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From Errors to Engagement: Gamification and Digital Tools in Teaching English Pronunciation to Arabic Speakers

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Abstract

Background of the Study: This study investigates the phonological errors in English pronunciation made by Egyptian university students whose first language is Arabic (L1). These errors are shaped by both first language interference and internal L2 challenges.
Aims and Scope of the Paper: The research categorizes errors into interlingual and intralingual types and emphasizes pedagogical strategies tailored to these challenges, with a specific focus on gamification and technology enhanced learning.
Methods: Data were collected through classroom observations and recorded speech samples from English language lectures. The recordings were transcribed and analyzed. Interlingual errors included vowel length confusion, consonant substitution, and cluster reduction, while intralingual errors involved overgeneralization and incorrect stress placement.
Result: The findings provided authentic insight into learners' spoken interactions. Phonological patterns influenced by Arabic L1 and internal misapplication of English phonological rules were clearly identified and analyzed. Gamified strategies were proposed as targeted interventions.
Conclusion: This study highlights the importance of integrating creative digital tools such as pronunciation based apps, rhythm based games, and role-play tasks into pronunciation instruction. These tools help transform error correction into a more dynamic and learner centered experience. The study contributes a practical model for improving phonological competence among Arabic-speaking EFL learners through innovative, evidence-based pedagogy.

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INTRODUCTION

Language is the means of communication between human beings. Speakers of a certain language tend to think in their own language, dealing with it as the base and foundation for other languages. Their morphology, lexical choice, structure, thoughts, pronunciation, and phonological structures are affected by their first language (L1).

Phonology is a linguistic branch that deals with sound systems of a particular language; it looks into pronunciation and other patterns that are related to a language system. Phonology is a field that focuses on the sound system of a language, examining the rules that govern how sounds are produced and how they function in communication (Azzahra & Prayogo, 2022). It deals with both general and individual sound patterns within a language system. Weise (2006) states that phonology is the study of functional and structural properties of sound in a language. It tends to look into individual differences and properties in a language, in addition to general ones as well. It tends to tackle phonemes of a language which are considered the smallest unit of sound such as the difference between bilabial voiceless plosive /p/ and the bilabial voiced plosive /b/.

Review of Literature

1.1 Error Analysis (EA)

Error analysis (EA) is a critical field within applied linguistics, aiming to identify, describe, and explain errors made by language learners. EA is also referred to as phonological errors. It helps teachers and researchers understand the cognitive processes underlying second language acquisition (SLA). Arabic students learning English as a second language (L2) tend to make errors throughout the process of learning. This is due to the fact that they use features, systems, and rules from their L1 in L2, resulting in phonological errors. EA is an approach established by Stephen Corder in the 1970s that tends to delve deep into errors committed by learners of a second language. It is a valuable tool for diagnosing learning needs and devising effective teaching strategies. According to Khansir (2012), EA is considered one of the major topics tackled in researches related to SLA and is an essential part of the learning process. It aims to identify, classify, and explain errors found in spoken and written utterances of L2 learners. It detects patterns and predicts further difficulties that can be encountered by learners while proposing solutions. Khansir (2012) states that error analysis is a branch of applied linguistics that does not only reflect errors done by learners due to their native language, but it also reflects universal strategies done by second language learners. It is also argued that error analysis describes how the process of learning occurs by examining the learners' utterances that includes correct and incorrect outputs. Therefore, Zhang and Rahimi (2020, as cited by Rajan et al., 2024) emphasize the importance of EA in identifying patterns in the mistakes of the learners and finding teaching strategies that can help enhance their language proficiency. The learner tends to apply the system and rules of L1 to L2 that can be categorized into transfer errors, overgeneralization errors, and developmental errors as indicated by Richards (1971). Moreover, studies like Kim (1989) and Hsin (2003) show how language-specific features, such as articles or verb tenses, contribute to error patterns due to structural differences between L1 and L2. Errors can occur in two different forms: Interlingual and intralingual. Interlingual errors arise from transfer issues between L1 and L2, where structures from the native language influence target language performance (Richards, 1971; Ellis, 1994). Intralingual errors are linked to overgeneralization, simplification, and incomplete rule application and comprehension within the target language. Hence, this paper analyzes common spoken errors performed by adult Arabic speaking students learning English language during university classroom interaction, highlighting the challenges faced by learners of L2. Teaching strategies are tailored and suggested to help in reforming the errors.

1.2 Interlingual errors

Some errors result as an influence of one's native language. The learner applies the structures, rules, and systems of his/her own language onto L2. This is referred to as interlingual errors. Ellis (2015), as cited by Rajan et al., 2024) explains that such errors stem from one's L1 resulting due to the misapplication of rules from L1 to L2. According to Ellis (1990, as cited by Khansir, 2012), this theory tends to provide an explanation of how language is acquired by L2 learners.

English language relies on the usage of auxiliary verbs while Arabic language does not. This causes Arabic speaking students to skip using auxiliaries in the present continuous tense when constructing English sentences. Moreover, Arabic does not rely on the usage of copula in present simple tense causing students to form sentences like "I Mohamed" without using "am". These errors are considered grammatical errors. Despite the fact that English follows the order *Adjective* followed by a *Noun*, Arabic speaking students face difficulties with such order where they tend to follow the Arabic order of *Noun* followed by an *Adjective* in English adjectival phrases. Regarding phonological errors, Arabic students undergo phonological transfer where sounds from L1 are imposed on L2. This is noticeable in the plosives /p/ and /b/, for instance. Arabic lacks certain phonemes, like /p/, which causes Arabic speakers to pronounce "people" as "beoble". Phonological constraints, particularly consonant clusters, are another issue faced by Arabic speakers learning English as L2. English language allows consonant clusters; however, Egyptian Arabic often simplifies such clusters by inserting short vowels to make pronunciation easier. Certain patterns can be detected leading to the formation of certain teaching strategies that would help learners override and fix these issues. Some

strategies include revealing the differences between two specific structures of L1 and L2, which helps learners form a distinction between both of them resulting in less errors.

1.3 Intralingual Errors

Not all errors occur due to a transfer from L1 to L2. Unlike interlingual errors, intralingual errors arise due to personal learning difficulties and slippages. Rajan et al., (2024) note that intralingual errors result due to the lack of knowledge about certain structures or rules in L2. Richards and Schmidt (2013, as cited by Rajan et al., 2024) explicate that that errors in L2 can arise from incorrect application of L2's rules and not as a result of language transfer. Lantolf (2000) argues that such errors reflect the learner's attempts to make sense of the language, bridging the gap between it and their social and cognitive interactions. Learners can mix-up between two similar words "faculty" and "factory" resulting in lexical errors. In addition, they may have phonological errors such as "bit" and "beat". Being exposed to the learner's attempts, the instructor starts to predict errors (interlingual and intralingual), form patterns, and tailor certain teaching techniques that aim to modify errors.

1.4 Pedagogic Implications

Pedagogical implications are critical in addressing phonological errors in SLA, offering structured and innovative strategies to help learners improve their pronunciation and overall communicative function. Research highlights the need for tailored teaching methods that focus on error patterns and their underlying causes. According to Celce-Murcia et al. (2010), raising learners' awareness of phonological contrasts between their L1 and L2, through contrastive analysis, provides a foundational and fundamental step in addressing errors. For instance, phonetic and phonological features such as vowel length, consonant substitutions, and syllable structure must be explicitly taught to L2 learners, as they are often the reason for L1 interference. Therefore, an explicit distinction and comparison between the two languages has to be proposed.

Levis and Cortes (2008) emphasize the role of task-based learning, highlighting the significance of pronunciation-focused tasks that integrate authentic language use to promote better application of phonological rules. Gamification has also emerged as an innovative pedagogical tool. Sykes and Reinhardt (2013) argue that incorporating digital games and interactive activities creates an engaging learning atmosphere that enhances error correction, in addition to phonological accuracy. Studies by Derwing and Munro (2005) underscore the importance of repeated practice and feedback, suggesting that learners benefit most when phonological training is tied to real-life communicative contexts. That is why role-plays are important in classroom applications and helps students imagine and interact in life-like scenarios.

There are many instructors and teachers available; however, a small number of them know how to effectively impact students, fix phonological errors, and override phonologic fossilization. As a result, Celce-Murcia et al., (2010), Levis and Cortes (2008), Jenkins (2000), and others, underscore the necessity of blending traditional methods with innovative approaches to create long-term improvements in learners' L2 phonological competence. Fraser (2000) emphasizes the need for teacher training in phonological pedagogy, highlighting that teachers often lack the tools and confidence to address errors effectively. By intertwining tools like visual aids, minimal pair exercises, and more, educators can address interlingual and intralingual errors, making the learning process more effective and engaging.

1.5 Theoretical Framework

Corder's (1974) framework on EA acts as the foundation for this study, outlining a systematic approach that includes five steps: Error identification, description, explanation, evaluation, and pedagogic proposal. The objective of the first step, error identification, is to pinpoint specific errors made by the learner, providing a basis for analysis. In the second step, error description, the errors are categorized and transcribed, particularly when the language of production differs from the learner's target language. Error explanation, the third step, delves into understanding the underlying causes of the errors, drawing on distinctions such as interlingual and intralingual erros as highlighted by Richards (1971) and Dulay and Burt (1974). The fourth step involves error evaluation, where

patterns are identified to determine their implications for language learning, echoing Selinker's (1972) concept of interlanguage as a developing linguistic system. Finally, the framework concludes with pedagogic proposals, emphasizing the creation of targeted exercises and activities to help learners overcome errors, a process enhanced by contemporary tools like gamified learning platforms (Crossley et al., 2016). Building on this framework, modern studies incorporate interdisciplinary insights, such as Ellis's (1994) emphasis on cognitive processes and the stages of second language acquisition, and Schachter's (1974) critique, which suggests balancing EA with an investigation of avoidance strategies.

METHOD

Research Design:
The data collected is primary qualitative data collected particularly for this study from 13 different university lectures. However, the focus is on five different groups with different students for the analysis. Some groups are excluded due to the presence of some students in multiple groups at the same time. The lectures are English Language courses for adult Arabic-speaking students. It is worth noting that the level of proficiency in English of the informants ranges between A1–B2. Each lecture is around two hours long. Lectures are recorded upon the consent of the students, transcribed, and then segmented. Problematic structures are demonstrated for illustration and analysis purposes. This is done in an attempt to identify phonological errors in students' utterances, determine the reason for their occurrence, and suggest pedagogic techniques to correct such errors.

Participants:
Students were asked whether they agreed to have the lecture recorded. Based on their consent, they were informed that the recordings would capture natural spoken and phonological instances. They were told that the main aim was to observe how they actually speak and pronounce words. Students expressed interest in knowing the results of their recorded interactions and error patterns.

Population and Sampling Method:
Data were collected from 13 university lecture sessions. However, for focused analysis, only five different groups were selected. Some groups were excluded due to student overlap across sessions. Selection was conducted purposively to ensure unique data samples and avoid duplication of participation.

Instrumentation:
After the lectures were recorded, specific parts of the audios were taken as excerpts for the analysis. The phonological error is described, highlighting its nature and purpose. Afterwards, it is categorized as either an interlingual or intralingual error. For each error type, pedagogical techniques are offered as potential remedies. Three phonological features are demonstrated for interlingual errors and two features for intralingual errors. Each feature is supported by five different examples. Observation notes were used to support the transcriptions, and member checking was conducted by asking some students to verify their speech transcripts, in order to ensure credibility and trustworthiness of the data.

RESULTS AND DISCUSSION

Result:

1.1 Interlingual Errors

Arabic (L1) learners of English Language (L2) shall be referred to as (AL1) and (EL2), respectively, throughout the analysis. All samples provided are from undergraduate students from the faculties of Physical Therapy, Pharmacy, and Engineering. This part of the analysis examines phonological transfer which is a type of interlingual errors that includes errors in vowel length, consonant substitution, and vowel addition.

1.2 Phonological Transfer (Vowel Length)

(AL1) has fewer vowel sounds than (EL2). This part tackles issues in vowel length of some sentences uttered by the students. The observed phonological issues, particularly related to vowel length substitutions, are presented in Table 1

Table 1. Phonological Transfer in Vowel Length

	Sentence	Incorrect utterance	Correct utterance
a	**Last week, I */miːt/* my friends.**	*/miːt/*	*/met/*
b	**I just */sliːpt/*.**	*/sliːpt/*	*/slept/*
c	**She */hiːrd/* him.**	*/hiːrd/*	*/hɜːd/*
d	**/ðiːs/ exercise involves gentle movement.**	*/ðiːs/*	*/ðis/*
e	**He */fiːl/* down.**	*/fiːl/*	*/fel/*

The above examples are taken from a classroom interaction where students were asked to talk about certain topics. As demonstr ated, the students tended to substitute short vowels with long ones and the other way around. The error in pronunciation affected the meaning of the sentences. In the first one, for instance, the pronunciation affected the tense, where */miːt/* is the present form of */met/*. The sentence is in the past; however, the verb provided is in the present tense. In 1(d), the demonstrative pronoun, */ðiːs/*, uttered does not correspond with the singular noun exercise. Therefore, this created an incorrect structure where the determiner is plural and the noun is singular. As for 1(e), the structure created is incorrect and ungrammatical. The utterance that the student has provided is *He feel down.* The listener would not be able to determine the meaning of the sentence. It might be interpreted as *Someone feels sad*, but the subject-verb agreement is not achieved. Therefore, there has to be another thought. Analyzing it, the student intended to say */fel/* instead of */fiːl/.* Finally, transcripts 1(b-c), they cannot be interpreted as the words are not English words. This hinders the communicative and interpretive processes.

1.3 Phonological Transfer (Consonant Substitution)

Not all consonants in (EL2) are found in (AL1). They both share 14 similar consonants; however, the differ in phonemes like */p/*, */tʃ/*, */dʒ/*, */ŋ/*, and */v/*, as stated by Alshalaan (2020). The following transcripts further demonstrate in Table 2:

Table 2. Consonant Substitution Due to Phonological Transfer

	Sentence	Incorrect utterance	Correct utterance
a	**They */grædʊæli/* increase the joint's ability to bend.**	*/grædʊæli/*	*/grædʒʊəli/*
b	**The modalities use */haidroʊθeræbi/*.**	*/haidroʊθeræbi/*	*/haidroʊθɛrəpi/*
c	**[…] can */broʊvaid/* relief.**	*/broʊvaid/*	*/prəvaid/*
d	**There are over 160 international */kæmbʌsiz/* […]**	*/kæmbʌsiz/*	*/kæmpəsiz/*
e	**There are a lot of */ædvæntiʃiz/*.**	*/ædvæntiʃiz/*	*/ədvæntidʒiz/*

The above transcripts demonstrate the difficulties faced by the students in the voiceless bilabial plosive */p/* and the voiced postalveolar affricate */dʒ/*. In transcripts 2(b-c-d), the students failed in pronouncing the */p/* sound and substituted it with the voiced bilabial plosive */b/*. Moreover, in transcript 2(d), the student did not only substitute the consonant, but she also omitted the phoneme */ə/* and added */ʌ/* which is a more common sound/phoneme in Arabic. The schwa is not just omitted in 2(d), this is done in all examples. Transcripts 2(a-e) demonstrate a clear transformation of the

phoneme */dʒ/* to */d/* and */ʃ/*. As stated by Alshalaan (2020), Arabic does not contain the voice postalveolar affricate */dʒ/*. In fact, it has the sound */ʒ/*, but not */dʒ/*. Therefore, AL1 students were unable to pronounce it fully correct and they are struggling to utter it.

1.3 Cluster Reduction (Adding Vowels)

AL1's language influences the way they pronounce EL2. These students usually find consonant clusters difficult to deal with, especially at the beginning of the word. Hence, they tend to insert vowels to simplify pronunciation. The following examples shall provide a better insight on this.

Table 3. Cluster Reduction Through Vowel Insertion

	Sentence	Incorrect ulterance	Correct utterance
a	**Read the */tekest/* below and answer.**	*/tekest/*	*/tekst/*
b	**[…] with */estuːdents/* from all over the */wɔːrled/*.**	*/estuːdents/* */wɔːrled/*	*/stuːdents/* */wɝːld/*
c	**[…] including */hæmestriŋz/* and */kælvez/***	*/hæmestriŋz/* */kælvez/*	*/hæmstriŋz/* */kaːvz/*
d	**This helps alleviate */estrein/***	*/estrein/*	*/strein/*
e	**They can go to different */peleɪsɪz/*.**	*/peleɪsɪz/*	*/pleɪsɪz/*

This process is particularly common among AL1 learners of English due to significant phonological differences between the two languages. In Arabic, consonant clusters, especially at the beginning or middle of words, are often avoided, leading to transfer errors when producing English words. For instance, in the first example, the word **text** is pronounced as */tekest/* by inserting a vowel sound */e/* between the */k/* and */s/* sounds. This simplification occurs because the cluster */kst/* does not conform to Arabic phonetic rules, making it difficult for learners to form. Similarly, in the following example, the word **students**, shifts to */estuːdents/*, where a vowel sound */e/* is added at the beginning to break up the initial */st/* cluster. Arabic speakers frequently add a vowel before clusters like */st/* because Arabic words typically do not begin with such combinations.

The other examples follow the same pattern. In **world**, pronounced as */wɔːrled/*, learners insert a vowel sound to ease the articulation of the */rld/* cluster. For the word **hamstrings**, learners pronounce it as */hæmestriŋz/*, inserting a vowel to simplify the */mstr/* sequence. Likewise, in **calves** pronounced as */kælvez/*, the insertion of */e/* breaks up the final cluster. Finally, in the word **strain**, simplified to */estrein/*, a vowel sound is added at the start to avoid the difficult */str/* onset cluster, and in **places**, pronounced as */peleisiz/*, a similar vowel epenthesis simplifies the internal cluster. These errors arise because Arabic speakers naturally apply phonotactic constraints from their AL1 to EL2, avoiding clusters that do not exist in their native language. As a result, they tend to simplify English words by adding vowels, which conforms to Arabic pronunciation patterns. These patterns highlight the role of interlingual transfer in phonological errors, where learners subconsciously rely on their L1 phonological rules to navigate L2 pronunciation challenges.

1.4 Intralingual Errors

This section focuses on three common features of intralingual phonological errors: Overgeneralization of regular patterns and incorrect stress placement. For each feature, five examples are provided, followed by the explanation and the analysis.

Discussion:

Overgeneralization occurs when learners apply phonological rules too broadly, ignoring exceptions in the target language.

Table 4. Overgeneralization in Pronunciation

	Sentence	Incorrect ulterance	Correct utterance
a	**I /riːd/ it.**	*/riːd/*	*/red/*
b	**The /wuːmæn/ suffered from pain.**	*/wuːmæn/*	/*wʊmən/*
c	**This is a */knaɪf/.**	*/knaɪf/*	*/naɪf/*
d	**[…] and this was a */niːs/* example.**	*/niːs/*	*/naɪs/*
e	**We did the experiment on */miːs/.**	*/miːs/*	*/maɪs/*

The phonological errors presented in the examples highlight overgeneralization as a prominent intralingual feature. In the first example, the learner mispronounces **read** in its past tense form, applying the regular long */iː/* sound associated with *"ea"* in words like **team** or **leaf**, instead of the irregular */red/*. Similarly, the second sentence demonstrates the overapplication of the long vowel */uː/*, as seen in **moon** or **food**, ignoring the correct pronunciation */wʊmən/*. The phrase **This is a /knaɪf/** reflects a lack of awareness of silent letters in English, where */k/* remains unpronounced. In 4(d), the learner replaces the diphthong */ai/* with the monophthong */iː/*, showing confusion between irregular and regular vowel sounds. Lastly, example 4(e) generalizes the long */iː/* sound, mispronouncing *mice* and disregarding the correct diphthong */ai/*. These patterns illustrate a reliance on regular phonological rules and limited exposure to irregularities in English.

Incorrect Stress Placement

Stress placement errors arise when learners misapply stress rules, often transferring regular stress patterns to irregular cases.

Table 5. Incorrect Lexical Stress Placement in Learner Speech

	Sentence	Incorrect utterance	Correct utterance
a.	**I'm /prɪˈzent/, doctor.**	/prɪˈzent/	/ˈprezənt/
b.	**Should I write the */æd'res/*?**	*/æd'res/*	*/'ædres/*
c.	**He lives in a */'hoʊtel/.**	*/'hoʊtel/*	*/hoʊ'tel/*
d.	**The */'poʊlis/* went after him.**	*/'poʊlis/*	*/pə'liːs/*
e.	**Can we listen to the */riˈkɔrd/*?**	*/riˈkɔrd/*	*/'rekərd/*

The examples provided illustrate misplacement of lexical stress, a common intralingual error observed among English learners. In 5(a), the learner incorrectly applies stress on the second syllable of **present** instead of the first */'prezənt/*, which is appropriate for the noun form. This confusion arises due to a failure to differentiate stress patterns between noun and verb forms in English, reflecting the student's insufficient exposure. Similarly, **"Should I write the /æd'res/?"** demonstrates stress misplacement in the noun **address**, which requires stress on the first syllable */'ædres/*. Learners often misapply verb stress patterns here, showcasing an overgeneralization of second-syllable stress. In 5(c), the learner incorrectly stresses the first syllable of **hotel** instead of the correct second syllable */hoʊ'tel/*. The fourth example exhibits misplacement of stress in **police**, which correctly places emphasis on the second syllable */pə'liːs/*. The final example demonstrates a stress error where the learner applies the verb form's stress pattern to the noun **record.** Instead of stressing the first syllable */'rekərd/*, the second syllable is incorrectly emphasized, reflecting difficulty in distinguishing stress changes across grammatical categories. These errors highlight a lack of awareness of English stress placement rules and indicate the need for explicit instruction and practice.

Pedagogical Implications:

The pedagogical implications of this study provide a detailed, structured approach targeting interlingual and intralingual phonological errors observed in university classrooms. For interlingual errors, such as phonological transfer in vowel length, consonant substitution, and cluster reduction, tailored activities aim to enhance students' awareness of L1 interference and provide a more accurate L2 pronunciation. Students must know the differences between both languages and understand the distinction between them. Therefore, it is highly recommended to propose a table for students with the differences that leads to phonological errors. This will make students more aware of their pronunciation and mistakes. Pedagogic implications can be through gamification, which gives students the chance to learn through entertainment. For interlingual errors, such as phonological transfer involving vowel length, consonant substitution, and cluster reduction, gamified pronunciation activities can lead to engagement and deeper learning. For instance, digital pronunciation games like **Phoneme Detective** can challenge students to identify correct versus incorrect vowel lengths in minimal pairs, for instance *sheep* vs. *ship*, within a timed activity. For consonant substitution, interactive role-playing games can encourage learners to practice voicing distinctions, for instance /f/ vs. /v/ and /p/ vs. /b/ in a social context, where their success in the game depends on accurately producing target sounds. Students are given imaginary situations from daily life and they are asked to enact it together to practice actual speaking. The instructor will monitor the ongoing conversation, take notes, and correct the errors after the students have finished their dialogue. The instructor can also ask the other students, the ones acting as the audience, to note if there are any errors and point them out after the role-play. This will help all students to be engaged in the activity, not just the ones doing the role-play. Cluster reduction errors can be addressed through rhythm-based gaming apps that simulate syllable stress patterns, encouraging students to match correct clusters to visual or auditory cues. Rhythm-based gaming apps are tools or games designed to help users practice timing, rhythm, and often language or speech skills through engaging, interactive activities. In language learning, they focus on combining pronunciation or stress with rhythmic patterns, often integrating music or beats to enhance learning. These apps provide an innovative way to practice phonological aspects of language. An example of this idea is **SpeakBeat** app, which provides rhythmic beats using any instrument and students can practice stresses on the beat played.

For intralingual errors such as overgeneralization and incorrect stress placement, innovative approaches like escape room-style activities in the classroom can be effective and entertaining. For example, students could work collaboratively to unlock clues by accurately pronouncing stress in words, for instance *present* as /ˈprezənt/ for the noun and /prɪˈzent/ for the verb. This activity can be done at the end of the session/lecture, where students are required to pronounce words correctly with the correct stress to be able to leave “escape” the classroom. Mobile applications, such as Kahoot, Quizlet Live, and even WordWall, can be customized to include stress pattern recognition challenges, where learners compete to classify words into correct stress categories based on auditory prompts. Overall, these gamified and innovative pedagogical strategies align with contemporary communicative teaching methodologies, offering engaging, student-centered solutions to address phonological errors effectively. They transform error correction into a dynamic, interactive, and entertaining process, ensuring that learning remains both effective and enjoyable.

Research Contribution:

This study contributes to the field of applied linguistics by providing a detailed, classroom-based phonological error analysis among Arabic-speaking EFL learners. It offers clear examples of interlingual and intralingual errors, highlighting specific challenges in vowel length, consonant substitution, cluster reduction, and stress placement. By integrating authentic spoken data and pedagogical strategies including gamification and task-based learning—the research bridges the gap between theoretical phonology and practical classroom instruction. It also emphasizes the importance of pronunciation-focused interventions in multicultural and multilingual learning environments.

Limitations:

The study is limited by the scope of its participants, focusing on a specific group of Arabic-speaking university students in classroom settings. The analysis is also constrained by qualitative methods and does not include phonetic measurements or acoustic data, which could offer more precise insights into learners' pronunciation. Additionally, the absence of longitudinal data restricts the ability to assess long-term pedagogical effects of the suggested strategies.

Suggestions:
Future studies may include more diverse participant backgrounds and implement quantitative tools such as acoustic analysis to enrich the findings. Longitudinal research is recommended to assess the sustained impact of specific pedagogical interventions over time. It is also suggested that teacher training programs include explicit modules on phonological instruction, particularly for L1 groups with significant phonemic differences from English. Developing interactive pronunciation tools tailored to specific L1 backgrounds may further improve learner outcomes.

CONCLUSION

This study analyzes common spoken errors performed by adult Arabic speaking students learning English language during university classroom interaction, highlighting the challenges faced by learners of a second language. Teaching strategies are tailored and suggested to help in reforming the errors. The research explores the intricate landscape of phonological errors in English pronunciation among university students, focusing on both interlingual and intralingual factors. By analyzing interlingual errors such as phonological transfer in vowel length, consonant substitution, and cluster reduction, the study reveals how L1 interference shapes L2's phonological output. These errors highlight the persistent influence of L1 structures on L2 learning. Similarly, the study delves into intralingual errors, particularly overgeneralization and incorrect stress placement, demonstrating how learners' attempts often result in errors.

The pedagogical implications presented in this research provide a reference for addressing these challenges through gamification and innovative teaching strategies. By implementing rhythm-based gaming apps, role-playing games, and more, educators can transform error correction into a dynamic and engaging experience. For interlingual errors, activities like Phoneme Detective and role-plays create opportunities for learners to modify their phonological errors. Meanwhile, intralingual errors are addressed through gamified challenges like the escape room games, SpeakBeat app, Kahoot, Quizlet Live, and WordWall to enhance both awareness and self- correction.

As a summary, this study underscores the importance of adopting a holistic, learner- centered approach to phonological instruction in classroom settings. By combining theoretical aspects with practical explanation and solutions, it bridges the gap between error analysis and pedagogical implications, offering a comprehensive model that can be used as a guide to overcome phonological errors that could be either interlingual or intralingual. Moreover, the emphasis on gamification and technology-enhanced learning aligns with modern communicative teaching methodologies, ensuring that these strategies are effective, entertaining, and engaging for various students. As a result, this research acts as an awareness form and call for the attention educators to innovate their teaching practices. By addressing the root causes of phonological errors and tailoring interventions to meet the specific needs of learners, this study highlights the transformative potential of targeted, creative pedagogical approaches in second language acquisition. Future recommendation includes a research could expand on these findings by exploring the long-term effectiveness of gamified strategies and their application across varied linguistic settings, further enriching the field of phonological error correction and enhancing, in addition to language teaching.

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learning, and pedagogy inspired this analysis. This research is a small contribution to the broader effort of making language learning more inclusive, accurate, and learner-focused.

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