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Iten Ezz

Hamline University

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A LESSON UNIT ON AURALLY DIFFERENTIATING BETWEEN THE
PHONOLOGIES OF ENGLISH & ARABIC: /P/ AND /B/

by

Iten Ezz

A capstone submitted in partial fulfillment of the requirements for the degree of Master
of Arts in English as a Second Language

Hamline University

Saint Paul, Minnesota

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Primary Advisor: Jennifer Carlson
Secondary Advisor: Julia Reimer
Peer Readers: Alsayed Rizk

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To my husband for your support.

Thank you to my Capstone Committee.

Your guidance helped me to complete this project.

“Success is not final; failure is not fatal: it is the courage to continue that counts”.
-Winston Churchill

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CHAPTER ONE

Introduction

Historical Background

The first language of an individual has a direct effect on their ability to hear and produce sounds of the English language. Learners may have difficulty producing certain sounds which do not exist in their mother tongue (Avery & Ehrlich, 2012). This is why Arab learners face problems in distinguishing between some consonants sounds like /p/ and /b/. English has its pronunciation system that differs from the Arabic one.

The phoneme /p/ does not exist in the Arabic phonemic inventory, so how do Arabs pronounce it? Native Arabic vocabulary does not contain a /p/, and Arabs tend to change it to /b/. The /p/ phoneme pronounced as /b/ by most Arab speakers and even Arabs who do distinguish the /p/ phoneme and knows how to pronounce it may still interchange it with the /b/ phoneme occasionally or vice versa. For example, a native Arabic speaker might say picycle, bitza, swimming in the bool; and I have a barty at home. I have heard many Arabs say “bassboort” for passport, bobcorn, bretty, beejama, berfect, examble, bronounce, habben, abbrove, bublish, baber, broud, exblain, bresent, and bast.

The question is: Are Arabs able to produce the /p/ phoneme? And the answer is, yes, indeed they can. Arabic speakers are capable of pronouncing it correctly since the /b/ exists in Arabic. The place and manner of articulation of /p/ is the same as /b/; the /p/ is just a de-voiced /b/. Converting /b/ into /p/ is not a complicated process for Arab

learners. Arab speakers are fully capable of pronouncing the /p/. It needs a lot of practice at the beginning, and then it becomes a natural thing. Although /b/ and /p/ do not exist as two separate phonemes in Arabic, it is easy to train them in pronouncing correctly, although many of them fail to do so. People sometimes confuse /p/ and /b/ in the middle of a conversation too.

Professional Experience

This is why I chose to do my project on /p/ and /b/:

In private schools in my home country of Egypt, children learn the alphabet in English at the same age as they learn the alphabet in Arabic. Early interaction with a foreign language helps them distinguish between /p/ and /b/, but for learners who learn English at an older age in public schools, it is hard to learn the difference. However, it is not impossible.

I grew up in a country that lacks the sound /p/. It is quite hard to get that sound later as an adult, but luckily, I attended a Scottish private school and learned English from Kindergarten at age five. Therefore, it is not hard for me to distinguish between the two sounds. Fortunately, my ears at this young age could distinguish easily between the two sounds while my peers who attended public schools and started learning English in middle school could not differentiate between /p/ and /b/.

Lenneberg (1967) reported that it is hard to acquire native-like accent in any language after puberty because of the brain and articulators (tongues and lips). Thus, learners who learned a language that has /p/ from a young age could pronounce it correctly, but older learners make the common mistake of mixing /p/ and /b/.

When I started learning English in Egypt, our teacher began by teaching us the alphabet. And she told us: ‘In English, the letter “b” can be written in two different ways: with the stroke up and pronounced as /b/ or with the stroke down and pronounced as /p/. When I talk to Arab speakers, I still use this method to help me understand what they mean. For example: cup or cub? While in the present time, the way of teaching the difference between the two sounds has changed. Many teachers use a sheet of paper in front of the mouth, and if the paper moves, it is a /p/, otherwise it is a /b/. Another method by putting your finger on your throat; and you feel vibration only with /b/ not /p/.

My husband was born in Egypt and came to the US in his 20s. He earned two Master degrees, and he is completing his Ph.D. now. To this day he cannot distinguish between /p/ and /b/. He knows how to pronounce /p/, but still convert it to /b/ sometimes and vice versa. When I talk to him, I have to ask if the “stick” for the word is up or down, or does he mean /p/ as in pen or /b/ as in boy? Sometimes, when he writes something, and he was not sure about the spelling, he asks me if it is /p/ or /b/. That is because /p/ and /b/ are so close to each other. Also, he cannot distinguish the sound when he hears it. When an individual cannot hear the difference, how can one know when to say /p/ or /b/? This might be the reason why Arabs change every /p/ to /b/. It is easy for them. Any /p/ or /b/ naturally sounds like /b/ in their language. They do it spontaneously. And as you can see, it works well to deliver their message when they talk, but the other person has to think and decide what the Arab person means!

Cousins and friends are a different story. Many of my Arab friends speak very good English as long as there is no /p/ in the sentence. They have a very hard time with /p/. My cousin visited me three years ago, and she was asking me: “Do you have a robe?”

I thought she was cold, and I brought her a nice robe. “She said ‘No, not this one; I need to tie a box.’” I then realized that she meant a rope. I laughed and corrected her. Another time, she was telling my daughter to visit Egypt and see the amazing birmids. My daughter was confused at first until I interpret to her that she means “the pyramids.” I did my best trying to show her how /p/ differs from /b/. Thus, when I deal with Arabs, I have to ask, is it /p/ as in pencil or /b/ as in boy. I have friends from Egypt, Sudan and Saudi who earned their Master’s and Ph.D.’s from abroad from well-ranked universities, but they still pronounce the /p/ exactly like a /b/!

The question now: Is it necessary or useful to teach these differences in pronunciation? The answer is definitely “yes” because pronunciation is not just about producing the right sounds or stressing the right syllables, it is also about helping students understand what they hear. Pronunciation improves listening. The mouth teaches the ear. Pronunciation is in the ear as well as the mouth.

This problem is very common throughout most Arab countries. Learners do not have an awareness of a particular consonant sound such as /p/ because it does not exist in the Arabic language. However, sounds that are familiar in their native Arabic language such as /b/ are heard instead of the actual sound which leads to students keep mispronouncing words and results in misunderstanding the English communication (listening and speaking).

The purpose of the project

The purpose of this project is to help Arab learners who learn English as a second language with the correct pronunciation of /p/ and /b/. In short, this study compares /p/ and /b/ by observing that the manner and place of articulation are the same for /b/ and /p/;

the difference is only in voicedness of the target consonants. Giving a comparison between them is considered a very important aspect.

This capstone will integrate a curriculum that may help Arab learners of English to differentiate between /p/ and /b/, and pronounce the target sounds properly which will be fulfilled through a curriculum based on the Understanding by Design framework model created by (Wiggins & McTighe, 2011).

Summary

This project compares the phonologies of Arabic and English by giving some explanations about specific consonants: /p/ and /b/. In linguistics, /p/ and /b/ are known as bilabial plosives. They are completely different sounds; /b/ is a voiced bilabial plosive; and /p/ is an unvoiced bilabial plosive. They require different mechanisms to generate. This project will explain many things such as speech production, modification of air and description of desired sounds to accommodate adults who are learning English as a second language with the correct pronunciation of /p/ and /b/. I will start by highlighting some of the difficulties that Arab learners encountered when pronouncing English consonants /p/ and /b/. Chapter two will address current research on the methodology involved in my project. There are several studies related to my problem. I will discuss what they said about /p/ and /b/ to establish the need for teaching the differences and achieve my goals of Arab learners distinguishing between the two sounds, many similarities, and differences between the two sounds and how to produce them. This project will answer these important questions:

- What did the previous research say about the problem?
- What are the causes of the problem?

- What are the factors affecting learning a second language?
- What are the appropriate methods of teaching used to overcome the problem?

Chapter three will describe my project, including the elements and the process. It will include the intended audience, and the three stages learning framework (UbD), then I will talk about how Understanding by Design works and its three stages: desired result, evidence of learning and the learning plan (curriculum) for the four-week pronunciation unit. I included a schedule of the sounds we will cover.

Chapter four will offer insight into my conclusions and a discussion of how I achieved my goals.

CHAPTER TWO

Literature Review

Introduction

The goal of this project is to accommodate Arabs who learn English as a second language with the correct pronunciation of /p/ and /b/ sounds. The project will highlight some of the students' common errors to improve teachers' effectiveness in teaching English pronunciation. This capstone aims to explain the following points of interest:

What did the previous research say about the problem?

What are the causes of the problem?

What are the factors affecting learning a second language?

What are the appropriate methods of teaching used to overcome the problem?

This chapter begins by introducing important issues and definitions related to the target project. Then, I will address the previous research on the methodology involved in pronunciation problems faced by second language learners, then compare between the two sounds /b/ and /p/ regarding Arab learners. There is a considerable amount of research regarding the pronunciation problems related to second language learners; however, there is less research available regarding Arab learners and the target sounds /p/ and /b/. A curriculum for teaching the target sounds will be designed in Chapter three to help overcome the existing problem.

Languages are different from each other. Each language has its linguistic system including semantic, grammar, morphology, phonetics, phonology and syntax. Approximately 341 million people speak English as a native language, and a

further 267 million speak it as a second language in over 104 countries (Rabab'ah, 2003). Learners from different first language backgrounds would experience different difficulties when attempting to learn a second language. In language learning, students come to the classroom with various cultural, linguistic, and content schemata (Ferris & Hedgcock, 2013).

The Arabic language has official status in over 20 countries and spoken by more than 250 million people (Alfehaid, 2015). Arabic consonant sounds vary from dialect to dialect, but the same problems occur for speakers from most Arabic dialects because English has many vowel sounds while Arabic only has a few. There are many existing varieties of Arabic. Those varieties include one written form, Modern Standard Arabic, and many spoken forms, each of which is a regional dialect. Modern Standard Arabic is the regular variety that can be taught in schools, used in written communication, news broadcasts, formal speeches, books, and public debates (Zidan, 2014).

O'Connor (1991) noted that it is important to understand which sounds in a language are phonemes because they express the differences in meaning and the learner should be able to pronounce them. Otherwise, he commits errors. In the English language, there are 24 consonants and 20 vowels; that means there are 44 phonemes in English that the learner should be able to produce while learning English. Second language learners may face some difficulty to pronounce them because of their first language interference (Hassan, 2014). In the Arabic language, there are fewer phonemes than in the English language: there are 28 consonant phonemes and six vowel phonemes. Thus, if learners' first language sound system misses any of the 44 English sounds, then they may have difficulty pronouncing them accurately and will be difficult to produce the

sounds that do not exist in their first language, such as /p/ and /v/ for native Arabic speakers.

Reasons behind pronunciation errors

Researchers and linguists have pointed to some linguistic factors affecting learning the second language and may lead to pronunciation errors such as differences of the sound system between the first and the second languages, and first language interference and how it influences spelling and pronunciation.

In the field of second language acquisition, learners with different linguistic backgrounds would face different difficulties to produce English sounds, because of the differences between the two languages (Gimson & Crutteden, 1994).

Eckman (1977) developed the Markedness Theory in second language acquisition, which helps in understanding the areas of difficulties that second language learner may encounter while learning another language. It explained why Arab learners have difficulty distinguishing between the two sounds /p/ and /b/. Eckman announced that a marked phonetic form in the second language is difficult for a second language learner to acquire, especially if it is unmarked in the first language. For example /p/ is considered an unmarked form of /b/ in Arabic, but in English /p/ and /b/ are considered marked phonemes.

Pronunciation errors that learners of English from different language backgrounds encounter are systematic, not accidental. Thus, they concluded that the main problem of speakers of other languages who speak English is substitution of sounds, i.e., they substitute sounds that they do not have in their native language, by other sounds which are close to them, e.g., replacing /p/ by /b/ (Carter & Nunan, 2001; O'Connor, 1980).

Yule (2009) studied pronunciation problems and the influence of first language. He found that many sounds such as /p/ and /b/, /s/ and /θ/, /v/ and /f/ are confusing e.g. (pit / bit), (thin / sin), (Fan / van).

The mispronunciation of /p/ and /b/ sounds resulted from the longtime practicing on their first language (Hassan, 2014). Articulators of Arab learners are set to pronounce foreign sounds such as /p/ and /v/ with the matching and closest letters which is /b/ and /f/.

Differences between Arabic and English consonant systems emerge from the fact that each language has its own phonetic and phonological systems. English consonant sounds are different in number, as well as in place and manner of articulation than Arabic. Some English consonants do not exist in the Arabic sound system at all. The Arabic language has eight vowels. Three of these vowels are common to both English and Arabic such as /i, a, u/; four are restricted to English such as /e, æ, i, ə/. Only one vowel restricted to Arabic which is /a/; most consonants shared between English and Arabic. Arabic does not have equivalents to the English sounds in some letters, such as: /p/, /v/, /g/. Arab learners exchange the non-existing sounds with others from their language that is close. Similarly, Arabic has some consonant sounds with no equivalent in English; such as ع, غ, and خ and known as "emphatic consonants. The IPA symbols for these sounds are [ʕ], [ɣ] and [x] respectively.

Problems in pronouncing consonants by Arab learners include the inability to produce the "th" sounds in words such as this and thin, the confusion between /b/ and /p/, and the substitution of /f/ for /v/ and /g/ for /j/. Arabs have difficulty in knowing the difference because there is no /p/ or /v/ or /j/ in Arabic. So you will hear many Arabs say

'fan' instead of 'van.' There is no equivalent to the /ch/ phonemic sound found in 'cheese', and it tends to pronounce as /sh/ phoneme. The /t/ sound is much stronger in Arabic and is generally over pronounced in English. Silent letters are often pronounced, as in the 'S' in 'island,' because there are no silent letters in Arabic. Consonant clusters are unusual in Arabic especially those that are longer than two consonants. As a result, Arabic speakers tend to put a short vowel between two consonants producing sounds like sepoon for a spoon, nekist for next, etc.

This project will focus on one of the most commonly mispronounced sounds; such as: /b/ and /p/. Arabs have difficulty differentiating between /p/ and /b/ phonemes. Since Arabic has no /p/ sound, Arab speakers will often pronounce /p/ as /b/ like banda, bear or bolice. The English words pencil often pronounced as bencil and Pepsi as bebsi (Jenkins, 2009). The resulting errors created by the differences between languages are called native language transfer errors (Lightbown & Spada, 2006).

Difficulties faced by Arabs who are learning English arise from the fact that the sound systems of Arabic and English are different in many aspects. Arab Learners might get used to a certain way of pronouncing certain sounds either because of faulty teaching or because they seem stuck in the journey between L1 and L2, and it is known as interlanguage errors (Yule, 2009). The problem could be caused by a non-native language teacher who mispronounced some sounds when teaching to Arab learners at their childhood, and then it was taken as a model for correct pronunciation all over their life.

Importance of teaching pronunciation

The main purpose of teaching pronunciation is we want our students to speak an intelligible language, which means the speaker can be easily understood by others even if

he came from another region and had an accent (Celce-Murcia, Brinton, Goodwin & Griner, 2010). It is necessary to teach pronunciation because it is not just about producing the right sounds or stressing the right syllables, it is also about helping students understand what they hear. Teaching pronunciation is important to help learners notice the sounds, then, acquire and produce them. Also, pronunciation is important for students to speak understandable English because students need to speak and understand English in real life to communicate with both native speakers of English and speakers of other languages.

Teaching pronunciation should not focus on the production of sounds only, but on understanding what they hear. Abercrombie (1949) stated that “language learners need no more than a comfortably intelligible pronunciation”. Pronunciation is a powerful tool for learners because it covers all four skills of language learning: listening, speaking, reading and writing. It is considered physical learning whereas learning grammar and vocabulary often taught cognitively.

Good phonological awareness of a second language is necessary for learners to have if they want to achieve fluent communication in the language (Altamimi, 2015). The goal of teaching pronunciation to such learners is not to make them sound like native speakers of English. A more modest and realistic goal is to enable learners to surpass the threshold level so that their pronunciation will not detract from their ability to communicate (Kissling, 2014).

Pronunciation helps in raising self-esteem and gives a sense of proficiency; sometimes learners avoid pronunciation of some words in the second language because they knew their difficulty for them (Gilakjani & Ahmadi, 2011).

Factors Affecting Pronunciation

According to researchers, there are several factors affect pronunciation. This study will highlight some of the most important factors, such as Critical Period, L1 interference, motivation, personality, exposure to the target language, spelling, and sound system.

Critical Period

Several studies have been conducted about the critical period, which reported that second language learners could not speak with a native-like pronunciation (Gilakjani & Ahmadi, 2011). People are born with the ability to acquire a language that surrounds them, thus people cannot acquire any language naturally. They have to study and learn the new language and will not master it natively; it is known as the critical period. A second language learner meets some difficulties, because the first language affects the second language especially if learning the second language started in adulthood, and this is a result of first language transfer (Brown, 2000). Other studies suggest that native-like pronunciation among those who acquire a second language after early childhood is rare (Flege & Mackay, 1995).

First Language interference

The first language has a clear influence on second language learners' pronunciation because rules are in conflict and errors are expected. Such errors linked to the interference between the two languages. So many learners use /p/ as /b/, others use /s/ for /θ/ and /z/ for /ð/ and /b/ for /v/ (Ladefoged, 2001; Carter & Nunan, 2001).

Alkhuli (1983) noted that the confusion between /p/ and /b/ linked to the influence of the first language, the tongue becomes stiff with the new sounds because the

articulators are set to certain position and led to such errors. Mossa (1979) noted that the Arab learners of English form habits of their mother tongue; this makes them encounter many difficulties in distinguishing sound systems between a native language and the second language.

Hassan (2014) did a study about the mispronunciation of some sounds and the shifting of particular sounds with others; the exact reasons for such errors are related to the mother tongue interference, sound system differences between the native and the foreign language. Substitution of sounds expected in the pronunciation of many Arab learners of English; this is because students do not have such sounds in their mother tongue language. Hassan had a close observation of Sudanese students confused the pronunciation of some English words that have sounds that do not exist in Sudanese Spoken Arabic, e.g., /p/ in “experience”, in addition to having errors with some consonants that do not exist in Sudanese Spoken Arabic, e.g., /θ ð p v/ they replace them with /s z b f/. They replaced the bilabials (b and p) with each other. They usually use /b/ instead of /p/ and in very few cases /p/ instead of /b/.

Spelling

Pronunciation can be influenced by spelling. When second language learners look at words, they may guess the pronunciation according to the spelling that links to their previous background on their first language. They often pronounce every letter.

In a Case Study of English Language Students at Sudan University of Science and Technology, Hassan (2014) noted that Sudanese students had some difficulty in the pronunciation of some words from a written text. This problem is due to the difference between the spelling system in English and Arabic. Arab learners can easily pronounce a

word from a written text just by looking at it, as each letter represents a sound in the Arabic language. The relationship between the orthography and the phonology is very easy to distinguish. Besides, there is no silent letter in the Arabic language as it is found in English, whereas many words in English have letters, which are not pronounced. When second language learners look at words, they guessed the pronunciation according to the spelling that links to their previous background on their first language (Hassan, 2014). Often sounds of spoken English do not match with letters of written English, and it is difficult to describe the sounds of a language like English. If a learner knows that each letter represents a certain sound, he can avoid mispronunciation (Yule, 2009). A learner who still does not have the mastery of pronunciation of some words, and pronounces them by looking at its spelling is expected to mispronounce them (O'Connor, 1991).

Teachers must be aware of the correspondences between orthography and phonology that enable the students to predict the pronunciation of words from their spelling. So if the learner does not know such relationship between sounds and spelling, he may mispronounce words by just looking at their spellings, for example, the silent k in the knee spelled with the k (Carter & Nunan, 2001).

Sound system

In 1983, a study on the effect of sound system on learning pronunciation was done by Alkhuli who reported that the main problem in teaching and learning English pronunciation results from the differences between the sound system of English and the native language, so Arab learners are not accustomed to pronouncing sounds that not found in their native language. The differences between the sound systems of Arabic and English are considered as barriers against competence in the pronunciation of English

because the organs of speech (articulators) of the learner are not used to produce such sounds and led to the use of the nearest ones. Learners of the second language must change the ways of using the organs of speech and hearing. Although, it is not easy to change what a learner has learned.

When there is a difference in the sound system between any two languages, errors are expected because learners transfer their sound system into the target language. As teachers, we need to believe that everyone can learn pronunciation; we need to give all our students the help they need to do it well (Carter & Nunan, 2001).

Exposure to the Target Language

Students' pronunciation learning is also affected by how much English they have a chance to hear in their daily lives (Gilakjani & Ahmadi, 2011). Learners who live in an English-speaking country where they constantly surrounded by the language will be more familiar with the sounds than learners who live or came from a foreign country because they try to imitate what they hear.

Motivation

Learners in any subject area tend to make more progress if they want to learn. Teachers cannot force students to learn, but they can help motivate students by showing them how improving their pronunciation will help them reach their goals (Celce-Murcia et al., 2010). Learners have to be willing to do the practice because of their desire to reach a goal such as getting a job, shopping, or making doctor's appointments. We can provide information and many chances to practice, but we do not have the power to change our students' pronunciation for them. They have to want to do it and be willing to

do the work themselves. In 2010, According to Celce-Murcia et al. (2010), there are different kinds of motivation:

- Integrative motivation in which learners want to be accepted into a group that uses the language. Even though, the group might still recognize them as “outsiders.”
- Assimilative motivation in which learners want to be accepted as real members of the group and function well. They do not want to thought of as “outsiders.”
- Instrumental motivation in which learners have goals such as getting a job, conducting business, or passing a test.

Teachers can help motivate students by showing them how improving their pronunciation will help them reach their goals.

Personality

No two people are alike. We each have our personality, talents, strengths, and weaknesses; these factors can affect how people learn pronunciation. Teachers may assume that outgoing learners will be able to learn pronunciation better than shy students (Celce-Murcia et al., 2010). Confident students might speak more and are willing to try new sounds, and the extra practice may help them improve their pronunciation. However, it is not always the case, sometimes; confident students may jump ahead without paying attention to the accuracy of their pronunciation. They have to think carefully about sounds. Teachers must not underestimate the quiet students; they can do better than talkative ones by practicing within themselves with audio, video and internet tools (Celce-Murcia et al., 2010).

The Sound System of English

English consonants such as /p/ and /b/ are formed when the air stream is restricted or stopped at some point between the vocal cords and the lips (Todd, 1987). The external flow of breath is made in different ways by the organs of speech (articulators) to produce English consonant sounds; the airflow is stopped completely or partially, or forced over the sides of the tongue or pass through the nose according to the sound. The most accurate way of describing a consonant sound is through its place and manner of articulation. Sounds of English distinguished by their place of articulation.

The place of articulation

The parts that are responsible for producing sounds are called articulators, and sounds are related to them. When the air stream passes through the vocal tract, it obstructed in some way and distinct each sound, the most important articulators that may cause obstruction are lips, teeth, vocal cords, and the hard palate (Ladefoged, 2001). Points of articulation are formed by the movement of an active organ towards another constant organ (Masloh, 1980).

The manner of articulation

It refers to the way the airstream configured during the production of consonant sounds. The consonants /p/ and /b/ differ in the way they pronounced due to their manner of articulation or air stream. They are both bilabial plosive sounds, which means that they are formed by both the upper and lower lips when they come together or closed, and the air stream in the vocal tract is completely stopped at some point.

In linguistics /p/ and /b/ are known as bilabials which mean that they are produced through the lips. /b/ is voiced bilabial which makes the vocal cords vibrate during its

production, while /p/ is voiceless bilabial. If learners put their finger on their throat; the vocal cords will vibrate with the pronunciation of /b/ but not with /p/.

Voicing	Bilabials
Voiceless	p
Voiced	b

Problem /p/ vs. /b/

The /p/ and /b/ are two different phonemes that can be easily distinguished by native English speakers, but not by Arabic learners because they only have the phoneme /b/ in their native language, this is why most Arabic speakers mispronounce words having the sounds /p/ and /b/, they need to be aware of the phoneme /p/ (Catford, J. C., & Pisoni, D. B., 1970), (Swan, M., & Smith, B., 2001) and (Moosa, 1979).

In 2010, Schmidt reported that learners need to notice the target linguistic feature first. Arab learners usually get confused between /p/ and /b/. If we ask them to say a word like (pen), they'll pronounce it (ben). The reason for shifting from /p/ to /b/ is the fact that the two sounds are two allophones of one phoneme.

Arab learners of English can easily pronounce /b/ since it exists in Arabic; “b” is the letter equivalent to the Arabic letter “ب”. The aspirated /p/ does not exist in Arabic. Thus, Arab learners cannot pronounce it and usually use /b/ instead of /p/ which can change the meaning, such as the difference between /bæt/ and /pæt/ (Celce-Murcia et al., 2010). Arab learners have difficulties pronouncing /p/ correctly because they are not aware of the way to produce it. /p/ is voiceless and produced by lips and speaker should

push the air stronger outside the mouth. /b/ is a common consonant in English and Arabic whereas /p/ is a consonant restricted to English. /p/ exists in English as a phoneme. It does not exist in Arabic. It is an allophone of /b/ conditioned by the phonetic environment. /b/ is phonemic in English because it affects meaning, but in Arabic /b/ is phonetic because it does not affect meaning. (Alkhuli, 1983)

How to teach pronunciation?

Teachers need to know many ways to teach pronunciation; they must adapt their methods to fit students' needs, and helping them practice effectively to overcome any problems they might have in pronunciation (Celce-Murcia et al., 2010). First, learners need to hear the difference between the incorrect and the correct sound, and then they need to learn how to produce the correct sound. Finally, they need to be able to recognize when to make each sound. They must be more aware of the difference in meaning and then try to pronounce them together. The unintelligible sounds cause barriers and boundaries to effective communication amongst speakers (Ahmad, 2011)

Learning correct pronunciation takes a long time. Pronouncing sounds involves both the individual's mind and body because learning new sounds, needs learning to move muscles of the mouth (articulators) in a new way and change the pronunciation habits that have built up throughout the individual's whole life. It is not easy to memorize, changes must be done slowly, practice a lot, and gradually to build up skills (Celce-Murcia et al., 2010).

How to overcome learners' Pronunciation Problems

According to Celce-Murcia, Brinton & Goodwin (1996), the most effective ways of teaching pronunciation was as follows:

1. *Listen and imitate*: An old technique used in the Direct Method, in which students listen to a teacher-provided model and repeat or imitate it. The most successful methodologies in L2 teaching and learning have included repetition and imitation of words and sentences to a greater or lesser (Celce-Murcia et al., 1996). This technique has improved with the use of audio and video recorders, internet applications and language labs. This process is important in second language acquisition and has been seen as the most effective way to learn a second language especially for vocabulary and accurate pronunciation. Repetition works best when done in a meaningful context (e.g., via interaction with others). Saidi (2017) announced that evidence shows that learning L2 through repetition induces neuroplasticity, specifically with second language learners.
2. *Phonetic training*: A technique from the Reform Movement, which may involve doing phonetic transcription as well as reading phonetically, transcribed text using articulatory descriptions, diagrams, and a phonetic alphabet (IPA).
3. *Minimal pair drills*: It is an old technique introduced during the Audiolingual era to help students distinguish between similar and problematic sounds in the target language through listening and speaking practice. Minimal pair drills typically start with word-level drills and then move on to sentence-level drills. The teacher establishes the setting; students are then trained to respond to a sentence stem with the appropriate, meaningful word choice: (a- (pear) or b- (bear)).

Strategies for teaching difficult Sounds such as /p/ and /b/

Teachers can practice teaching using communicative activities, such as read aloud, minimal pairs, and role play. Teachers must encourage students to be responsible

for their learning and work on their own by guiding students to develop strategies to practice the features identified as problematic on their own outside of the class such as Google applications production training. The most effective strategy is the minimal pair drills.

The use of Minimal Pairs in teaching pronunciation

Minimal pairs are two words with different meanings that have only one single sound difference which is in the same position in both words (Mihalicek & Wilson, 2011). Using minimal pairs is an effective strategy to start, according to Altamimi's experiment with Saudi students in 2015, minimal pairs helped students to learn the differences between the sounds: /p, v, tʃ, ʒ, ŋ/. The difference between minimal pairs is the sound, or the phoneme, not the spelling. Minimal pair drills focus on highlighting two single sounds (phonemes) and contrast them. Teachers can look for appropriate minimal pairs, such as words that are the same except for one different sound. They can help with teaching the target sounds that learners need to focus. Minimal Pairs help learners recognize the difference between words regarding their sounds and meanings, which may lead to pronunciation mastery. Students make more mistakes when they produce the sounds in contexts than in isolated words because they lose focus on the target sound. Accordingly, it is better for teachers to begin training learners on isolated words then sentences and finally, contexts (Binturki, 2008).

Minimal pairs will be used in the curriculum to teach the difference between the target sounds. Understanding the small differences in pronunciation between similar words is a great way to help students.

The use of technology in teaching Pronunciation

In 2014, a case study by Hassan E. aimed to help Sudanese students of English improve their pronunciation using the modern techniques and aids in learning the language, e.g., internet, audio aids such as (CDs, tapes, and TV). She suggested regularly listening to English sounds and words using the technology tools which are very useful for practicing pronunciation, in addition to her recommendations of using a speaking dictionary for checking the correct pronunciation of words. Alsuheim (2017) stated that better pronunciation outcomes could be achieved by integrating computer technology.

Audio aids and Google play store applications will be used in the curriculum. Students will be able to listen and practice pronunciation. They can use the recording feature to listen to their sound production and receive scores.

Summary

The /b/ and /p/ are allophones of the same phoneme in Arabic, while they are separate phonemes in English leading to words with different meanings, e.g. 'big' and 'pig.' Arabic does not have two distinctive bilabial plosives; only the voiced /b/ represents both "b" and "p". /P/ and /b/ are often studied as a pair because both sounds are produced in the front of the mouth with the tongue in the same place. The difference is the /p/ produce a puff of air through the lips while /b/ is causing the vocal cords vibration.

English learning beginners will not be able to differentiate between some of the words they hear, words as: 'pit,' 'pet,' 'put,' 'pot,' and 'pat' might be the hardest for Arabic speakers to pronounce and recognize. The vowels in the words 'pin' and 'pen' are different phonemes, and so are the consonants at the beginning of the words 'pet' and 'bet.' Because

of the confusing nature of English phonology, it is particularly important to learn to think of English pronunciation regarding phonemes rather than letters of the alphabet

CHAPTER THREE

Methodology

Introduction

The goal of this project is to design a curriculum for teaching the difference between /p/ and /b/ phonemes to avoid the confusion between them because minor mispronunciations can give words a different meaning and sometimes cause problems. Changing the meaning may result in a bad or inappropriate word to the listener. Students will recognize their common mistakes in pronunciation and the impact those have on their comprehensible output.

The learning plan will focus on how to overcome one of the most common pronunciation mistakes that inhibit Arab learners from being understood. By the end of this curriculum, students will be able to distinguish between the target sounds using oral and written communications skills.

This chapter will describe the project, intended audience, the Understanding by Design (UbD) learning framework, and a curriculum for teaching the target sounds. This project will use effective teaching procedures that help teachers and students overcome the areas of difficulty. To make lessons truly enjoyable for English as Second Language (ESL) students, teachers must use interactive learning activities that allow students to explore the English language in a fun and productive way and encourage skill improvement and better attendance for ESL students, examples are personal interaction; role plays, games and Google play store applications. There are many Google play store applications that can help learners to listen, practice and test their pronunciation.

The key skills needed for good pronunciation are as follows:

- Develop listening skills to distinguish between the desired sounds.
- Practice speaking in class with correct pronunciation and gain confidence in conversational skills.
- Develop reading comprehension strategies.

Overview of context

Participants

I will start this chapter by introducing the intended audience. They are adults intermediate to advanced Arabic native speakers from different Arab countries who are attending a university in the US. Some of the students are intended to live in the US, and others want to get their degrees, and then go back to their home countries. They are pursuing advanced degrees in different fields of study (sciences, engineering, liberal arts, languages, etc.). Students' ages range from 21 to 50 years. English language proficiency and academic experience among students can vary greatly.

Their proficiency in English was assessed using the following questionnaire:

Name _____ Date _____

1. Why do you need to learn more English? Please be specific. Give examples of situations that are difficult for you in English.
2. When people speak English to you, how much do you understand? Check the amount.
 Everything most some a little very little
3. When you watch American TV, how much do you understand? Check the amount.
 Everything most some a little very little
4. When you speak English, how much do other people understand from you?
 Everything most some a little very little

5. Order the skills that you need from one to six. Number one is the most important, and number six is the least important to you at this time. Please use each number only once.

___ Reading ___ Writing

___ Listening ___ Speaking

___ Vocabulary ___ Pronunciation

The context Place

This course is intended for a community education class, where there are a lot of Arab learners who came to the US to pursue their degrees. This course will be conducted over a four week period. The class meets three times a week for 60 minutes each time. Within the framework, students will gain an understanding of the tools necessary to pronounce the desired sounds correctly.

Materials and Equipment

Technology must be incorporated into teaching pedagogy, so that students will not only effectively acquire a second language, but will also develop electronic literacy skills. Teaching our students language in its traditional media is no longer enough. Traditional literacies, such as reading and writing, are now only a subset of the skills a learner is required to develop, to function efficiently. Increasingly, in everyday and professional life, people need the skills of electronic literacy, such as accessing, evaluating, and utilizing information (Warschauer, Shetzer, & Meoni, 2000).

The framework

The curriculum is designed according to the Understanding by Design (UbD) model created by Wiggins & McTighe in 1998 for developing an educational curriculum that involves setting learning goals before developing instructional techniques and

assessment. Teachers need to decide what results they want to achieve, and then plan how they are going to teach accordingly. It offers a planning process and structure to guide curriculum, assessment, and instruction. Its two key ideas contained in the title:

1. Focus on teaching and assessing for understanding and learning transfer, and
2. Design curriculum “backward” from those ends.

The effective curriculum is planned backward from long-term, desired results through a three-stage design process (Desired Results, Evidence, and Learning Plan). This process helps avoid the common problems of treating the textbook as the curriculum rather than a resource, ensuring that learning happens, not just teaching and assuming that what taught was learned. Activity-oriented teaching recommended in which no clear priorities and purposes are apparent (Wiggins & McTighe, 2011)

Identifying desired results or goals is the first step of the UbD framework. Goals must be specific, measurable, achievable, realistic, and timely determined. The goal for my curriculum is students will be able to differentiate between /p/ and /b/ fluently using oral and written communication skills, In addition to identifying the physical difference between the aspirated voiceless /p/ and the voiced /b/.

Goals must take into consideration the learners’ level, and abilities. Working with learners as they set their goals will help overcome barriers to achieving their progress. Teachers must identify strategies and create a learning plan with objectives to achieve their goals in improving pronunciation according to individual needs, students’ level of language proficiency and educational history to monitoring the students’ progress throughout the course.

Backward design encourages teachers and curriculum planners to think like assessors before designing a specific unit or lesson. Students are required to perform tasks using skills learned in class and demonstrate what they have learned authentically. Students will be assessed using minimal pairs of exercises, quizzes, and observations.

Teachers must first determine what students are expected to know to focus their teaching accordingly. The evidence of learning not only helps teachers to clarify their goals but also results in a more sharply defined teaching and learning target. Assessments are not just to provide a 'grade,' they are the tools that provide teachers with data on the students' knowledge and serve as an important source for official progress. When designing an assessment, we have to design the ones that generate the evidence we need as teachers to determine what our students have achieved and the extent of students' understanding, so that we can make decisions about how we can approach future instructions.

Formal and informal assessments will be used in the project. Formal assessments like quizzes are used to measure the understanding power of students. Informal assessments will be used such as classroom discussions or games that can tell much about the students' learning and understanding of basic concepts. Students' understanding can be assessed by observing and listening to the student responses and by taking notes. Using performance evidence by asking students to apply their learning to a new and authentic situation as a means of assessing their understanding and explaining concepts in their own words. Some goals can be achieved through listening and speaking; others may require more active learning, practicing, discussion, small group collaboration, and technology use. Students' exposure to visual and audio aids must be of

professional quality and relevant to the lesson to assure effective learning in the classroom. Every teacher must Consider which equipment/aids choices are available, and which one best suit the lesson.

Active learning instructional strategies include a wide range of activities that share the common element of involving students in doing things either in class or out of class and thinking about the things they are doing (Bonwell & Eison, 1991)

Active learning instructional strategies can be created and used to engage students in:

- Speaking with a partner, in a small group, or with the entire class.
- Expressing ideas, exploring personal attitudes and values.
- Giving and receiving feedback.

A systematic process for designing instructional strategy will help structure an effective curriculum. By designing the learning plan with step by step activities can help learners acquire and retain skills longer.

In the curriculum, the four steps for teaching pronunciation developed by Celce-Murcia et al. (1996) will be used.

1. **Develop sound awareness**

Find out about the most common pronunciation problems that affect speakers of their L1 and listen carefully to the difference between L1 and L2.

2. **Articulation practice**

Using a piece of tissue or paper to feel the air in case of /p/ only not /b/.

pa-pee-poo

ba-bee-boo

3. **Controlled practice**

Using minimal pairs and tongue twisters

4. **Communicative practice Perception Production**

Perception Production encourages students to use:

- Multiple and varied exposures (e.g., via technology)
- Interaction with others to reuse the relevant form.

The curriculum includes welcoming and easy warm-up activities to act as icebreakers, for example, showing them pictures of things or objects with /p/ and /b/, and ask the whole class to guess the pronunciation of each word.

Learning plans may reflect the language used in everyday life in the U.S., and may include types of communicative language used at home, at work, or in the community; i.e., talking about family members and family fun activities, comparing services, and community participation in the U.S. and other societies.

Curriculum Settings

Instructional strategies

This lesson will be conducted over a four week period. Class time is 60 minutes. The class meets three times a week. I will be teaching two phonemes: /p/ and /b/ using minimal pairs.

Topic:

Teaching /p/ and /b/ consonants

Student proficiency level:

Intermediate and Advanced

Lessons aim:

Provide controlled and free practice through communicative activities.

Objectives and Lesson outcomes:

By the end of this curriculum, students will be able to differentiate between /p/ and /b/ fluently using oral and written communications.

Anticipated problems and solutions:

Students may pronounce /b/ or /p/ for /b/, and do not identify the difference. They may become frustrated if they cannot produce the sound correctly.

1. The teacher will discuss, and show the articulation of the sound with the help of videos or audios.
2. The teacher must have appropriate and exciting activities or games such as flash cards, Flyswatter game and Google play store applications which help Students practice in a fun and non-stressful way.
3. A great way to fix pronunciation problems in English is to work with minimal pairs. A minimal pair is two words that differ only by one sound, such as bear/pear.

Materials

- Pictures
- Flashcards
- Sturdy paper
- Lamination
- scissors
- whiteboard
- erasable markers
- regular paper for worksheets

- handouts (examples and exercise sheets)

Equipment

- Overhead projector
- Computer or Laptop
- LCD Screen
- Microphone
- DVD Player
- Whiteboard
- Tablets

Summary

This chapter introduced the Understanding by Design framework that was used to develop a curriculum for helping Arab learners of English to differentiate between the two sounds /b/ and /p/. The intended participants included in this chapter as well as the materials and tools used in the teaching process. Minimal pairs were a great way in teaching the difference between the target sounds, in addition to the use of Google applications which help students to do more practice in the present time and the future.

My goal for this class is to focus on speaking the sounds, and students will be able to differentiate between their pronunciations. Students will be given a word list to introduce the target sounds for the day. The list is used throughout the class to practice in different ways, such as with a mirror or in pairs or groups. Practical activities and recommendations are provided to help Arab learners to overcome such problems. Different games and activities will be used in class to engage students and keep them

involved. By the end of the course, students will be able to differentiate between /p/ and /b/ using oral and written communications.

CHAPTER FOUR

Conclusion

This study targeted two phonological sounds that are mistaken by Arab learners, /p/ vs. /b/ consonants. The goal of this project is to accommodate Arabs who learn English as a second language with the correct pronunciation of /p/ and /b/ sounds. The project discussed some of the students' common errors in pronunciation and provided a curriculum that may help improve teachers' effectiveness in teaching English pronunciation to Arabs.

Researchers and linguists noted that the errors of pronunciation that learners of English from different language backgrounds made are systematic, not accidental. They have pointed out that the main reason for such pronunciation errors was due to the effect of the first language in learning a second language. The mispronunciation resulted from a longtime practicing on their first language as each language has its own phonetic and phonological systems. They pointed that first language interference has a clear influence on second language learners' pronunciation because rules are in conflict and errors are expected, learners' tongues develop stiffness with the new sounds, and they commit such errors. For example, English consonant sounds are different in place and manner of articulation than Arabic. They mentioned that the reason for the resulting errors might be created by the differences between the two languages which are called native language transfer errors, they concluded that the main problem of the speakers of other languages, who speak English, is the substitution of sounds that they do not have in their native language by other sounds which are close to them, e.g., replacing /p/ by /b/. Arab learners

are unable to produce /p/ because they have no /p/ in their mother language; they only have the /b/ consonant; they have difficulty differentiating between the two sounds.

Teaching pronunciation is important to help learners to speak intelligible English which means the speaker can easily be understood by others and communicate with both native and non-native speakers of other languages. Some researchers mentioned that good phonological awareness of a second language is necessary for learners to have if they want to achieve fluent communication. It is particularly important to learn to think of English pronunciation regarding phonemes rather than letters of the alphabet.

Pronunciation teaches the ear and accordingly teaches the mouth which means listening improves speaking.

Teaching Pronunciation

The most accurate way of describing a consonant sound in the English language is through its place and manner of articulation. Often /p/ and /b/ are studied as a pair because both sounds are produced in the front of the mouth with the tongue in the same place. They are known as labials which mean that they produced through the lips. The /b/ voiced which makes the vocal cords vibrate during its production, while/p/ is voiceless. If learners put their finger on their throat; the vocal cords will vibrate with the pronunciation of /b/ but not with /P/.

This project was influenced by Celce-Murcia et al. (1996), who stated the most effective ways in teaching pronunciation is by:

1. listening and imitating,
2. phonetic training: using articulators,
and

3. minimal pair drills.

Altamimi (2015) pointed to the effectiveness of minimal pairs strategy in teaching pronunciation according to his experiment; with Saudi students, minimal pairs helped students to learn the differences sounds such : /p, v, tʃ, ʒ, ŋ/ by using two words or sentences with different meanings that have only one single sound difference that is in the same position in both words.

Minimal pairs were used in the curriculum to teach the difference between the target sounds. The difference between minimal pairs is the sound, or the phoneme, not the spelling. Minimal pair drills focus on highlighting two single sounds (phonemes) and contrast them. The curriculum was affected by the strategies used by Hassan E. in her 2014 study to help Sudanese students of English improve their pronunciation using the modern techniques and aids in learning language, e.g., internet, audio aids such as (CDs, and TV).

Scaffolding is applied in the curriculum. It is an essential element of effective teaching. It refers to moving students gradually toward stronger understanding and independency.

Interactive learning activities and games are used to make lessons enjoyable and give students the opportunity to explore the English pronunciation in a fun and productive way.

Implications

Learning correct pronunciation is not easy and takes a long time. Teachers must make a visible and physical approach for teaching pronunciation. Pronouncing sounds involves both our minds and our bodies because when learning new sounds, students

need to learn to move the muscles of the mouth (articulators) in a new way and change the pronunciation habits that were built up throughout the whole life. Learning a new sound is not easy to memorize, the change has to be done slowly, practice a lot, and gradually to build up skills. Also, Arab learners especially graduate students do not like criticizing, they usually think their pronunciation is perfectly right, and most theories and researches suggested that recognizing the pronunciation problem is the first step in resolving the problem. Pronunciation teaching needs time and motivation to succeed.

In my future research, I would like to do a broader project or thesis with analytical methods about all the sounds that are confusing and mistaken by Arab learners, such as /v/ vs. /f/, /s/ vs. /z/ and others not only /p/ and /b/ consonants.

Recommendations

Before designing any curriculum or learning plan, teachers must set reasonable course objectives such as increasing learners' pronunciation intelligibility in specific sounds such as /p/ and /b/, then, create learning plans based on learners' needs. Teachers should target the most confusing sounds for learners that can affect their intelligibility.

In general, mispronunciation may lead to misunderstanding. Teachers must start with observational practice to help learners notice the difference between the accurate pronunciation and their original pronunciation, then train them on producing the target sounds using videos, audios, imitation, minimal pairs strategy, and Google play store applications.

Teachers must make sounds visual and physical, by providing techniques that help learners distinguish the target sounds. For example, in /p/ and /b/, a piece of Tissue or paper can be used to highlight the aspiration feature of /p/ sound and to touch the

throat to feel the vibration accompanied the /b/ sound. Teachers should use evaluation logs to observe and track learners' improvement and determine their pronunciation weaknesses.

Teachers may encourage learners to practice individually on PCs or tablets or phones to practice out of class. Google play store applications provide good pronunciation features, recording production of sound and real life like dialogues, as well as feedback and pronunciation scores. Further research should be done on improving the pronunciation of Arab speakers to add suggestions to the limited literature.

Summary

In the curriculum, controlled activities used at the beginning, then, practiced in authentic speech using in-class exercises to ensure learners exposure to the target sounds. Learners trained on producing the sounds in isolated words and sentences; then, gradually moved to the sounds in authentic speech using the scaffolding model. Activities were created such as Jigsaw and Roleplay, in addition to using Google play store applications to train students on using them at home from their tablets or phones.

Applying technology is currently an important tool in classrooms, but Technology must be used as a supplemental tool rather than replacement tools. Teachers must assure that learners are receiving enough practicing activities in class.

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