

Error Analysis of Pronouncing English Vowel Sounds by Iraqi University Learners

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Abstract

Learning English as a foreign language requires learners to understand and cope with its new sounds that do not exist in their mother tongue. This study attempts to describe the types of difficulties in learning English vowels and determines the types of errors committed by learners. The sample of this study is composed of two main groups, each of which consists of (20) participants, the first and second-year students at Al-Nisour University College for the academic year 2021-2022. The qualitative and quantitative methods are used in the analysis. The concentration is on Hemchua and Schmidt's (2006) classifications of errors to identify incorrect pronunciation. The researchers used two instruments; an audio recording and a questionnaire. The audio recording is used to catch the learners' speech, and the questionnaire proved whether the learners received enough training in English vowels or not. Descriptive analysis showed the frequencies and percentages of the correct and wrong pronunciation. The findings showed that first-year students are better than second-year students. The most common type of errors found in the learners' pronunciations was misformation, omission, and addition that came after them. Most students faced difficulties in the front position and the back position of the tongue, and some in the central position. The research confirmed that receiving enough training and complete knowledge may help students recognize categories of English vowels easily.

Keywords: Error analysis; English vowels; pronunciation errors; interlingual error; intralingual error.

INTRODUCTION

When the term English as a foreign language (henceforth EFL) is used, the reference is to the situation where English is taught as a school subject, and it is learned to communicate with native speakers or inter-language users of the foreign language. In this setting as is the case in the Arab world, English has no official status. Learning is confined to the classroom, i.e., the language is taught and used in schools only. The teaching of pronunciation is concerned with the formation and production of the correct sounds of the foreign language. The speaker has acquired the sounds of his native language through constant repetition and imitation of the sounds made by other human beings in his immediate environment (Oliva, 1969).

The pronunciation of a language according to McArthur and McArthur (1992) is "the act or result of producing the sounds of speech, including articulation, intonation, and rhythm", besides "the sound system of a language." The English sound system is composed of segmental and suprasegmentals. As far as this study is concerned, the segmental aspects of the English sound system are taken into consideration. It is a well-known fact that EFL students in Iraq face certain problems in learning English pronunciation due to several factors among which is the interference between the sound system of the first language and second language as well the influence of the mother tongue on the learning of the foreign language, especially on the phonological level, has been extensively studied and documented (cf. Jakobovits, 1971;

James, 1980; Al-Mutawa and Kailani, 1989; Flege, 1990; Chaudhary, 1997).

This study hypothesized that second-year students are better than first-year students in English vowels, and the main reason behind making such errors is the interference of the first language and the target language itself, as well receiving enough training and complete knowledge may help students recognize categories of English vowel. Additionally, it aims at investigating types of difficulties faced by first-year and second-year students at Al-Nisour University College in learning English vowels, determining types of errors committed by students and analyzing these errors, and showing the reason behind them. It is expected that this study is to be useful for phoneticists, linguists, students of linguistics, and many others who are interested in teaching/learning English vowel sounds.

Concerning this, some studies have been conducted on errors committed by learners in pronunciation. Fauzi (2014), in his study, talked about errors committed by Sudanese students; the researcher used the descriptive method to get the objectives of the study. In Al-Abdely and Thai's (2016) study, they examined the difficulties faced by Iraqi EFL learners in producing English vowels; they were two groups. The results of the study showed that there was an effect in the level of proficiency on the accuracy rate for some vowel categories. For Alezi (2020), he investigated errors encountered by EFL fourth-level learners in producing certain phonemes. He used a close-ended questionnaire and a test to get the result. For Umami (2017), the Mandailing students were chosen to fulfill the requirements of the study; the researcher concentrated on types of vowels committed by students and explained the causes of vowel errors. It is a qualitative descriptive study depending on the percentages of students' error pronunciation. In this paper, the researchers presented the most related studies to the objectives of this study.

Literature review

Speech sounds are usually classified into two broad categories of consonants and vowels, which can be defined in terms of phonetics and phonology.

English consonants

Phonetically, consonants are sounds made by closure or narrowing in the vocal tract so that the airflow is either completely blocked, or restricted that audible friction is produced. From a phonological point of view, consonants are those units that function as the margins of syllables either singly or in clusters (cf. Crystal, 1985:67). There are 24 consonants in English, described and classified according to the place and manner of articulation (cf. IPA, 1949:10; Jones, 1969: 138ff; Gimson 1970, 149ff; O'Connor, 1980: 57ff). Consider Table (1) below:

Table (1) *Chart of English Consonants; Manner and Place of Articulation*

Classification of NAE Consonant Phonemes							
Manner of Articulation	Place of Articulation						
	Bilabial	Labiodental	Dental	Alveolar	Palatal	Velar	Glottal
Stop	p			t		k	
Voiceless							
Voiced	b			d		g	
Fricative		f	θ	s	ʃ		h
Voiceless							
Voiced		v	ð	z	ʒ		
Affricate					tʃ		
Voiceless							
Voiced					dʒ		
Nasal	m			n		ŋ	
Voiced							
Liquid				l	r		
Voiced							
Glide	w				y		
Voiced							

English vocalic system

Crystal (1985: 330) defines in terms of phonetics and phonology. Phonetically, they are sounds articulated without a complete closure in the mouth or degree of narrowing which would produce friction; the air escapes evenly over the center of the tongue. Phonologically, vowels are "those units which function as the center of syllables."

According to many phoneticians such as Jones (1969), Gimson (1970), O'Connor (1980), Ladefoged (1982), Roach (1983), and others too, English vowels are classified in terms of four factors:

1. The height of the tongue in the mouth.
2. The part of the tongue participating in the production of the vowel in question.
3. The length of the vowel.

4. The shape of the lips whether spread or rounded.

Cardinal vowels

In classifying vowels, phoneticians often use a hypothetical diagram of vowel classification in which the two variables (tongue height and tongue retraction) are mapped out. Such a hypothetical diagram of vowels is called "Cardinal Vowels". Roach (ibid: 13) points out that these cardinal vowels are a standard reference system and they are not the vowels of any language. These vowels are used for describing, classifying, and comparing vowels.

The vowels in figure (1) are the so-called primary cardinal vowels which are eight in number. They are the most familiar to the speakers of European languages. There are also the secondary cardinal vowels which are less familiar.

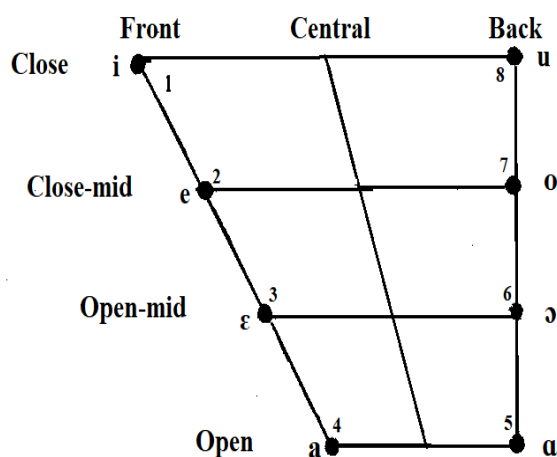


Figure (1) *Primary Cardinal Vowels*

English pure vowels

According to most references, English has twelve pure vowels. Figure (2) displays the English pure vowels.

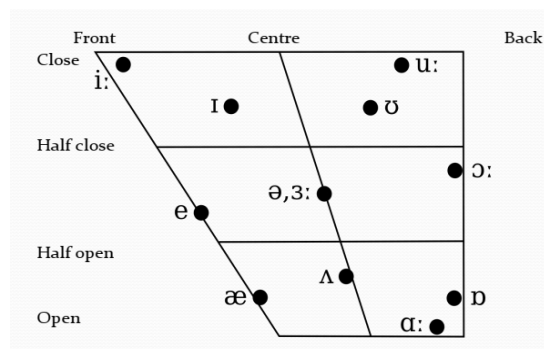


Figure (2) *A Chart of English Pure Vowels*

(Adopted from Roach, 1991 and modified for the study)

English diphthongs

O'Conner defines a diphthong as "a smooth glide from one vowel position to another, the whole glide acting like one of the long simple vowels. The total number of English diphthongs is eight. They are divided into three groups:

1. Centering diphthongs endings with /ə/: the sound /ɪə/ as in 'beer' /bɪər/; the sound /ʊə/ as in 'low' /ləʊ/, and the sound /eə/ as in everywhere /'ev.ri.weər/.
2. Closing diphthongs ending with /ɪ/: the sound /eɪ/ as in cake /keɪk/; the sound /ɔɪ/ as in toy /tɔɪ/, and the sound /aɪ/ as in high /haɪ/.
3. Closing diphthongs ending with /ʊ/: the sound /əʊ/ as in hello /he'ləʊ/, and the sound /aʊ/ as in house /haʊs/ (Kelly,2000).

Error analysis

According to Corder (1967), the researchers try to investigate the process of language learning by analyzing learners' errors; it is similar to the acquisition of the mother tongue. Additionally, this term implies faulty or incomplete learning of students' speech or writing (Hornby, 1982). Linguistically, Ringbom (1987) stated that an error "offends against the norm of the language...". A norm can mainly be related to the 'acceptability' and 'appropriateness' of interlanguage utterances as produced by the foreign language learner (Corder, 1981).

Richards and Schmidt (2002) indicate that the aims of error analysis are as follows:

- a. identifying strategies that learners use in language learning.
- b. trying to identify the causes of learner errors.
- c. obtaining information or common difficulties in language learning, as an aid to teaching or in the preparation of teaching materials.

AbiSamara (2003), in line with what Richards and Schmidt (2002), defines error analysis to be that type of linguistic analysis that always focuses on the errors learners make, especially by second language learners. Therefore, Corder (1967) makes a distinction

between error and mistake. Brown (1980) stated that a mistake denotes a performance error that is either a random guess or a slip in that, it is a failure to utilize a known system correctly. Richards and Schmidt (2002) observed that mistakes occur due to “lack of attention, fatigue, carelessness, or other aspects of performance” and not necessarily because of the ignorance of language rules.

Table (2) *Distinctions between Errors and Mistakes (Scovel, 1998:31)*

No.	Error	Mistakes
1.	Systematic	Unsystematic
2.	Evidence of competence	Evidence of performance

3.	Recurrent	Normally nonce
4.	Restricted to a non-native speaker	Made by a native and non-native speaker
5.	Cannot be corrected by the maker	Can be corrected by the maker
6.	Significant to the process of language	Significant to the process of language learning

Hemchua and Schmidt's (2006) classified errors into four categories to identify incorrect forms, and they are as follows: omission, addition, misformation, and misordering.

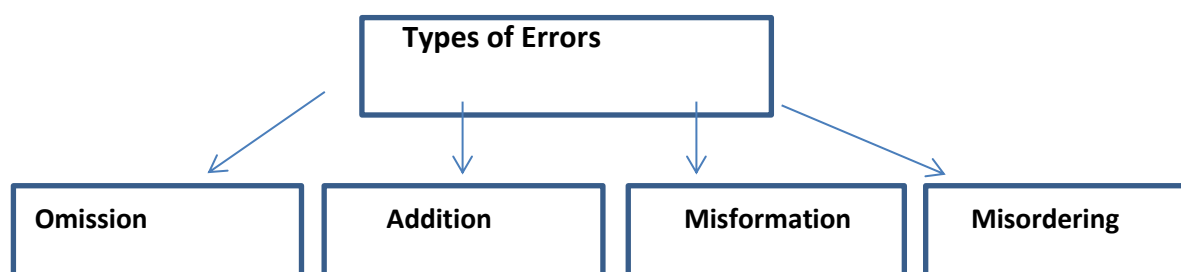


Figure (3) *Types of Errors Adopted from Hemchua & Schmidt's (2006)*

Besides, Richards and Schmidt (2002) divided the sources of errors into two types: interlanguage and interlingual. The first term is caused by interference of the learner's first language; whereas, the second term is caused by interference within the second language itself.

Research methodology

This section includes research design, the sample of the study, instruments and data collection, statistical procedures, reliability of the test and questionnaire, and the analytical framework.

Research design

This research was designed to investigate types of difficulties faced by students in learning

English vowels and determine types of errors committed by them and analyze these errors to show the reason behind them. Therefore, the questionnaire and the audio recording were used to fulfill the hypothesis of this study. The questionnaire was adopted from Bizongwako (2014).

Sample of the study

The population of the research is composed of two main groups, each of which consists of (20) participants, the first-year and second-year students in the Department of English/Al-Nisour University College for the academic year 2021-2022. These students had been taught EFL for approximately ten years. The reason for selecting this particular group of students is that they have practiced pronunciation before.

Table (3) *Demographic Data of the Sample Study*

Demographic Variables		First-Year Student		Second-Year Student	
		Frequency	Percent	Frequency	Percent
Gender	Male	9	45%	8	40%
	Female	11	55%	12	60%
Age of Learning English Vowels	From 10-15 Years old	6	30%	11	55%
	From 15-20 Years old	11	55%	7	35%
	From 20-25 Years old	3	15%	2	10%
Levels of Education	Primary School	6	30%	10	50%
	High School	9	45%	6	30%
	University	1	5%	4	20%
	Others	4	20%	0	0%

Instruments and Data Collection

The words of the test used in this study are (57). They were collected from J.D. O'Connor (1980), *Better English Pronunciation*. To get good results, the researchers used two instruments, and they are as follows; an audio recording and a questionnaire. The audio recording was used to catch the students' speech where they read fifty-seven words, which the researchers think are the most difficult for them. The second instrument is the questionnaire, which is an effective way used to measure the qualitative and quantitative analysis. In this study, subjects were allotted 30 minutes to read the words and answer the questionnaire. The students were not allowed to use any dictionaries to check the correct pronunciation. See Appendix 1 and 2.

Statistical procedure

Descriptive Analysis is used to show the frequencies and percentages of the correct and wrong student's pronunciation. It is also used with the questionnaire to display if the students have received enough training in English vowels or not.

Analytical framework

Qualitative and quantitative content analysis are used in this study to analyze the data. This study adopts Hemchua & Schmidt's (2006) classifications of errors to identify incorrect pronunciation. Besides, the researchers used

Richards and Schmidt's (2002) sources of errors to show the main reason behind the committed errors.

Data analysis

In this section, we have different steps to analyze students' error pronunciation(.). In the first step, the researchers identify the errors committed by students, and they drew a comparison between the two groups by using frequency analysis. Secondly, they identify wrong sounds according to the classifications mentioned by Hemchua & Schmidt (2006). Finally, they describe and explain the errors according to Richards and Schmidt (2002) to show the cause of the errors.

Identifying errors

To analyze errors, we need to identify them first. For this reason, the researchers compared the pronunciation of the first group (first-year students) with the second group (second-year students). Thus, Table (2) shows the errors committed by students. The researchers divided the Table into four columns; the first column consists of words and the phonetic transcription for each word; the second and the third column consist of other minor columns, and they are as follows: correct and incorrect pronunciation of the first and second-year students, where they consist of other sub-columns (frequency and percent), and the last column consists of students' error pronunciations.

Table (4): *The Errors Committed by the First and Second-Year Students*

Words	1 st Year-Student				2 nd Year Student				Students' Error
	Correct Pronunciation		Incorrect Pronunciation		Correct Pronunciation		Incorrect Pronunciation		Pronunciation
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	
Lead /li:d/	8	40%	12	60%	6	30%	14	70%	/e/ and /ei/ instead of /i:/
Lid /lɪd/	13	65%	7	35%	12	60%	8	40%	/aɪ/, /æ/ and /i:/ instead of /ɪ/
Led /led/	14	70%	6	30%	7	35%	13	65%	/i:/, /aɪ/ and /əʊ/ instead of /e/
Been /bi:n/	17	85%	3	15%	14	70%	6	30%	/ æ/ and /e/ instead of /i:/
Bin /bɪn/	12	60%	8	40%	7	35%	13	65%	/i:/, /e/, / æ/ and /aɪ/ instead of /ɪ/
Ben /ben/	17	85%	3	15%	11	55%	9	45%	/i:/ instead of /e/
Dead /ded/	13	65%	7	35%	13	65%	7	35%	/æ/ instead of /e/
Dad /dæd/	16	80%	4	20%	16	80%	4	20%	/ɪ/ instead of /æ/
Dud /dʌd/	12	60%	8	40%	14	70%	6	30%	/æ/ and /ʊ/ instead of /ʌ/
Teen /ti:n/	7	35%	13	65%	4	20%	16	80%	/e/ instead of /i:/
Tin /tɪn/	14	70%	6	30%	7	35%	13	65%	/e/, /ʊ/ and /æ/ instead of /ɪ/
Ten /ten/	15	75%	5	25%	14	70%	6	30%	/i:/ instead of /e/
Tan /tæn/	17	85%	3	15%	16	80%	4	20%	/e/ instead of /æ/
Ton /tʌn/	0	0%	20	100%	0	0%	20	100%	/oo/ instead of /ʌ/
Beat /bi:t/	11	55%	9	45%	8	40%	12	60%	/e/ and /eɪ/ instead of /i:/
Bit /bɪt/	13	65%	7	35%	11	55%	9	45%	/e/, /ʌ/, and /aɪ/ instead of /ɪ/
Bet /bet/	6	30%	14	70%	8	40%	12	60%	/ɪ/ and /i:/ instead of /e/
Bat /bæt/	13	65%	7	35%	11	55%	9	45%	/ʌ/ instead of /æ/
But /bʌt/	9	45%	11	55%	7	35%	13	65%	/ʊ/ instead of /ʌ/
Luck /lʌk/	11	55%	9	45%	7	35%	13	65%	/ʊ/, /aɪ/ and /ʊ/ instead of /ʌ/
Lark /lɑ:k/	18	90%	2	10%	19	95%	1	5%	/i:/ instead of /ɑ:/
Lock /lɒk/	19	95%	1	5%	17	85%	3	15%	/ɑ:/ and /ʌ/ instead of /ʊ/
Lust /lʌst/	6	30%	14	70%	13	65%	7	35%	/ʊ/ and /e/ instead of /ʌ/
Last /lɑ:st/	17	85%	3	15%	17	85%	3	15%	/ɪ/ and / ʊ/ instead of /ɑ:/
Lost /lɒst/	20	100%	0	0%	20	100%	0	0%	/
Poll /pəʊl/	15	75%	5	25%	8	40%	12	60%	/ʊ/ and /aʊə/ instead of /əʊ/
Paul /pɔ:l/	13	65%	7	35%	10	50%	10	50%	/ɪ/ and /ʊ/ instead of /ɔ:/

Pull /pɒl/	11	55%	9	45%	11	55%	9	45%	/u:/ instead of /ʊ/
Pool /pu:l/	10	50%	10	50%	13	65%	7	35%	/ʊ/ and /ɔ:/ instead of /u:/
Heard /hɜ:d/	17	85%	3	15%	15	75%	5	25%	/ɑ:/ instead of /ɜ:/
Hard /hɑ:d/	20	100%	0	0%	18	90%	2	10%	/aɪ/ instead of /ɑ:/
Firm /fɜ:m/	12	60%	8	40%	14	70%	6	30%	/ɑ:/ instead of /ɜ:/
Farm /fɑ:m/	17	85%	3	15%	17	85%	3	15%	/ɜ:/ instead of /ɑ:/
Low /ləʊ/	12	60%	8	40%	15	75%	5	M	/ɔ:/ instead of /əʊ/
Law /lɔ:/	5	25%	15	75%	9	45%	11	55%	/əʊ/ instead of /ɔ:/
Know /nəʊ/	19	95%	1	5%	0	0%	20	100%	/aʊ/ instead of /əʊ/
Now /naʊ/	19	95%	1	5%	19	95%	1	5%	/əʊ/ instead of /aʊ/
Late /leɪt/	12	60%	8	40%	8	40%	12	60%	/e/, /æ/ and /ɪ/ instead of /eɪ/
Let /let/	15	75%	5	25%	11	55%	9	45%	/eɪ/ and /i:/ instead of /e/
White /waɪt/	12	60%	8	40%	13	65%	7	35%	/ɒ/, /e/ and /eɪ/ instead of /aɪ/
Wait /weɪt/	9	45%	11	55%	13	65%	7	35%	/e/ instead of /eɪ/
Annoy /əˈnɔɪ/	17	85%	3	15%	13	65%	7	35%	/i:/ instead of /ɔɪ/
Year /jɪə/	19	95%	1	5%	20	100%	0	0%	/ɪə/ instead of /jɪə/
Here /hɪə/	16	80%	4	20%	20	100%	0	0%	/eə/ instead of /ɪə/
Hair /heə/	13	65%	7	35%	12	60%	8	40%	/ɑ:/ and /ɪə/ instead of /aɪə/
Poor /pɔ:/	16	80%	4	20%	18	90%	2	10%	/ɑ:/ and /aʊə/ instead of /ɔ:/
Cure /kjʊə/	10	50%	10	50%	6	30%	14	70%	/ɔ:/ instead of /ʊə/
Coward /'kɑʊ.əd/	9	45%	11	55%	11	55%	9	45%	/eə/, /ɑ:/ and /ʌ/ instead of /ʊə/
Powerful /'paʊə.fʊl/	17	85%	3	15%	15	75%	5	25%	/ɜ:/ and /ɔ:/ instead of /aʊə/
Royal /'rɔɪ.əl/	14	70%	6	30%	14	70%	6	30%	/ɪə/ and /əʊ/ instead of /ɔɪə/
Lawyers 'lɔɪjəʳz	7	35%	13	65%	6	30%	14	70%	/aɪə/ and /ɔɪə/ instead of /ɔɪjə/
Being /'bi:.ɪŋ/	17	85%	3	15%	16	80%	4	20%	/ɪ/ instead of /i:/
Seeing /'si:.ɪŋ/	17	85%	3	15%	16	80%	4	20%	/ɪ/ and /ɒ/ instead of /i:/
Chaos /'keɪ.ɒs/	3	15%	15	85%	0	0%	20	100%	/əʊ/ and /ɔɪ/ instead of /eɪə/
Ruin /'ru:.ɪn/	5	25%	15	75%	1	5%	19	95%	/aʊ/ and /ʌ/ instead of /u:/
Biography /baɪ'ng.rə.fi/	6	30%	14	70%	8	40%	12	60%	/ɪ/ instead of /aɪə/

Co-operate /kəʊ'ɒp.ər.ɪt/	8	40%	12	60%	6	30%	14	70%	/ɪ/ and /i:/ instead of /eɪ/
Total	20	100%	20	100%	20	100%	20	100%	

According to the above percentages, the first-year students are better than the second-year students in pronouncing most words.

Types of errors

After identifying them, they were classified into four categories: omission, addition, misformation, and misordering. The last one does not take into consideration in this study because it occurs with consonants only.

Omission

For Cook (1997), a gap or lack of knowledge in the second language may cause errors in spelling committed by some students when they read or write a text. Thus, omission is defined as the absence of an important letter to understand a word, phrase, or sentence construction (Hemchua & Schmitt, 2006). For instance, the speaker pronounced 'test' [test] as [tes].

Table (5) Shows Omission of Sounds

Words	Phonetic Transcription	Students' Error Pronunciation
Poll	/pəʊl/	/ʊ/ instead of /əʊ/
Late	/leɪt/	/e/ and /ɪ/ instead of /eɪ/
Year	/jɪə/	/ɪə/ instead of /jɪə/
Hair	/heə/	/ɪə/ instead of /aɪə/
Royal	/'rɔɪ.əl/	/ɪə/ and /əʊ/ instead of /ɔɪə/
Biography	/baɪ'ɒɡ.rə.fi/	/ɪ/ instead of /aɪə/
Co-operate	/kəʊ'ɒp.ər.ɪt/	/ɪ/ instead of /eɪ/

Addition

In this type of error, the learner inserts or adds extra letters that are not needed. For instance, s/he pronounced 'car' [ka:] as [kʌr]. It is also known as overinclusion (Cook, 1997).

Table (6) Shows Addition of Vowel Sounds

Words	Phonemic Transcription	Students' Error Pronunciation
Lid	/lɪd/	/aɪ/ instead of /ɪ/

Bin	/bɪn/	/aɪ/ instead of /ɪ/
Poll	/pəʊl/	/aʊə/ instead of /əʊ/
Let	/let/	/eɪ/ instead of /e/

Misformation

This type of error is characterized by using the wrong sounds in a word, phrase, or sentence. Such as the word 'thin' [ðɪn] is pronounced by some learners as [tɪn], and this is due to the effect of the mother tongue or the target language itself (James, 1998). All the errors committed by students in Table (4) represented misformation of vowel sounds, except the word 'lost'.

Misordering

In this kind of error, the learners replace or change the order of letters in a word, phrase, or sentence (Cook, 1997). To illustrate, they say the word 'ask' [a:sk] as [a:ks]. It is supposed that intralingual is the reason behind this where most students undergo it (James, 1998). In this study, it does not occur with vowel sounds, only with consonant sounds. As 'firm' to 'frim,' 'farm' to 'from,' and 'coward' to 'crowd.'

Describing and explaining errors

They can be described according to Richards and Schmidt's (2002) classifications, which are as follows: intralingual and interlingual.

Interlingual error

This type of error is caused by interference of the learner's first language, where the students use the rules of the first language into the second language. According to Amer (2010), the Arabic language has three short vowels, and they are as follows: /i/, /u/ and /a/, and it has three long vowels, as follows: /ii/, /uu/ and /aa/, and it has two diphthongs which consist of a vowel and a consonant: /aw/ and /ay/. According to him, Arabic students faced difficulties in these sounds: /e, ɔ:, ɒ, ɜ:, ə, ɑ:/ because they do not exist in their mother language. In this study,

some students face difficulties in the same sounds. It appears clearly in the below table.

Table (7) *Interference of Mother Tongue*

Words	Transcription	Students' Error Pronunciation
Led	/led/	/i:/ and /ai/ instead of /e/
Ben	/ben/	/i:/ instead of /e/
Dead	/ded/	/æ/ instead of /e/
Ten	/ten/	/i:/ instead of /e/
Lark	/la:k/	/i:/ instead of /a:/
Lock	/lɒk/	/ʌ/ instead of /ɒ/
Last	/la:st/	/ɪ/ instead of /a:/
Poll	/pəʊl/	/ʊ/ and /aʊə/ instead of /əʊ/
Paul	/pɔ:l/	/ɪ/ and /ʊ/ instead of /ɔ:/
Hard	/hɑ:d/	/aɪ/ instead of /ɑ:/
Know	/nəʊ/	/aʊ/ instead of /əʊ/
Late	/leɪt/	/æ/ and /ɪ/ instead of /eɪ/
Let	/let/	/i:/ instead of /e/
Annoy	/ə'noɪ/	/i:/ instead of /ɔɪ/
Poor	/pɔ:r/	/aʊə/ instead of /ɔ:/
Biography	/baɪ'ɒɡ.rə.fi/	/ɪ/ instead of /aɪə/
Co-operate	/kəʊ'ɒp.ər.eɪt/	/ɪ/ and /i:/ instead of /eɪ/

The results show most students changed the sound /e/ to /i:/, /æ/, /aɪ/; the sound /ɒ/ to /aɪ/ and /ʌ/; the sound /eɪ/ to /ɪ/, /æ/ and /i:/; the sound /aɪə/ to /ɪ/; the sound /a:/ to /i:/, /ɪ/, and /aɪ/; the sound /ɔ:/ to /aʊə/, /ɪ/ and /ʊ/; the sound /əʊ/ to /aʊ/. In accordance with table (3), the

significant differences in percentages and frequencies were in favor of first-year students. They were better at pronouncing the sound /e/, /ɒ/, /eɪ/, /a:/, /ɔ:/, and /əʊ/.

Intralingual error

This type of error is caused by interference within the second language itself. Richard (1974) divided this type of error into four categories: overgeneralization, ignorance of rule restrictions, incomplete application of the rules, and false concept hypothesized. In this study, the researchers used overgeneralization and incomplete application of rules in one section, as well used the ignorance of rule restrictions and false concepts hypothesized in one section.

Overgeneralization and incomplete application of rules

It occurs when the students make a deviant structure according to other forms in the second language, i.e., they try to apply already-familiar rules to new ones where they are inappropriate to use them (Littlewood, 1984).

Table (8) *Overgeneralization and Incomplete Application of Rules*

Words	Transcription	Overgeneralization in Learners' Pronunciation
Lid	/lɪd/	/i:/ instead of /ɪ/
Led	/led/	/i:/ instead of /e/
Bin	/bɪn/	/i:/ instead of /ɪ/
Ben	/ben/	/i:/ instead of /e/
Dead	/ded/	/æ/ instead of /e/
Dud	/dʌd/	/æ/ instead of /ʌ/
Teen	/ti:n/	/e/ instead of /i:/
Tin	/tɪn/	/e/ instead of /ɪ/
Tan	/tæn/	/e/ instead of /æ/
Beat	/bi:t/	/e/ instead of /i:/
Bit	/bɪt/	/e/ instead of /ɪ/
Lust	/lʌst/	/ɒ/ instead of /ʌ/
Last	/la:st/	/ɒ/ instead of /a:/

Poll	/pəʊl/	/ʊ/ instead of /əʊ/
Paul	/pɔ:l/	/ʊ/ instead of /ɔ:/
Pool	/pu:l/	/ʊ/ instead of /u:/
White	/waɪt/	/e/ instead of /aɪ/
Wait	/weɪt/	/e/ instead of /eɪ/
Being	/'bi:ɪŋ/	/ɪ/ instead of /i:/
Seeing	/'si:ɪŋ/	/ɪ/ instead of /i:/

Concerning those who said 'lid' */li:d/ and 'led' */li:d/, they were most likely overgeneralizing how 'lead' /li:d/ is pronounced. This situation also occurred with 'bin' and 'ben' were pronounced as 'been' /bi:n/; the words 'dead' and 'dud' were pronounced as dad /dæd/; the words 'teen', 'tin' and 'tan' were pronounced like 'ten' /ten/; the words 'beat' and 'bit' were pronounced as bet /bet/; the words 'lust' and 'last' were pronounced like 'lost' /lɒst/; the words 'pool', 'poll' and 'Paul' were pronounced as 'pull'

/pɒl/; the words white and wait were pronounced as wet /wet/, and the last two words 'being' */bɪŋ/ and 'seeing' */sɪŋ/ were pronounced like the sound /ɪ/ in sing /bɪŋ/. Most students tried to apply already-familiar words to new ones where they are inappropriate to use them. Besides, this is due to the development of the rules in producing other acceptable utterances by students.

Ignorance of rule restrictions and false concept hypothesized

An existing structure in the target language is not observed by the learners because of their ignorance to rule restrictions (James, 1998). As well, students committed errors that derive from faulty comprehension of the rule distinction in the target language. Learners usually misunderstand the use of specific structures of the target language. Most students cannot recognize the differences in the quality of the sound, especially the sound /i:/ and /e/. They used the short vowel instead of the long one, as in 'lid' */li:d/ and led */li:d/, vice versa.

Table (9) *Ignorance of Rule Restrictions and False Concept Hypothesized*

Type of Error	Words	Transcription	Student's Error Pronunciation
Changing long vowels to short vowels	Lead	/li:d/	/e/ instead of /i:/
	Been	/bi:n/	/e/ instead of /i:/
	Teen	/ti:n/	/e/ instead of /i:/
	Beat	/bi:t/	/e/ instead of /i:/
	Being	/'bi:ɪŋ/	/ɪ/ instead of /i:/
	Seeing	/'si:ɪŋ/	/ɪ/ instead of /i:/
	Last	/lɑ:st/	/ɪ/ and /ɒ/ instead of /ɑ:/
	Paul	/pɔ:l/	/ɪ/ and /ʊ/ instead of /ɔ:/
	Pool	/pu:l/	/ʊ/ instead of /u:/
	Ruin	/'ru:ɪn/	/ʌ/ instead of /u:/
Changing short vowels to long vowels	Bin	/bɪn/	/i:/ instead of /ɪ/
	Lid	/lɪd/	/i:/ instead of /ɪ/
	Ben	/ben/	/i:/ instead of /e/
	Ten	/ten/	/i:/ instead of /e/
	Bet	/bet/	/i:/ instead of /e/

	Led	/led/	/i:/ instead of /e/
	Lock	/lɒk/	/a:/ instead of /ɒ/
	Let	/let/	/i:/ instead of /e/
	Pull	/pɒl/	/u:/ instead of /ʊ/

As you see above, students changed the long vowels /i:/, /a:/, /ɒ:/, and /u:/ to short vowels /e/, /ɪ/, /ɒ/, /ʊ/, and /ʌ/. It is the result of ignorance or misunderstanding of tongue movements. For instance, the sound /i:/ is barely behind and below the close front position by the front of the tongue, and the lips are spread; whilst, the sound /ɪ/ is slightly nearer the center by the part of the tongue, where it is raised to just above the half-close position and the lips are spread loosely (not as high as in /i:/); the sound /e/ is between the half-open and half-close positions by the front of the tongue, and the lips are loosely spread (Kelly, 2000). Therefore, the students need to know the position of the body of the tongue, the height of the tongue, and the degree of lip rounding to distinguish short and long vowels.

Discussion of results

At the beginning of this study, the researchers hypothesized that ‘second-year students are better than first-year students in English vowels’

despite the results showing the opposite; the first-year students are better than the second-year students. One of the reasons second-year students have not received enough training on English vowels in college. This is due to virtual learning after the covid-19 pandemic, which was not enough. However, they learned English vowels at an early age (in primary or high school), which was also not enough because the teachers had not used specific modules. Additionally, they did not develop themselves by reading extra explaining about vowels or going to training institutions as other students did in the first-year group. In the questionnaire, (80%) of second-year students confirmed that there was no specific module to learn English vowels; (75%) of them confirmed that the pronunciation training was not enough, and (95%) of them affirmed that they have difficulties in learning English vowels. Therefore, it is proved that receiving enough training and complete knowledge may help students recognize categories of English vowels easily.

Table (10) *Questions about Receiving Enough Training on English Vowels*

No.	Questions		Yes	No
1.	During training on English vowel sounds, was there a specific module for pronouncing them?	First-year students	N	2
			%	10%
		Second-year Students	N	4
			%	20%
2.	Was the pronunciation training you received enough?	First-year students	N	4
			%	20%
		Second-year Students	N	5
			%	25%
3.	Do you have difficulties in learning English vowel sounds?	First-year students	N	15
			%	75%
		Second-year Students	N	19
			%	95%

The most common type of error found in the learners’ pronunciations was misformation

changed by students in all words, except the word ‘lost.’ Omission came after misformation

occurred with seven words only. The last one, addition, occurred with four words. In this study, misordering has not been taken into consideration because it just came with consonant sounds. As ‘firm’ to ‘frim,’ ‘farm’ to ‘from,’ and ‘coward’ to ‘crowd.’ The study displayed the main reason behind these errors; interlingual and intralingual errors. They were described according to Richards and Schmidt’s (2002) classifications. The interference of the learner’s first language occurred with seventeen words, especially with the sounds /e, ɔ:, ɒ, ɜ:, ə, ɑ:/ because they do not exist in their mother language, on the other hand, the interference within the target language itself happened with thirty-nine words.

According to Table (4), most students faced difficulties in the front position of the tongue (48.2%), the back position of the tongue (37.5%), and some students in the central position of the tongue (14.3%). The word ‘lost’ was excluded from the below table because it was pronounced correctly by all students.

Table (11) *Difficulties Faced Students in the Positions of the Tongue*

Position of the Tongue	Frequency	Percentage
The Front Vowels	27	48.2%
The Central Vowels	8	14.3%
The Back Vowels	21	37.5%
Total	56	100%

Conclusions and recommendations

In consonant sounds, the learners can recognize where the place of articulation is and identify the type of mistake in their pronunciation because it is made by specific interference of the vocal organs with the airstream. Whereas with vowels, the situation is different no obstacles in the airstream of sound production. Thus, the learners cannot identify the quality of the vowel sounds (Connor, 1980). The results of the analysis proved that the interlingual source of error was higher than intralingual, which validates the hypothesis that “the main reason

behind making such errors is the interference of the first language and the target language itself.”

In this study, the first-year students were better than the second-year students in English vowels, which refutes the hypothesis that “second-year students are better than first-year students in English vowels.” It is due to virtual learning after the covid-19 pandemic. However, they learned English vowels at an early age, which was not sufficient because the teachers had not used specific modules. Additionally, they did not develop themselves in studying English vowels as other students did in the first-year group. In the questionnaire, nearly all students confirmed that there was no specific module to learn English vowels, and the pronunciation training was not sufficient. Also, they have difficulties in learning English vowels. Therefore, it certified that receiving enough training and complete knowledge may help students recognize categories of English vowels easily.

The most common type of error found in the learners’ pronunciation was misinformation. Omission and addition came after it. The study displayed the main reason behind these errors; interlingual and intralingual errors. They were described according to Richards and Schmidt’s (2002) classifications. The interference of the learner’s first language occurred with the sounds /e, ɔ:, ɒ, ɜ:, ə, ɑ:/ because they do not exist in the learners’ mother language, on the other hand, the interference within the target language itself happened with most sounds. The frequencies showed most students faced difficulties in the front position of the tongue and the back position of the tongue, and some students in the central position of the tongue.

For second language teachers, the study suggests that they should give intensive training in English vowels with acting the way of producing the sounds. For learners, they should be allowed to listen to the words on tapes, recorders, or CDs within the given material and use the sounds in sentences to improve their pronunciation. For researchers, this work could be further developed in other fields and applied to consonant sounds, for example. Thence, it is expected that this study is to be useful for phoneticists, linguists, students of linguistics, and many others who are interested in teaching/learning English vowel sounds.

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