n/ phoneme is the closest approximation to this phoneme. S/he lists up the words in the general from an easy articulation to the difficult ones.
4. S/he prepares a minimal pair corpus out of the general corpus as a case of contrastive analysis.
5. S/he develops tongue twisters, cliché articulations, minimal sentences, contextual clues, and problem-sound concentrated sentences for practice in class.

A MODEL LESSON PLAN:

Level: In-service-training or teacher training

Method: The audio-articulation Model

Duration: one class period (45-50 minutes)

1. Motivation-warm up:

(Teacher Trainer (TT) enters the class.)

TT: Good morning, class! How are you all today?

Students: Good morning, sir / mam! We are fine. And you?

T: I am well too, thank you. *Emine*, do you like cooking?

Emine: Yes, sir, I like *cooking* [kʊkɪŋk]. (The teacher does not deliberately correct the mispronounced word *cooking* by *Emine*.)

T: Fine!

TT: *Mehmet*, do you like running?

Mehmet: Yes, sir, I like *running* [ɾʌnɪŋk] because I am an athlete.

(Again the teacher does not make a correction on the mispronounced word *running* which comes out the mouth of the student as [ɾʌnɪŋk].)

(S/he passes on to the second step)

2. Reviewing the previous material related to the topic.

(The previously taught phoneme is the /n/ phoneme, which is the first element of the minimal pair /n/ and /ŋ/)

TT: Students, if you remember, we hear the / n / phoneme in such words as *nine, sign, pin, pen, honey, sunny, funny* and *none*. Today, we will study an English phoneme that is very close to it as a pair.

3. Giving the full explanation of today's topic.

TT: Students, today, we will study on the articulation of the /ŋ/ phoneme, which is a *voiced alveolar-dental nasal*, as heard in such words as *evening* [ɪvənɪŋ], *morning* [mɔːnɪŋ], *king* [kɪŋ], *building* [bɪldɪŋ], *holding* [həʊldɪŋ], etc. (Teacher trainer writes the new topic on the board.)

4. Starting to teach the new topic:

TT: Students, the following indicates the difference between /n/ and /ŋ/ phonemes:

/n/ a voiced dental / alveolar nasal

/ŋ/ a voiced velar nasal

A. Preparing a corpus

TT prepares a corpus of 50 to 100 words that contain the /n/ and /ŋ/ contrasts from which he develops the oncoming exercises (Cambridge Dictionary of American English: 2000; Longman Dictionary 2004)

/n/ and /ŋ/

sin [sɪn]	tune [tu:n]	sing [sɪŋ]	wing [wɪŋ]
kin [kɪn]	pin [pɪn]	king [kɪŋ]	Hong Kong [hɒŋ kɒŋ]
ban [bæŋ]	dun [dʌn]	bang [bæŋ]	tongue [tʌŋ]
pan [pæŋ]	thin [θɪn]	pang [pæŋ]	during [dʒʊrɪŋ]
son [sʌn]	pain [peɪn]	sung [sʌŋ]	ping [sɪŋ]
win [wɪn]	been [bi:n]	being [bi:ŋ]	nothing [nʌθɪŋ]
nap [næp]	knock [nɒk]	long [lɒŋ]	dung [dʌŋ]
nest [nest]	neck [nek]	spring [sprɪŋ]	ping pong [pɪŋ pɒŋ]
nun [nʌn]	neat [ni:t]	losing [lu:zɪŋ]	hang [hæŋ]
next [nekst]	note [nəʊt]	gang [gæŋ]	interesting [ɪntərestɪŋ]
jogging [dʒɒgɪŋ]	singing [sɪŋɪŋ]	gossiping [gɒsɪpɪŋ]	rafting [ræftɪŋ]
not [nɒt]	along [ə'lɒŋ]	belong [bəlɒŋ]	paying [peɪɪŋ]
none [nʌn]	ring [rɪŋ]	ski-ing [ski:ɪŋ]	King Kong [kɪŋ kɒŋ]
noble [nəʊbəl]	sung [sʌŋ]	fling [flɪŋ]	song [sɒŋ]
ton [tʌn]	think [θɪŋk]	run [rʌn]	bowling [bəʊlɪŋ]
thing [θɪŋ]	ink [ɪŋk]	slang [slæŋ]	yearling [ji:rɪŋ]
strong [strɒŋ]	morning [mɔ:ɪŋ]	punning [pʌŋɪŋ]	mourning [maʊnɪŋ]

darling [dɑrlɪŋ]	pudding [pʊdɪŋ]	sibling [sɪblɪŋ]	young [jʌŋ]
bring [brɪŋ]	anything [enθɪŋ]	dong [dɒŋ]	nagging [næɡɪŋ]
lung [lʌŋ]	everything [evrɪθɪŋ]	seeing [si:ʒɪŋ]	evening [ɪvnɪŋ]
sting [stɪŋ]	something [sʌmθɪŋ]	swing [swɪŋ]	wrongdoing [rɒŋgdɔʊŋ]
boxing [bɒksɪŋ]	wrestling [reslɪŋ]	jogging [dʒɒɡɪŋ]	singing [sɪŋ ɡɪŋ]

(TT gets these words to be repeated in single and choir articulations. They may also be taped and given to the students).

B. Specifying the minimal pairs

TT singles out some minimal pairs to show the accurate comprehension of the fossilized error-causing phoneme ; without phoneme discrimination skills, learners can neither express themselves nor understand others fully. These may be taped.

<u>/n/</u>	/ŋ/
thin [θɪn]	thing [θɪŋ]
sin [sɪn]	sing [sɪŋ]
kin [kɪn]	king [kɪŋ]
pan [pæn]	pang [pæŋ]
ban [bæn]	bang [bæŋ]
ton [tɒn]	tongue [tʌŋ]

The teacher practices the minimal pairs in class through exhortation, without boring the students, in single or choir repetitions in small doses. It must be noted that the TT is, here, a pronunciation coach, giving appropriate models where necessary, setting and providing a wide variety of practice opportunities, at the same time giving an overall support by encouraging the learners.

C. TT produces the following tongue from the general corpus in 4A, and s/he practices them in class by calling on students in single or choir activities. Such practices sensitive the learners to their own potential as active pronouncers of the target language.

- | | |
|---|--|
| (1) | (6) |
| A king | Bowling |
| A wrong king | Bowling in the morning |
| A crying wrong king | Bowling in the morning and evening |
| A crying wrong but strong king | Bowling in the morning and evening with the king |
| (2) | (7) |
| A wing | Everything |
| A singing wing | Everything for the king |
| A singing, hissing wing | Everything for the loving king |
| A singing, hissing, springing wing | Everything for the loving young king |
| (3) | (8) |
| A morning | A wrongdoing |
| A long morning | An interesting wrongdoing |
| A long mourning morning | An interesting wrongdoing during |
| A long mourning morning in spring | An interesting wrongdoing during doing jogging |
| (4) | (9) |
| A song | A ring |
| A crying song | A stinging ring |
| A long, crying song | A stinging ring on a swing |
| A long, crying song in the evening | A stinging ring on a swing in Spring |
| (5) | (10) |
| Dancing | A tongue |
| Dancing and singing | A punning tongue |
| Dancing and singing with the gang | A punning, biting tongue |
| Dancing and singing with the young gang | A punning biting tongue of my darling |

C. Doing recognition exercises

TT: Students, now I am going to articulate some words to you, if you hear the /n/ in the word, say one, if you hear /ŋ/ in the word, say two. All right, let's begin:

TT: Ali, *pin!*

Ahmet: One!

TT: That's correct. Thank you, Ali. Murat, *finger!*

Murat: Two.

TT: Very good. Thank you, Murat. Sevim, *pain* and *paying!*

Sevim: One and two.

TT: Well done, Sevim, thank you. Pervin, *swing-swing-swing!*

Pervin: Two-two-two.

TT: Perfect, Pervin. Thank you. Mustafat, *song-son-song!*

Mustafa: Two-one-two.

TT: Good. Thank you, Mustafa.

TT: Zahide, *bring-brink-brink-bring!*

Zahide: Two-one-one-two!

TT: Thank you Zahide, very good!

(The teacher may continue on this practice, but must watch the timing.)

5. Giving the RULE. S/he uses the audio-devices if necessary.

TT: Students, lend me your ears please because this is the RULE TIME.

Here is the rule:

As I have repeatedly stressed before,

/n/ a voiced dental / alveolar nasal, as in **kin, pin, sin** and **pan**.

/ŋ/ a voiced velar nasal, as in **bring, sing, king** and **bang**.

In the articulation of /n/, the apex touches the dental / alveolar area of the upper teeth ridge and at that moment the air stream directly coming from the lungs is modified in

the mouth as heard in such words as *pan* [pæ ɲ] and *ban* [bæ ɲ], whereas in the articulation of the /ŋ/, the

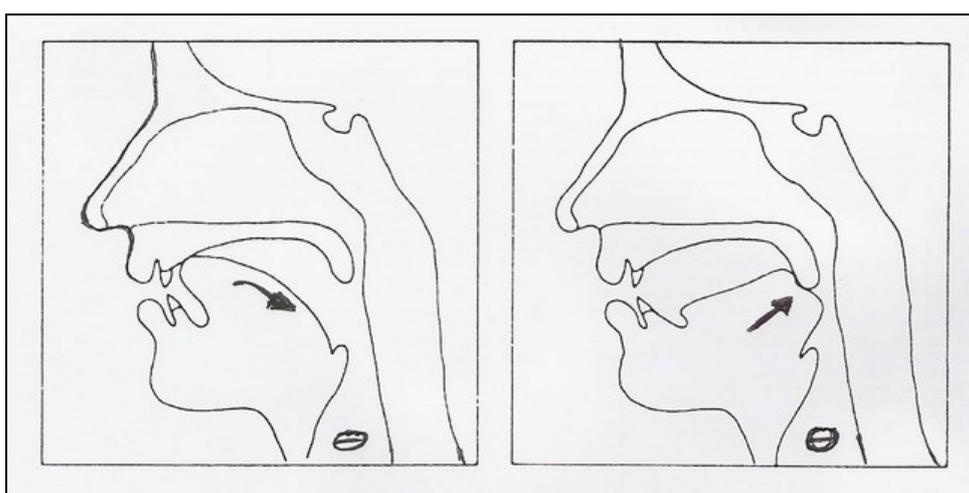
dorsum of the tongue is raised up to the velum, blocking the way of the air stream which escapes into the nasal cavity where the articulation takes place in form of [ŋŋŋŋŋŋ] sound as

heard in *pang* [pæ ɲ] and *bang* [bæ ɲ]. This case is clearly seen in the following two figures:

/ n /

/ ŋ /

A word of CAUTION is due here: Many of the non-native English language teachers do not pay attention to the difference between /n/ and /ŋ/ and carelessly



mispronounce such correct pronunciations *long* [bŋ], *slang* [sæ ɲ], *young* [jʌ ɲ], *bringing* [brɪŋg ɲ],

Figure 1: The articulations of /n/ and /ŋ/ in English pronunciation

sleeping [sl :p ɲ], *going* [gow ɲ], and *evening* [ɪv ɲ] as [bŋ k], [sæ ɲk], [jʌ ɲk], [brɪŋg ɲ], [i :tŋk], [sl :p ɲk], [gow ɲk] and [ɪv ɲk]. This is a grave fossilized pronunciation error, which must be rehabilitated.

/ŋ/ is articulated as [ŋk] only and only when /k/ phoneme follows /ŋ/, as distinctly heard in the following words:

stink [strɪŋ]	think [θɪŋk]	junk [ʃʌŋk]
strink [strɪŋk]	strunk [strʌŋk]	strunk [strʌŋk]
drink [drɪŋk]	drank [dræŋk]	drunk [drʌŋk]
brink [brɪŋk]	wink [wɪŋk]	stink [strɪŋk]
frank [fræŋk]	blank [blæŋk]	chunk [tʃʌŋk]

6. Producing further drills as a reinforcing power

The following type of exercises can also be seen in Demirezen (2007c).

A. Practicing with the minimal sentences

TT: Students, repeat the following sentences by paying close attention to /n/ and /ŋ/ difference in the articulations.

1. King Kong is my KIN / KING (Demirezen 2007)
2. WRONG makes your life FLUNK.
3. Dog's FANGS are STINGY.
4. England's young KING / KIN is a great SINNER / SINGER.
5. A wrongdoing GANG has biting FANS / FANGS.
6. Our KING / KIN has no WINS / WINGS.
7. That PAIN / PAYING does not bring you any main GAIN.
8. A CLAN / CLANG can intimidate the whole GANG.
9. A PIN / PING will be required in BOXING.
10. This BAN / BANG will not give you any PAIN / PAYING.

B. Practicing with sentences called contextual clues: such practices make the place, point and manner of articulation of the problem-causing fossilized mistake better heard, recognized, and articulated (Demirezen 2007:

1. England's KING is my KIN.
2. To be a KING is not a BITING SIN.

3. Her TONGUE weights a TON.
4. The PLAN of that CLAN made the CLANG.
5. A BAN does not BRING a financial BANG.
6. A BEAN is BEING BEATEN.
7. This long THING is THIN.
8. Is your PAIN bringing you any PAYING?
9. The word “SEEING” does not mean the word “SEEN.”
10. My SON has just SUNG a LONG SONG.
11. A MORNING has nothing to do with MOURNING.
12. She is a FAN with a funny FANG.
13. That angel will WIN her WINGS in the evening.

C. Problem-sound concentrated sentences:

Practicing with such sentences in single or choir repetitions may seem and sound artificial, but they are extremely useful in activating the 1000 muscles, situated in our face and throat, that are used in articulating the fossilization-causing speech sounds.

1. I like RAFTING, WRESTLING, and SAILING.
2. The LUNGS of the SMOKING YOUNGS are not STRONG.
3. To SING a LONG SONG in HONG KONG is not WRONG.
4. I hate GOSSIPING, BADMOUTHING, AND LINGERING.
5. The SINNING GANG is PLAYING PING PONG with KING KONG
6. The KING is MOURNING DURING the MORNING and EVENING.
7. The KING is PLAYING PING PONG in HONG KONG with KING KONG.
8. A CURSING and MURDERING KING will have no KINS and DARLINGS.
9. A STINGING bee can give a NAGGING PAIN DURING the MORNING and EVENING.
10. The KING is SINGING a LONG SONG in HONG KONG in a tone of SING-DING-A DONG!

7. Making a summary

TT makes a summary by going over the already given rule in figure (1) and draws the students' attention to the fossilization causing problem sound of the target language.

8. Giving homework(s)

TT: Students, each of you will prepare the following exercises on the following items; please turn them in the next lesson.

1. In which of the words below do you hear two occurrences of the /ŋ/ ?
a. wronged b. belonging. c. gangs d. gongs e. springs
2. In which of the following words there isn't the [ŋ] sound?
a. strange b. monkey c. single d. drunkard e. sleeping?
3. Study with a dictionary and find out your own five minimal pairs on /n/ and /ŋ/
4. Prepare five long tongue twisters by /n/ and /ŋ/.
5. Prepare 5 long minimal sentences by /n/ and /ŋ/.
6. Prepare 5 long sentences with contextual clues by /n/ and /ŋ/.

CONCLUSION

The scarcity of the pronunciation teaching methods, lasting one class hour to cure the fossilized pronunciation error of the teacher trainees and teachers-on-the-job, is a big problem. The fossilized pronunciation problems of the non-native speaking teachers can no longer be ignored because pronunciation teaching cannot be marginalized in foreign language teacher education. Fossilized pronunciations (Acton 1991) can be rehabilitated. Since good pronunciation, which paves the way for good intonation, is an integral part of the communicative competence, the audio-articulation pronunciation teaching method may be of great use in handling this problem. There is no other better way to cure the incorrect articulations than pedagogically designed adequate repetitions of the problem-causing phoneme in communicative contexts within a combination of micro-skill and macro-skill articulation activities. Repetitions should not be overused; otherwise, they bore the students and harm the creative use of language, become an obstacle in developing the communicative fluency. Some pronunciation games (Hancock 1995) are also considerable.

Turkish learners of the English language cannot properly articulate the nasal sound /ŋ/ phoneme of the English language because of the interference of Turkish consonant rule, which allows no word-final voiced velar nasal. For this reason, the Turkish teacher trainees tend to pronounce it as [ŋk], especially in word-final positions, and the result is a very strange sounding articulation in speech, harming the acoustic beauty and perception of this English phoneme. The English words like *sing-sang-sung* being pronounced just like *sink-sank-sunk*, within a neutralization process triggered by a Turkish word-final pronunciation rule as [ŋk], may pave the way for other mother tongue interferences. This is a solid example of mother tongue interference of Turkish over English. The application of the **audio-articulation model** on such fossilized errors of the Turkish teacher trainees has produced very positive results to eradicate them from their articulations in a very short time (Hismanoğlu 2004). Thus, the audio-articulation pronunciation teaching model may get to be an integral part of pronunciation teaching pedagogy in teacher training since it is very applicable to other fossilized errors of this kind for **consonants** like / t --- θ, d --- ð, v --- w /, and for **vowels** like / e --- æ, e --- ε, æ ---- ε, ə --- æ, æ --- ʌ, ɔ ---- ɔw, ʊ ---- ʊw /, which constitute the prime **fossilized error continuum** for the Turkish teachers, teacher trainees and students in learning and teaching English as a foreign language.

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Prof. Dr. Mehmet Demirezen is a lecturer of linguistics and English language education at Hacettepe University, Department of ELT, Beytepe, Ankara, Turkey. He is the author of two books on applied phonetics and phonology, and of three books on teaching paragraph and composition writing. He teaches phonetics, phonology, linguistics, seminar in ELT, language acquisition, testing, and academic writing to BA, MA, and Ph.D. students in English language education department of Hacettepe University. He is also a teacher trainer and an ELT consultant.