



Scrutinizing EFL Learners' English Pronunciation Oversight: A Consonant Error Analysis

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Article Info	Abstract
Accepted: 2025-07-14 Revised: 2026-06-25 Accepted: 2026-06-25 Keywords: Error Analysis, English Consonants, Phonological Interference, Pronunciation Errors, EFL Learners, Phonetic Awareness DOI: 10.24256/ideas.v14i1.7500 Corresponding authors: Muhammad Danial muhammad_danial@unsulbar.ac.id Universitas Sulawesi Barat, Majene, Indonesia	<i>Pronunciation is a substantial aspect of communicative competence in English as a Foreign Language (EFL), though systematic phonetic errors frequently disrupt understandability. The research aims to identify the types and reasons for English consonant pronunciation errors made by Indonesian EFL learners at the university level. Using a quantitative-descriptive design within an Error Analysis framework, the study investigated an oral corpus comprising 3,920 words collected from 10 pre-service English teachers through reading tasks and semi-structured interviews. Results show that substitution constitutes the most common error strategy (68%) and particularly for phonemes not present in learners' native phonetic inventory, namely dental fricatives (/ð/, /θ/) and voiced labiodental fricative (/v/). In addition, omission errors (27%) were common in the word-final consonant part, reflecting phonetic constraints and a preference for syllabic simplification, while insertion errors were rare (5%). These results underscore the role of language interference and articulatory markedness, demonstrating a paradox in achievement whereby successful attainment of general language skills does not guarantee phonological allegiance. In the context of pedagogy, this has implications for EFL curricula, specifically the incorporation of explicit phonetic awareness instruction by structuring focused articulatory interventions into syllabi to minimize systematic pronunciation errors effectively.</i>

1. Introduction

Pronunciation constitutes a fundamental component of oral communication. Acquiring proficiency in English encompasses not only the understanding of vocabulary and grammar but also the ability to pronounce words accurately and distinctly, where accurate pronunciation is a fundamental communication skill (Making, 2017). They need to pronounce English correctly to avoid misconceptions. Pronunciation is one of the substantial parts of speaking, and a vital aspect for English as a Foreign Language (EFL) students.

Learning English as a second language involves more than just learning the vocabulary and grammar used in a certain context, but also the ability to articulate words properly, so there is no doubt or ambiguity. No matter how fluent or fast an English speaker is, giving the wrong sound or pronouncing things incorrectly can tremendously alter the meaning of their words and make communication difficult. Although it is very crucial to communicate with others, it becomes a daunting challenge for Indonesian learners who often lack phonetic perfection in their pronunciation, in addition to the other challenges (Nirwana, 2021; Wahyuningsih & Maisyanah, 2021).

Pronunciation of non-native speakers is largely affected by their native language and regional linguistic background. In the Indonesian context, there are systematic articulatory deviations due to differences between the phonetic inventories of English and Indonesian, mostly known as interferences (Muchlas et al., 2026; Riswanto, 2022; Santrika & Damanik, 2025). The situation is further compounded by the various regional accents like Javanese, Bugis, Mandar and Makassar that naturally influence how learners pronounce English sounds. As a result, they frequently resort to compensation strategies like replacing colorful English consonants (e.g., the labiodental /v/ with /f/, or the dental fricatives /θ/ and /ð/ with alveolar stops /t/ and /d/) (Malah & Rashid, 2015) cited in (Habibi, 2016).

Although previous literature has identified pronunciation as a barrier to successful communication, most studies have focused heavily on one of two things: the idiosyncratic nature of spelling-to-sound correspondences for English words or suprasegmental features (e.g., misplaced stress). Therefore, there is a lack of quantitative-descriptive research that systematically outlines the predominant errors in segmental consonants among advanced learners.

And there is a major research gap regarding the proficiency paradox behind EFL education, when students who have adequate training to become proficient speakers and future teachers are still engaged in fossilized articulatory deviations. The urgency for investigating pre-service English teachers is manifested as their phonological accuracy will directly influence both their teaching efficacy and the learning outcomes of their students.

This study set out to bridge this gap by identifying and classifying errors of English consonant pronunciation made by students in their third semester of pre-service English education. This study utilized an Error Analysis framework in a way that exceeds the Value of mere mistake lists; we organized types of alteration (substitution, deletion, and insertion) to provide insights into phonotactic limitations at play, along with interlingual interference mechanisms that contribute to a nuanced view of learners' interlanguage.

2. Method

Research Design

This study utilizes a descriptive quantitative research design in the scope of Error Analysis (EA). The qualitative component was chosen to map and list the phonological errors learners produce systematically, whereas the quantitative aspect enables us to ascertain which errors dominate statistically using Corder's (1967) and Ellis' (1994) frequency formula (Corder, 1967; Kearney & Ellis, 1995). This design lies on students' interlanguage as a lens through which it provides an objective description of the distance between the L1 phonetic system and the target language.

Participants

The participants were ten undergraduate students from the English Education Department of West Sulawesi University. The respondents of the study were pre-service English teachers who had undergone a core phonology and speaking course, selected using a purposive sampling technique. In addition, these respondents were also active speakers of the indigenous language of the region. A restricted sample of the 10 participants was chosen as this type of phonological study needed an intense, high-granularity examination of the corpus and every phoneme. (Dornyei, 2007).

Instrument and Task

The main instrument for data gathering is an oral production task that comprises a reading-aloud and a semi-structured interview to capture the respondents' pronunciation. The reading text was expressly created for this study to include all English consonant phonemes in different positions (initial, medial, and final). This task assisted in keeping the data collection under control and allowed for specific target phonemes to be elicited in a systematic fashion. These interviews served as an additional source of spontaneous speech in order to determine whether or not the identified errors were consistent across different speech registers.

Data collection procedure

The data for this study were collected through high-quality video recordings to obtain phonetic clarity. All recordings were made with a digital voice recorder in a controlled, quiet environment. The procedures were conducted through various steps: (1) non-participant observation during the reading task to monitor articulatory gestures, (2) Audio recording of both the impromptu interview and the situated reading, and (3) field notes to document immediate phonetic observations, to prevent the loss or unclear data in the voice recorder. This session generated a total of 3920 words that were processed independently by rigorous transcription.

Data analysis and transcription

The analysis was based on the five-step process of Error Analysis, including: (1) corpus gathering of English language learners' samples, (2) error identification, (3) error description, (4) error explanation, and (5) error evaluation. (Corder, 1967) Further, the transcription of the recording was transcribed and analyzed using the phoneme-by-phoneme method to identify substitutions, omissions, and insertions. Among the 3920 analyzed words, 3145 (80.2%) performed a correct pronunciation, while an incorrect pronunciation was used in 775 instances (19.8%).

To measure the dominance of pronunciation errors, the study used the formula of $D = P_i - P$ where P_i represents the percentage of errors for a specific consonant and P represents the mean error rate (4.16%). To assess the reliability of the phoneme transcription and error categorization, inter-rater validation was used in the study, where an expert in phonetics acted as the validator to re-check the data analysis result.

3. Results

The analysis of the transcribed data identified a range of errors in the students' production of English consonant sounds. Out of the 3.920 total words analyzed, 3145 words (80%) were pronounced correctly, while 755 words (20%) exhibited phonological errors. Table 1. Summarizes the frequency and distribution of these errors across the 24 English consonants investigated.

Table 1: Distribution of Consonants Pronunciation Errors

No	Consonant	Frequency of Errors	Proportion (%)
1	P	2	0.26%
2	B	0	0.00%
3	m	0	0.00%
4	w	8	1.03%
5	f	3	0.39%
6	v	121	15.61%

7	θ	36	4.65%
8	ð	209	26.97%
9	t	31	4.00%
10	d	72	9.29%
11	s	52	6.71%
12	z	58	7.48%
13	n	18	2.32%
14	l	25	3.23%
15	r	5	0.65%
16	tʃ	6	0.77%
17	dʒ	20	2.58%
18	ʃ	5	0.65%
19	ʒ	30	3.87%
20	j	57	7.35%
21	k	3	0.39%
22	g	1	0.13%
23	ŋ	13	1.67%
24	h	0	0.00%
Total		775	100.00 %

Identification of Dominant Errors

To determine the dominance of specific consonant errors, this study employed a dominance index (D) calculated by the formula $D = P_i - P$. In this equation, P_i represents the error percentage of a specific phoneme, and P represents the mean error frequency across all 24 phonemes (calculated as $100\%:24 = 4.16\%$). Positive result (+) indicates a dominant error pattern, whereas a negative result (-) suggests the error is less frequent.

Thus, the result of the $P_i - P$ calculation indicates whether the given vowel is dominant or less prominent. The sum of dominant error headings (+) is ten. Fifteen mistake headings are less common than the others. Seven vowels were found to have degrees of dominance that yield advantageous outcomes based on the computation. In contrast, students often mispronounce six vowels when attempting to pronounce English consonants.

Table 2: The Dominant Error Heading

No	Consonant	Frequency	Degree of dominance (Pi-P)
1	ð	209	22.81%
2	v	121	11.45%
3	d	72	5.13%
4	z	58	3.32%
5	j	57	3.19%
6	s	52	2.55%
7	θ	36	0.49%

These errors are actually grouped around particular manners of articulation when examined intensively in terms of phonological patterns. Notably, the fricative group was most vulnerable to pronunciation errors, with the two most prevalent mistakes being the voiced dental fricative /ð/ (26.97%) and the voiced labiodental fricative /v/ (15.61%). By contrast, error frequencies for nasal sounds (/m/, /n/, /ŋ/) and glides (/w/, /j/) were much lower, indicating highly specific phonological difficulties in the students about sounds that entail more complex constriction of the vocal tract.

Delving further into Table 2, we uncover a significant difference in the relative dominance between the seven investigated consonants. The voice dental fricative /ð/ is the most extreme phonological outlier, with a dominance of 22.81%, more than five standard deviations from the mean error rate. In the 2nd place is the voiced labiodental fricative /v/ with 11.45% of dominance. Such absolute dominance of these two phonemes seems to mean that they are merely fossilized mistakes or considerable pronunciation deficiencies in the students' interlanguage.

In addition to the overall rules, there is an interesting phonetic pattern in all these dominant errors, which is the raising of voiced consonants. The reason is that out of seven dominant errors, only one is voiceless (/θ/) and the others are all voiced phonemes ([ð], [v], [d], [z], [j]). This concentration suggests that students have significantly more difficulty sustaining vibrational phonation during the articulation of complex fricatives and stops than their voiceless counterparts. The least of all errors, which is /θ/ with 0.49% of all errors, suggests that this is a transitional error while the high positive magnitudes for /ð/ and /v/ point to overwhelming phonological interference requiring focused instructional remediation.

Classification of Consonant Errors

The identified errors were classified as substitution, ommision and insertion types.

Substitution Errors: The most common type of error, found 527 times (68% of all errors). There are many notable regularities, such as the replacement of the voiced dental fricative /ð/ with the alveolar stop /d/ (e.g. without pronounced /e:ɪ'daʊt/) and the labiodental fricative /v/ with /f/. etc. The complete data is shown in **Table 3**. Ultimately, the emergence of the first two substitutions shows a simplification process; sounds invoking precise frication are being substituted for stops or voiceless equivalents, which are insubstantial within the students' articulatory tools.

Omission Errors: 208 (26.8%) omission errors occurred frequently in word-end position, for example, /d/ was left out in found (/faʊn/) and /t/ was omitted in almost (/ʌlmɒs). For the specific findings, it is elaborated in **Table 4**. These omissions serve to simplify the phonetic complexity of the target words, causing potential lexical ambiguity and decreased intelligibility in fluent speech.

Insertion Errors: The rates category, with 40 errors (5%), mainly consisted of inserting alveolar sounds, such as putting /s/ in back (/bek s/) or /z/ in lion (/lɪɒn z/), which is further elaborated in **Table 5**. The insertion might point to an innate but mistaken effort to synchronize the shape of English words with observed morphological markers or to ease transitions across syllables that speakers found difficult to execute phonetically.

Table 3: Consonant Errors of Substitution Classification

No	Consonants	Occurrence
1	P	2
2	V	121
3	θ	29
4	ð	209
5	T	8
6	S	16
7	Z	56
8	N	1
9	L	1
10	tʃ	6
11	dʒ	20
12	ʃ	5
13	ʒ	30

14	J	10
15	ŋ	13
Total		527 times

Table 4. Consonant Errors of Insertion Classification

No	Consonant	Occurrence
1	F	3
2	S	11
3	Z	1
4	N	14
5	L	5
6	R	1
7	tʃ	1
8	J	1
9	K	2
10	G	1
Total		40 times

Table 5. Consonant Errors of Omission Classification

No	Vowel	Occurrence
1	W	8
2	θ	7
3	T	23
4	D	72
5	S	25
6	Z	1
7	N	2
8	L	19
9	R	4
10	J	46
11	K	1
Total		208 times

4. Discussion

The analysis of pronunciation errors in the current study reveals a systematicity that transcends mere performance slips, highlighting the complex nature of the participants' interlanguage. Although the learners demonstrated an overall accuracy of 80% (3.145 words), the remaining 20% (775 errors) provides a critical window into the phonological hurdles faced by the Indonesian EFL learners. Within the framework of the Error Analysis study, these deviations are interpreted as evidence of a stable linguistic system influenced by both native language (L1) interference and universal phonetic markedness.

Interlingual Interference and the Phonemic Absence of Dental Fricatives

Language learners inevitably produce errors in both spoken and written forms, influenced by their native language, intralingual factors, and the learning context (Brown, 2007, p. 263) cited in (Fadhilah, 2019). In Indonesia, ethnicity significantly affects pronunciation due to the presence of numerous ethnic groups and cultures, each with unique phonetic characteristics. This variation can lead to speaking errors and alter meanings (Faliyanti & Prasesti, 2016). Non-native English speakers must exercise caution in their pronunciation of specific utterances to avoid potential misunderstandings (Algifari, 2017). Pronunciation presents challenges, particularly for non-native speakers, including individuals from Indonesia.

The most prominent finding was the dominance of substitution errors (68%), which primarily involve dental fricatives (/ð/ and /θ/). The voiced dental fricative /ð/ emerged with a dominance level of 22.81% errors, reflecting a profound phonetic issue in Indonesian EFL learners. Because these phonemes do not exist in the Indonesian phonetic inventory, learners employ an approximate sound, substituting /ð/ with the voiced alveolar stop /d/ (e.g., *that* as /dæt/). This finding is not limited to the Indonesian Context. Comparisons with Vietnamese EFL learners (Hung, 2024; Thi Kim Phuong et al., 2025) and Thai learners (Salamah & Setiawati, 2024) reveal nearly similar pronunciation issues in which the substitution strategies emerged. Meanwhile, the difficult and rare sounds pose challenges for EFL learners worldwide.

Voicing Mechanisms and Articulatory

This study indicates that participants often exhibit inaccuracies in the pronunciation of English consonants. The findings indicate that participants exhibited errors with 24 English consonants, each occurring at varying percentages, attributable to multiple factors.

The high frequency of voicing errors, specifically the replacement of the voiced labiodental fricative /v/ with its voiceless counterpart /f/ (15.16%), underscores a robust articulatory constraint. This phenomenon indicates a

struggle to maintain vocal fold vibration during the construction of the vocal tract, as elucidated in Hill & Ladefoged (1977). In the Indonesian context, /v/ is commonly threatened as an allophone of /f/, leading to a default production of the less muscularly demanding sound.

This phenomenon could be viewed as the consequence of the difference in English and Indonesian phonology, as discovered by some studies (Fitria, 2024; Kamsinah Kamsinah & Nurasia Natsir, 2025). Interestingly, this phenomenon is similar to studies about the phonological behavior of Japanese EFL learners who often make mistakes in interdental, labiodental, and voiced post-alveolar fricatives, as well as the two liquids, which are among the consonants that need to be learned. Japanese speakers of English frequently employ substitution techniques to overcome these difficulties in making English sounds.

These strategies typically involve employing Japanese phonemes that most nearly approximate the sounds that are being substituted (Yoko, 2019). These kinds of errors often become a habit because they rarely impede basic intelligibility, despite significantly affecting the speakers' perceived fluency and nativeness (Derwing & Munro, 2015).

The issue lies not only in the recognition and discrimination of sound but also in its production (Syafei, 1988, p. 16) cited in (Fadhilah, 2019). They tend to make errors in pronouncing the English consonantal sounds such as /v/, /θ/, /ð/, /ʒ/, /dʒ/, and /tʃ/ (Salwa, 2017). Even though some participants pronounced words almost exactly as they were spelled, the study's results showed that participants chose a possible pronunciation. As a result, most produced inappropriate sounds.

Phonetic Constraints and Syllabic Simplification

Omission occurs when the linguistic item that is required in the sentence is omitted or when some elements are omitted that should be present (Making, 2017, p. 15). Three mistakes involving the omission of consonants are present in this section and will be discussed in more detail. /d/, which occurred 72 times, /j/, which occurred 46 times, and /s/, which occurred 25 times, were the three consonants with the highest frequency of errors. Omission errors (26.8%) were primarily localized in word-final positions (e.g., *found* as /faʊn/), which can be elucidated through phonotactic constraints. Indonesian syllable structures are predominantly simple and lack the complex final consonant clusters of English.

This kind of error not only exists in Indonesian EFL learners but also in other non-native English-speaking countries, such as Vietnam (Disney & Nu Cam Le, 2024; Permata et al., 2025). Consequently, learners simplify these clusters to align with their L1 rhythmic templates, a strategy of syllabic simplification.

Similar trends are observed among Chinese EFL learners, where the consonant deletion is frequently observed due to the influence of the learners' mother tongue. (Danxin, 2015; Wang et al., 2025). This suggests that word-final boundaries constitute a universal zone of volatility for learners whose native

languages lack complex codas, as in Southeast Asian phonology.

5. Conclusion

This study provides a broad overview of an area in which Indonesian EFL learners experience phonological difficulties in producing English consonants. The findings demonstrate that, although learners may possess high general linguistic proficiency, their phonological competence remains highly susceptible to interlingual interference and to the inherent articulatory complexity of the target language. A systematic analysis of the 775 errors identified—almost exclusively substitutions involving dental fricatives or voicing inconsistencies—pointed to a persistent gap in learners' interlanguage development.

At a theoretical level, this investigation supports the phonemes missing in L1 (for instance, /ð/ and /θ/) as well as typologically marked attributes (such as voiced fricatives), which are shown to be the greatest barriers to successful L2 acquisition. The "proficiency paradox" that emerged, where high-level learners still made systematic segmental errors, indicates that phonological accuracy development is not a natural concomitant of increased lexical or grammatical proficiency. This highlights the importance of looking at pronunciation as a separate, but equally important, aspect of communicative competence in language instruction that must be given designated attention throughout the pedagogical process.

In practical terms, this research proposes a paradigm shift in English language teaching to support the Indonesian education system. In short, these results suggest taking a step further than the traditional imitation-based approaches and incorporating phonetic awareness, visual articulatory models, along with AI-assisted speech recognition technology that can offer near-instant feedback. Targeting the "fossilized" errors via minimal pair drills and cluster-focused instruction to improve intelligibility and the global communicative efficacy of Indonesian speakers will help educators.

Though it provides valuable insights, this study is limited due to its segmental nature and learner-specific focus. Future studies in this field should take a longitudinal perspective to examine the fossilization process across time, and try to address the relationship between segmental deformational features at the suprasegmental level (like lexical stress or intonation) for a more complete picture of EFL phonological development. In essence, bridging the phonological gap between Indonesian and English is of utmost importance in endowing learners with the essential phonetic accuracy for effective communication on a global scale.

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