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<sup>1\*</sup> Rese: Arsalan  
Ibrahim Sulaiman

<sup>2</sup>Dr. Asmaa Yahya  
Qassim

University of Duhok -  
College of Basic  
Education

Email:  
[arsalanebra@yahoo.com](mailto:arsalanebra@yahoo.com)

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## Kurdish Students' Pronunciation Errors due to Phoneme - Grapheme Mismatches at University Level

### A B S T R A C T

One of the most important parts of foreign language teaching and learning is English pronunciation since it affects students' communicative competence. The current study aimed to identify the most common pronunciation errors made by Kurdish students in the production of English vowels and sounds. The current study was a quantitative one and it examined 25 Kurdish third-year English department students at the College of Basic Education-English Department, University of Duhok. The number of the words was 26 contained some vowels and consonants. The data were collected by an oral pronunciation test in which students read certain words and their voices were recorded. The results showed that Kurdish students found it difficult to learn true pronunciation because the voiced /ð/ sound was harder to master than the voiceless /θ/ sound. In addition, the pronunciation of the "ou" and grapheme became inconsistent when students heard it in words such as "plough" and "thought". The students faced additional pronunciation difficulties with "ea" because of sounds that were irregular such as when pronouncing "hearth" along with "breathe" and problems with both "-ed" and "-s". This affected their ability to master past tense and plural forms. These problems require students to receive specific phonological training that addresses their needs.

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## أخطاء تلفظ طلاب الكورد الناتجة عن عدم تطابق الصوتيات والحرفيات على مستوى الجامعة

الباحث: أرسلان ابراهيم سليمان  
 أ.م.د. أسماء يحيى قاسم  
 مديرية تربية محافظة دهوك  
 جامعة دهوك - كلية التربية الأساسية

### الملخص:

يعد التلفظ باللغة الانكليزية أحد أهم جوانب تعليم وتعلم اللغات الاجنبية، حيث يؤثر على الكفاءة التواصلية للطلاب. هدفت الدراسة الحالية الى تحديد اخطاء النطق الأكثر شيوعاً التي يرتكبها الطلاب الكورد في انتاج حروف العلة والاصوات الانكليزية. كانت الدراسة الحالية دراسة كمية واختبرت ٢٥ طالباً كردياً من طلاب المرحلة الثالثة بقسم اللغة الانكليزية في كلية التربية الاساسية، جامعة دهوك. بلغ عدد الكلمات ٢٦ كلمة تضمنت بعض حروف العلة والحروف الساكنة. تم جمع البيانات عن طريق اختبار النطق الشفوي حيث قرأ الطلاب كلمات معينة وتم تسجيل أصواتهم. اظهرت النتائج بان طلاب الكورد واجهوا صعوبة في تعلم النطق الصحيح وان صوت /ð/ المجهور كان أصعب اتقانه من صوت المهموس /θ/. بالإضافة الى ذلك، كان صوت "ou" غير متسق عندما سمعه الطلاب في هذه الكلمات "plough" و "thought". واجه طلاب الكورد صعوبات اضافية في النطق "ea" بسبب الاصوات الغير منتظمة، مثلاً نطق "hearth" جنباً إلى جنب مع "breathe"، ومشاكل في نطق "s" و "ed". مما اثرت على قدرتهم في اتقان نطق صيغة الماضي وصيغة الجمع. تتطلب هذه المشكلة حصول الطلبة على تعليم صوتي محدد يلبي احتياجاتهم.

**الكلمات الدالة:** أخطاء التلفظ، عدم التوافق بين الصوتيات والحرفيات، اختبار التلفظ الشفوي.

### 1. Introduction

English language learners who speak as a second tongue experience essential problems frequently that cause interest to language researchers during their language acquisition process. Students face the English spelling pattern complexity as a constant problem (Daffern & Mackenzie, 2020). According to Johnson and Venezky (1976), the distinctive features separate this system from others with its different pattern arrangement. Learning English spelling poses difficulties for students because the written rules and patterns in the language are challenging to understand.

The ability to speak and understand English in a second language faces severe restrictions because of this particular challenge to pronunciation. English contains numerous consonant sounds with the familiar /c/ among them. When the letter signifies /k/ at word level its initial encounter transforms it into /tʃ/. The Latin term "champagne" demonstrates that the digraph combination of and in certain cases reflects the /f/ sound. Learning difficulty intensifies for novices due to this inconsistency in the English language.

One of the most central aspects of a person's speech is their pronunciation, though many teachers do not exactly teach it, according to Elliot (1995), teachers in foreign language schools hardly ever teach it. It is also among the toughest problems that language learners and teachers come across. Teachers can efficiently enhance their instruction to raise their students' pronunciation accuracy if they are aware of the traits that affect how they pronounce words.

Teachers of ESL/EFL need access to training materials which will enhance their pronunciation teaching capabilities according to Fraser (2000). The principal objective of pronunciation education according to Morley (1991), it is the development of understandable speech instead of perfect pronunciation because it represents communicative competence. Establishing specific targets representing the learner's communication needs and being realistic along with practical and fair stands as an excellent teaching approach. All English language learners must achieve clear speech which their listeners can understand rather than native-like speech.

According to Pourhosein Gilakjani (2011) students must transform their language sound mental frameworks to enhance their English pronunciation quality. All speech elements starting from syllables up to stress patterns and rhythm align with this observation. Teaching pronunciation remains mainly overlooked throughout English language instruction.

### **1.1 Research Problem**

The need for leaning another language has become necessary in today's globalized world .The ultimate goal of teaching pronunciation is to communicate effectively in the target language. The pronunciation system of Kurdish differs from the pronunciation system of English alongside their graphical systems. The unique way English and Kurdish represent sounds creates an optimal situation for incorrect speech pronunciation. Therefore; the lack of correspondence between sound and letter causes Kurdish students to make pronunciation errors. Additionally, Each English grapheme can represent multiple phonemes in writing while single phonemes could correspond to different written symbols. Systematic mispronunciations occur because of these mismatches that the Kurdish language does not normally experience.

### **1.2 Research Question**

1. What are the most common pronunciation errors made by Kurdish students as a result of phoneme-grapheme mismatches?

### **1.3 Aim of the Study**

The current study mainly aims to identify and analyze the particular pronunciation errors made by Kurdish university students due to the mismatches between phonemes and graphemes in English language.

### **1.4 Significance of the Study**

The current study is significant since it helps EFL Kurdish university teachers to provide directed pronunciation instruction and advise the development of teaching materials that address the specific challenges related to the disparity between sound and letter in English language.

### **1.5 Scope of the Study**

The current study included 25 Kurdish third-year English department students at the College of Basic Education, University of Duhok to take part in the study in the second semester for the academic year (2024-2025), morning classes. The students were 13 males and 12 females.

## **2. Theoretical Background and Literature Review**

### **2.1 Introduction**

The worldwide popularity of English is growing as people dedicate intense effort to study it as Graddol, Leith, Swan, Rhys and Gillen (2007) report, the attempts made by students of the English language do not lead to adequate language mastery. Brown (2000) revealed that difficulties in learning pronunciation properly result in learners being stuck during social interactions. Lack of knowledge about pronunciation stands among the elements that make learning a new language more challenging.

### **2.2 Phoneme-Grapheme Correspondence**

The establishment of sound-symbol linkages between phonemes and graphemes forms the basis of phoneme-grapheme correspondence. A precise pronunciation combined with reading skills requires an effective connection between phonemes and graphemes. The learning process of language becomes simpler because phonemes and graphemes establish clear and direct connections with each other. Learners experience learning obstacles caused by the unclear patterns and irregularities in phoneme-grapheme relations. The notion links to orthographic depth which describes the effectiveness of writing systems to represent phonology. The phonetic print system in English matches the influence of English orthographies but Finnish orthographies demonstrate high levels of phonetic consistency (Frost, 2012).

#### **2.2.1 Impact on L2 Pronunciation**

Native language interference with foreign language learning is known as L1 interference or language transfer. English speakers tend to encounter pronunciation problems in Kurdish due to fundamental differences between the two languages together with Kurdish phonological rules and gamma-phoneme correspondence relationships. The Contrastive Analysis Hypothesis (CAH) evaluates the effectiveness of L1 and L2 system comparison to detect learning difficulty points. Many contemporary beliefs show that language transfer extends beyond structural differences to encompass multiple additional factors (Jarvis, 2000; Odlin, 2003).

### **2.3 The Role of Phonological Awareness in L2 Learning**

Learning L2 pronunciation depends on students' phonological awareness which enables them to handle language sounds in their target language. The acquisition of a second language becomes more effective when a person demonstrates strong phonological awareness in their first language (L1). My pronunciation faces difficulties because L1 does not match the phonotactic principles and phonemic inventory of L2. Learning pronunciation in the L2 faces two main challenges: poor phonological skills in the L2 and the interference which comes from the L1. To improve L2 pronunciation learners need to develop their L2 phonological awareness coupled with explicit phonological teaching according to (Derwing & Munro, 2005; Levis, 2005).

## 2.4 Importance of Pronunciation

Oral communication requires pronunciation skills thus the English language considers this skill its fundamental base. Individuals use pronunciation to show meaning through sound formation that symbolizes concepts (Yates, 2002). Non-native speakers encounter special challenges when they try to make proper English word pronunciation. Teachers alongside their students find it hard to learn English sounds thus creating frustration for both groups. Pronunciation remains a complex essential element of second language learning that produces many difficulties for students according to (Zhang, 2009).

## 2.5 Pronunciation Errors

Students face considerable difficulties because pronunciation mistakes stand as a main issue for second language English learners. A person makes pronunciation mistakes because this leads to "consistently implicated loss of intelligibility" according to the research of Munro and Derwing (1995). Native speakers may experience similar difficulties during communication with non-native speakers and also with one another because of dialectal variations (p.76).

### 2.5.1 Error Analysis (EA)

Error analysis (EA) stands as a widely used technique to investigate learner language particularly their pronunciation difficulties. In the 1970s EA became the preferred method after it succeeded Contrastive Analysis according to (Ellis, 1999). According to Corder (1967), the main task for Error Analysis would consist of studying errors by themselves free from any confusion with mistakes. The essential technique of applied linguistics produces comprehensive explanations from Intan et al. (2020) to detect, classify and evaluate the errors that second language learners create. The second language learning challenges faced by students become easier to understand because Error Analysis helps researchers study error rates along with classification and sources of mistakes (p.10).

## 2.6 Common Types of Pronunciation Errors

The following table presents pronunciation errors grouped into insertion errors and deletion errors and substitution errors. Every category of pronunciation error includes examples which demonstrate incorrect student pronunciation (Munro and Derwing, 2015).

**Table 1**

*Common types of pronunciation errors*

Type	Explanation	Examples
<b>Insertion</b>	Containing a portion not present in the target language form	/lɪvəd/ for 'lived' (/lɪvd/)
<b>Omission</b>	Deleting a portion that is present in the target language.	/sɪk/ for 'six' (/sɪks/)
<b>Replacement</b>	Substituting a portion in the target form with a segment from a different phonemic classification.	/kʌt/ for 'cat' (/kæʔ/)

## 2.11 Related Studies

Bekleyen (2011) studied how pronunciation problems increased the complexity of English language learning through various language features in Turkey. Features for English language learners in Turkey. The research evaluated 24 participants using open-ended and read-aloud procedures and the results were gathered orally. This research showed students had difficulties understanding different English sounds during their usage with particular focus on the pair of voiceless and voiced “th” (/ð/-/θ/).

Mohammed, M. A. A., & Idris, S. A. M. (2020) their research studied the pronounced importance of pronunciation teaching in English as a foreign language through evaluating specific pronunciation challenges that postsecondary learner of EFL experience in spoken English. Research findings indicated severe difficulties for students in distinguishing English sound pair combinations and proper word stress among their peers.

The research identified insufficient pronunciation practice as one of the primary factors which affected students. English vowels present a major learning challenge because learners struggle to pronounce words correctly given their multiple acceptable pronunciations ("son," "come," "among," "blood"). Rustling pronunciations existed for plural "-s" ending sounds, "-ed" word final syllables along with the various pronunciations found in words containing "ea," "oo" and "o". The study outcomes prompted researchers to create repair strategies which focused on minimal pair exercises alongside teacher-directed pronunciation models for students to overcome their pronunciation problems.

## 3. Methodology

### 3.1 Research Design

Harwell (2011) stated that researchers should identify study research designs since these designs show essential methodological aspects and differ according to qualitative or quantitative or mixed approaches (p. 148). The correct identification of research design remains essential since it determines the methods for data acquisition and evaluation. So, the current study is a quantitative descriptive one.

### 3.2 The Sample of Participants

According to Woodrow (2014), it is noteworthy to classify the criteria and the size of the sample of participants and how this sample was chosen because these elements can provide reliable results and impact the findings of the present search. Thus, the sample of this study was 25 Kurdish third-year English department students taken randomly out of 80 students at the college of Basic Education, University of Duhok. Their native language was Kurdish and their age ranged between 19-22. Additionally, they were 13 males and 12 females.

### 3.3 Research Instruments

For collecting the necessary data, an oral pronunciation test was conducted in which students were reading certain words and their voices were recorded. The words were taken from “Better English Pronunciation” by O’Connor (1998) and “English Phonetics and Phonology” by Roach (2009) to cover the most problematic words. Furthermore, the words were 26 words which were challenging for students to pronounce.

### 3.4 Validity of the Test

The validity of the test was assured by sending a copy to the jury members (see appendix A) specialized in applied linguistics and phonology so as to obtain their comments and feedbacks related to the usefulness and suitability of the test. Then, the test was modified according to their feedbacks and the final draft was given to the participants.

### 3.5 Methods of Data Collection

The instrument used in this study was an oral pronunciation test in which students had to read some challenging words taken from “Better English Pronunciation” by O’Connor (1998) and “English Phonetics and Phonology” by Roach (2009) to cover the most difficult words which had disparity between sound and letter.

### 3.6 Methods of Data Analysis

For the analysis of the results of the test, IBM SPSS version 26 was used to analyze the results of the test by showing frequencies and percentages in tables as well as the overall means of correct and incorrect pronunciation. Furthermore, the students’ recorded voices were imported into PRAAT, then they were compared to IPA transcription by the researcher to make sure of their correct and incorrect pronunciations.

### 3.7 Ethical Issues

Accordingly, to Bell (2010) states that the securing of participants, voluntary informed consent before research gets embarked on is considered the norm for the conduct of research. Thus, in the current study, students were told about the aims of the research and their responses would be taken for academic purposes only. Moreover, they were told that they were free whether to participate or not as well as all their responses would be confidential to give accurate and honest responses.

## 4. Data Analysis and Discussion of Results

In this section, the results of the question will be analyzed. The question consisted of 4 themes, each theme had some words which were difficult for students to pronounce. The number of students who participated in the pronunciation test was 25 Kurdish third-year English department students -13 males and 12 females. The question is “*What are the most common pronunciation errors made by Kurdish students as a result of phoneme-grapheme mismatches?*”

The process of analyzing the students’ recorded voices was done through using PRAAT, is an effective and reliable tool for analyzing speech sounds. According to Boersma, P., & Weenink, D. (2023), it is a famous phonetic analysis program and the procedures of this tool were as follows: Importing the students’ recorded voices into Praat and detailed acoustic analyses were conducted due to the need for accurate identification of pronunciation errors. Then, their transcriptions were compared to IPA transcription by the researcher to double check their correct and incorrect pronunciation.

#### 4.1 Pronunciation of “th” (voiceless /θ/ and voiced /ð/)

The below tables represent the frequencies and percentages of each word as well as the overall mean of correct and incorrect pronunciation. In addition, each table contains several words and each word will be analyzed individually as stated in the following tables:

**Table 2**

*Pronunciation of “th” (voiceless /θ/ and voiced /ð/)*

Word	Total Students	Standard Pronunciation	Correct Pronunciation	Incorrect Pronunciation	Correct %	Incorrect %
loathe	25	/ləʊð/	3	22	12	88
breath	25	/breθ/	19	6	76	24
heathen	25	/'hi:ðən/	14	11	56	44
twelfths	25	/twelfθs/	17	8	68	32
smooth	25	/smu:ð/	1	24	4	96
think	25	/θɪŋk/	23	2	92	8
Overall mean of Correct Percentage =51.3%						
Overall mean of Incorrect Percentage =48.7%						

Table 2 showed the pronunciation of “th” sound, both voiced and voiceless among 25 students. The data revealed an important disparity in the students’ ability to produce these sounds accurately, indicating the challenges posed by these English phonemes. Thus, words such as “smooth” and loathe”, proved to be problematic since “smooth” was pronounced incorrectly by 24 students by pronouncing it as /smu:θ/, referring to an ample lack of mastery. The word “loathe” , also displayed a high error rate of 88% .Conversely, words with the voiceless “th” sound /θ/ ,like “breath and think” ,were pronounced more accurately, with “think “ , viewing the highest success rate of 92% . Although , “ breath” still, presented a noteworthy challenge with a 24% error rate .In addition , the words “ heathen and twelfths “ ,with a correct percentage of 56 % for “ heathen” and a success rate of 68% for “ twelfths” .

Finally, the table underscored that students faced problems mastering the “th” sound, particularly the voiced /ð/, underlining the need for targeted instructions to improve their pronunciation.

#### 4.3 Different pronunciation of “ou” in different words

**Table 3**

*Different pronunciation of “ou” in different words*

Word	Total Students	Standard Pronunciation	Correct Pronunciation	Incorrect Pronunciation	Correct %	Incorrect %
plough	25	/plaʊ/	0	25	0	100
cough	25	/kɒf/	9	16	36	64
soul	25	/səʊl/	25	0	100	0
rouge	25	/ru:ʒ/	3	22	12	88
country	25	/'kʌntri/	22	3	88	12
thought	25	/θɔ:t/	6	19	24	76
journey	25	/'dʒɜ:ni/	18	7	72	28
tour	25	/tuə/	5	20	20	80
Overall mean of Correct Percentage =44%						
Overall mean of Incorrect Percentage =56%						

Table 3 inspected the miscellaneous pronunciations of the “ou” graphemes through various words by 25 students. The data highlighted the inconsistency of “ou” pronunciation, leading to extensive errors. The word “plough” was mispronounced by all students, indicating that students had an extreme lack of recognition for the /aʊ/ sound in this context. “Thought” and “tour” also presented remarkable difficulties with 76% error rates for “thought” and 80% for “tour”, suggesting students faced troubles pronouncing /ɔ:/ and /ʊə/ pronunciations, respectively. “Cough” showed an error rate of 64%, demonstrating difficulty with the /ɒ/ sound.

Conversely, “soul” was correctly pronounced by all students, showing that the /əʊ/ sound was well-understood in this word. Concerning the word “country” proved a high success rate of 88%, suggesting that students the /ʌ/ sound was comparatively easy for students to distinguish in this context. The word “Journey” had a success rate of 72%, demonstrating that students were familiar with its pronunciation despite it had an error rate of 28%. While “rouge” proved to be challenging for students by having an error rate of 88%, indicating that students faced problems pronouncing it correctly.

In conclusion, the table demonstrated the unpredictable nature of the “ou” sound in different words, offering an indicator of having a focused instruction on the various phonetic realizations of the “ou” grapheme.

#### 4.4 Different pronunciation of “ea” in different words

**Table 4**

*Different pronunciation of “ea” in different words*

Word	Total Students	Standard Pronunciation	Correct Pronunciation	Incorrect Pronunciation	Correct %	Incorrect %
hear	25	/hɪə/	18	7	72	28
bear	25	/beə/	20	5	80	20
earth	25	/ɜ:θ/	20	5	80	20
hearth	25	/hɑ:θ/	0	25	0	100
breathe	25	/bri:ð/	10	15	40	60
heather	25	/heðə/	12	13	48	52
<b>Overall mean of Correct Percentage =53.3%</b>						
<b>Overall mean of Incorrect Percentage =46.7%</b>						

Table 4 analyzed the various the various pronunciation of “ea” across different words. The data revealed the inconsistent nature of “ea” pronunciation in English, leading to a range of accuracy levels. The word “hearth “was mispronounced by all students, showing a 100 error, suggesting a complete lack of recognition for the /ɑ:/ sound in this context. “Breathe “and “heather “also presented a significant challenge, with error rates of 60% and 52%, suggesting that students face difficulty distinguishing between the /i:/ and /e/ sounds in these words.

On the contrary, “bear “, “earth” and “hear” demonstrated high success rates ,with 80%, 80%, and 72% accuracy, successively . This proposed that the /eə/, /ɜ:/, and /ɪə/ sounds are fairly more available to students. Although; even these words showed a noteworthy percentage of incorrect pronunciations.

Overall, the table emphasizes the irregular nature of "ea" pronunciation in English. The data determines that students struggle essentially with certain pronunciations, while others were more readily captured. This stressed the need for intensive instruction on the different phonetic realizations of the "ea" grapheme, especially in less common or more irregular words.

#### 4.5 Pronunciation of past tense "-ed" ending and plural "-s" ending

**Table 5**

*Pronunciation of past tense "-ed" ending and plural "-s" ending*

Word	Total Students	Standard Pronunciation	Correct Pronunciation	Incorrect Pronunciation	Correct %	Incorrect %
breathed	25	/bri:ðd/	4	21	16	84
lapsed	25	/læpst/	12	13	48	52
targeted	25	/'tɑ:ɡɪtɪd/	13	12	52	48
gardens	25	/'gɑ:dənz/	1	24	4	96
laughs	25	/lɑ:fs/	6	19	24	76
Languages	25	/'læŋɡwɪdʒɪz/	2	23	8	92
<b>Overall mean of Correct Percentage =25.3%</b>						
<b>Overall mean of Incorrect Percentage =74.7%</b>						

Table 5 showed the pronunciation of past tense "-ed" endings and plural "-s" endings by 25 students, revealing noteworthy encounters with both types of suffixes. The data shows a clear difficulty in applying the correct phonetic procedures for these endings. The past tense "-ed" endings showed changing degrees of difficulty. The words "breathed and lapsed" presented important challenges, with high error rates of 84% and 52 successively. So, this was an indicator that students were not able to differentiate between the /d/ and /t/ sounds if related to "-ed" relying on the preceding consonant. The word "targeted", with a proximate 50/50 split, specifying that /ɪd/ pronunciation was also tricky.

The plural "-s" endings also discovered inconsistencies. The words "gardens and languages" were awesomely mispronounced, with error rates of 96 % and 92 % respectively, indicating a significant challenge in producing the /z/ and /ɪz/ sounds. On the other hand, the word "laughs" was also problematic, with 76% of students, mispronouncing the final /s/ sound.

Overall, the table above showed a steady struggle with the pronunciation of both "-ed" and "-s" endings, suggesting that students faced difficulty implementing the phonological rules that spell the different pronunciations of these suffixes depending on the preceding sounds. Therefore; this was a sign of the need for regular and directed instructions centered on the phonetic differences of these common English endings.

#### 4.6 Key Summary of Results

Resistant English pronunciation features proved difficult for Kurdish EFL students according to the research because they include sounds with conflicting phoneme-grapheme correspondences. Kurdish EFL students experienced specific pronunciation difficulties with the voiced "th" sounds (as in smooth) and the past tense ending "-ed" (breathed vs. lapsed) and plural marking "-s" (gardens) and the irregular vowel patterns "ou" (plough, cough) and

“ea” (hearth, breathe). Available research confirms that EFL students face equivalent difficulties to the results shown by Kurdish learners. The students faced pronunciation issues specifically when different vowels appeared inconsistently in English words. This research demonstrates why students require specialized phonetic training through which they can better overcome their pronunciation difficulties.

## 5. Discussion

According to the above results, it was shown that students consistently struggled with voiced “th”, past tense “-ed” endings, plural “-s” endings, and the inconsistent “ou” and “ea” graphemes. According to the test of their pronunciation of various English phonemes. Words with voiced “th”, such as “smooth” and “loathe”, and distinguishing between /d/ and /t/ sounds in “-ed” endings, such as “breathed” and “lapsed”, all of these were particularly difficult for the students to pronounce. Thus, the results of the current study are reinforced by Bekleyen (2011) study in which he showed that Turkish students had difficulty pronouncing (/ð/-/θ/) since they are not existed in their native language.

Additionally, the plural “-s” endings in nouns like “gardens” and “languages” also presented a noteworthy challenge. To be continued, words like “plough”, “thought” and “cough”, the “ou” grapheme had high error rates, indicating that students encountered difficulty pronouncing them. Concerning the grapheme “ea” in these words’ “hearth”, “breathe” and “heather” proved to be hard for students to pronounce.

On the other hand, the results of the current study concerning “-ed” endings and plural “-s” endings, “ea” and “oo and o” showed problems in pronouncing them due to the intricate nature of English spelling and pronunciation. Therefore; the current results are in full alignment with a study conducted by Mohammed, M. A. A., & Idris, S. A. M. (2020). This research analyzed the specific pronunciation problems faced by EFL learners while speaking English at the post-secondary level. Students experienced intense difficulty mastering English phoneme-grapheme mismatches distinctions alongside realizing proper word stress placements including “-ed” endings and plural “-s” endings, “ea” and “oo and o”.

English Vowel Inconsistencies, the multiple pronunciations of each English vowel stand as a main barrier for students trying to learn English. The students face many pronunciation difficulties which results in incorrect word pronunciation. During the learning process students replace specific vowel sounds with phonetic variations although they are wrong because the sounds are incorrect either in quality or quantity for son /sʌn/, come /kʌm/ and blood /blʌd/. Almost all learners speak these words incorrectly until they develop full competence with those vowel sounds.

In essence, it was indicated that students faced problems pronouncing words which their pronunciation was completely different from their spelling. So, this posed the necessity for phonetic training to address these pronunciation difficulties faced by Kurdish students. The frequencies of mistakes across several categories confirmed the need for the targeted instructions on the phonological rules to overcome such pronunciation errors occurred due to the phoneme-grapheme mismatches in English language.

## 6. Conclusion

The current study aimed to identify pronunciation errors made by Kurdish students as a result of the mismatch between sounds and letters. Thus, the current study arrived at the following conclusions:

1. Problems with "th" Sounds: The "th" sounds proved hard for students to learn but specifically the voiced /ð/ sound required extra attention in speech instruction. The students handled voiceless /θ/ sounds without much trouble but found it difficult to produce the voiced /ð/ sounds found in words such as "smooth" and "loathe".
2. Non-correspondence of "ou" Grapheme Pronunciation: Students' errors in pronouncing the "ou" grapheme occurred frequently because their pronunciation remained inconsistent. The words "plough," "thought," "tour," and "cough" displayed major pronunciation challenges to students because they consumed their ability to pronounce "ou" properly.
3. Irregular Pronunciation of "ea" Grapheme: The "ea" grapheme caused difficulties because it contains irregular pronunciation patterns. Students faced problems pronouncing words "hearth" and "breathe" and "heather" which showed that they had difficulty differentiating between numerous vowel sounds. The accuracy in pronouncing "bear" and "earth" and "hear" did not dominate the necessity for specific training of "ea" sounds in language development.
4. Difficulties with "-ed" and "-s" Endings: Students persistently experienced trouble sounding both "ed" in past tense forms and "s" in plural versions. Students displayed poor performance when trying to use appropriate phonological rules for suffixes starting with selected sounds in words "breathed," "lapsed," "gardens," "languages," and "laughs." Proper teaching methods on different English pronunciation traditions must become a priority because students consistently demonstrate difficulty with these standard endings.

### 6.1 Implication for Pedagogy and Curriculum

These research results indicate that English language teaching for Kurdish students requires specific detailed pronunciation instruction. Firstly, the teaching of problematic English sounds along with inconsistent English spellings needs immediate attention during instruction. Secondly, teachers need to include phonics-based techniques combined with contextual practice elements which enable students to detect and accurately generate these particular sounds. Additionally, teaching should make "-ed" and "-s" inflectional endings the focus of pronunciation instruction because students need precise mastery of these endings to achieve fluency along with grammatical accuracy. Finally, the curriculum design needs to keep pronunciation-related areas connected to normal lessons with plenty of practice time and feedback support.

### 6.2 Suggestions for Future Studies

1. Research should address how targeted pronunciation methods impact Kurdish learners by investigating designated approaches to handle the pronunciation challenges found in this research.
2. An investigation of first language (L1) interferences which lead to lasting pronunciation issues should be undertaken to achieve more specialized teaching techniques.

3. Extensive research using time-based methods could measure pronunciation improvement patterns of students after they receive structured training programs.
4. Additional research about pronunciation difficulties needs to study age groups and proficiency levels to better comprehend their effect on learning so teachers can adjust their approaches properly.

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## Appendix A

### Jury Members

No	Name	Specialty	Academic Status	Affiliation
1	Dr. Asmaa Amin Hussein	Linguistics/ phonology	Lecturer	University of Duhok
2	Dr. Aveen Mohamad Hasan	Phonetics and phonology	Assistant professor	University of Duhok
3	Dr. Samira T. Saeed	Linguistics	Assistant professor	University of SalahAldin
4	Dr. Laureen Ibrahim Naser	Linguistics & Applied Linguistics	Assistant professor	University of Duhok

## Appendix B

### Students' Consent Form

My name is Arsalan Ibrahim Sulaiman, a teacher of English Language at General Directorate of Duhok Education. Currently, I am a TESOL MA student at Department of English / College of Basic Education / University of Duhok. I am conducting a study entitled "Kurdish Students Pronunciation Errors due to Phoneme-Grapheme Mismatches at University Level". Accordingly, I am kindly seeking your assistance to participate in this study and you are fully free whether to take part or not. All the information collected during the test will be confidential and used only for academic purposes. Your name will not be mentioned in this study. Your willingness to participate in this study will definitely enrich this study and it is greatly appreciated.

### Researcher's statement

I have illustrated the processes of the current study and I have answered all the questions of the participants.

Signature of the researcher ..... Date.....

### Participant's statement

I have checked the information given in this consent form, I have had the chance to ask, and I have received answers to my questions and I willingly agree to take part in this study.

Signature of the participant..... Date.....

For more information, feel free to contact me at [arsalanebra@yahoo.com](mailto:arsalanebra@yahoo.com) or by phone **07508226176**