

Examining the Challenges Encountered by Iraqi College Students Learning English as a Foreign Language in Word-Based Vowel Transcription

Alaa Ali Abdul Kadhem¹

¹Assistant Lecturer, Department of English, Al-Zahraa University for Women, Iraq

E-mail: 1alaa_ali@alzahraa.edu.iq

ORCID: <https://orcid.org/0009-0004-7441-3841>

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Abstract - This study seeks to examine the challenges encountered by Iraqi EFL college students in transcribing triphthongs and diphthongs in words. This paper intends to address answers to those questions: 1. How and what challenges do Iraqi EFL college students encounter in transcribing triphthong and diphthong sounds? 2. What errors do Iraqi EFL college students commit when transcribing English words that contain triphthongs and diphthongs? The objectives supposed to be fulfilled regarding the current investigation, the upcoming approaches are formulated: Iraqi EFL college students encounter challenges in English phonetic transcription, particularly with triphthong and diphthong sounds. Iraqi EFL college students struggle to differentiate between the phonetic symbols of diphthongs and triphthongs during English word transcription. To validate the study's hypotheses, the researcher conducted a test involving groups of students. The sample for this study comprised 25 students from the Department of English at Al-Imam Kadhim College for the academic year 2020-2021. The study's findings indicate that Iraqi EFL college learners excel in selecting symbols to complete word transcriptions or to identify the correct transcription by circling it; however, they struggle when tasked with transcribing the provided words themselves. The findings indicate that students perform significantly better in transcribing diphthong vowels in words compared to triphthong vowels.

Keywords: Phonetic Transcription, Diphthongs, Triphthongs, Iraqi EFL Learners, Pronunciation Challenges, English Vowel Sounds, Language Learning Errors

I. INTRODUCTION

According to Wells in his piece (2006) defines the “phonetic transcription” as the author indicates “the use of phonetic symbols to represent speech sounds” (p. 1). Also, there are numerous prominent transcription types: broad or phonemic transcription, which utilizes basic symbols to denote the phonetic pronunciation of a word and distinguish between phonemes, and phonetic or transcription, which encompasses extensive specifics to differentiate allophones using more precise symbols. Instructing phonetic transcription is especially beneficial for pupils whose second language (L2) exhibits a weaker grapheme-phoneme correspondence relative to their first language (L1). Due to the challenges learners face in comprehending the link between pronunciation and spelling in English, phonetic awareness is

believed to assist pupils with their pronunciation. Phonetic transcription, which illustrates pronunciation faults, as noted by Atkielski (2015), aids learners in comprehending their mistakes.

Furthermore, the prevalent depiction of speech sounds in English is phonetic transcription. All English phoneme is determined by a distinct symbol. Phonetic transliteration is typically enclosed in brackets. Minor constituents of consonants and phonemes can be identified in numerous languages; nevertheless, owing to the intricate nature of English orthography, certain letters or combinations of letters may be articulated differently across distinct words (Mokhtarinejad et al, 2017). Consequently, mastering English pronunciation using phonemes (symbols) rather than alphabetic letters is essential. EFL students must understand that to achieve like native or close to be native English pronunciation, they must either learn the influence of the English language from people who are native speakers or employ English “phonetic transcription” (Biswas, 2024). Undoubtedly, every student who accurately translates words is capable of pronouncing them appropriately (Gilakjani, 2016).

Moreover, vowels represent the most challenging phonemes to master in phonetic transcription due to their various types, including long vowels, short vowels, diphthongs, and triphthongs, as well as the intricate nature of their pronunciation depending on the location and the manner of articulation.

II. LITERATURE REVIEW

2.1 Pronunciation

Gilakjani (2016) illustrates that pronunciation pertains to the sounds articulated by humans to communicate meaning. It refers to the articulation of words; a method of conveying a phrase which is mostly accepted or comprehended. The graphic illustration of how words are enunciated through phonetic metaphor.

(Çakır et al., 2014) assert that second or another language learners often struggle with pronunciation due to the unfamiliar phoneme that might not correspond with those in their native language. Effective pronunciation fosters learning, but poor pronunciation complicates language instruction significantly (Jeon & Lee, 2025), (Tayebnik et al, 2018).

2.2 Phonetic Transcriptions

Phonetic transcription denotes the depiction of spoken sounds through phonetic symbols. Every spoken utterance phoneme must be denoted by a written phonetic symbol (Wells, 2003). Ochs (1979) asserts that the conversion of spoken language into written symbols is more complex than it initially seems. Written language comprises a specific set of distinct and recognizable symbols. Conversely, spoken language is a continuous phenomenon characterized by a nearly infinite array of components.

Roach (2009) asserts that the terms "transcription" and "writing" are synonymous. Phonetic transcription refers to the representation of words or sentences using phonetic spelling or phoneme and accent markings. Slant markings must consistently be employed on both sides when transcribing any phonetic element, be it a phoneme, a word, or a sentence (Sønning, 2013). The phonetic alphabet is the predominant method of phonetic transcription.

2.3 Phonetic Symbols

Many phoneticians utilize the symbol set established by the terms 'International Phonetic Alphabet (IPA)'. Also, "The International Phonetic Alphabet (IPA)" (Nolan et al., 1999) is a procedure where every symbol represents a specific sound in English (Armnazi & Alegasan, 2024). One can ascertain a precise English word's pronunciation by employing the International Phonetic Alphabet (IPA). Learning English independently or with a skilled instructor during a personalized English Accent Training session may enhance your pronunciation and boost your confidence in speaking English (Jones, 1949).

"The International Phonetic Alphabet (IPA) is not the only one that exists. Certain academic in small specifics are very traditional, such as the substitution of Š for ʃ or y IPA j, while many differ regarding the quantity of symbols utilized. IPA did not achieve the universal standard for phonetic transcription envisioned by its creators and is utilized less frequently in America compared to Europe (Ladefoged & Johnson, 2011). Notwithstanding its shortcomings, it is widely employed by linguists and dictionaries, albeit with numerous modifications. Abercrombie, 1953. Nonetheless, a language does not possess a singular 'IPA transcription'; instead, multiple systems may exist, all employing the IPA alphabet (Wells, 2003).

2.4 The vowels of English

According, "vowels are sounds in which there is no obstruction to the flow of air as it passes from the larynx to

the lips". There are twenty vowels in English (Mohammadinasab et al, 2014). Moreover, Vowels are sounds in which the vocal cords vibrate continuously and that causes the air stream to pass freely. For instance "ah" /ɑ:/ or "oh" /oʊ/. (Ladefoged & Maddieson 2004) states that: The vowel sound occurs when the vocal tract is unobstructed and located in the middle of a syllable. Most vowels have three fundamental characteristics: a high, low, front, and rear endpoint on a standard scale. Vowel descriptions based on linguistic traits have been around for a while (Chomsky & Halle, 1968).

So those phonemes such as 'Vowels' have three positions the top (i) also lower and upper tongue(ii) as well as lips position (O'Connor, 1980). Furthermore, Vowels are the center or "peak" of a syllable. A syllable can be as simple as one vowel (V). Alternatively, A consonant can also be used to surround the vowel in the syllable on one or both sides (Ibid).

2.5 The Types of Vowels

Phonemes or vowels are produced by the stream of the air flowing through various mouth shapes. The variations in the form of the mouth result from the distinct placements of the tongue and lips. Those letters are vowels a, e, i, o, and u. On the other hand, vowels can be classified according to the phonetic sounds they make when written. Twelve monophthongs, eight diphthongs, and five triphthongs make up the phonemic system, according to (Stevens, 1998). The following phonetic characters represent each of them;

Pure Vowels (/i:/, /ɪ/, /ʊ/, /u:/, /e/, /ə/, /ɜ:/, /ɔ:/, /æ/, /ʌ/, /ɑ:/)

1. Diphthongs (aɪ/ , /eɪ/ , /əʊ/ , /aʊ/ , /eə/ , /ɪə/ , /ɔɪ/ , /ʊə/)
2. Triphthongs (/aʊə/ , /eɪə/ , /əʊə/ , /ɔɪə/)

2.5.1 English Diphthong

Peter Roach (2009, pp. 21-22) defines a sound that transitions vowel one to another as a diphthong. In contrast to the vowel remains stable and does not glide. A prevalent speech error among English learners with a "foreign" manner is the articulation of free vowels in place of diphthongs. "diphthongs have been described as a sequence of two vowels pronounced together, the two vocalic elements being members of the same syllable. It is difficult to distinguish between a genuine diphthong from sequences of a vowel and a semivowel"

Diphthongs have the same quality in terms of length. The initial components of every diphthong are stronger and longer than the second part. There are eight diphthongs in all. The simplest method to remember them is to divide them into three categories, as shown in this diagram:

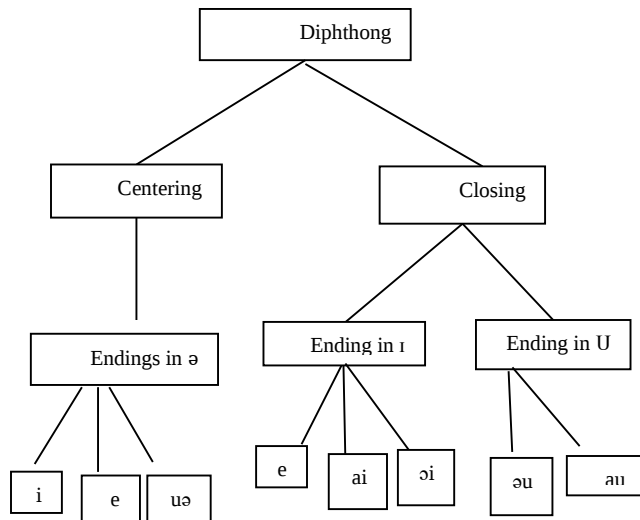


Fig. 1 Classification of English Diphthongs Based on Articulatory Movement

Fig 1 illustrates the categorization of English diphthongs into centering and closing types, based on their articulatory endpoints. The terminal diphthongs possess the attribute of concluding with a glide towards a more closed vowel. Due to the weakness of the second component of the diphthong, it frequently fails to attain a posture that may be classified as closed. George Yule (2006) defines a diphthong as a composite vowel sound. In every single instance, they commence regarding vowel sounds and conclude with glides. When articulating most single vowel sounds, our vocal apparatus temporarily adopts a singular position; yet, in the production of diphthongs, we transition from one vocalic posture to another during sound formation.

2.5.2 English Triphthongs

Peter Roach, 2009 (p. 24), Triphthongs are the most complicated vowel sounds in English. They're not easy to pronounce and even not easy to identify. A triphthong is an uninterrupted transition from one to another vowel and subsequently to a third vowel.

For instance, the precise articulation concerning this word 'hour' commences with a vowel sound like to *a* and transitions into a glide refers the rear, resembling the vowel schwa, *ə*. The sound *aʊə* denotes the pronunciation of 'hour', although it does not consistently reflect proper phonetic representation. Roach, 2009. The triphthong can be regarded as a synthesis of the five concluding diphthongs referenced in the preceding section, along with a terminal element. Consequently, we possess:

$ei + ə = eiə$

$ai + ə = aiə$

If $a + ə = a + ə$, then $əʊ + ə = əʊə$.

Modern English's very slight vowel symbol lengthening, especially in very tiny sounds, is the primary source of difficulty for an international student. The resultant sound is difficult to recognize because the primary vowel characteristic of the triphthong /*o*/ (especially *i* or *ʌ*) is difficult to discern. The question of whether the diphthong is thought of as having one or two syllables also remains. Words like 'fire' and 'hour' are usually heard as monosyllabic by most English speakers who use the BBC pronunciation. On the other hand, words like 'player' and 'slower' are more generally seen as disyllabic ("Ibid").

III. METHODOLOGY

3.1 Research Design

This research was designed to investigate the difficulties faced by students in transcribing English vowels determine the difficulties and attempt to show the reason behind them. Therefore, a written test was used to fulfill the hypothesis of this paper.

3.2 The Population and Sample of the Study

The points of the research comprise Iraqi EFL 2nd year university students at the Department of English/ College of Education/ Al-Imam Kadhim College in the academic year 2020-2021. The total population was 25 students. The sample was chosen randomly. The reason for selecting this stage is that they have already practiced pronunciation.

3.3 Instruments

The words used in this study were (12). They were collected from the book entitled "English Phonetics and Phonology" by Peter Roach (2009). In this research, the researcher used a test. This test indicates two questions; and shows six words highlighting the description. The study sample was given 30 minutes to read the text and to ensure proper transcription, the pupils were not permitted to use dictionaries. In the test, each student must write the correct transcription of all content of words for each question, as well as pick the right diphthongs or triphthongs to finalize the second question's remaining six words transposed.

3.4 Research Method

This research used a descriptive quantitative method. According to (Kothari, 2007), quantitative research employs methods and measures to generate quantifiable/discrete values. The reason why this approach was chosen is that some researchers intended to provide the findings of the data analysis as numerical results so that the readers might comprehend the research's findings more easily

3.5 Procedures

To begin, the researcher statistically examines the data using frequencies and percentages, as well as a graphical representation for each table.

3.6 Validity and Reliability

Those two statements are closely associated with the concepts that utilized to evaluate the quality of researchers' work. There exist two sorts of validity: face validity and content validity, among others. Both of them are suitable methods to ascertain the test's validity for the objectives of this research. To verify the content and face validity of the exam, it has been presented to two educators to ensure that the methodology and data collection instruments yield valid and reliable outcomes.

Reliability is related to objectivity. This refers to the stability of the scores obtained from a test "The rule is then the more objective a test, the more reliable it is" (Bachman, 1990). The Alpha-Cronbach equation is applied and the reliability of the test is 0.80, it is considered an acceptable one. According to Bachman (1990), the test reliability is acceptable if it is not less than 0.50.

IV. DATA ANALYSIS

4.1 Frequency and Percentage of the First Question

The table 1, displays the percentage and frequency of the initial question. In transcribing the word 'purchased', learners achieved 8 accurate responses, constituting 32.0%, while they recorded 17 incorrect responses, amounting to 67%. In transcribing the word 'hour,' just four students provided the proper answer, while twenty-one students submitted an incorrect response, yielding percentages of 16% and 84%, respectively.

In transcribing the word 'noise', 0 students provided an accurate answer, while 25 students provided an incorrect answer, resulting in percentages of 0% and 100%, respectively.

Only two pupils successfully transcribed the word 'player,' nonetheless, the majority, twenty-three, failed to provide the correct response. The transliteration of this term is regarded as the most challenging for students to date. In the case of the word 'faithful', pupils achieved (4) accurate answers and (21) erroneous answers, resulting in percentages of (16%) and (84%) respectively. In transcribing the word 'wide,' pupils do significantly better than with prior words, as six achieve the proper answer while nineteen provide wrong responses, yielding respective percentages of 16% and 83%.

TABLE I FREQUENCY AND PERCENTAGE DISTRIBUTION FOR TRANSCRIPTION ACCURACY IN QUESTION ONE

Word	Correct (True=1)	Incorrect (False=2)	% Correct	% Incorrect
transcription of bought	8	17	32.0%	67.0%
transcription of hour	4	21	16.0%	84.0%
transcription of noise	0	25	0%	100.0%
transcription of player	2	23	8.0%	92.0%
transcription of broad	6	19	24.0%	76.0%
transcription of loyal	4	21	16.0%	84.0%

4.2 Descriptive Analysis of the First Question

TABLE II DESCRIPTIVE STATISTICS OF RESPONSES IN QUESTION ONE

Word	Mode	Mean	Standard Deviation
transcription of bought	2	1.68	0.4759
transcription of hour	2	1.84	0.3742
transcription of noise	2	2	0
transcription of player	2	1.92	0.2769
transcription of broad	2	2.76	0.4359
transcription of loyal	2	1.84	0.3742

As shown in Table 2, the mode value of 2.00 across all words indicates that incorrect answers were most frequent among students. In this descriptive first question, we look at the data in the table. The value of each word's transcription is indicated in column two. The mode, which shows the most common response among students, is indicated by column three, while the standard deviation is shown by the last column.

The median value (2) shows that pupils provide incorrect responses more frequently than correct ones. The overall average also corroborates this.

4.3 Frequency and Percentage of Second Question

TABLE III FREQUENCY AND PERCENTAGE DISTRIBUTION FOR TRANSCRIPTION ACCURACY IN QUESTION TWO

Word	Correct (True=1)	Incorrect (False=2)	% Correct	% Incorrect
transcription of lower	16	9	64.0%	36.0%
transcription of fire	15	10	60.0%	40.0%
transcription of lawyer	15	10	60.0%	40.0%
transcription of care	20	5	80.0%	20.0%
transcription of brown	16	9	64.0%	36.0%
transcription of near	20	5	80.0%	20.0%

As shown in Table 3, students demonstrated better performance in completing transcriptions, especially for words like 'care' and 'near' which showed 80% accuracy. The table displays the percentage and frequency of responses to the second question, which requires students to complete the word transcription.

In selecting the appropriate triphthongs in which complete 16 students got the word "lower" correctly, making up 64% of the total, whereas 9 students got it wrong, making up 36%.

Fifteen students successfully identified the appropriate triphthong to transcribe the word 'fire,' whereas ten students failed to provide the correct response, resulting in respective percentages of 60% and 40%. Similar to the preceding examples in this inquiry, the majority of students successfully selected the appropriate diphthong to complete the transcription regarding this example 'lawyer,' with 15 participants providing the right answer, resulting is 60%,

while 10 participants answered incorrectly, yielding a percentage of 40%.

Students have significantly improved performance in the tasks of word transcription. In selecting an appropriate diphthong, while five students gave the wrong transposition., resulting in percentages of 80% and 20%, respectively. It is observed that pupils provide right answers more frequently than wrong ones. Sixteen students successfully identified appropriate diphthongs to complete the transcription of the word 'brown,' whereas nine students failed to provide the correct response, resulting in respective percentages of 64% and 36%.

Similar to the previous examples in this inquiry, the majority of students successfully selected the appropriate diphthong to complete the transcription of the word 'near,' with 20 participants providing the correct answer, resulting in an 80% success rate, while 5 participants answered incorrectly, yielding a 20% error rate. The transcription of this term is straightforward, akin to the preceding ones in this inquiry.

4.4 Second Question Analysis

TABLE IV DESCRIPTIVE STATISTICS OF RESPONSES IN QUESTION TWO

Word	Mean	Mode	Standard Deviation
transcription of lower	1.3600	1.00	0.48990
transcription of fire	1.4000	1.00	0.50000
transcription of lawyer	1.4000	1.00	0.50000
transcription of care	1.2000	1.00	0.40825
transcription of brown	1.3600	1.00	0.48990
transcription of near	1.2000	1.00	0.40825

As shown in Table 4, students more frequently gave correct responses in all six words, as evidenced by the mode value of 1.00 across the board. The columns display the mode and value of each word. The mode, which is the third column, shows which answer was most often given by students, while the standard deviation is in the last column. With a mean value of 1, we can see that pupils are more likely to get the answer right than wrong. That is also well-supported by the general average.

4.5 The Results

The first hypothesis posited that Iraqi EFL college students encounter challenges in English phonetic transcription, specifically for triphthongs and diphthongs. The researcher determined that the outcome supports the initial hypothesis. All students obviously did not understand or correctly transcribe the common word "noise" according to the results of the first exam question. Transcribing the first question yields rates of 0%, 16%, 24%, 32%, 8%, and 16% for six word correctness, respectively. The low percentages indicate a lack of transcription exercises among EFL learners, resulting in inaccurate pronunciation of several terms. It has been demonstrated that numerous EFL learners can differentiate between the phonetic symbols of triphthongs and diphthongs. The researcher identified the following

percentages of accurate transcription for the six words in question two: 64%, 60%, 64%, 60%, 80%, and 80% correspondingly. Undoubtedly, these percentages are significantly elevated, indicating the proficiency of EFL learners in differentiating among all diphthong symbols. The results indicate that the students have deficiencies in transcribing triphthong vowels. The outcome in question two validates hypothesis number (2), which posits that Iraqi EFL learners are unable to differentiate between the phonetic symbols of diphthongs and triphthongs. The researcher noted that EFL learners perform significantly better in selecting symbols to complete word transcriptions or in circling the right transcription in question two.

V. CONCLUSION

The majority of EFL students do not consistently utilize "English phonetic transcriptions" would help one become fluent in pronouncing English words. Among Iraqi EFL students, diphthong differentiation is the most common. The Iraqi EFL college students excel in selecting symbols to complete word transcriptions or to identify the proper transcription by circling it; yet, they completely falter when tasked with transcribing the provided words.

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