Expoloring the Difficulties Native Mandarin and Arabic speakers Facing when Learning English

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Abstract. This paper presents a comparative analysis of Mandarin, Arabic and English in the phonological part. The study focuses on the challenges and difficulties faced by L1 Mandarin and Arabic speakers in acquiring English pronunciation. Chinese is tone-based, and Arabic has a simpler vowel system; in contrast, English, a Germanic language, uses a complicated inventory of vowels and consonants, elaborate syllabic structures, and prominence-related stress patterns. The study looks at how the Arabic vowel and consonant inventory and the Pinyin system, a Chinese phonetic transcription tool, affect phonetic transfer problems when learning English. The study aims to help native Mandarin and Arabic speakers have a better understanding of the difference among different languages which would help them overcome the challenges and achieve more native-like fluency in English speaking.

Keywords: Mandarin Phonological system, English Phonological System, Comparison between English phonological system and Arabic phonological system.

1. Introduction

Today's world is surrounded by cultural sensitivity and global awareness. As migration has continued to rise and international collaborations have become more and more common, the ability to communicate effectively with people who have different cultural backgrounds is not only a professional skill but also a social necessity.Therefore, it is crucial for people everywhere to ascertain and comprehend how L1 acquisition affects the process of acquiring a second language. Arabic is the third official language in the world, whereas English is the most widely used language. The two languages that are most widely spoken worldwide are English and Mandarin. Worldwide, more than 2.6 billion individuals speak Mandarin, English, or both languages.

Differences in phonology between different languages can significantly influence learning a new language. This is particularly evident for native Mandarin and Arabic speakers, whose phonological systems are markedly different from English. English, as part of the Germanic branch of the Indo-European language family, has a complex phonetic structure, whereas Chinese, a Sino-Tibetan language, and Arabic, a Afro-Asiatic language, have distinct phonetic characteristics.

The primary objective of this paper is to explore how these phonological disparities affect the learning of English as a second language by native Chinese and Arabic speakers.This paper specifically look at how the Chinese Pinyin system, which is used to teach Mandarin pronunciation, affects learning English sounds and how its structure causes interference. When combined with the lack of vowel reduction and the propensity to insert vowels to make consonant clusters simpler, the absence of some English vowels and consonants in Arabic poses substantial challenges for Arabic speakers. The purpose of this study is to identify these major obstacles and offer insights that will aid language teachers in creating more successful plans of action to help students from Arabic and Chinese backgrounds get past these phonological hurdles..

2. The Comparisons between Chinese and English

2.1. Pinyin System and IPA system

Chinese and English are two large spoken languages right now around the world. English belongs to the Germanic language in the Indo-European language family. Chinese is a branch of the Sinctic

language in the Sino-Tibetan language family. Chinese is a logographic script in which the sound and the word are not correlated in Chinese. All the words in Chinese are represented in morphemes and syllables rather than phonemes. Most of the languages in the world use IPA (International Phonetic Alphabet) to describe and transcribe the sound. However, Chinese marks sound pronounced in Chinese with the Pinyin System.

Pinyin is the official phonetic transcription system for Madrian, created by linguist Zhou Youguang in the 1950s. Since the main goal of the Pinyin system is to connect people to the rest of the world and give those who wish to learn Chinese a faster and more accurate way to learn the pronunciation, all of the letters are written in the Latin alphabet [1]. The Pinyin alphabet consists of a total of 26 characters. The International Phonetic Alphabet uses all of the letters. But in contrast, each letter has a distinct sound. For instance, the IPA Chart and Pinyin systems have differing pronunciations of the letter /a/. The distinct system for describing how each Chinese word is pronounced is called the Chinese Pinyin System. . For each native Chinese children and second language learners, the first thing they should learn is to understand how to use the Pinyin system to pronounce the Chinese character in Chinese [2]. The tone is one of the most important things in the Pinyin System. There are in total four different tones in pronouncing Chinese words. In Chinese phonemes, the same syllable can be pronounced with different tones in order to create different meanings.

2.2. Learning English as The Second Language For Mandarin Speakers

The Pinyin System has affected the period for a Chinese speaker who tries to pronounce English as his or her second language. The Pinyin system is for native Chinese speakers to learn Chinese pronunciation during primary school. Learners are likely to apply their L1 language techniques and mechanisms when they are trying to learn English. Hence the pinyin system is impressively remembered by Chinese speakers. The influence of the Pinyin system influences Chinese speakers to learn English pronunciation[3].They create a different sound when they attempt to pronounce an English word because they are using the Pinyin system to assess how to pronounce the word. Because Chinese and English differ greatly from one another in phonetics and phonology, there are more negative than positive translations from Chinese to English in phonology. Phonetic transfer may be hampered by the differences in vowels and consonants between Chinese and English due to the Pinyin system's disparity from the IPA. Furthermore, it is difficult to build a favorable Chinese-to-English transfer because English is prominence-related and Chinese is tone-determined [4].

Also, the difference in word and sentence stress also causes difficulty for Chinese speakers to learn English pronunciation. Chinese speakers who try to learn English may sound a bit choppy and robotic as opposed to wording sounding of highs and lows. they may be confused about where the stress should appear in the sentence to sound properly. The different tones in Chinese may lead them to pronounce English words with a different and strange sound because of the nonstandard and improper location of the stress. For some multi-syllable words in English, it is normal for a Chinese speaker to place the stress in the wrong syllable. This is a common problem not only among Chinese speakers but also other native Asian speakers. It happens when a speaker incorrectly replaces one letter with another, such as mistaking words with the /l/ sound with /r/ /b/ or /p/ [5-6].

When Chinese native speakers attend to learn English, the missing letters in the Pinyin system compared to IPA means that Chinese native speakers may struggle to distinguish or produce certain English sounds. In Mandarin, there are only six basic vowels compared to twelve vowel sounds in English. In English, there exist short and long vowels like /i/ and /i:/. The different use of short or long vowels create different words. However, the vowel is not phonemic in Chinese. It means that the vowel duration does not create different words or change the meaning of a word. When they attend to learn English, some little difference about vowel length may cause some difficulties for Chinese speakers perceiving and producing the distinction in English. Moreover, one of the most common vowels in English is schwa sound /ə/, but the schwa sound is lacking in Mandarin. There is no direct equivalent sound to the schwa, which makes it challenging for Chinese speakers to produce this sound.

During their period of learning English, they may replace words containing the sound schwa with some more familiar vowels that appeared in Chinese, which lead to some non-native-like pronunciation from native English speakers [7-9].

Chinese speakers learning English may likewise have challenges if specific consonant sounds are absent. The English language has two extremely unique sounds: /θ/ and /ð/. These two sounds have no equivalent sounds in Chinese. Chinese speakers are more prone to replace the sounds /θ/ and /ð/ with /s/ and /d/, respectively. It could cause some misinterpretations of the messages the speaker is trying to convey. In English grammar, complex consonant clusters are permitted for plural nouns and third-person forms by appending "s" or "es" to the end of the word. However, Mandarin only has simpler syllable structures. Chinese speakers are more likely to simplify these clusters by omitting consonants by adding extra vowels or reducing the number of consonants. This simplification can create confusion for native English speakers.

3. The Comparisons between Arabic and English in Phonological System

3.1. Introduction to the Background of Arabic

Arabic is the third official language all around the world beside English and French. Phonology is replete with many major divergences between Arabic and English, differences that make it hard for Arabic speakers to learn English. The two languages do not even share the same families of the languages because Arabic is classified into the Afro-Asiatic family and more precisely, the Semitic group, whereas English falls under the Indo-European family and more precisely the Germanic group. These dissimilarities result in the most serious divergences between vowel and consonant inventories, syllabic structures, stress patterns, and prosodic features. The proceeding discussion will tap into these phonological problems supported through comparative analysis coming from graphic representations [10].

3.2. Vowel Difference between Arabic and English in Phonological system

One of the key obstacles that confront Arabic L2 learners of English is the varying inventory of vowels between the two languages. According to Table 1, Arabic has a relatively simple vowel system. including three short vowels (/a/, /i/, /u/) and three corresponding long vowels (/aː/, /iː/, /uː/). Beside these six vowels, there are only two diphthongs in the Arabic vowel system. They are /aw/ and /aj/. On the contrary, English has a huge number of vowels. English phonological includes both monophthongs and diphthongs, such as /æ/, /ɛ/, /ɪ/, /ʊ/, /ɔ/, /eɪ/, /aɪ/. The vowels in English are quite complicated, which gives rise to some problems for Arabic speakers.

Table 1. Vowel phonemes of Modern standard Arabic and Classical Arabic

	Short		Long	
	Front	Back	Front	Back
Close	/i/	/u/	/iː/	/uː/
Open	/a/		/aː/	
Diphthongs	/aw/,/aj/			

In Arabic, differences in vowel length can make a difference in a word's meaning. For instance, [kitab] means ‘book’ while [kita:b] means something different. On the other hand, vowel length is not only a matter of the length of a vowel. In contrast, English not only differentiates vowels by length but also by quality. Arabic speakers find it hard to differentiate the numerous vowels in English since there are only eight vowels in the Arabic vowel system including diphthongs. For instance, the English /ɪ/ (as in ‘sit’) and /iː/ (as in ‘seat’) are fairly close in sound to a native Arabic speaker, who might not be able to find the difference between the vowel height and tension. There are a lot of examples of common mispronunciations for a native Arabic speaker, which may confuse the meanings for different words in English.

Vowels in English can change dramatically based on their different positions and whether they are stressed within a word. The unique vowel schwa /ə/ is one of the most notable instances of vowel reduction. It frequently happens with shortened and unstressed vowels. For example, the first and last vowels in the English word "banana" are unstressed and reduced to the schwa sound, [bəˈnaenə]. In contrast, the Arabic phonological system does not have vowel reduction. Arabic vowels all need to be uttered with clarity. Therefore, there can be an issue if native Arabic speakers wish to learn English: they might pronounce each English vowel as fully and clearly as they would pronounce Arabic vowels. For example, an Arabic speaker might pronounce "banana" as [bananʌ] instead of [bəˈnænə], which can make speech sound stilted or overly formal in English.

Another common problem that Arabic speakers may have is the absence of certain vowels in Arabic phonological system, which are very common in the English phonological system like some particularly central vowels /ə/ and /ʌ/ . Since these sounds do not exist in Arabic, Arabic speakers often substitute them with front or back vowels of similar sound. For example, an English word like ‘cup’ /kʌp/ can be mispronounced as [kæp] or [kɑp], in which the vowel has moved to a more front or back position. Such substitution can further confuse the communication, especially if vowel differences are the ones that change word meanings in English.

3.3. Consonant difference between Arabic and English

The Arabic consonant system also has some significant differences compared to the English consonant system. There are some special places for Arabic consonants such as emphatic consonants, uvular consonants and pharyngeal consonants, which are not present in the English phonological system. There are also some lack of English consonants in the Arabic phonological system. In Arabic, there does not exist some important consonants in the English phonological system. For example, the labiodental voiceless plosive sound /p/, the labiodental voiced fricative sound /v/ and velar voiced nasal sound /ŋ/. Native Arabic speakers have a high possibility to substitute these missing consonants with some similar existing sound in the Arabic phonological system. They may use labiodental voiced plosive sound /b/ to replace /p/, like ‘bat’ to ‘pat’ ; labiodental voiceless fricative sound /f/ to substitute /v/, like ‘ferry’ to ‘very’ ; alveolar voiced nasal sound /n/ to replace /ŋ/, like ‘sin’ to ‘sing’. The vowel substitution would lead to some misunderstanding of meaning by native Arabic speakers.

For Arabic speakers learning English, distinguishing between voiced and voiceless fricatives presents another significant obstacle. Arabic speakers have trouble telling voiced fricatives from voiceless ones. Alveolar voiced fricative /ð/ and dental voiceless fricative /θ/ are two examples. Both /θ/ and /ð/ are consonants in Arabic; however, for some particular words, /θ/ may be substituted with /s/ and /ð/ with /z/. When they encounter English words that have the sound /θ/ or /ð/, they might not know how to pronounce the sound correctly and end up pronouncing the words incorrectly [11].

English allows for more complex syllable structures, particularly with consonant clusters. On the other hand, the Arabic phonological system generally follows a more restrictive syllable structure, (C)V(C), where consonant clusters are less common. Arabic speakers may insert additional vowels between consonants (a process known as epenthesis) to make the pronunciation easier.

4. Conclusion

The analysis of the phonological differences between Chinese, Arabic, and English reveals the depth of the challenges faced by native Chinese and Arabic speakers when learning English.These difficulties stem from basic variations in the three languages' usage and structure of sounds. Because of the Pinyin system's influence, Chinese speakers frequently have trouble pronouncing words correctly in English, which causes issues with consonant clusters, vowel length, and the schwa sound. Similar challenges face speakers of Arabic include the absence of some consonant sounds in Arabic phonology, such as /p/ and /v/, and the absence of vowel reduction in their mother tongue. Both learner groups also struggle with word and sentence emphasis, which makes it more difficult for them to acquire English pronunciation that sounds natural..

Understanding these difficulties is crucial for language educators, as it allows them to create some new teaching methods to the specific needs of Chinese and Arabic learners for learning English as a second language. Pronunciation exercises that focus on the distinction between short and long vowels, stress placement, and the production of unfamiliar consonants can greatly benefit these learners. Moreover, native Mandarin speakers or native Arabic speakers can have a better understanding of the differences between their languages and English in the phonological systems. They can pay more attention to the differences and speak English more native-like.

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