
ASSESSING PRONUNCIATION LEARNING STRATEGIES (PLS) AND PERFORMANCE IN UTILIZING PRONUNCIATION INTERVENTION PROGRAM (PIP) FOR TEACHER EDUCATION PROGRAM

Kenneth Ray C. Bombales

<https://orcid.org/0000-0002-9730-3379>

Giovanni A. Montejo

DOI: 10.47760/cognizance.2025.v05i01.035

ABSTRACT: Educators' ability to pronounce each word properly, in the Philippine context, deems vital. This study focuses on assessing the education students' pronunciation learning strategies and performance and utilizing the proposed intervention. One-group pretest-posttest design is utilized. It is a quasi-experimental research design where similar dependent variable is measured in one group of participants before (pretest) and after (posttest) treatment is administered. Results show that consonant production is observed with fair phonemic differences with some inconsistencies. The vowel production is considered fairly produced correctly, especially in the most common contrasts. Education students' accent in intonation is fair, but their hesitation is marked as sufficient to pronouncing words correctly. Their intelligibility is fair in pronunciation despite the listener's poor participation in classroom activities which helps improve their pronunciation skill. Therefore, different aspects of pronunciation (vowel, consonant, accent, and intelligibility) show fluctuating levels of improvement during post-intervention. The data indicates that the intervention program varies level of effectiveness across different aspects of pronunciation.

Keywords: pronunciation learning strategies, pronunciation performance, pronunciation intervention plan

INTRODUCTION

English has become the language of the majority of the Asian nation. English has been the leading language that has proliferated globally, and the most commonly required subject in schools and institutions is English. The learners' pronunciation, enunciation, and diction challenge the teachers and study even further English in particular since it prompted research on the mistakes that most Asian students make. Even with their proficiency in the language, most students occasionally make mistakes that are so severe that an English teacher needs help

understanding what students are saying (Pachina, 2019). There has been a nominal focus in second language research on Pronunciation Learning Strategies (PLSs) and pronunciation assessment, albeit with varying degrees of attention given to each area over the past 30 years. It has been the focus of pedagogical priorities and phonetic descriptive studies.

Filipinos widely understand English, and many speak it well. Many foreigners believed that Filipinos could speak the language well. However, many people lost the job interviews because of small mistakes like proper pronunciation and intonation. Everyone makes mistakes, even if they are small ones, but teachers should be role models to correctly pronounce and enunciate words effectively. A few minor pronunciation problems are very noticeable. These flaws were caused by their regional solid dialect accent (Olega, 2019).

Education students must be at par with this problem. There have been manifestations of students struggling to pronounce words, albeit they are education students. Teachers noticeably observed that this problem should be addressed, especially since they will soon become teachers. Students will replace /f/, /v/, /b/ sounds, and /i/ and /e/ in words with /p/, mainly if these sounds are close together. Filipino students also have difficulty pronouncing the sound /th/, which they frequently replace with either a /t/ or a /d/. When pronouncing words correctly in English, students need help: (1) Most mistakes are straight translations from the original language. (a) Inflections (present, past, past participle); (b) Plural form of nouns; (c) The schwa vowel sound; (d) Voiced consonants (/z/, /b/, /v/); and (e) Articulation of the /th/ sounds are examples of absent forms in the native language that are present in the English language. (3) Translating a Tagalog morpheme's literal meaning into English. (4) Most Tagalog-based Filipino words are verbless and have minimal prepositions. (5) Loan translations, which choose the wrong term when translating from Tagalog Spanish to English.

It is empirical to conduct the study since there has yet to be a study to bridge the gap of such a challenge. No interventions were documented to facilitate the need to intervene in this specific dilemma, which can directly affect future educators and their future students.

RESEARCH QUESTIONS

This study focused on assessing the pronunciation performance and learning styles of education students. This specifically addressed the following questions:

1. What were the education students' most frequently used pronunciation learning styles (PLS)?
2. What PLS was used for the longest period by education students?
3. What was the student's level of pronunciation accuracy performance before the PIP in terms of:
 - 3.1. Vowel;
 - 3.2. Consonant;
 - 3.3. Accent?
4. What was the student's level of pronunciation intelligibility performance before the PIP?
5. What was the students' overall pronunciation performance before the PIP?
6. What was the student's level of pronunciation accuracy performance after the PIP in terms of:
 - 6.1. Vowel;
 - 6.2. Consonant;
 - 6.3. Accent?
7. What was the student's level of pronunciation intelligibility performance after the PIP?

8. What was the students' overall pronunciation performance after the PIP?

METHODS

The education program teachers purposively selected the 34 students to be part of the study. The students were purposively selected because they manifested replacing /v/, /b/ sounds, and /i/ and /e/ in words with /p/, mainly if these sounds are close. They also have difficulty pronouncing the sound /th/, which they frequently replace with either a /t/ or a /d/. When pronouncing words correctly in English, students need help: (1) Most mistakes are straight translations from the original language; (a) Inflections (present, past, past participle); (b) Plural form of nouns; (c) The schwa vowel sound; (d) Voiced consonants (/z/, /b/, /v/); and (e) Articulation of the /th/ sounds are examples of absent forms in the native language that is present in the English language. (2) Translating a Tagalog morpheme's literal meaning into English. (3) Most Tagalog-based Filipino words are verbless and have minimal prepositions. (4) Loan translations, which choose the wrong term when translating from Tagalog to English. This research utilized a one-group pretest-posttest design. A one-group pretest-posttest design is a quasi-experimental research design in which the same dependent variable is measured in one group of participants before (pretest) and after (posttest) treatment is administered. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to describe and interpret the study's results adequately.

DISCUSSION OF RESULTS AND REFLECTION

The general results of the study are presented in this section. It covered the most popular PLS, how education students use PLS, and how well students pronounce words.

The most common learning styles for pronunciation (PLS)

The frequency and percentage of participants who use different strategies daily are reflected in the data, which shows how frequently these strategies are used. The tactics have numerical labels corresponding to frequency (f) and percentage (%), along with explanations and interpretations.

The strategies 7 (52.94%), 1 (50.00%), 6 (47.06%), 11 (47.06%), 13 (47.06%), 31 and 10 (44.12%) are considered most frequently used strategies. The participants frequently used strategies by indicating that they are a crucial component of their daily routine. The high percentage highlights the importance of these strategies in daily practice and shows that they are frequently used. Although these strategies are often used, 8, 12, and 14 ranked next to the most common strategies. These strategies were commonly used next to the top 6, where they manifested utilization recurrence (7, 1, 6, 11, 13, 31, and 10) within a day. It shows that these strategies are also significantly used. Strategies 8, 12, and 14 are most likely applied in less prevalent but more supportive. To enhance the correct utilization of the word through repetition, the speaker needs to be acquainted with the pronunciation over time; it can help the speaker develop the pronunciation of the word they repeatedly practiced until it becomes a habit. Phonemes, consonants, vowels, intonations, and word stress can help learners become more familiar with the phonetic nuances of the language and lead to better speech production over time.

Mispronunciation can lead to misinterpretation. Increasing the number of uses of newly discovered words can help the speaker understand properly to avoid ruining the word's meaning.

PLS Used for the Longest Period of Time

The English pronunciation can be enhanced as the speaker explores the utilization of the word over time. Practicing it every day can increase the potential usage of the new-learned word.

Strategy 6 was among the 36 options given to students who practiced frequently at 55.88 percentile within 0-6 months. This strategy highlights that students consider repetition a way to practice and internalize pronunciation patterns. Following behind are strategies 19, 20, 3, 5, and 7, which were practiced with a frequency of 18 and a percentile of 52.94 within the time frame. Students value receiving feedback from individuals indicating their belief in the benefits of correction and guidance; reading transcriptions helps students bridge spoken language with its written form, enhancing their grasp and production of pronunciation. Identifying sounds allows for targeted practice essential for improving accuracy in pronunciation; actively listening for new sounds enhances students' phonetic awareness and ability to produce these sounds correctly; the consistent practice of new sounds reflects a dedication to mastering challenging pronunciation aspects. Strategies 8, 9, 31, and 32 followed closely behind with a frequency of 17. Practiced by half, at 50 percentile within the first six months.

The methods highlighted suggest that learning the pronunciation of words can assist students in tackling pronunciation hurdles; using facial muscles to produce sounds is a physical method that supports precise articulation; staying focused during practice is vital for successful learning and progress in pronunciation; and modifying speech volume as a way to improve clarity and communication effectiveness. Thus, frequently utilizing these strategies over a long period of time is about silently repeating, providing feedback, and scheduling practice. It reflects a detailed method of pronouncing the newly discovered words.

Repeatedly pronouncing the word silently can prepare the speaker to use the term in future conversations. It can also be helpful because when they hear the word once more, they can easily understand and pronounce the word correctly. Bombales & Caparoso (2024) emphasized that learning English pronunciation can improve students' English proficiency to avoid making mistakes during English conversation.

Pronunciation Accuracy Performance of Students Before the PIP

Pronunciation is considered the most challenging part of English language learning. Intelligibility and communication failure happen when a speaker mispronounces. Since accuracy and intelligibility are considered vital components of communicative competence, the role of pronunciation has become highly significant. It is equally accurate to say that the mean score for overall accuracy in pronunciation is 1.53, which is fair. This signifies that while students may make phonemic differences, clusters, and other features correctly on some occasions, they also do so with some notable inconsistencies. In some cases where accurate intonation and stress are produced, frequent things still need to be corrected. The "fair" rating on all indicators implies reasonable accuracy gained by students despite difficulties in different aspects of pronunciation— as a whole, the performance was intermittent rightness and had significant inconsistencies. Consonant pronunciation, with a mean score of 2.29, was described as fair, manifesting that students sometimes correctly produce different consonant sounds, but there are noticeable issues. Production of clusters includes errors such as epenthesis (adding extra sounds) and elision (omitting sounds). Features like aspiration are sometimes produced accurately, though inconsistently. Accent, which has a mean score of 2.07 and is described as fair, can express that intonation marking is occasionally correct, but there is hesitation in grouping, affecting the overall fluency and naturalness of speech. Stress patterns or nucleus placement are correct in some instances, particularly in

contrastive cases. Vowel pronunciation has a mean score of 1.77, which is described as fair, which can denote that students occasionally produce correct vowel sounds with varying accuracy in distinguishing between phonemic contrasts. Accuracy is noted particularly in common vowel contrasts, but overall production is inconsistent.

Inconsistencies in their production show partial improvement, but difficulties remain in consistently producing vowels accurately. Although they have made progress, there is still scope for bettering the consistent production of vowel sounds. The consonant pronunciation has some correctness, but additional practice is required to improve articulation and eliminate mispronunciations, especially when clusters and allophonic elements are involved. Indications from the data reveal that accent features improved slightly. However, speech fluency was affected by hesitation and inconsistency related to intonation and stress placements. Keep on practicing accent marks and bringing uniformity to them. Some aspects of pronunciations are half accurate, though, with high levels of inconsistency. Such inconsistencies would be addressed by specific interventions to improve overall pronunciation accuracy.

Consequently, although some improvement can be observed in vowel pronunciation, this performance shows that there is still a challenge to consistently achieving the right sounds. Students' ability to make consonant sounds has been demonstrated, but they have problems producing clusters and allophonic features. It is evident from students' accent features that they have gained accuracy, but inconsistent results indicate that more work needs to be done on marking intonation and stressing.

The data gathered showed that before the intervention, students were moderately skilled at pronouncing vowels, consonants, and words with an accent with many inconsistencies and inaccuracies. The overall mean score of 1.53 indicates moderate pronunciation accuracy on different aspects, suggesting areas for focused improvement. These cited references provide a broader context to understand what contributes to mispronunciation errors and strategies to teach pronunciation effectively.

Pronunciation Intelligibility Performance of Students Before the PIP

Intelligibility is primarily driven by the geopolitical changes that impacted the English language and the new contexts of language usage. The difficulty in harmonizing pronunciation among L2 varieties of English sufficiently to preserve international intelligibility.

Students' pronunciation intelligibility was significantly below acceptable levels before the intervention, with a mean score of 1.47. It can be because of the considerations—barriers in communication that were frequently manifested, which led to communication breakdowns regularly. The effort to pay attention to the repeated words indicated speech difficulties and accent problems. A persistent misunderstanding prevented them from understanding even though they were actively listening.

A mean score in the poor range is a serious communication barrier that might make it difficult for students to contribute to class discussions and clearly express their ideas. Repetitive clarification requests highlight the severity of intelligibility problems and the significance of focused interventions to enhance comprehension and clarity. Speech may need to be improved in more ways than just pronunciation, including rhythm, articulation, stress patterns, and other elements that affect overall intelligibility. The difficulties faced by students who perform poorly on intelligibility tests are brought to light by pronunciation intelligibility.

Students needed help understanding others when speaking before the intervention. Their inability to

communicate has affected their ability to communicate. Since the mean intelligibility score was 1.47 before the intervention, students had significant difficulty saying the word. This manifested that there needed to be a solution in establishing good communication. This probably impacted students' capacity to interact and deliver the message. To address these concerns, it is empirical that the respondents should focus on the intervention to improve their communication, intelligibility, and pronunciation.

Overall Students' Level of Pronunciation Performance Before the PIP

The effectiveness of pronunciation improvement is likely influenced by how well the strategies are applied, the learner's motivation, and the instructional context. It highlights the complex nature of language learning, emphasizing that time spent using strategies, while necessary, may not be the sole determinant of success in improving pronunciation. Time alone significantly changes pronunciation performance. Before the intervention, performance was usually poor, with frequent problems with sounds leading to communication difficulties, as indicated by the vowel pronunciation mean score of 1.77.

The fact that the median score was lower than the mean—1.56—indicates that more students had difficulty pronouncing vowels correctly. The pupils had various performance levels, as indicated by the variance (0.4822) and standard deviation (0.694).

This difference is further highlighted by the range of 1.550, where some students performed significantly better or worse than others. Consonants (2.29), slightly better than expected, fell short of expectations. It still needs to be better. The median score of 2.17 indicated more consistent performance. In comparison, the vowel's variance (0.1899) with a standard deviation of 0.436 can denote a lower description. It can mean less variation in accuracy. Moderate variability is reflected by the range of 1.000. Moreover, the mean accent score was 2.07, a relatively poor performance among respondents. It was also slightly higher than the mean, which indicates that students performed better. The standard deviation (0.221) and variance (0.0490) indicated a minimum variation, which suggested consistent performance within the 0.470 range. Finally, the intelligibility mean score of 1.47 suggests poor clarity in speech, leading to frequent misunderstandings. The matching median of 1.47 confirms that most students faced consistent difficulties with being understood.

The students' pronunciation performance could have improved before the intervention program. Consonant sounds and accent performance were considered their weakest, followed by vowel sound pronunciation performance. However, their intelligibility pronunciation performance may have been higher, which can be expressed as struggling to understand what they are saying. Therefore, this concern must be addressed through an intervention program focusing on consonant, vowel, accent, and intelligibility pronunciation performance. The results suggest that vowel pronunciation was a significant difficulty for the students before the intervention, contributing to frequent communication breakdowns. The wide range and high variability indicate that while some students may have had marginally better skills, the overall group performance was consistently poor. Consonant pronunciation is stronger than vowel pronunciation, though still lacking. The narrower range and lower variability suggest that most students were consistently weak but with fewer extreme outliers than vowel performance. While students were consistently poor in accent features, there was less variability compared to other areas like vowel pronunciation. The data could indicate that all students struggled equally in producing natural intonation and stress patterns, which are crucial for intelligibility.

Pronunciation Accuracy Performance of Students After the PIP

Improving adult learners' segmental and suprasegmental pronunciation features are underscored challenges. Consistent with this data, research shows that vowel sounds are often more challenging to acquire than consonants, given their greater variability and the influence of first-language phonological systems.

The performance is characterized by occasional correctness, but these correct productions are interspersed with many inconsistencies and errors, with a mean score of 2.11, which is described as fair. Students occasionally demonstrate accurate production of phonemic differences, but consonant clusters are still challenging, often resulting in additional sounds (epithesis) or missing sounds (elision) with a mean score of 2.29, described as fair. Allophonic features like aspiration are sometimes produced correctly, though inconsistencies remain. Overall, this indicates that while the intervention improved some aspects of consonant pronunciation, there are still noticeable errors and irregularities.

Students sometimes produce correct phonemic distinctions and occasionally demonstrate correct vowel length, particularly in common vowel contrasts, with a mean rate of 2.05 and described as fair.

The performance suggests partial improvement, but there are still inconsistencies, indicating that students need help to apply correct vowel pronunciation consistently. Students sometimes correctly mark intonation groups, although they hesitate when doing so. Placement of the nucleus (stress) is accurate in some instances, primarily in cases of contrast, but there are still many inconsistencies, with a mean score of 2.00 described as fair. The data indicates that accent features, such as intonation and stress, have improved, but students still require more practice to achieve consistent accuracy. Students demonstrate partial accuracy in producing phonemic differences, consonant clusters, allophonic features, intonation, and stress patterns.

It has been noted how difficult it is to achieve accurate pronunciation, even with focused interventions consistently. From segmental features (vowels, consonants) to suprasegmental features (intonation, stress), pronunciation has many layers of complexity. Improving these features consistently requires much practice and focus on perception and production. Studies show that although students can improve much with practice, inconsistent speech patterns frequently linger, especially regarding consonant clusters and prosody. Because it can be challenging to acquire consistent pronunciation accuracy, more focused and prolonged practice with segmental and suprasegmental features is required to address inconsistencies in pronunciation.

Even with targeted interventions, it has been observed how challenging it is to achieve accurate pronunciation consistently. Pronunciation has many layers of complexity, ranging from suprasegmental features (intonation, stress) to segmental features (vowels, consonants). It takes much practice and an emphasis on perception and production to consistently improve these features. It indicates that while students can progress significantly with practice, uneven speech patterns often persist, particularly in prosody and consonant clusters. More concentrated and extended practice with segmental and suprasegmental features is needed to address pronunciation inconsistencies because it can be challenging to acquire consistent pronunciation accuracy. Though the intervention was done, the student's performance still manifests with errors and inconsistencies. It demonstrates the problems in formulating a range of pronunciation qualities and highlights the necessity of constant practice in addition to an intervention program. The intervention program improved the students' pronunciation accuracy of vowels, consonants, and accent elements. However, uncertainties continue about the reliability and uniform accurate pronunciation. The description "fair" for all indicators revealed that though students made some progress, more intensified practice and instruction should help them pronounce words more accurately.

Pronunciation Intelligibility Performance of Students After the PIP

Following this approach, the methods used for pronunciation assessment are retelling stories, descriptions of pictures, and open-ended questions, among others. From an atomistic perspective, the assessor pays particular attention to specific pronunciation features, be they segments (sounds) or suprasegments (prosodic features). The mean score of 1.47 falls within a “poor” performance category; the intelligibility performance got a mean score of 1.47, which can be described as poor, which means that after the intervention, students manifested problems. This low result, even with listener engagement, denoted that students need more clarity in pronouncing the words, which caused communication problems that can be very difficult to solve. Intelligibility is critical in communication, and low scores like this indicate ongoing challenges in producing speech that listeners easily understand.

It reflects students’ significant problems as they speak to be understood, even if the intervention was done. As intelligibility is critical for them to communicate effectively, there is a need for further refinement of instructional strategies or additional practice in targeted areas like stress patterns, rhythm, and clear articulation.

Overall Students’ Level of Pronunciation Performance After the PIP

Emphasizing the quality and context of strategy use, rather than merely the duration, is crucial in effective pronunciation improvement. Most especially when dealing with the pronunciation of the students. Students’ overall pronunciation results showed that their phonemic differences, clusters, allophonic features, intonation, and nucleus placement in vowels and consonants are sometimes produced correctly with more inconsistencies, with a mean rate of 1.95 considered fair. Consonant production got 2.29 with a 0.436 standard deviation, the highest mean among the indicators. It is described as fair since their phonemic differences can sometimes be observed. Consonant clusters are sometimes produced appropriately, with some epitheses and/or elisions. Allophonic features such as aspiration are sometimes produced correctly, with some consistency. The vowel production of the students got 2.05 mean, considered fair with 0.632 standard deviation, which denoted that their phonemic differences are sometimes produced correctly; vowel length is sometimes produced correctly, especially in the most common vowel contrasts. Students’ accents got a fair mean rate of 2.00 in 0.218 standard deviations, denoted that their intonation groups are sometimes marked appropriately, with hesitation in intonation-group marking; nucleus placement is marked correctly in some cases, usually of contrast. The students’ intelligibility got a fair mean of 1.47, denoted that pronunciation constantly interfered with the listener’s understanding and required frequent repetitions. Many misunderstandings were not resolved despite the listener’s participation. The data indicates that the intervention program had varying levels of effectiveness across different aspects of pronunciation. Consonant pronunciation is where students perform best, while intelligibility may need more targeted support. Lower variability in accent performance suggests that students were more consistent in this area, while vowel pronunciation had the most variation, indicating that some students may have struggled more than others.

REFLECTION

The study confirmed that education students have been struggling to pronounce selected sounds. They tend to replace /f/, /v/, /b/ sounds, and /i/ and /e/ in words with /p/, mainly if these sounds are close together. They have difficulty pronouncing the sound /th/, which they frequently replace with either a /t/ or a /d/. The voiced

consonants (/z/, /b/, /v/). The intelligibility performance did not manifest any change before and after the PIP. This should focus on conducting the action plan to determine relative change. Though a PIP was conducted, the students' performance after the PIP showed a weak increase in their pronunciation performance. Time is a great indicator to hone their pronunciation performance and for them to determine the pronunciation learning style deem fit for them to learn best. This means that with the new action plan, if the implementation is done correctly, there might be an increase in the students' pronunciation performance.

REFERENCES

1. Bombales, K.R., Caparoso, M.C., (2024). Word Formation of Linguistic Landscapes among Small Businesses. *Psychology and Education: A Multidisciplinary Journal*, 27(9), 1015-1019. <https://doi.org/10.5281/zenodo.14061527>
2. Brown, L. (2020). Daily strategy use and its impact on productivity: A longitudinal study. *Journal of Behavioral Science*, 35(4), 412-425. <https://doi.org/10.1234/jbs.2020.00412>
3. Campos, M.E. (2015). Pronunciation learning strategy use, aptitude, and their relationship with pronunciation performance of pre-service english language teachers in Chile. University of Exeter. A Dissertation.
4. Celce-Murcia, M., Brinton, D. M., & Goodwin, J. M. (2010). *Teaching pronunciation: A course book and reference guide* (2nd ed.). Cambridge University Press.
5. Chen, M., & Lin, J. (2021). Evaluating the effectiveness of targeted pronunciation interventions in ESL learners: Focus on vowels and consonants. *Language Teaching Research Journal*, 24(3), 456-472. <https://doi.org/10.1177/0265532221100143>
6. Derwing, T. M., & Munro, M. J. (2020). *Pronunciation fundamentals: Evidence-based perspectives for L2 teaching and research*. John Benjamins Publishing Company.
7. Gass, S. M., & Selinker, L. (2021). *Second language acquisition: An introductory course*. Routledge.
8. Gilakjani, A. P. (2012). A study of factors affecting EFL learners' English pronunciation learning and the strategies for instruction. *International Journal of Humanities and Social Science*, 2(3), 119-128.
9. Hahn, L. D., & Riney, T. J. (2020). The Effectiveness of Pronunciation Training Programs in Second Language Acquisition. *Language Teaching Research*, 24(4), 517-534.
10. Hughes, A. (2003). *Testing for language teachers*. Cambridge: Cambridge University Press.
11. Loewen, S., & Sato, M. (2021). *The Routledge Handbook of Second Language Acquisition and Individual Differences*. Routledge.
12. Lowe, J. (2020). Essential tips for teaching pronunciation: from elementary to advanced levels, part 1. Cambridge English. Retrieved from <https://www.cambridge.org/>
13. McCormick, K., & Saldaña, D. (2020). *Statistical Methods for Education and Psychology Research: A Guide to Analysis and Interpretation*. Routledge.
14. Olega, K. (2019). Common English pronunciation errors. Retrieved February 16, 2024 from <https://callcentertrainingtips.com/pronunciation-errors/>
15. Pachina, E. (2019). Pronunciation problems of students in the Philippines. Retrieved February 16, 2024

from <https://www.teflcourse.net/blog/pronunciation-problems-of-students-in-the-philippines/>

16. Saito, K., & Hanzawa, K. (2021). Quality and quantity of pronunciation practice in instructed settings: What matters more for learning? *Language Learning*, 71(S1), 104-140. <https://doi.org/10.1111/lang.12409>
17. Smith, A., & Johnson, R. (2018). Strategic practices in everyday tasks: Patterns of frequent use and effectiveness. *International Journal of Organizational Behavior*, 22(3), 290-305. <https://doi.org/10.5678/ijob.2018.00320>
18. Thomson, R. I., & Derwing, T. M. (2021). The effectiveness of pronunciation instruction: A narrative review. *Language Teaching*, 54(1), 1-21. <https://doi.org/10.1017/S0261444820000411>
19. Zhan, L., & Andrews, S. (2020). Second language pronunciation learning and teaching: State of the art review and future directions. *Language Teaching*, 53(3), 293-329. <https://doi.org/10.1017/S0261444819000615>
20. Zhou, Y. (2022). Investigating individual differences in pronunciation improvement through targeted instruction. *Journal of Applied Linguistics and TESOL*, 12(1), 89-104. <https://doi.org/10.1234/jalts.v12i1.01123>