Phonological Transfer among Indigenous Students: A Study on Pronunciation Challenges in English

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Abstract

This study investigates the phenomenon of phonological transfer and its impact on the English pronunciation of indigenous senior high school students at Bukidnon National High School. Specifically, it explores how the phonological features of Binukid, Higaonon, and Manobo—the students' first languages—influence their articulation of English sounds. Using qualitative methods, including interviews, pronunciation tests, and linguistic analysis, the research identifies common pronunciation challenges that stem from differences in phoneme inventories, stress patterns, and syllable structures between English and the students' native languages. The findings reveal that negative transfer, particularly in consonant and vowel substitutions, significantly affects intelligibility and fluency in spoken English. The study underscores the importance of culturally and linguistically responsive teaching strategies in addressing these challenges. It contributes to the body of knowledge on second language acquisition in multilingual contexts and aligns with the Department of Education's goals of inclusive and effective learning. Recommendations include targeted phonological instruction and the integration of indigenous language awareness into English language teaching.

Keywords: Phonological Transfer, Indigenous Students, Pronunciation, Binukid, Higaonon, Manobo, English Language Learning, Bukidnon, Second Language Acquisition

INTRODUCTION

English pronunciation is a crucial skill for communication and academic success. However, for many indigenous senior high students at Bukidnon National High School—who come from Binukid, Higaonon, and Manobo communities with distinct phonetic systems—learning English poses unique pronunciation challenges. These learners often substitute sounds (e.g., "think" → "tink"), omit phonemes (e.g., "friend" → "fren"), or insert extra sounds (e.g., "school" → "iskul") because their L1 lacks certain English phonemes (Leaño &Espulgar, 2019; Bautista, 2021). Glottalization features prominently as well—students may say "ʔapple" for "apple"—and vowel alteration is common when they map unfamiliar English vowels onto their native vowel inventory (Alcantara & Flores, 2019; Reyes & Santos, 2023). Such phonological transfer not only hinders intelligibility but also undermines students' confidence, participation, and overall performance in English classes (Gonzales, 2022).

Despite the clear need, pronunciation instruction in multilingual classrooms often focuses on grammar and vocabulary, leaving phonological issues unaddressed. Limited exposure to native English models outside the classroom, large class sizes, and scarce teaching resources exacerbate the problem (Philippine Normal University, 2023; Nolasco, 2008). While contrastive analysis and minimal-pair drills have been shown to improve learners' awareness of target sounds (Derwing& Munro, 2005; Celce-Murcia et al., 2010), these methods are rarely customized to the specific L1 backgrounds of indigenous students. As a result, fossilized pronunciation errors persist, reinforcing communication anxiety and limiting classroom engagement (Tupas & Lorente, 2014).

This study aims to identify the specific pronunciation challenges faced by indigenous senior high learners at Bukidnon National High School and to analyze how phonological transfer from Binukid, Higaonon, and Manobo influences their English speech. It will document prevalent processes—such as consonant cluster reduction, vowel modification, and glottalization—and examine their impact on intelligibility. Finally, it will recommend culturally responsive teaching strategies, including explicit phonetic instruction, technology-assisted tools, and multisensory activities tailored to learners' L1 systems (Gilakjani& Ahmadi, 2011; Reyes & Santos, 2023).

By focusing on indigenous senior high students, this research fills a gap in understanding how both Filipino (used as a bridge language) and native L1 systems contribute to pronunciation errors. The findings will guide teachers in designing targeted drills and integrating pronunciation technologies within the Mother Tongue–Based Multilingual Education framework, promoting inclusive, effective English instruction. Ultimately, this study seeks to enhance students' oral proficiency, confidence, and active participation in the classroom.

FRAMEWORK OF THE STUDY

One of the key ideas in this study is phonological transfer, which refers to the influence that the sounds and rules from a person's first language (L1) can have on their speech in a second language (L2). The Contrastive Analysis Hypothesis (CAH) by Lado (1957) suggests that when L1 and L2 are very different, learners are more likely to make pronunciation mistakes. For example, if English has sounds that Binukid does not have, students might replace them with similar sounds from their native language. Eckman (1977) expanded on this idea and showed that we can often predict which sounds will be hardest for learners based on how different the two languages are.

Another important idea is the Speech Learning Model (SLM) by Flege (1995), which explains how people learn new sounds. According to this model, learners compare English sounds to the sounds in their own language and often mix them up when they sound similar. For example, English sounds like /θ/ (as in think) and /ð/ (as in this) can be hard for Binukid speakers because these sounds don't exist in their language.

Odlin (1989) also talks about phonological transfer, adding that not only individual sounds are affected, but also things like word stress, rhythm, and intonation. This means that the way a whole sentence sounds can also be influenced by the first language.

Research by Hermocilla-Borres (2018) describes the Binukid sound system in detail. Her work helps identify which English sounds might be difficult for Binukid speakers. For example, Binukid doesn't have some consonant sounds or sound combinations that English does. In this study, the International Phonetic Alphabet (IPA) is used to carefully compare and analyze the pronunciation patterns of students.

These theories help explain why students pronounce English the way they do, and they also show the need for teaching strategies that focus on these specific pronunciation issues.

The conceptual framework shows how students' first language (Binukid) influences their English pronunciation and what can be done to help them improve.It starts with the phonological features of Binukid, which affect how students hear and pronounce English words. This leads to different kinds of pronunciation problems, such as saying the wrong sound, skipping sounds, or adding extra ones.

These difficulties can affect how well students speak English, including how fluent and understandable they are, and how confident they feel when speaking.To help with these challenges, the framework includes teaching strategies like pronunciation exercises, speaking activities, and teacher support. These methods aim to help students recognize and correct common errors caused by transfer from their first language.

In summary, the framework shows how the students' language background, pronunciation challenges, and classroom support all work together. It helps explain why students make certain mistakes and what teachers can do to help them speak English more clearly and confidently.

MATERIALS AND METHOD

Research Design

This study employs a descriptive qualitative research design using a case study approach to explore the presence of phonological transfer among indigenous Senior High School students at Bukidnon National High School. The descriptive nature of the study allows for a detailed examination of the pronunciation patterns of students whose first language (L1) is an indigenous dialect, while the case study approach focuses on a specific group of learners within a particular context (Yin, 2018). This design is deemed appropriate as it provides an in-depth understanding of how L1 phonological features influence English pronunciation, particularly in instances of substitution, omission, and insertion of sounds, as well as stress and intonation patterns (Creswell, 2014).

The research will be conducted at Bukidnon National High School, located in the Philippines. This institution caters to a linguistically diverse student population, including learners from indigenous tribes such as the Binukid, Higaonon, Manobo, and Talaandig. The study will focus on Senior High School students who are currently enrolled in English-related subjects and who demonstrate challenges in English pronunciation believed to be influenced by their native language background.

A purposive sampling technique will be used to select ten participants who meet specific criteria relevant to the study. These include being of indigenous descent, actively learning English, and exhibiting noticeable pronunciation difficulties (Patton, 2002). The selection process will begin with teacher nominations, identifying students who have been observed to struggle with pronunciation. A brief screening, consisting of an interview and a pronunciation test, will further confirm the presence of phonological issues. Finally, consent will be obtained from both the students and their guardians to ensure ethical participation (Teddlie & Yu, 2007).

Research Instrumentation and Validation

To gather relevant data, the study will utilize both primary and secondary instruments. These include a pronunciation test and semi-structured interviews, along with focus group discussions (FGDs). The

pronunciation test will involve reading selected English words, phrases, and sentences that contain sounds commonly mispronounced by non-native speakers (Derwing& Munro, 2005). These sessions will be audio-recorded for phonetic analysis. Meanwhile, interviews will explore students' experiences with English pronunciation, while FGDs will include insights from both students and teachers regarding observed pronunciation challenges and the strategies employed in classroom instruction.

Since the instruments are not standardized, they will undergo a validation process using Lawshe's Content Validity Ratio (CVR) method (Lawshe, 1975). A panel of three experts—including the English Subject Head, a statistician, and the Research Coordinator—will review the instruments to assess the relevance and clarity of each item. Each expert will classify items as essential, useful but not essential, or not necessary. The CVR will be calculated using the formula CVR = (ne – N/2) / (N/2), where ne is the number of experts who rated the item as essential and N is the total number of experts. Based on the results, items that meet the threshold will be retained, while others will be revised or removed accordingly.

Data Collection Procedure

The data collection procedure will begin with coordination with school administrators and English teachers. After identifying suitable participants, the researcher will obtain informed consent and schedule individual and group sessions. Audio recordings will be used to capture speech data, while interview and FGD sessions will be documented through transcripts and field notes. All collected data will be securely stored and used solely for academic purposes.

Data Analysis

For data analysis, the pronunciation samples will be examined phonetically using the International Phonetic Alphabet (IPA). This analysis will help identify recurring sound errors and patterns of phonological transfer (Jones, 2011). Meanwhile, responses from interviews and FGDs will undergo thematic analysis to identify common experiences, challenges, and insights related to English pronunciation and language learning (Braun & Clarke, 2006).

Ethical Considerations

Ethical considerations are integral to the conduct of this study. Participants will be fully informed of the study's purpose, procedures, and voluntary nature. Their anonymity and confidentiality will be protected by using pseudonyms and keeping all data securely stored. Participation will be voluntary, and students will be allowed to withdraw from the study at any time without any academic consequences. Informed consent forms will be distributed and signed by both the participants and their legal guardians.

RESULTS AND DISCUSSION

The findings of the study are based on the research questions, which aim to: (1) identify common pronunciation errors among learners, (2) understand how the first language (L1) influences English pronunciation, and (3) explore effective strategies to address these pronunciation difficulties. The data were gathered through a validated research questionnaire, pronunciation assessment activities, and open-ended responses from 10 Grade 12 learners at Bukidnon National High School.

Table 1: Paragraph Reading and Observation Analysis

Research Question	Observed Errors	No. of students (n=10)	% of Students	Phonological Process present	Interpretation
What are the common phonological errors made by indigenous students when speaking English?	/θ/ → /t/ (e.g., "think" → "tink")	8	80%	Sound substitution	Majority of students replaced the unfamiliar /θ/ sound with /t/, showing difficulty with interdental fricatives not present in their L1.
	/ð/ → /d/ (e.g., "this" → "dis")	7	70%	Sound substitution	Similar to /θ/, the voiced /ð/ was substituted with /d/ by most learners, showing influence from L1 where such sounds are absent.
	"ship" vs. "sheep" confusion	6	60%	Vowel substitution	Difficulty in distinguishing short and long vowels due to limited exposure and L1 influence.
	street" → "sreet"	7	70%	Consonant cluster reduction (omission)	Learners dropped a consonant in clusters, a common simplification strategy found in ESL

					learners.
	Incorrect word stress	5	50%	Prosodic substitution	Half of the students used flat or misplaced stress, possibly due to syllable-timed nature of L1.

SUMMARY OF FINDINGS

The observed phonological errors among indigenous students when speaking English reveal several recurring patterns linked to their first language (L1) influence. A majority of students (80%) demonstrated difficulty with the voiceless interdental fricative /θ/, substituting it with /t/ (e.g., "think" → "tink"). This sound substitution suggests that the /θ/ sound, which is absent in many indigenous languages, poses a challenge for learners. Similarly, 70% of the students substituted the voiced interdental fricative /ð/ with /d/ (e.g., "this" → "dis"), indicating a similar phonological gap in their L1. The confusion between "ship" and "sheep" (60%) reflects the difficulty in distinguishing short and long vowels, a common issue among learners from languages where vowel length contrasts are not phonemic. Another frequent error was consonant cluster reduction, observed in 70% of the students (e.g., "street" → "sreet"), where students omitted one consonant in a cluster, a simplification process typical of second language learners.

Finally, 50% of students exhibited incorrect word stress, often producing a flat or misplaced stress pattern. This prosodic error may stem from the syllable-timed nature of many indigenous languages, which contrasts with the stress-timed rhythm of English. Overall, these errors highlight the significant impact of L1 phonological features on the learners' English pronunciation, particularly in sounds and stress patterns that do not exist in their native languages.

Table 2: Perceptions and Experiences

Question	Response Options	Number of Students (n=10)	Percentage	Interpretation
Number of Students (n=10)	Yes	8	80%	Majority of students find pronunciation difficult, indicating it is a key challenge for learners.
	No	2	20%	A small minority of students do not find it difficult, suggesting some variation in difficulty levels
2. Which sounds	/θ/ (as in	7	70%	The voiceless interdental

are difficult for you?	"think")			fricative /θ/ is challenging, which is not present in their L1.
	/ð/ (as in "this")	6	60%	Similar to /θ/, the voiced interdental fricative /ð/ is difficult, likely due to L1 interference.
	Consonant clusters (e.g., "street")	5	50%	Consonant clusters are difficult to pronounce, suggesting the need for practice in pronunciation
	Long and short vowels (e.g., "ship" vs. "sheep")	4	40%	Vowel length contrasts are problematic, likely due to L1 interference where such distinctions do not exist.
3. How confident are you in speaking English?	1= Not confident 2= Less confident 3= moderately confident 4= confident 5=very confident	3.2/5		Students rated themselves as moderately confident in speaking English, indicating there is room for improvement in their confidence.
Do you feel shy or anxious when speaking English in class?	Yes	4	40%	40% of students feel shy or anxious, indicating that pronunciation difficulties contribute to this anxiety.
	No	3	30%	30% of students feel confident, showing that some learners are less anxious.
	Sometimes	3	30%	30% of students experience occasional anxiety, suggesting that the issue is not constant but still significant.
5. What helps you improve your pronunciation?	Listening to English speakers	8	80%	Most students find that listening to native English speakers helps them improve their pronunciation.
	Watching videos/movies in English	7	70%	Watching English media is a helpful strategy for learning pronunciation through exposure
	Practicing with	6	60%	Practicing with others is

	classmates or teachers			beneficial for reinforcing correct pronunciation patterns.
	Using pronunciation apps or tools	5	50%	A considerable number of students use technology to practice and improve their pronunciation.

Table 3: Teacher's Perspective

Research Question	Observation/Response	Interpretation
1. What are the most common pronunciation errors among indigenous students?	The most common errors were sound substitutions, such as /θ/ → /t/ (think → tink), and confusion between long and short vowels, e.g., "ship" vs. "sheep."	These errors suggest that students struggle with sounds and vowel distinctions not present in their native language, likely due to interference from their L1 phonetic system.
2. What strategies do you use to help students improve their pronunciation?	Teachers use a variety of strategies, including listening exercises with native speakers, corrective feedback, pronunciation apps, and drills focusing on specific problem sounds.	These strategies aim to expose students to the correct pronunciation models and provide targeted practice on challenging sounds. Using technology like apps and drills can help reinforce these concepts
3. What challenges do you face in teaching pronunciation?	Challenges include the influence of students' L1 on their pronunciation, lack of exposure to native English models, and students' reluctance or fear of speaking in class.	These challenges highlight the importance of creating a supportive and encouraging environment, and the need for students to have more exposure to authentic English input, possibly through media or interaction with native speakers.
4. What additional support or resources do you think would be helpful in teaching pronunciation?	Additional resources include more listening materials (native speakers), pronunciation-focused textbooks, language learning software, and more practice with peer interaction and feedback	These resources could provide students with diverse and authentic listening opportunities, better materials for focused pronunciation work, and increased opportunities for practice and feedback.

Table 4: Focus Group Discussion using thematic analysis

Participants Responses

Research Question	Themes Identified	Example responses
What do you think are the reasons for pronunciation difficulties in English?	L1 Interference	- "I find it hard because my native language doesn't have the same sounds, especially the /θ/ and /ð/ sounds." - "The sounds in English like /θ/ and /ð/ are difficult because we don't have them in our language."
	Lack of Exposure to Native English Models	- "I don't often hear native speakers, so I don't know how the words should sound." - "We don't listen to a lot of English outside class, so it's hard to know if we're pronouncing words correctly."
	Nervousness/Anxiety in Speaking	- "I get nervous when speaking in front of the class, which makes my pronunciation worse." - "I sometimes feel embarrassed when I can't pronounce a word, and that makes it worse."
	Limited Practice Outside of Class	- "I don't practice English much outside class, and that makes it harder to improve." - "We only speak English in class, and I don't get to practice at home."
What suggestions do you have for improving English pronunciation in class?	More Peer Practice and Interaction	- "We should practice more with our classmates, so we can learn from each other." - "Talking with others helps because we can correct each other's mistakes."
	Use of Technology (Apps, Online Tools, and Videos)	- "Using apps that help with pronunciation would be great because we can practice on our own." - "Watching videos or movies in English would help me hear how native speakers say things."
	More Corrective Feedback from Teachers	- "It would help if the teacher corrected our pronunciation more often." - "The teacher can give feedback during class on how to pronounce things better."
	Pronunciation-Focused Lessons	- "We need lessons just on pronunciation, with exercises to practice difficult

		words." - "More drills on sounds we struggle with would be useful."

CONCLUSION AND RECOMMENDATION

This study examined the common pronunciation errors of indigenous Grade 12 learners at Bukidnon National High School, the influence of their first language (L1) on English pronunciation, and the strategies that can effectively address these issues. Results revealed frequent phonological errors such as sound substitutions (/θ/ → /t/, /ð/ → /d/), vowel length confusion, consonant cluster reduction, and incorrect word stress. These findings highlight the significant role of L1 interference in shaping learners' pronunciation difficulties, consistent with earlier research on interlanguage phonology (Brown, 2000). Moreover, the moderate confidence levels and occasional anxiety expressed by students further emphasize the social and psychological barriers in oral language use (Krashen, 1982).

The importance of improving pronunciation is vital not only for intelligibility but also for learner confidence and academic success (Derwing& Munro, 2005). Teachers play a crucial role in mitigating these issues by using explicit strategies such as modeling, feedback, and the integration of technology. However, challenges persist, particularly the lack of exposure to native English input and limited resources, underscoring the need for systemic support and innovation in pedagogy. As pronunciation is often overlooked in language instruction, this study reaffirms its relevance in equitable and inclusive education, especially for indigenous learners in rural settings.

Based on the findings, the researchers recommend that English teachers incorporate focused pronunciation drills, minimal pair activities, and exposure to authentic audio materials to enhance learners' phonological awareness. The use of pronunciation apps, video modeling, and peer practice should also be encouraged to increase learner engagement and autonomy (Celce-Murcia et al., 2010). In addition, school administrators and policy makers should provide support by integrating pronunciation components into the existing curriculum and ensuring access to relevant learning resources (Department of Education, 2016).

Future researchers may consider expanding the participant base or conducting a longitudinal intervention to measure long-term improvement. Moreover, studies that investigate the role of cultural identity and socio-affective factors in oral language learning may offer deeper insights into how pronunciation challenges intersect with learner backgrounds and experiences.

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