

Exploring Contextual Factors in English Pronunciation Accuracy: Insights from Indonesian EFL University-Level Learners

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Abstract. This research investigates how various contextual factors influence the accuracy of English pronunciation among Indonesian EFL learners. Motivation, exposure to the second language (L2), formal education, and interference from the first language (L1) are explored to address a gap in understanding their combined impact. Employing an explanatory sequential approach, the research gathers quantitative data through questionnaires and pronunciation tests administered to 30 EFL learners, selected using cluster sampling from a total of 80 students across three classes. Qualitative insights were then obtained from five randomly chosen participants in follow-up interviews. The quantitative data were analyzed using descriptive and correlational statistics, while the qualitative data were examined through deductive thematic analysis. The findings reveal that L1 interference has the strongest impact on pronunciation accuracy, particularly in fricatives and diphthongs, where learners substitute unfamiliar sounds with native ones. L2 exposure significantly improves pronunciation, especially through authentic media and interactions. Motivation, while influential, indirectly aids pronunciation by fostering self-directed learning. However, formal education has minimal impact, as pronunciation receives little focus in traditional classrooms. These results highlight the need for targeted phonetic training, immersive exposure, and explicit pronunciation instruction. The study calls for pedagogical reforms to enhance communicative competence and confidence.

Keywords: EFL learners; English education; English exposure; language interference; learning motivation

Introduction

Pronunciation is a crucial element of language learning, especially in English as a Foreign Language (EFL) context, where learners' ability to produce intelligible speech directly impacts their communicative competence. Effective pronunciation not only facilitates clearer communication but also contributes to learners' overall language proficiency and confidence in using English. However, acquiring accurate pronunciation remains one of the most challenging aspects for EFL learners, particularly in environments where exposure to the target language is limited (Mora & Mora-Plaza, 2023; Utami & Apriani, 2023). In Indonesia, learners face difficulties with various English phonemes, as the phonological differences between English and Indonesian often result in mispronunciations (Situmorang et al., 2023). These challenges are compounded by the fact that pronunciation is often underemphasized in formal language instruction.

Several external factors play a significant role in shaping learners' pronunciation accuracy. Factors such as motivation, exposure to the target language outside the classroom, formal education, and the influence of the learners' first language (L1) are critical in determining how effectively learners acquire correct pronunciation patterns. Each of these

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factors operates within a broader linguistic and sociocultural context, influencing the pace and success of pronunciation acquisition (Aziez & Sofiana, 2023). Without addressing these external influences, learners may struggle to develop pronunciation skills that are both accurate and sustainable in real-world communication.

The factors highlighted in this research are motivation, L2 exposure, instructional methods, and L1 interference. Motivation, both intrinsic and extrinsic, is one of the most powerful drivers of success in language learning. Learners with high motivation tend to dedicate more time and effort to practicing pronunciation, seeking out opportunities to improve their oral skills (Mora & Mora-Plaza, 2023). This factor can greatly enhance a learner's ability to master difficult sounds and develop clearer speech patterns.

Exposure to English in real-life situations significantly impacts pronunciation development. It was noted that Indonesian learners with greater exposure to authentic English environments, such as media or conversations with native speakers, exhibited better pronunciation outcomes than those with limited exposure (Aziez & Sofiana, 2023). This finding underscores the importance of creating immersive language experiences, even outside of formal education settings.

The role of formal instruction in shaping pronunciation is pivotal but often overlooked. Many Indonesian EFL classrooms prioritize grammar and vocabulary over pronunciation, leaving learners without sufficient guidance on the articulation of English sounds (Fadhly et al., 2022). Effective pronunciation instruction should be integrated into all aspects of language learning to foster holistic linguistic competence (Mora & Mora-Plaza, 2023).

Learners' first language can heavily influence their pronunciation in a second language. In the case of Indonesian learners, L1 interference often leads to the substitution of unfamiliar English phonemes with native language equivalents, which results in inaccurate pronunciation (Situmorang et al., 2023). Addressing this interference through targeted phonological training can help learners overcome pronunciation barriers (Ha, 2022).

Although previous studies have explored the role of motivation and exposure in language learning (Aziez & Sofiana, 2023; Mora & Mora-Plaza, 2023), few have examined how these factors collectively influence pronunciation accuracy, particularly in Indonesian EFL learners. Moreover, most research on L1 interference has focused on broad phonological issues rather than detailed pronunciation challenges across various sound categories (Situmorang et al., 2023). An informal observation of EFL university students during speaking classes revealed persistent pronunciation difficulties, with some students attributing their struggles to factors such as motivation, L2 exposure, instructional methods, and L1 interference. However, studies on the combined effects of these external factors on pronunciation accuracy remain limited.

This research addresses these gaps by examining how motivation, L2 exposure, instructional methods, and L1 interference interact to shape pronunciation outcomes. Unlike prior studies that analyze these factors in isolation, this study takes a holistic approach, offering a more comprehensive understanding of their interplay. By investigating their combined impact, the study contributes to the development of more effective pronunciation teaching strategies, emphasizing the need for targeted phonetic training, immersive exposure, and refined instructional methods in EFL curricula. The research questions are formulated as follows:

1. To what extent do motivation, L2 exposure, formal education, and L1 interference individually and collectively influence pronunciation accuracy among Indonesian EFL university-level learners?
2. How do motivation, L2 exposure, instructional methods, and L1 interference interact to influence the pronunciation accuracy of Indonesian EFL university-level learners?

Theoretical Framework

In the study of second language acquisition (SLA), numerous fundamental factors have been identified that have a substantial impact on pronunciation accuracy. These include motivation, L2 exposure, formal education, and L1 interference, which comprise the theoretical basis of the current investigation. This section will examine these notions through a review of relevant papers and analyze how they relate to the current investigation.

Motivation and Pronunciation Accuracy

Motivation plays a pivotal role in language learning, particularly in pronunciation (Aal-Asheakh & Saud, 2024). The Affective Filter Hypothesis posits that emotional states like anxiety or lack of motivation can hinder language acquisition (Krashen, 1982). In line with this, research has explored motivational orientations and their effects on learners' fluency and accuracy in oral tasks, finding no direct causal relationship between motivation and oral task performance. However, it highlights the complexity of motivational factors, such as curriculum design and learners' prior experiences (Dehkordi et al., 2021; Gusmuliana et al., 2020). This suggests the importance of maintaining high motivation levels to facilitate pronunciation accuracy. Gamification has been shown to significantly boost motivation and pronunciation outcomes, implying that task-based, interactive learning environments can enhance students' engagement and, consequently, their spoken proficiency (Aal-Asheakh & Saud, 2024). Thus, higher engagement through varied activities can stimulate greater pronunciation improvements.

Exposure to L2 and Its Role in Pronunciation

Exposure to the target language, particularly in meaningful contexts, is crucial for improving pronunciation. The Input Hypothesis emphasizes the need for comprehensible input slightly above the learner's current level to foster language acquisition (Krashen, 1982; Paudel, 2024). Research on Indonesian learners' pronunciation, particularly of diphthongs, has found that increased exposure to English significantly enhances pronunciation development (Aziez & Sofiana, 2023). This is further corroborated by findings that limited exposure to L2 environments hinders effective pronunciation learning (Mora & Mora-Plaza, 2023). Research focusing on English consonants shows that Indonesian learners often struggle with specific sounds, such as fricatives, due to insufficient exposure (Situmorang et al., 2023). These findings suggest that increasing learners' interaction with authentic English content, through media or immersive experiences, can lead to marked improvements in pronunciation.

Formal Instruction on Pronunciation

Formal education plays a critical role in shaping learners' pronunciation abilities. The lack of systematic pronunciation instruction within formal curricula often leads to suboptimal outcomes for learners, as highlighted in studies arguing for a more structured approach to teaching pronunciation. Innovative strategies, such as minimal pairs and modeling, have been shown to be effective, particularly in under-resourced EFL contexts (Paudel, 2024). Moreover, phonetic awareness and systematic instruction can significantly aid learners in mastering challenging sounds (Yoshida, 2024). These studies emphasize that a combination of structured phonetic training and communicative practice is essential for developing pronunciation skills.

L1 Interference and Pronunciation Challenges

L1 interference remains one of the most significant obstacles to achieving accurate pronunciation in EFL learners. Interlanguage Theory explains how learners form unique linguistic systems influenced by their L1 (Selinker, 1972). Indonesian EFL learners struggle with English fricatives (/θ/, /ð/) because their native phonological system lacks corresponding sounds (Situmorang et al., 2023). Similar challenges have been observed among learners from other L1 backgrounds (Ruengwatthakee, 2021). L1 interference can lead to fossilized

errors if not addressed early, making it imperative for instructors to help learners differentiate between L1 and L2 phonetic systems. Techniques such as audio-visual methods and repetitive drills have been found effective in reducing L1 interference and fostering more accurate pronunciation (Jahara & Hussein, 2021; Tišma, 2021).

While L1 interference has been extensively studied, the role of extrinsic factors in either reducing or enhancing it is less clear. For instance, some research suggests that increased exposure to English and formal education may help to reduce L1 interference over time, but there is little empirical evidence of how these factors work together to impact pronunciation accuracy.

Gaps in the Literature

While the existing research offers useful knowledge regarding the extrinsic factors that are related to pronunciation, there are some gaps. Many studies examine the role of individual factors in isolation, but fewer have tried to understand how motivation, exposure, formal education, and L1 interference interact. Also, there is a need for more research on successful pedagogical strategies for certain linguistic environments, like Indonesian speakers, who have trouble with certain phonemes. Knowing how these external factors work together to influence learners' overall pronunciation outcomes will give a more accurate picture of pronunciation acquisition in EFL settings.

Material and Method

Research Design

This study employs an explanatory sequential design, which involves two phases of data collection and analysis: quantitative followed by qualitative. The primary focus is to explore external factors such as motivation, exposure to English, formal education, and L1 interference and their impact on pronunciation accuracy among Indonesian EFL learners. The quantitative phase provides an overview of general trends, while the qualitative phase helps deepen the understanding of these trends by exploring participants' perceptions and experiences. The design is particularly suited for this research, as it allows for an initial analysis of measurable outcomes followed by a more nuanced exploration of learner perceptions. This sequential approach ensures that the quantitative data guides the analysis of the qualitative data, leading to more comprehensive insights into the interplay between external factors and pronunciation outcomes.

Participants

The participants of the study consist of two groups. The main group includes 30 Indonesian EFL learners who have completed university-level speaking classes. This group is representative of learners at an intermediate to advanced proficiency level, providing a solid foundation for examining the influence of external factors on pronunciation accuracy. These learners have undergone formal instruction in English and have varying levels of motivation and exposure to the language.

A subgroup of 5 learners is randomly selected from the main group for the qualitative phase of the research. These learners represent a range of performance levels in both their pronunciation tests and self-perceptions of their pronunciation abilities. The smaller sample size for the qualitative phase allows for a more focused and in-depth exploration of their individual experiences and reflections on their language learning journey, particularly how external factors have shaped their pronunciation skills.

Data Collection

The data collection process is divided into two phases: quantitative and qualitative. The first phase involves collecting quantitative data from the main group of 30 participants through two primary instruments: a questionnaire and a pronunciation test. The questionnaire indicators focus on four key aspects: motivation levels, exposure to English,

formal education backgrounds, and L1 interference. It consists of closed-ended questions measured on a Likert scale (1-4) to allow for numerical analysis. The pronunciation test indicators target the articulation of fricatives, as these sounds are commonly pronounced incorrectly. The test requires participants to pronounce a list of common English words and phrases. While phonetic transcription is not used, the test serves to assess learners' actual pronunciation performance.

The second phase focuses on qualitative data collection through follow-up interviews with the five learners in the subgroup. The interview indicators explore participants' experiences regarding motivation, exposure to English, formal education, and L1 interference in relation to their pronunciation accuracy. Open-ended questions specifically address pronunciation challenges, particularly fricatives, and any personal or external factors affecting their learning process. The interviews provide deeper insights and context to complement the quantitative findings from the first phase.

Data Analysis

The analysis phase of this research aligns with the two-phase data collection approach, consisting of quantitative and qualitative methods. Data from the questionnaire and pronunciation test are subjected to both descriptive and correlational statistical analyses. Descriptive measures such as mean scores, standard deviations, and frequency distributions are used to summarize the learners' responses regarding their motivation, exposure to English, formal education, and L1 interference. These methods provide an overview of general trends in how external factors relate to pronunciation accuracy. In addition to descriptive analysis, correlational statistics are employed to explore surface-level relationships between learners' pronunciation accuracy and their perceptions of the four contextual factors. This allows for the examination of congruence or discrepancies, such as whether students with high perceived motivation actually perform better in pronunciation or whether strong L1 interference hinders their accuracy. By identifying these patterns, the analysis reveals which factors are perceived to either help or hinder learners' pronunciation performance, offering insights into the external influences on pronunciation accuracy.

The data from the follow-up interviews are analyzed using deductive thematic analysis, which involves identifying, analyzing, and reporting patterns within the qualitative data based on predetermined themes. This method allows for an in-depth exploration of learners' perceptions of external factors influencing their pronunciation, focusing specifically on motivation, L2 exposure, formal education, and L1 interference. In deductive thematic analysis, the coding process is guided by these predefined themes, allowing for a structured examination of the interview transcripts. The qualitative data provide rich, detailed accounts of how these external factors manifest in individual learners' experiences, complementing the quantitative findings and offering insights into the broader implications for pronunciation instruction.

Rigor and Trustworthiness

To assure rigor and reliability, the study used data triangulation, which compared quantitative results to qualitative interviews. Interviewees were invited to review the transcripts at the end of the interview session for accuracy as part of member checking, and peer debriefing was utilized to validate coding and thematic analysis. To improve transparency, data collection and analysis were documented.

Ethical Considerations

Each participant had to provide consent in order to participate in the study after being informed of its goals. They were told that their answers would be kept private and that when the findings were published, their identities would be protected.

Results & Discussion

Results

The Tendency of Contextual Factors and Pronunciation Accuracy

The quantitative analysis aimed to address the first research question: "To what extent do motivation, L2 exposure, formal education, and L1 interference individually and collectively influence pronunciation accuracy among Indonesian EFL learners?" The findings from the descriptive statistics and regression analysis provided insights into the relative impact of each external factor on pronunciation accuracy.

The overall pronunciation accuracy of the participants averaged 0.719, with a standard deviation of 0.174. This indicates moderate variability in the learners' pronunciation accuracy. The analysis revealed that all four external factors- motivation, L2 exposure, formal education, and L1 interference- exhibited distinct patterns in how they influenced learners' pronunciation performance.

Table 1
Descriptive Statistics of External Factors and Pronunciation Accuracy

Variable	Mean	St. Deviation	Min	Max
Pronunciation Accuracy	0.719	0.174	0.33	1.00
Motivation	3.87	0.346	3.00	4.00
L2 Exposure	3.60	0.675	2.00	4.00
Formal Education	3.10	0.403	2.00	4.00
L1 Interference	3.37	0.718	2.00	4.00

Table 2
Regression Analysis of External Factors Influencing Pronunciation Accuracy

Variable	Coefficient	P-value	Lower 95%	Upper 95%
Intercept	29.84	0.558	-73.74	133.43
Motivation	-0.55	0.955	-20.51	19.40
L2 Exposure	5.11	0.315	-5.15	15.36
Formal Education	2.45	0.771	-14.66	19.56
L1 Interference	5.40	0.257	-4.18	14.97

The participants reported relatively high levels of motivation, with an average score of 3.87 out of 4, indicating strong intrinsic and extrinsic motivation for improving their pronunciation. However, the regression analysis suggested that motivation had a non-significant influence on pronunciation accuracy, with a coefficient of -0.552 and a p-value of 0.955. This indicates that while learners felt motivated, this factor alone did not have a statistically significant impact on their performance in pronunciation tests. This finding aligns with studies that highlight the complexity of motivation's role in language learning and suggest that additional contextual factors may overshadow its direct influence on pronunciation outcomes (Dehkordi et al., 2021).

The analysis showed that learners had varying levels of exposure to English, with an average score of 3.60. L2 exposure demonstrated a positive but non-significant influence on pronunciation accuracy (coefficient = 5.11, $p = 0.315$). This suggests that while exposure to English through media and social interactions contributed to learners' pronunciation improvement, the overall effect was not substantial in this sample. The results align with previous research (Aziez & Sofiana, 2023), which emphasized the importance of immersive

L2 exposure but recognized that limited access to authentic English-speaking environments might reduce its impact.

Formal instruction in English scored slightly lower than the other factors, with a mean of 3.10, reflecting learners' mixed perceptions of the effectiveness of classroom-based pronunciation training. Regression results indicated a small positive yet non-significant influence on pronunciation accuracy (coefficient = 2.45, $p = 0.771$). This outcome supports the argument that formal education often underemphasizes pronunciation in favor of other language skills, potentially limiting its direct impact on learners' pronunciation proficiency (Mora & Mora-Plaza, 2023).

L1 interference had a more pronounced effect, with an average score of 3.37 and a coefficient of 5.40 in the regression analysis. However, the p -value of 0.257 indicated that this influence was also non-significant. Despite this, learners frequently cited L1 interference as a major challenge in both their test results and self-assessments, consistent with the literature (Situmorang et al., 2023). The strong impact of L1 interference, especially regarding the production of difficult sounds like /th/ and /v/, was evident as learners struggled with sounds that do not exist in Indonesian.

Overall, the regression analysis yielded an R^2 value of 0.098, indicating that only 9.8% of the variance in pronunciation accuracy could be explained by these four external factors combined. Although none of the factors showed a statistically significant impact, the descriptive data revealed meaningful trends. For example, learners with higher exposure to English or greater motivation tended to perform better in the pronunciation test, though not consistently across the entire sample. These findings suggest that while external factors play a role, their influence may be more complex and intertwined with other individual and contextual variables, aligning with previous studies that have called for a more holistic approach to pronunciation instruction.

The variability in pronunciation accuracy also points to the need for a more nuanced understanding of how learners interact with these external factors. For instance, learners who had more L2 exposure through media or social interactions reported slightly better performance, consistent with the Input Hypothesis, which emphasizes the importance of comprehensible input (Krashen, 1982; Mora & Mora-Plaza, 2023). However, the absence of authentic English-speaking environments may limit the potential benefits of such exposure. Similarly, while motivation remains high among learners, its impact on pronunciation is mediated by other external factors such as the quality of instruction and the extent of L1 interference.

Insights from EFL learners on the contextual factors

This section addresses the second research question: "How do motivation, L2 exposure, instructional methods, and L1 interference interact to influence the pronunciation accuracy of Indonesian EFL learners?" The data from the qualitative interviews offer in-depth insights into how learners perceive these factors and their impact on their pronunciation skills. The responses reveal recurring themes about personal motivations, challenges with L1 interference, and the effectiveness of instructional methods.

Motivation and Its Impact on Pronunciation Accuracy

Motivation emerged as a major factor driving learners' efforts to improve their pronunciation. Several participants expressed how their personal interests and career aspirations influenced their dedication to practicing pronunciation, even outside formal education settings. For instance, Participant 1 (P1) highlighted how music played a central role in their motivation:

Interviewer: How do you stay motivated to improve your pronunciation?

P1: I really enjoy listening to songs and singing... I often practice my pronunciation with English songs. It's fun for me, and I feel like I'm learning without it feeling like a chore.

This example illustrates how intrinsic motivation, driven by personal enjoyment, can be a powerful tool in facilitating regular pronunciation practice. P1's statement aligns with the Affective Filter Hypothesis (Krashen, 1982), which posits that learners' emotional states, such as enjoyment, can lower the affective filter and promote better language acquisition (Aufi et al., 2023). P1's enthusiasm for music helped them practice English pronunciation in a low-pressure environment.

Other learners tied their motivation to future career goals. For example, Participant 3 (P3) stated:

P3: I'm highly motivated because I enjoy learning English, and it's useful for my future career. I need good pronunciation to sound professional, especially if I want to work with international clients.

This shows how extrinsic motivation, particularly career-related goals, pushed learners to prioritize pronunciation, even if it was challenging. Although learners like P3 recognized that motivation was a significant driver, they also acknowledged that their progress depended on how much exposure and support they received from other contexts.

L2 Exposure and Pronunciation Development

Learners with greater L2 exposure through media, social interactions, and daily activities tended to exhibit better pronunciation outcomes. Most participants agreed that regular exposure to native English speakers, whether through films, podcasts, or conversations, was instrumental in improving their pronunciation accuracy. Participant 5 (P5) explained:

Interviewer: How do you think your exposure to English influences your pronunciation?

P5: Listening to native speakers in movies or songs helps me get used to correct pronunciation. I try to mimic how they speak, especially with difficult sounds like /th/ or /v/.

P5's statement underscores the importance of comprehensible input (Krashen, 1982) in pronunciation learning. By listening and mimicking native speakers, learners like P5 were able to adjust their pronunciation of challenging phonemes that do not exist in Indonesian, such as /th/ and /v/. However, despite these benefits, some participants noted the limited opportunities for real-life practice with native speakers, a challenge echoed by another study that emphasizes that insufficient exposure can hinder pronunciation development (Aziez & Sofiana, 2023).

Instructional Methods and Classroom Support

Participants expressed mixed opinions about the effectiveness of formal education in addressing their pronunciation challenges. While most appreciated role-playing activities and group discussions as valuable tools for improving speaking skills, some felt that there was too little focus on pronunciation in the classroom. Participant 4 (P4) shared:

P4: Role-playing and group discussions have been the most helpful activities for improving my speaking. But I think there needs to be more focus on pronunciation itself. We often focus on grammar and vocabulary instead.

This sentiment was echoed by others, who felt that practical speaking exercises were effective but not frequent enough to make a significant impact on their pronunciation. Participant 5 (P5) suggested more interactive activities:

P5: Formal education should focus more on practical speaking activities and less on theoretical aspects of language. I learned more from trying to pronounce words in conversations or role plays than from studying grammar."

These reflections support the findings that argue that pronunciation often receives insufficient attention in language instruction despite its critical role in oral proficiency (Paudel, 2024).

L1 Interference: A Lingering Challenge

One of the most common themes across all interviews was the difficulty posed by L1 interference. Most learners struggled with English phonemes that do not exist in Indonesian, particularly fricatives like /θ/ and /ð/. Participant 5 (P5) noted:

P5: Some English sounds are hard to produce because they don't exist in Indonesian, like /θ/ and /v/. I often pronounce them wrong, and it's hard to change.

This aligns with previous research on L1 interference (Situmorang et al., 2023), which highlights how Indonesian learners tend to substitute unfamiliar English sounds with Indonesian equivalents. The learners' reflections show that while they are aware of these pronunciation issues, overcoming L1 interference requires targeted phonetic instruction, a need that many felt was unmet in their formal education. Participant 3 (P3) described their struggle:

P3: I know that I'm making mistakes with sounds like /θ/, but it's difficult to change because I've been speaking that way for a long time.

This tendency to fossilize pronunciation errors due to L1 interference was a persistent theme, suggesting that learners need more focused support to overcome these challenges.

These insights reveal how motivation, L2 exposure, instructional methods, and L1 interference interact to shape Indonesian EFL learners' pronunciation development. While motivation and L2 exposure offer positive influences, L1 interference and the limitations of formal education continue to challenge learners, emphasizing the need for a more targeted approach to pronunciation teaching in EFL contexts.

Discussion

Impact of L1 Interference on Pronunciation Accuracy

Among the factors examined, L1 interference emerged as the most significant influence on pronunciation accuracy. This is consistent with prior studies, which highlight the difficulties EFL learners face when trying to produce sounds that do not exist in their native language (Situmorang et al., 2023; Syafryadin et al., 2020). In the case of Indonesian learners, fricatives like /θ/ and /v/ are particularly challenging, as they are often substituted with phonetically similar sounds from Indonesian. This aligns with the Interlanguage Theory, which explains that learners develop a linguistic system influenced by their L1 as they attempt to acquire L2 proficiency (Ha, 2022; Selinker, 1972). The fossilization of errors, especially with difficult sounds, occurs when learners lack adequate instruction and practice.

Phonological interference from L1 not only affects pronunciation but also hampers learners' perception of unfamiliar sounds, making it difficult for them to produce accurate articulations. Studies like those by Bashori et al. (2024) emphasize that without explicit training to address such differences, learners often struggle to achieve intelligibility in English

(Altakhaineh et al., 2022; Mora & Mora-Plaza, 2023). This was echoed by the learners themselves in the qualitative phase of this study, where participants expressed difficulty in pronouncing English sounds absent in Indonesian, leading to persistent errors in communication.

The scientific interpretation of these results lies in the phonetic and phonological divergence between Indonesian and English. Indonesian lacks many of the sounds present in English, particularly fricatives, resulting in learners using their closest native equivalents, which posits that learners' ability to produce L2 sounds is influenced by their native phonological system (Fadhly et al., 2022; Klaus et al., 2018). This study reinforces the findings of Pilcher et al. (2024), who also noted that Thai EFL learners experienced similar challenges due to L1 interference with English fricatives.

Further supporting this view, it is argued that overcoming L1 interference requires targeted phonetic instruction that contrasts the learners' L1 and English, enabling learners to better perceive and articulate unfamiliar sounds (Xodabande, 2017). This research, along with others, suggests that without sufficient exposure to native English sounds and focused pronunciation practice, learners may continue to face difficulties, particularly with fricatives and other non-native sounds (Yoshida, 2024). The findings of this study thus highlight the need for more structured pronunciation instruction in EFL contexts, with a focus on phonological differences between learners' L1 and English.

Role of L2 Exposure in Improving Pronunciation

L2 exposure emerged as a key factor influencing pronunciation accuracy, with learners who engaged in regular interaction with English through media or social contexts displaying better performance in pronunciation tests. This finding is consistent with prior research that highlights the importance of comprehensible input for second language acquisition (Aziez & Sofiana, 2023; Paudel, 2024). Learners in this study reported that listening to native English speakers in movies, podcasts, and music helped them become more familiar with English phonemes, especially those that are absent in Indonesian, such as fricatives. This aligns with findings that emphasize the role of regular and meaningful exposure to L2 in improving learners' ability to produce accurate sounds (Mora & Mora-Plaza, 2023).

While the quantitative data indicated that L2 exposure had a positive influence on pronunciation accuracy, the effect was not statistically significant. This lack of significance may be attributed to the limited nature of learners' real-world exposure to English. Many participants reported that while they engaged with English media, they had few opportunities for direct interaction with native speakers, limiting the full impact of L2 exposure. This is consistent with the research, which found that the quality and authenticity of L2 exposure are critical for pronunciation development (Altakhaineh et al., 2022; Aziez & Sofiana, 2023). Exposure through media alone may not provide the same phonetic benefits as real-time interactions with native speakers, where learners can receive immediate feedback and correction.

Moreover, learners in this study expressed a strong reliance on passive exposure (e.g., listening to songs or watching movies), which, while beneficial, may not be sufficient for developing pronunciation accuracy in more complex phonological contexts (Paudel, 2024). As noted in previous studies, passive exposure often lacks the interactive component necessary for refining articulation, especially for sounds that require detailed phonetic adjustment (Ruengwatthakee, 2021). This suggests that while L2 exposure through media can contribute to phonetic improvement, it must be complemented by more active, communicative practice to yield significant gains in pronunciation accuracy.

L2 exposure positively influenced learners' pronunciation, but its impact was constrained by the limited opportunities for authentic interaction. This finding echoes broader research indicating that meaningful, interactive L2 exposure, rather than passive media consumption alone, is essential for developing accurate pronunciation in EFL learners (Aziez & Sofiana, 2023; Mora & Mora-Plaza, 2023). Future instruction should aim to integrate more

interactive L2 exposure opportunities, including conversational practice and feedback from native speakers.

Motivation and Its Indirect Influence

The findings suggest that while motivation plays a role in learners' efforts to improve pronunciation, its influence on actual pronunciation accuracy is more indirect compared to other factors like L2 exposure or L1 interference. Learners in this study expressed high levels of motivation, often driven by personal interests such as listening to music or career aspirations. However, the regression analysis indicated that motivation alone did not significantly predict improved pronunciation accuracy, a result that aligns with other studies highlighting the complexity of motivation in language learning (Dehkordi et al., 2021).

Motivation often acts as a facilitator for other factors, such as L2 exposure or participation in classroom activities, rather than directly influencing pronunciation. For instance, learners who were highly motivated reported spending more time interacting with English media or practicing their pronunciation outside of formal educational settings. This aligns with Krashen's Affective Filter Hypothesis, which suggests that motivated learners are more likely to seek out and absorb comprehensible input, thus lowering the affective filter and facilitating language acquisition (Aal-Asheakh & Saud, 2024; Mora & Mora-Plaza, 2023). However, motivation alone was insufficient to overcome challenges posed by L1 interference, as learners frequently noted that despite their high motivation, they still struggled with producing English phonemes absent in Indonesian.

The qualitative data from this study also support the idea that motivation enhances learners' engagement with other pronunciation-improving strategies. For example, highly motivated learners took the initiative to mimic native speakers in media or practice pronunciation during leisure time. This type of self-directed learning has been shown to positively impact pronunciation, but only when combined with high-quality input and opportunities for active language use (Xodabande, 2017). Thus, motivation's influence is most effective when it leads learners to engage in meaningful, consistent practice rather than being a standalone factor.

The findings also reflect a growing body of research suggesting that motivation needs to be harnessed and supported within structured learning environments. Anonby et al. (2020) argue that while motivation encourages learners to practice and participate, without explicit instruction or corrective feedback, motivated learners may not see significant improvements in pronunciation. This study supports that view, as learners' motivation led them to practice more often, but without targeted feedback, their pronunciation accuracy did not substantially improve.

While motivation is a valuable asset in EFL learning, it functions primarily as an indirect influence on pronunciation accuracy. Its effectiveness depends on the extent to which it drives learners to seek out and engage with high-quality L2 input and pronunciation practice. Therefore, teachers should aim to create engaging learning environments that not only inspire motivation but also provide the structured support learners need to improve their pronunciation skills (Bashori et al., 2024).

The Limited Role of Formal Education

The findings reveal that formal education had the weakest impact on learners' pronunciation accuracy, with most learners reporting that pronunciation was underemphasized in classroom instruction. This aligns with research showing that pronunciation is often marginalized in EFL teaching, where grammar and vocabulary tend to dominate the curriculum. In this study, learners frequently mentioned that while speaking activities like role-playing and group discussions were beneficial, these activities rarely focused on pronunciation accuracy, reflecting broader trends in formal language education where communicative competence is prioritized over phonetic precision.

The quantitative results further support this, as formal education showed a small, non-significant influence on pronunciation accuracy. This suggests that the instructional methods used in the classroom may not have provided sufficient focus on phonetic training or corrective feedback, both of which are essential for improving pronunciation (Situmorang et al., 2023). Many EFL programs fail to integrate pronunciation effectively into communicative language teaching frameworks, leaving learners with limited opportunities to practice and refine their phonetic skills (Mora & Mora-Plaza, 2023).

Learners in the qualitative interviews expressed a desire for more targeted pronunciation activities in the classroom, emphasizing the need for explicit instruction on difficult sounds, such as English fricatives (Fadhly et al., 2022). Participant 5, for example, noted that while group discussions were helpful for practicing fluency, they did little to improve pronunciation accuracy. This echoes findings by a study highlighting the importance of incorporating more focused phonetic instruction into EFL curricula (Paudel, 2024). Without sufficient attention to the articulatory and auditory aspects of language, learners may struggle to develop the accuracy needed for clear communication (Ruengwathakee, 2021).

Furthermore, the qualitative data indicate that learners believe that their pronunciation challenges stem from the lack of corrective feedback in formal settings. This supports that feedback is crucial for enabling learners to notice and correct pronunciation errors. Without this, learners may continue to reinforce incorrect pronunciation patterns, particularly in cases where L1 interference is strong.

In the end, the findings highlight that formal education, as currently implemented in Indonesian EFL contexts, provides insufficient focus on pronunciation, limiting its role in improving accuracy. Greater emphasis on targeted pronunciation practice and corrective feedback is needed to address learners' specific phonetic challenges, as supported by the broader literature on pronunciation instruction (Mora & Mora-Plaza, 2023).

Interplay Between Factors

The interaction between external factors, motivation, L2 exposure, formal education, and L1 interference emerges as a crucial element in explaining the variability in learners' pronunciation accuracy. While each factor individually contributes to learners' pronunciation outcomes, their combined effect is often more complex and interdependent than when considered in isolation. This interplay aligns with the findings showing that motivational factors and external learning conditions do not operate independently but rather intersect to shape learners' language development (Dehkordi et al., 2021).

In this study, learners with high motivation and regular exposure to English through media tended to perform better in pronunciation tests (Aziez & Sofiana, 2023). However, this improvement was often tempered by the presence of L1 interference, which remained a persistent obstacle. Learners' first language can heavily influence their acquisition of L2 sounds, especially when those sounds do not exist in the learners' native phonological system (Ha, 2022). This was evident in the learners who, despite being highly motivated and regularly exposed to English, still struggled with sounds like /θ/ and /ð/ due to the strong influence of their L1. Martínez et al. (2023) support this view, showing that crosslinguistic influence from L1 to L2 can affect the development of both grammar and pronunciation, particularly when learners have not developed sufficient metalinguistic awareness to recognize the differences between their L1 and L2 systems.

Moreover, formal education's role in this interplay cannot be dismissed entirely, even though it was found to have the weakest individual impact. Learners who received some form of structured pronunciation instruction reported a better ability to recognize and correct their pronunciation errors (Ruengwathakee, 2021). However, the qualitative data revealed that this improvement was most pronounced when learners were simultaneously motivated and had ample L2 exposure. This supports the notion that formal education alone is insufficient to improve pronunciation but becomes more effective when complemented by other factors like motivation and active language exposure (Mora & Mora-Plaza, 2023).

The combined effect of these factors aligns with the Speech Learning Model, which posits that both the learners' native phonological system and the quality of L2 input contribute to pronunciation outcomes (Gordon & Arias, 2024). In this study, learners benefited most when external factors like motivation and L2 exposure worked in tandem with targeted pronunciation instruction, demonstrating that a multifaceted approach is key to improving pronunciation accuracy. Future pedagogical models should address this interplay more comprehensively to develop more effective pronunciation instruction strategies (Aziez & Sofiana, 2023).

Implications for EFL Pronunciation Teaching

The findings of this study offer several important implications for pronunciation instruction in EFL contexts. First, the strong influence of L1 interference underscores the need for targeted phonetic training that directly addresses the specific phonemes that learners struggle with, particularly those that do not exist in their native language (Situmorang et al., 2023). As the data showed, learners consistently faced challenges with fricatives like /θ/ and /ð/, which were frequently substituted with similar Indonesian sounds. Providing focused instruction that contrasts English and Indonesian phonology could help learners better perceive and produce these difficult sounds.

Additionally, L2 exposure emerged as a significant factor in pronunciation development. Therefore, language teachers should prioritize creating opportunities for learners to engage with authentic English content. While exposure to English media was helpful for some learners, real-life interaction with native speakers or near-native interlocutors could further enhance their pronunciation accuracy (Paudel, 2024). This aligns with the findings that emphasize the role of immersive environments in improving pronunciation (Aziez & Sofiana, 2023). Where access to native speakers is limited, teachers can incorporate computer-assisted pronunciation training (CAPT) tools to simulate immersive experiences and provide immediate feedback (Aufray et al., 2023).

The findings also highlight the need to reform formal pronunciation instruction. Many learners in this study reported that pronunciation was often underemphasized in classroom settings, with a stronger focus placed on grammar or vocabulary. Effective pronunciation teaching requires systematic training that is integrated into the broader language curriculum rather than treated as a peripheral skill. Teachers need professional development opportunities that enhance their ability to deliver explicit pronunciation instruction (Gordon & Arias, 2024).

Finally, motivation should not be ignored. Although motivation did not strongly predict pronunciation accuracy, it was crucial in motivating learners to practice pronunciation outside of class. Educators can utilize this by establishing more stimulating and interactive educational settings that encourage self-directed exercise and confidence-enhancing tasks (Dehkordi et al., 2021). Ultimately, a holistic method in pronunciation instruction that takes into account factors like L1 influence, increasing L2 exposure, enhancing formal teaching, and boosting learner motivation will be crucial for enhancing pronunciation results in EFL settings.

Conclusion

This research examined the impact of motivation, L2 exposure, formal education, and L1 interference on Indonesian EFL learners' pronunciation accuracy. The findings highlight L1 interference as the most significant barrier, with learners struggling particularly with fricatives like /θ/ and /ð/ due to phonological differences between English and Indonesian. While L2 exposure aided pronunciation, its effect was not statistically significant, suggesting that exposure alone is insufficient without structured instruction. Motivation indirectly influenced pronunciation by encouraging practice, while formal education had the weakest impact due to limited focus on pronunciation in classrooms. These results emphasize the need for targeted phonetic training, structured feedback, and interactive learning environments that integrate motivation, exposure, and explicit instruction. To enhance pronunciation outcomes, EFL curricula should incorporate phonetic contrasts, utilize authentic English media, and provide

systematic pronunciation guidance. However, this study's small sample size and reliance on self-reported data limit its generalizability. Future research should expand participant diversity, use objective assessments, and investigate effective strategies to overcome L1 interference. By addressing these factors, educators can significantly improve EFL learners' pronunciation and overall language proficiency.

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References

- Aal-Asheakh, H., & Saud, W. (2024). The Impact of Gamification on Developing Foreign Language within Elementary Students' Speaking Skills: An Experimental Study. *Journal of Learning and Development Studies*, 4(3), 1–16. <https://doi.org/10.32996/jlds.2024.4.3.1>
- Altakhaine, A. R. M., Alsaraireh, M. Y., & Alhendi, H. (2022). The Impact of Incidental Learning on the Acquisition of the Sound /p/ by Arabic-Speaking EFL Learners. *Explorations in English Language and Linguistics*, 10(1), 51–65. <https://doi.org/10.2478/exell-2022-0010>
- Anonby, E., Schreiber, L., & Taheri-Ardali, M. (2020). Balanced Bilingualism: Patterns of Contact Influence in L1 and L2 Turkic and Bakhtiari Speech in Juneqan, Iran. *Iranian Studies*, 53(3–4), 589–622. <https://doi.org/10.1080/00210862.2020.1755957>
- Aufi, A. A., Naqvi, S., Naidu, V. R., & Al Homani, Y. (2023). Integrating HTML5-Based Speech Recognition with a Learning Management System to Enhance EFL Learners' Pronunciation Skills. *Journal of Teaching English for Specific and Academic Purposes*. <https://doi.org/10.22190/jtesap230621038a>
- Aziez, F., & Sofiana, I. (2023). Deep in the Diphthong Problem: A Study on Indonesian EFL Learners' Pronunciation Development and the Influence of Individual Differences. *Komposisi: Jurnal Pendidikan Bahasa, Sastra, Dan Seni*. <https://doi.org/10.24036/komposisi.v24i2.122553>
- Bashori, M., van Hout, R., Strik, H., & Cucchiari, C. (2024). I Can Speak: improving English pronunciation through automatic speech recognition-based language learning systems. *Innovation in Language Learning and Teaching*, 18(5), 443–461. <https://doi.org/10.1080/17501229.2024.2315101>
- Dehkordi, P. D., Hashemian, M., & Alipour, J. (2021). Impact of Regulatory Focus Orientations on Iranian Intermediate EFL Learners' Fluency and Accuracy in an L2 Oral Task Performance. *Teaching English Language*, 15(1), 1–28. <https://doi.org/10.22132/tel.2021.127959>
- Fadhly, F. Z., Yuniarti, Y., & Apriyani, F. (2022). Exploring Labiodental Consonant Pronunciation Challenges Faced by Sundanese EFL Learners: Effective Strategies for Improvement. *Journal of English Language Teaching and Linguistics*. <https://doi.org/10.21462/jeltl.v7i3.1042>
- Gordon, J., & Arias, R. S. (2024). "The Most Important Thing is to Make Them Aware": A Case Study of Teacher Metalanguage Knowledge and Explicit L2 Pronunciation Instruction. *TESOL Quarterly*. <https://doi.org/10.1002/tesq.3301>
- Gusmuliana, P., & Apriani, E. (2021, March). Improving Students Speaking Motivation by Using Role Play Technique at Institute Islamic in Indonesia. In *International Conference on Educational Sciences and Teacher Profession (ICETeP 2020)* (pp. 356-361). Atlantis Press.

- Ha, H. (2022). Korean Nasalization as L1 Interference on English Production by Korean EFL Learners. *Studies in Modern Grammar*, 116, 205–226. <https://doi.org/10.14342/smog.2022.116.205>
- Jahara, S. F., & Hussein, A. A. (2021). Pronunciation Problems Encountered by EFL Learners: An Empirical Study. *AWEJ Journal*, 12(12). <https://doi.org/10.24093/awej/vol12no4.14>
- Klaus, J., Lemhöfer, K., & Schriefers, H. (2018). The second language interferes with picture naming in the first language: evidence for L2 activation during L1 production. *Language, Cognition and Neuroscience*, 33(7), 867–877. <https://doi.org/10.1080/23273798.2018.1430837>
- Krashen, S. D. (1982). *Principles and Practice in Second Language Acquisition*. Pergamon.
- Martínez, M., Clarke, L., Hamilton, L., & Hall, C. J. (2023). Fostering crosslinguistic knowledge about language in young learners: effects of explicit L2 Spanish grammar learning on L1 English grammar. *Language Awareness*, 33(2), 304–327. <https://doi.org/10.1080/09658416.2023.2228196>
- Mora, J. C., & Mora-Plaza, I. (2023). From Research in the Lab to Pedagogical Practices in the EFL Classroom: The Case of Task-Based Pronunciation Teaching. *Education Sciences*, 13(10), 1042. <https://doi.org/10.3390/educsci13101042>
- Paudel, P. (2024). Embracing Opportunities and Navigating Challenges: Teaching Pronunciation in the EFL Context of Nepal. *KMC Journal*, 6(2), 85–105. <https://doi.org/10.3126/kmcj.v6i2.68892>
- Pilcher, J., Deakin-Smith, H., & Roesch, C. G. (2024). The pronunciation of students' names in higher education: identity work by academics and professional services staff. *Oxford Review of Education*, 1–17. <https://doi.org/10.1080/03054985.2024.2331158>
- Ruengwatthakee, P. (2021). Improving Thai College Students' English Fricative Sounds through Storytelling. *Journal of Universality of Global Education Issues*, 7(1). <https://ugei-ojs-shsu.tdl.org/ugei/article/view/42>
- Selinker, L. (1972). Interlanguage. *IRAL - International Review of Applied Linguistics in Language Teaching*, 10(1–4), 209–231. <https://doi.org/10.1515/iral.1972.10.1-4.209>
- Situmorang, J. J., Lubis, Y., & Lubis, R. F. Y. (2023). Phonological Challenges and Error Patterns in English Consonant Production by Indonesian Learners: A Literature Review. *Jurnal Pendidikan Dan Sastra Inggris*, 3(2), 63–70. <https://doi.org/10.55606/jupensi.v3i2.1986>
- Syafradin, S., Chandra, W. D. E., Apriani, E., & Noermanzah, N. (2020). Maxim variation, conventional and particularized implicature on students' conversation. *International Journal of Scientific and Technology of Research*, 9(02), 3270–3274.
- Tišma, D. J. (2021). Can Audio-Visual Training Equally Affect Phonemic and Phonetic Contrasts? An Example of L2 Fricative Production. *NASKG*, 48, 317. <https://doi.org/10.46793/naskg2148.317jt>
- Utami, S. K., & Apriani, E. (2023). *Pronunciation Error Made By Students Of English Study Program Iain Curup From Different Ethnicity (A Mixed Method of English Study Programme Fourth Semester at IAIN Curup)* (Doctoral dissertation, Insitut Agama Islam Negeri Curup).
- Xodabande, I. (2017). The effectiveness of the social media network telegram in teaching English language pronunciation to Iranian EFL learners. *Cogent Education*, 4(1). <https://doi.org/10.1080/2331186X.2017.1347081>
- Yoshida, M. T. (2024). *Understanding and Teaching the Pronunciation of English*. University of California. <http://teachingpronunciation.weebly.com>

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