

ARTICLE

## Improving Pre-service students' Pronunciation with Shadowing Technique

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### ABSTRACT

This study investigates the effectiveness of the shadowing technique in enhancing pronunciation skills among pre-service teachers at the Universidad Técnica Estatal de Quevedo, Ecuador. Recognizing the persistent challenges that Ecuadorian EFL (English as a Foreign Language) learners face in acquiring proficient and intelligible pronunciation, this research focuses on applying the shadowing technique to improve their overall oral communication abilities. Shadowing, which involves the immediate repetition of heard speech, has gained attention for its potential to develop listening and speaking skills simultaneously. By employing a quasi-experimental design, the study enlisted 39 pre-service teachers who engaged in a structured ten-week shadowing intervention program. Participants were divided into control and experimental groups, with the latter partaking in intensive shadowing sessions based on curated audiovisual materials that reflected authentic spoken English. Pre-test and post-test assessments were conducted to measure changes in pronunciation using a comprehensive rubric that evaluated intelligibility, articulation of individual sounds, word and sentence stress, rhythm, and intonation patterns. Results indicated statistically significant improvements in all phonological aspects among the experimental group, surpassing those observed in the control group. This study contributes to the growing body of empirical evidence supporting the efficacy of shadowing as a pedagogical tool, especially for EFL contexts, and highlights its value in pronunciation-focused language instruction.

**Keywords:** Shadowing; Pronunciation; Pre-service Teachers; Ecuador

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## 1. Introduction

Speaking is a fundamental aspect of human interaction and is crucial in various domains, including language acquisition, social engagement, and cognitive processes. Chomsky argues that speaking is a vital component of language use, essential for expressing thoughts, ideas, and intentions<sup>[1]</sup>. In his view, the ability to produce and comprehend speech is a necessary aspect of human communication. Additionally, speaking is also relevant in the development of intercultural communication skills. However, it is worth noting that listening and speaking skills are often overlooked in the university context. Liontas and Siegel<sup>[2]</sup> suggest that providing opportunities for face-to-face intercultural communication in the classroom can be beneficial, highlighting the importance of incorporating speaking activities into language learning environments.

In the Ecuadorian context, learners are introduced to English from primary school onward<sup>[3]</sup>; however, by the time they reach university, many continue to struggle with speaking proficiency. Common challenges include limited vocabulary, grammatical inaccuracies, pronunciation difficulties, and anxiety about making errors<sup>[4]</sup>. These issues are particularly pronounced among students in the Pedagogy of National and Foreign Languages program at Universidad Técnica Estatal de Quevedo—pre-service teachers who are preparing to become future educators of English.

This specific group represents a crucial but understudied population in the field of pronunciation development. Unlike general EFL learners, pre-service teachers must not only attain high levels of oral proficiency but also model correct pronunciation for their future students. Thus, improving their speaking skills, particularly pronunciation, is not merely beneficial but essential for their professional identity and instructional competence.

Despite growing interest in the Shadowing technique as a strategy for improving pronunciation, fluency, and listening skills, few studies have examined its effectiveness with pre-service teachers. The existing body of research focuses largely on general language learners or intermediate-level students, without addressing the unique pedagogical and performance demands faced by those preparing to teach English. This gap in the literature highlights the need for targeted research on instructional methods that can support the oral development of future language teachers.

In response to this need, this study aims to evaluate the impact of the Shadowing technique—a method involving repetitive and synchronous listening and speaking—on the pronunciation skills of pre-service EFL teachers. The study is guided by the following research question:

1. To what extent does using the Shadowing Technique improve the pronunciation of EFL pre-service teachers of the Pedagogy of National and Foreign Languages career at Universidad Técnica Estatal de Quevedo?

By focusing on this distinct population, the study seeks to contribute to the growing body of literature on effective pronunciation instruction and provide practical insights for language teacher education programs.

## 2. Literature Review

### 2.1. English Speaking Skills

Speaking skills are crucial for successful communication in a foreign language, and as such, they should be developed from the onset of language learning<sup>[5]</sup>. Acquiring proficiency in speaking is vital for effective communication in a foreign language, frequently serving as a primary objective for language learners<sup>[6]</sup>. Moreover, these speaking abilities are crucial in various real-life scenarios, such as job interviews, presentations, and social interactions<sup>[7]</sup>. Further emphasizing this importance, speaking is considered an active or productive skill, implying that students are fully immersed in the learning process. This hands-on learning requires students to generate sentences independently, necessitating ample practice and acquiring a wide range of concepts related to grammar, vocabulary, sentence structure, and practical usage<sup>[8]</sup>.

Numerous individual-specific factors can potentially impact how learners develop their proficiency in speaking a second language (L2)<sup>[9]</sup>. These variables can range from age, ethnic group affiliation, first language, and experiences studying abroad to their willingness to communicate. Therefore, in addressing L2 speaking development, it is necessary to incorporate a review of variables based on phonology, fluency, and sociolinguistics. The challenge in defining L2 speaking as a construct is congruent with the complexity of the variables contributing to L2 speaking development. Much of the research, including that conducted by Crowther

and Gass<sup>[10]</sup>, underscores this complexity, frequently situating English as the target language for acquisition.

Amoah and Yeboah<sup>[4]</sup> recommend that EFL learners enhance their motivation and develop English oral proficiency by engaging with English speakers and immersing themselves in English-language content, such as native English movies, news, documentaries, and TED talks. Creating an environment conducive to English language acquisition is crucial for learners. In addition to addressing psychological barriers to speaking, teachers should emphasize other vital aspects of language learning. This includes encouraging students to devote time to activities like reading literature, studying grammar, practising pronunciation, and expanding their vocabulary. It is worth noting that this challenge is common to the Ecuadorian context; in countries like Thailand, many students prioritize communication skills while neglecting aspects like pronunciation<sup>[11]</sup>.

## **2.2. Pronunciation and Its Importance in Communication**

Pronunciation is a crucial component of effective oral communication<sup>[12]</sup>. It refers to the production and perception of speech sounds in a particular language. It encompasses the skills that enable speakers to reproduce individual sounds, rhythm, stress, and intonation of a language clearly and understandably. Pronunciation plays a crucial role in effective communication, as poor sound management can impact the in-Ter locutor's ability to understand and interpret the message.

Assisting learners in establishing pronunciation objectives rooted in real-world applications constitutes a valuable aspect of the teaching role, setting them on a successful language learning path<sup>[13,14]</sup>. Pronunciation, an integral facet of language and communication, conveys diverse types of meaning and encompasses linguistic competence at both micro and macro levels, including speech production and perception<sup>[15]</sup>. It is essential to note that pronunciation extends beyond mere correct articulation; it encompasses multiple layers of language proficiency and various forms of communicative competence.

Clarke-Jones<sup>[13]</sup> noted a need for more research on incorporating personalized pronunciation goal setting within classroom settings. Although this method was recommended, there was a need for documented studies investigating how

instructors could proficiently guide this process. It is worth noting that the significance of precise pronunciation becomes apparent when considering that effective communication success is contingent upon intelligibility, denoting the degree to which conversational partners genuinely comprehend the intended message<sup>[16]</sup>. Additionally, fluency training is equally crucial when evaluating and cultivating comprehensible speech that resembles native pronunciation.

In evaluating global L2 English pronunciation skills, there are typically two related yet somewhat separate aspects to consider. One is comprehensibility, which concerns how easily the pronunciation can be understood, and the other is accentedness, which deals with how closely it resembles native-like pronunciation in terms of sounds<sup>[16]</sup>. The existing body of research provides insights into how factors related to fluency, such as the speed of speech and the frequency of pauses, play a significant role in explaining a substantial portion of the variability in how listeners perceive comprehensibility<sup>[17]</sup>. This information highlights the interconnected nature of these elements when aiming to achieve effective pronunciation and communication in English as a second language.

### **2.2.1. Intelligibility**

As defined by Kang et al.<sup>[18]</sup>, intelligence is a critical aspect of effective English communication, particularly for non-native speakers. It refers to a native listener's ability to accurately identify linguistic elements in a speaker's message, indicating their capacity to grasp the intended message. This concept distinguishes itself from comprehensibility and accentedness. Comprehensibility relates to how easily a listener comprehends the message, while accentedness measures variations in pronunciation between the speaker and listener. Lascotte and Tarone<sup>[19]</sup> discovered that L2 English learners could blend their language ego boundaries with their model speakers, achieving a closer match to desired pronunciation patterns when generating their messages.

Inadequate pronunciation can lead to misunderstandings, frustration, and discomfort, especially in professional or academic settings<sup>[18]</sup>. Research indicates that unclear pronunciation can result in negative perceptions of non-native speakers' competence and intelligence. Therefore, enhancing intelligibility is crucial for confident communication in English-speaking situations. The concept of intelligibility has been debated among those assessing the acceptability of

different English varieties, even preceding the emergence of the term “world Englishes”<sup>[20]</sup>.

Intelligibility in English communication is influenced by the familiarity of speakers, whether native or non-native, with a particular English variety<sup>[20]</sup>. This familiarity enhances mutual understanding between speakers and members of the speech community, promoting effective communication. Understanding is a dynamic, interactive process between speakers and listeners. It encompasses three categories: intelligibility (recognition of individual words or utterances), comprehensibility (grasping the meaning conveyed), and interpretability (understanding deeper meaning or intent)<sup>[20]</sup>. When speakers struggle with segmental aspects like individual sounds, instructors may prioritize pronunciation drills or phonetic exercises<sup>[18]</sup>.

### 2.2.2. Stress, Rhythm, and Intonation in the English Language

Effective pronunciation in the English language requires mastery not only of individual sounds but also of suprasegmental aspects such as stress, rhythm, and intonation.

Stress is fundamental in English, as it helps speakers emphasize keywords and convey meaning clearly. According to Celce-Murcia et al.<sup>[21]</sup>, “word stress is used to highlight the most important syllable in a word, while sentence stress is used to highlight the most important words in a sentence” (pp. 201). This strategic use of stress prevents misunderstandings and facilitates comprehension. Additionally, Gilbert<sup>[22]</sup> states that the proper use of stress is essential for achieving natural and convincing pronunciation in English, which is crucial for effective communication.

The natural rhythm of English, characterized by alternating between stressed and unstressed syllables, is another key element of pronunciation. Ladefoged and Johnson<sup>[23]</sup> explain that this rhythmic pattern forms “feet” or groups of syllables (pp. 259). A fluent and natural rhythm helps speakers sound more native-like and convey their message more clearly and persuasively. Underhill<sup>[24]</sup> emphasizes that appropriate rhythm is fundamental for effective communication in English, as it contributes to intelligibility and the overall perception of fluency.

Intonation, the patterns of tone and melody throughout a sentence, also plays a crucial role in English pronunciation. According to Halliday and Greaves<sup>[25]</sup>, intonation

allows speakers to convey meaning, attitude, and emotion in their discourse. Appropriate intonation helps interlocutors understand the speaker’s intentions and respond accordingly. Hewings (2018)<sup>[26]</sup> highlights that natural and convincing intonation is essential for effective communication in English, as it facilitates the clear and authentic expression of ideas and feelings.

Mastering stress, rhythm, and intonation is fundamental for achieving effective pronunciation in English. These suprasegmental elements enable speakers to convey their messages in a clear, convincing, and conventionally appropriate way, which is crucial for successful communication<sup>[27]</sup>.

### 2.3. Shadowing Technique

Initially, shadowing was employed as a training method for novice interpreters to help them learn to listen and speak in their target language<sup>[28]</sup>. Lambert<sup>[29]</sup>, a trailblazer in the study of shadowing within English as a Foreign Language (EFL) setting, defined it as a paced, auditory tracking task that involves the immediate vocalization of auditorily presented stimuli, i.e., word-for-word repetition in the same language, parrot-style (pp. 266). Ginting<sup>[30]</sup>, on the other hand, described it as a dynamic and cognitively demanding task. Thus, this technique is an on-the-fly activity that necessitates learners to immediately vocalize the speech they hear, leaving minimal time to grasp its meaning as they go along.

Some researchers in the language teaching field have demonstrated the benefits of using this technique in class<sup>[31–37]</sup>. Hamada<sup>[32]</sup> explored the effectiveness of two shadowing-based techniques for enhancing pronunciation skills in Japanese university students. The study involved 58 participants divided into two groups, each using one of the shadowing techniques across 15 sessions. The findings indicated that both methods significantly improved students’ pronunciation comprehensibility and segmental features, with the Haptic-Shadowing (H-SH) group also showing improvement in suprasegmental features. An exploratory factor analysis assessed learners’ perceptions of the techniques, revealing a positive reception and a preference for the novelty and engagement offered by these methods. These results suggested that integrating specific shadowing techniques into pronunciation instruction can effectively enhance learners’ spoken language skills and engagement with learning. Ulfa<sup>[37]</sup> explored the application of the shadowing technique

to improve pronunciation skills among senior high school students. Results from the study indicate that the shadowing technique helped improve students' pronunciation and increased their confidence and engagement in learning English. The technique was demonstrated to be particularly effective in enhancing the classroom environment's interactivity and liveliness, while providing students with a practical, hands-on approach to mastering pronunciation. The study concluded that shadowing can significantly enhance students' oral language skills and motivation to learn when properly integrated into the classroom with appropriate audio materials and clear instructions.

Further, Salim et al.<sup>[35]</sup> demonstrated the effectiveness of the shadowing technique in improving pronunciation, grammar, and vocabulary among senior high school students. A quasi-experimental design with a control group was employed, involving 70 participants. Results highlighted a significant improvement in the experimental group's pronunciation abilities, as evidenced by t-test results (4.077), which significantly exceeded the critical value (2.021) at a 95% confidence level. Conclusively, the shadowing technique boosted pronunciation skills and increased student motivation and engagement, making it a valuable method for educators in language teaching.

## 2.4. Innovation

The aforementioned studies were conducted in various settings worldwide. Still, most studies investigated the same group of participants, revealing a gap in the literature on pre-service teachers. According to Hamada<sup>[38]</sup>, further research needs to be carried out to study the effects of the strategy over periods of time longer than one month. Thus, the present study contributes to the field as obtained and analyzed results explore the strategy's influence on speaking and listening performance of students in a period of 5 months. Therefore, the analysis provided in this report can broaden the understanding of the scope of shadowing as a pedagogical strategy.

Moreover, the participants of the study belong to different backgrounds in a context where varied English proficiency levels can be found, ranging from A1 to B1+. Additionally, the fact that the participants of the study are future English teachers and that they can boost their confidence and speaking performance through shadowing<sup>[39]</sup>, is a signifi-

cant contribution in a context where English teachers show a lack of confidence when speaking due to several factors, including L1 interference when talking<sup>[40]</sup>, a factor that can potentially hinder the quality of the English Learning experience. Thus, the present strategy contributes to the study of pre-service teachers' increment of communication mastery through the shadowing technique.

Finally, the generalization of previous studies to the Ecuadorian context, specifically the one in which the study was done, is not recommendable. Most of the studies regarding the applied strategy have been reported from Asian countries where people have different cultures, access to education, and different English pronunciation challenges. For instance, Japanese learners usually add certain vowels at the end of given words<sup>[41,42]</sup>; Indian pupils show difficulties with rhotic sounds which influence different varieties of pronunciation among them<sup>[43]</sup>. On the other hand, Ecuadorian students struggle with fricative sounds making them to confuse vowels; ending in reduced intelligibility. Therefore, these cultural and challenges differences make the studied population unique for the research. Although, when there are learners with challenges similar to the ones faced by Ecuadorian students<sup>[44]</sup> outcomes obtained in the context present differences<sup>[45]</sup>. Therefore, the following research analyses different criteria evidencing different results<sup>[39]</sup>, that can open the way for further discussion and research.

## 3. Materials and Methods

### 3.1. Research Design

This investigation used a quantitative approach to improve academic achievement by using proven methods<sup>[46]</sup>. Action research with an experimental design was conducted to collect data from the target population involved in a ten-week program using the Shadowing technique. According to Gay et al.<sup>[47]</sup>, action research aims to provide teacher researchers with a systematic approach to addressing educational challenges that enhance student learning and teacher effectiveness. Action research also empowers teachers through a dynamic process of identifying problems, planning an intervention, implementing the intervention, and evaluating the outcome, which becomes a reflective practice<sup>[48]</sup>. To answer the research questions, action research was conducted with a pre-posttest research design using a quantitative approach. A

pre-test/post-test design provides valuable information about the effectiveness of the intervention process<sup>[49]</sup>.

### 3.2. Participants

The target population was 41 conveniently chosen Ecuadorian pre-service teachers enrolled in the fourth semester of the Pedagogy of National and Foreign Languages program at a public university in the coastal area of Ecuador. The undergraduate students were enrolled in the course under “English IV”. It was an intensive English course of six hours per week that aimed to develop students’ proficiency at a B2 level. The students range in their English level from A1 to B1+, with some struggling to refine pronunciation in speaking skills. Out of 41 enrolled students in the course, 39 agreed to participate. At the end of the study, the data were collected from 16 students who fully attended all sessions. There were an equal number of females (n = 8) and males (n = 8), and all participants were between 18 and 24 years old. All of them were native Spanish speakers with no previous knowledge of the Shadowing technique.

### 3.3. Context of the Study

Following the principles of action research, systematic observations and data collection were conducted to guide reflection, inform decision-making, and develop a targeted classroom strategy to address pronunciation difficulties among EFL pre-service teachers<sup>[50]</sup>. This intervention emerged from the instructor’s detailed observations, which revealed that several students faced challenges in speaking tasks such as role-plays and classroom presentations. These

challenges, supported by evidence including audio recordings, prompted further investigation into the issue and the exploration of potential solutions. After an in-depth review of relevant literature, the shadowing technique was identified as a promising strategy to enhance speaking proficiency and was subsequently proposed as part of an action research project. The initiative, titled “Shadowing through the Use of Technology to Improve Speaking Skills,” was formally approved by the University<sup>[39]</sup> and implemented as a classroom-based intervention<sup>[51]</sup>.

### 3.4. Procedure

Data collection took place over ten weeks from November 2022 to March 2023. A structured pre-test assessed participants’ pronunciation skills before and after implementing the shadowing technique. For the preliminary analysis (pre-test), participants were instructed to read and record a phrase sourced from a YouTube video. 34 participants attended the day of the pre-test. The shadowing program was implemented over ten weeks of practice, with one video from the YouTube channel “Learn English With TV Series”; the video was provided each week by the teacher at the beginning of the week. The students practised twice a week in a face-to-face session. The procedural practice is illustrated in **Figure 1**. A standard shadow was used, which means simultaneously repeating what is heard<sup>[27]</sup>. Then, following the intervention, a post-test was administered at the end of the program to gauge participants’ progress in pronunciation skills through the shadowing technique. The post-test mirrored the pre-test structure and was conducted in a face-to-face setting.

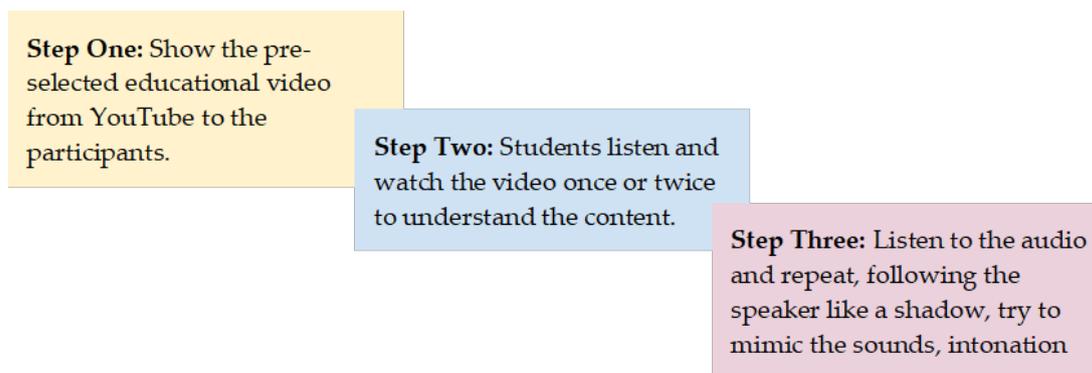


Figure 1. Practice process.

### 3.5. Data Collection and Analysis

A structured pre-test assessed participants' pronunciation skills before and after implementing the shadowing technique. This pre-test involved the reading and recording of a phrase sourced from a YouTube video and was administered to 34 participants on the test day. Then, following the intervention, a post-test was administered at the end of the program to gauge participants' progress in pronunciation skills through the shadowing technique. The post-test mirrored the pre-test structure and was conducted in a face-to-face setting.

In both tests, the rubric used to evaluate pronunciation was adapted from the one employed by Cambridge Assessment. The rubric included overall intelligibility, individual sounds, stress, rhythm, and intonation as phonological descriptors. The descriptors were assigned scores from one to six (See **Appendix A**). Each recording was analyzed and received a mark according to the rubric for each criterion. Each recording in the pre- and post-test was examined twice by the researchers to verify each participant's performance.

Subsequently, the data obtained from the pre-test and post-test underwent rigorous statistical analysis using SPSS software, with a confidence level set at 95%. This approach ensured a thorough evaluation of the impact of the shadowing technique on participants' pronunciation skills and provided valuable insights into the intervention's effectiveness.

### 3.6. Ethical Considerations

The results show that, in terms of intelligibility, participants' pronunciation was generally understood, conveying meaning adequately. Then, although there may be occasional problems for listeners, individual sounds are generally clear. Stress, rhythm, and intonation also show an adequate expression of meaning (see **Appendix A**)

Notably, a statistical test was conducted to compare the results before and after the intervention. A hypothesis test

This study received ethical approval from Quevedo State Technical University, aligning with the university's rigorous ethical standards. Throughout the research process, a steadfast commitment to ethical principles was maintained, particularly in safeguarding the confidentiality of the participants. Additionally, the ethical corner-stone of informed consent and voluntary participation remained unwavering. Before the intervention, exhaustive information about the study was meticulously provided to the participants, ensuring clarity about its objectives and aims. Participants were also explicitly informed of their rights in the study and were assured of their freedom to withdraw at any point. To further reinforce ethical transparency, participants who willingly expressed interest were invited to engage in interviews and were asked to formalize their participation through signed consent forms, reinforcing the study's ethical integrity.

## 4. Results and Discussion

This research aimed to evaluate the effectiveness of the Shadowing technique in enhancing pre-service teachers' pronunciation. The results in **Table 1** provide a detailed reflection of the improvements observed in each speaking phonological descriptor. Specifically, students exhibit significant pronunciation enhancement in the post-test in the following order: pronunciation of individual sounds ( $M = 4.50, SD = 0.89$ ), overall intelligibility ( $M = 4.44, SD = 1.31$ ), and finally, stress, rhythm, and intonation ( $M = 4.13, SD = 1.41$ ).

**Table 1.** Results by individual criterion.

|                                 | Pre-test |      | Post-test |      |
|---------------------------------|----------|------|-----------|------|
|                                 | Mean     | SD   | Mean      | SD   |
| Overall Intelligibility         | 3.38     | 1.09 | 4.44      | 1.31 |
| Individual sounds               | 3.25     | 0.86 | 4.50      | 0.89 |
| Stress, rhythm, and intonation. | 3.50     | 0.82 | 4.13      | 1.41 |

for the difference between the two means was applied, with a significance of 5%.

Hypothesis:

**H0.** *There has been no change in the average scores on the students' skills test.*

**H1.** *There is a change in the average scores on the students' skills test.*

**Table 2** shows the results from the paired sample t-test, which indicates a statistical improvement in pre-service teachers' pronunciation using the shadowing technique between the pre- (M = 10.13, SD = 2.217) and post-test (M = 13.06, SD = 3.214) of the participants.

**Table 2.** Paired Sample Statistics.

|        |           | Mean  | N  | Std Dev | Standard error |
|--------|-----------|-------|----|---------|----------------|
| Pair 1 | Pre-test  | 10.13 | 16 | 2.217   | 0.554          |
|        | Post test | 13.06 | 16 | 3.214   | 0.803          |

The increase in the mean scores in the post-test serves as evidence that the shadowing technique has achieved its objective, facilitating the development of students' pronunciation. Martinsen et al.<sup>[52]</sup> reported similar results. They attributed the success of the shadowing technique to its immersive and repetitive nature, which enables students to continuously listen to and replicate sounds, rhythms, and intonations, thus promoting the internalization of correct pronunciation patterns. This improvement might only have been possible once students enhanced their bottom-up listening skills; consequently, they focused their attention and cognitive resources on speaking<sup>[38]</sup>. Huang et al.<sup>[53]</sup> demonstrated that shadowing practice effectively improves EFL learners' comprehensibility and lexical-level intelligibility. Hamada and Suzuki<sup>[27]</sup> stated that shadowing may enhance certain pronunciation features due to the involvement of attention and the repeated use of language features, which leads to automatization. Furthermore, students perceived shadowing as an effective method for improving pronunciation<sup>[39,54]</sup>.

In analyzing the effectiveness of the shadowing technique across various studies, we observe consistent positive outcomes in improving pronunciation skills, despite variations in target groups and educational contexts. This research involved pre-service teachers, while Hamada<sup>[26]</sup>, Ulfa et al.<sup>[37]</sup>, and Salim et al.<sup>[35]</sup> focused on university and high school students. This difference in target groups provides a broader validation of the shadowing technique's efficacy across different learning stages and educational settings.

These comparative insights confirm that shadowing is versatile and practical across different academic settings and target groups. This technique not only enhances pronunciation but also actively engages learners, fostering a dynamic and interactive learning environment.

On the other hand, although previous research has indicated that prosody shadowing focuses explicitly on stress, rhythm, and intonation<sup>[27]</sup>, this study proposes that standard shadowing could foster those phonological descriptors.

In addition, as shown in **Table 3**, the results of the Paired Sample Correlations indicate a significance value of 0.485, suggesting that there is no correlation between the Pre-test and post-test results. This verifies that the results have been obtained randomly and confirms the validity of the data and the present study.

**Table 3.** Paired Sample Correlations.

|        |  | N  | Correlation | Sig.  |
|--------|--|----|-------------|-------|
| Pair 1 | Skill test results before and after the test | 16 | -0.188      | 0.485 |

It is crucial to understand that the absence of correlation does not necessarily mean the absence of effect or change; it simply indicates that the changes observed in the post-test are not directly related to the initial values of the pre-test. This lack of correlation can be interpreted as an indication that the results obtained are not due to an initial predisposition or to the students' prior skills, but possibly to the intervention (in this case, the shadowing technique) applied between the pre-test and the post-test.

This conclusion is particularly valuable in educational research, where it is essential to ensure that the observed improvements are not merely due to students' prior abilities or knowledge but to the pedagogical intervention under study<sup>[52]</sup>. This finding reinforces the study's validity, suggesting that any observed change in the post-test results is authentic and not a product of pre-existing trends or predispositions in the sample analyzed.

**Table 4.** Paired differences test.

| Paired Differences |  | Mean   | Std Deviation | Standard error | 95% confidence interval of the difference |        | t      | df | Sig. (2 tailed) |
|--------------------|--|--------|---------------|----------------|---|--------|--------|----|-----------------|
|                    |  |        |               |                | Lower                                     | Upper  |        |    |                 |
| Pair 1             | Skill test results before and after the test | -2.938 | 4.234         | 1.059          | -5.194                                    | -0.681 | -2.775 | 15 | 0,014           |

In the test for the difference of means, a significance level of 0.014 was found, which is less than 0.05. Therefore,  $H_0$  is rejected, and  $H_1$  is accepted, indicating that there has been a change in the average scores obtained after the application of the shadowing technique. Moreover, as observed in **Table 4**, the post-test mean value increased. Based on this and the previously mentioned points, it is concluded that applying the methodological strategy allows for improving students' pronunciation.

## 5. Conclusions

This study had significant results in improving students' oral skills. After applying the technique to an experimental group, a noticeable improvement in the students' pronunciation was observed, demonstrating the effectiveness of this method in educational contexts. Specifically, the results showed that students' pronunciation skills were noticeably improved for all the dimensions, with individual sounds being the feature with the best performance after the intervention. The study has uncovered how the shadowing technique can also be used to boost students' pronunciation and provide more evidence of its efficacy for productive skills. Hence, it is essential to highlight the importance of teachers constantly searching for techniques and tools that enhance their students' learning.

### 5.1. Recommendations

In a constantly changing society, where education plays a transcendental role as a driver of transformation, teaching professionals are responsible for adopting practical and relevant methodologies for their audience. By adopting these methodologies, we improve students' academic skills and contribute to developing more prepared and capable individuals, fostering more profound and lasting social change.

### 5.2. Future Studies

Future studies should consider a broader sample of students, covering different academic levels and educational institutions. This will allow a more generalized evaluation of the shadowing technique and its effectiveness in other contexts and with various demographic groups. Also, given the rapid evolution of technology and its applications in the educational field, it would be beneficial to investigate how new technological tools can improve or complement the

shadowing technique.

## Author Contributions

Conceptualization, M.A.R.Z., J.C.d.S., and G.G.A.; methodology, M.A.R.Z., J.C.d.S., and G.G.A.; software, M.A.R.Z., J.C.d.S., and G.G.A.; validation, M.A.R.Z., J.C.d.S., and G.G.A.; formal analysis, M.A.R.Z., J.C.d.S., and G.G.A.; investigation, M.A.R.Z., J.C.d.S., and G.G.A.; resources, M.A.R.Z., J.C.d.S., and G.G.A.; data curation, M.A.R.Z., J.C.d.S., and G.G.A.; writing—original draft preparation, M.A.R.Z., J.C.d.S., and G.G.A.; writing—review and editing, M.A.R.Z., J.C.d.S., and G.G.A.; visualization, M.A.R.Z., J.C.d.S., and G.G.A.; supervision, M.A.R.Z., J.C.d.S., and G.G.A.; project administration, M.A.R.Z., J.C.d.S., and G.G.A.. All authors have read and agreed to the published version of the manuscript.

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## Institutional Review Board Statement

The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Review Board.

## Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

## Data Availability Statement

Data available on request due to privacy/ethical restrictions.

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During the preparation of this manuscript, the authors used ChatGPT to proofread and revise the English language.

## Conflicts of Interest

The authors declare no conflicts of interest.

## Appendix A

### Speaking Phonological Descriptors.

Table A1. Rubric.

| Overall Intelligibility  | Individual Sounds   | Stress, Rhythm and Intonation   | Mark |
|--|---|---|------|
| Pronunciation is easy to understand, and meaning is conveyed effectively.  | Individual sounds are clear and unambiguous.  | Stress, rhythm and intonation are consistently used appropriately so that meaning is expressed effectively. | 6    |
| Pronunciation is easy to understand, and meaning is conveyed well.   | Individual sounds are generally clear and unambiguous.  | Stress, rhythm and intonation are generally used appropriately so that meaning is expressed well.           | 5    |
| Pronunciation can generally be understood, and meaning is conveyed adequately.   | Individual sounds are generally clear although there may be occasional difficulty for the listener.                               | Stress, rhythm and intonation are used to express meaning adequately.                                       | 4    |
| Pronunciation can generally be understood but L1 features may cause strain; meaning is conveyed but there may be some ambiguity.                   | Many individual sounds are clear, but some may cause difficulty for the listener.   | An attempt is made to use aspects of stress, rhythm and intonation to express meaning.                      | 3    |
| Pronunciation of single words may be intelligible but L1 features may make understanding difficult, and some meaning may be distorted.             | Inaccuracies in the pronunciation of individual sounds may cause strain for the listener and may impede communication of meaning. | Little attempt is made to use aspects of stress, rhythm and intonation to express meaning.                  | 2    |
| Pronunciation of single words may be intelligible but L1 features may cause excessive strain to a listener and meaning may be seriously distorted. | Serious inaccuracies in the pronunciation of individual sounds may make speech unintelligible.                                    | No attempt is made to use aspects of stress, rhythm and intonation to express meaning.                      | 1    |

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