STUDENTS' ABILITY ON PRONOUNCING FRICATIVE SOUNDS: A CASE STUDY IN PRIVATE ISLAMIC COLLEGE

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Abstract

Pronouncing fricative sounds in English is challenging for students. This study investigates the pronunciation challenges faced by first-semester university students at STAI RAKHA Amuntai in articulating English fricative sounds: /θ/, /ð/, /ʃ/, and /ʒ/. The research employs a mixed-methods approach, combining quantitative analysis of pronunciation accuracy with qualitative analysis of error patterns. Data were collected through voice note submissions from nine participants, with results indicating significant challenges in pronouncing /θ/ and /ð/, often substituted with /t/ and /d/. The study identifies native language interference and limited practice as key factors contributing to these difficulties. Then, it is suggested for students to use specific pronunciation exercises and more exposure to real English to help them speak more clearly and effectively.

Keywords: *fricative sounds; pronunciation; mixed-methods; language interference; error patterns.*

A. INTRODUCTION

In order to communicate effectively using English, pronunciation become an important aspect to be mastered by learners. It becomes fundamental aspect of language learning since it directly influences intelligibility and communication effectiveness. Inadequate pronunciation used by students can lead to misconceptions in a conversation, so it essential for clear articulation of sounds to ensure comprehension by others (Johan & Cahyani, 2024). In other words, mastery of pronunciation facilitates clarity and reduces misunderstandings, which is particularly vital for English as a Foreign Language (EFL) and English as Second Language (ESL) learners. Students with good pronunciation skills are more likely to participate actively in classroom discussions and perform better in oral assessments. Therefore, incorporating pronunciation practice into language learning is suggested for developing comprehensive language proficiency (Srakaew, 2021).

English phonemic system is different with Indonesian which the total amount of consonant and vowel sound is more than 24 sounds. Then, there are several consonant sounds that do not exist in Indonesian and hard to pronounce such as /θ/, /ð/, /ʃ/, and /ʒ/. They are called as fricative sounds. Fricative sounds are produced by forcing air through a narrow constriction in the vocal tract and creating turbulent airflow. Adnyani (2021) supposed that Indonesian learners experiences difficulties in pronounce fricative sounds due to the tricky English spelling system. These sounds /θ/, /ð/, /ʃ/, and /ʒ/ are

uncommon in Indonesian and other language, leading learners to replace them with familiar phonemes, such as /t/, /d/, /s/, and /z/.

There are two common errors that Indonesian students made in pronouncing fricative sounds. First, students often substitute /v/ sound with the bilabial stop /p/, voiceless labiodental fricative /f/, or alveolar stop /d/ or /t/ (Armelia, et al., 2024). Second, they also substitute /ʒ/ sound with /z/, /s/. or /s/ while there was no such difficulties in pronouncing / ʃ /. /s/, and /z/ (Luthfianda, et al, 2024). It happens due to the unexciting the sound in Indonesian phonemic system and limited English phonetic knowledge.

Prior research by Celce-Murcia et al. (2010) and Gilbert (2010) highlights these challenges, yet limited attention has been given to beginner learners' struggles with fricatives. Then, this study investigates how students in the first semester of English Language Education Department of STAI RAKHA Amuntai pronounce fricative sounds in the beginning, middle and final words. The result will gives the general idea about their difficulties and phonetic knowledge in English.

Therefore, several research questions are being formulated: (1) what are the common errors made by students in pronouncing fricative sounds and (2) which fricative sound is the easiest and hardest for student to pronounce, (3) do students' abilities in pronouncing sounds vary across different word positions (initial, middle, final). Specifically, this study identifies and categorizes specific pronunciation error made by first-semester students with fricative sounds (/θ/, /ð/, /ʃ/, and /ʒ/); determines which fricative sounds are perceived as the easiest and hardest for students to pronounce; and investigates how students' pronunciation abilities vary across different word positions (initial, middle, final) for fricative sounds.

B. METHOD

This research employs a descriptive quantitative method to explore students' ability to pronounce specific fricative sounds. It integrates quantitative analysis to measure pronunciation accuracy and qualitative analysis to interpret patterns and error types observed in the data. Nine first-semester students from the English Language Education Department at STAI RAKHA Amuntai participated in this study. They were selected through random sampling. Data were collected through online voice note submissions, where students recorded their pronunciation of selected words that provided by researchers, and sentences containing fricative sounds (/θ/, /ð/, /ʃ/, and /ʒ/). WhatsApp Voice Note was used as the recording platform for accessibility and convenience. Data collection procedures as follows:

1. Target words and sentences were prepared to ensure linguistic appropriateness.
2. Participants received detailed instructions on recording and submission.
3. Voice notes were submitted within a specified timeframe.
4. Submissions were reviewed for clarity and completeness using standardized reference audio.

Last, the data analyzed using by using the nature of quantitative which pronunciation accuracy was measured through the frequency of correct and incorrect pronunciations, expressed as percentages, and the errors were categorized based on phonetic deviations such as substitutions and omissions.

C. RESULT AND DISCUSSION

This section presents the results of the fricative sound pronunciation test administered to first-semester students. The data were collected through individual voice recordings and analyzed quantitatively to determine the accuracy of students' pronunciation of specific fricative sounds. The findings are organized into two categories: word-based and sentence-based pronunciation tests. Each result is presented in terms of frequency and percentage of correct and incorrect responses.

1. Word-Based Pronunciation Test

PRONUNCIATION TEST (WORD) RESULT OF FRICATIVE SOUND

Words	Phonetic Transcription	Frequency (F)		Percentages (%)	
		Correct	Wrong	Correct	Wrong
Vision	/ˈvɪʒən/	5	4	55,6%	44,4%
Treasure	/ˈtrɛʒər/	6	3	66,7%	33,3%
Cash	/kæʃ/	5	4	55,6%	44,4%
Brush	/brʌʃ/	6	2	75%	25%
Shine	/ʃaɪn/	8	1	88,9%	11,1%
Through	/Θru/	0	9	0%	100%
Thing	/θɪŋ/	3	6	33,3%	66,7%
Jump	/ʤʌmp/	4	5	44,4%	55,6%
Giant	/ˈʤaɪənt/	5	4	55,6%	44,4%
Judge	/ʤʌʤ/	5	4	55,6%	44,4%

The table displays the students' performance in pronouncing fricative sounds embedded in isolated words. Among the ten target words, the highest pronunciation accuracy was recorded for the word *shine* (/ʃaɪn/), with 88.9% of students producing the sound correctly. This was followed by *brush* (/brʌʃ/) at 75% and *treasure* (/ˈtrɛʒər/) at 66.7%. These results suggest that students generally found the voiceless and voiced postalveolar fricatives /ʃ/ and /ʒ/ easier to articulate in isolation.

In contrast, the word *through* (/Θru/), which contains the voiceless interdental fricative /θ/, was pronounced incorrectly by all students, resulting in a 0% accuracy rate. Similarly, the word *thing* (/θɪŋ/) also demonstrated low accuracy, with only 33.3% of students producing the correct fricative sound. These findings indicate that the interdental fricative /θ/ posed the greatest difficulty among the tested sounds.

Words containing the voiced palato-alveolar affricate /ʤ/—such as *judge* (/ʤʌʤ/), *jump* (/ʤʌmp/), and *giant* (/ˈʤaɪənt/)—resulted in moderate accuracy rates ranging from 44.4% to 55.6%. This suggests a degree of inconsistency in students' ability to produce this complex sound. Table above provides a comprehensive summary of the word-based test results.

2. Sentence-Based Pronunciation Test

PRONUNCIATION TEST (SENTENCE) RESULT OF FRICATIVE SOUND

Sentences	Phonetic Transcription	Frequency		Percentages	
		Correct	Wrong	Correct	Wrong
The measure was accurate	/ðə ˈmɛʒər wʌz ˈækjərət/	5	4	55,6%	44,4%
She loves to shop for clothes	/ʃi lʌvz tu ʃɑp fɔr kloʊðz/	8	1	88,9%	11,1%
You can think clearly	/ju kæn θɪŋk ˈklɪrli/	3	6	33,3%	66,7%
He gave a joke during the meeting	/hi geɪv ə ʤoʊk ˈdʊrɪŋ ðə ˈmitɪŋ/	1	8	11,1%	88,9%
Sheep are grazing in the field	/ʃip ɑr ˈgreɪzɪŋ ɪn ðə fild/	9	0	100%	0%

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The sentence-based test required students to pronounce fricative sounds within the context of complete sentences, offering a more naturalistic speaking environment. As shown in Table 2, the highest level of accuracy was achieved with the sentence *Sheep are grazing in the field* (/ʃip ɑr ˈgreɪzɪŋ ɪn ðə fild/), with 100% of students pronouncing all fricative sounds correctly. This suggests that fricatives such as /ʃ/ and /z/, when embedded in familiar or frequent lexical items, are more easily acquired and reproduced accurately.

Conversely, the sentence *He gave a joke during the meeting* (/hi geɪv ə ʤoʊk ˈdʊrɪŋ ðə ˈmitɪŋ/) presented the greatest difficulty, with only 11.1% of students achieving correct pronunciation. This may be attributed to the presence of multiple voiced fricatives (/v/, /ʤ/, and /ð/) in close succession, which can pose a challenge for learners unfamiliar with voicing distinctions.

Furthermore, low accuracy rates were also observed in sentences containing interdental fricatives. For example, only 33.3% of students pronounced the sentence *You can think clearly* (/ju kæn θɪŋk ˈklɪrli/) correctly, and 55.6% succeeded with *The measure was accurate* (/ðə ˈmɛʒər wʌz ˈækjərət/). These outcomes reinforce the finding from the word-based test that interdental fricatives, particularly /θ/ and /ð/, are among the most problematic for learners at this level.

In summary, the data reveal that first-semester students exhibit varying degrees of accuracy in pronouncing English fricative sounds, with greater success observed in producing /ʃ/ and /ʒ/, and consistent challenges in articulating /θ/ and /ð/. The sentence-based tests further highlight that fricative pronunciation accuracy tends to decline in more complex linguistic contexts, especially when multiple fricatives or less familiar words are present.

The results of the pronunciation test underscore specific challenges faced by first-semester students in articulating English fricative sounds, particularly the interdental fricatives /θ/ and /ð/. These sounds were frequently mispronounced, with learners substituting them with the more familiar plosives /t/ and /d/, respectively. This substitution pattern aligns with prior findings by Armelia et al. (2024), who

noted that learners tend to replace unfamiliar fricatives with phonetically similar and more accessible sounds from their native language. The complete absence of correct pronunciation for the word *through* (/Θru/) and the low accuracy in *thing* (/θɪŋ/) and sentences such as *You can think clearly* and *He gave a joke during the meeting* strongly support this observation. These difficulties are further exacerbated in connected speech, suggesting that sentence-level pronunciation poses a higher cognitive and articulatory burden for learners than isolated word pronunciation.

In contrast, students demonstrated relatively higher accuracy with the fricatives /ʃ/ and /ʒ/, particularly in words such as *shine* (/ʃaɪn/) and *treasure* (/ˈtrɛʒər/), and in the sentence *Sheep are grazing in the field*. These fricatives, which are produced at the postalveolar place of articulation, may be more accessible to learners due to the presence of acoustically and articulatory similar sounds in their first language (L1). This is consistent with Firdaus et al. (2020), who argued that L2 phonological acquisition is positively influenced when target sounds closely resemble existing phonemes in the learner's L1 inventory. The students' ability to produce /ʃ/ accurately in both word and sentence contexts indicates the facilitating role of cross-linguistic similarity in pronunciation learning.

Another noteworthy observation concerns the position of fricatives within words. Students tended to perform better when the fricative appeared at the beginning of the word (e.g., *shine*, *thing*) compared to when the fricative was in the medial or final position (e.g., *judge*, *clothes*). This trend suggests that the initial placement of fricatives may enhance saliency and articulatory ease, thereby improving pronunciation accuracy. In contrast, final-position fricatives may be less perceptually prominent or more difficult to produce, particularly in fast or connected speech.

Furthermore, the sentence *He gave a joke during the meeting* demonstrated one of the lowest pronunciation accuracies, with only 11.1% of students articulating the fricatives correctly. This sentence contains multiple voiced fricatives and affricates—/v/, /ʤ/, and /ð/—in rapid succession, thereby increasing the complexity of articulation. This result aligns with findings by Chandrika and Ambedkar (2020), who emphasized that increased linguistic complexity and cognitive processing demands significantly affect pronunciation accuracy. Learners must manage not only the articulation of individual phonemes but also coarticulatory adjustments, stress patterns, and intonation in full sentences, all of which can increase the likelihood of phonemic errors.

Taken together, these findings highlight the multifaceted nature of pronunciation difficulties faced by novice English learners. The patterns observed point to the need for targeted and systematic pronunciation instruction, with an emphasis on high-variability input and practice with problematic fricative sounds—particularly /θ/ and /ð/—in both isolated and connected speech contexts. Additionally, incorporating listening discrimination tasks, visual articulatory aids, and contextualized pronunciation drills may further support learners' acquisition of these sounds. More broadly, the results call for increased exposure to English phonetics within the language curriculum to bridge the gap between L1 phonology and the target sound system in English.

The findings of this study offer several important pedagogical implications for the teaching of English pronunciation, particularly concerning fricative sounds. First and foremost, the persistent difficulties with the interdental fricatives /θ/ and /ð/ highlight the need for explicit and focused instruction on these sounds. Given their absence in the students' first language and their tendency to be substituted with /t/ and /d/, it is essential that teachers incorporate targeted drills and articulatory instruction, such as visual demonstrations of tongue placement and airflow. The use of phonetic diagrams, mirrors, and instructional videos can enhance learners' awareness of how these sounds are physically produced.

Second, the relatively better performance with the fricatives /ʃ/ and /ʒ/ suggests that leveraging cross-linguistic similarities can be an effective strategy. Teachers can build upon students' existing phonological knowledge by drawing comparisons between L1 and L2 sounds. When learners recognize familiar patterns, they may gain confidence and improve their accuracy. Additionally, using high-frequency words and familiar lexical items containing /ʃ/ and /ʒ/ in contextualized speaking activities can reinforce correct pronunciation in meaningful ways.

Third, the variation in pronunciation accuracy based on word position and sentence complexity implies the importance of integrating pronunciation practice at multiple linguistic levels. Instruction should not be limited to isolated word-level drills but should also include sentence-level exercises and communicative practice. Repetition of target sounds in different positions (initial, medial, and final) and within a range of syntactic structures can promote greater fluency and accuracy. Teachers should also be mindful of cognitive load, especially in beginner-level learners, and scaffold tasks appropriately—from simple to more complex—to support gradual improvement.

Fourth, incorporating listening discrimination activities can enhance learners' phonemic awareness. Students who struggle to hear the difference between fricative pairs such as /θ/ and /t/ or /ð/ and /d/ will likely have difficulty producing them accurately. Activities such as minimal pair drills, audio transcription, and focused listening tasks can train learners' auditory discrimination and support accurate production.

Lastly, consistent and formative feedback is crucial. Teachers should provide individualized corrective feedback during pronunciation tasks, helping students to notice their errors and understand how to adjust their articulation. Encouraging self-monitoring and peer feedback through recordings and guided reflection can further empower students to take ownership of their pronunciation development.

In sum, the pedagogical approach to teaching English fricatives must be multi-dimensional—combining articulatory instruction, listening practice, contextualized speaking tasks, and confidence-building activities. By adopting such strategies, language educators can better support learners in overcoming persistent pronunciation challenges and achieving greater intelligibility in spoken English.

E. CONCLUSION

This study investigated the pronunciation of English fricative sounds among first-semester students, revealing that while sounds like /ʃ/ and /ʒ/ were generally pronounced with moderate accuracy, students struggled significantly with interdental fricatives /θ/ and /ð/. These sounds were often substituted with more familiar plosives from the students' first language, indicating strong L1 interference. Pronunciation accuracy also varied based on word position and sentence complexity, with initial-position fricatives and isolated words being easier to produce than final-position or sentence-embedded fricatives. The challenges became more evident in connected speech, where cognitive and articulatory demands were greater.

These findings suggest a pressing need for explicit pronunciation instruction, particularly for fricatives that are absent in learners' L1. Pedagogical approaches should include articulatory modeling, listening discrimination tasks, and contextualized speaking practice to improve both perception and production. Providing regular, constructive feedback and integrating pronunciation activities into broader communicative tasks can enhance learners' confidence and competence in spoken English. Ultimately, targeted support in mastering fricative sounds can contribute significantly to students' overall oral proficiency.

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