The Interference of Maanyanese Language on English Pronunciation: A Case Study of University Students at Palangka Raya

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ARTICLE INFO

Article history
Received November 13 2025
Revised December 25 2025
Accepted January 13 2026

Keywords
Keyword_1 Acoustic Phonetics
Keyword_2 Interlanguage Phonology
Keyword_3 L1 Transfer
Keyword_4 Maanyanese Language
Keyword_5 Praat Analysis
Keyword_6 Vowel Interference

ABSTRACT

Phonological interference from learners' first language (L1) is a well-established factor affecting English pronunciation, yet empirical research on L1 transfer among speakers of minority languages in Indonesia, particularly Maanyanese remains scarce. Despite growing interest in L2 phonology, no previous study has examined how the Maanyanese language, with its limited vowel inventory and absence of central vowels, influences English vowel production. This study addresses that gap by analyzing the English pronunciations of three Maanyanese-speaking university students selected through purposive sampling. Using a qualitative case study design, supported by semi-structured interviews and acoustic-phonetic analysis in Praat, the research investigated how learners produced English vowels that lack direct Maanyanese equivalents. The findings reveal systematic substitution patterns such as /ɪ/→/i/, /ʌ/→/a/ or /u/, and the consistent avoidance of schwa, indicating predictable L1 transfer. Interpreted through the Perceptual Assimilation Model, these patterns illustrate how unfamiliar L2 vowels are assimilated into existing Maanyanese phonemic categories, shaping learners' interlanguage phonology. Scientifically, the study contributes new evidence on L1 influence from an under-documented Indonesian language, expanding the understanding of L2 vowel acquisition in multilingual contexts. Pedagogically, the results underscore the need for explicit instruction in vowel reduction, tense–lax distinctions, and segmental contrasts not present in Maanyanese.

1. INTRODUCTION

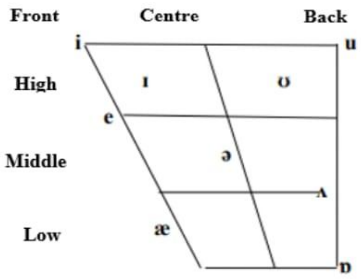
Every language organizes its sound system according to its own structural principles, thereby determining which acoustic contrasts function as phonemically distinctive. In the process of acquiring a second language, learners frequently assimilate novel sounds into pre-existing phonemic categories of their native language rather than establishing new language-specific categories, which often leads to perceptual and articulatory difficulties. This situation becomes even more complex in multilingual regions such as Central Borneo, where multiple mother tongues also function as lingua francas among local communities and are taught in elementary and junior high schools as formal subjects (Sigiro, 2016).

Consequently, dialectal overlap within the mother tongue can interact with this multilingual landscape, further influencing an individual's speaking proficiency.

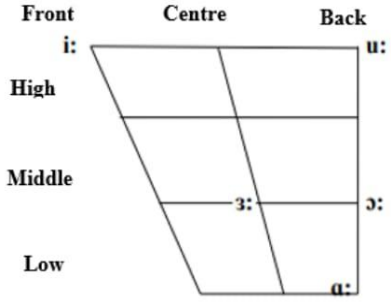
Furthermore, Hidayati (2021) reports that Dayaknese students face difficulties in English pronunciation. This issue arises partly because dialectal differences influence speakers' pronunciation, particularly due to varying vowel inventories and limited phonemic contrasts across languages (Ladefoged & Johnson, 2014)

In particular, issues such as diphthong production, consonant clusters, and general pronunciation difficulties have received attention, yet research focusing specifically on the mispronunciation of certain vowel sounds remains limited. Existing studies indicate that Dayaknese speakers experience challenges with specific vowels, as some tend to shift toward other vowel qualities. Based on the findings of Jamzaroh et al. (2021), it can be observed that the Maanyan language favors the frequent use of vowels such as (/a/, /i/, /u/, and /e/) as existing vowels. English, by contrast, is known for its extensive vowel inventory. Vowel sounds are produced with minimal constriction in the vocal tract. More likely referred to as the articulatory or speech apparatus, allowing continuous airflow through the vocal cords. Hidayati (2021) similarly notes challenges in this area, though comprehensive explanations remain scarce. On the other hand, English has fourteen phonemes of vowels that also contain five long vowels, namely, (/i/, /ɪ/, /e/, /æ/, /ə/, /ʌ/, /u/, /ʊ/, and /ɒ/) (Pratika, 2016).

Picture 1. Short vowel phonemes in English



Picture 2. Long vowel phonemes in English



Pronunciation is one of the toughest challenges when it comes to learn L2 due to the different structures and varieties of existing words, and these variables commonly confuse speakers since their own dialect does not have such sounds. Several experiments have examined the use of English vowels by Korean speakers. In Experiment 1, naturally produced English vowels were classified by native Korean (NK) adults to identify which pairs of contrastive English vowels were likely to pose perceptual difficulty. Experiment 2 then examined the discrimination of five English vowel contrasts by both NK and native English (NE) participants.

Findings from Experiment 1 indicated that NK listeners would likely struggle to discriminate the contrasts (/i/–/ɪ/, /eɪ/–/ɛ/, /ɛ/–/æ/, and /ɑ/–/ʌ/,) but not (/i/–/ɑ/,) as the latter pair corresponds to distinct vowel categories in Korean and would therefore be more readily differentiated by NK speakers (Tsukada et al., 2005). Similar L1-based vowel convergence has been reported among Burmese and Yemeni EFL learners. Burmese

learners frequently confuse tense–lax pairs and central vowels, showing high mispronunciation rates for /aː/, /ɜː/, and schwa, as well as difficulty with diphthongs like /ɔɪ/ and /eə/ due to the absence of these vowel qualities in Burmese (Zaw, 2022). Yemeni EFL learners likewise exhibit substantial perceptual and articulatory difficulty with front vowels /i/, /ɪ/, /ɛ/, and /æ/, often merging them because Arabic lacks parallel distinctions (Al-Hamzi, 2021).

These consistent patterns demonstrate that pronunciation errors are not random but systematic outcomes of L1 transfer, a phenomenon that aligns with Flege's model. (1995) Speech Learning Model. The model posits that learners tend to assimilate unfamiliar L2 sounds into pre-existing L1 phonetic categories, thereby shaping their production and perception patterns. Such interference constitutes a central mechanism in the formation of interlanguage, the transitional linguistic system that emerges as learners construct and continuously revise their developing L2 knowledge.

As Guo. (2022) explains that interlanguage is dynamic, evolving through ongoing exposure, feedback, and restructuring as learners progress toward greater proficiency. From this perspective, pronunciation errors are not arbitrary; instead, they reflect developmental stages shaped by L1 influence and the learner's ongoing restructuring of phonemic categories within the interlanguage system. Although the Maanyanese phonemic system illustrates how local sound structures can influence second-language pronunciation, comparable interference patterns have been widely documented among EFL learners in diverse linguistic contexts. In Indonesian bilingual cases, namely Sundanese only have ten distinct vowel (/i/, /ɨ/, /u/, /ʊ/, /o/, /e/, /ɛ/, /ə/, /ɔ/, /a/), Alhammad (2023) which indicate to confuse them with front-high vowel /i/ to center high vowel /ɨ/ to substitute the sound.

Balinese people also indicate interference their pronunciation, especially at deep sounds, namely: /æ/ becomes /e/, /ɪə/ becomes /e/, /ɛ/ becomes /ə/, /eə/ becomes /ɑI/ or /e/ or /I/, /əʊ/ becomes /oː/, /ʧ/ becomes /c/, /dʒ/ becomes /d/, /ŋ/ becomes /ng/, /eɪ/ becomes /e/, /r/ becomes /r/, /f/ becomes /p/, and /iː/ becomes /i/. Moreover, the Indonesian phonological system itself indicates that one sound can be substituted for another similar vowel to produce the sound. The research was conducted with 20 students to oversee the result, and English phoneme /æ/ occurs only in word-initial and medial positions; however, it is absent from both the phonological and orthographic systems of Bahasa Indonesia. Articulatorily, [æ] is produced with a slightly wider mouth opening than [e], and its quality is closer to the cardinal vowel [ɛ] than to cardinal [a], which in practice is also realized similarly to [ɛ]. Consequently, nearly all 20 students in this study tended to substitute the phoneme /æ/ with either /ɛ/ or /e/ whenever it appeared in English words (Andi-Pallawa, 2013).

Although phonological interference among speakers of Korean, Yemeni, Burmese, Sundanese, and Balinese has been widely studied, empirical research on Maanyanese speakers remains scarce. This research gap is significant because the Maanyanese language, characterized by a limited vowel inventory and intra-dialectal variation, may yield unique patterns of phonemic transfer distinct from those documented in other Indonesian EFL contexts. Therefore, despite numerous studies on L1 interference in

English pronunciation, the influence of Maanyanese has not yet been examined, leaving a crucial area of L2 phonology underexplored.

To address this research gap, the present study investigates two interrelated dimensions of influence. The primary question concerns the extent to which the Maanyanese phonemic system constrains or reshapes learners' production of English vowel categories. By conducting an in-depth analysis of three Maanyanese speakers from Palangka Raya, this study seeks to illuminate the interaction between English as a foreign language and Maanyanese in second-language phonological development, thereby contributing to a more comprehensive understanding of interlanguage phonology within multilingual EFL contexts.

2. RESEARCH METHODOLOGY

2.1. Research Design

This study adopted a qualitative case study design using acoustic–phonetic analysis. The case study approach enabled an in-depth examination of a small group of speakers and the contextual conditions shaping their language use, a strength commonly emphasized in qualitative linguistics (Tisdell et al., 2025; Creswell, 2023). To complement these experiential accounts, acoustic–phonetic analysis using Praat was employed, as this software remains widely used in recent L2 pronunciation research (Niu et al., 2023).

2.2. Scope of the Study

This study specifically examines the influence of Maanyanese phonological features on the English vowel production of young adult learners in Central Kalimantan. The analysis is limited to segmental aspects, focusing on selected English vowel sounds known to pose challenges for Maanyanese speakers due to differences in phonemic inventories and articulatory patterns. The study does not aim to generalize its findings to all Indonesian learners of English; instead, it seeks to provide an in-depth account of how mother tongue L2 pronunciation shapes within a specific context. By narrowing the scope to vowel production and acoustic characteristics, the research maintains analytical depth while highlighting the unique phonological transfer patterns present among Maanyanese-speaking learners.

2.3. Sample and Sampling Method

The study employed purposive, criterion-based sampling to recruit participants who met the linguistic and academic characteristics relevant to the research focus. Three participants were selected based on being native Maanyanese speakers, aged 21, and currently enrolled in the English Education program. All participants reported no history of speech or hearing impairments, ensuring that observed phonological patterns were attributable to linguistic rather than physiological factors. Participant 1 (male) had approximately six years of formal English study. Participant 2 (female) had approximately 9 years of English learning experience. Participant 3 (male) has six years of English study. Although the sample size is limited, it is appropriate for an exploratory qualitative case study, enabling analytical generalization through in-depth examination of information-rich cases rather than population-level inference.

2.4. Study Setting

The research took place in Palangka Raya, the capital city of Central Kalimantan, which is characterized by dynamic patterns of bilingualism and language use, where Maanyanese remains a central medium of everyday communication for its speakers. This landscape provides a meaningful backdrop for examining how local phonological features influence English vowel production. The recordings were conducted in a quiet classroom. This controlled indoor setting ensured consistent acoustic conditions and minimized environmental noise, thereby supporting the reliability of the recorded speech samples.

2.5. Data Collection Method

The researcher collected the data through pronunciation elicitation tasks. The researcher administered a 10-minute pronunciation task comprising five target words and five sentences. The selection of target vowels followed the Perceptual Assimilation Model (Best & Tyler, 2007), which explains how learners perceive and produce L2 sounds by assimilating them into their L1 phonological categories; therefore, vowels without direct Maanyanese equivalents were prioritized to reveal potential L1–L2 assimilation patterns. During data collection, the researcher used a word and sentence list designed to elicit specific vowel contrasts, and digital audio recorders (smartphone and laptop microphones), while also taking field notes on contextual and non-verbal cues. All sessions took place in a quiet classroom to maintain consistent acoustic conditions and ensure reliable audio quality.

2.6. Data Analysis

The researcher analyzed the data by conducting acoustic–phonetic examination and interpretation. The acoustic analysis used Praat, where the researcher segmented each vowel token and measured its formant values (F1 and F2), duration, pitch, and spectral characteristics; midpoint measurements ensured comparability and allowed the researcher to identify substitution, lowering, and centralization by comparing the data with reference English vowel norms (Styler, 2023). To ensure trustworthiness, the researcher used triangulation, integrating acoustic measurements and transcription results, and had two trained linguistics raters independently transcribe all tokens to establish inter-rater reliability. The researcher also maintained systematic field notes and coding records to support the dependability and confirmability of the analysis.

2.7 Ethical Consideration

The researcher secured voluntary consent from all participants and safeguarded their confidentiality and anonymity throughout the study. All procedures complied with institutional ethical protocols and adhered to established standards for research involving human participants.

3. FINDINGS

3.1. The Phonemic Interference of English in Maanyanese Speakers' Pronunciation

The pronunciation data presented in this section provide an analysis of the phonemic realizations of selected English words and sentences produced by three Maanyanese participants. The lexical and sentential items were deliberately chosen to represent a range of phonological features that commonly challenge Maanyanese learners of English. These

features were selected based on previous literature documenting L1 influence on Indonesian EFL learners, as well as preliminary observations of Maanyanese phonology.

To elicit systematic and comparable data, each participant was instructed to read five isolated words and five sentences containing the target phonemes. Each lexical item was repeated more than once to capture possible intra-speaker variation and to enhance the reliability of the phonetic transcription. The recording sessions were conducted individually in a quiet environment to minimize background noise and ensure the clarity of the acoustic signal.

Following data collection, all productions were transcribed phonetically using the International Phonetic Alphabet (IPA). The transcriptions were then compared with standard American English (AmE) reference pronunciations, enabling the identification of deviations in vowel quality, segmental substitutions, and articulatory shifts. Particular attention was given to phonemes absent from the Maanyanese vowel inventory, namely /e/ and /a/. These are predicted to be especially vulnerable to L1 influence according to models of second-language speech acquisition (Flege, 1995; Best & Tyler, 2007).

The observed patterns of substitution, merging, and phonetic approximation were subsequently analyzed to determine the extent and nature of L1–L2 phonological interference. Table 1 summarizes the dominant phonemic variations identified across participants, highlighting recurring substitution patterns and Maanyanese phonological sources that contribute to these deviations.

Table 1. Phonemic Interference Between English and Maanyanese Pronunciation

Word and Sentences	English Transcription	Maanyanese Participants' Transcription
Important Everything is important.	US /ɪmˈpɔrtənt/	**Participant 1** **Attempt 1** /impor.tan/ **Attempt 2** /impor.tant/ **Participant 2** **Attempt 1** /Impor.tan/ **Attempt 2** /impor.tant/ **Participant 3** **Attempt 1** /ɪmˈpɔrtənt/ **Attempt 2** /ɪmˈpɔrtənt/
Must He must be seventeen by now.	US /mʌst/	**Participant 1** **Attempt 1** /mus/ **Attempt 2** /mas/

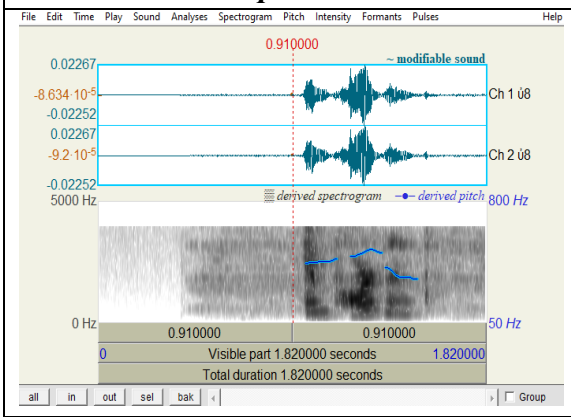
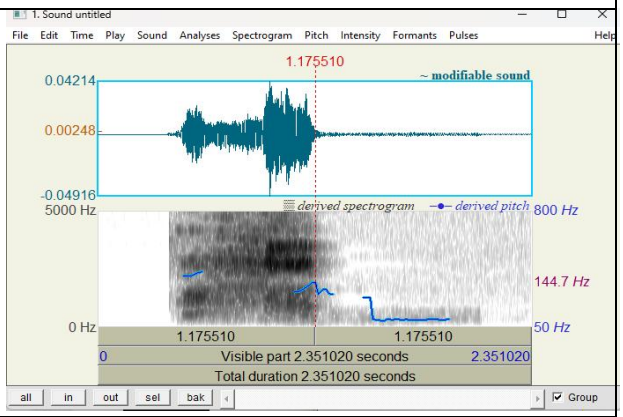
		Participant 2 **Attempt 1** /must/ **Attempt 2** /must/ **Participant 3** **Attempt 1** /mʌst/ **Attempt 2** /mʌst/
Teeth His teeth went yellow.	US /tiθ/	**Participant 1** **Attempt 1** /tit/ **Attempt 2** /tit/ **Participant 2** **Attempt 1** /tit/ **Attempt 2** /tit/ **Participant 3** **Attempt 1** /tit/ **Attempt 2** /tit/
Sticker Her bag filled with numerous amount of sticker.	/stɪkərz/	**Participant 1** **Attempt 1** /se.tiker/ **Attempt 2** /se.tiker/ **Participant 2** **Attempt 1** /se.tiker/ **Attempt 2** /setiker/ **Participant 3** **Attempt 1** /stɪkərz/ **Attempt 2** /st.iker/
General The crowd in general will support us.	/dʒɛnərəl/	**Participant 1** **Attempt 1** /je'erel/

		Attempt 2 /jen.erel/ **Participant 2** **Attempt 1** /jen.erel/ **Attempt 2** /jen.erel/ **Participant 3** **Attempt 1** /dʒɛnərəl/ **Attempt 2** /jen.ere/

The findings indicate that both participants produced the targeted English phonemes with only partial accuracy and demonstrated systematic deviations, including vowel substitutions and consonant simplifications. These patterns suggest a persistent influence of Maanyanese phonotactic constraints and articulatory habits on their English speech production, thereby evidencing segmental-level phonemic interference.

To further substantiate the phonemic analysis, spectrographic measurements obtained with the Praat application were used to compare productions by native English and Maanyanese speakers. The resulting spectrograms revealed distinct acoustic disparities in vowel quality, temporal characteristics, and aspiration patterns, providing visual validation of the impact of Maanyanese phonotactic structures on English pronunciation. These acoustic divergences corroborate the interference patterns identified in the auditory analysis. At the same time, the visual representations furnish objective, instrument-based evidence of segmental variation, thereby reinforcing the perceptual and transcriptional findings.

Table 2. Pronunciation contrast on the word 'Important'

The spectrogram representing the native speaker's pronunciation of *important*	**The spectrogram of Participant 1's pronunciation of *important***
	
The spectrogram representing the	**The spectrogram of Participant 2's**

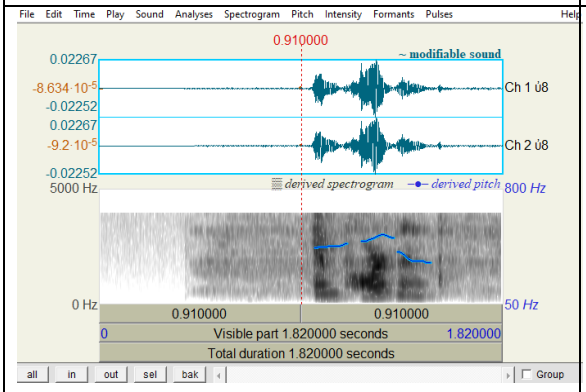
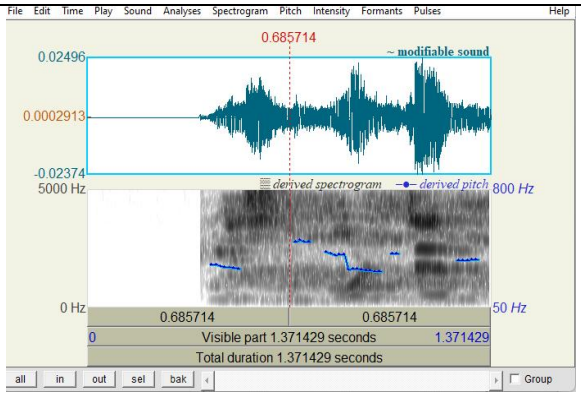
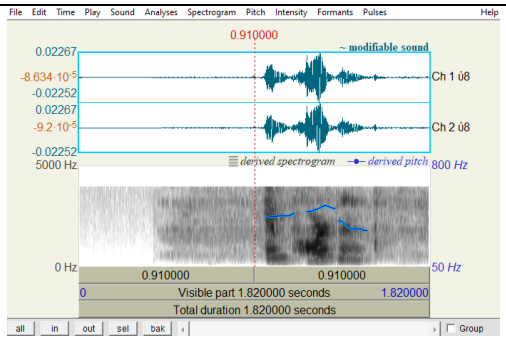
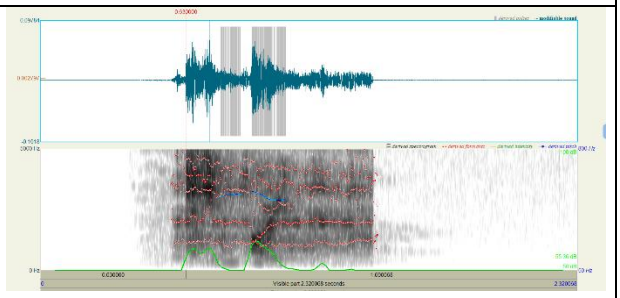
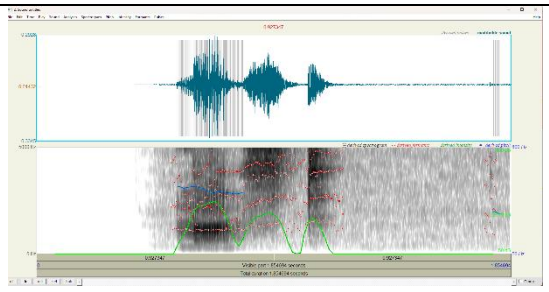
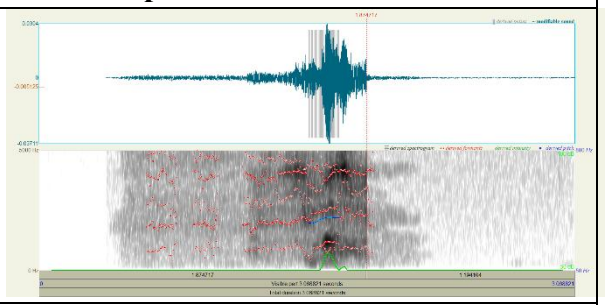
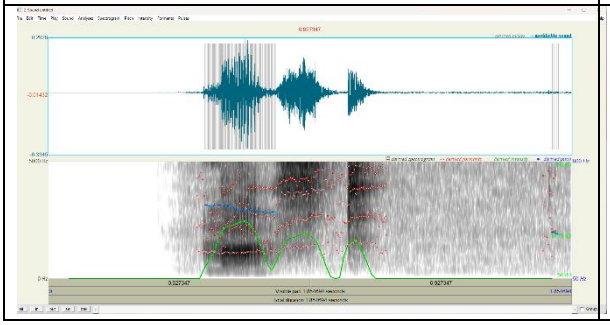
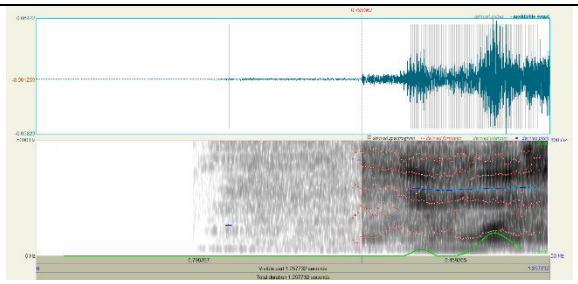
native speaker's pronunciation of *important*	**pronunciation of *important***
	
The spectrogram representing the native speaker's pronunciation of *important*	**The spectrogram of Participant 3's pronunciation of *important***
	

Table 3. Pronunciation contrast on the word 'Must'

The spectrogram representing the native speaker's pronunciation of *must*	**The spectrogram of Participant 1's pronunciation of *must***
	
The spectrogram representing the native speaker's pronunciation of *must*	**The spectrogram of Participant 2's pronunciation of *must***
	

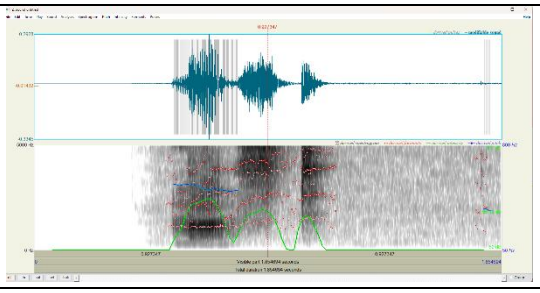
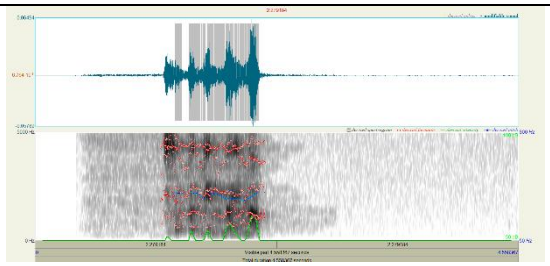
The spectrogram representing the native speaker's pronunciation of *must*	The spectrogram of Participant 3's pronunciation of *must*
	

Table 4. Pronunciation contrast on the word 'Teeth'

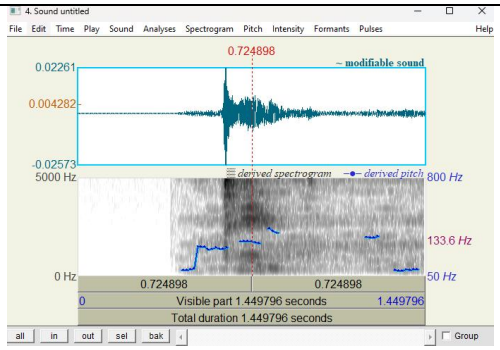
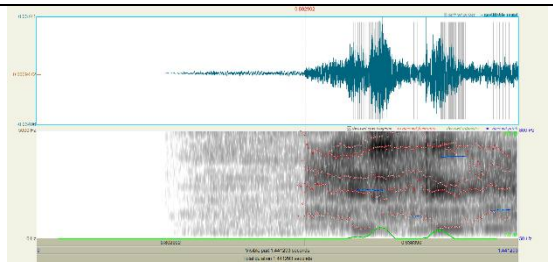
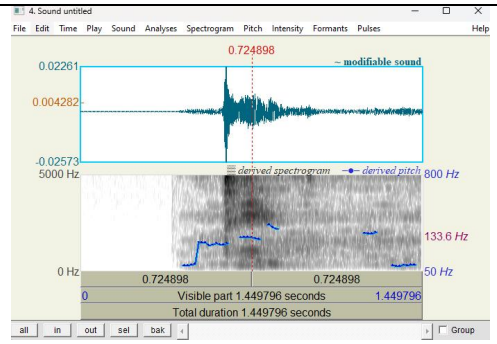
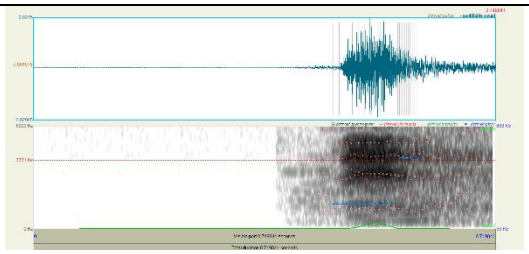
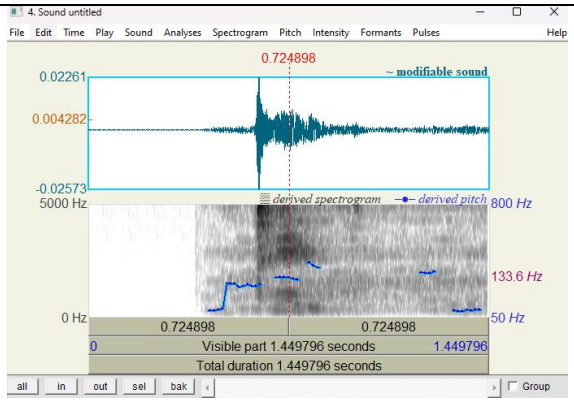
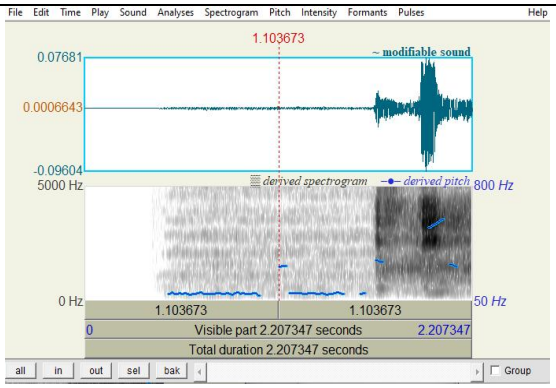
The spectrogram representing the native speaker's pronunciation of *teeth*	The spectrogram of Participant 1's pronunciation of *teeth*
	
The spectrogram representing the native speaker's pronunciation of *teeth*	**The spectrogram of Participant 2's pronunciation of *teeth***
	
The spectrogram representing the native speaker's pronunciation of *teeth*	**The spectrogram of Participant 3's pronunciation of *teeth***
	

Table 5. Pronunciation contrast on the word 'Sticker'

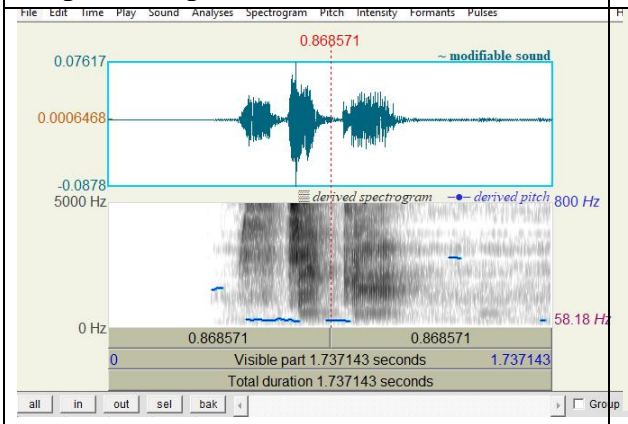
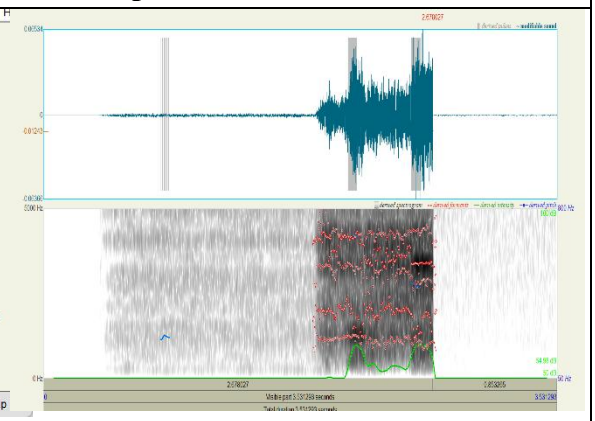
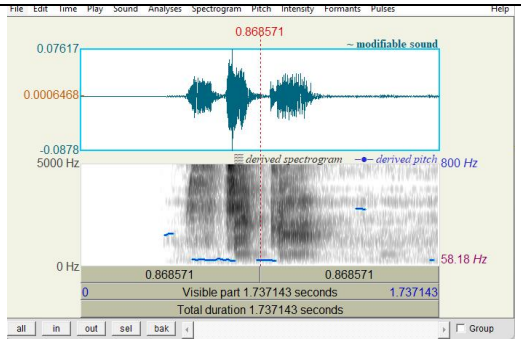
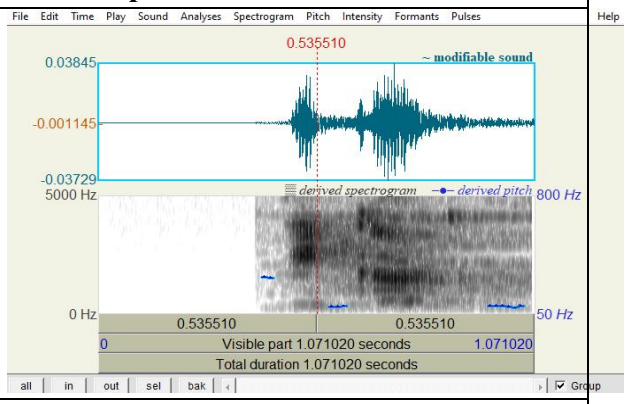
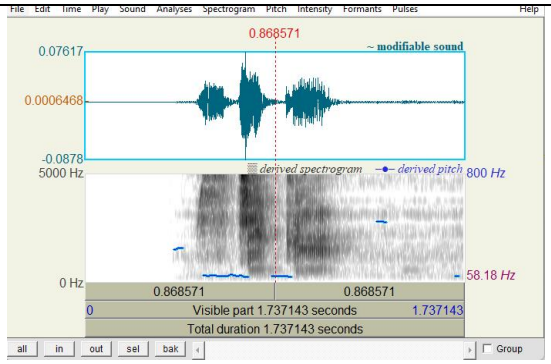
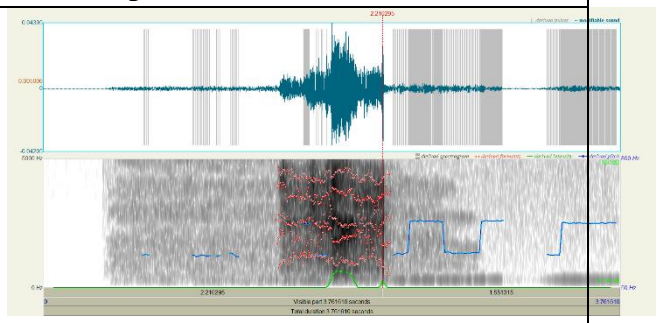
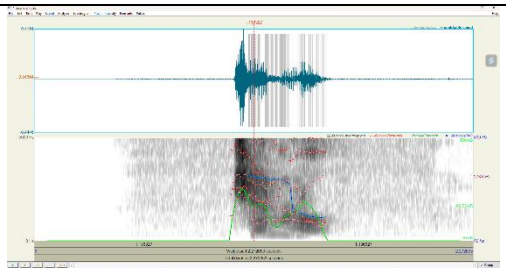
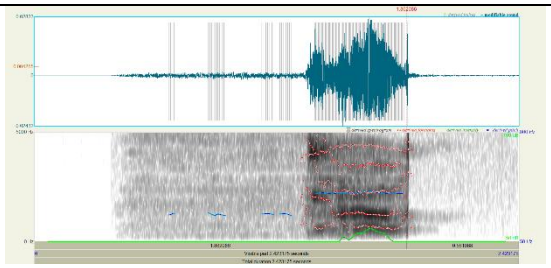
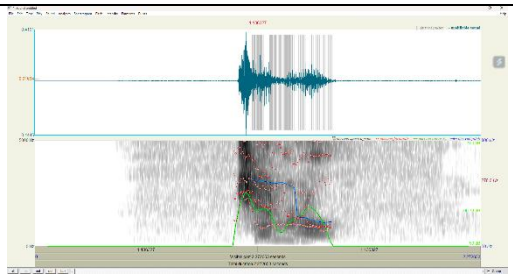
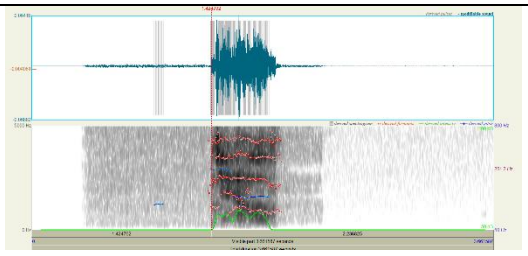
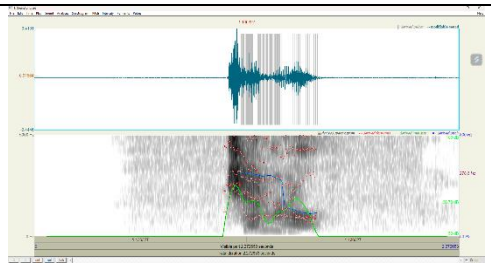
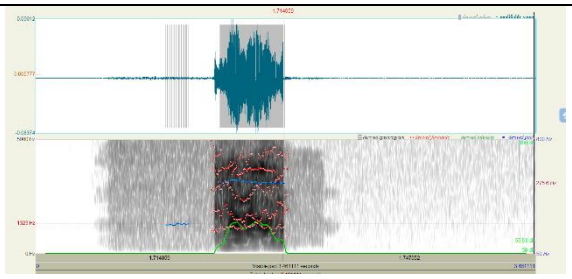
The spectrogram representing the native speaker's pronunciation of the *sticker*	**The spectrogram of Participant 1's pronunciation of *sticker***
	
The spectrogram representing the native speaker's pronunciation of the *sticker*	**The spectrogram of Participant 2's pronunciation of *sticker***
	
The spectrogram representing the native speaker's pronunciation of the *sticker*	**The spectrogram of Participant 3's pronunciation of *sticker***
	

Table 6. Pronunciation contrast on the word 'General'

The spectrogram representing the native speaker's pronunciation of *general*	**The spectrogram of Participant 1's pronunciation of *general***
	
The spectrogram representing the native speaker's pronunciation of *general*	**The spectrogram of Participant 2's pronunciation of *general***
	
The spectrogram representing the native speaker's pronunciation of *general*	**The spectrogram of Participant 3's pronunciation of *general***
	

4. DISCUSSION

4.1. The Influence of Maanyanese Vowel on English Pronunciation of 'Important'

In the target pronunciation /ɪmˈpɔːrtənt/, the initial vowel /ɪ/ is a short front lax vowel, followed by the stressed mid-back rounded vowel /ɔː/ and the reduced schwa /ə/ in the unstressed syllable. In this study, both Participant 1 and Participant 2 demonstrated vowel substitution patterns influenced by their Ma'anyanese phonological system. Participant 1 produced /impor.tan/ and later /impor.tant/, substituting /ɪ/ with the tenser /i/, replacing /ɔː/ with /o/, and using /a/ instead of the reduced /ə/, indicating the absence of vowel reduction. Participant 2 showed a similar pattern in /Impor.tan/ and /impor/.tant/, consistently using full vowels rather than centralized forms. In contrast, Participant 3 accurately produced /ɪmˈpɔːrtənt/ in both attempts, maintaining correct vowel contrasts and unstressed vowel centralization. These patterns are consistent with Best and Tyler's Perceptual Assimilation Model (2007), which proposes that L2 learners assimilate nonnative sounds into the closest L1 phonetic categories when phonemic contrasts do not

exist in the native system. Additionally, Sypiańska & Cal. (2020) found that L2 speakers often merge tense-lax distinctions when such contrasts are absent in the L1 vowel inventory, leading to substitutions such as /ɪ/ → /i/ and /ɔː/ → /o/. Likewise, Darwis & Natsir (2025) emphasize that Indonesian languages lack central vowel reduction, leading to consistent avoidance of schwa /ə/. Therefore, the deviations observed in Participants 1 and 2 reflect systematic Ma'anyanese interlanguage transfer rather than random pronunciation error. Overall, the contrast between Participants 1 and 2 and the accurate production from Participant 3 demonstrates differing levels of phonological development, suggesting that increased L2 exposure and auditory awareness may gradually enable learners to perceive and produce English vowel contrasts more accurately.

4.2. The Influence of Maanyanese Vowel on English Pronunciation of 'Must'

The standard pronunciation /mʌst/ features the low-mid central lax vowel /ʌ/, a sound absent in the Maanyanese vowel system. As a result, speakers typically substitute the closest L1 equivalents, /a/ or /u/. In this study, Participant 1 produced /mus/ and /mas/, replacing /ʌ/ with /u and /a, revealing a preference for full-tense vowels rather than centralized lax vowels. Participant 2 similarly articulated /must/ in both attempts, maintaining /u/ rather than /ʌ/, indicating a lack of vowel centralization. In contrast, Participant 3 accurately produced /mʌst/ in both attempts, maintaining target-like vowel quality. These results correspond with Best and Tyler's Perceptual Assimilation Model (2007), which explains that L2 learners assimilate unfamiliar sounds to the nearest L1 categories when phonemic distinctions are absent in the native system. Supporting this, Masykar et al. (2022) found that Indonesian regional language speakers frequently perceive English central vowels as /a/ or /u/ due to the absence of a comparable L1 category. Likewise, Subandowo. (2017) and Dewi et al. (2024) report persistent difficulty among Indonesian learners in producing English vowels because Indonesian dialects lack tense–lax contrasts and vowel reduction, leading to the use of full vowels in reduced-syllable environments. Collectively, the deviations by Participants 1 and 2 demonstrate systematic interlanguage transfer, while Participant 3 reflects developing phonological competence. Overall, the substitutions made by Participants 1 and 2, compared with Participant 3's accurate production, indicate varying levels of phonological development, suggesting that greater exposure and training can improve learners' acquisition of the English vowel /ʌ/.

4. 3. The Influence of Maanyanese Vowel on English Pronunciation of 'Teeth'

In the standard pronunciation /tiːθ/, the high front tense vowel /iː/ is followed by the voiceless dental fricative /θ/, a consonant absent from the Maanyanese phonological system. As a result, learners tend to substitute phonemes based on the closest articulatory equivalent available in their L1. In this study, all three participants consistently produced /tit/ in both attempts, maintaining the correct vowel quality but replacing /θ/ with the alveolar stop /t/. Participant 1 demonstrated stable substitution across attempts, indicating systematic reliance on familiar articulatory placement rather than interdental frication. Participant 2 followed the same pattern, reflecting perceptual assimilation where /θ/ is not recognized as phonemically distinct from /t/. Participant 3 exhibited identical substitution despite accurate vowel production in previous tasks, showing that interdental fricatives

remain challenging regardless of proficiency. Supporting this, Merrita. (2021) reports that Indonesian learners frequently replace /θ/ with /t/ or /d/ due to the absence of interdental fricatives in Indonesian phonology. Likewise, Sayogie & Adbaka (2022) emphasize that such substitutions represent interlanguage transfer rather than performance errors. Furthermore, Rohmana et al. (2025) found that Indonesian university students commonly replace fricatives such as /θ/ with alveolar stops /t/ because they lack articulatory familiarity with interdental placement. Overall, the uniform production /tit/ across participants reveals predictable L1-based transfer rather than random variation.

4.4. The Influence of Maanyanese Vowel on English Pronunciation of 'Sticker'

In the standard pronunciation /stɪkərz/, the word begins with the short front lax vowel /ɪ/ followed by the schwa /ər/, both of which are absent from the Maanyanese vowel system. As a result, learners tend to substitute these vowels with the closest available L1 categories. In this study, Participants 1 and 2 consistently produced forms such as /se.tiker/ and /setiker/, replacing the target vowel /ɪ/ with a higher and tenser /i/ and substituting the schwa with a full vowel /e/ or /a/. These substitutions indicate reliance on Maanyanese vowel-height patterns and the absence of vowel reduction in L1. The presence of epenthetic vowels in their productions further reflects the influence of Maanyanese phonotactics, which do not permit reduced or centralized vowels in unstressed syllables. Participant 3 demonstrated more target-like output in the initial attempt but still produced /st.iker/ in the second attempt, indicating partial influence of L1 vowel patterns during processing of multisyllabic words, as in prior studies by Andi-Pallawa & Alam (2013) and Jamzaroh et al. (2021) confirm that Indonesian and Dayak language speakers frequently replace English lax vowels with tense vowels and avoid schwa due to its absence in their native inventories. Similarly, Dewi et al. (2024) report that Indonesian learners often insert extra vowels to fit English syllable structures into their L1 phonotactic constraints. The substitutions observed in all three participants reflect systematic L1-based transfer of Maanyanese vowel patterns, rather than random or individual variation. Overall, the patterns found in the participants' productions align with these observations, revealing that the pronunciation of "sticker" is reshaped by Maanyanese phonology in systematic rather than accidental ways, illustrating how L1 structure subtly guides the form an English word ultimately takes.

4.5. The Influence of Maanyanese Vowel on English Pronunciation of 'General'

In the standard pronunciation /dʒɛnərəl/, the first syllable contains the mid-front lax vowel /ɛ/, followed by the schwa /ə/, a reduced vowel absent from the Maanyanese phonemic system. In this study, Participants 1 and 2 consistently shifted the target vowels toward forms more familiar within Maanyanese, producing variants such as /je'erel/ and /jen.erel/. These realizations show fronting of /dʒ/ to /j/ and the systematic replacement of schwa with full vowels such as/e/ or /a/, reflecting the absence of vowel reduction in Maanyanese. Participant 3 produced a closer approximation but still displayed occasional reliance on /e/ in unstressed positions, indicating partial centralization. These substitutions align with Best and Tyler's Perceptual Assimilation Model, which predicts that L2 vowels lacking direct L1 equivalents are mapped onto the nearest native category, often resulting in overuse of full vowels. Previous findings by Andi-Pallawa & Alam. (2013) and

Hidayati. (2021) further confirms that Indonesian learners rarely produce reduced vowels and tend to replace /ə/ with /e/ or /a/. The consistent reshaping of /dʒɛnərəl/ into forms like /jen.erel/ reveals that Maanyanese speakers rely heavily on their native vowel system when confronting English unstressed syllables and complex onset clusters, demonstrating predictable L1-driven patterns in their developing interlanguage. Overall, the uniform shift from /dʒɛnərəl/ to forms such as /jen.erel/ across participants indicates that the Maanyanese vowel system and its limited consonantal distinctions continually shape how learners restructure unfamiliar English segments into familiar, L1-based articulatory patterns.

5. CONCLUSION

This study examined the influence of the Maanyanese vowel system on the English pronunciation of three university students in Palangka Raya. The findings demonstrate that their recurring mispronunciations, such as the substitution of /ɪ/ with /i/, /ʌ/ with /a/ or /u/, and the consistent avoidance of schwa, were not random but systematic outcomes of first-language transfer. Patterns such as the persistence of full vowels instead of reduced vowels further highlight how Maanyanese phonemic and phonotactic features reshape English vowel production. Interpreted through the Perceptual Assimilation Model, these patterns confirm that unfamiliar English vowels are assimilated into the closest Maanyanese categories, contributing to the development of interlanguage phonology among the learners.

The implications of these findings extend to applied linguistics and pronunciation pedagogy in multilingual contexts such as Central Borneo. The results emphasize the need for explicit pronunciation training focused on vowel reduction, tense–lax distinctions, and contrastive segments absent in Maanyanese. Instructional strategies that incorporate acoustic awareness, articulatory training, and minimal-pair discrimination may help learners overcome persistent L1 influence.

This study, however, is limited by its small sample size and its focus on a restricted set of English vowels. The acoustic analysis also captures pronunciation at a single point in time rather than across a more extended developmental period. Therefore, future research should involve a larger, more diverse group of Maanyanese speakers, including learners with varying levels of English proficiency and exposure. Comparative studies with other Dayaknese language groups would be valuable for mapping phonological transfer across dialects, while longitudinal or experimental research could track developmental change and the effectiveness of targeted pronunciation instruction.

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