ANALYSIS OF PRONUNCIATION ERRORS OF SAUDI ESL LEARNERS

by

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A Thesis
Submitted in Partial Fulfillment of the Requirements for the
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THESIS APPROVAL

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A Thesis Submitted in Partial

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for the Degree of

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in the field of Applied Linguistics

and Teaching English to Speakers of Other Languages

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AN ABSTRACT OF THE THESIS OF

Turki A. Binturki, for the Master of Arts degree in Applied Linguistics and Teaching English to Speakers of Other Languages, presented on May 30, 2008, at Southern Illinois University Carbondale.

TITLE: ANALYSIS OF PRONUNCIATION ERRORS OF SAUDI ESL LEARNERS

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This study was conducted as a qualitative investigation to determine the difficulty of /p v ɹ/ to Saudi ESL speakers. More specifically, this study investigated what word environments were most difficult for Saudi speakers. Subjects were specifically selected to represent Najdi dialect because it is the closest dialect to Classical Arabic and also for the lack of previous research regarding this dialect. Five native speakers of Saudi Arabian Najdi dialect studying in the U.S. were chosen to participate in this study. A word list and a reading passage were used to elicit the target sounds in order to generate data for both context and isolation. The results of this study demonstrate that Saudi ESL speakers do have difficulty with the voiced interdental fricative /v/ and to lesser extent, with /p/ and /ɹ/. The study also found that difficulty

was closely related to certain word positions. The findings of this study are important to

teachers of English as a second language especially those who deal with Saudi speakers.

DEDICATION

I would like to dedicate this thesis to my dear mom, dad, and my brothers who

have always supported me.

ACKNOWLEDGMENTS

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CHAPTER 1
INTRODUCTION

Many second language learners want to "sound like natives", however this dream has yet to be achieved by the majority of second language learners are under the impression that they speak English intelligibly, but the truth is a vast majority of ESL learners make numerous errors. In addition to phonological, lexical and spelling errors, learners also produce pronunciation, rhythm, intonation voice quality errors (Messiha, 1985). To a greater extent, ESL learners are not even aware of the pronunciation errors that they make.

There are numerous factors that contribute to the errors second language learners produce, especially in the area of pronunciation. Certainly, the differences between the learners' native language and the acquired language play an important role in these difficulties. Moreover, there are elements that contribute directly to pronunciation errors. In addition to variations in the phonemic inventory of both languages, age and language transfer also play a strong role in the acquisition process.

1.1 Attitudes towards pronunciation

English occupies a high status among world international languages as it has

become the language of diplomacy, trade, communication, technology, business and

development of large numbers of Arab countries (Suleiman, 1993). Its importance has

shaped the positive attitudes of some second language learners. Suleiman (1993) stated

that according to the participants in his study; learning English provides the individual

an advantage as an active participant in today's world, opening new horizons to a better

future.

A large population of second language learners believes that the main difficulty

they experience when speaking English is pronunciation. Generally, they consider

pronunciation as the main cause for their communication problems (Derwing &

Rossiter, 2002; Al-Kahtany, 1995).

The majority of ESL learners want to be indistinguishable from English native

speakers. In a study conducted by Derwing (2003), more than half of the interviewees

felt that they would receive more respect if they pronounced English well. According to

(Giles, 1970; Weener, 1967), it is very important to second language learners to be

perfectly understood and not be stigmatized as being "lower class" and have anything

they produce be discounted by others. Good pronunciation insures that a message gets transmitted more effectively. Also, abnormal pronunciation means that the person is stained as a "non-native" speaker of that language (Weeren & Theunissen, 1987).

Often, native speakers of English evaluate non-native speakers of English negatively. Ryan and her colleagues found out that U.S. listeners of English negatively rated Spanish and German accented English speech (Ryan, Carranza & Moffie, 1977; Ryan & Sebastian, 1980; Ryan & Bulik, 1982). However, not all non-native speakers of English are stigmatized due to their accents. In a study conducted by Cargile & Giles (1998), a Japanese speaker with a "moderate accent" was rated highly by American university students.

There is a large number of learners that attribute communication problems to pronunciation, as a result this conception reflects negatively on their attitude towards their target languages. Listeners and speakers are aware of their communication problem, thus they are interested in improving their speaking skills. This study identifies which pronunciation problems to expose so that educators and English teachers can more effectively deal with them.

In the following section the predominant issues that hinder the acquisition process of many Saudi Speakers learning English as a second language will be discussed.

1.2 Difficulties of English Acquisition.

Non-native speakers of English encounter endless difficulties on their mission to acquire a second language. Some of these difficulties are phonological, syntactic, lexical, social, attitudinal and communicative. A New York corporation discovered that communication difficulties between native and non-native speakers of English was limiting the company's efficiency (Mettler, 1989).

Differences between languages can cause difficulties in acquiring a second language. Many differences appear when cross-comparing two languages. For example, when comparing English to Cantonese, we see differences in the phonemic inventory, characteristics of sounds, distribution of phonemes, syllable structure and rhythm (Chan & Li, 2000). On a phonological and structural level, English is very different from Mandarin Chinese. Chan & Li (2000) expected that ESL Chinese learners would meet several difficulties in their acquisition process.

In our first language experience, it seems that we are able to process native language with ease despite the variability in speaker sounds, accents, speech rate and emotional affect (Zhang & Wang, 2007). Pallier, Christophe, & Mehler (1997) explained that listeners of different languages use their perceptual system to exploit knowledge about the constraints on the co-occurrence of phonemes.

Pallier & his colleagues (1997) added that speakers predict the upcoming phoneme using phonotactics. They also attempt to establish a pattern of the speech signal that follows the patterns of their native language. Japanese speakers insert "illusory" phonemes when a word does not conform to this pattern. As a result, speakers of Japanese (a language that does not allow word-internal obstruent clusters) have a lot of trouble discriminating between VCCV and VCVCV.

Another difficulty learners of English encounter is L1 interference. Mukattash (1981) attributed errors of the auxiliary verb *BE* replacing other auxiliaries in 400 first year students at the University of Jordan to L1 interference. He added that L1 interference played a more significant role on the phonological and the lexical levels than the syntactic and morphological levels. Moreover, he explained that the role was clear in "style", especially in written complex sentences as opposed to simple sentences.

One of the goals of this study is to introduce pronunciation errors committed by Saudi ESL learners in order to identify the source or sources of difficulty.

1.3 The Markedness Differential Hypothesis (MDH).

It is well known that Eckman (1977) proposed the Markedness Differential Hypothesis (MDH) as justification for areas of difficulties in second language learning. He proposed his hypothesis on the phonological theory of markedness. The common sounds in many languages are considered unmarked, while the less common sounds are considered marked. Eckman predicted that for second language learners, the acquisition of an unmarked sound like unaspirated stops would be easier than the aspirated stops which are considered marked (Fellbaum, 1996).

The MDH has gathered a wide range of audiences, some of whom agree with it and think it is the cause of second language errors, while others think it cannot be the sole answer to identify sources of errors. The current study identifies pronunciation errors which could lead to predicting sources of difficulty.

1.4 The Critical Period Hypothesis (CPH).

Age has received its fair amount of attention and research as a controversial

major factor in language acquisition. More specifically, the Critical Period Hypothesis

(CPH) is still disputed in many age related language learning studies. Although age is

irrelevant to the current study, it is cited enough in the literature so that it must also be

discussed here.

Chiswick & Miller (2007) defined the CPH as a sharp decline in learning

outcome with age. They added that to ensure a native-like proficiency, one has to

acquire language before the critical period ends (at puberty). Learning a second

language is also much more difficult after the critical period.

Lenneberg (1967) established that language learning ability would be affected

after the age of puberty due to the completion of lateralization processes. Krashen

(1973) also suggested that the period affected more than general learning abilities

covering other areas like pronunciation, morphology, syntax, or pragmatics in language.

In response to Lenneberg's hypothesis, (language learning was possible during

the period from infancy to puberty, with a loss of abilities after puberty), Johnson &

Newport (1989) concluded that the data on second language learning in their study, did

carry a corresponding result. They did not find a direct relationship between

performance and age of learning throughout childhood, with a rapid decline in

performance marking the end of the critical period; rather, in their study performance

increasingly declined from about age seven until adulthood.

As mentioned earlier, age has no significance to this study because all of the

subjects began their acquisition of English after the critical period. Nevertheless, the

role of age in learning languages has long been debated. It was worthy of referring to

the effects of age on second language learning.

1.5 Types of Errors

There are errors committed by language learners in every area of linguistics.

Tushyeh (1996) exemplified multiple errors committed by Arab learners of English on

various linguistic areas. On the phonological level, Arab learners of English confuse /p/

and /b/; /f/ and /v/; /i/ and /e/. On the morphological level, the same learners commit

typical errors such as: *womens and *furnitures. She noted a lexical error example of:

*"the clock is now ten a.m." For the syntactic level she gave an example of wrong

word order and the use of presumptive pronouns. Because the focus of this thesis is on

pronunciation difficulties of Arab learners of English, my focus in this section will be limited to pronunciation rather than other aspects of acquisition.

A brief description of the types of errors is provided under this subtitle. Distinguishing between types of errors is significant because not all errors are dominant. Some errors proved to be temporal and developmental and some are fossilized and dominant.

Corder (1967: 25) in his widely cited article, *The Significance of Learner's Errors*, first introduced a hypothesis that stated "learner's errors provide evidence of the system of the language that he is using at a particular point in the learning course".

He further classified errors into two types. The first type is mistakes. Mistakes are infrequent and non-systematic occurrences that may occur in the native language of a speaker. Errors are the second type. They are systematic occurrences in the use of the L2 as compared to the correct use of the native language (Bayraktaroglu, 1985).

Burt & Kiparsky (1972) made a distinction between errors by classifying them into global and local. Global errors, unlike local errors, hinder communication. They provided some examples of both types; local errors as in the omission of third person singular, while an example of global errors would be the wrong order in a sentence.

Geranpayeh (2000) argued that learner's errors cannot be accounted for by a single theory. He proposed that a combination of contrastive analysis and analysis of learner's errors can be fruitful. He pointed out the differences between the English and Persian systems as the English system uses definite markers, while the Persian system uses specific markers. He also added that in English syntax plays a major role in the uses of definite markers, whereas in Persian, the semantic system is the major player in the specific markers. In his conclusion, he claimed that the acquisition of the English article system is delayed for the majority of L2 learners of Persian to the final stages of language learning (Geranpayeh, 2000).

Predicting the systematic errors that ESL learners will produce is not impossible, but is a mere hypothesis. This was demonstrated by Bayraktaroglu (1985) in his error analysis study of native speakers of Turkish. He explained that the predictions of pronunciation errors made by Turkish subjects based on a contrastive analysis were not accurate. He added that the errors that were found were not predictable through a prior comparison of the English and Turkish systems, but by the analysis of the results of actual errors.

Breaking down errors helps better deal with a large problem such as the one at hand. Pronunciation errors are a prominent problem for learners and teachers of English alike. By identifying pronunciation errors and classifying them into subcategories, this will help to deal with the problem more efficiently. This study helps to accurately identify errors and provides better solutions to pronunciation problems.

1.6 Error Analysis and Contrastive Analysis

There is growing interest in research regarding error analysis in the field of applied linguistics as opposed to contrastive analysis (Tushyeh, 1996). Error analysis (EA) is working with actual errors second language learners express. Contrastive analysis (CA) is comparing two languages to predict errors (Tushyeh, 1996).

The belief that CA predicts areas of difficulties faced by learners of a foreign language has been questioned (Bayraktaroglu, 1985). The predictive powers of CA are often not completely accurate even in phonology.

Corder (1967) suggested that the language system of an interlanguage is provided by the learner's errors. Corder indicated that this system is the one that the

learner has learned at a specific point despite the fact that the language system being

produced is not yet correct.

Bayraktaroglu (1985) compared the CA predictions of English and Turkish and

the results he came up with in his EA study. In his study, clarified that CA predicted

that Turkish learners of English may have difficulties in the labiodental fricatives [θ]

and [ð] because of their absence from the Turkish phoneme inventory, but failed to

accurately predict the produced sounds as well as following EA. A different

representation for the problematic sounds were produced by Turkish informants where

CA, could not have predicted (Bayraktaroglu, 1985).

Bayraktaroglu (1985) concluded, after his comparison study of the two analysis

systems, that error analysis cannot totally replace contrastive analysis. He added that it

is safe to claim that EA might be supplemented by the results of CA especially when

determining the sources of errors is required.

The two methods of identifying errors are equally important. Contrastive

analysis predicts where errors might lay in order for error analysis to accurately

demonstrate them. This study is an error analysis study; it provides detailed errors

committed by Saudi ESL learners. It also yields substitutions of the targeted sounds.

1.7 Sources of Difficulties

There are two major sources of errors; interlanguage and intralanguage (Tushyeh, 1996). Many researchers, like Lado (1957) and Selinker (1972) focused on native language interference (interlanguage errors). According to Richards (1971), interlanguage is the cause of more than 36% of errors. Others like Dulay & Burt (1974) focused on the second language as the source of difficulty (intralanguage errors). Tushyeh (1996) listed numerous intralanguage errors; simplification, overgeneralization, hypercorrection, faulty teaching, avoidance, inadequate learning and false concepts hypothesized.

Selinker (1972 p. 36) introduced the concept of fossilization as a persistent type of error that second language learners make. He defined it as "linguistic items, rules and subsystems which speakers of a particular native language will tend to keep in their interlanguage relative to a particular target language, no matter what the age of the learner or amount of explanation and instruction he receives in the target language". He clarified his theory with the example of American English learners of French using the retroflex /ɹ/ instead of the French uvular /ʁ/.

Another intralanguage error committed by second language learners is the overgeneralization of the target language rules, such as the overgeneralization of the past tense suffix (-*ed*) to irregular verbs which result in errors as in *goed* and *comed* (Tushyeh, 1996). Bayraktaroglu (1985) demonstrated that some errors made by Turkish learners of English were due to overgeneralization of the target language phonetic system. He attributed the substitutions of /ð/ by [θ] and /θ/ by [ð] as examples of overgeneralization of sounds which are not in the Turkish phonemic inventory. Furthermore, Turkish learners replace phonemes that exist in Turkish like /d/, /s/, /z/ and /t/ with newly acquired phones from English [θ] and [ð].

Differences in writing systems are a continuous source of difficulty for Arab learners. Tushyeh (1996) explained that the Arabic alphabet is different from the Roman alphabet, where English has only twenty six characters, Arabic has twenty eight. Moreover, Arabic has more of a one-to-one correspondence sound system where Arabic letters correspond closely to phonemes. This language feature is different from English that has about 85% of its words in regular spelling, in addition to the exceptions of the pronunciation rules. On the other hand, Arabic writing system does not distinguish between orthography and pronunciation (Tushyeh, 1996).

Although the current study does not deeply investigate sources of problems that

cause pronunciation errors, it attempts to figure out the reasons behind errors.

1.8 Pronunciation difficulties

Yost (1959: 115) noted that Syrian and Lebanese learners of English often have

difficulty distinguishing between certain sounds like [s] and [t]. For example, the word

chestnuts is difficult for Arabic speakers. Syrian speakers of English would pronounce it

like [gostnust] since [s] never follows [t] in the same syllable in Arabic. He also

stressed the influence of Arabic sounds on learners' English by giving examples of

vowel errors such as *put* pronounced as [put] and *full* turned into [ful]. In addition, Yost

further explained the absence of some English phonemes in Arabic which were

substituted by phonemes from the native language as in the following: /p/ became [b],

/g/ was [k], /tʃ/ had no Arabic equivalent but it wasn't difficult for educated people to

pronounce, /v/ also caused little trouble and that probably was due to the vocalization of

[f] as in the Arabic word *mustashfa*, /d/ became [ð] in words like *good*, /ŋ/ was

pronounced [ŋk], and finally /r/ was realized as a tongue pointed trill.

Learners of English face countless difficulties that hinder their learning process.

Arab learners are no exception. Tushyeh (1996) stated that errors were crucial to the

pronunciation of Arab learners of English. She reported errors caused by differences

between the sound systems such as the substitution of the sound [b] for the letter *p* as in

[bibəl] for *people*. She claimed that the Arabic sound system does not include a

voiceless bilabial plosive, but only a voiced bilabial plosive /b/.

It is important to highlight the difficulties in pronunciation that are specific to

Arabic speakers and to not assume they will make the same errors as other English

learners from other L1's which this study will attempt to accomplish.

1.9 Arabic dialects

An interest in the Arabic language and Arabic phonetics was established since

the 7th century CE. Al-Khalil and Sibawayh were the authors of the two first and far

most important books in Arabic grammar, phonology and phonetics (Rosenhouse,

2007). This section will discuss differences among Arabic dialects. More specifically, it

will demonstrate the differences between Saudi Arabian dialects. One of the reasons to

establish a distinction between dialects is the fact that all Arabic dialects are spoken and

none are practiced in the written form (Al-Kahtany, 1997). This lack of a written

language format may have some effect on pronunciation abilities and error production.

Arabic in the Arab world, like many other languages, suffers from an existing

situation of the separation of the *al-ʔrabia al-ʔamia* "colloquial Arabic" (regional

dialects) or low variety and *al-ʔrabiyya al-fusḥa* "literary Arabic" (Modern Standard

Arabic) or high variety (Scott & Tucker, 1974; Al-Kahtany, 1997). This separation is

known as diglossia.

Gordon (2005) reported that Ethnologue includes 35 varieties of Arabic on its

website. These versions of Arabic are scattered among 21 countries. These varieties of

Arabic are not restricted to Arab countries, but they transcend borders to other nations

including Afghanistan, Cyprus, Malta and Uzbekistan. In Saudi Arabia alone there are

four dialects: Gulf, Hijazi, Najdi, and Standard spoken Saudi Arabian dialect.

The highest and most prestigious form of Arabic language lies between the

covers of the Quran (Mneimneh, 1997). The significance of Arabic lies in its early

documentation which was in the 600s following the Islamic advent.

Isaksson (1999) listed at least 45 different representations in his survey of non-

standard first person singular pronouns in modern Arabic dialects. The diverse

representations were gathered by different scholars during different times with disparate

linguistic backgrounds. It included data gathered from many countries and various tribes

around the Arab world. Despite the many representations of one pronoun, Isaksson

(1999) claimed that the separate pronoun (*ana*) has turned out to be very stable in

modern Arabic dialects.

Although Arabs in general share some pronunciation errors, there are errors that

characterize some Arab nationalities more than others. Messiha (1985) clarified that

among the pronunciation problems that Egyptian Arabic learners face are /p/, /θ/, /ð/,

/v/ and these sounds were represented as follows [b], [s], [s], [f] respectively. This also

corresponds with Barros' (2003) results with her Egyptian subjects. Messiha (1985) also

pointed out that some Arab speakers do not share the same difficulties with Egyptian

speakers regarding the interdental fricatives.

This paper, will investigate pronunciation errors regarding specific ESL

learners. More specifically, it will carefully look into three problematic consonant for

Saudi ESL learners in the onset (beginning) and coda (end) environments of words and

will focus on the phonemes /ɹ p v/.

The importance of this study lays in its involvement in exposing one of the

Saudi dialects, a dialect that did not receive much attention in comparison to other

dialects of the area.

1.10 American vs. Arabic sound systems

Gordon (2005) lists the most extensive catalog of the world's languages. It

contains a detailed classified list which currently includes 6,809 distinct languages

(Anderson, 2005). English and Arabic languages are not close relatives. Where English

is an Indo-European West Germanic language, Arabic is an Afro-Asiatic Central South

Semitic language. Nevertheless, there are a lot of phonemes that are present in both

systems (see table 2.1). English has twenty-five consonants /p b m n f v θ ð t d s z h l ʃ

ʒ tʃ dʒ ɹ j k g ŋ ʔ w/, ten vowels /i ɪ ɛ æ u ʊ ɔ ʌ ɑ ə/ and five diphthongs /aj aw ɔj ej

ow/ (Rogers, 2000). On the other hand, Arabic like many Semitic languages, is marked

by a rich consonantal system and by a limited vocalic system. It has twenty-eight

consonants /b d ð f h j k l m n r s ʃ t θ w z dʒ ħ χ sˤ dˤ tˤ zˤ ʕ ɣ q ʔ/, six vowels /ɑ u i

ɑ: u: i:/, and two diphthongs /ɑi ɑu/ (Kharma & Hajjaj, 1997, phonetic symbols

converted to standard IPA symbols where appropriate; see also Rogers 2000; Prochazka

1988; Al-Ani 1970; Watson 2002).

Table 2.1 English vs. Arabic IPA chart (this table was reduced to fit the studied sounds)

		Bilabial	Labiodentals	Dental	Alveolar	Post alveolar	Velar	Uvular	Pharyngeal	Glottal
Plosive	Eng.	p b			t d		k g			ʔ
	Arb.	b			t d tˤ dˤ		k	q		ʔ
Fricative	Eng.		f v	θ ð	s z	ʃ ʒ				h
	Arb.		f	θ ð	s z sˤ zˤ	ʃ		χ ʁ	ħ ʕ	h
Trill	Eng.									
	Arb.				r					
Approximant	Eng.				ɹ					
	Arb.									

Although there are many sounds that are shared by both sound systems, there are

sounds that are present in one system but not the other. In this study, the focus is not the

vowel system, but the main objective is to concentrate on the consonantal sounds that are absent from Arabic language (assuming it to be the cause of some pronunciation difficulty). More specifically, Arabic lacks the voiceless bilabial stop /p/, voiced velar stop /g/, voiced fricative /v/, voiced postalveolar fricative /ʒ/, voiceless post-alveolar affricate /tʃ/, voiced nasal velar /ŋ/ and the voiced retroflex approximant /ɹ/. Because covering all of these sounds is beyond the scope of this work, this list was further reduced to /p v ɹ/ for the purposes of this study. These three particular sounds were chosen since they are well documented sounds in proving difficult for Arabic speakers of all dialects. While there are many sounds that cause pronunciation difficulties beyond these three sounds, this study focused only on these three sounds in order to have a smaller and more controlled study.

It is very important to establish that the comparison mentioned above is between American English (AE) and Classical Arabic (CL) or Modern Standard Arabic (MSA). Furthermore, the dialect that all participants presented in this study was restricted to the Saudi Arabian Najdi dialect, which displays the majority of the characteristics that CL and MSA contain, including all the sounds CL and MSA Arabic lacks (Prochazka, 1988; Al-Ani, 1970; Watson, 2002; Kharma & Hajjaj, 1997). In addition, some of the

sounds that are absent from CL and MSA are present in some Arabic dialects such as /ʒ/ in *Sarat ʔabidah* (Southern Hijaz and Tuhama dialect in Saudi Arabia) and *Saida* (Morocco), /v/ in *Rufaidah* (Southern Hijaz and Tuhama dialect in Saudi Araia) and Syrian Arabic, and /g/ in *gilit* (Mesopotamian dialect in Iraq) (Prochazka, 1988; Owens, 2005; Yoda, 2006 and Yost, 1959). Barros (2003) pointed out that Egyptian subjects reflected errors in pronunciation that were different from errors exhibited by other subjects from Saudi Arabia and Kuwait. These differences between dialects make it important to control subjects' dialect in any study of Arabic learners of English as shown in this study.

1.11 Purpose & Significance of the study

One of the important skills that nearly all language learners want to master is pronunciation. Large numbers of L2 learners are concerned with their speaking abilities. Various studies have verified that ESL learners are not satisfied with their pronunciation skills. They always dream of speaking English fluently (Derwing & Rossiter, 2002).

Each L1 speaker of a language produces some errors that are different from another L1 speaker of another native language. Scott & Tucker (1974) proposed that the

interference in spoken English by Arab learners is from colloquial Arabic. As the

literature clarifies, certain speakers from Arabic dialects produce different errors than

speakers of other dialects. This research highlights the significance of effects of dialects

on pronunciation.

The present study will look into the difficulties of pronunciation of Saudi

Arabian ESL learners. More specifically, focusing on Najdi dialect including certain

phonemes; the bilabial voiceless stop /p/, the labiodental voiced fricative /v/ and the

alveolar approximant /ɹ/. This study investigates which word positions Saudi ESL

learners have the most difficulty with among the three targeted sounds.

CHAPTER 2

LITERATURE REVIEW

The number of studies investigating L2 pronunciation is growing enormously.

Each study is concerned with different aspects of pronunciation. Some studies deal with

attitude towards pronunciation; others look into sources of difficulties in pronunciation.

The following chapter will focus on pronunciation studies that have some significance

to the present study. The literature will be presented in two main sections. The first will

be studies that deal specifically with errors made by Arabic speakers. The second

section of studies will demonstrate general difficulties made by learners of English

whose first language is not necessarily Arabic and are included to demonstrate some

common difficulties that are related to this study.

Altaha (1995) focused on competence errors in pronunciation made by Saudi

sophomores majoring in English. He collected data over a period of four years by

recording sophomores in various situations. He identified seven major pronunciation

errors. The first error reported was replacing the sounds /p, v, e/ and /ɛə/ with the

sounds [b, f, i] and [ɔ:], respectively. The second error that he recognized was vowel

insertion in words that contains a sequence of two consonants initially or inserting a vowel between the first two consonants in words that have a sequence of three consonants initially. The third identified error was the pronunciation of "silent" letters. Fourthly, pronouncing the letter *c* as [k] when it should be pronounced as [s]. The fifth error was pronouncing the voiced stop /g/ as a voiced affricate [dʒ] and vice versa. The sixth error was pronouncing the digraph *dg* as two phonemes medially, as in example 1:

Ex. 1 [bʌd git]   for   /bʌdʒət/   *budget*

He finally identified shifting the place of stress as the seventh pronunciation error as in example 2:

Ex. 2 [pri ˈpɔziʃən]   for   /prepə ˈziʃən/   *preposition*

This study is important because it demonstrates many of the English sounds that pose difficulty for Arabic speakers of English.

Barros (2003) looked into pronunciation difficulties with English consonants facing ESL Arab learners after the age of puberty. She identified and analyzed difficulties in pronunciation of six Arabic speakers who have been living in the United States for four years. She explained that the sounds /ŋ/, /ɫ/, /d/, /p/, /ɹ/, /v/, /ʤ/ and /ð/ were mispronounced respectively as [k], [l], [t], [b], [r], [f], [ʒ] and [də].

Barros reported that 5 out of 6 of the participants had problems with the

following consonants (in order of difficulty): /ŋ/, /ɫ/, /d/, /p/ and /ɻ/. As for the sound /v/

only half of the participant had problems pronouncing it appropriately. The consonants

/ʤ/ and /ð/ were mispronounced by 2 participants.

Barros's subjects did not represent a single Arabic accent. As she pointed out,

her subject selection was formed from different Arab countries. She explained that two

subjects were from Egypt, one was from Saudi Arabia and three were from Kuwait. The

two Egyptian subjects were the only participants who experienced problems with the

phonemes /ʤ/ and /ð/. The other participants all displayed the same mispronunciations,

but one subject from Kuwait who pronounced the sound /v/ appropriately. We can

easily extract from this that there that there are differences in pronunciation among

Arab learners. This gives us an insight that we cannot generalize pronunciation mistakes

to all Arabs. There are certainly differences in various Arab backgrounds and dialects

which result in different mispronunciations in English.

Barros stated that the greatest number of participants in her study experienced

problems with the phoneme /p/ and half of them had difficulty with /v/. She attributed

this mispronunciation to the fact that the above sounds are not present in the Arabic

phonemic inventory and they are substituted with the voiceless and voiced counterparts

/f/ and /b/. Her study was to measure the errors made by Arab learners after the age of

puberty. While the current study will not be considering age, several of sounds that

were investigated in the Barrow study will be a part of this study. Therefore, this study

was important in providing a framework for the sounds included in this study.

Messiha (1985, p. 225) stated that "it is an elementary linguistic fact" that the

English phonemes which are not present in Arabic are the cause of the phonetic

difficulties that Arab learners face. He added that the phonemes /p/, /θ/, /ð/, /v/ are good

examples of the pronunciation difficulties which are mispronounced as [b], [s], [s], [f]

respectively by Egyptian speakers.

Barros and Messiha's results are important to this current study in that they

provide another dimension about different performances of other Arab speakers and the

types of errors they make with specific consonant sounds.

2.2 Studies focusing on general characteristics of L2 English learners

Chan (2006) discussed Cantonese ESL learners' pronunciation of English final

singleton consonants. His methodology included several different tasks; reading of a

word list, a description of pictures, reading of three passages and an interview. He

claimed that he attempted to stimulate the learners' interphonology. He discovered that

the participants had difficulties with the voicing contrasts of final obstruents. He also

reported, among other problems, the non-release of final plosives and the inaccurate

articulation of certain fricatives and sonorant consonants. The preceding vowel

environments of nasals and laterals were also found to contribute significantly in

determining the learners' acquisition of the segments concerned. This study is related to

the present study because it provides good information about the coda position, since

our study look into pronunciation in that region.

Chan & Li (2000) conducted a detailed comparison of differences between the

English and Cantonese phonological subsystems. They explored major difficulties in

pronunciation that Cantonese learners may face when learning English. Cantonese does

not allow voiced syllable final plosives, Cantonese learners of English tend to substitute

/b, d, g/ for [p, t, k] Moreover, they transfer articulatory habits of not releasing final

plosives to English. A word like *step* is pronounced [step˺] and *not* would be

pronounced [not˺]. Minimal pairs such as *rope* and *robe*, *maid* and *mate* are practically

indistinguishable (Chan & Li, 2000).

Cantonese learners exhibit the same problem of devoicing in word initial position when pronouncing voiced plosives. As a result, they tend to devoice these sounds /b, d, g/ and pronounce them incorrectly as [p, t, k]. In relation to the voiced labiodental fricative /v/, Chan & Li (2000) referred the pronunciation errors performed by Cantonese learners to the substitution of the nearest sound in their native language. The same method of devoicing is applied; as in /laɪv/ which will be pronounced as [laɪf].

Chan & Li (2000) also examined nasals, laterals and the approximant /ɹ/. It appears that Cantonese speakers of English often have problems distinguishing /l/ from /n/ or /ɹ / word initially. In words like 'ride' /ɹaɪd/ which Cantonese speakers pronounce it as [laɪd]. Some speakers may substitute /w/ for /ɹ/, saying [waɪd] for 'ride' /ɹaɪd/. The difficulties in pronunciation that Cantonese speakers of English encounter is attributed to fundamental differences between the phoneme inventories of the two languages, the characteristics and distribution of the phonemes, the permissible syllable structures and the rhythmic patterns of the two languages in question (Chan & Li, 2000).

The variations in the sound systems of two languages may cause difficulties for adult second-language (L2) learners. Chinese learners of English have difficulty

producing English syllable final consonants and consonant clusters because few such

sequences occur in the major dialects of Chinese (Flege & Wang, 1989; Kenworthy,

1987; Rogers & Dalby, 2005).

However, Flege & Davidian (1984) illustrated that phonological rules may be

transferred from the first language (L1) inappropriately to the L2. In a phonetic

implementation comparison study of voiced stops produced in Arabic by Saudi

Arabians and by both American and Saudis in English, it was found that when Saudis

pronounced /b/ it was indistinguishable from /p/ to native speakers of English. However,

when measuring the timing of /p/, it suggested that Saudis did realize the phonological

nature of the phoneme /p/ (Flege & Port, 1981). In Flege & Port's study, the

researchers' subjects were from Saudi Arabia and spoke a distinct colloquial Arabic

dialect (from central and northern regions), Arabic accented English, and American

English.

In a similar study conducted by Flege (1980), in which he contrasted English

and Saudi Arabic voiced and voiceless stops /b d g/ and /p t k/, he explained that there

are differences in voiced and voiceless stops both word initially and word finally. He

attributed this difference to the closure interval of stops in Arabic being longer than it is

in English (Flege, 1980).

Although, Weinreich (1953) and Lado (1957) attributed all substitutions made

by second language learners to the nonexistence of those sounds in the speaker's native

language, it was established that not all transfer substitutions are due to the absence of

that sound in the learner's native language. Contrary to Weinreich's and Lado's

findings, after examining the production of sounds of Hungarian speakers of English,

Nemser (1971) detected that some Hungarian speakers produced [sθ] for the English /θ/

which was not a phoneme present in English or Hungarian. Although these errors were

not classified as a result of native language transfer, they were categorized as

developmental and were typical of what L2 learners go through in their acquisition

process.

Additionally, Weinberger (1990) established that the contrastive analysis adopted

by Weinreich (1953), and Lado (1957) was not able to explain the different substitution

errors made by Japanese and Russian speakers of English when pronouncing the

English interdental fricatives /θ/ and /ð/. In this study, Japanese speakers substituted [s]

and [z] for the English /θ/ and /ð/, respectively, while Russian speakers substituted [t]

and [d] for the interdentals. As a result, Weinberger embraced underspecification theory

and attributed the Japanese and Russian speakers' error types are due to the fact that /s/

and /z/ are the least marked segments in Japanese, whereas /t/ and /d/ are the least

marked segments in Russian.

Vidovic (1972a), in his contrastive analysis study, compared the sound systems

of Serbo-Croat and English to predict the difficulties of pronunciation of learners of

both languages. In his comparison, he used words that contained the same sounds in

both languages and asked native speakers, who had not yet been exposed to these

words, to pronounce them. For example, he would ask a native speaker of English to

pronounce the Serbo-Croat word *sit* /sɪt/ which means "full up" and he would ask

native speakers of Serbo-Croat to pronounce the English word *sit* /sɪt/. Then he

analyzed each sound and reported the differences.

Vidovic (1972b) pointed out the small differences between the two systems

despite the existence of a large number of similar sounds in both systems. He registered

all the differences between the Serbo-Croat and English consonants then concluded that

consonants are roughly equivalent but not one is truly identical. For instance, the Serbo-

Croat sound /s/ is a strong dental sound and more hissing than the English /s/ sound

which is an alveolar sound with less hissing. He explained that dental fricatives /θ/ and /ð/ do not exist in Serbo-Croat and they are often replaced by the sounds [t] and [d] respectively and rarely replaced by the sounds [s] and [z] noting that all four sounds are dental in Serbo-Croat.

Collins & Rodd (1972) studied the pronunciation of English of West African learners from 22 different first languages. They found many sounds that caused difficulties; the labial fricatives /f/ and /v/ (in some students) were replaced by the bilabial fricatives [ɸ] and [β] especially in intervocalic positions, the dental fricatives /θ/ and /ð/ were a constant source of difficulty and were replaced with the labial fricatives [f] and [v], overcorrection of /s/ and /z/ lead to the occasional replacement with [θ] and [ð], alveolar plosives /t/ and /d/ were confused with the dental [t̪] and [d̪], /p t k/ often lacked aspiration in initial position resulting in [b d g], /tʃ dʒ/ usually leveled with [ʃ] and /ʒ/ especially in medial position and /r/ is confused with [l].

Nearly all the articles evaluated regarding pronunciation among Arab speakers cite Kharma & Hajjaj (1997) as a reference. This work attempts to identify all errors in English the Arab speakers endure. It addresses a wide range of errors in grammar, syntax, discourse, idioms and vocabulary. As far as pronunciation errors go, they

classified mistakes into two major categories; Mistakes in Vowels and Mistakes in Consonants. More specifically, this study is interested in the mistakes in consonants.

This chapter summarized a number of studies that dealt with pronunciation errors. Despite that there are many studies that investigate pronunciation problem; there are not any studies that deal with this specific dialect of Arabic. Nevertheless, the literature presented is closely related to our study in many ways and were selected in order to determine which sounds Arab speakers and other learners of English have difficulty with and which environments these difficulties are likely to be present.

CHAPTER 3

METHODOLOGY

3.1 Purpose of the study and research Questions

The purpose of this paper is to determine the pronunciation difficulties of

Saudi learners with the pronunciation of some English sounds. More importantly, the

goal of this paper is to determine exactly what environments within words the errors

occur. The current study investigates pronunciation of Saudi Arabian ESL learners who

speak Najdi dialect. There are three main questions this study will investigate:

Question one: Do Saudi ESL learners have difficulty with the sounds /p ɹ v/?

Which sound seems to pose the most difficulty?

Question two: In what context do Saudi ESL learners have the most difficulty

with the sounds /p ɹ v/? Are Saudi ESL learners more accurate in their production of

these sounds when they are produced in isolation (a word list) or in connected speech (a

reading passage)? Do all three sounds pattern in the same way (all three sounds more

accurate in isolation or all three sounds more accurate in connected speech)?

Question three: In what environment do Saudi ESL learners have the most

difficulty with the sounds /p ɹ v/? Are they more accurate in word-initial position or in

word-final position? Do all three sounds pattern in the same way (all three sounds more

accurate in word-initial position or all three sounds more accurate in word-final

position)?

3.1 Research Problem

As presented earlier, the current study will investigate the pronunciation

difficulties of Saudi ESL learners regarding certain phonemes; the bilabial voiceless

stop /p/, the labiodental voiced fricative /v/ and the alveolar approximant /ɹ/. The focus

of this study lies in two areas. The first one is presenting errors of pronunciation

regarding Saudi Arabian Najdi dialect ESL learners of English, more specifically, which

of the sounds /p/, /v/ and /ɹ/ cause more difficulty. The second section of this study is to

see which of the problematic sounds is more difficult to pronounce and in which

position. More precisely, do Saudi Arabian Najdi dialect ESL learners of English have

more difficulty pronouncing the sounds /p/, /v/ and /ɹ/ in the onset position or coda

position? Which of the three studied sounds is pronounced closer to the native sound

will also be analyzed in order to determine which one is the most difficult to acquire

and which is acquired first.

3.2 Subjects

The subjects for this study were carefully chosen to represent a certain group of

Saudis. Gender and age factors were controlled and the level of proficiency was also

controlled.

Five subjects were chosen to participate in this study. All five subjects are from

the center region of the Arabian Peninsula. Najdi dialect is the sole dialect of the region

(Ingham, 1982; Ingham, 1986; Ingham, 1997; Al-Sweel, 1987; Prochazka, 1988). One

of the subjects reported to be from a different city called Al-Wadi and the other subjects

were from the capital city of Riyadh, nevertheless all participants spoke the targeted

regional dialect of the study. The significance of the Najdi dialect among Arabic

dialects within modern linguistics is the hypothesis that it is the closest dialect to

Classical Arabic. In addition, it is the least studied dialect among Arabic dialects (Al-

Sweel, 1987). For these reasons the subjects that spoke this specific dialect were chosen

to be a part of this study.

3.2.2 Age, Gender and English Proficiency

Age and gender were controlled to eliminate their effect on the results of the study. All subjects were males and ranged from 20-29 years of age. No subject had ever left his country of origin for any reason before coming to the US, thus they were not exposed to any other language but Arabic. Their exposure to English was relatively similar which was merely through the public educational system. All participants started learning English at the age of 12-13 in which students normally start their first year of middle school. The public education system in Saudi Arabia is divided into three levels; elementary (six years), middle school or intermediate (three years) and high school (three years). Starting from middle school to high school, students are taught English as a foreign language along with other disciplines. Students of English in Saudi Arabia are taught by Arabic native speakers and not exposed to the pronunciation of native English speakers. All participants arrived in the United States and immediately enlisted in the English as a Second Language Program in the Center of English as a Second Language (CESL) at Southern Illinois University Carbondale (SIUC). Upon their arrival to CESL, they were placed in the lower level based on their placement tests scores. Their total English exposure in the US was about 24-30 months at the time of the collection of the

data and they had all finished one semester in their academic undergraduate studies.

None of the subjects received any pronunciation or extracurricular speaking classes

other what was already provided in the ESL program. Four of the participants' recent

TOEFL scores ranged from 460-490 on the Institutional TOEFL exam, one subject

scored 527 on the same exam.

3.2.3 Educational background

All participants finished an associate degree prior to their arrival in the US.

After they finished their English requirements, each subject was interested in a different

area of study at SIUC. At the time of data collection, subjects were studying

Management, Radiology, Economy, Information System Technology and Instructional

Technology.

3.3 Instruments

There are two parts to the research instrument, a word list and a reading passage.

Both parts of the instrument contained the same set of target words, which were

selected to elicit each targeted sound (/p/, /v/ and /ɹ/). The sounds were placed into

words in an initial position (onset) and in the final position (coda). An attempt was

made to control the environment of each sound (previous or following sound). For

example, for the sound /v/, the words *veal* /vil/ and *leave* /liv/ were chosen because in

the first word (representing onset position) the sound following /v/ is /i/ which is the

same sound as the /i/ preceding /v/ in *leave*. For each sound, four words were chosen in

each position (initial and final) which led to a total of eight words per sound times three

sounds (/p/, /v/ and /ɹ/) for a total of 24 words for all three targeted sounds.

The word list, referred to throughout this study as Words in Isolation (WI),

included the 24 targeted words plus 12 additional distracter words for a total of 36

words to be produced in isolation (WI). The reading passage, referred to as the Words

in Context (WC) instrument, included the same 24 targeted words dispersed in a reading

passage which contained a total of 253 words (see appendix A and C).

Upon agreeing to participate in this study, each subject was presented with a

consent form and demographic information form and was explicitly asked by the

researcher if he had any questions. Some participants asked for the purpose of the study

and they were told that this study was looking into pronunciation errors made by Saudi

ESL learners. They were not told which particular sounds that the study was

investigating.

3.4 Procedure

The recording was completed in a quiet room on campus. Subjects were given

the reading narrative words in context (WC) as their first task. They were given 5-10

minutes to read the narrative carefully and become familiar with the content then give

the permission to start recording. None of the participants exhausted the allocated time

reading the narrative thoroughly. They all asked to be recorded before five minutes had

passed.

A microphone (Labtec PC Microphone) was used for the recordings. Digital

sound files were recorded immediately onto a laptop computer (Dell Inspiron 710m).

Data were later analyzed and transcribed on a separate desktop computer with the help

of spectrographic software (SIL Speech Tools 2.0 and Speech Analyzer Version 2.5,

available from www.sil.org). For the first task which was words in context (WC), each

participant read the narrative twice with normal reading pace and they were recorded

both times. The second task which was words in isolation (WI) was administered

immediately after the reading task. The 36 words in isolation were printed on flash

cards in random order and the researcher held them up for the participants to read

aloud. The rationale behind this procedure was to regulate the pace of the task. If the

participants had actually held the flash cards, it was expected that they would read too

quickly and that might negatively affect the produced sounds. Each subject was

expected to read each word aloud twice, for a total of four repetitions of each word

during the recording session.

3.5 Coding

After collecting the data from all participants the recordings were saved as

digital sound files and labeled individually for easy access. Each subject had a main file

and each file contained two main categories; Words in Isolation (WI) and Words in

Context (WC). Each category contained two more subcategories; first attempt and

second attempt. Since the subjects were asked to read each word in the word list twice,

each word resulted in a total of four sample tokens. For consistency, only the second

instance of each word pair was taking into consideration for this study.

Later, each sound was analyzed and the targeted sounds transcribed using the

Speech Analyzer program which allowed the researcher to examine each sound via

waveform and spectrogram. Every segment of a target sound the subjects produced was

recorded and registered. However, only correct pronunciations were taken into

consideration in this study.

All data collection and transcription was performed by the researcher who is

currently a graduate student of linguistics at SIU. Another current graduate student of

linguistics at SIU independently analyzed and transcribed the sounds and the two

transcriptions were compared. A third reviewer who was a professor of linguistics at

SIU was consulted when there was disagreement in the transcription. After separating

each sound and analyzing it thoroughly, each produced sound was placed in its actual

position in a work sheet. Each subject was allocated four similar work sheets; first and

second attempts for words in isolation (WI) and first and second attempts for words in

contexts (WC) (see appendix D). An Excel database was constructed to hold all tokens

produced by subjects. Although, work sheets held every pronounced utterance correct or

mispronounced, this study did not take into consideration mispronunciation. Only the

correct pronunciations were taken into consideration in the data base. Each correct

pronunciation of a sound was marked as one, while each mispronunciation was regarded

as zero in the data base.

CHAPTER 4

RESULTS

The purpose of this study was to identify and analyze pronunciation difficulties

experienced by Saudi Arabian ESL speakers regarding certain English consonant

phonemes. More precisely, three sounds were selected for this study; the voiceless

bilabial stop /p/, the voiced labiodental fricative /v/ and the alveolar approximant /ɹ/.

The results of this study revealed that subjects performed differently regarding

each sound in each environment. The results will be reported in the light of the

proposed research questions.

After counting all the correct instances of the studied sounds, it was evident that

all participants faced pronunciation difficulties with each sound. These sounds are in the

order of difficulty as follows: the voiced labiodental fricative /v/, the voiceless bilabial

stop /p/, and the alveolar approximant /ɹ/. These results coincided with Eckman's (1977)

Markedness Differential Hypothesis (MDH). His phonological hypothesis proposed that

the more common phonetic features among world's languages the less difficult those

features are to acquire, but less common features would be more difficult to acquire.

This means a more marked sound is more difficult to learn than a less marked sound. In

our case fricatives are more marked than stops. The current study is not concerned

about the different representations of sounds the subjects produced but is concerned

with the number of correct attempts that were produced.

The results of this study are as follows. The total number of tokens was 240

instances. This was divided among five subjects. For every targeted sound, each subject

read 16 words, 8 words in context and 8 words in isolation. Words in context and

isolation were further divided into onset position and coda position which resulted in 4

tokens for each. Thus, the breakdown is 4 words times 2 positions times 2 contexts

times 3 sounds times 5 subjects (4x2x2x3x5 = 240).

Table 4.1 Total Number of Correct instances in WI and WC combined

	Total	p	v	ɹ
Number Correct	136	51	34	51
Number Possible	240	80	80	80
Percent Correct	56.7%	63.75%	42.5%	63.75%

4.1 Question one:

Do Saudi ESL learners have difficulty with the sounds /p ɹ v/? Which sound seems to pose the most difficulty?

To answer the first research question the data was analyzed collectively as shown in Table 4.1. This allowed for the production of all participants in the first and second task combined to be evaluated. When all three sounds are combined, the subjects only managed to pronounce these sounds correctly 56.7% of the time. As for the individual sounds, the percentage correct ranged from 42.5% to 63.75% with no sound being produced correctly by all subjects all the time. The literature suggested that Arab learners have difficulty with the targeted sounds. These results support that Saudi Arabian ESL learners of English do indeed have difficulties regarding pronunciation of these particular sounds as shown in Table 4.1.

4.2 Question two:

In what context do Saudi ESL learners have the most difficulty with the sounds /p ɹ v/? Are Saudi ESL learners more accurate in their production of these sounds when they are produced in isolation (a word list) or in connected speech (a reading passage)?

Do all three sounds pattern in the same way (all three sounds more accurate in isolation

or all three sounds more accurate in connected speech)?

Given the overall results in Table 4.1, it would appear that /v/ is the most

difficult sound for Saudi Arabian Najdi dialect speakers to produce in English with

42.5% accuracy compared to 63.75% for both /p/ and /ɹ/. However, in order to answer

the second research question more thoroughly, the production accuracy by task (WI vs.

WC) needs to be evaluated and the results compared according to each sound.

Table 4.2 shows the results of the production task in words in isolation (WI).

When examining the correct sound production in WI it is apparent that the voiced

labiodental fricative /v/ was again a difficult sound to pronounce. Only 57.5%of the

time subjects pronounced this sound correctly. This is followed by the alveolar

approximant /ɹ/, which comes second in difficulty with 80% in pronunciation accuracy.

Finally the voiceless bilabial stop /p/ was the least difficult among the three with 82.5%

correct pronunciations.

Table 4.2 Correct production in WI

	Total	p	v	ɹ
Number of Correct	88	33	23	32
Number of Possible	120	40	40	40
Percent Correct	73.3%	82.5%	57.5%	80.0%

The results of the word in context (WC) task are shown in Table 4.3. Subjects were less accurate in producing these sounds in context than in isolation as expected. The voiced labiodental fricative /v/ proved extremely difficult with only 27.5% correct pronunciation. However, the voiceless bilabial stop /p/comes in second in difficulty in pronunciation with only 45% of the time. Production of /p/ proved slightly more difficult for subjects in the WC than the least difficult sound in the task, the alveolar approximant /ɹ/ with 47.5% accuracy in pronunciation.

Table 4.3 Correct sounds production in WC

	Total	p	v	ɹ
Number of Correct	48	18	11	19
Number of Possible	120	40	40	40
Percent Correct	40%	45%	27.5%	47.5%

Table 4.3 clearly provides an answer to question 2; pronunciation of all three sounds

was less accurate in context (WC) than in isolation (WI). /v/ is the most difficult sound

both in context and in isolation for these Saudi Arabian ESL speakers of Najdi dialect.

Our subjects also faced difficulty in the remaining two sounds, but both sounds were

produced more accurately than /v/. While /ɹ/ appears to be slightly more difficult than

/p/ in isolation (WI) and /p/ appears to be slightly more difficult than /ɹ/ in isolation,

these differences are too close to make such a determination.

4.3 Question three:

    In what environment do Saudi ESL learners have the most difficulty with the

sounds /p ɹ v/? Are they more accurate in word-initial position or in word-final

position? Do all three sounds pattern in the same way (all three sounds more accurate

in word-initial position or all three sounds more accurate in word-final position)?

Table 4.4 /p/, /v/ and /ɹ/ production by word position

Word position	/p/	/v/	/ɹ/
Initial	32/40	18/40	33/40
Final	19/40	16/40	18/40

At this point a number of things have been established. After examining table

4.4, it appears that all sounds occurring in word initial position appear to be easier than

those occurring in word final position. The dominance of the difficulty of the sound /v/

in both word initial and word final position is obvious, although it is less apparent in

word final position than in initial position. The data suggests that the /p/ sound was

more accurately produced word initially than it was word finally. Likewise, the same

applies to /ɹ/ sound where it was produced more accurately word initially than word

finally. Furthermore, /ɹ/ seems to be slightly easier for learners than /p/ word initially,

while word finally the /p/ appears to be slightly easier than /ɹ/.

Another dimension is added to this data by analyzing it by task as well (WI vs. WC). In the discussion of research question two, the performance of subjects in the word list was more accurate than their performance words in context. Tables 4.2 & 4.3 demonstrate that participants managed to correctly produce 73.3% of the time in the words in isolation (WI) task compared to only 40% in words in context (WC).

4.4 The voiceless bilabial stop, /p/:

Unlike its other Semitic sisters such as Hebrew, Aramaic, Amharic and Socotri, Arabic lacks the voiceless bilabial stop /p/ (Newman, 2002). Some authors argue that the sound /p/ does exist in Arabic, not as a phoneme, but as an allophone of the bilabial voiced stop /b/. Newman (2002) suggested that the voiced bilabial /b/ is often devoiced in a voiceless environment.

The production for the phoneme /p/ in the current study revealed an interesting contrast between its correct productions in each environment.

Table 4.5 Isolation and Context for /p/

p			Correct	%		p			Correct	%
	initial	20	20	100			initial	20	12	60
WI	final	20	13	65		WC	final	20	6	20
	Combined	40	33	82.5			Combined	40	18	45

By examining Table 4.5 above, it becomes apparent that sound production in words in isolation in both initial and final environments are superior to sound production in words in context. With both initial and final contexts combined, participants correctly produced /p/ 82.5% of the time in WI compared to 45% in WC.

Moreover, subjects were able to accurately pronounce all 20 instances 100% of the time for the sound /p/ initially and 65% of the time in word final position in WI. This is in contrast to the 60% of the time that the same subjects correctly produced the sound /p/ initially and 20% of the time in word final position in WC. This noticeable distinction in word-initially in isolation is by far the highest number of errors that subjects produced in this study.

Although the overall performance of participants in the phoneme /p/ seemed better than the other two sounds, there are some variations on the individual level. In Figure 4.1 and Table 4.6, the individual data for the production of /p/ is totaled across the two tasks (WI and WC). After comparing the performance of individual subjects in both tasks, subject 1 managed to accurately pronounce /p/ only 43.75% of the time while subject 5 produced /p/ correctly 87.5% of the time.

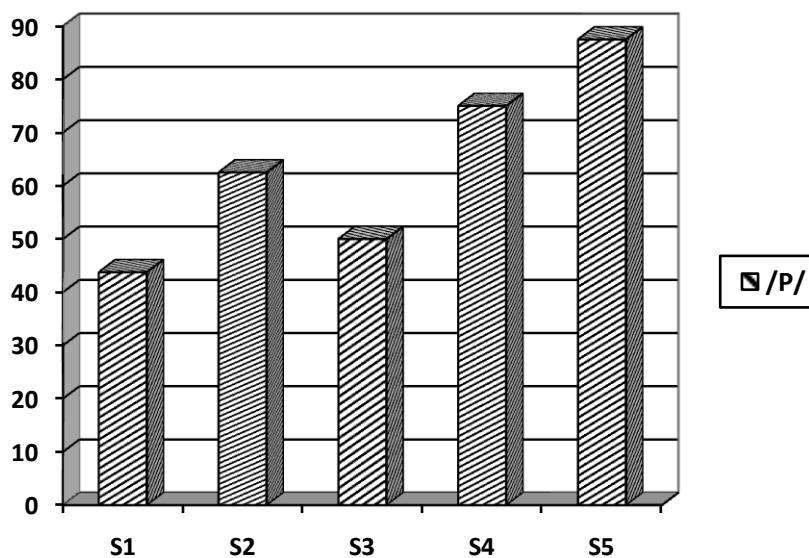Figure 4.1 Individual production of /p/

Table 4.6 Subjects' productions of /p/

/p/	Total #	S1	%	S2	%	S3	%	S4	%	S5	%
WI & WC	16	7	43.75	10	62.5	8	50	12	75	14	87.5

4.5 The voiced labiodental fricative /v/

As established earlier, Saudi speakers have the greatest difficulty in pronouncing

the /v/ sound compared to other sounds. The differences in performance between the

two tasks and positions are also apparent.

Table 4.7 below, displays the varying results of each subjects' individual

production. This data demonstrates that the performance in WI was generally better than

in WC, as expected. Informants produced /v/ correctly 57.5% of the time in WI

compared to a low 27.5% in WC.

Table 4.7 Isolation and Context for /v/

			Correct	%				Correct	%
						v			
	initial	20	11	55		initial	20	7	35
WI	final	20	12	60	WC	final	20	4	20
	Combined	40	23	57.5		Combined	40	11	27.5

The performance of subjects was slightly better word finally than it was word

initially in WI. In this task, informants produced /v/ correctly 60% of the time word

finally in comparison to 55% word initially. This difference gave an indication that

word initially, it was slightly more difficult for the subjects to pronounce /v/ than word

finally. This is the opposite of the results earlier for the /p/ in the same environment.

Strikingly, this was not consistent in the second task. In context, word finally appears to

be more difficult than word initially for /v/. Subjects pronounced /v/ only 20% of the

time correctly compared to 35% word initially in WC.

On an individual basis, the subjects' performance was unusual and diverged

from their performance in the voiceless bilabial stop /p/. Subject 3 managed to

pronounce /v/ 87.5% of the time correctly, in comparison to his earlier performance in

the phoneme /p/ where he fell second to last only pronouncing 50% of the time

accurately. Moreover, subjects 5 and 4 who scored 87.5% and 75% respectively in their

performance in the sound /p/, they scored the lowest of all participants with an equal

18.75% correct productions regarding the phoneme /v/. (See figure 4.2 & table 4.8)

Table 4.8 Subjects productions of /v/

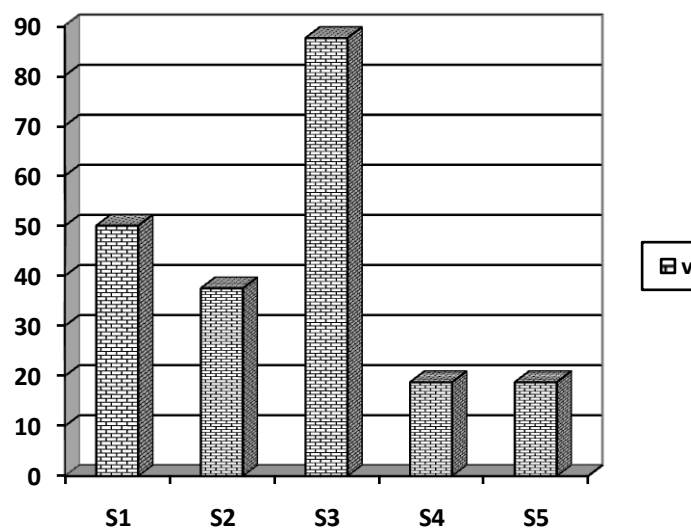| /v/	Total #	S1	%	S2	%	S3	%	S4	%	S5	%
WI & WC	16	8	50	6	37.5	14	87.5	3	18.75	3	18.75

Figure 4.2 Individual production of /v/

4.6 The alveolar approximant /ɹ/

Arabic does not have /ɹ/ in its phonemic inventory. It only has the alveolar trill

/r/ (Rogers, 2000; Prochazka, 1988; Al-Ani, 1970; Watson, 2002; Kharma & Hajjaj,

1997). Nevertheless, the difficulty of this sound was equal to /p/ with 63.25% accuracy.

Generally, subjects' performance on /ɹ/ mirrored their performance in the phoneme /p/

in both tasks and positions. Informants produced [ɹ] 80% of the time correctly word

initially (WI) compared to a 47.5% in WC. The data also demonstrates the difficulty of

WC production with only 15% compared to the 30%. (Table 4.9).

As shown in table 4.9 below, production of words in isolation in both initial and final environments is better than words in context. While participants produced [ɹ] 85% of the time word initially in isolation (WI), they only managed to produce 80% accuracy in word context (WC). Moreover, subjects were able to correctly pronounce /ɹ/ 75% of the time word finally in WI compared to a very low 15% of the time in WC. This obvious difference word finally in WC is the lowest number that subjects produced in this study. It is even lower than the production of the /v/ which was produced 20% in word final position in WC.

Table 4.9 Isolation and Context for /ɹ/

ɹ			Correct	%		ɹ			Correct	%
	initial	20	17	85			initial	20	16	80
WI	final	20	15	75	WC		final	20	3	15
	Combined	40	32	80			Combined	40	19	47.5

On the individual level, subjects 4 and 5 scored the highest in comparison to the other participants with a 75% and 81.25%, respectively. Subjects 3 and 4 equally scored

62.5% in their correct performance regarding this sound where subject 1 scored the

lowest with a 37.5% of the time (see figure 4.3 & table 4.10).
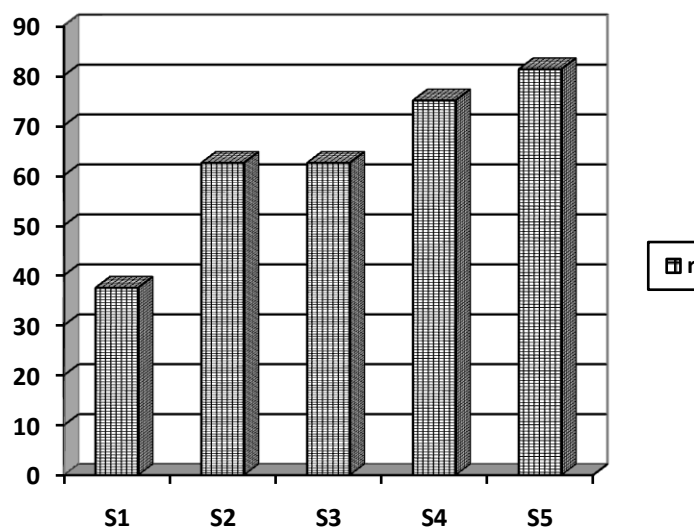
Figure 4.3 Individual production of /ɹ/

Table 4.10 Subjects' productions of /ɹ/

/ɹ/	Total #	S1	%	S2	%	S3	%	S4	%	S5	%
WI & WC	16	6	37.5	10	62.5	10	62.5	12	75	13	81.25

Table 4.11 demonstrates the performance of each subject in each sound. Subject

one expressed the lowest average of the five subjects with only 44% of accurate sound

production. Despite that the data established /v/ as the most difficult sound of all,

subject three performed better in /v/ than in /p/ or /ɹ/ with 67% which was the highest

accuracy of all five subjects. While Subjects four and five performed the highest in the

list in /p/ and /ɹ/, they did not fare as well in the overall results because of their poor

performance on /v/.

Table 4.11 Subjects' performances in each sound

	/p/	/v/	/ɹ/	Total
S1	7	8	6	21/48
S2	10	6	10	26/48
S3	8	14	10	32/48
S4	12	3	12	27/48
S5	14	3	13	30/48

CHAPTER 5

DISCUSSION, IMPLICATIONS, LIMITATIONS AND CONCLUSION

In this paper, more evidence has been introduced to demonstrate the difficulty of some English consonant to Saudi ESL learners. This chapter provides discussions and explanations for the results presented in previous chapters. It also sheds some light on the implications and limitations of the current study in addition to recommendations for future research. This chapter will be presented in the light of the data demonstrated in addition to the research questions. In order to answer question three the two main tasks, words in isolation (WI) and words in context (WC) are evaluated.

Although the literature suggested some pronunciation problems which were predictable regarding Arab learners of English in relation to some sounds, the main objective of the present study was to find out if the bilabial voiceless stop /p/, the labiodental voiced fricative /v/ and the alveolar approximant /ɹ/ were a source of pronunciation problems to Saudi ESL learners.

5.1 Pronunciation Difficulty in /p/, /v/ and /ɹ/

The first research question was aimed to find out if the English bilabial voiceless

stop /p/, the voiced labiodental fricative /v/ and the alveolar approximant /ɹ/ were

problematic to pronounce for native speakers of Saudi ESL learners.

The findings provided evidence that the designated sounds do pose some

difficulty to the participant, regardless of the environment or position. These results

support predictions made through the Contrastive Analysis Hypothesis. It suggested that

the absence of sounds in a first language could result in the difficulty of acquisition of

these sounds in a new language. Bayraktaroglu (1985) suggested that CAH can predict

the sounds that may be difficult for learners but at the same time it failed to predict the

outcome of those sounds. The data showed that there is a general agreement on the

difficulty of the phoneme /v/ and also on the phonemes /p/ and /ɹ/. However, there are

unusual individual correspondences regarding /p and /ɹ/, which will be addressed later

in this chapter.

In general, the difficulty encountered by Saudi ESL learners in acquiring the

pronunciation of the English fricatives /v/ was evident. This finding seems to support

Eckman's (1977) Markedness Differential Hypothesis, which states that common

sounds between L1 and L2 are less difficult or less marked than nonexistent sounds

which are considered more difficult and more marked. However, all three sounds

studied (/p/, /v/, and /ɹ/) are absent from the L1 inventory of these subjects and present

in the L2 inventory. This should indicate that all three sounds will pose a difficulty for

these learners which is also supported by this study.

5.2 The most difficult context

To establish the most difficult context for these three sounds, each situation was

separated. As introduced in chapter four, results varied when looking at sounds in

isolation and in context. Although it seems that in both situations there was an

agreement on the difficulty of one sound, there were slight disagreements on the

difficulty of the remaining two.

In word isolation and in context it was unmistakable that the voiced labiodental

fricative /v/ posed the greatest difficulty in pronunciation as demonstrated by the lowest

number of accurate pronunciation instances of the three sounds. On the other hand, the

/p/ and the /ɹ/ were the second most difficult sounds to produce with the /p/ being the

second most difficult to pronounce in context and the /ɹ/ being the second most difficult

to pronounce in isolation.

In isolation it seemed that subjects placed /ɹ/ as the second most difficult sound

followed relatively closely by /p/. The opposite happened in context where /p/ was

pronounced correctly slightly more often than/ɹ/. It is important to point out that there

was not a considerable difference between these two sounds in their percentage of

correct pronunciations. It is safe to assume that the two sounds are of approximately

equal difficulty since the difference is so minute in each situation.

5.3 Onset or Coda

Question three asked what environment do Saudi ESL learners have the most

difficulty with the sounds /p ɹ v/? Are they more accurate in word-initial position or in

word-final position? Do all three sounds pattern in the same way (all three sounds more

accurate in word-initial position or all three sounds more accurate in word-final

position)?

The results of this study indicate that /v/ is the most difficult sound in the

following environments: word initially in isolation, word finally in isolation and word

initially in context. This is consistent with the overall data. However, Saudi speakers

have the greatest difficulty pronouncing the phoneme /ɹ/ in the word final position in

context.

The above discussion established the difficulty of the phoneme /v/ as it applies

to the subjects as a group. The next section will discuss the individual results.

The performance of individual subjects was very different when cross-

comparing isolation to context. This was also reflected when looking at the data of each

environment more critically. In general, their performance in isolation (initially and

finally) was superior to their performance in context (also initially and finally).

This study did not consider the mispronunciations of subjects but only attempted

to establish the general difficulty regarding the designated sounds regardless of their

productions.

However, to provide a better justification of the difficulty of the phoneme /ɹ/ of

word final position in context, this study evaluates the mispronunciations of subjects in

that position. One would think that because /ɹ/ is a sonorant sound it could be well

absorbed when pronounced in context, where it is more likely to be in an intervocalic

environment, but this was not the case for the participants of this study. As reported

earlier, subjects managed to pronounce /ɹ/ 15% of the time in word-final position in context accurately. That means they mispronounce that sound 85% of the time. 100% of their mispronunciations were productions of the trill [r], which is their native Arabic rhotic.

A general explanation of subjects' poor performance in all sounds in word-final position in context could be L1 transfer. Since Arabic contains the sounds /b f r/ but lacks the /p v ɹ/ (Altaha, 1995). Subjects are well aware of the sounds, especially when coming across them in isolation and word initially in context; therefore they are more careful in pronouncing them as they are pronounced in English. Subjects' word initial and final production in isolation was better than it was in word-final position in context especially with the sound /p/. Speakers of Arabic are extremely conscious when it comes to common /p/ vs. /b/ errors. They also have more chance to pay attention to their pronunciation when reading words in isolation in contrast to context.

Another explanation for the subjects production errors may be the effect of orthography since Arabic spelling has more of a one-to-one correspondence between sound and symbol than English does (Tushyeh, 1996). That means that the majority of letters in the orthography are pronounced individually. Since subjects were reading from

a paper, they might become aware of the text itself. Therefore, their substitutions of the

retroflex were all trills (Arabic [r]) and not misrepresentations of other sounds. On the

other hand, a common misrepresentation was the devoicing of the sound /v/, subjects

pronounced [f] instead of pronouncing /v/. As for /p/, subjects managed to produce the

sound more accurately, they even pronounced it frequently with the correct aspiration as

needed. Substitutions of /p/ were also voicing which resulted in the production of [b].

The results of this study agree with Altaha's (1995) study of pronunciation errors made

by Saudi students learning English. It is interesting to note that despite of the different

learning environments; where the first study was conducted in an EFL setting and ours

in an ESL, the result was identical regarding the sounds /p/ and /v/. Moreover, the

current study corresponds with Barros's (2003) general findings of sounds substitutions,

but it does not agree with the order of difficulty that Barros came up with where she

labeled /p/ as a more difficult sound than /v/.

Although the data demonstrates an overall agreement on the difficulty of one

sound, our results revealed a non-consistency in performance between participants

individually. Subjects 4 and 5 were not consistent in their performance of the sound /v/

as they were the sounds /p ɹ/. In contrast to their performance on /p/ and /ɹ/, they scored

the lowest in the most difficult sound /v/. This could be explained based on the overall

difficulty of the voiced labiodental fricative, which was previously discussed in relation

to MDH. However, not all subjects performed as badly on the sound /v/. Subject 3, who

remained average in his performance in /p/ and /ɹ/ scored the highest of all subjects in

producing the sound /v/.

To account for the unusual results regarding individual performances, especially

subject 3, 4 and 5, the subjects' demographics were individually analyzed. Due to the

small number of subjects, a hypothesis of this behavior could not be determined. It may

be possible that subjects 4 and 5 were well aware of the common errors of the

phonemes /p ɹ/ and thus consciously performed better than other subjects on these two

sounds. Moreover, they could have been unaware of the common difficulty of the sound

/v/ and therefore performed the worst. The opposite could apply to subject 3 as well.

5.4 Limitations of the Study

Despite the effort to control validity threats, this study suffered a number of

limitations which could hinder its value. First, this study was limited to the

pronunciations difficulties of the voiceless bilabial stop /p/, the voiced labiodentals

fricative /v/ and the retroflex /ɹ/ in isolation and in context in all positions. It is very

likely that orthography and L1 phonology greatly contributed in this matter. Therefore,

a more comparable selection of sounds seems to be more accurate to research in future

studies. For example, investigating difficulties in laterals, stops or fricatives would be

more valid to perform accurate comparisons. Moreover, the tasks used elicit sounds

were a words list and a narrative. The validity of results could be improved by

observation and recording of spontaneous speech. This would also eliminate the effects

of orthography as Arabic is a one-to-one correspondence language and that may affect

their pronunciation.

Second, the findings of this study should not be generalized to all ESL learners

other than the sample studied. This study was structured to monitor Najdi dialect Saudi

Arabian ESL learners of English. Expanding the samples to cover another Saudi dialect

will increase the importance of such studies.

Finally, this study did not look into the mispronunciations of targeted sounds;

therefore a definite explanation of the reason of their production could not be reached.

Therefore, a limitation of this study is that it did not explain the exact substitutions for

errors. It is important to identify the source of the problem whether it is acquisition

oriented or phonological.

Despite the obvious limitations of this study, the findings hold a substantial

number of implications for English teaching pedagogy.

5.5 Implications

The findings of the present study revealed that Saudi ESL learners of English

struggle with the sounds /p v ɹ/. In addition, it demonstrated the difficulty of the voiced

labiodentals fricative /v/ in all environments and the difficulty of producing /ɹ/ word

finally in context. These results study have implications both for students and teachers

of English alike.

Recognizing sources of difficulties in speaking may help students to be more

cautious about their pronunciation. Careful pronunciations of problematic sounds can

help communication and also aid non-native speakers to be better understood (Mettler,

1989; Derwing, 2003).

ESL teachers should be aware of the different first languages and their

contrastive characteristics in the classroom. This knowledge ensures better

understanding of problems and therefore they will be better prepared to address

students' needs. Moreover, understanding the phonetic inventory of students' L1 can

provide a better tool in predicting the source of mispronunciations by identifying the

difficult sounds as this study revealed regarding the sounds /p v ɹ/.

By acknowledging the difficult sounds, teachers can prepare materials,

instructions and pronunciation exercises to better address them. Knowledge of the exact

environments of difficulty with these sounds will assist teachers to target the problem at

its roots. When instruction is required, teachers will be able to concentrate on specific

sounds and environment and address them accordingly. The results of this study can

positively benefit English teachers when dealing with Saudi ESL learners.

5.6 Suggestions for Future Research

The findings of this study established the difficulties of the sounds /p v ɹ/. More

specifically, it revealed the difficulty of the sound /v/ in all positions and the difficulty

of /ɹ/ especially in word final position in context. This last finding suggests that further

research is essential in that environment and regarding the phoneme /ɹ/ in general. A

larger more comprehensive study is vital to confirm the findings of this study and to

provide more evidence to account for the ambiguities regarding some of the findings.

Individual performances in this study were puzzling. Questions surrounding their

pronunciation could also be resolved when a larger sample is available.

This study was restricted to a specific group of participants. It would be very

interesting to conduct a similar study targeting other Saudi dialects with subjects in both

the U.S. and subjects in Saudi Arabia and compare the findings of both studies. This

would help to establish the common difficulties of pronunciation among Arabic

speakers.

5.7 Conclusion

This study inspected the difficulties facing Saudi ESL learners regarding specific

consonants. These sounds were the voiceless bilabial stop /p/, the voiced labiodentals

fricative /v/ and the retroflex /ɹ/. Previous research suggested that these sounds were

problematic to Arab learners in general and this study agreed with those claims

regarding Saudi speakers.

Furthermore, this study demonstrated not only the difficulty of sounds but where

the difficulty according to word position. In conclusion, this study proved that the

sample studied encounter difficulty in certain word positions. Saudi speakers of English,

struggle with the sound /v/ in most word positions. They also have difficulties in

pronouncing /ɹ/ in word final in context as /ɹ/. The interlanguage of Saudi speakers

contains instances of correct and incorrect production of the problematic sounds. This

study further demonstrated that special attention is required when teaching the English

sounds of /p,v, r/ when in the word final position. This study also demonstrates that it is

important to teach these sounds in context rather than in isolation only.

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APPENDICES

APPENDIX A

Words in Isolation (Word List)

/ɹ/		/p/		/v/	
word initial	word final	word initial	word final	word initial	word final
rain	bear	pain	nape	vase	nave
read	fear	peek	keep	veal	leave
rob	car	park	cop	value	have
rose	more	poor	rope	vote	stove

APPENDIX B

Words In Isolation with distracters

dream	hands	have
town	left	read
rose	more	ice
rob	nave	car
bear	keep	small
black	rain	rope
stove	leave	fear
loud	pain	child
nurse	veal	value
peek	park	vote
poor	blue	corner
cop	vase	nape

APPENDIX C

Words In Context (reading story)

She walked into the nave. Fear was all around her. The nape of her neck was frozen as ice. She managed to escape the cop but she couldn't out run the bear. It all started on an early morning in a small town. On that day, after she turned on the stove, Lucy took out a piece of veal and tomato paste from the refrigerator. She felt a rare pain in her back. She went to see a doctor. On her way out, she tripped and knocked down the vase in the corner. It had a great value to Lucy. She was very sad, but the pain forced her to leave soon. She put on her blue cape and took off in her car. On her way to the hospital, passing slowly by the park, she felt something in her left arm. When she looked at it her vein was black. She noticed a poor man with a rose and a rope in his hands. Then she heard a woman screaming at her son: you shouldn't rob our neighbors. When she arrived at the hospital, a nurse asked her to fill out more forms and read them carefully. Lucy asked for a copy to keep with her records. At the waiting room, there was a little child playing peek a boo with his mom. Then all of a sudden a loud voice shouting: vote and have a nice day! woke up Lucy from her dream to the sound of rain on the roof.)

APPENDIX D

Work sheet # _

Word list

SUB. #__ Attempt #__

/ɹ/		/p/		/v/	
word initial	word final	word initial	word final	word initial	word final
_____ain	bea_____	_____ain	na____e	_____ase	na____e
_____ead	fea_____	_____eek	kee____	_____eal	lea___e
_____ob	ca_____	_____ark	co_____	_____alue	ha___e
_____ose	mo____e	_____oor	ro____e	_____ote	sto____e

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