

THE PROCEDURES OF PHONOLOGICAL MODIFICATION IN THE ENGLISH AND INDONESIAN LANGUAGES

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ABSTRACT

Phonological change is commonly experienced by bilingual students who use Indonesian and English in daily communication due to differences in the sound systems of both languages. This study aimed to analyze the phonological change processes experienced by second-semester students at Universitas Negeri Medan in Indonesian and English pronunciation, including the factors influencing these changes and students' perspectives on phonology learning. This study applied a descriptive contrastive design. The data were obtained from the responses of 10 second-semester students taking Indonesian and English language courses at Universitas Negeri Medan. Data were collected using a structured close-ended questionnaire consisting of several sections related to pronunciation habits, phonological processes, influencing factors, and learning preferences. The collected data were classified based on phonological processes and analyzed descriptively using simple percentages. The findings showed that phonological changes frequently occurred in both languages. In Indonesian, deletion became the most dominant process, especially the omission of final sounds in informal speech. In English, epenthesis frequently appeared when students added vowel sounds to simplify consonant clusters. The study also revealed that first language interference, speaking habits, and limited corrective feedback influenced students' pronunciation patterns. In addition, most students preferred practical pronunciation learning activities such as speaking exercises and direct correction. These findings imply that improving phonological awareness and providing more pronunciation practice are important to support bilingual learners in developing clearer and more accurate pronunciation.

Keywords: *phonological change, pronunciation, bilingual learners, English, Indonesian*

ABSTRAK

Perubahan fonologis umumnya dialami oleh mahasiswa bilingual yang menggunakan bahasa Indonesia dan Inggris dalam komunikasi sehari-hari karena perbedaan sistem bunyi kedua bahasa. Penelitian ini bertujuan untuk menganalisis proses perubahan fonologis yang dialami mahasiswa semester dua Universitas Negeri Medan dalam pelafalan bahasa Indonesia dan Inggris, termasuk faktor-faktor yang memengaruhi perubahan tersebut serta perspektif mahasiswa terhadap pembelajaran fonologi. Penelitian ini menggunakan desain deskriptif kontrastif. Data diperoleh dari jawaban 10 mahasiswa semester dua yang mengambil mata kuliah bahasa Indonesia dan bahasa Inggris di Universitas Negeri Medan. Data dikumpulkan menggunakan kuesioner terstruktur tertutup yang terdiri dari beberapa bagian terkait kebiasaan pelafalan, proses fonologis, faktor yang memengaruhi, serta preferensi pembelajaran. Data yang terkumpul diklasifikasikan berdasarkan proses fonologis dan dianalisis secara deskriptif menggunakan persentase sederhana. Temuan menunjukkan bahwa perubahan fonologis sering terjadi pada kedua bahasa. Dalam bahasa Indonesia, penghilangan (deletion) menjadi proses paling dominan, terutama penghilangan bunyi akhir dalam percakapan tidak formal. Dalam bahasa Inggris, epentesis sering muncul ketika mahasiswa menambahkan bunyi vokal untuk menyederhanakan gugus konsonan. Penelitian ini juga mengungkap bahwa interferensi bahasa ibu, kebiasaan berbicara, serta keterbatasan umpan balik korektif memengaruhi pola pelafalan mahasiswa. Selain itu, sebagian besar mahasiswa lebih menyukai aktivitas pembelajaran pelafalan yang praktis seperti latihan berbicara dan koreksi langsung. Temuan ini menunjukkan bahwa peningkatan kesadaran fonologis dan pemberian lebih banyak latihan pelafalan penting untuk mendukung pembelajar bilingual dalam mengembangkan pelafalan yang lebih jelas dan akurat.

Kata kunci: perubahan fonologis, pelafalan, pembelajar bilingual, bahasa Inggris, bahasa Indonesia

A. Introduction

University students in Indonesia often use both Indonesian and English in their academic activities. Indonesian is commonly used in daily communication, while English is needed for presentations, assignments, academic materials, and communication in wider contexts.

However, using two languages is not always easy because Indonesian and English have different sound systems. These differences often make students change certain sounds when speaking, either consciously or unconsciously, to make pronunciation easier.

This phenomenon is known as phonological change. Phonological change happens when speakers modify sounds during pronunciation, such as adding, deleting, replacing, or rearranging sounds. According to Fromkin, Rodman, and Hyams (2014), this usually happens because speakers try to pronounce difficult sounds more easily. Some common phonological processes include assimilation, deletion, epenthesis, epithesis, and metathesis. These processes are often found among bilingual speakers who regularly use more than one language.

English pronunciation is often challenging for Indonesian students because English has more complex sound patterns than Indonesian. English contains consonant clusters, stress patterns, vowel differences, and several sounds that do not exist in Indonesian. Because of this, students often simplify English pronunciation by adding extra vowels, deleting certain sounds, or replacing unfamiliar sounds with sounds that are more familiar to them. Jasuli, Sari, and Astuti (2025) found that Indonesian EFL learners often have difficulties in pronouncing consonant clusters and

vowels, which can lead to pronunciation changes.

Phonological changes do not only happen when students speak English. They can also happen in Indonesian, especially in informal communication. Students may shorten words, delete final sounds, or change pronunciation patterns in daily conversations. Based on the preliminary findings of this study, 50% of students stated that their mother tongue or regional dialect influenced the way they pronounce words. This shows that first language background plays an important role in phonological change.

Previous studies mostly focus on English pronunciation problems such as speaking anxiety, pronunciation errors, and lack of confidence. Giawa (2025) found that many students still struggle with speaking English because they are afraid of making mistakes and have pronunciation difficulties. However, most previous studies only discuss English pronunciation and rarely examine phonological changes in both Indonesian and English at the same time. This is important to study because university students often use both languages in their daily academic

activities. Understanding phonological changes in both languages can provide a clearer picture of students' pronunciation challenges.

Therefore, this study aims to analyze phonological change processes experienced by second-semester students at Universitas Negeri Medan in both Indonesian and English pronunciation. This study focuses on identifying the common types of phonological changes, the factors that influence them, and students' views about learning phonology. The findings of this study are expected to help improve pronunciation learning for bilingual students.

Theoretical Framework

This study focuses on phonological changes experienced by university students when pronouncing Indonesian and English words. To understand this phenomenon, this study uses several theories related to phonological change, phonological processes, first language interference, differences between English and Indonesian sound systems, and phonological awareness. These theories help explain why students

change certain sounds and what factors influence those changes.

Phonological change refers to changes in speech sounds that happen when speakers modify pronunciation patterns. According to Fromkin, Rodman, and Hyams (2014), phonological change may happen through adding, deleting, replacing, or rearranging sounds in words. These changes usually happen because speakers try to make pronunciation easier during communication. In bilingual situations, phonological changes often happen when speakers move between two languages with different sound systems.

Diani and Azwandi (2021) explain that phonological changes often occur because speakers tend to adjust difficult sounds into forms that feel easier and more familiar based on their own phonological system. This idea is relevant to this study because students often changed certain sounds when pronouncing both Indonesian and English words.

Several phonological processes are discussed in this study. Crystal (2008) explains that assimilation happens when one sound becomes

similar to another nearby sound. Deletion happens when speakers remove certain sounds during pronunciation. Fromkin et al. (2014) state that deletion often occurs because speakers want to simplify speech production.

Epenthesis happens when speakers add sounds in the middle of a word, especially when they find consonant clusters difficult to pronounce. Epithesis refers to adding sounds at the end of words. Stageberg (1981) explains that metathesis happens when speakers accidentally change the order of sounds in a word. These phonological processes are important because they became the main categories used to analyze students' pronunciation patterns in this study.

Another important theory used in this study is language transfer theory. Selinker (1972) explains that second language learners often transfer language patterns from their first language into the target language. This often happens in pronunciation because learners usually rely on familiar sounds from their mother tongue when they find foreign sounds difficult to produce.

Hidayati, Yatmikasari, and Sulaeman (2023) also explain that bilingual speakers often experience phonological interference because they unconsciously bring sound patterns from their first language into another language. This theory helps explain why many students in this study pronounced English words using Indonesian pronunciation patterns.

Differences between English and Indonesian phonological systems also contribute to phonological changes. According to Dardjowidjojo (2009), English has more complex vowel sounds, consonant clusters, stress patterns, and pronunciation variations than Indonesian. Fitria (2024) also explains that Indonesian pronunciation tends to be simpler and more consistent than English pronunciation.

Because of these differences, Indonesian learners often experience pronunciation difficulties in English. Jasuli, Sari, and Astuti (2025) found that Indonesian learners frequently struggle with English consonant clusters and vowel combinations. As a result, learners often add or delete sounds to make pronunciation easier.

Adnyani (2021) also found that Indonesian learners often have difficulty pronouncing English sounds such as /θ/, /ð/, /v/, and /ʃ/ because these sounds do not exist in Indonesian. Suhardianto, Mardiana, and Oktafiani (2023) further explain that regional accents can also influence students' pronunciation patterns.

Lastly, phonological awareness is an important part of pronunciation learning. Sihombing, Sihalohe, Sianipar, and Sinurat (2025) explain that students who understand sound patterns and pronunciation differences tend to produce more accurate pronunciation. Better phonological awareness can help students reduce pronunciation errors and improve communication skills.

Based on these theories, this study examines the types of phonological changes experienced by students, the factors that influence those changes, and their implications for pronunciation learning in both Indonesian and English.

B. Research Methodology

This study used a descriptive contrastive design to analyze phonological changes in Indonesian and English among second-semester students at Universitas Negeri Medan. This design was chosen because the study aimed to compare phonological changes in two languages by identifying similarities, differences, and common pronunciation problems experienced by students. According to Fitria (2024), contrastive analysis helps researchers compare language systems and identify areas where learners may experience pronunciation difficulties. This design was considered appropriate because the study focused on comparing phonological processes that occur in both Indonesian and English.

The data in this study were students' responses related to their pronunciation habits and phonological changes in both languages. The data source consisted of 10 second-semester students who were taking Indonesian and English language courses at Universitas Negeri Medan. The participants were selected purposively because they are still in the early stage of language learning

and are more likely to experience phonological interference from their first language. Most students also came from different regional language backgrounds, which made this study relevant for examining bilingual pronunciation patterns.

The main instrument used in this study was a structured close-ended questionnaire developed based on common phonological processes discussed in previous studies. Before being distributed, the questionnaire was reviewed to ensure that the questions were clear and relevant to the research objectives. The questionnaire consisted of six sections.

The first section collected demographic information and students' knowledge of phonological change. The second section examined pronunciation habits in Indonesian and English. The third section focused on phonological processes such as deletion, assimilation, metathesis, epenthesis, and epithesis. The fourth section identified common sound changes experienced by students. The fifth section explored factors influencing

phonological changes, while the final section focused on learning preferences and students' interest in phonology learning.

The data were collected during regular classroom hours. Before distributing the questionnaire, the researcher explained the purpose of the study and informed participants that their responses would remain confidential. Students were given enough time to answer all questions honestly based on their own experiences.

The data analysis was conducted in several steps. First, the responses were grouped into phonological changes in Indonesian and phonological changes in English. Second, the responses were classified based on the types of phonological processes. Third, the frequency of each phonological process was calculated using simple percentages to identify dominant patterns. The results were then presented in tables and interpreted descriptively to explain differences between phonological changes in Indonesian and English.

Through this method, the researcher was able to identify

common phonological changes, the factors influencing them, and their implications for pronunciation learning among bilingual students.

C. Results

This study was conducted among 10 second-semester students at Universitas Negeri Medan to examine phonological changes in both Indonesian and English. The findings were obtained from questionnaire responses related to students' awareness of phonological change, pronunciation habits, common phonological processes, influencing factors, and learning preferences.

First, the findings show that students have moderate awareness of phonological change. Based on the questionnaire, 7 out of 10 students (70%) stated that they had heard the term phonological change, while 3 students (30%) said that they had never heard the term or were still unsure about its meaning. This shows that most students are familiar with the term, but their understanding is still limited. Some students admitted that they only knew the concept from class discussions and still found it difficult to

identify examples in daily communication.

Second, students often experience phonological changes in their daily speech. The questionnaire showed that 6 students (60%) often unconsciously change sounds when speaking English, while 4 students (40%) said that it happens occasionally. In Indonesian, 5 students (50%) admitted that they sometimes shorten words or omit certain sounds during informal conversations.

Third, the findings show that first language interference is the main factor affecting phonological change. Based on the responses, 5 students (50%) stated that their regional language or mother tongue strongly influenced their pronunciation. Meanwhile, 3 students (30%) mentioned speaking habits and fast speech as factors that affect their pronunciation, and 2 students (20%) said that their environment and interaction with friends also influence the way they speak.

The findings also revealed several phonological processes in both languages. In Indonesian,

deletion was the most common process. Around 40% of students reported deleting final sounds in words such as *sudah* becoming *suda* and *tahu* becoming *tau*. This usually happened in casual communication because students wanted to speak more quickly and easily.

In English, epenthesis was the most common phonological process. About 50% of students reported adding vowel sounds when pronouncing difficult consonant clusters. For example, some students pronounced *school* as *sekolah* or *eschool* to make the word easier to pronounce.

Besides deletion and epenthesis, other phonological processes were also found. Around 20% of students showed signs of assimilation by changing certain sounds to become similar to nearby sounds during fast speech. Around 10% of students experienced metathesis by accidentally changing the order of sounds in unfamiliar words. Another 10% reported epithesis by adding extra sounds at the end of words to make pronunciation easier. Although these processes happened less frequently,

they show that students experience different forms of phonological change.

Another important finding is related to difficult English sounds. Four students (40%) reported difficulty in pronouncing English sounds that do not exist in Indonesian, especially /θ/, /ð/, and /v/. These sounds were often replaced with more familiar sounds such as /t/, /d/, or /f/.

The study also found that many students rarely receive pronunciation correction. Six students (60%) said that they were rarely corrected when making pronunciation mistakes, while only 4 students (40%) said they often received correction from teachers or classmates. This lack of feedback may cause students to repeat the same pronunciation mistakes.

In terms of learning preferences, 7 students (70%) preferred practical learning methods such as listening practice, speaking practice, and direct correction from lecturers. Meanwhile, 3 students (30%) preferred learning through theory.

Finally, 8 students (80%) expressed interest in learning more

about phonological change and improving their pronunciation skills. This shows that students are aware of the importance of pronunciation and are motivated to improve their speaking ability.

Overall, the findings show that phonological changes frequently occur in both Indonesian and English because of first language interference, pronunciation difficulties, speaking habits, and limited corrective feedback. The most common processes found in this study were deletion in Indonesian and epenthesis in English.

Discussions

The findings of this study show that second-semester students at Universitas Negeri Medan frequently experience phonological changes when pronouncing both Indonesian and English words. The most common phonological processes found in this study were deletion in Indonesian and epenthesis in English, followed by assimilation, metathesis, and epithesis. These findings verify that phonological change is a common phenomenon among bilingual learners who regularly use more than one

language. This result supports Diani and Azwandi (2021), who explain that speakers often modify sounds to make pronunciation easier and more familiar based on their own phonological system.

One of the strongest findings in this study is the influence of first language interference. Based on the findings, 50% of students stated that their mother tongue or regional language affected their pronunciation. This supports Selinker's (1972) theory of language transfer, which explains that second language learners often transfer sound patterns from their first language into the target language. This can be seen when students inserted vowels in English words such as school, which was pronounced as eschool or sekolah. Students tended to adjust English pronunciation to match Indonesian sound patterns because they were more familiar with them.

This finding is also supported by Jasuli, Sari, and Astuti (2025), who found that Indonesian learners often experience difficulties in pronouncing English consonant clusters. Since Indonesian has simpler phonological patterns than English, students often

add vowels or delete sounds to reduce pronunciation difficulty. This explains why epenthesis frequently appeared in English pronunciation in this study.

Deletion was another common phonological process found in this research, especially in Indonesian pronunciation. Students often omitted final sounds in words such as *sudah* becoming *suda* and *tahu* becoming *tau*. According to Fromkin, Rodman, and Hyams (2014), deletion happens when speakers simplify pronunciation during communication. This shows that phonological change does not only happen in English learning but also appears in daily Indonesian communication.

The findings also showed that students had difficulty pronouncing English sounds that do not exist in Indonesian, such as /θ/, /ð/, and /v/. Many students replaced these sounds with /t/, /d/, or /f/. This finding supports Adnyani (2021), who found that Indonesian learners often replace unfamiliar English sounds with sounds that are easier to pronounce. Crystal (2008) also explains that assimilation often occurs when speakers adjust sounds to nearby or familiar sounds for easier pronunciation.

Metathesis and epithesis were found in smaller numbers, but they still show that students use different strategies to simplify difficult pronunciation. Stageberg (1981) explains that metathesis happens when speakers change the order of sounds unintentionally, while epithesis occurs when speakers add sounds at the end of words. These processes show that pronunciation changes can happen in different forms depending on students' speaking habits and language backgrounds.

Besides linguistic factors, non-linguistic factors also influenced phonological changes. Some students stated that fast speaking habits, limited English exposure, and interaction with friends affected their pronunciation. This supports Carter and Nunan (2001), who state that language environment and speaking habits influence second language pronunciation development.

Another important finding is that many students rarely receive pronunciation correction from teachers or classmates. This may cause students to repeat incorrect pronunciation patterns. At the same time, most students preferred practical

learning methods such as listening practice, speaking practice, and direct correction. This shows that students need more active pronunciation learning activities rather than only learning phonological theory.

The findings of this study have important implications for English language learning. English lecturers should provide more pronunciation practice, listening activities, and direct corrective feedback to help students improve their pronunciation accuracy. Teachers should also introduce difficult English sounds, consonant clusters, stress patterns, and phonological differences between English and Indonesian more clearly. In addition, increasing students' phonological awareness can help them understand why pronunciation changes happen and how they can improve their speaking skills.

Overall, this study confirms that phonological changes among bilingual learners are influenced by first language interference, phonological differences between languages, speaking habits, and limited corrective feedback. Understanding these factors can help improve pronunciation teaching and support

students in developing clearer communication in both Indonesian and English.

D. Conclusions

This study investigated phonological change processes experienced by second-semester students at State University of Medan in both Indonesian and English pronunciation, including the factors influencing these changes and students' perspectives on learning phonology. The results indicate that phonological changes commonly occur in both languages. In Indonesian, the most frequent process was deletion, particularly in informal contexts where students tend to drop final sounds for ease of communication. In contrast, epenthesis was more dominant in English, as students often inserted vowel sounds to simplify the pronunciation of complex consonant clusters. Other processes, such as assimilation, metathesis, and epithesis, were also identified, although they appeared less frequently.

Moreover, the findings revealed that first language interference played

a significant role in shaping students' pronunciation patterns, followed by factors such as speaking habits, environmental influence, and the lack of corrective feedback. Although most students were somewhat familiar with the concept of phonological change, many still struggled to recognize it in actual communication. In terms of learning preferences, students tended to favor practical approaches, including speaking and listening activities with direct correction. These results suggest that both linguistic and external factors contribute to phonological changes, emphasizing the importance of improving pronunciation instruction to enhance students' phonological awareness and overall speaking performance.

Recommendations

Based on the findings of this study, several suggestions are proposed. First, English lecturers at State University of Medan are encouraged to provide more practical pronunciation activities, such as listening exercises, speaking practice, and direct corrective feedback, to help students improve their pronunciation accuracy and phonological

awareness. In addition, phonological concepts should be explained clearly and connected to real-life communication through interactive methods such as pronunciation drills, peer correction, and the use of audiovisual materials.

Furthermore, students at State University of Medan are expected to actively practice their pronunciation both inside and outside the classroom by increasing exposure to English, practicing speaking regularly, and seeking feedback from lecturers or peers. Lastly, future researchers are suggested to conduct similar studies with a larger number of participants and more varied research instruments, such as interviews or pronunciation tests, to gain deeper and more comprehensive insights into phonological changes among bilingual learners.

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