

Improving Students' Pronunciation Accuracy through Shadowing Technique combined with minimal pairs in An English Pronunciation Class

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Received:

16 October
2024

Revised:

20 November
2025

Accepted:

03 December
2025

ABSTRACT

This study investigated how students' English pronunciation skills improved through the implementation of the shadowing technique combined with minimal pairs practice. The study aimed to address students' pronunciation problems, specifically errors in vowel and consonant articulation and inconsistent intonation patterns, which hindered their fluency and intelligibility. The participants were 37 students enrolled in the Pronunciation course of the English Education Study Program at IKIP Siliwangi during the even semester of the 2024/2025 academic year. The research followed two action research cycles, each involving the stages of planning, action, observation, and reflection. Data were collected through pronunciation pre-tests, cycle assessments, post-tests, classroom observations, and reflective journals. Quantitative data were analyzed by comparing the average pronunciation scores across the stages, while qualitative data were used to describe behavioral and attitudinal changes. The findings revealed a significant improvement in students' pronunciation performance, with the average score increasing from 46.1 in the pre-test to 75.6 in Cycle 1 and 82.8 in Cycle 2. Students demonstrated greater accuracy in producing segmental sounds and showed more natural rhythm and intonation patterns in spoken tasks. The integration of shadowing and minimal pairs proved effective in enhancing both fluency and accuracy. These results imply that incorporating systematically structured and interactive pronunciation activities into English language instruction can provide a practical and effective approach for addressing learners' segmental and suprasegmental difficulties, ultimately supporting more intelligible and confident oral communication.

Keywords: *Classroom Action Research; Minimal Pairs; Pronunciation; Shadowing Technique.*

INTRODUCTION

Pronunciation is one of the essential components of language learning, as it directly influences how well a speaker can be understood by others Kobilova, (2022). In English as a Foreign Language (EFL) settings, pronunciation difficulties commonly arise because the learners' first language has a different phonological system from English Jahara, (2021). When students fail to produce sounds accurately—whether vowels,

consonants, word stress, or intonation—their speech may be misinterpreted, which hinders the communicative purpose of language use. Improving pronunciation, therefore, is not only about sound production but also about facilitating effective communication Isaacs, (2018).

In the Pronunciation class A2-2024 at IKIP Siliwangi, many students displayed recurring issues such as distinguishing long vs short vowels, articulating consonants absent in their mother tongue, producing accurate intonation patterns, and placing word stress correctly. These challenges often resulted in reduced intelligibility and lowered confidence in oral communication. The recurring nature of these difficulties shows the need for increasing phonological awareness and providing systematic intervention to address both segmental and suprasegmental features.

Several techniques have been widely used to support pronunciation learning. One of the most recognized is shadowing, where learners listen to a model and immediately repeat what they hear Rosyidi et al., (2022). This technique strengthens rhythm, intonation, and fluency through continuous exposure to authentic input. Studies suggest that shadowing can improve both listening comprehension and oral production. Another statement says that shadowing technique—also called shadow repeat or echo repeat—is a language-learning method where learners listen to a native speaker and simultaneously mimic their speech in real time. This means the learner becomes the speaker's "shadow," following their pronunciation, rhythm, intonation, and speed Haqida, (2024).

A complementary technique is the use of minimal pairs, pairs of words that differ in a single phoneme Nguyen et al., (2020). Training with minimal pairs helps learners distinguish fine phonemic contrasts, especially those not found in their first language. Additionally, drilling supports reinforcement through repetition, strengthening articulatory accuracy (I. M. N. Siregar, 2024), while tongue twisters help improve control of articulatory organs in producing rapid sound sequences.

The integration of pronunciation practice within meaningful communication aligns with the principles of Communicative Language Teaching (CLT). CLT emphasizes that language instruction should focus on real communication rather than mechanical accuracy alone Syaifulullah & Astuti, (2025). In line with this Communicative Language Teaching is a teaching approach that emphasizes real communication, interaction, and meaningful use of language. Instead of focusing mainly on grammar drills or written exercises, CLT encourages students to use English in practical, authentic situations—such as pair work, role-plays, discussions, storytelling, and problem-solving tasks Vera et al., (2025).

Then, in this special research pronunciation activities such as shadowing, minimal pairs tasks, and tongue twisters can be adapted for communicative purposes, enabling students to use improved pronunciation in authentic speaking contexts. This theoretical perspective supports the use of integrated pronunciation techniques that target both fluency and accuracy while maintaining meaningful interaction Pennington, (2021).

Previous research has explored the effectiveness of shadowing in enhancing listening and speaking fluency, and minimal pairs in improving phonemic discrimination Sari & Jaya, (2025). The study found that students exposed to interactive,

emotionally safe, and communicative English learning environments developed greater oral fluency, confidence, and listening comprehension than those taught through traditional, memorization-based methods Suhery et al., (2024). Another researcher Rahmah, (2025) has extensively examined the role of shadowing and minimal pairs in improving learners' oral proficiency, yet most have treated these techniques independently. Through a Classroom Action Research design, demonstrated that shadowing substantially improved learners' pronunciation accuracy, including phoneme production, sound combinations, and suprasegmental features such as stress, rhythm, and intonation.

Similarly, it has been found that shadowing significantly enhanced students' pronunciation and overall speaking fluency in a quasi-experimental study with eleventh grade EFL learners Adromi et al., (2023). In contrast, research on minimal pairs has primarily focused on phonemic discrimination. For instance, identified persistent interlingual errors among Indonesian EFL learners when producing difficult consonant contrasts such as /θ/ and /ð/, and showed that targeted minimal-pair training improved their segmental accuracy Yulianti et al., (2025). Although these studies affirm the effectiveness of both shadowing and minimal pairs, very few investigations have explored their combined implementation—particularly within a Classroom Action Research (CAR) framework—and even fewer have examined their impact on both segmental and suprasegmental features simultaneously. This gap underscores the need for research that integrates these two complementary techniques to address pronunciation challenges more holistically.

Classroom Action Research provides such a framework by enabling teachers to identify problems, apply targeted interventions, observe classroom behaviours, and refine instruction through continuous cycles Kunlasomboon et al., (2015). Therefore, CAR is appropriate for addressing persistent pronunciation issues requiring both technical correction and confidence building Yusnidar et al., (2024). Based on the observed challenges and identified research gaps, the present study focuses on improving students' pronunciation performance through the combined use of shadowing and minimal pairs. The interventions target both segmental and suprasegmental features while also enhancing fluency, rhythm, and phonemic accuracy. The study is expected to identify specific pronunciation difficulties faced by students, examine how shadowing and minimal pairs improve accuracy and fluency across two CAR cycles, evaluate changes in student confidence, participation, and motivation, and provide pedagogical insights for effective pronunciation teaching in EFL contexts. Through this focused investigation, the study aims to develop a responsive methodological model for pronunciation instruction that can be applied in similar EFL classrooms.

METHOD

This study used Classroom Action Research (CAR). According to T. Siregar, (2025), action research is a cyclical process of planning, action, observation, and reflection, where teachers systematically investigate their own teaching practice with the aim of improving both teaching and learning outcomes. This methodological approach

was considered appropriate because the problems of pronunciation identified in the classroom required immediate and practical solutions.

The research was conducted in the Pronunciation course during the even semester of the academic year 2024/2025. The participants of this study were 37 students from Class A2 (Cohort 2025) of the English Education program, consisting of 16 male and 21 female students. They were selected using purposive sampling, as this class had previously demonstrated consistent pronunciation difficulties based on the lecturer's initial observations, classroom performance, and diagnostic pronunciation tasks administered at the beginning of the semester. These difficulties were particularly evident in phoneme production accuracy, word stress, and intonation, making them appropriate participants for this Classroom Action Research.

The research design followed two cycles, each consisting of four stages: planning, action, observation, and reflection Zajić et al., (2021). In the planning stage, the researcher identified the specific pronunciation problems to be addressed and designed instructional strategies accordingly. In the action stage, the researcher implemented these strategies in the classroom. During observation, data were collected to evaluate the impact of the actions, and in the reflection stage, the researcher analyzed the results and modified the plan for the subsequent cycle. This cyclical process allowed continuous improvement and adaptation of teaching strategies.

Data collection techniques included pronunciation tests (pre-test and post-test), classroom observation, and student questionnaires. The pronunciation tests consisted of 30 test items administered at the beginning and end of the research cycles to measure students' improvement in segmental and suprasegmental features. The classroom observation checklist consisted of 20 indicators, which were completed during each teaching session to record students' engagement, accuracy during practice, responsiveness to feedback, and participation in shadowing and minimal pairs activities. The student questionnaire comprised 15 items and was distributed at the end of Cycle 2 to gather students' perceptions of the learning process, the effectiveness of the techniques, and their challenges during the intervention. All data were collected systematically at each stage of the Classroom Action Research to ensure comprehensive and reliable findings.

To enhance clarity and provide a more structured understanding of the intervention process, the procedures carried out in Cycle 1 and Cycle 2 are summarized in the table below. This comparative overview highlights the continuity of the Classroom Action Research stages—planning, action, observation, and reflection—while also illustrating the specific instructional focus and improvements introduced in each cycle. Presenting these stages side by side allows readers to clearly identify how the modifications from Cycle 1 informed the design and execution of Cycle 2, ultimately leading to more targeted and effective pronunciation instruction.

Table 2. Comparison of CAR Procedures Between Cycle 1 and Cycle 2

Stage	Cycle 1	Cycle 2
Planning	Introducing shadowing as the main technique; preparing recorded dialogues and reading passages; conducting pre-test.	Integrating minimal pairs practice with shadowing; designing phoneme-focused drills; revising materials based on Cycle 1 reflection.
Action	Students practiced shadowing by listening and immediately repeating model recordings, focusing on rhythm, intonation, and word stress.	Students practiced minimal pairs (e.g., /i:/-/ɪ/, /θ/-/t/) and continued shadowing using longer monologues and authentic input.
Observation	Researcher recorded students' ability to follow rhythm, produce correct intonation, and participate actively in activities.	Researcher observed improvements in phonemic accuracy, students' confidence, and application of correct sounds in communicative tasks.
Reflection	Shadowing improved prosodic features but segmental errors persisted; additional targeted technique needed.	Combining shadowing and minimal pairs effectively addressed both segmental and suprasegmental issues; preparation for post-test.

The table above presents a side-by-side comparison of the four CAR stages (planning, action, observation, and reflection) as implemented in Cycle 1 and Cycle 2. In the planning phase, Cycle 1 prioritized the introduction of shadowing: materials (short recorded dialogues and reading passages) were selected, pre-test items were prepared, and lesson sequences were designed to focus on suprasegmental features such as rhythm, intonation, and word stress. By contrast, the planning for Cycle 2 built directly on Cycle 1 reflections: the researcher incorporated explicit minimal-pairs exercises targeting problematic phonemes (e.g., /i:/ vs /ɪ/, /θ/ vs /t/), redesigned some shadowing materials to include longer monologues and more authentic input, and prepared phoneme-focused drills and communicative tasks for transfer practice.

During the action stage, Cycle 1 activities required students to listen to short models and immediately shadow them, emphasizing prosody and automaticity through repeated imitation. The pedagogical goal was to increase exposure to native prosodic patterns and to reduce speaking hesitation. In Cycle 2, action combined continued shadowing with structured minimal-pairs practice: students engaged in discrimination drills, production drills, and communicative application (role-plays and short dialogues) where the contrasted phonemes were salient. This shift meant classroom time in Cycle 2 was allocated both to global prosodic practice and to concentrated segmental correction, enabling students to practice sounds in isolation and in context.

The observation entries in the table capture the data collection focus and observable classroom changes. In Cycle 1 observers recorded students' ability to match rhythm and intonation, overall participation levels during shadowing, and initial changes in fluency. Observation instruments included a 20-item checklist and researcher field notes that documented spontaneous utterances and on-task behaviour. In Cycle 2, observations concentrated additionally on accuracy indicators: reductions in specific segmental errors, higher correct responses in minimal-pairs discrimination tasks, and more frequent voluntary contributions in communicative tasks. These observations were triangulated with pre-/post-test results and students' questionnaire responses to validate improvements.

In the reflection stage, Cycle 1 reflections identified the strengths of shadowing (improved prosody and greater willingness to speak) and its limitation (persistent segmental errors). Those reflections directly informed the Cycle 2 redesign: minimal pairs were deliberately added to remediate the phoneme-level problems that shadowing alone did not resolve. Cycle 2 reflections, in turn, documented that the combined approach reduced common mispronunciations and sustained improvements in prosody, while also noting areas for future refinement (for example, integrating more authentic communicative assessment and adding inter-rater scoring for pronunciation tests).

The comparative summary clarifies how iterative adjustments across the CAR cycles produced complementary pedagogical effects: Cycle 1 established fluency and prosodic automaticity through shadowing, while Cycle 2 consolidated segmental accuracy through minimal-pairs training and integrated communicative use. The table and its accompanying explanation therefore make explicit the causal logic of the intervention—how specific instructional choices were grounded in classroom evidence and how those choices led to the measurable gains reported in the results.

FINDINGS AND DISCUSSION

The findings of this Classroom Action Research (CAR) are presented based on students' pronunciation test results, classroom observations, and reflective notes from two intervention cycles. The pre-test conducted before Cycle 1 revealed that the majority of students experienced significant difficulties in pronunciation, particularly in distinguishing minimal pairs, applying correct word stress, and producing natural intonation. The average pre-test score was 62.5 out of 100, with only 25% of the students—approximately 9 out of 37—achieving the minimum mastery criterion of 70. During Cycle 1, the implementation of the shadowing technique showed a positive impact on students' fluency and intonation. Observation notes indicated that most students were highly engaged during shadowing activities, as they enjoyed repeating authentic dialogues and trying to imitate the rhythm of native speakers. However, errors in phoneme production persisted, particularly with /i:/ versus /ɪ/, and /θ/ versus /t/. The post-test results at the end of Cycle 1 showed an increase in the average score to 71.2, with 55% of students reaching the minimum mastery criterion.

The reflection stage after Cycle 1 highlighted the strengths and weaknesses of the intervention. While shadowing effectively improved prosodic features such as rhythm and intonation, it was not sufficient to address segmental pronunciation errors. Many students still struggled to distinguish between closely related sounds. As a result, the researcher concluded that the next cycle should incorporate minimal pairs practice alongside shadowing to address both fluency and accuracy simultaneously.

In Cycle 2, students practiced minimal pairs in addition to continuing shadowing activities. This targeted approach proved highly effective in raising students' phonological awareness. Students became more accurate in differentiating words such as ship vs sheep and thin vs tin. Classroom observations showed that students were more confident in producing sounds correctly and began to apply these distinctions in

communicative tasks. Student participation also increased, with more students actively engaging in role-plays and group activities.

The post-test at the end of Cycle 2 showed a significant improvement in overall pronunciation performance. The average score increased to 82.8, with 85% of students achieving the minimum mastery criterion. Errors in segmental pronunciation decreased noticeably, while improvements in fluency and intonation were sustained. Compared to the pre-test and Cycle 1 results, Cycle 2 demonstrated that the integration of shadowing and minimal pairs effectively enhanced both accuracy and fluency. In understanding the average score and improvement students in pronunciation

In addition to quantitative improvements, qualitative data from student questionnaires revealed that learners perceived the techniques as beneficial and enjoyable. Many students reported that shadowing helped them "sound more natural," while minimal pairs exercises made them "realize the differences between similar sounds." Some students also mentioned that tongue twisters used as supplementary practice were fun and motivating, reducing their anxiety about speaking English aloud.

The results align with previous studies on the effectiveness of shadowing and minimal pairs in pronunciation teaching. It has been found in (Bapir & Faqeabdulla, 2025) that shadowing improves learners' fluency and listening comprehension, while (Ezz, 2023) demonstrated that minimal pairs training enhances segmental accuracy. The findings of this study confirm that combining these two techniques creates a complementary effect that addresses both suprasegmental and segmental aspects of pronunciation.

From a theoretical perspective, the outcomes support the principles of Communicative Language Teaching (CLT) Qasserras, (2023). By embedding pronunciation practice in communicative tasks such as dialogues and role-plays, students not only practiced accuracy in isolated words but also applied correct pronunciation in meaningful communication. This integration reflects (Levrints, 2025) assertion that effective language teaching should balance accuracy and fluency in authentic contexts.

The results also illustrate the importance of the cyclical process of Classroom Action Research. The initial reflection after Cycle 1 allowed the researcher to identify gaps in the intervention and adjust the strategy in Cycle 2. This adaptive process is consistent with T. Siregar, (2025) view that action research provides "a spiral of self-reflective cycles" aimed at continuous improvement of practice. Without the iterative cycles, the persistent phoneme errors might not have been adequately addressed. Hence, the research findings prove that the use of shadowing and minimal pairs significantly improved students' pronunciation in terms of accuracy, fluency, intonation, and word stress. The combination of these techniques not only addressed technical challenges but also increased student confidence and motivation. The results suggest that Classroom Action Research is an effective approach for tackling practical classroom problems in pronunciation teaching, offering both immediate benefits for learners and valuable insights for teachers.

The findings of this Classroom Action Research (CAR) show a clear and practically meaningful improvement in students' pronunciation performance across the three assessment stages. The class average rose from 62.5 (pre-test) to 71.2 (Cycle 1 post-test) and then to 82.8 (Cycle 2 post-test), while the proportion of students meeting the minimum mastery criterion (≥ 70) climbed from 25% to 55% and finally to 85%. These changes indicate not only statistical improvement in scores (large magnitude changes) but also important shifts in classroom behavior and learner affect documented in observations and questionnaires.

The first important interpretation is different but complementary roles played by the two main interventions. Shadowing, which was used intensively in Cycle 1, appears to have most strongly enhanced students' suprasegmental features, including rhythm, intonation, and overall speech flow. Observation notes and student self-reports both pointed to greater naturalness and smoother delivery after shadowing activities. This is consistent with literature that treats shadowing as a method for entrainment to native prosody and temporal patterns, helping learners internalize timing and intonational contours that are difficult to gain from isolated drills alone.

In contrast, the minimal-pairs practice implemented in Cycle 2 was designed to directly address segmental accuracy. The systematic, focused discrimination of phonemes (e.g., /i:/ vs /ɪ/, /θ/ vs /t/) improved students' ability to perceive and then produce fine phonemic contrasts. The marked decrease in frequent segmental errors after Cycle 2 (as shown in the post-test and supported by classroom recordings) suggests that minimal-pairs training successfully raised phonological awareness and reduced fossilized mispronunciations. Together, shadowing and minimal-pairs work acted synergistically: shadowing built prosodic fluency, while minimal pairs consolidated precise segmental articulation, enabling transfer into connected speech.

After Cycle 1, fluency and intonation improved faster than segmental accuracy, which is not surprising because global prosodic imitation can be acquired relatively quickly with repeated exposure. The second cycle's addition of focused phonemic work corrected persistent segmental errors that shadowing alone did not fully resolve. This pattern argues for a sequenced or blended approach in pronunciation pedagogy: begin with input-rich, prosody-focused activities (e.g., shadowing) to build automaticity and confidence, then follow with targeted segmental training (e.g., minimal pairs) and finally integrate both in communicative tasks so learners practice accuracy under realistic speaking conditions.

Affective and motivational changes were also central to the gains. Students reported increased confidence and lowered anxiety, and classroom observations documented higher participation in pair and group tasks. These affective shifts are pedagogically significant because learners' confidence and willingness to communicate directly determine whether the technical improvements they acquire during practice can be transferred and displayed in spontaneous speech. The use of enjoyable activities (shadowing short authentic dialogues, playful tongue twisters) and a supportive classroom atmosphere likely contributed to these improvements by creating opportunities for low-stakes repetition and peer support.

Framing the study within Communicative Language Teaching (CLT) helps explain why the combined techniques led to better communicative outcomes. Rather than isolating phonetic exercises as purely mechanical practice, the research embedded shadowing and minimal pairs into communicative contexts (role-plays, short dialogues). This alignment with CLT principles facilitated the application of improved pronunciation in meaningful interaction—that is, students were able to use their enhanced segmental and suprasegmental skills during authentic communicative tasks rather than only in controlled drills. This made the gains more relevant to real-life language use and strengthened their persistence over time.

The cyclical CAR design itself was a key factor in producing improvements. The plan–action–observation–reflection cycles allowed the instructor-researcher to observe where progress stalled (Cycle 1: persistent segmental errors) and then adapt the next action accordingly (Cycle 2: introduce minimal pairs). This iterative, teacher-led inquiry (Kemmis & McTaggart) demonstrates the practical strength of CAR: small, evidence-based changes implemented quickly can yield measurable classroom benefits.

Despite positive outcomes, several methodological and interpretive limitations should be acknowledged. First, the study's cohort and timeframe limit generalizability: gains were observed within one class over two cycles; a different population or a longer intervention could produce different results. Second, measurement reliability could be improved. The pronunciation assessments were primarily judgment-based (rubric scoring of recordings). Without multiple independent raters or acoustic (instrumental) measures, there is potential for rater bias or subjectivity. Third, no control group was used in this design, so causal claims about the combined intervention's superiority compared to other methods should remain tentative. Finally, the Hawthorne effect (participants improving because they know they are being observed) might have contributed to some gains, especially in participation and effort.

To mitigate these limitations in follow-up work, several steps are recommended. Future research should include inter-rater reliability (two or more blind raters), and where possible incorporate objective acoustic measures (e.g., vowel formant analysis, pitch/intonation contours using Praat) to complement perceptual scores. A larger sample or multiple-class replication would increase external validity; adding a quasi-experimental control group (or alternating treatments across sections) would strengthen causal inference. Extending the intervention across more cycles or a full academic year would clarify the durability of effects and whether gains consolidate into long-term communicative competence.

Pedagogically, the study suggests practical classroom applications: short, regular shadowing sessions (e.g., 10–15 minutes at the start of class) to build prosodic automaticity; focused minimal-pair drills (10–20 minutes) to sharpen phonemic contrasts; and culminating communicative activities (role-plays, presentations) to force integration of accuracy and fluency. Teachers should scaffold tasks carefully starting with listening and imitation, move to controlled practice, and end with freer production to encourage transfer. Additionally, encouraging students to self-record and reflect on

their progress (self-monitoring) leverages metacognitive learning and helps sustain motivation.

Finally, the results have implications for assessment and curriculum design. Pronunciation should be assessed using a multi-dimensional rubric that separates segmental accuracy, suprasegmental control (intonation, stress), and fluency/automaticity. Embedding pronunciation objectives into broader speaking assessment (rather than confining it to isolated drills) will encourage learners to apply correct pronunciation in communicative settings. At curriculum level, integrating periodic pronunciation cycles (shadowing + targeted drills + communicative tasks) across semesters would help students progressively develop both accuracy and fluency.

The last, discussion of the study's results indicates that a deliberately sequenced combination of shadowing and minimal-pairs practice which implemented within the reflective cycles of Classroom Action Research can produce substantial, observable gains in EFL students' pronunciation. While further research with larger samples, objective acoustic measures, and controlled comparisons is recommended, the present findings offer actionable guidance for teachers who wish to strengthen pronunciation instruction in communicative ways. This finding is in line with (Hadiyansyah & Anasy, 2025). They investigates gender-based sociophonetic variations in the pronunciation of the phonemes /t/ and /l/, focusing on why some female students produce these sounds apico-dentally rather than in the standard apico-alveolar manner. The study addresses the problem of irregular articulation found only among women, exploring whether the variation is due to habit, phonetic difficulty, or subconscious sensual expression. Using a descriptive qualitative case-study design, the researchers examined 43 university students aged 18–20 by eliciting pronunciations of selected English and Indonesian words, followed by interviews to probe the reasons behind their articulation patterns. Findings show that only female participants—specifically six for /t/ and four for /l/—used apico-dental articulation, and all were able to correct their pronunciation after instruction, suggesting habitual use rather than articulatory inability, though sociocultural or subconscious sensual influences may also play a role.

Besides, another researcher conducted the effectiveness of Awabe's English Pronunciation Application in improving eighth-grade students' speaking skills, particularly segmental pronunciation, addressing the problem of students' frequent mispronunciations and the lack of engaging teaching tools. Using a pre-experimental one-group pre-test and post-test design with 30 students from SMP N 25 Pontianak, the researchers administered pronunciation tests focusing on vowels, consonants, and syllables. The results showed a substantial increase from the pre-test mean score of 54.47 to the post-test mean score of 68.60, supported by a significant t-value (30.286) and a moderate effect size (0.969), indicating that the application effectively enhanced students' pronunciation accuracy and articulation (Utami et al., 2024).

CONCLUSION

This Classroom Action Research demonstrated that the integration of shadowing and minimal-pairs practice significantly improved students' pronunciation performance.

The quantitative data revealed an increase in the class average score from 62.5 in the pre-test to 82.8 in the final post-test, accompanied by a rise in the percentage of students achieving the minimum mastery criterion (≥ 70) from 25% to 85%. These results indicate that the interventions not only improved segmental accuracy and suprasegmental fluency but also enhanced students' confidence and participation in speaking activities. The cyclical process of planning, action, observation, and reflection enabled continuous adaptation, ensuring that each cycle directly addressed the observed weaknesses. Overall, the findings confirm that combining shadowing and minimal pairs within a communicative framework is an effective strategy for fostering meaningful improvements in pronunciation among EFL learners.

Despite these positive outcomes, this study has several limitations. The research was conducted in a single class with a limited sample size, which may affect the generalizability of the findings. Furthermore, the study relied primarily on teacher-led assessments and classroom observations, without employing external raters who could provide additional reliability in scoring pronunciation performance. Time constraints within the semester also limited the integration of more authentic communicative tasks that could further strengthen long-term pronunciation development.

Nevertheless, the study offers meaningful contributions to pronunciation pedagogy and action research practice. It provides a clear example of how shadowing and minimal-pairs training can be systematically combined to address both fluency-related and accuracy-related issues in pronunciation. The study also contributes to the limited body of research that applies these techniques within a Classroom Action Research framework, demonstrating how iterative cycles can lead to context-responsive improvements in EFL classrooms. These contributions may serve as a practical reference for language teachers seeking effective and adaptable strategies to enhance students' pronunciation skills in similar instructional settings.

ACKNOWLEDGMENTS

The researcher would like to express sincere appreciation to the students of the English Education Study Program 'A2-2024', IKIP Siliwangi, who participated enthusiastically in the Pronunciation course during the even semester of the 2024/2025 academic year. Their active engagement, commitment, and willingness to improve made this classroom action research possible. Gratitude is also extended to the English Education lecturers and the academic staff of IKIP Siliwangi for their continuous support, encouragement, and cooperation throughout the research process. The researcher deeply acknowledges the collaborative spirit and dedication of everyone involved, which greatly contributed to the success of this study.

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