Exploring Vowel Mispronunciation Errors among University Students from West Sumatera

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Abstract

Students do a self-introduction every time they start the English class. Although the teachers had given some guidance and explanation, vowel mispronunciation was still present in their speech. The study highlighted the consistent patterns of vowel mispronunciation, explaining the phonological contrast between English and Minangkabau Language and their impact on English learning. The study used a qualitative method to explore 30 Information technology students as data source from West Sumatra who studied at Universitas Putra Indonesia YPTK Padang. The students' self-introductions are recorded and transcribed to check the errors they make. In addition, a 10-question questionnaire was designed and completed by students to identify the reasons behind their mispronunciation. The research showed that vowel mispronunciation was found in substitution diphthongs with monophthongs and problems with lax, tense, and central vowels. The reasons for these errors are the absence of sound in the student's native language, the student's lack of exposure to the English language, and the student's lack of confidence and motivation. This study suggests that teachers should give extra guidance and practice, so the students will be more aware of their errors, have correct pronunciation models, and have more time to practice and improve their pronunciation.

Keywords: Pronunciation, Vowel Sounds, Native Language.

INTRODUCTION

The English language plays a vital role in many aspects of today's world, such as society, politics, and the economy. In terms of education and career development, mastering English can elevate opportunities. English is taught at all levels of schools and is regarded as the primary foreign language in Indonesia (Haidara, 2016). In universities in Indonesia, students from all departments must take English subjects during the semester and gain a certificate of English competency. These are necessary for students to get ready to face any test they take at the career level.

Among all the English competencies, using correct pronunciation when speaking is challenging for students. When learning the language in the classroom, the first step is always to require students to introduce themselves in English. Although the English vocabulary used in self-introduction is basic and standard, most students still need help to perform self-introduction with correct pronunciation. First impressions, such as making a self-introduction in English, are prone to greatly impact greatly impact their assessment of their speaking ability.

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Pronunciation is critical to English language learning, especially for non-native students. According to Tahereen (2015), non-native speakers cannot fully imitate the native speaker's pronunciation by learning the accent. Abrahamsson & Hyltenstam (2009) also agreed that EFL learners should strive for understandable pronunciation rather than native-like pronunciation as their end aim. They should not see the standard English Pronunciation as the goal, but they can use their pronunciation in building good communication.

Incorrect pronunciation can lead to misconceptions in meaning (Savitri & Andrianto, 2021). Students who cannot speak correctly may fail to communicate well, especially with native English speakers. Therefore, students need to know the sounds of words in English, especially those they will use in daily basics like self-introduction. Good grammar and vocabulary are only enough with correct pronunciation. Khalifa (2020, p. 13) stated that students must be guided with the model-based approach so they can see how native speakers pronounce the words correctly and send them feedback for the errors they make.

However, most students need help with English, especially speaking and pronunciation. By having some tests in the early semester, students will have more opportunities to improve and practice their English skills before using them on the necessary occasions. Gilakjani (2012) said, that attitude is an essential factor influencing students' English pronunciation. If students are aware of the different pronunciations, they can imitate the sounds in English even though the sounds do not exist in their language.

In Indonesia, students are from different regions with their native language. These languages have their unique structure, vowel and consonant systems. Because of this, many students may face specific phonological challenges due to the influence of their native language. The phonological challenges often arise for non-native speakers, especially those whose native language does not contain similar phonetic features. The analysis focuses on common errors such as mispronunciation of vowel sounds, specifically examining cases where "my" is pronounced as "mi." Minangkabau, a language spoken in West Sumatera, has a distinct vowel system that significantly differs from English.

English has monophonic (one sound) and diphthongs (two vowels in one sound). It has 12 vowel phonemes, five long (tense), and seven short (lax) sounds. The tense vowels are; /i, ɔ, u, ɜ, ɑ/ and the lax vowel; /ɪ, ʌ, e, ɒ, æ/ (Skandera & Burleigh, 2011, p.35). For example, diphthong /ai/ in "my" and long vowel like /i/ (as in "see"). Meanwhile, the Minangkabau vowel system is more straightforward and lacks the variety present in English. It does not include diphthongs or tense/lax distinctions. The vowel sound has six monophthongs (one sound): /i,

u, e, ə, o, a/, and some allophonic variations in realization (Almos, 2012), and the language does not have word stress (Gil, 2006). They are typically monophthongs, leading to difficulty articulating English diphthongs. For example, the English diphthong /ai/ in "my" is often mispronounced as /i/ or /e/ because Minangkabau speakers may not distinguish between these sounds.

The difference in vowel systems between English, Minangkabau, and Bahasa Indonesia leads to consistent patterns of vowel mispronunciation when university students perform oral practices. Moreover, a study by Wudagsa, R. et al. (2018) found that Minangkabau learners of English did not have a vowel space area similar to native English speakers. They did not open their jaws and move their tongues the way the natives pronounce the English vowels. This issue is further compounded by limited pedagogical strategies employed in the classroom to effectively address the challenge of vowel mispronunciation.

This fundamental difference in vowel inventories creates challenges for Minangkabau speakers when learning English, as they often substitute an English vowel with the closest equivalent in their native language. Therefore, this article investigates these pronunciation errors, focusing on vowel sounds, and offers an analysis based on phonological principles.

METHOD

This research uses qualitative method. That uses explanations and numbers to analyze the collected data. A qualitative case study systematically collects information about a particular social setting, event, or group of people to enable researchers to understand how something works (Lune & Berg, 2017, p. 170).

The study's population is 40 university students from West Sumatra in Information Technology, Computer Science Faculty of Universitas Putra Indonesia YPTK Padang. At the time of testing, the students were classified as 18 to 20 years old and started learning English in schools from 7 to 11 years old. All of the students took English subjects in the first semester. They were shown the correct pronunciation to do the self-introduction, given some time to practice, and asked to perform their speaking in front of the class.

To conduct this research, students' oral self-introduction practices were recorded to examine vowel pronunciation errors. The recordings were transcribed using a phonetic system to identify deviations from standard English pronunciation. The analysis focused on common vowel mispronunciations in frequently used words during self-introductions. A phonetic transcription approach was employed to systematically compare the students' pronunciations

with standard English norms. Additionally, a questionnaire was administered to investigate the underlying reasons behind the students' vowel mispronunciations.

RESULT AND DISCUSSION

During the first semester, students learned how to introduce themselves using correct pronunciation properly. The students learn to introduce themselves properly by giving guidelines that they can use to practice. The guideline is given as this;

"Hello, everyone. Good morning. My name is George Davis. I am a student at a university. I am 19 years old. I live in a boarding house near Campus. I go to Campus on foot. In my free time, I play guitar and online games. I want to be a successful businessman and travel around the world. Thank you."

However, after studying the different sounds they must be aware of in the context above, most students still made mispronunciation errors. Table 1 shows the error occurrence and percentage made by the students:

Word	Phonetic Target	Number of Occurrences (Errors)	Percentage (%)
Hello	/həˈloʊ/	12	40,0
everyone	/ˈɛvriwən/	12	40,0
Good	/gʊd/	5	16,7
My	/maɪ/	8	26,7
name	/neɪm/	6	20,0
George	/dʒɔrdʒ/	10	33,3
Davis	/ˈdeɪvɪs/	8	26,7
student	/ˈstjuːdənt/	18	60,0
study	/ˈstʌdi/	18	60,0
University	/ˌjuːnɪˈvɜːrsɪti/	10	33,3
19	/naɪntiːn/	10	33,3
years	/jɪərz/	8	26,7
old	/əʊld/	5	16,7
from	/frɒm/	2	6,7
boarding	/ˈbɔːrdɪŋ/	7	23,3
house	/haʊs/	12	40,0
near	/nɪər/	12	40,0
campus	/ˈkæmpəs/	15	50,0
foot	/fʊt/	5	16,7
free time	/friː taɪm/	12	40,0
play	/pleɪ/	10	33,3
guitar	/gɪˈtɑːr/	18	60,0
online	/ˈɒnlaɪn/	5	16,7
games	/geɪmz/	2	6,7
future	/ˈfjuːtʃər/	22	73,3
successful	/səkˈsesfʊl/	26	86,7
businessman	/ˈbɪznɪsmæn/	26	86,7
travel	/ˈtrævəl/	12	40,0
world	/wɜːld/	2	6,7
thank	/θæŋk/	5	16,7

Table 1. Error Occurrences and Percentages

The analysis revealed several consistent patterns of vowel mispronunciation:

1. **Substitution of Diphthongs with Monophthongs**

a. *Mispronunciation of English vowel /ai/ as /i/ in Minangkabau Language (ML).*

In English, the word "my" is pronounced as /maɪ/, featuring a diphthong. A frequent error observed was the pronunciation of "my" as /mi/ instead of /maɪ/.

This substitution occurs because the /ai/ diphthong is absent in the students' native vowel system. Students tend to replace it with /i/, a more familiar sound, resulting in a monophthong rather than the required diphthong.

Komariah (2018) argued that pronunciation errors occur because certain English sounds are absent in the students' mother tongue. As a result, students tend to substitute the target sound with the closest equivalent available in their native language's sound system. Other diphthong errors based on the data are "hello," "my," "19," "house," "time," "play," and "game."

b. *Mispronouncing of English vowel /eɪ/ as /e/*

Words like "name" (/neɪm/) were often shortened to /e/ and pronounced as /nɛm/. This shortening indicates that students struggle with English diphthongs and tend to shorten them to fit their familiar vowel patterns. The tendency to eliminate the glide in diphthongs and produce a shorter, single vowel sound is a shared transfer error from their native phonological system.

c. *Schwa /ə/ mispronunciation*

Words that contain the schwa sound are; "everyone," "student," "years," "old," "near, Campus, future, successful, and travel. Most Minangkabau students made errors due to the absence of the schwa sound in their native language. They do not have an equivalent vowel sound, so they substitute it with another closer sound. The highest occurrence of errors in "future" (73%) and "successful" (86.7%) can be attributed to the difficulty in accurately producing these diphthongs.

d. *Stress and Phonotatic Contrain*

English stresses the first syllable of "online" (/ɒlaɪn/), but in ML, the constraints and stress differ. The students tend to pronounce the /laɪn/ with /len/, the vowel /aɪ/ to /e/ or /ɜ/ to reduce the complexity of producing a stressed syllable with a diphthong, aligning with ML's preference for a more straightforward, monophthong vowel sound.

2. **Difficulty with Lax (short) vowel**

a. *Confusion with /ɪ/ and /i/*

Another recurring issue was the confusion between /ɪ/ and /i/, particularly in words like "university" and "sit". The English lax vowel /ɪ/ does not have a direct equivalent in the ML.

Students frequently pronounced the words as /*juniversiti*/ instead of /*junɪ'vɛ:rsɪti*/, substituting the lax vowel /ɪ/ with the tense /i/. This issue reflects the absence of tense and lax contrast in ML and for students whose native languages do not differentiate between these sounds.

b.   Replacing / ʊ / with /u/

Similarly, the English lax vowel /ʊ/ (as in "foot") is typically substituted with /u/ in the Minangkabu speaker's English Pronunciation. This results in words like "good" being pronounced as /*gud*/ rather than /*gʊd*/, further showing the influence of their native, more straightforward vowel system.

3.   Shortening of Tense (long) Vowels

English long vowel /i:/ and /u:/: English has long and short vowel contrasts, such as /i/ vs /ɪ/. In ML, long vowels are not distinguished; thus, students often shorten long English vowels. For example, "see" (/*si:*/) may be pronounced as /*si*/, omitting the length.

4.   Substitution of central Vowels

English's /ʌ/ with ML's /a/: In words like "study," the English vowel /ʌ/ is often pronounced as /a/, leading to a pronunciation more akin to /' *state*/ instead of /'*stʌdi*/. This error can be attributed to the absence of the /ʌ/ sound in Minangkabau and Indonesian, prompting students to replace it with the closest sound in their native language.\

Mispronunciation of "student" as /*staden*/ and "study" as /*studi*/ by Minangkabau students is also influenced by the Indonesian pronunciation "studi" (meaning "study), which is pronounced exactly as /*studi*/. The students tend to choose the simplified version of the English sound with the familiar one.

The mispronunciations observed are primarily due to phonological transfer and vowel inventory limitations when students apply the vowel sounds from their native language when speaking English. A study by Amar (2022) showed that most students in English Education Study programs have problems with pronunciation. The factors that cause the mispronunciation are the absence of the sound in the native language, the student's unfamiliarity with the words, and the students getting the wrong pronunciation from their English teacher. The student's mispronunciation errors are also caused by the lack of pronunciation practice (Marsuki, 2021).

The Minangkabau vowel system, for example, does not include diphthongs or certain tense vowels, which limits students' ability to reproduce English vowel sounds accurately. This leads students to approximate English sounds using the closest equivalents available in their language. This transfer phenomenon is typical among second-language learners who rely on their L1 (first-language) phonetic and phonological systems when learning a new language.

The negative transfer is evident in their reliance on familiar monophthongs or tense vowels when attempting to produce diphthongs and lax vowels. Besides, students with the most errors tend to be distant from the English language. They rarely watch movies or listen to songs in English. Without sufficient exposure to native English speakers or pronunciation practice, students might rely heavily on spelling when pronouncing words, causing a substitution based on what seems logical from their perspective. This is shown in the most mispronounced words, such as "future" (73.3%), successful" (86.7%), and "businessman" (86.7%). To address these pronunciation challenges, English teachers in West Sumatra should focus on targeted phonetic training. Introducing students to English diphthongs through visual aids (e.g., vowel charts) and auditory drills (e.g., minimal pair practice) can help them distinguish and correctly produce these sounds. Additionally, incorporating phonemic awareness activities and using software for pronunciation practice could give students more opportunities to hear and practice the correct sounds. Almuslimi (2020) argued the most significant problems contributing to vowel mispronunciation are the students' mother tongue interference and limited language exposure.

Moreover, students were given a questionnaire to investigate the reasons for the pronunciation errors. The questionnaire contains information about significant reasons for pronouncing, such as syllable divisions, vowel confusion, and other external factors that might cause the problem. The results of the questionnaire are shown in Table 2.

No	Questions	Mean	Skor	Value
1	I realize I misspronounce certain sound in English	3,9	119	79,3
2	I have difficulties with the division of syllable	3,7	111	74
3	I have major problem with my confidence at speaking English	3,4	103	68,6
4	I mixed between vowel	3,5	107	71,3
5	I find changing vowel sound confusing	3,4	102	68
6	I know pronunciation, but I don't practice them	23,4	102	68
7	I do not know about pronunciation rules	2,9	88	58,6
8	I rarely listen to English songs	2,6	80	53,3
9	I rarely like to watch English movie	2,8	85	56,6
10	I immitate my English teacher pronouncing	3,8	114	76

Table 2. Students' Problem in Pronunciation

The data presented in Table 2 highlights the primary challenges students face in English pronunciation, categorized into internal and external factors. Internal factors include syllable division, vowel confusion, and a lack of confidence, while external factors involve limited exposure to English media and dependence on teacher pronunciation. The most significant issue identified is students' awareness of their mispronunciation of certain sounds (mean: 3.9, value: 79.3), which corresponds to phonological interference theory. This theory posits that

students' native language affects their ability to distinguish and produce English sounds, particularly those absent in their mother tongue. For instance, vowel confusion (mean: 3.5, value: 71.3) stems from the complexity of the English vowel system, which contrasts with the simpler vowel systems of many languages, such as Indonesian.

A notable challenge in pronunciation is related to syllable division (mean:3.7, value: 74), which reflects students' struggles with the stress-timed nature of English. Each syllable tends to have an equal duration in syllable-timed, whereas stressed syllables dominate the rhythm in English. This indicates that the learners are transferring rhythmic patterns from their native to English. Additionally, difficulties with changing vowel sounds (mean: 3.4, value: 68) suggest a need to understand the fluidity and variance in English vowels, which requires learners to differentiate between subtle phonetic shifts.

Confidence issues also play a critical role in pronunciation errors. The data shows that the students lack confidence in speaking English (mean: 3.4, value: 68.6), which may stem from fear of making mistakes or being judged. This shows that anxiety and low self-esteem can block language acquisition. Students are less likely to practice speaking or experiment with pronunciation without sufficient confidence, perpetuating their errors. Based on Nazawa's opinion (2012), many EFL learners experience inhibition and anxiety when they speak in English. Because of these reasons, they lack confidence in pronouncing words appropriately. This issue underscores the need for a supportive and low-pressure learning environment where students feel safe to practice and improve.

External factors also significantly influence pronunciation learning. The low mean scores for exposure to English songs were 2.6, a value of 53.5, and movies with 2.8, a value of 56.6, which indicates that the students lack sufficient interaction with authentic English media. Consistent exposure to comprehensive input is essential for acquiring accurate pronunciation. Similarly, students' reliance on imitating their teacher's pronunciation has a mean of 3.8 and a value of 7.6, which shows that the teacher often becomes the primary model for pronunciation. While helpful, this dependency highlights the importance of diversifying input sources to include native or near-native speakers through media and technology. Therefore, with proper examination and supervision, students might know specific areas to improve their pronunciation. To help students with pronunciation, they should listen to them speak carefully. Jahara and Abdelrady (2021) found that EFL graduate students enhanced their pronunciation through consistent motivation and a willingness to practice during teacher-designed tests. Their

findings underscore the importance of students' motivation and teacher guidance in fostering pronunciation improvement.

A comprehensive strategy is required to address these issues effectively. First, explicit instruction on English phonemes, syllable stress patterns, and vowel systems should be integrated into the curriculum. Second, learners must be encouraged to consume more English media to develop better auditory discrimination skills. Third, fostering a positive and supportive classroom environment can help reduce anxiety and build confidence in speaking. Lastly, teachers should receive training in pronunciation pedagogy to provide accurate models and constructive feedback. By addressing both internal and external factors, these interventions can help students overcome pronunciation errors and improve their overall speaking proficiency.

CONCLUSION

The study highlights the common vowel pronunciation errors made by university students from West Sumatra during self-introduction oral practices, emphasizing the influence of their native language's phonological system. The errors found are in diphthongs, monophthongs, stress vowels, difficulties with lax vowels, shortening tense vowels, and central vowel substitutions. These findings were supported by questionnaire data, which spotted phonological interference and vowel confusion as key internal barriers alongside external factors like minimal exposure to English media and overreliance on teacher pronunciation. These challenges, compounded by students' anxiety and lack of confidence, slow their progress in improving their pronunciation.

The research shows a significant mispronunciation problem in English learning, particularly vowels. These findings emphasize the importance of tailored interventions, such as phonetic instruction and increased exposure to authentic English media for better pronunciation. By understanding the specific types of errors and their causes, teachers can develop more effective teaching strategies to support students in improving pronunciation skills. The study also suggests the potential for further exploration into consonant articulation and intonation patterns, which could provide a more comprehensive understanding of pronunciation challenges faced by learners from similar linguistic backgrounds.

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