AN ANALYSIS OF THE PRONUNCIATION PROBLEMS
OF TURKISH LEARNERS OF ENGLISH

A THESIS
SUBMITTED TO THE FACULTY OF HUMANITIES AND LETTERS
AND THE INSTITUTE OF ECONOMICS AND SOCIAL SCIENCES
OF BILKENT UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF ARTS
IN THE TEACHING OF ENGLISH AS A FOREIGN LANGUAGE

TARKAN KAÇMAZ

AUGUST 1993

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tarafından hazırlanmıştır.

BY

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ABSTRACT

Title   : An analysis of the pronunciation problems of Turkish learners of
          English
Author : Tarkan Kaçmaz
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                     MA TEFL Program
Thesis Committee Members: Ms. Patricia J. Brenner, Dr Ruth Ann Yontz,
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This study attempted to arrive at an analysis of the pronunciation

problems of advanced Turkish learners of English. In this study, the

researcher employed Prator & Robinett's (1972) Accent Inventory as diagnos-

tic text in order to elicit the participants' pronunciation. Participants

in the study were randomly selected from among the second-year students at

the English department of Dokuz Eylul University, Buca Faculty of Education

in Izmir.

The researcher recorded the participants' voices as they read aloud

the Accent Inventory and listened to the recordings several times in order

to detect problems in the pronunciation of English phonemes. The research-

er calculated the number and percentage of the participants who failed to

pronounce a particular phoneme and how they dealt with the problem.

The results of the research have shown that Turkish speakers of

English do have certain problems in pronouncing certain English phonemes

where there are differences between the Turkish and English sound systems.

Participants faced problems mainly in producing the English phonemes in the

following five cases.

(1) When an English phoneme was in free distribution whereas the

    Turkish counterpart was not.

(2) When an English phoneme was non-existent in Turkish.

(3) When the place and manner of articulation of a phoneme differed

    in the two languages.

(4) When the allophones of a phoneme were non-existent in Turkish.

(5) When the Turkish phonotactic rules contradicted the English

    phonotactic rules.

When the participants were faced with one of the above mentioned

cases, they adopted certain strategies in order to deal with the problem.

Participants' strategies included the following:

(1) Substitute a similar sounding Turkish phoneme for the English phoneme;

(2) Delete an English phoneme that they had difficulty in pronouncing;

(3) Add a Turkish phoneme before, after or in-between the English phoneme(s).

It can be concluded from this research that Turkish speakers of English have certain difficulty with some English phonemes and that teachers of English to speakers of Turkish should allocate more time and effort to improve pronunciation in the problematic phonemes detected in this research and before continued mispronunciation leads to fossilization.

BILKENT UNIVERSITY
INSTITUTE OF ECONOMICS AND SOCIAL SCIENCES
MA THESIS EXAMINATION RESULT FORM

August 31, 1993

The examining committee appointed by the
Institute of Economics and Social Sciences for the
thesis examination of the MA TEFL student

Tarkan Kaçmaz

has read the thesis of the student.
The committee has decided that the thesis
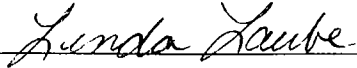of the student is satisfactory.

Thesis title   : An analysis of the pronunciation problems
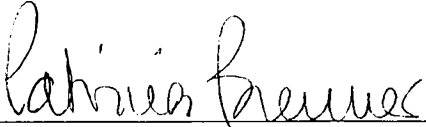of Turkish learners of English

Thesis advisor   : Dr. Linda Laube
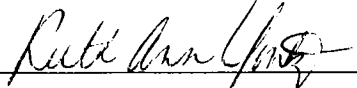Bilkent University, MA TEFL Program

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We certify that we have read this thesis and that in our combined opinion it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts.

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TO MY MOTHER AND SISTER

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CHAPTER 1 INTRODUCTION

Background of the Study

In our shrinking world, with the increasing international relations (cultural, economic, social, etc.), foreign languages have become of paramount importance. Especially, the last two decades have experienced an immeasurable progress in communications technology.

At the same time, in the field of language teaching, there has been a shift from mere linguistic competence towards communicative competence which is a broader concept. Since language is primarily a means of communication, the basic requirement for every speaker of English is to be at least intelligible to the people with whom the speaker wishes to communicate. Moreover, with an increasing focus on communication, has come a growing premium on oral comprehensibility, making it of critical importance to provide instruction that enables students to become not "perfect pronouncers" of English (which is neither reasonable nor necessary), but intelligible, communicative, confident users of spoken English for whatever purpose they need. Thus, intelligible pronunciation has become an essential component of communicative competence (Morley, 1991).

Intelligible pronunciation does not require a pronunciation that is indistinguishable from that of a native speaker of English. In its simplest sense, intelligibility is the ability to be understood by a listener. A more operational definition of intelligibility would be that: the more words a listener is able to identify accurately when said by a particular speaker, the more intelligible that speaker is (Kenworthy, 1987). To be more specific, if the foreign speaker substitutes/fails to pronounce a sound or a feature of pronunciation, and the result is that the listener hears a different word or phrase from the one the speaker was aiming to say, that foreigner's speech is unintelligible (Kenworthy, 1987).

With the increasing attention, in recent years, on pronunciation and the teaching of pronunciation, it has become imperative for English language teaching programs to give the students necessary instruction that will help them not just to "survive" but also to "succeed." However, since the teaching of pronunciation had been neglected by language teachers and institutions until recently, English language teaching programs produce

fluent and accurate (grammatical), yet unintelligible speakers of English. This is, in fact, due to the English language teachers' lack of expertise in phonetics. They are, unfortunately, not furnished with the necessary training to decide which phonetic features of language are important and, therefore, need to be emphasized and which ones, on the other hand, are relatively less important and may be overlooked until a more advanced stage (Brown, 1987).

Parallel to this, the teacher training programs in Turkey graduate each year hundreds of English language teachers without giving them the necessary conscious and systematic knowledge of phonetics -- the lack of which will make those novice teachers unable to train reasonably intelligible speakers of English, for those teachers themselves are not usually, though possibly, very native-like speakers of English and they do not feel secure with their own pronunciation of English which oftentimes still remains to be a foreign language for themselves. Hence, the researcher himself observed a similar situation in his own institution which is also a four-year teacher-training program training English teachers for secondary education.

Purpose of the Study

The purpose of the present study is to give an account of the pronunciation problems of the second-year students at the English Language department of Izmir Dokuz Eylul University, Buca Faculty of Education. By studying a group of participants from this institution, the researcher aimed to get a picture of the Turkish-speaking in-training prospective teachers of English.

In addition to this, the research interpreted the findings of the study to offer English language teachers in Turkey an analysis of the pronunciation problems of Turkish learners of English and some guidelines to teach pronunciation more effectively and more efficiently, especially because the novice teachers assume that the only classroom choice available to them is one between teaching articulatory phonetics or not to teach pronunciation at all (Yule, 1990).

Therefore, the researcher aimed to present some specific information about the pronunciation difficulties of Turkish learners of English so that

the teachers and novice teachers would gain the necessary information they can use to modify their classes to better meet the needs of their students. Prospective teachers, on the other hand, will start their teaching career furnished with the specific information necessary to teach pronunciation effectively.

Problem Statement

It is apparent that the Turkish non-native speakers' problematic pronunciations show some similarity (though some idiosyncratic speech characteristics exist). They seem to have some difficulty in pronouncing some certain sounds. This might be due to various reasons: background of the learners, lack of training in phonetic aspects of English, idiosyn-cratic speech characteristics, etc.

Hence, this study aims to answer the questions: Which English phonemes constitute difficulty for Turkish learners of English? and how should they be dealt with?

The objectives of this study are then:

(1) to find out which English phonemes constitute difficulty for Turkish learners of English,

(2) to give a linguistic account of the possible reasons for the difficulty a particular phonem constitutes,

(3) to give the English language teachers in Turkey some suggestions as to how the pronunciation problems of Turkish learners of English should be dealt with.

This study has been subject to several limitations and delimitations due to the nature, scope and the type of the research. In the following section these limitations and delimitations are explained.

Limitations of the Study

One of the limitations of the study was that the findings of the data collected from the sophomores of the English language department of Dokuz Eylul University, Buca Faculty of Education were used to account for the pronunciation difficulties of the whole population of the Turkish learners of English in Turkey.

Another limitation was that the data collected were not based on spontaneous conversation material and, therefore, may not be natural data.

Admittedly, more revealing results might be achieved if the analysis could be based on large amounts of spontaneous conversation material, rather than on a few sentences to be read. Students might possibly get tense when they know that they are being recorded and their performance may probably vary from that of ordinary conversation. However, because of the tremendous amount of time and effort it requires, an analysis of the ordinary conversation of an entire class cannot be carried out effectively.

Another limitation of the study was that the data elicitation instrument, Prator & Robinett' (1972) Accent Inventory (See Appendix A), does not include all the English phonemes in all the positions: word-initial, word-medial, or word-final. Therefore, a sound that does not appear in all the positions in the Accent Inventory may appear to be unproblematic.

One other limitation of the study was that the researcher did not pilot the study before the research was conducted. A final limitation of this study was that the researcher analyzed the pronunciation of the participants only on the segmental level (vowels and consonants), for an analysis of the suprasegmental phonemes (stress, pitch, intonation and rhythm) is beyond the scope of this study because of the time constraints.

Delimitations of the Study

A delimitation of this study was that advanced learners of English with at least a preliminary knowledge of English phonetics were chosen as participants in order to be able to arrive at a sound analysis that will illustrate the actual situation, to detect the truly problematic English phonemes for Turkish learners of English, and to avoid the possibility of mislabelling the learners' mispronunciations caused merely by the ignorance of the phonetic features of English. For that purpose, the sophomores of the English language department of Dokuz Eylul University, Buca Faculty of Education, who, in their freshman year, completed a compulsory phonetics course and, therefore, at the time the research was carried out, had already been introduced to the English phonetic system, were asked to participate in the research.

CHAPTER 2   REVIEW OF LITERATURE

Introduction

In this chapter, the background of the problem, history of the relevant theory and research, goals of pronunciation teaching, and theories of pronunciation teaching will be reviewed. In addition, a conceptual framework for the study will be offered.

Background of the problem

Pronunciation is sometimes referred to as the "poor relation" of the English language teaching world. It is an aspect of language teaching which is often neglected if not completely ignored. However, just as low quality loud speakers disguise the fact that the audio system is of state-of-the-art technology, poor pronunciation makes speakers unintelligible who may, in fact, be perfectly grammatical, fluent and accurate. Learners are quite aware of the fact that good pronunciation pays. They admit that pronunciation is the one skill which they want to be their best but usually happens to be their worst.

Another measure of the neglect pronunciation has suffered is given by the amount of literature on the subject. The following table from Brown's (1991) book "Teaching Pronunciation" gives the number of articles on pronunciation published over the period of 1975-1988 in four of the leading English language teaching journals. Out of 1420 articles in those four journals during the given period, only 95 of them were related to pronunciation teaching (which is only 7.6 %).

Table 1.

Pronunciation Articles in Selected Journals.

Journal	total no. of articles	no. of articles on pronunciation	%
International Review of Applied Linguistics	159	19	11.9
Language Learning	293	29	9.9
TESOL Quarterly	385	20	5.2
ELT Journal	583	27	4.6
Total	1420	95	7.6

This lack of attention to the teaching of pronunciation has contributed to a lack of expertise, or even interest, among English language teachers. However, researchers like Strevens (1974) and Abercrombie (1956) claim that all language teaching involves pronunciation teaching and from the very beginning. Although grammar or vocabulary can be gradually immersed, teachers cannot avoid using phonemes like interdental fricatives or schwa, for example, postponing them till later on the grounds that they are difficult for their class (Brown, 1991).

History of the Problem

Not to mention the severe neglect it suffered during the period when the Grammar-Translation method was used, from the 1940s into the 1960s pronunciation was viewed as an important component of English language teaching curricula in both the Audiolingual methodology in the U.S. and the situational language teaching in the U.K.

The pronunciation class in this view was one that gave primary attention to phonemes and their meaningful contrasts, environmental allophonic variations, and combinatory phonotactic rules along with structurally based attention to stress, rhythm, and intonation.

However, beginning with 1960s, and continuing through the 1970s and into the 1980s, and in sharp contrast to the previous period, many questions were raised about teaching pronunciation in the English language teaching curricula. There were questions about the importance of teaching pronunciation as an instructional focus or questions about whether it could be, or should be taught directly at all. The effect was that more and more language teaching programs gave less and less time and explicit attention to the teaching of pronunciation and even many programs dropped it entirely.

Beginning in the mid 1980s and into the 1990s there has been a growing interest in revisiting the pronunciation component of the English language teaching curricula. Morley (1991), in her famous TESOL article, states the following:

> Overall, with today's renewed professional commitment to empowering
> students to become effective, fully participating members of the
> English speaking community in which they communicate, it is clear

that there is a persistent, if small, groundswell of movement to write pronunciation back into the instructional equation but with a new look and a basic premise: Intelligible pronunciation is an essential component of communicative competence (p. 488).

Goals of Pronunciation Teaching

It will be useful at this point to define the goals of pronunciation teaching. Morley (1991) states that it has become increasingly clear in recent years that ignoring students' pronunciation needs is an abrogation of professional responsibility. In programs for adult (and near adult) ESL learners in particular, it is imperative that students' educational, occupational, and personal/social language needs, including reasonably intelligible pronunciation, be served with instruction that will give them communicative empowerment -- effective language use that will help them not just to survive, but to succeed. Moreover, with an increasing focus on communication has come a growing premium on oral comprehensibility, making it of critical importance to provide instruction that enables students to become, not "perfect pronouncers" of English (which is neither reasonable nor necessary), but intelligible, communicative, confident users of spoken English for whatever purposes they need.

In the past it might have been said that the goal in teaching pronunciation should always be native-like pronunciation. But today we know that this is an inappropriate goal for most of the learners. Morley (1991) claims that the old Utopia of native-like pronunciation has long been given up. Kenworthy (1987) adds that expecting the learners to have native-like pronunciation or accent is neither reasonable nor possible. For the majority of learners a far more reasonable goal is to be "comfortably" intelligible. The issue of intelligibility will be elaborated in the following section.

As for who needs the most assistance with pronunciation, Morley (1987) points out that there are at least four groups of learners who need most assistance with pronunciation to improve their oral communication skills:

(1) Foreign teaching assistants-and sometimes even foreign faculty in colleges and universities in English speaking countries.

(2) Foreign-born technical, business and professionals employees in business and industry in English speaking countries.

(3) Refugees (adult and adolescent) in resettlement and vocational training programs wishing to relocate in English speaking countries.

(4) International business people who need to use English as their working lingua franca.

Again, however, the goal of teaching pronunciation to such people is not necessarily to make them sound like native speakers of English. Except for a few highly gifted and motivated individuals, such a goal is quite unrealistic. The more modest and realistic goal that we have in mind is that of enabling the learners to get above a certain level so that the quality of their pronunciation will not detract significantly from their ability to communicate. However, we should keep in mind the fact that teachers of English to the speakers of Turkish and the teacher-trainees in Turkish teacher-training institutions are the ones that need the most assistance with pronunciation.

Importance of Good Pronunciation

Pronunciation is an important component of a learner's overall language ability. A learner's language may be grammatically correct, the learner may use rich and appropriate vocabulary, may speak fluently and accurately (grammatically) but may well be unintelligible which makes the listeners look down upon his or her English. Besides, a learner may employ avoidance strategies in other areas of language, selecting simple grammatical constructions and vocabulary items in preference to more complex forms which s/he can not handle with confidence.

However, poor pronunciation cannot be compensated for in this way. Teachers of English have probably all met foreign speakers of English who sounded very fluent and may have been perfectly grammatical, with appropriate vocabulary, but who were unintelligible owing to poor pronunciation (Brown, 1991).

Intelligibility

One question raised about the quality of pronunciation of a learner has been that of intelligibility. Not to mention the old Utopia of native-like pronunciation or accent -- which is neither reasonable nor possible (Morley, 1991), a far more reasonable goal is to have a comfortably intelligible pronunciation. An informal definition of intelligibility is "being understood by a listener at a given time, in a given situation." Kenworthy (1987) gives a more operational definition of intelligibility as follows:

> The more words a listener is able to identify accurately when said by a speaker, the more intelligible that speaker is. Since words are made up of sounds, it seems that we are talking about the issue of equivalence of sounds. If the foreign speaker substitutes one sound or feature of pronunciation for another, and the result is that the listener hears a different word or phrase from the one speaker was aiming to say, we say that the foreigner's speech is unintelligible (p. 13).

Today, intelligible pronunciation is the goal set for teaching pronunciation and as Morley (1991) states, intelligible pronunciation is an essential component of communicative competence.

Theories of Teaching Pronunciation

Various language learning theories can also be applied to the teaching of pronunciation. As the learning theories and approaches change, so does pronunciation teaching. For instance, the popularity it gained by the introduction of audio-lingual method disappeared as new pedagogical sights were set on language functions, communicative competence and task-based methodologies.

In this section some of the major language theories that relate to the teaching of pronunciation will be reviewed.

Contrastive Analysis Hypothesis

Deeply rooted in behaviorism and structuralism the contrastive analysis hypothesis appeared during the middle part of this century. At that time, and even today, it was one of the most popular explanations of applied linguistics.

Brown (1987) defines the contrastive analysis hypothesis as follows:

> Contrastive analysis hypothesis claimed that the principal
>
> barrier to second language acquisition is the interference of
>
> the first language system with the second language system and
>
> that a scientific and structural analysis of the two languages
>
> in question would yield a taxonomy of linguistic contrasts
>
> between them which in turn would enable the linguists predict
>
> the difficulties a learner would encounter (p. 145)

In addition to its explanatory feature, the contrastive analysis hypothesis also influenced language teaching materials. Lado (1957) cites Charles Fries, his teacher and colleague and the originator of the contrastive analysis hypothesis:

> The most effective materials are those that are based upon a scien-
>
> tific description of the language to be learned, carefully compared
>
> with a parallel description of the native language of the learner
>
> (p. 9).

The same idea is presented in each of these statements, the idea that it is possible to contrast the system of one language-the grammar, phonology and the lexicon, with the system of a second language in order to predict those difficulties which a speaker of the second language will have in learning the first language and to construct teaching materials to help the learner to learn that language (Wardhaugh, 1970).

For a number of years materials in foreign languages were prepared on these fundamental assumptions about the relationships between the two linguistic systems in learning a foreign language. Stockwell and Bowen (1965) took the predictive version of the contrastive analysis one step further and presented a hierarchy of difficulty of learning problems based on the types of difficulties between languages. Their approach argues that the greater the difference between languages, the more persistent the predicted errors will be. However, it was argued that the contrastive analysis hypothesis can only be used to explain differences between two given languages but not to predict difficulties.

In commenting on their work later on, Stockwell and Bowen pointed out the following:

Our hierarchy itself-the ranking of particular problems of pronuncia-
tion on a scale from hardest-to-acquire and most-persistently-diffi
cult down to virtual-nonexistence as problems-is totally empirical in
terms of our own experience in some ten years of intensive Spanish
teaching. The only thing that was our attempt to categorize these
errors in terms which seemed to us provide an explanation of why the
facts should be as our experience indicated them to be (p. 19).

Since its first introduction by Charles Fries in the middle part of
this century, and despite Lado's (1957) caveat that

the list of problems resulting from the comparison of the foreign
language with the native language must be considered a list of
hypothetical problems until final validation is achieved by checking
against the actual speech of students (p. 72)

the contrastive analysis hypothesis received much criticism -- maybe more
than praise. Consequently, in the years that followed, contrastive
analysis revealed a change in the emphasis from contrasts of discrete
linguistic items to those of language use, culture and patterns of dis-
course (Robinett and Schachter, 1991). However, despite these criticisms,
contrastive analyses continued to be conducted. Larsen-Freeman and Long
(1991) claims that the enduring quality of contrastive analysis was not due
to sheer obstinacy; no one could deny that the mother tongue influenced
second language performance, so that we can often identify with some degree
of assurance the native language of a foreign speaker, at least where
phonological evidence is available. They went on to say that although the
contrastive analysis hypothesis was unproven, contrastive analysis as a
methodological option was not abandoned at all.

In an attempt to reconcile the disappointing results of the empirical
investigations, Wardhaugh (1970) proposed a distinction between the strong
and the weak version of the contrastive analysis hypothesis. The strong
version involved predicting errors in second language learning based upon
a priori contrastive analysis of the first and second languages. In the
weak version, however, researchers start with learners' errors and explain
at least a subset of them by pointing to the similarities and differences
between the two languages.

Thus, although contrastive analysis might not be useful a priori, it possesses a posteriori explanatory power. He also claims that the weak version of the contrastive analysis is probably used most often and he questions the validity of the strong version, the predictive ability of the contrastive analysis. He further claims that the strong version of the contrastive analysis is quite unrealistic and impracticable; on the other hand, the weak version does have certain possibilities for usefulness. Ellis (1991), on the other hand, claims that the weak version of the contrastive analysis hypothesis which stated that contrastive analyses might be used to explain some of the errors that were seen to occur was still possible. Odlin (1989) advocates this claim by stating that a comparison of the native and the target language would be useful for explaining why certain errors arise. Odlin also claims that contrastive analyses have long been a crucial part of second language learning pedago- gy, and in the 20th century contrastive analyses have become more and more detailed. He went on to say that cross-linguistic comparisons constitute such an indispensible basis for the study of transfer that a discussion of second language research must include contrastive analysis hypothesis. According to Odlin, what counts as a prediction is frequently based on data about learner performances known to a linguist who has interpreted the data record with the help of cross-linguistic comparisons. For instance, a record of errors in French made by English speaking learners can serve as a predictor of errors that English speaking learners will make in the future. However, a good contrastive analysis should make it easier to explain why errors will or will not occur in any given instance. Without clear understanding of the conditions that occasion transfer there is little hope of developing highly sophisticated contrastive analyses. Therefore, good explanations are a crucial part of achieving that goal. Based on the above assumptions, this study will analyze the pronunciation problems of the Turkish learners of English and explain the possible reasons for these pronunciation problems by using the a posteriori explanatory application (weak version) of the contrastive analysis.

Interlanguage and Fossilization

Another major theory that has motivated empirical research is the "Interlanguage Theory." The term was coined by Selinker (1972) and since its initial formulation it has undergone considerable changes which maked it difficult to give an accurate account of the theory.

The main premises of the interlanguage theory, as Ellis (1992) put forward and for each of which a brief elaboration will be given, are as follows:

(1) The learner constructs a system of abstract linguistic rules which underlies comprehension and production.
This system of rules is referred to as an interlanguage. The learner draws on these rules in much the same way as the native speakers draw on linguistic competence. The rules enable the learner to produce novel sentences.

(2) The learner's grammar is permeable.
The grammar that the learner builds is far from being stable or complete. The learner amends it as he or she confronts new linguistic forms and rules. This change might be "internal", i.e. by means of transfer from the native language or overgeneralization of interlanguage rule or "external", i.e. through exposure to target language input.

(3) The learners' competence is transitional.
As a result of the permeability of interlanguage system learners rapidly revise it. They pass through a number of stages in the process of acquiring the target language. The series of stages together comprise the interlanguage continuum.

(4) The learners' competence is variable.
At any stage of development the language produced by learners display systematic variability.

(5) Interlanguage development reflects the operation of cognitive learning strategies.
One type of explanation of the process by which interlanguages are constructed identifies a number of cognitive learning strategies such as native language transfer, overgeneralization

and simplification.

(6) Interlanguage use can also reflect the operation of communicative strategies.

When learners are faced with having to communicate messages for which the necessary linguistic resources are not available they resort to a variety of communicative strategies which enable them to compensate for their lack of knowledge. Typical communicative strategies are paraphrase, code-switching and appeals-for-assistance.

(7) Interlanguage systems may fossilize.

The term fossilization as introduced by Selinker refers to the tendency of many learners to stop developing their interlanguage grammar in the direction of the target language once they are able to communicate adequately for their immediate purposes. At this stage the motivation to improve wanes and their interlanguages get fossilized (pp. 51-52).

Interlanguage theory provided an explanation of how learners acquire a target language and had a considerable impact on language pedagogy. Fossilization, on the other hand, has raised many discussions and has led to research on the topic as to its existence, reasons and the remedial ways to help learners repair their already fossilized language, especially pronunciation. As Blair (1991) claimed, with the disputable policy of the Natural Approach of not bringing attention to student production errors claiming that it may promote the early attainment of fluency -- but only at the cost of accuracy -- fossilization occured more. Because, once the bad habits are established, they are not easily eradicated. Once a low level of interlanguage is used repeatedly and successfuly in communication situations, it "fossilizes." The threat of fossilization is so dangerous and real that, no matter what treatment is administered later, there is little hope for the betterment of the case. Therefore, to avoid fossilization, language programs have to guide the learners systematically right from the beginning.

Psychomotor Considerations

Another important issue in learning pronunciation parallel to the role of neurological considerations is the role of psychomotor coordination of the speech muscles. This is claimed to be one of the most important factors in second language acquisition, or more specifically, accent. It is also important to appreciate the fact that given the existence of several hundred muscles that are used in the articulation of human speech (throat, larynx, mouth, lip, tongue, velum and some other muscles), a tremendous degree of muscular control is required to achieve the normal fluency of a native speaker of a language (Brown, 1987). Therefore, the physical development and the psychomotor coordination of these speech muscles must be considered in a comparison of two languages. Especially in the adults, since the speech muscles have already been developed, pronunciation and accent are more marked than in the children.

Sound-Spelling Correlation

Some researchers claim that there is a correlation between spelling and sound, i.e. grapheme and phoneme, and that the written words could as well be used to teach pronunciation. Schane (1971) pointed out that the English spelling system is much more regular than has been thought and suggested that this systematicity could help learners. Oswalt (1973) demonstrated that the English orthography is regular and that the phonemic value of a letter or grapheme is predictable in terms of the surrounding phonemes.

Researchers had different ideas about when the printed word should be introduced. Muller (1965) claimed that early exposure to the written word has an adverse effect upon the students' pronunciation. On the other hand, Lado (1972) favored early introduction of the written word and claimed that the evidence that students should be introduced to the written word at an early stage in foreign language study is increasing, and that, especially at the beginning level, reading should be given an expanding role.

Dickersen (1977) claimed that learners also need to develop the skill to predict which sounds are required in which words by a careful study of orthography. Dickersen (1978) further claimed that even non-native speakers of English can use English orthography to learn to predict the

sounds of words they have never before seen or heard, by using the pedagog-ically-interpreted generative rules.

There are also some researchers who were suspicious of possible interference of the written words in the pronunciation. Bowen (1978) claimed that once the students are introduced to reading and writing, they shift from oral-aural dominance to visual dominance, which results in interference from the printed word in foreign language study. Therefore, he recommended study of sound-spelling correspondence. Butzkamm (1985) explained that the printed word should be introduced in second language teaching only with great care in order to avoid interference from spelling on pronunciation.

Sound-Spelling correlation is especially important in Turkish, because Turkish is a phonemic language. i.e. there is a one-to-one correspondence between the sounds and the letters of Turkish. Therefore, Turkish learners of English tend to pronounce the sound value of every single letter they read.

Individual Variables

There are several individual variables that seem to impede or enhance the acquisition of a reasonable pronunciation. Kenworthy (1987) names six individual factors, for each of which a brief elaboration will be given as the following:

(1) The learner's native language.

Mother tongue transfer is generally more systematic, pervasive and persistent in the area of pronunciation (the foreign accent) than it is in grammar or lexicon. This makes it important for teachers to know something about the sound system of the language(s) of their learners in order to anticipate and under stand the source of errors.

(2) The learner's age.

The younger the age when the learner begins to acquire English, the better the learner's pronunciation. In fact, complete mastery of English before the age of 12 generally results in accent-free speech, whereas acquisition after age 15 virtually guarantees some degree of accentedness in speech.

(3) The learner's exposure.

Exposure to the target language can refer to both the length of time and the intensity of the exposure overtime. Generally speaking, the more time spent on learning the spoken language, the better the pronunciation.

(4) The learner's innate phonetic ability.

Some people simply have more skill at or aptitude for imitating and producing sounds and sound patterns that are new to them. Such learners will achieve a better pronunciation than will those learners with less aptitude.

(5) The learner's attitude and sense of identity.

The attitude the learner has toward the target language and its speakers may affect his or her pronunciation (the more favorable the attitude, the better the pronunciation). Likewise the learner's personality and sense of their own identity will also play a role; for example, extremely authoritarian, chauvinistic learners may (perhaps unconsciously) refuse to modify their pronunciation at all when speaking English.

(6) The learner's motivation and concern for good pronunciation.

The factor is of greatest importance in pronunciation instrucn; if the learner's motivation to improve is strong and if the investment of time and effort (genuine not feigned) is great, there will be improvement.

A language teacher should know of and take into consideration the above individual variables in his or her teaching environment to achieve better results with pronunciation.

Conclusion

In this chapter, major issues concerning the teaching of pronunciation has been dealt with and the related literature has been reviewed. In the next chapter methodology of the research will be discussed in detail.

CHAPTER 3 RESEARCH METHODOLOGY

Introduction

       This study attempts to investigate the pronunciation problems of Turkish learners of English and to offer English language teachers an analysis of the pronunciation problems Turkish learners of English may have. Therefore, the researcher collected data to determine the English phonemes that constitute problem for Turkish learners of English in producing these English phonemes. In this methodology chapter, an overall description of the entire study will be given. The details of the process of the selection of the participants and why and how they were selected will be discussed. The type and the characteristic of the data collected for the study and the choice of the instrument used to collect the data will also be described. In addition to this, the procedure of data collection and analysis will be given in detail.

       Participants

       Thirty second-year students (teacher-trainees) from Dokuz Eylul University Buca Faculty of Education Foreign Languages Department English Language Department participated in this study. These thirty students were selected randomly from a population of seventy second-year students of the above mentioned department.

       These students are the second-year students of a four-year teacher-training program. The population's native language is Turkish and they are required to hold a certain level of proficiency in English enough to be able to start the first year. Their proficiency is tested through a proficiency test which they take at the beginning of the academic year. The test consists of a reading section, a writing section and a grammar section. The testees are then interviewed by the faculty as a final step and according to their performance in each section of the test their proficiency level is determined. The ones who achieve the required level of proficiency start with the first year and the ones who perform below the required level of proficiency have to attend a one-year preparatory program at the end of which they take another proficiency test to prove that they have attained the required level of proficiency and then continue with the first year.

The thirty students who participated in the study were selected randomly from a list of seventy second-year students. These students were all beyond a certain level of proficiency--which is pre-advanced--and had all taken and succeeded in the compulsory phonetics course in the first year. Therefore, since there was not much difference in the proficiency levels of these students, each student was given a number and thirty numbers were drawn randomly from those seventy numbers. These thirty students were asked to participate in the research and, if they volunteered, were asked to sign a consent form (see Appendix B). They were given the necessary information about the study and they were advised that their voice would be recorded to be analyzed only by the researcher in strict confidentiality.

Data Collection/Analysis Procedures

Since the purpose of this study was to analyze the pronunciation problems of Turkish learners of English, the researcher needed to record the participants' pronunciation to determine the English sounds that constitute difficulty for them. Although the researcher intended to audio-tape natural oral conversation, he had to change plans because of the tremendous amount of time and ingenuity it required.

Data Collection Instrument

Since this study aimed to get at an anlysis of the pronunciation of the participants, the researcher intended to record their voices. Therefore, a reading passage was chosen to be used to elicit the pronunciation of the participants. For that purpose, Prator and Robinett's (1972) Accent Inventory (see Appendix A) was chosen as the data collection instrument. This Inventory is a reading passage to diagnose the elements of foreign accent in non-native speakers of English. The Inventory is eleven sentences long and includes all the English phonemes in various positions in words in a meaningful context. Some phonemes, of course, do not occur in all positions because of their phonological distribution. The Inventory has been used by the authors for over twenty years now and as they report it worked perfectly well in fulfilling their institutional requirements. The Inventory also fit the needs of the researcher, who aimed to make the participants produce all the English phonemes in various positions.

Data Collection Procedures

After the selection of the data collection instrument, the researcher obtained the necessary permission from the head of the department where the research was going to be conducted. Because the researcher himself is from the faculty of this department, all of the teachers willingly allowed their students -- if selected -- to participate in the research. Following this procedure, the participants were selected as described in the previous section and then the researcher interviewed the selected participants individually in one of the classrooms and recorded their voices as they read aloud the Accent Inventory using a microphone and a tape-recorder. The participants were allowed to quickly read the passage once before their voice was recorded and the researcher recorded their voices when they felt that they were ready. The researcher checked the recording of each participant before the participant left to ensure that the recording had been made without any technical failure in the machine.

Data Analysis Procedures

After the data were collected, the researcher listened to the recordings many times to detect the pronunciation problems of the partici- pants. The researcher used a rubric which classified the strategies of the participants in handling the difficulty they had in pronouncing a sound. This rubric described three types of strategies and marked them as follows; S=substitution, A=addition, and D=deletion. Substitution means that a phoneme is substituted for another, e.g. Turkish /v/ for the English /w/, addition means that a phoneme is added, e.g. addition of a vowel in-between the consonant clusters, deletion means that a phoneme is deleted, e.g. the deletion of the second element in the diphthong /ou/ as in the word clothing. Similar rubrics were used by several researchers in analyzing the errors in reading and writing. For instance, Goodman (1981) used a similar rubric for miscue analysis of miscues in reading.

The researcher also asked two native speakers to analyze 10% of the data (three participants) in order to confirm the reliability of the researcher's analysis. The two native speaker raters were trained by the researcher for half an hour prior to their analysis of the randomly selected portion of the data. The raters were trained to read the phonetic

symbols in the checklist, were briefly reminded of the articulatory features of some of the phonemes, were warned not to identify the British English pronunciations as mispronunciation, and asked to listen to the recordings carefully and critically. The native speaker raters then listened to the data three times and identified the mispronunciations as they perceived, using the same checklist as the one the researcher used containing the English phonemes. The researcher then compared his results with those of the native speaker raters and found that his findings matched their findings. The native speaker raters and the researcher identified the same sounds as mispronounced by the participants. With one of the raters 95 % agreement was achieved and with the second rater 93 % agreement was achieved. When the raters and the researcher had different perception of the mispronunciations, the researcher offered explanations about the particular sound and the piece of data was listened to once more for a final decision. One of the raters, however, did not identify the syllabic /n/ as mispronounced in the pronunciation of one of the participants.

Conclusion

In this chapter, methodology used in the study has been presented. In addition to this, the processes of selecting the participants, data collection instrument, data collection procedures, and data analysis procedures have been discussed.

CHAPTER 4   PRESENTATION AND ANALYSIS OF THE DATA

Introduction

        This study aimed to offer an analysis of the pronunciation problems
of Turkish learners of English and to give an account of the probable
reasons for these problems. For that purpose the researcher elicited data
from the second-year students of the English Department of Dokuz Eylul
University Buca Faculty of Education. The researcher employed Prator &
Robinett's (1972) Accent Inventory (see Appendix A) as the data collection
instrument and recorded the voices of the participants as they read aloud
this Accent Inventory. The researcher, then, listened to the recordings of
the participants' voices many times to decide which English phonemes they
failed to pronounce properly and how they handled those problematic sounds.

        In this chapter, the data collected will be presented and, at the
same time, analysis of the data will be given.

Presentation and analysis of the data

        The researcher listened to the recordings of the participants' voices
and, in the first place, looked for all of the English phonemes that
occurred in the Accent Inventory. Then, for each phoneme, the researcher
calculated the total number of students and the percentage of the partici-
pants who failed to pronounce a particular phoneme and ruled out the
phonemes that did not cause the participants any problem or caused very
little problem (the researcher did not count a phoneme as problematic
unless more than five participants had problems pronouncing it).

        Table 2 shows the distribution of the English sounds that were
mispronounced by the participants. In the table, there are fourteen pure
phonemes, three diphthongs, two allophones, one consonant cluster and a
phoneme couple.

Table 2

Distribution of the English Sounds that the Participants Failed to
Pronounce and Their Percentage.

Sound	F[a]	%
/dʒ/	27	90
/ŋ/	24	80
/ɘ/	23	76
/æ/	22	73
/w/	21	70
/eɪ/	20	66
/r/	20	66
/ʊ/	19	63
/aɪ/	19	63
/d/	18	60
/i:/	17	56
/ou/	16	53
/ɔ:/	16	53
/t/	15	50
/ʒ/	15	50
/ɵ/	14	46
/st/	11	36
/ɘr/	11	36
/e/	9	30
/l/	8	26

Note. F[a] = Total number of participants who failed to pronounce
a particular sound.

In the following section, the sounds in table 2 will be discussed
in detail and examples will be given. The discussions on Turkish phonology
are based on the works by Sebuktekin (1975) and Turgut (1982).

1. /dʒ/

27 out of 30 participants (90 %) failed to pronounce this phoneme correctly when it occurred in the word final position. Although this sound exists in Turkish sound system, it does not occur in word final position in Turkish except for some borrowed words. Hence, the reason why so many participants failed to pronounce this sound was that it occurred in word final position in the word language. Therefore, 90 % of the participants substituted /t / for /dʒ/. The same phenomenon is also seen in Turkish when, in some borrowed words, /dʒ/ occurs in word final position. According to Turkish phonotactic rules /b/, /d/, and /dʒ/ lose voice when they occur in word final position except for some loan words and they are usually substituted by the voiceless counterparts of these sounds. For example loan words like hac, sac, rab, etc. are pronounced as haç, saç, and rap.

2. /ŋ/

24 out of 30 participants (80 %) failed to pronounce this sound. In fact, this is one of the most problematic English sounds for Turkish learners of English. The non-existence of this sound as a separate phoneme in Turkish creates serious problems. Although when Turkish /n/ is followed by /g/ or /k/ in word medial position it is pronounced somewhat like the English /ŋ/, this phoneme never occurs in word final position in standard Turkish. Therefore, the participants substituted /nk/ or /ng/ for /ŋ/ as in the words studying, feeling, etc. However, the participants did not use /ng/ when /ŋ/ occurred in word final position, because Turkish phonotactic rules do not allow /g/ to occur in word final position or else, it loses voice and becomes /k/. Thus, when /ŋ/ occurred in word medial position, participants substituted /nk/ for it, and when it occurred in the word final position, participants substituted /nk/ for /ŋ/.

3. /ə/

23 out of 30 participants (76 %) failed to pronounce this mid-central schwa sound. Although it has a nearish equivalent in Turkish /ı/, Turkish /ı/ is higher and tenser because Turkish has no central vowels. Especially, under the influence of spelling, Turkish speakers give the schwa its stressed value and thus, pronounce the word about as /əbaʊt/. Therefore, 76 % of the participants substituted Turkish /e/ for schwa when it occurred

in unstressed syllables as in the words, <u>about</u>, <u>appropriate</u>. However, participants were able to pronounce schwa (though not exactly schwa, rather Turkish /ı/) when it occurred in final syllables as in the words <u>another</u>, <u>question</u>, etc.

4. /æ/

22 out of 30 participants (73 %) failed to pronounce this low-front vowel as in the words, <u>has</u>, <u>campus</u>, etc. Turkish does not have this vowel. Turkish /e/ is midway between English /e/ and /æ/ both in the tongue height and position. Therefore, 73 % of the Participants substituted Turkish /e/ for /æ/ because Turkish /e/ is laxer and higher than the English /æ/.

5. /w/

21 out of 30 participants (70 %) failed to pronounce this consonant when it occurred in the word final position as in the words <u>when</u>, <u>where</u>, etc. Although this sound does not exist in Turkish as a separate phoneme, it may occur as an allophone of Turkish /v/ only when it is followed by /u/ in the word medial position as in the words; <u>havuc</u>, <u>tavuk</u>, <u>bavul</u>, etc.

However, it never occurs in the word initial position in Turkish and, therefore, 70 % of the participants substituted /v/ for /w/ when it occurred in the word initial position.

6. /eı/

20 out of 30 participants (66 %) participants failed to pronounce this diphthong properly as in the words <u>stayed</u>, <u>take</u>, etc. It is not due to the fact that Turkish has no diphthongs, but that articulation and elements of diphthongs are different in Turkish and English diphthongs. In Turkish diphthongs first element of the diphthong (in this case /e/) is shorter than the first element in an English diphthong. The second element in Turkish diphthongs, on the other hand, is the /y/ sound which is not yet proven to be a semi-vowel or glide, whereas in English diphthongs second element is certainly a semi-vowel (in this case /ı/). Consequently, 66 % of the participants used Turkish /y/ as the second element of this diph-thong, thus unnecessarily shortening the first element of the diphthong pronouncing it as the Turkish word <u>bey</u> /bey/.

7. /r/

20 out of 30 participants (66 %) failed to pronounce the English retroflex /r/ as in the words where, first, etc. Although Turkish has this sound as an allophone of the Turkish /r/, participants seem to fail to choose the right allophone in the right position. Therefore, 66 % of the Participants tend to choose the non-retroflex flap or fricative allophones of Turkish /r/ in the positions that require retroflex /r/. This is probably due to the reason that the voiced apico-alveolar fricative /r/ is the most frequent allophone of Turkish /r/.

8. /ŋ/

19 out of 30 participants (63 %) failed to pronounce this syllabic /ŋ/ as in the words wouldn't, shouldn't, etc. Since there are no syllabic consonants in Turkish and Turkish phonotactic rules generally require a vowel between two consonants, Turkish speakers tend to add a vowel before the syllabic consonants. In our case, 63 % of the participants added schwa before the syllabic /ŋ/ and pronounced the word wouldn't as /wʊdənt/.

9. /aɪ/

19 out of 30 participants (63 %) failed to pronounce this diphthong properly as in the words united, time, etc. It is not due to the fact that Turkish has no diphthongs, but that articulation and elements of diphthongs are different in Turkish and English diphthongs. In Turkish diphthongs first element of the diphthong (in this case /a/) is shorter than the first element in an English diphthong. The second element in Turkish diphthongs, on the other hand, is the /y/ sound which is not yet proven to be a semi-vowel or glide (Turgut, 1982), whereas in English diphthongs second element is certainly a semi-vowel (in this case /ɪ/). Consequently, 63 % of the participants in the study used /y/ as the second element of this diphthong, thus unnecessarily shortening the first element of the diphthong pronouncing it as the Turkish word bay /b y/.

10. /d/

18 out of 30 participants (60 %) failed to pronounce this voiced alveolar stop /d/ when it occurred in the word final position as in the words offered, dressed, etc. Although the same sound exists in Turkish (though a little bit more fronted and dental) the problem is that Turkish

/d/ is not in free variation as the English /d/. Turkish /d/ does not occur
in the word final position, in fact, Turkish phonotactic rules do not allow
voiced stops in the word final position. Therefore, 60 % of the partici-
pants substituted /t/ (the voiceless counterpart of /d/) for /d/ when it
occurred in the word final position.

11. /i:/

17 out of 30 participants (56 %) failed to pronounce this high-front
long vowel /i:/ as in the words he, be, etc. It is partly due to the fact
that Turkish does not have any long vowels (except for some cases where
phonological environment requires the vowel to be lengthened). In fact,
Turkish /i/ is midway between English /i/ and /i:/ both in the tongue
height and position. Turkish /i/ is relatively tenser than the English
/i/, but laxer than the English /i:/. Since English /i:/ is longer than
the Turkish /i/, Turkish speakers of English tend to pronounce this English
long vowel like its short counterpart in Turkish. Therefore, 56 % of the
participants in the study substituted Turkish /i/ for the English /i:/.

12. /ou/

16 out of 30 participants (53 %) failed to pronounce this English
diphthong properly as in the word clothing. Differences in the production
of diphthongs in Turkish and English were given in item 6 of this section
but there is more to be added to that discussion for this particular
diphthong. The problem with this diphthong is not caused by the difference
in the second element of the diphthong. Rather, the problem is that
participants did not pronounce any sound as the second element in this
diphthong. Therefore, 53 % of the Participants simply pronounced /ɔ/ as if
it was a single vowel but not a diphthong.

This might be due to the fact that there is no similar sounding diph-
thong in Turkish. As a result, it can be concluded that the participants
deleted the second element of the English diphthong /ou/ and, instead,
pronounced /ɔ/.

13. /ɔ:/

16 out of 30 participants (53 %) failed to pronounce this mid-back,
long vowel /ɔ:/ as in the word long. Turkish /o/ is lower and shorter than
the English /ɔ:/. The mouth is not so wide open as it is for the English /ɔ:/

/. Turkish /o/ is relatively more rounded and more fronted than the
English /ɔ:/. As it was mentioned above, Turkish does not have long vowels
and any lengthening is due to the phonological environment. Therefore,
53 % of the participants substituted the short Turkish counterpart /o/ for
the English /ɔ:/.

14. /t/

15 out of 30 participants (50 %) failed to pronounce the voiced
apico-alveolar stop /t/ properly. Although Turkish has a similar conso-
nant, Turkish /t/ is an apico-dental stop consonant according to the place
of articulation, whereas, the English counterpart of it is an apico-
alveolar stop consonant. Therefore, 50 % of the participants substituted
Turkish /t/, which is an apico-dental stop, for the English /t/, which is
an apico-alveolar stop.

15. /ð/

15 out of 30 participants (50 %) failed to pronounce this voiced
apico-dental slit fricative consonant /ð/ as in the words another, the,
etc. It is simply because of the fact that this consonant does not exist
in Turkish and it is a totally new sound for Turkish learners of English.
Therefore, 50 % of the participants substituted /d/, the nearest sound to
this consonant, for the English /ð/. The reason why there were not many
participants who failed to pronounce this totally new and non-existent
sound for them is that they had taken a phonetics course in the previous
year and had been taught how to pronounce this sound. The ones who failed
to pronounce this consonant either have not yet acquired this sound or
their interlanguage phonology had already been fossilized.

16. /θ/

14 out of 30 participants (46 %) failed to pronounce this voiceless
apico-dental slit fricative consonant properly as in the word think. Since
Turkish does not have this sound, 46 % of the participants substituted /t/
for the English /θ/. For detailed discussion, see item 15 above.

17. /st/

11 out of 30 (36 %) participants failed to pronounce this consonant
cluster properly as in the words study, student, etc. This is simply
because of the fact that Turkish phonotactic rules do not allow initial

consonant clusters in Turkish words (except for a few borrowed words).
Since there are no initial consonant clusters in Turkish, 36 % of the
participants added a vowel in between the two consonants, which differs
according to the following vowel after the second consonant of the cluster.
For instance, they added an /ʊ/ in-between /s/ and /t/ in the word student,
and an /i/ in the word study, an /i/ in the words States, stayed, spend, and
speech.

The same phenomenon is true for all other initial clusters and,
therefore, will not be dealt with separately.

18. /ər/

11 out of 30 participants (36 %) failed to pronounce the sounds
/ə/+/r/ properly (as in the word learn). This is due to the fact that
Turkish speakers of English misperceive the schwa sound in that environment
as the Turkish low-front vowel /ö/. Therefore, 36 % of the participants
substituted /o/ for the schwa followed by /r/.

This might also be due to the prior exposure of the participants
to the RP vowel /ɜ:/ used in the same position and its similarity to the
Turkish /ö/.

19. /e/

9 out of 30 participants (30 %) failed to pronounce this English mid-
front vowel properly as in the words when, better, etc. In fact, the
Turkish /e/ is midway between the English /e/ and /ae/, both in the tongue
height and in the tongue position. Turkish /e/ is laxer and lower than the
English /e/, too. Therefore, 30 % of the participants readily substituted
Turkish /e/ for the English /e/.

20. /l/

8 out of 30 participants (26 %) failed to pronounce this apico-
alveolar lateral consonant properly. Although Turkish has a similar /l/
consonant too, Turkish /l/ is apico-dental. English /l/ has a clear and
a dark allophone but Turkish does not have an allophone of /l/ (though a
somewhat palatalized variant of /l/ may be seen in some borrowed words).
However, more than the place of articulation, what also causes problem for
Turkish learners of English is the choice of which allophone of the English
/l/ to pronounce in which environment. Thus, 26 % of the participants

substituted Turkish /l/ for the English /l/ in some environments and pronounced clear /l/ where they were to pronounce dark /l/ and vice versa.

Conclusion

In this chapter, data collected for the research have been presented and analysis of the data has been offered. Table 2 shows the distribution of the English sounds that the participants failed to pronounce. Following table 2 each sound or sound group has been discussed in detail.

In the following chapter conclusions drawn from the research will be presented.

CHAPTER 5 CONCLUSIONS

<u>Summary of the Thesis and the Conclusions</u>

In the first chapter, introduction to the study, background and the purpose of the study and problem statement were presented. In the introduction chapter, the researcher tried to offer some discussion on the selection of the topic, the need for this study, its relevance and importance to the field. In the second chapter, related literature concerning pronunciation teaching was reviewed. In the third chapter, methodology used in the research was shown. In addition, selection of the participants, the data collection instrument, data collection and the analytical procedures were explained. Chapter 4 presented the data collected and offered an analysis of the data.

In this study, the researcher aimed to get at an analysis of the pronunciation problems of Turkish learners of English by analyzing the data elicited from randomly selected thirty participants from the English department of Dokuz Eylul University, Buca Faculty of Education in Izmir.

The researcher employed Prator & Robinett's (1972) Accent Inventory (See Appendix A) as the data collection instrument and recorded the participants' voices as they read aloud the Accent Inventory. Then, the researcher listened to the recordings several times in order to detect any failure of the participants in pronouncing the English phonemes.

The results of the study have shown that Turkish learners of English face with some problems in pronouncing certain English phonemes, and therefore, have a foreign accent.

Participants mainly faced with problems in producing the English phonemes in the following five cases.

(1) When an English phoneme was in free distribution whereas the Turkish counterpart was not.

(2) When an English phoneme was non-existent in Turkish.

(3) When the place and manner of articulation of a phoneme differed in the two languages.

(4) When the allophones of a phoneme was non-existent in Turkish.

(5) When the Turkish phonotactic rules contradicted with the English phonotactic rules.

When the participants were faced with one of the above mentioned cases, they adopted certain strategies in order to deal with the problem. The strategies that the participants used included the following.

(1) Substitute a similar sounding Turkish phoneme for the English phoneme;

(2) Delete an English phoneme that they had difficulty in pronouncing;

(3) Add a Turkish phoneme before, after or in-between the English phoneme(s);

It can be concluded from this research that Turkish speakers of English have certain difficulty with some English phonemes and that teachers of English to speakers of Turkish should allocate more time and effort to improve pronunciation of the problematic phonemes detected in this research and before continued mispronunciation leads to fossilization.

Evaluation of the Study

This study aimed to get at an analysis of the pronunciation problems of Turkish learners of English. The researcher was able to successfully detect the problematic English sounds that appeared in the diagnostic passage. Each of these sounds was discussed in detail in chapter four and probable reasons for the problem were given at the same time. However, the researcher points out the fact that there might be some other sounds that did not appear in the diagnostic passage which would probably be problematic for Turkish learners of English. Again, admittedly, a similar study which could also include supra-segmental phonemes (stress, pitch, and intonation) would yield better results as to the pronunciation problems of Turkish learners of English.

Pedagogical Implications

In connection with other studies in this field (Morley, 1987, 1991; Brown, 1987; Kenworthy, 1987), it can be claimed that teaching pronunciation is an important component of language teaching. Therefore, language teaching programs should take this into consideration and design courses that give due importance to this long neglected component of language teaching. This also entails an awareness of the pronunciation problems of Turkish learners of English. At that point, this study offers an analysis

of the pronunciation problems of Turkish learners of English so as to enable the English language teachers to speakers of Turkish to deal with those problems and help improve their students' pronunciaton.

At this point it will be useful to give some suggestions to English teachers to speakers of Turkish as to how the problematic English sounds should be dealt with. Suggestions made are based on the works by Prator & Robinett (1972), Sebuktekin (1975), and Turgut (1982).

Suggestions Concerning Vowels

In the following section, suggestions concerning problematic English vowels and diphthongs will be given.

1. /ae/ and /e/

These two English vowels cause difficulty for Turkish learners of English because they are non-existent in Turkish and are mostly substituted by the Turkish /e/. In fact, Turkish /e/ is midway between the English /ae/ and /e/ both in the tongue height and position. Teachers can indicate the differences among these three vowels and tell the Turkish learner to open his mouth a bit wider for the English /ae/ relatively drawing back his tongue. The mouth should be less open for the English /e/. The following word pairs containing these vowels might also prove useful for practice. In these word pairs, the two English vowels /ae/ and /e/ are compared to the Turkish /e/.

English /e/	Turkish /e/	English /ae/
set	set	sat
men	men	man
ten	ten	tan

Research on second language phonology claims that presenting these vowels in a meaningful context is also necessary. For instance, as in the following example, "This pen leaks/This pan leaks" the vowels /e/ and /ae/ are given in a meaningful context. Teachers can produce similar sentences in order to teach pronunciation more effectively.

2. /iː/

This vowel is problematic for Turkish learners of English because Turkish has no long vowels and, therefore, Turkish learners of English substitute Turkish /i/ for this vowel. However, Turkish /i/ is identical

with neither the English /i:/ nor /i/. In fact, Turkish /i/ is midway between the English /i:/ and /i/ both in the tongue height and position. The teacher can indicate the difference among the three sounds and ask the Turkish learner to gradually close his mouth while producing Turkish /i/ and prolong the articulation to pronounce a long /i:/. The following word pairs might be useful for practice.

English /i:/	Turkish /i/	English /i/
deep	dip	dip
keen	kin	kin
beat	bit	bit

Providing the learners with meaningful contexts which include these sounds might also be useful. For instance, "Try to come a _____ earlier" a. beat b. bit (TR) c. bit. Learners can use each of these words in the blank in the sentence and thus, hear the difference themselves.

3. /ɔ:/

This long English vowel is also problematic for Turkish learners of English because Turkish does not have long vowels. Therefore, Turkish learners of English substitute Turkish /o/ for the English /ɔ:/. The English /ɔ:/ is higher and longer, whereas, Turkish /o/ is more rounded and and fronted than the English /ɔ:/. The teacher can indicate the difference between the two and ask the Turkish learner to lower his jaw a bit more for the English /ɔ:/ and produce a longer vowel. The following word pairs might be useful for practice.

English /ɔ:/	Turkish /o/	English /o/
torn	ton	ton
chalk	çok	chock
cork	kok	cock

These vowels should also be given in meaningful sentences. For example, "There is something wrong with the _____ of this rifle. a. cock   b. kok (TR)   c. cork.

4. /ə/

Although there is no central vowel in Turkish, Turkish /ɪ/ sounds similar to the English schwa sound. However, these two are not identical. In fact, problems arising from this central vowel are not due to the

difference between the two vowels. Rather, Turkish learners of English,
under the influence of spelling, fail to pronounce the schwa when it occurs
in an unstressed syllable. For example, they fail to pronounce the schwa
in the words <u>about</u>, <u>appropriate</u>, etc. They pronounce /e/ instead of /ə/.
The teacher can indicate this phenomenon and ask the learner to centralize
the Turkish /ı/ a little bit to pronounce schwa. The following word pairs
in which Turkish /ı/ and /ə/ occur in unstressed syllables might be useful
for practice.

Turkish /ı/	English /ə/
ı'lık	a look
ı'tır	attend
ı'sık	a shake

It may also be useful to use these two sounds in meaningful sentences.
The teacher should provide the learners with such sentences.

5. /eı/ and /aı/

These diphthongs are problematic for Turkish learners of English, but
it is not due to the fact that there is no diphthong in Turkish. In fact,
there are more diphthongs in Turkish than English. However, there are
some articulatory differences between Turkish and English diphthongs.
In English, the second element of a diphthong is a semi-vowel or a glide
e.g. /i/, /ə/, and /ʊ/, but Turkish does not have semi-vowels or glides.
Instead, in Turkish diphthongs a pure consonant, /y/ is used as the second
element. Secondly, in a Turkish diphthong, the first element is shorter
than the second, whereas in an English diphthong, the second element is
shorter. These differences do not cause much difficulty but still the
English diphthongs that the Turkish learners pronounce sound somehow
strange to the ears of native speakers. The teacher can indicate the
differences between the Turkish and English dphthongs, and ask the learners
to pronounce /i/ instead of /y/ as the second element and to shorten the
second element of the diphthong instead of the first one. The teacher
should also provide the learners with some word pairs and meaningful
sentences to enable them to pronounce the English diphthongs better.
For example,

"Did you _____ this ?   a. tay (TR)   b. tie

"The horse will _____ .   a. ney (TR)   b. neigh

"I want to _____ this book.   a. bay (TR)   b. buy

Suggestions concerning Consonants

In this section suggestions concerning the English consonants and consonant clusters will be given.

1. /θ/ and /ð/

These two sounds are purely English and are non-existent in Turkish. Therefore, Turkish learners of English have certain difficulty in producing these consonants and tend to substitute Turkish /t/ and /d/ respectively for them. In order to produce these consonants, the teacher can ask the learner to place his tongue tip very close to the back edge of the upper teeth in such a way that the sides of the tongue are in close contact with the sides of the palate. The learner should make sure that the tongue tip does not touch the upper front teeth but leaves a narrow passageway there. After that the learner should release the air out of this passageway and hear the friction of air rushing out for sometime. The teacher may also provide the learners with some meaningful sentences to help them differentiate these sounds. For instance,

"Please accept our _____.   a. tanks   b. thanks

2. /t/, /d/ and /dʒ/

Although Turkish also has /t/ and /d/, they are more fronted and dental. However, the problems arising from especially /d/ include not only the difference in the point of articulation but the distribution of this consonant in the two languages. Although it is in free distribution in English, it never occurs in word-final position in Turkish.

In fact, Turkish phonotactic rules do not allow voiced stops in word-final position (except for a few loan words). Therefore, Turkish learners of English substitute /t/ for the English /d/ when it occurs in the word-final position.

This is also true for /dʒ/. It does not occur in word-final position in Turkish and, therefore, Turkish learners of English substitute /tʃ/, the voiceless counterpart of it, for /dʒ/, when it occurs in the word-final position. The teacher should indicate this fact and provide examples to

enable the learners to practice these sounds in word-final position.

3. /ŋ/

This consonant is non-existent in Turkish as a separate phoneme. However, in some phonological environments, it might occur as an allophone of the Turkish /n/. The non-existence of this consonant as a separate phoneme in Turkish causes some difficulty and Turkish learners of English tend to substitute /ng/ or /nk/ for the English /ŋ/. They substitute /ng/ for /ŋ/ when it occurs in the word-medial position and /nk/ for /ŋ/ when it occurs in the word-final position. The teacher can indicate the difference and by having them practice the similar Turkish allophone of /n/ can help the learners overcome this difficulty. For example, when Turkish /n/ is followed by /g/ or /k/, it is pronounced as /ŋ/, as in the words:

yonga	sanki
denge	çunku
dingil	Ankara

This might be useful for /ŋ/ in the word-medial position, but it is still difficult for Turkish learners to pronounce this sound in the word-final position because Turkish phonotactic rules do not allow a voiced sound in word-final position. Here, the teacher can offer exercises containing this sound in the word-final position and ask them to make sure they do not devoice the final sound. The following sentences might be useful to this end.

"I only have one _____." a. ton   b. tongue

"Are you a _____?" a. sinner   b. singer

"John _____ for help." a. rang   b. ran

"Our _____ has died." a. king   b. kin

4. /w/

This consonant, as the previous one, does not exist in Turkish as a separate phoneme, but may occur as an allophone of /v/ when it is followed by /u/ as in the words kavun, bavul, havuç, etc. The teacher can draw attention to this allophone of Turkish /v/ because /w/ is mostly substituted by /v/ by Turkish learners of English. The following sentences might be useful for practice.

"The villain was watching his victim viciously"

"Vera gets very weary every Wednesday"

"Walt wanted a very wide wagon for the vegetables"

5. /r/

Although Turkish has this consonant and its allophones, their distribution is different in Turkish. Therefore, problems arising from this consonant are mainly due to wrong selection of the allophone of this consonant. In fact, the most frequent allophone of /r/ in Turkish is the voiced apico-alveolar fricative /r/ while the most frequent allophone of /r/ in English is the retroflex /r/. Besides, in Turkish, /r/ does not occur in the word-inital position. Therefore, Turkish learners of English tend to use the most frequent allophone of /r/ in all the places. The teacher can indicate the differences between the allophones of /r/, and help the learners to choose the right allophone when necessary.

6. /ŋ̩/

This syllabic /ŋ̩/ causes difficulty for Turkish learners of English because it is non-existent in Turkish. Therefore, Turkish learners tend to insert a vowel before the syllabic consonant. The teacher should indicate the articulatory features of this sound and should offer exercises to help the learners overcome this difficulty. This consonant is formed with the tip of the tongue touching the tooth ridge. The teacher can ask the learner to place his tongue tip to the tooth ridge and keep it there for the following /n/. There should not even be a brief separation of the tongue tip and tooth ridge before the /n/. The teacher can also explain the learners that the syllabic /ŋ̩/ occurs after /t/, /d/, and /n/ and when the next syllable is unstressed.

7. /l/

Again, as in /r/, Turkish has this sound and its allophones (clear /l/ and dark /l/), but due to the differences in the distribution of these allophones, Turkish learners of English have difficulty choosing the right allophone in the right position. For example, they are not used in the word-initial position except for some imitative words like lıkır lıkır, langur lungur. Although a change in /l/'s do not cause any misunderstanding, the Turkish learner's pronunciation sounds strange to the ears of the

native speakers and it will better if the learners can differentiate between these allophones. The teacher can indicate the difference and tell the learners that the clear /l/ is used initially while the dark /l/ is used finally. The following word pairs might be useful for practice.

clear /l/	dark /l/
link	milk
let	film
like	help
clear	dull

8. Consonant Clusters

The English initial consonant clusters cause difficulty for Turkish learners of English, because Turkish does not allow initial consonant clusters. Therefore, Turkish learners of English tend to insert a vowel in between the elements of a cluster. Learners should be warned not to insert a vowel in between the elements of the cluster and try to produce the two consonants one after the other. For instance, when pronouncing /st/, the learner should start with /s/ and without inserting a vowel pronounce /t/ very rapidly.

Implications for Further Research

This study analyzed the pronunciation difficulties of Turkish learners of English only on the segmental level (vowels and consonants) and in a limited context. Further research on the supra-segmental level (stress, pitch, intonation, rhythm, etc) and in a larger context might yield better results. On the other hand, the researcher was not able to collect natural data by analyzing spontaneous conversation due to the extensive amount of time it required. Thus, the data the researcher elicited were based on unnatural and controlled performance of the partici-pants. Therefore, data based on natural and spontaneous conversation might yield better results and further research based on that type of data is strongly recommended.

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Appendix A: Prator & Robinett's accent inventory

(1) When a student from another country comes to study in the United States, he has to find the answers to many questions, and has many problems to think about. (2) Where should he live? (3) Would it be better if he looked for a private room off campus or if he stayed in a dormitory? (4) Should he spend all of his time just studying? (5) Shouldn't he try to take advantage of the many social and cultural activities which are offered? (6) At first it is not easy for him to be in casual dress, informal in manner, and confident in speech. (7) Little by little he learns what kind of clothing is usually worn here to be casually dressed for classes. (8) He also learns to choose the language and customs which are appropriate for informal situations. (9) Finally he begins to feel sure of himself. (10) But let me tell you, my friend, this long-awaited feeling doesn't develop suddenly-does it? (11) All of this takes practice.

Appendix B: Consent Form

Dear Participant,

You are beng asked to participate in research which will analyze how Turkish learners pronounce English. This study will not evaluate or judge you in any way. You will not be required to do anything other than read a passage in English. Your voice will be recorded as you read the passage.

'The researcher guarantees that your identity and data which will be elicited through audiotaping will be confidential. You are also free to withdraw any time you feel uncomfortable with the study.

Your participation will improve our understanding of how Turkish learners pronounce English and help the teachers. If you agree to partici-pate in this study, please sign your name below. I would like to thank you in advance for your co-operation. If you have any questions regarding the study you may contact my thesis advisor.

Advisor	Researcher
Dr. Linda Laube	Tarkan Kacmaz
MA TEFL PROGRAM	MA TEFL PROGRAM
BILKENT UNIVERSITY	BILKENT UNIVERSITY

_____

I have read the consent form above. I understand that there is no risk to my privacy and I am free to withdraw from participating any time I wish.

I agree to participate in your research.

Name:_____

Signature:_____

Appendix C: Consent Form for Native Speaker Raters

Dear participant,

You are kindly requested to participate in research that deals with the pronunciation problems of Turkish learners of English. You are asked to listen to the recordings of non-native Turkish speakers' pronunciation and identify the mispronunciations you perceive.

If you agree to participate, please sign below. Thank you in advance for your co-operation.

If you have any questions, you may ask the researcher.

Tarkan Kaçmaz

Bilkent University

MA TEFL Program

date   name

signature