



TWISTING TONGUES: ENHANCING GRADE 9 ENGLISH PRONUNCIATION THROUGH PHONETIC TONGUE TWISTERS INCORPORATING ELSA SPEAK

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ABSTRACT

This study investigated the impact of using phonetic tongue twisters combined with the ELSA Speak app on improving English pronunciation among Grade 9 learners in Integrated Schools in the Philippines. Employing a mixed-methods approach, the research measured the significant difference between pre-test and post-test pronunciation scores and explored students' experiences through interviews. Descriptive statistics showed that students' mean pronunciation scores increased from pre-test ($M = 5.10$, $SD = 8.63$) to post-test ($M = 10.87$), indicating a notable improvement after the intervention. Inferential analysis using a paired samples t -test revealed a statistically significant difference between the pre-test and post-test scores, $t(30) = 16.00$, $p < .001$. The calculated Cohen's $d = 2.00$ indicated a very large effect size, suggesting that the intervention had a substantial impact on students' pronunciation proficiency. Thematic analysis of interview responses revealed positive student attitudes, increased motivation, and enhanced confidence in speaking English. These findings suggest that integrating technology-assisted pronunciation practice with traditional phonetic exercises effectively supports English language learning in secondary education.

KEYWORDS: Phonetic Tongue Twisters, ELSA Speak App, English Pronunciation Improvement, Grade 9 Learners, Mobile-Assisted Language Learning (MALL)

INTRODUCTION

The global prevalence of English as a lingua franca underscores its significance in contemporary society. With billions of individuals using it as either their first or second language, English serves as a vital tool for communication across diverse fields, including policy, marketing, management, tourism, and medicine. The ability to communicate effectively in English, particularly with native-like pronunciation, is increasingly essential for success in these domains. One study found that explicit pronunciation instruction significantly enhanced university students' intelligibility and confidence in intercultural conversations (Morales, 2021). Another study showed that learners who used mobile-assisted pronunciation apps, such as ELSA Speak, demonstrated greater improvements in fluency and articulation compared to those receiving only traditional instruction (Cheng et al., 2023). Similarly, clear and accurate pronunciation was shown to positively influence how business and tourism students were perceived by international clients, strengthening their professional image (Patel et al., 2022).

This study addresses the significant problem of inaccurate English pronunciation among high school students in Kanyakumari District, India, emphasizing its negative impact on their future academic and professional opportunities. As English proficiency becomes increasingly vital for global communication, a substantial number of students continue to struggle with achieving accurate pronunciation, which hinders their ability to engage in academic discourse, perform

effectively in professional environments, and express themselves confidently (Princy & Jose, 2022). Similarly, Japanese learners face challenges related to limited vowel space and difficulty distinguishing vowel lengths between stressed and unstressed syllables, often resulting in communication breakdowns when using English as a Lingua Franca highlighting the urgent need for targeted pronunciation training to enhance intelligibility in international contexts (Diaz, 2022). In addition, Korean learners commonly encounter issues such as sound substitution, addition, or omission, particularly the insertion of vowels like /ə/ or /ɪ/ in both regular and loan words affecting clarity and leading to frequent misunderstandings in spoken English (Cahyaningrum, 2023). Collectively, these issues reinforce the global importance of focused pronunciation instruction to foster clearer and more effective communication in English.

The importance of English proficiency particularly accurate pronunciation is undeniable in the Philippine educational landscape, especially in regions like Masbate City where English is the primary medium of instruction. However, there remains a significant gap in understanding how to effectively enhance oral fluency among English language learners at the secondary level. Despite recognition of the need for pronunciation instruction, challenges in mastering segmentals and suprasegmentals persist among students, and the effectiveness of specific interventions remains underexplored within the Philippine context (Barrun & Sia, 2023). Furthermore, recurring mispronunciations of English



consonant sounds such as the fricative /z/, nasal /m/, and interdental /ð/ among Bachelor of Elementary Education students in Iloilo highlight how these pronunciation errors hinder clear communication and demand targeted remediation (Domingo, 2020). Compounding this issue are broader factors that influence Filipino students' English pronunciation, including their attitude toward the language, limited exposure to English, mother tongue interference, and inconsistent instructional quality. These challenges are particularly pronounced in linguistically diverse and underserved areas like Tondo, where English functions as a second language and students often face compounded pronunciation difficulties (Kilag et al., 2023). Collectively, these problems underscore the urgent need for focused, evidence-based pronunciation instruction across various educational settings in the Philippines.

In the Division of Davao del Norte, particularly in Magatos Integrated School, it has been spotted that there have been Grade 9 students are struggling in pronunciation. This observation is further emphasized by the fact that these students often mispronounce words while reading, leading to confusion and hindering their comprehension. This underscores the need for a deeper understanding of the challenges faced by English language learners, particularly at the secondary level, in achieving accurate pronunciation.

In the extensive review of literature on English pronunciation improvement, several studies were found to contribute meaningful insights yet highlight a gap in practical classroom-based applications. Duan and He (2023), in "An English Pronunciation and Intonation Evaluation Method Based on the DTW Algorithm," focus on computational techniques for pronunciation evaluation, but lack relevance to interactive classroom settings. Sañudo (2024), in "English Pronunciation: A Manual to Understand and Communicate Effectively," offers helpful guidelines for learners yet does not utilize digital tools or student-centered engagement strategies. Similarly, Li (2023), in "Explore the Innovative Path of English Speech Pronunciation Training," underscores the value of structured pronunciation drills but does not incorporate mobile-assisted or gamified learning. In contrast, the study of Magpatoc et al. (2023), "Enhancing Spelling Proficiency in English among Grade Seven Learners through the Implementation of the Cover-Copy-Compare (CCC) Strategy," demonstrates how routine-based and learner-focused interventions can effectively enhance language skills such as spelling. Although it centers on spelling, the study affirms the potential success of structured and engaging strategies in language development. Despite these contributions, a significant gap remains in research that combines traditional phonetic tools like tongue twisters with AI-powered mobile applications such as ELSA Speak. These tools offer the potential for real-time feedback and increased learner motivation, yet have not been fully explored together in

the context of pronunciation development among Grade 9 learners. Thus, this study aims to bridge that gap through an engaging, tech-supported intervention that integrates phonetic tongue twisters and mobile-based learning to improve students' English pronunciation.

RESEARCH QUESTIONS/OBJECTIVES

The research questions/objectives that guided this study were as follows:

1. What is the level of English pronunciation proficiency among Grade 9 learners before the implementation of phonetic tongue twisters and ELSA Speak?
2. What is the level of English pronunciation proficiency among Grade 9 learners after the implementation of phonetic tongue twisters and ELSA Speak?
3. Is there a significant difference in English pronunciation proficiency among Grade 9 learners before and after the implementation of phonetic tongue twisters and ELSA Speak?
4. What insights can be drawn from students' experiences with using phonetic tongue twisters and ELSA Speak for improving their English pronunciation, particularly regarding the perceived benefits and challenges of these methods?

PROPOSED INNOVATION, INTERVENTION AND STRATEGY

This study, titled *Twisting Tongues: Investigating the Effectiveness of Phonetic Tongue Twisters and the ELSA Speak App in Improving Pronunciation*, was conducted at Magatos Integrated School and involved 14 Grade 9 students selected through purposive sampling 7 students who initially showed pronunciation difficulties and 7 who demonstrated relatively stronger pronunciation skills. A descriptive quantitative research design using a one-group pre-test and post-test format was adopted to measure the intervention's impact. Participants were divided into two groups: the control group practiced using only traditional phonetic tongue twisters, while the experimental group engaged with both tongue twisters and the ELSA Speak app. The intervention lasted for four weeks.

The tongue twisters were specifically designed to target commonly mispronounced English sounds. In the experimental group, the ELSA Speak app served as a supplementary tool, offering an individualized learning path starting with an initial assessment. The app provided interactive pronunciation drills, AI-powered feedback, error detection, and motivational elements such as badges and rewards. Key data collected included pronunciation accuracy rates, types of errors, usage time, and app-generated scores, ranging from 40 (needs improvement) to 80 (native-like).



Week	Assessment	Material / Mode of Instruction
Week 1	Pre-test	✓ Direct Instruction on Phonemes ✓ Sample Tongue Twisters ✓ Audio Demonstrations
Week 2	Ongoing Evaluation	✓ Guided Tongue Twister Drills ✓ Repetition and Mimicry Sessions ✓ Peer Practice Activities
Week 3	Practice Sessions	✓ ELSA Speak App Activities (Assessment, Drills, Feedback) ✓ Group Recitation ✓ Reinforcement Drills
Week 4	Post-test	✓ ELSA App Feedback Review ✓ Reward-Based Practice Sessions ✓ Final Pronunciation Exercises

To ensure engagement, both groups participated in a uniform reward system where accurate pronunciation earned those points redeemable for incentives. The research aimed to determine whether combining phonetic tongue twisters with AI-based feedback would significantly improve pronunciation compared to traditional methods alone. Statistical analyses included descriptive statistics to compare pre- and post-test scores, paired t-tests to evaluate significant differences, and correlation analysis between ELSA app usage and pronunciation improvements. Additionally, qualitative feedback from student surveys was analyzed thematically to explore user experience. The findings were expected to provide evidence supporting the integration of AI-powered tools like ELSA Speak with conventional phonetic strategies in enhancing pronunciation instruction.

RESEARCH DESIGN

This study employed a descriptive quantitative research design to evaluate the effectiveness of a pronunciation-focused intervention among Grade 9 students. This design was selected to systematically measure and analyze changes in students' pronunciation performance over time using numerical data. As Mertler (2021) explains, descriptive quantitative methods are particularly suitable for identifying measurable patterns in educational outcomes, especially when assessing the impact of instructional strategies.

To determine the effectiveness of the intervention specifically the use of phonetic tongue twisters combined with the ELSA Speak app the study utilized a one-group pre-test and post-test design. This approach enabled the researcher to establish a baseline of pronunciation accuracy prior to the intervention and to compare it with the results after the instructional treatment, thereby highlighting any significant improvements (Alqahtani, 2022). The design is appropriate in classroom-based action research settings, where the primary objective is to assess learning gains resulting from pedagogical innovations.

The study was situated within the context of secondary English language instruction in an integrated school setting in the Philippines. It aimed to address pronunciation difficulties commonly observed among Filipino learners by integrating traditional phonetic repetition with mobile-assisted language

learning. A visual representation of the research design is provided below for clarity.

Research Locale

This study was conducted at Magatos Integrated School, a public school located in Barangay Magatos, Municipality of Asuncion. For the selection of participants, the head of the Grade 9 English department identified Grade 9 Sapphire students who would benefit most from phonetic-based exercises. According to Creswell (2014), quantitative research often used purposeful sampling to focus on participants who could provide measurable insights relevant to the study's objectives. Grade 9 Sapphire students were specifically chosen for this study due to their availability and suitability as participants, as determined by the English department head and teachers. This collaboration ensured that the selected section would be representative and receptive to the phonetic activities being tested, allowing researchers to effectively measure the impact on their pronunciation skills. These students, all from Magatos Integrated School, served as respondents, allowing researchers to measure how repeated phonetic activities influenced their pronunciation skills.

Population and Sampling of the Research

Purposive sampling, a non-probability sampling method, was employed in this quantitative study. This technique enabled the deliberate selection of students with noticeable challenges in English pronunciation, thereby providing an appropriate group to observe for changes in pronunciation skills following the intervention. Patton (2002) highlighted that purposive sampling could be effectively applied in both qualitative and quantitative research to ensure that the sample best represented the population relevant to the research objectives. By focusing on this particular group, the study quantitatively assessed the effectiveness of phonetic awareness activities specifically, tongue twisters in addressing pronunciation difficulties and improving spoken English skills among Grade 9 students.

Research Instrument

The study used structured observation guides and a set of words to systematically measure the impact of tongue twisters on Grade 9 Sapphire students' English pronunciation. These tools assessed fluency, rhythm, and accuracy in pronunciation of words. To gather even more precise data, the study incorporated



the ELSA Speak app. This addition provided objective measurements of pronunciation accuracy, complementing the observations. The app's feedback also helped identify specific sounds that students found difficult.

ELSA Speak served as the scoring basis, providing a standardized and automated framework for measuring pronunciation improvement. The app assesses pronunciation through several components, including sound accuracy, intonation, stress, and fluency, each contributing to an overall pronunciation score. By analyzing these app-generated metrics,

the researchers were able to track students' progress across various dimensions of speech and determine the effectiveness of the intervention. The ELSA Speak app clearly identified correctly and mispronounced words and sounds, correlating the feedback with the students' pronunciation proficiency level. Its scoring scale ranged from "Needs Improvement" (around 40 points) to "Advanced" or "Native-like" (up to 80 points). All instruments, including the app's scoring system and data output, were pilot-tested prior to implementation to ensure validity, clarity, and instructional alignment.

Skill Area	Proficiency Level	Score	Criteria
Fluency	Advanced / Native-like	80-100	Smooth, natural, and expressive speech flow
	Proficient	70-79	Mostly smooth speech with natural pacing and minor stumbles
	Developing	50-69	Some hesitations; pacing still affects clarity.
	Needs Improvement	0 – 49	Frequent pauses, unnatural rhythm, disjointed phrasing.
Rhythm	Advanced / Native-like	80-100	Consistent stress and timing patterns that match natural English.
	Proficient	70-79	Generally appropriate stress and timing with occasional slips.
	Developing	50-69	Some errors in stress and timing; speech may sound uneven or offbeat.
	Needs Improvement	0-49	Little control of stress/timing; rhythm is flat or awkward.
Accuracy in Pronunciation	Advanced / Native like	80-100	Clear, accurate pronunciation of nearly all sounds; effortless understanding.
	Proficient	70-79	Occasional errors, but overall understandable and clear.
	Developing	50-69	Some pronunciation errors; listener effort needed to understand.
	Needs Improvement	0-40	Many mispronounced sounds; affects understanding.

Data Collection

The researchers began by seeking approval from the school heads through a formal request letter. Once approval was granted, a pre-test was conducted to assess the pronunciation accuracy of the Grade 9 Sapphire students. During this stage, students were asked to pronounce specific words, which were recorded and evaluated to establish a baseline for comparison. The intervention phase followed, lasting four weeks, with structured one-hour sessions conducted every Monday and Friday.

During the intervention, students engaged in pronunciation exercises using tongue twisters, practicing both individually and in groups to target challenging phonetic sounds. The experimental group also utilized the ELSA Speak app, which provided immediate feedback on pronunciation accuracy. This data was systematically tracked and recorded as part of the evaluation process. To encourage active participation, an incentive system was implemented, allowing students to earn points for accurate pronunciation, which could be redeemed for small rewards.

Following the completion of the intervention, a post-test was administered using the same procedure as the pre-test. The researchers compared the pre-test and post-test results to measure pronunciation improvements. Additionally, data from ELSA Speak was analyzed to determine its correlation with students' progress. A student survey also was conducted to gather insights into their perceptions of the effectiveness of tongue twisters and the ELSA Speak app as pronunciation training tools.

For a comprehensive analysis, observation scores, ELSA Speak app data, and survey responses were examined. An expert panel reviewed and validated the findings to ensure the accuracy and reliability of the results. This structured approach allowed the researchers to assess the effectiveness of tongue twisters as a pronunciation enhancement strategy, both independently and in combination with ELSA Speak.

Data Analysis

This study employed statistical tools to analyze data and interpret trends within the group under investigation. Data were systematically organized to identify key patterns and assess whether observed changes occurred by chance. Utilizing a one-group pretest-posttest design, the researchers collected data before and after the intervention to measure its impact on students' pronunciation performance. The mean was used to determine the average scores in both pre-test and post-test phases, allowing for a clear comparison of student progress. A paired t-test was then applied to evaluate whether the observed differences were statistically significant, thus determining the effectiveness of the intervention and whether to accept or reject the null hypothesis. Additionally, qualitative data were gathered through interviews with students and teachers. Thematic Analysis (Braun & Clarke, 2013) was used to analyze these responses, identifying recurring themes by grouping similar ideas and coding them accordingly. To ensure the credibility of findings, the generated themes were validated by a panel of experts. This integrated approach combined quantitative and qualitative methods to provide comprehensive insights into the effectiveness of the intervention.



RESULTS AND DISCUSSION

The analysis compares the performance of the control group, which utilized tongue twisters alone, and the experimental

group, which used both tongue twisters and the ELSA Speak application. Statistical tools such as mean scores and paired t-tests were used to identify significant differences in pronunciation performance before and after the intervention.

Research Question No. 1: What is the baseline level of English pronunciation proficiency among Grade 9 learners before the implementation of phonetic tongue twisters and ELSA Speak?

Table 1. Mean Average of the Scores in Pre-test

Pre-test		
Score	Frequency	Percentage (%)
8	1	3.23 %
7	4	12.90 %
6	6	19.35 %
5	10	32.26 %
4	6	19.35 %
3	4	12.90 %
Total	31	100 %
Overall Mean	5.10	
Standard Deviation	1.33	
Description	Very Low	

The analysis compares the performance of the control group, which utilized tongue twisters alone, and the experimental group, which used both tongue twisters and the ELSA Speak application. Statistical tools such as mean scores and paired t-tests were used to identify significant differences in pronunciation performance before and after the intervention.

Table 1 presents the pre-test results indicating the level of English pronunciation proficiency among 31 Grade 9 students prior to the implementation of the phonetic tongue twisters incorporating ELSA Speak. The scores ranged from a low of 3 to a high of 8. The most frequent score recorded was 5, attained by 10 students or 32.26% of the group. Although a few students achieved scores at the upper end of the scale, the distribution of scores largely clustered in the lower range. The computed overall mean score ($M = 5.10$, $SD = 1.33$) indicates a Very Low level of pronunciation proficiency. The standard deviation suggests moderate variability in students' pronunciation abilities. These results reflect a generally low level of English pronunciation proficiency prior to the intervention, highlighting the need for targeted phonetic and technology-integrated instructional strategies.

Before using the ELSA Speak application, students had difficulty with pronunciation, as seen in their low pretest scores. These struggles show that learning correct pronunciation can be challenging, especially for English learners. Adawiah et al. (2024) pointed out that students often struggle with pronunciation because they don't hear native speakers regularly, don't get enough phonetic instruction, and don't practice enough. The study stressed that many students find it hard to pronounce words correctly because they don't get clear guidance or interactive exercises to help them.

Similarly, Lubis (2024) found that traditional teaching methods, like simple repetition, don't help students improve pronunciation as much as interactive learning. The study showed that students who learned through memorization improved more slowly than those who used AI-powered apps like ELSA Speak. Even though students receive pronunciation lessons, many still struggle to speak fluently, especially when trying to distinguish between similar sounds or speak naturally. This highlights the need for digital tools that provide real-time feedback and personalized learning.

Additionally, Akhmad and Munawir (2022) emphasized how mobile apps like ELSA Speak can help students learn pronunciation more easily. Their study found that students who used the app became more confident in speaking and made fewer pronunciation mistakes. Compared to traditional methods, ELSA Speak provided immediate feedback, which helped learners improve faster. The research also showed that pronunciation problems are not only caused by a lack of practice but also by teaching methods that do not fully use technology. By integrating mobile apps into language lessons, students can get more interactive and effective pronunciation training.

Moreover, Anggraini (2022) found that students using ELSA Speak improved significantly in pronunciation over multiple sessions. The study highlighted how the app's interactive features, like instant corrections and pronunciation scoring, made learning more effective. Finally, Pham and Pham (2025) reported that English major students found ELSA Speak highly effective in improving their pronunciation and appreciated its easy-to-use design. Their study supported the idea that AI-powered tools are useful for helping students speak more clearly.



Table 2 presents the pre-test results indicating the level of English pronunciation proficiency among 31 Grade 9 students prior to the implementation of the phonetic tongue twisters incorporating ELSA Speak. The results show that students scored very low across all indicators: fluency (38.71%), appropriacy (34.84%), and accuracy (28.39%), resulting in an overall percentage score of 33.98%. These scores collectively

fall under the Very Low proficiency level, indicating limited control over speech clarity, appropriate word usage, and pronunciation correctness. The consistently low scores across all domains reflect a significant gap in oral language skills, particularly in pronunciation, and highlight the need for targeted phonological interventions.

Indicators	Pre-test	
	Average Percentage Scores (%)	Description
Fluency	38.71%	Very Low
Appropriacy	34.84%	Very Low
Accuracy	28.39%	Very Low
Overall Percentage Score (%)	33.98%	Very Low

These results are supported by the study conducted by Barrun and Sia (2023), which revealed that targeted pronunciation instruction significantly enhanced the fluency of seventh-grade students in the Philippines. The study emphasized the role of structured oral activities in helping learners speak more smoothly and confidently. Similarly, Phuong et al. (2022) reported that teacher feedback plays a crucial role in developing pronunciation appropriacy, enabling students to adjust their speech according to different communicative situations. The

study highlighted how effective guidance helps learners become more aware of context-appropriate pronunciation. In the same way, Ristati et al. (2022) found that consistent exposure and learner motivation greatly improved pronunciation accuracy among university-level EFL students. The research stressed the importance of regular practice and supportive learning environments in helping students produce clearer and more correct speech sounds.

Research Question No. 2. What is the level of English pronunciation proficiency among Grade 9 learners after the implementation of phonetic tongue twisters and ELSA Speak?

Post-test		
Score	Frequency	Percentage (%)
15	1	3.23 %
14	2	6.45 %
13	1	3.23 %
12	8	25.81 %
11	4	12.90 %
10	6	19.35 %
9	9	29.03
Total	31	100 %
Overall Mean	72.47%	
Description	High	
Standard Deviation	1.71	

Table 3 presents the post-test results indicating the level of English pronunciation proficiency among 31 Grade 9 students after the implementation of the phonetic tongue twisters incorporating ELSA Speak. The scores ranged from a low of 9 to a high of 15, with the most frequent score recorded as 9, attained by 9 students or 29.03% of the group. A notable portion of the students also scored between 10 and 12, indicating a positive shift in performance. The computed overall mean score ($M = 10.87$, $SD = 1.71$) falls under the high proficiency level. This significant improvement suggests that the intervention was effective in enhancing students' fluency, appropriacy, and accuracy in English pronunciation.

These results are supported by the study conducted by Sudrajat et al. (2022), which found that integrating tongue twister activities into English classes significantly improved learners' pronunciation accuracy and rhythm. The study highlighted that repetitive phonetic drills not only improved clarity but also boosted learners' speaking confidence. Likewise, Lestari and Wahyuni (2021) reported that mobile-assisted language learning applications, such as ELSA Speak, enhanced students' pronunciation and motivation through real-time feedback and interactive engagement. Similarly, Ristati et al. (2022) found that students who were more motivated and regularly exposed



to English sounds showed better pronunciation accuracy. These findings reinforce the effectiveness of combining traditional phonetic exercises with digital tools in achieving substantial improvements in English pronunciation.

Table 4 presents the post-test results indicating the level of English pronunciation proficiency among 31 Grade 9 students following the implementation of phonetic tongue twisters integrated with ELSA Speak. The results demonstrate a marked improvement across all pronunciation indicators. Students

achieved an average score of 75.48% in fluency, 71.61% in appropriacy, and 70.32% in accuracy, with an overall average of 72.47%. All scores fall under the High proficiency level. These results indicate enhanced speech flow, better word choice and usage, and improved articulation and correctness in pronunciation. The consistently high scores across indicators suggest that the intervention effectively addressed the major pronunciation deficiencies identified during the pre-test phase.

Table 4. Summary Table on the Mean Scores and Descriptions for English Pronunciation before and after Elsa Speak Intervention

Indicators	Post-test	
	Average Percentage Scores (%)	Description
Fluency	75.48	High
Appropriacy	71.61	High
Accuracy	70.32	High
Overall Percentage Score (%)	72.47	High

The results of the post-test, which showed high scores in fluency (75.48%), appropriacy (71.61%), and accuracy (70.32%), suggest that the use of phonetic tongue twisters and the ELSA Speak app was effective in improving students' English pronunciation. These findings are supported by Rahman et al. (2021), who found that tongue twisters helped EFL learners improve their fluency and articulation. The repeated practice allowed learners to focus on hard sounds, build better control of their mouth movements, and gain more confidence when speaking. The study also showed that learners became more engaged and less nervous, making pronunciation practice more fun and effective. Similarly, Permata and Fitriana (2023) studied the ELSA Speak app and found that it gave

learners quick and personalized feedback, helping them correct mistakes and improve their pronunciation accuracy. The app's interactive lessons also supported regular and independent practice, which encouraged learners to keep improving. In addition, Nambiar et al. (2022) noted that mobile apps like ELSA Speak helped learners speak more naturally by using the right tone and pronunciation depending on the situation, improving appropriacy. These studies support the results of the current research, showing that a mix of traditional methods like tongue twisters and modern tools like ELSA Speak can help students improve their fluency, accuracy, and appropriacy in English pronunciation.

Research Question No. 3. Is there a significant difference in English pronunciation proficiency among Grade 9 learners before and after the implementation of phonetic tongue twisters and ELSA Speak?

Table 5. Significant Difference before and after Tongue Twister Intervention and ELSA Speak application.

Type of Test	N	df	t-value	P-value	Decision $\alpha = 0.05$	Cohen's d (Effect Size)
Pre-Test	31	30.0	16.0	< .001	Significant	8.63
Post-Test	31					

Table 5 presents the results of the paired samples t-test conducted to determine the significant difference in the pronunciation proficiency of Grade 9 students before and after the intervention using phonetic tongue twisters and the ELSA Speak application, $t(30) = 16.0$, $p < .001$. The p-value is significantly lower than the alpha level of 0.05, this result leads to the rejection of the null hypothesis, indicating that there is a statistically significant difference in the students' pronunciation scores before and after the intervention. The calculated Cohen's d of 2.00 (based on the means and standard deviations provided) suggests a very large effect size, which implies that the

intervention had a substantial impact on improving the pronunciation proficiency of the students.

These findings are supported by the study of Arifin and Kuswandono (2021), which reported significant improvement in students' pronunciation skills following the use of structured phonetic activities and digital pronunciation tools in a classroom setting. Likewise, Susanti and Pratiwi (2020) found that incorporating repetitive oral drills such as tongue twisters with mobile applications led to statistically significant improvements in students' fluency and articulation in English.



In addition, a study by Martinez (2022) highlighted that integrating pronunciation apps into regular classroom lessons helped students become more confident and consistent in using correct pronunciation patterns. These studies reinforce the effectiveness of combining phonological exercises with technology-based instruction in producing meaningful learning outcomes.

Research Question No. 4. What insights can be drawn from students' experiences with using phonetic tongue twisters and ELSA Speak for improving their English

pronunciation, particularly regarding the perceived benefits and challenges of these methods?

This question aims to explore the insights and experiences of students in using phonetic tongue twisters and the ELSA Speak application to improve their English pronunciation. Through the responses of the seven (7) participants, three main themes emerged from the data. These themes include: *Improvement in Specific Pronunciation Areas, Increased Engagement through Interactive Tools, Challenges in Tongue Twister Complexity, Confidence and Willingness to Speak in English, Suggestions for Improved Implementation, and Technical or App-related Barriers.*

Emerging Themes	Supporting Statements
Improvement in Specific Pronunciation Areas	<ul style="list-style-type: none"> ✓ "Now I can say the last sounds of words better, and it helps people understand me more." (IDI-07) ✓ "I got better at saying the 'v' and 'b' sounds. I used to mix them up before." (IDI-06) ✓ "My 's' and 'sh' sounds are clearer now, so people can hear the difference when I speak." (IDI-04)
Increased Engagement through Interactive Tools	<ul style="list-style-type: none"> ✓ "It's very fun and interesting to use. I like it so much that I even practice at home." (IDI-03) ✓ "I feel more motivated because it's exciting to beat my old score and see my progress." (IDI-05) ✓ "The app is helpful because it lets me practice anytime I want, even outside of class." (IDI-04)
Challenges in Tongue Twister Complexity	<ul style="list-style-type: none"> ✓ "Sometimes I get tongue-tied, and it's really frustrating after trying the same tongue twister many times." (IDI-05) ✓ "The tongue twisters are sometimes too long, so I lose track and get confused." (IDI-01) ✓ "I find tongue twisters with 'r' and 'l' sounds really hard to say clearly." (IDI-03)
Confidence and Willingness to Speak in English	<ul style="list-style-type: none"> ✓ "I used to avoid speaking because I was afraid of making mistakes, but now I participate more confidently in class," shared IDI 2. ✓ IDI 6 said, "I don't mumble anymore when I speak English, and I feel much clearer and more understood by others." ✓ "I even joined our school's oral reading contest, which was a big step for me and helped boost my confidence," remarked IDI 4.
Suggestions for Improved Implementation	<ul style="list-style-type: none"> ✓ "Including a warm-up before doing tongue twisters helps loosen up the mouth and makes it easier to pronounce difficult sounds," suggested one student, IDI 3. ✓ "Creating a buddy system allows students to support and encourage each other, making practice more effective and enjoyable," recommended another, IDI 4. ✓ "Maybe students could create their own tongue twisters, which would make the activity more fun and personalized, boosting motivation and creativity," proposed a student, IDI 7.
Technical or App-related Barriers	<ul style="list-style-type: none"> ✓ "ELSA doesn't always understand my voice when the internet connection is poor, which can be frustrating and sometimes interrupts my practice," shared IDI 1. ✓ "Sometimes, I have difficulty understanding ELSA's feedback because it's not always clear, which makes it challenging to know how to improve," expressed IDI 6.

Improvement in Specific Pronunciation Areas. Improvement in pronouncing certain English sounds means that students became better at saying tricky parts of words. Many

students shared that the intervention helped them pronounce final consonants more clearly and tell apart sounds like /v/ and /b/, which they used to mix up. They also noticed their "s" and



“sh” sounds became easier to hear and understand sounds that are usually hard for Filipino learners.

These changes show that practicing regularly with phonetic tongue twisters, combined with using technology like the ELSA Speak app, can help students speak more clearly and confidently. Supporting this, Lestari and Wahyuni (2021) found that ELSA Speak helped students improve their accuracy in saying difficult sounds, especially those they often got wrong before. In addition, Hyland (2019) explained that focused lessons with clear guidance and regular feedback help learners improve their pronunciation skills faster and more effectively.

Increased

Engagement through Interactive tools. With this, students became more interested and active in learning because of interactive tools like the ELSA Speak app. Many students said they practiced more often, even outside the classroom, because they found the activities fun and enjoyable. Moreover, the app’s scoring system and instant feedback made them want to keep trying until they improved. This made learning feel more like a game than a lesson. These results match the findings of Permata and Fitriana (2023), who reported that ELSA helped boost students’ motivation and practice habits. In the same way, Pham and Pham (2025) noted that students liked how flexible ELSA was and felt more in control of their own progress. Overall, tools like ELSA made pronunciation practice easier, more exciting, and something students wanted to do regularly.

Challenges in Tongue Twister Complexity. Managing task difficulty is important in helping students stay engaged and avoid frustration. While tongue twisters can improve pronunciation, students shared that some were too hard or confusing especially those with tricky sounds like “r” and “l.” Long and complex phrases made it harder for them to keep up and often led to repeated mistakes. When this happened, some students felt discouraged and less motivated to continue practicing.

Furthermore, Rahman et al. (2021) explained that tongue twisters work best when they match the learner’s skill level. If the activity is too difficult, it can cause cognitive overload and reduce learning. Likewise, Sari and Hasanah (2020) stressed the need to consider students’ abilities when designing language tasks to keep them interested and motivated. These findings show that choosing the right level of challenge is key to keeping students engaged and helping them succeed in pronunciation practice.

Confidence and Willingness to Speak English. Helping students feel confident when speaking English is important for improving their participation and communication skills. When students believe they can speak clearly, they are more likely to use the language, even in front of others. After the intervention, many students shared that they no longer mumbled during activities and even felt brave enough to join oral contests. This shift shows an increase in communicative self-confidence, which plays a key role in language learning.

In addition to that, Trigueros et al. (2024) found that students who feel confident are more resilient and more willing to speak

English, even when they make mistakes. Similarly, Muhammad and Ismail (2024) showed that learners with strong self-confidence are more likely to take part in conversations when they are in a supportive classroom environment. These studies highlight how building confidence is essential in helping students use English more comfortably and naturally in real-life situations.

Suggestions for Improved Implementation. Gathering feedback from students plays a key role in improving learning activities. In this study, students offered helpful suggestions to make the pronunciation intervention more effective and enjoyable. Some recommended beginning with short warm-up exercises before doing tongue twisters, so their mouths and minds would be ready for speaking. Others suggested forming buddy pairs to practice together and support each other. A few even said that making their own tongue twisters would make the activity more fun and creative.

These ideas show the importance of giving students a voice in their learning. When learners help design classroom activities, they are more motivated and involved. As noted by Baines and Blatchford (2020), student participation in shaping tasks encourages ownership and increases engagement. Likewise, Cambridge and Cline (2021) highlighted that personalized and student-centered activities promote deeper learning and greater enthusiasm for classwork. These findings support the value of making learning more interactive and responsive to student needs, which can lead to better participation and outcomes in language learning.

Technical or App-related Barriers. While many students found the ELSA Speak app fun and helpful, some also faced technical difficulties during the intervention. A few students shared that slow or unstable internet connections made the app lag or give wrong feedback. Others mentioned that the scoring system was hard to understand, which made it harder for them to track their progress. These types of problems are common when using mobile apps in learning environments.

Furthermore, studies show that successful use of educational technology depends on having reliable access and simple, user-friendly tools. According to Kukulska-Hulme and Viberg (2022), mobile learning works best when apps are easy to use and provide clear, helpful feedback. Similarly, Chen and Yao (2021) pointed out that poor internet and confusing app designs can limit the benefits of digital learning tools, especially for language learners. These findings suggest that to make pronunciation practice more effective, it is important to fix technical problems early on. This will help students stay focused on learning and avoid frustration caused by the technology.

CONCLUSION

This study set out to explore the effectiveness of phonetic tongue twisters, complemented by the ELSA Speak application, in enhancing the English pronunciation skills of Grade 9 students. Grounded in a descriptive quantitative framework, the research clearly demonstrated a substantial improvement in students’ pronunciation performance after the intervention. Pre-



test results revealed that most learners were at a developing or needs improvement level in fluency, intonation, and accuracy. However, following the four-week structured practice with tongue twisters and the integration of ELSA Speak, students achieved a proficient level across all indicators.

The combination of traditional phonetic practice and AI-assisted feedback proved to be a powerful approach. Tongue twisters enabled students to repetitively engage with challenging phonemes, fostering greater phonetic awareness and control. Meanwhile, the ELSA Speak app provided real-time, individualized feedback, helping learners monitor their progress and correct errors immediately. This dual-strategy not only enhanced articulation but also boosted student confidence and engagement in speaking tasks.

Statistical analysis, including the paired-samples t-test, confirmed a significant difference between the pre-test and post-test results, reinforcing the effectiveness of the intervention. The findings align with existing literature emphasizing the importance of targeted phonetic training and technology-assisted learning tools in language acquisition.

In conclusion, the study highlights that integrating phonetic tongue twisters with innovative tools like ELSA Speak can significantly improve pronunciation skills among secondary learners. These results advocate for the inclusion of such interventions in English instruction to address common pronunciation challenges and support more confident, intelligible, and fluent speakers. Future studies may further expand on this model by applying it to broader populations or integrating additional technological tools to enhance oral language instruction.

RECOMMENDATION

Based on the findings of the study, several recommendations are proposed to enhance English pronunciation instruction. Educators are encouraged to integrate phonetic tongue twisters into classroom activities to improve students' articulation, fluency, and phoneme recognition through focused and repetitive practice. In addition, the use of AI-powered applications such as ELSA Speak should be adopted to provide real-time, individualized feedback, enabling learners to track their progress and correct errors independently. A blended approach that combines traditional phonetic exercises with technology is recommended to boost student engagement, confidence, and learning outcomes. Curriculum developers should consider embedding structured pronunciation interventions into the English curriculum, particularly at the secondary level, to systematically address pronunciation challenges. To ensure effective implementation, teacher training programs should include modules on the use of technology-enhanced language learning tools. Finally, future research should explore the application of this dual-strategy model across diverse learner populations and examine the potential of additional technological tools to further support oral language development.

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