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PROJECT SOUND-IT-OUT: A MULTIFACETED PHONEMIC AWARENESS INTERVENTION FOR GRADE 1 LEARNERS THROUGH PLAYFUL EXPLORATION AND INTERACTIVE LEARNING

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ABSTRACT

This action research investigated the effectiveness of Project SOUND-IT-OUT, a structured four-week phonemic awareness intervention implemented in a Grade 1 classroom at Clementa F. Royo Elementary School in Davao del Norte, Philippines. Recognizing the foundational role of phonemic awareness in early literacy development, the intervention was designed to support beginning readers through playful, engaging, and interactive learning experiences. The activities focused on enhancing letter-sound recognition, sound segmentation, blending, and phoneme manipulation using songs, games, movement-based tasks, and small-group drills that promoted student participation and enjoyment. A pre-test/post-test design was employed, using an adapted version of the Phonemic Awareness Assessment for 1st Grade to measure changes in students' phonemic awareness before and after the intervention. Quantitative results analyzed through paired samples t-tests revealed a statistically significant improvement in phonemic awareness ($t(19) = 8.10$, $p < .001$), indicating a strong impact of the intervention. The computed effect size (Cohen's $d = 1.81$) suggested a large and educationally meaningful improvement. In addition to test scores, qualitative data were gathered through informal interviews and reflective discussions with students after the intervention. The responses highlighted noticeable improvements in decoding skills, increased motivation to read, greater self-confidence in participating during reading tasks, and the emergence of independent reading habits among struggling learners. These findings suggest that Project SOUND-IT-OUT is an effective and developmentally appropriate approach for strengthening phonemic awareness among Grade 1 learners. The results underscore the importance of integrating playful and student-centered strategies into early literacy instruction to foster both academic gains and positive learning attitudes.

KEYWORDS: *Phonemic Awareness, Project Sound-It-Out, quantitative-descriptive, Grade 1 learners, Philippines*

INTRODUCTION

Learning sound recognition and phonemic awareness is essential to a child's academic growth, as it supports both reading and writing development. Phonemic awareness is the ability to hear, identify, and manipulate individual sounds in spoken words is a strong predictor of early reading success (Liebig et al., 2021). It falls under the broader domain of phonological awareness and involves critical skills such as isolating, blending, segmenting, deleting, and adding sounds to form new words (Goldstein et al., 2022). However, according to Ehri et al. (2020), many children, especially those from linguistically diverse or under-resourced backgrounds, struggle with distinguishing and producing accurate letter sounds. These challenges often result in delayed reading acquisition and limited literacy progress in the early grades.

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Phonemic awareness remains a common challenge among English learners in Indonesia, Japan, and Korea. In Indonesia, many students can recognize letters but struggle to produce their corresponding sounds. They often confuse similar-sounding phonemes and have difficulty distinguishing between vowels and consonants. Some also find it hard to connect uppercase and lowercase letters with their sounds, largely due to limited engaging phonemic activities (Hunt et al., 2020). In Japan, learners face difficulties with English phonemes because of inconsistencies between English and the Japanese sound system. This mismatch makes it challenging to recognize, distinguish, and accurately produce English sounds (Yolanda, 2020). Similarly, Nam Ki-yeon (2021) found that Korean EFL learners often fail to recognize familiar words when heard, despite knowing them in written form. This issue stems from inadequate training in identifying and distinguishing individual sounds, leading to poor phonological processing and limited listening comprehension.

In the Philippines, phonemic awareness challenges among Grade 1 learners are evident in various regions, including Tarlac, Cebu, and Cavite. In Tarlac, many students struggle to associate letters with their corresponding sounds, showing confusion and hesitation when identifying or producing them, and often relying on memorization rather than decoding through sound recognition (Bañez & Teresa, 2022). In Cebu, these difficulties are often tied to cognitive or linguistic factors, where children have underdeveloped phonological systems, leading to simplified sound patterns that hinder their ability to distinguish and manipulate individual sounds (Klein & Liu-Shea, 2020). Meanwhile, Tan (2020) observed that in Cavite, learners face similar struggles with identifying, isolating, and manipulating phonemes, which negatively affects their reading development and confidence in oral language tasks. These persistent issues highlight the urgent need for targeted and developmentally appropriate phonemic awareness instruction.

In the Division of Davao del Norte, specifically at Clementa F. Royo Elementary School, there are 20 Grade 1 learners were observed to have serious difficulties with phonemic awareness. These students struggled to identify letter-sound relationships, confuse similar phonemes, and showed limited ability to isolate, blend, and manipulate sounds. As a result, their phonemic awareness development was hindered, and their confidence and classroom participation were noticeably low. Classroom observations, informal assessments, and teacher feedback confirmed that a lack of engaging and structured phonemic awareness activities contributed to these challenges. Given the foundational role of phonemic awareness in early language development, this gap places students at risk of struggling with future literacy skills. Hence, this study aims to address these needs through a multifaceted intervention that uses playful exploration and interactive learning strategies to build strong phonemic skills among Grade 1 learners.

In relation to international research studies, there exists a large body of literature that is somewhat related to this research. For example, the study entitled “Effect of Reading Strategies on Grade One Children's Phonemic Awareness” by Solomon and Chanyalew (2020), which focused on direct reading instruction’s effect on phonemic awareness but excluded interactive strategies. Similarly, the study entitled “From Compliance to Play: Enhancement of Phonemic Awareness Through Play-Based Learning Activities in Kindergarten” by Dyezabel (2023), which used play-based methods in kindergarten, but not addressing the Grade 1 needs. Additionally, the study by Cassano and Rohde (2020), entitled “Phonological Awareness in Early Childhood Literacy Development”, which discussed general phonological development but lacked classroom-based interventions. These research gaps indicate that existing studies do not specifically address the integration of both direct reading instruction and play-based strategies tailored for enhancing phonemic awareness among Grade 1 learners within the context of actual classroom settings. Hence, Project SOUND-IT-OUT seeks to bridge this gap by implementing a multifaceted phonemic awareness intervention that incorporates playful, interactive learning strategies specifically designed for Grade 1 learners at Clementa F. Royo Elementary School.

This study applied a multifaceted approach to phonemic awareness using interactive and playful learning strategies for Grade 1 learners at Clementa F. Royo Elementary School. The researcher identified a gap in current instruction, noting that many students struggled with foundational phonemic awareness skills, such as recognizing letter sounds, identifying individual phonemes, and manipulating sounds in words. Although these skills were essential for early literacy development, traditional teaching methods had not effectively supported learners through engaging and interactive approaches that matched their diverse learning needs.

RESEARCH QUESTIONS/ OBJECTIVES

The research questions below aimed to investigate the effectiveness of Project Sound-It-Out, a multifaceted phonemic awareness intervention, in addressing reading challenges among Grade 1 learners at Clementa F. Royo Elementary School. This study sought to enhance students' phonemic awareness skills through playful exploration and interactive learning. Specifically, this study sought to answer the following questions:

1. What is the level of phonemic awareness of Grade 1 learners *before* implementing the "Project Sound-It-Out" intervention?
2. What is the level of phonemic awareness of Grade 1 learners *during and after* implementing the "Project Sound-It-Out" intervention?
3. Is there a significant difference between pre-test and post-test "Project Sound-It-Out" intervention on phonemic awareness among Grade 1 learners?
4. What insights can be drawn from the implementation of the "Project Sound-It-Out" intervention regarding its effectiveness in enhancing students' phonemic awareness in Grade 1 learners?

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PROPOSED INTERVENTION

In this study, we implemented an "PROJECT SOUND-IT-OUT" intervention to strengthen the phonemic awareness of Grade 1 learners. This multifaceted approach integrates playful exploration and interactive learning to develop early literacy skills. The intervention includes activities such as Sound Hunt (identifying beginning and ending sounds through classroom objects), Clap It Out (syllable and phoneme segmentation through rhythm and movement), Blend & Build (blending sounds to form simple words using letter tiles), and Story Sound Match (matching sounds from read-aloud stories to corresponding images or letters). These components were purposefully designed to create a fun, low-pressure environment that encourages participation and supports diverse learning styles. Through PROJECT SOUND-IT-OUT, learners engage in meaningful, multisensory activities that promote phonemic awareness and lay a strong foundation for reading development.

Week	Focus Area	Key Activities	Assessment Tool
Day 1	Baseline Assessment	Pre-test on letter-sound correspondence and basic rhyming	10-item Phonemic Awareness Pre-test
Week 1	Phoneme Segmentation & Auditory Discrimination	- Phoneme segmentation and blending (initial, medial, final sounds) - "Rhyme Time" for rhyming recognition and phonetic comparison	Teacher observation & formative oral checks
Week 2	Grapheme-Phoneme Correspondence	- "Word Building Workshop" (tiles, flashcards) - "Sound Detectives" for decoding and constructing varied sound-spelling patterns	Activity performance checklist
Week 3	Complex Phonetic Patterns & Sound Manipulation	- "Rhyme Relay" for subtle rhyme discrimination - "Sound Building Blocks" for consonant blends and digraph exploration	Oral drills & group task rubric
Week 4	Application and Integration of Phonetic Skills	- "Letter Match" games for complex grapheme-phoneme recognition - "Reading Relay" using texts with targeted phonetic patterns	Game scorecards & peer evaluation
Final Day	Post-Intervention Assessment	Post-test aligned with pre-test content to measure growth in phonemic awareness	10-item Phonemic Awareness Post-test

RESEARCH METHODOLOGY

Research Design

This study utilized a quantitative approach through a one-group pretest-posttest design, classified under pre-experimental research. This design involves assessing a single group of participants at two distinct points: before (pre-test) and after (post-test) the implementation of an intervention. It assessed changes resulting from an intervention or project by comparing values before (baseline) and after the intervention (end-line evaluation). Unlike experimental designs, pre- experimental designs lack a control group for comparison; instead, they focus on changes within a single group over time. The observed differences between baseline and End-line values are attributed to the project, suggesting its impact on the outcomes (Wamunyima & Nyirenda, 2023).

In the context of this study, the design was applied to measure the effectiveness of Project SOUND-IT-OUT, a multifaceted phonemic awareness intervention designed for Grade 1 learners at Clementa F. Royo Elementary School. The pretest gathered initial data on the students' ability to recognize, isolate, and manipulate phonemes, while the posttest determined any improvements after the implementation of playful and interactive phonemic awareness activities. This approach provided a practical means to evaluate how the intervention influenced students' phonemic awareness skills over time, even in the absence of a control group.

Research Participants

This research involved one section of Grade 1 students from Clementa F. Royo Elementary School, specifically Grade 1-Ilang-Ilang, comprising 20 students. This section was purposefully selected to focus on improving their phonemic awareness and letter-sound recognition. The intervention focused on enhancing the phonetic awareness of Grade 1 students by implementing Project SOUND-IT-OUT. By the end of the study, the students demonstrated improved phonemic awareness and letter-sound recognition.

Research Instrument

This study employed a pre-test and post-test design to assess the impact of the SOUND-IT-OUT intervention on students' phonemic awareness. Assessment instruments were adapted from existing Phonemic Awareness Assessment tools for 1st Grade. These tools were modified to align precisely with the intervention's objectives, ensuring age-appropriateness and relevance to the targeted phonemic awareness skills. The test included five key indicators: Onset Fluency (Isolate the Initial Phoneme); Rhyme Production; Identifying Final Sounds in Words; Adding Phonemes to Words; Substituting Initial Phonemes in Words. Each indicator comprised two items. The

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pre-test served as a baseline assessment, identifying students' current phonetic awareness challenges. After the intervention, the post-test measured improvements in their phonetic awareness, allowing for a clear comparison of performance.

By utilizing this diagnostic approach, the researchers captured the effectiveness of the intervention in enhancing students' phonemic awareness. The results from both tests were carefully analyzed to determine the progress made, shedding light on the intervention's impact and any remaining challenges in the students' phonemic awareness development. This systematic method ensured a reliable and data-driven evaluation of the students' learning outcomes.

In evaluating the learners' phonemic awareness, the criteria were adapted from relevant literacy studies by Melissa (2022).

Table 1
Range of Mean Percentage

Range of Mean Percentage	Descriptive level	Interpretation
91-100	Very high	Learners demonstrate exceptional ability to hear, identify, and manipulate individual sounds in spoken words. They readily segment, blend, and manipulate phonemes.
79-90	High	Learners show a strong understanding of phonetic units, with minor difficulties in complex phoneme blending or manipulation tasks.
61-75	Average	Learners exhibit adequate phonetic awareness but may struggle with some phoneme blends, particularly more complex ones, or with tasks requiring subtle phonetic distinctions.
51-60	Low	Learners show difficulty in identifying, isolating, or manipulating individual sounds in words. They struggle with basic phoneme blending and segmentation tasks.
0-50	Very low	Learners demonstrate very little understanding of phonetic units, requiring significant intervention to develop foundational skills in phoneme awareness.

Procedure

To begin the study, the researchers obtained approval from the school principal to conduct the action research in the Grade 1 class at Clementa F. Royo Elementary School. A letter of request was submitted, detailing the purpose, methodology, and expected benefits of the intervention for students' phonetic awareness skills. Upon approval, a meeting was conducted with the cooperating teacher to discuss the study's timeline and ensure alignment with the students' learning needs and schedules.

This intervention was implemented over a four-week period. On the first day of the assessment, a pre-test was administered to the participants by a Master Teacher majoring in English. This Phonetic Awareness Assessment for 1st Grade was designed to assess the initial reading and phonetic awareness skills of the Grade 1 students. The purpose of the pre-test was to establish a baseline of students' comprehension before any instructional intervention took place.

The first week focused on introducing basic phonemic awareness and letter-sound correspondence through engaging "Sound Safari" activities that targeted initial, medial, and final sounds. Following this, students participated in "Rhyme Time" activities that engaged them in identifying and producing rhyming words through fun, interactive games. These sessions were designed to build strong foundational phonemic awareness while making learning engaging and enjoyable.

In the second week, the intervention shifted to a Word Building Workshop where students used letter tiles and flashcards to blend individual sounds into simple words. In parallel, they took part in Sound Detectives activities that challenged them to listen carefully and isolate individual phonemes within words and sentences. This dual approach reinforced the connection between sounds and letters while providing hands-on practice in constructing words.

By the third week, students participated in a Rhyme Relay where they worked in teams to quickly generate and match rhyming words, promoting both quick thinking and collaborative learning. Simultaneously, they engaged in Sound Building Blocks activities that allowed them to manipulate tactile materials to visualize and assemble words from individual sounds. These interactive activities further reinforced their phonemic skills and helped consolidate their understanding of sound patterns in language.

In the last week, students focused on solidifying their letter-sound correspondences through Letter Match activities that involved matching letters with the correct sounds using engaging matching games. They also took part in a Reading Relay, where they collaboratively read short passages or word lists, thereby boosting their reading fluency and accuracy. These sessions were designed to integrate and apply all the skills learned, ensuring that students were confident in both phonemic awareness and reading.

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At the end of the intervention, a post-test was administered that mirrored the initial pre-test, allowing for the measurement of progress made in phonemic awareness and reading skills. The results helped determine the effectiveness of the intervention and identify areas where students may have needed additional support. This final assessment was critical for informing future instructional strategies and ensuring continued growth in students' literacy development.

Data Analysis

To analyze the data, the researchers first calculated the mean pre- and post-test scores to determine the overall change in phonemic awareness. This provided a measure of the intervention's general effectiveness. Further analysis involved a paired t-test to assess the statistical significance of the observed changes, distinguishing true improvements from random fluctuation (Gleichmann, 2020). Cohen's *d* was computed to determine the effect size, offering insight into the practical significance of the intervention's impact (Cohen, 1988). Finally, the standard deviation of pre- and post-test scores was calculated to gauge the consistency of improvement across participants (Field, 2013). A decrease in standard deviation would suggest that the intervention not only raised average phonemic awareness but also reduced the performance gap between students.

In addition to these quantitative analyses, qualitative data from student interviews was analyzed using thematic analysis. This involved coding the transcripts to identify recurring themes, reducing the data to focus on key insights, and extracting meaningful interpretations. This approach provided a deeper understanding of the intervention's impact from the students' perspective. The combined quantitative and qualitative analyses offered a comprehensive assessment of Project SOUND-IT-OUT's effectiveness.

Ethical Considerations

Ethical considerations were paramount in this research, particularly when working with young learners. Informed consent was obtained from parents or legal guardians, using age-appropriate language and ensuring they fully understood the research's purpose, procedures, potential risks, and benefits. Students were also given age-appropriate explanations about the research, emphasizing their right to participate or withdraw at any time without consequence. Confidentiality and privacy were strictly maintained by anonymizing all data and restricting access to the researchers. The intervention program was carefully designed to ensure its safety and appropriateness for first-grade students, minimizing any potential risks. The researchers maintained independence and impartiality throughout the research process, ensuring that the well-being and rights of all participants were prioritized. By adhering to these ethical considerations, the research aimed to create a safe and respectful environment for all participants, ensuring the integrity of the research and contributing to the advancement of educational practices for young learners.

RESULTS AND DISCUSSION

This section details the findings and analysis of Project Sound-It-Out, a phonemic awareness intervention implemented with first-grade students at Clementa F. Royo Elementary School. We present data comparing students' pre- and post-intervention performance on phonemic awareness tasks, analyze the statistically significant differences between these scores, and discuss the resulting insights.

Research Question No. 1: What is the level of phonemic awareness of Grade 1 learners before implementing the "Project Sound-It-Out" intervention?

To address the first objective, the study utilized the Phonemic Awareness Assessment for 1st grade to assess students' phonemic awareness of Grade 1 learners. Five indicators from the test were selected by the researchers, as their level of difficulty was deemed suitable for Grade 1 learners. These indicators include: Onset Fluency: Isolate the Initial Phoneme, Rhyme Production, Identifying Final Sounds in Words, Adding Phonemes to words, Substituting Initial Phonemes in Words. Table 1 presents the average scores of the students before the intervention was carried out.

Table 2. ***Mean Average of the Scores in Pre-test***

Score	Frequency	Percentage
0	2	10.0%
1	1	5.0%
2	1	5.0%
3	2	10.0%
4	2	10.0%
5	2	10.0%
6	1	5.0%
7	3	15.0%

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Score	Frequency	Percentage
8	4	20.0%
9	2	10.0%
Total	**20**	**100 %**
Overall Mean		**5.20**
Mean Percentage Score		**52%**
Description		**Low**

The pretest results illustrate the phonemic awareness of the 20 students in the experimental group. The group obtained an overall mean score of 5.20, indicating a generally low level of phonemic awareness prior to the intervention. The highest score recorded was 9, achieved by two students, accounting for 10 percent of the group. The lowest score was 0, obtained by two students, which represents 10 percent of the total. The most frequently occurring score was 8, recorded by four students, making up 20 percent of the group. These results suggest a wide variability in student performance, with a concentration of scores around the mode. The mean percentage score of 52% further confirms the students' phonemic awareness at the pretest stage.

Moreover, Table 2 presents the mean scores and corresponding descriptions for the selected phonemic awareness and reading proficiency indicators as identified by the Phonemic Awareness Assessment for 1st grade. These results provide a clearer view of the specific areas where students demonstrated strengths and weaknesses in their phonemic awareness.

Several action research studies support the use of varied approaches to enhance phonemic awareness, a critical skill for reading acquisition. The critical role of phonemic awareness in reading acquisition is underscored by numerous action research studies exploring diverse instructional approaches. Al-Bataineh and Sims-King (2020) highlight the significant challenges faced by students entering kindergarten with limited letter and sound knowledge, emphasizing the urgent need for early, targeted interventions to prevent later difficulties. This need is further amplified by Peng et al. (2021), who underscore the ongoing quest for optimal phonemic awareness instruction, particularly for students struggling. The complexity is heightened by the influence of first language on second language phonological awareness. Research with Japanese students learning English reveals a preference for mora-based segmentation rather than syllable-based segmentation, highlighting the necessity of explicit instruction tailored to address these linguistic differences. Tipan's (2023) action research, while focusing on kindergarten, provides valuable insights into the effectiveness of play-based activities in enhancing letter-sound fluency and blending. However, the less pronounced impact on segmenting skills suggests that a multifaceted approach, incorporating diverse strategies beyond play-based activities, may be necessary for comprehensive phonemic awareness development. Future research should investigate the optimal combination of instructional methods to maximize phonemic awareness development across diverse learners and linguistic backgrounds.

Table 3. Summary Table on the Mean Scores and Descriptions for Phonemic Awareness Indicators before the Implementation of the "Project Sound-It-Out" Intervention.

Indicators	Average Percentage Scores (%)	Description
Onset Fluency: Isolate the Initial Phoneme	70	Average
Rhyme Production	27.5	Very Low
Identifying Final Sounds in Words	70	Average
Adding Phonemes to words	40	Very Low
Substituting Initial Phonemes in Words	52.5	Low
Overall Percentage Score (%)	**52**	**Low**

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Table 3 presents the average percentage scores for various phonemic awareness indicators, categorized as "Very Low," "Low," and "Average." The average percentage score for Onset Fluency: Isolate the Initial Phoneme is 70, indicating that students demonstrated an average level of proficiency in this area. In contrast, Rhyme Production yielded a significantly lower average percentage score of 27.5, suggesting that students faced considerable challenges in producing rhymes and exhibited very low proficiency. Similarly, Identifying Final Sounds in Words also achieved an average percentage score of 70, reflecting average performance; however, Adding Phonemes to Words received a score of 40, indicating very low proficiency and substantial difficulties encountered by students. The ability to Substitute Initial Phonemes in Words resulted in a score of 52.5, categorized as low, signaling that while some students showed capability, overall performance was still below expectations. Overall, the students achieved an Overall Percentage Score of 52, categorized as low, confirming that significant gaps in phonemic awareness exist prior to the implementation of the "Project Sound-It-Out" intervention.

However, Torgesen (2021) emphasized that deficits in phonemic awareness during the early years of schooling are a major factor contributing to long-term reading difficulties. Students who struggle to identify, segment, and manipulate sounds in words during Kindergarten and Grade 1 often fail to develop the decoding skills necessary for fluent reading. These challenges in phonemic awareness do not disappear with age; instead, they persist and significantly impact reading progress through the later grades.

In connection with the findings of the pre-test, Melissa (2022) observed that many primary school students struggle with identifying letters due to limited understanding of the alphabetic principle and insufficient phonemic awareness. Her study revealed that a significant number of students entering first grade were performing below academic expectations, particularly in foundational literacy skills. This lack of preparedness hindered their ability to decode words effectively. Additionally, Wanzek et al. (2020) found that early intervention targeting phonemic awareness significantly improves the reading outcomes of at-risk students, reinforcing the need for immediate and structured support during the early stages of literacy development.

Research Question No. 2: What is the level of phonemic awareness of Grade 1 learners after implementing the "Project Sound-It-Out" intervention?

Table 4. Mean Average of the Scores in Post-test

Score	Frequency	Percentage
6	1	5.0 %
7	1	5.0 %
8	8	40.00 %
9	3	15.0 %
10	7	35.0 %
Total	**20**	**100 %**
Overall Mean		**8.70**
Mean Percentage Score		**87 %**
Description		**High**

To satisfy the second objective, the researcher administered a post-test adapted from the Phonemic Awareness Assessment for 1st grade. As shown in Table 4, the mean average scores of the students following the implementation of the Project Sound-It-Out intervention reflect their phonemic awareness. . The pre-test mean score was 5.20 with a standard deviation of 2.95, indicating moderate variability in the students' initial phonemic awareness performance. Following the Sound-It-Out intervention, the mean score increased significantly to 8.70, while the standard deviation decreased to 1.17. This reflects not only an overall improvement in phonemic awareness but also a more consistent level of performance across the group.

The post-test results reflect the spelling proficiency of the 20 students in the experimental group following the implementation of the intervention. The group achieved an overall mean score of 8.70, indicating a high level of phonemic awareness and reading skills competence. Notably, the highest score recorded was 10, attained by seven students, representing 35.0 percent of the group. Conversely, the lowest score was 6, obtained by one student, accounting for 5.0 percent of the total. The most frequently occurring score was 8, achieved by eight students, comprising 40.00 percent of the group. These findings illustrate a range of performance levels among the students, with a significant clustering around the mode, which suggests that many students performed similarly at this score. Furthermore, the mean percentage score of 87.00 percent reinforces the improvement in students' phonemic awareness and reading fluency, demonstrating a high level of performance following the intervention. Overall, these results underscore the effectiveness of the Project Sound-It-Out intervention in enhancing the phonemic awareness of the students in the experimental group.

In addition, Yopp (2022) highlighted that phonemic awareness is not a single skill but a set of interrelated abilities, such as

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blending, segmenting, and manipulating sounds. When students show weaknesses in specific components, such as rhyme production or phoneme substitution, it indicates a deeper issue in their phonological processing, which must be addressed systematically through instruction.

Table 5. Summary Table on the Mean Scores and Descriptions for Phonemic Awareness Indicators after the Implementation of the "Project Sound-It-Out" Intervention.

Indicators	Average Percentage Scores (%)	Description
Onset Fluency: Isolate the Initial Phoneme	100	Very High
Rhyme Production	82.5	High
Identifying Final Sounds in Words	95	Very High
Adding Phonemes to words	80	High
Substituting Initial Phonemes in Words	77.5	High
Overall Percentage Score (%)	**87**	**High**

The information presented in Table 5 highlights the average percentage scores for various phonemic awareness indicators following the implementation of the Project Sound-It-Out intervention. Each indicator is categorized based on performance levels, providing a clear overview of students' progress. The average percentage score for Onset Fluency: Isolate the Initial Phoneme is 100, reflecting an exceptional level of proficiency in this area and indicating that students have mastered the skill of isolating initial phonemes. Similarly, the average score for Rhyme Production is 82.5, categorized as high, suggesting that students demonstrated a strong ability to produce rhymes effectively. In terms of Identifying Final Sounds in Words, students achieved an impressive average score of 95, which falls into the very high category, showcasing their proficiency in recognizing final phonemes. The average percentage score for Adding Phonemes to Words is 80, indicating high performance and a solid understanding of phoneme manipulation. Furthermore, students scored an average of 77.5 in Substituting Initial Phonemes in Words, which is classified as high, demonstrating their competence in this essential phonemic awareness skill. Overall, the students achieved an Overall Percentage Score of 87, categorized as high, confirming a significant enhancement in their phonemic awareness following the intervention. These results indicate that the Project Sound-It-Out intervention was effective in improving the literacy skills of the students, as they not only met but exceeded average proficiency levels across multiple indicators.

Furthermore, these findings aligned with the study of Dowler (2021), who stressed the importance of introducing phonemic awareness at an early stage. Her study revealed that when children are exposed to engaging, interactive, and play-based activities designed to strengthen their ability to hear, identify, and manipulate individual sounds in spoken words, they are more likely to develop strong phonemic awareness skills. These foundational sound-based skills are critical for language development and help children gain confidence in working with the building blocks of spoken language.

This finding aligns with the research of Hofstadter-Duk and Daly (2020) which stated that the use of familiar resources—such as nursery rhymes—not only supports phonemic awareness but also enhances fluency by providing students with predictable language patterns and vocabulary. Repeated readings of these texts help builds automaticity and confidence in word recognition, which are essential components of fluent reading. Additionally, peer-assisted learning strategies, where higher-achieving students support those who are struggling, have been shown to be effective in promoting reading fluency in a collaborative and supportive environment.

This study's findings are supported by Bates (2020), who demonstrated the effectiveness of oral rhyming tasks in assessing phonemic awareness. These tasks, requiring children to identify or generate rhymes, provide a valuable method for evaluating their ability to perceive and manipulate the sounds within words.

Research Question No. 3: Is there a significant difference between pre-test and post-test "Project Sound-It-Out" intervention on phonemic awareness among Grade 1 learners?

A total of 20 students participated in this study, wherein their phonemic awareness was assessed both before and after the implementation of the Project Sound-It-Out Intervention. As

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shown in Table 6, a comparison of pre-test and post-test scores was conducted to evaluate the intervention's effectiveness

To determine whether this difference was statistically significant, a dependent samples t-test was conducted, t(19)=8.10, p<.001. Since the p-value (.p<.001) is well below the significance level of 0.05, the null hypothesis—stating that there is no significant difference between the pre-test and post-test scores—is rejected. The computed Cohen's d was 1.81, which indicates a large effect size. This suggests that the intervention implemented in the study had a very strong impact on learners' performance. This result highlights the effectiveness of the Sound-It-Out intervention and its potential to significantly enhance students' phonemic awareness.

Table 6. Significant Difference Between the Pre-test and Post-test Scores

Type of Test	*N*	*df*	*Mean*	*SD*	*t-value*	*P-value*	*Cohen's d*	*Decision a=0.05*
Pre-Test	20	19.0	5.20	2.95	8.10	<.001	1.81	Significant
Post-Test	20		8.70	1.17				

These findings confirm a statistically significant improvement in students' phonemic awareness following the Sound-It-Out intervention. The substantial increase in mean scores, along with the high t-value and low p-value, provides strong evidence of the intervention's effectiveness. In conclusion, the Sound-It-Out intervention demonstrates a meaningful positive impact on students' phonemic awareness. Based on these results, educators are encouraged to consider integrating the Sound-It-Out into their instructional practices to enhance phonemic awareness in the classroom.

Moreover, Moats (2020) emphasized that phonemic awareness is a foundational skill in early literacy and must follow a developmental sequence for effective instruction. It begins with distinguishing words from sentences, then progresses through rhyming, syllable awareness, and manipulating onsets and rimes, eventually leading to isolating and manipulating phonemes. Similarly, Berg and Stegelman (2021) highlighted that phonemic awareness supports decoding, word recognition, and overall reading development. Their study revealed that students initially struggled with letter names, sounds, and phoneme-word connections, but post-test results showed significant improvement after targeted interventions like Sound-It-Out. This improvement confirms that fluency involves automatic recognition of letters and sounds, which supports comprehension. In addition, Anderson and Scanlon (2020) found that repeated exposure to high-frequency sight words in graded readers promotes automatic word recognition. This approach is essential for developing reading fluency. Collectively, these studies support structured, intentional instruction to build strong, confident readers.

Research Question No. 4: What insights can be drawn from the implementation of the "Project Sound-It-Out" intervention regarding its effectiveness in enhancing students' phonemic awareness in Grade 1 learners?
To address this research question, in-depth interviews were conducted with participants, focusing on their observations and experiences regarding the impact of the Project Sound-It-Out intervention on improving phonemic awareness among Grade 1 learners. Probing questions were designed to elicit detailed responses that reflect the participants' insights into the effectiveness of the intervention. The major themes and sample statements related to this research question are summarized in Table 7.

From the participants' responses, six major themes emerged: (1) Improving Decoding and Phonemic Skills (2) Increasing Engagement and Enjoyment in Phonemic Activities (3) Addressing and Overcoming Specific Phonemic Challenges (4) Cultivating Independent Phonemic Awareness Practices (5) Engaging Play-Based and Interactive Learning Strategies.

Table 7. Insights Regarding the Use of Project Sound-It-Out in Enhancing Phonemic Awareness of Grade 1 Learners

Emerging Themes	Supporting statements
Improving Decoding and Phonemic Skills	• *"Teacher, the Sound-it-Out activities helped me." IDI-01* • *"Because of our Sound-it-Out activities, teacher, I now know the sounds of the letters." IDI-02* • *"I learned how to sound out letters and put them together." IDI-04* • *"The activities showed me how to break words into sounds, making it easier to understand." IDI-05* • *"I can understand new words now because I know the sounds of the letters." IDI-07*
Increasing Engagement and Enjoyment in Phonemic Activities	• *"I was happy during our Sound-it-Out activities because I really enjoy learning about sounds with my friends." IDI-02* • *"Yes, I loved it! It was fun to explore sounds with my friends." IDI-03* • *"I enjoyed the games we played. They made learning about sounds exciting!" IDI-05*

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	• *"I was very happy, teacher, because I practiced phonemic awareness together with my classmates and friends." IDI-06* • *"I felt happy because I could identify sounds better while having fun." IDI-07*
Addressing and Overcoming Specific Phonemic Challenges	• *"I am no longer afraid to identify sounds, teacher—especially when Teacher Liza asks us to sound out words." IDI-03* • *"Teacher, I already know the letter sounds, and now I am not afraid to be asked to sound them out." IDI-04* • *"I was scared to sound out letters because I didn't know the sounds." IDI-05* • *"Before Sound-it-Out, I had trouble blending sounds, but now I can do it." IDI-06* • *"Understanding sounds was hard for me, but now it feels easier because I can identify them." IDI-07*
Cultivating Independent Phonemic Awareness Practices	• *"I will practice identifying sounds at home with my older sister, and she also helps teach me." IDI-02* • *"I practice identifying sounds every day after school." IDI-04* • *"I explore sounds in books with my mom and dad at home." IDI-05* • *"I tell stories to my little sister, focusing on the sounds as we read together." IDI-06*
Engaging Play-Based and Interactive Learning Strategies	• *"I also want us to do puppet play, teacher, so that practicing reading will be more fun and enjoyable." IDI-01* • *"Teacher, I enjoy to practice reading through story time because we have fun sharing and telling stories." IDI-04* • *"We could sing songs about letters to make it even more enjoyable!" IDI-05*

Post-intervention interviews indicated that Project SOUND-IT-OUT significantly improved students' decoding and phonemic awareness skills. This aligns with research showing that stronger initial phonemic awareness leads to greater gains in decoding accuracy and fluency (Griffith & Kromrey, 2020). Systematic and explicit phonemic awareness instruction, especially when integrated with phonics, substantially enhances early literacy outcomes, particularly for struggling readers (Lane & Pullen, 2020). These findings underscore the importance of early, targeted phonemic awareness support for developing fluent literacy skills.

A key success of Project SOUND-IT-OUT was its ability to significantly increase student engagement and enjoyment. The program's playful and interactive methods, incorporating games, partner reading, and hands-on activities, transformed phonemic awareness learning into a fun and motivating experience. This is consistent with research demonstrating that peer interaction enhances phonemic skills through collaborative learning (Hofstadter-Duk & Daly, 2020) and that playful literacy tasks create positive learning experiences that boost engagement and support literacy development (Roskos & Neuman, 2021).

The intervention's success also stemmed from its ability to directly address students' specific phonemic awareness challenges. Through intentional guidance, encouragement, and tailored strategies, students made demonstrable progress in recognizing and manipulating individual sounds within words. This supports research highlighting the importance of supportive learning environments in building student confidence (Mary Jane et al., 2021) and the significant impact of early, individualized interventions combined with teacher encouragement on phonemic awareness development (Otaiba & Fuchs, 2022).

Furthermore, Project SOUND-IT-OUT successfully fostered independent phonemic awareness practice. Providing students with opportunities for self-directed exploration of phonemic tasks, using engaging and appropriate materials, empowered them to take ownership of their learning. This finding aligns with research emphasizing the benefits of early independent learning habits for sustained academic growth and self-assurance (Bahruddin et al., 2020) and the positive impact of learning environments that support student autonomy on motivation and engagement in foundational literacy skills (Guthrie et al., 2021).

Finally, the study's success can be attributed to the effective use of play-based and interactive learning strategies. The integration of games, songs, storytelling, and hands-on activities created a fun, meaningful, and adaptable learning environment that catered to diverse learning styles. This is consistent with research showing that enjoyable learning builds self-confidence and helps students internalize phonemic awareness (Collom, 2021) and that guided play-based learning, particularly with student participation in rule-making, enhances engagement, cooperation, and literacy skills (Moore, 2020).

CONCLUSION

A pre-intervention assessment of 20 Grade 1 students using a five-component Phonemic Awareness Assessment (Onset Fluency, Rhyme Production, Identifying Final Sounds, Adding Phonemes, Substituting Phonemes) revealed a concerningly low mean score of 5.20 (52%). Significant weaknesses were evident in rhyme production (27.5%) and phoneme addition (40%), underscoring the critical need for targeted intervention

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in these foundational literacy skills. Early intervention is crucial for addressing these deficits, which can significantly impact future reading proficiency.

Following a four-week Project SOUND-IT-OUT intervention, a post-test using the same assessment demonstrated a substantial improvement, with the mean score rising to 8.70 (87%). All five components showed marked gains, with Onset Fluency achieving 100% proficiency. This significant increase strongly suggests the intervention effectively addressed the initial weaknesses in phonemic awareness.

Statistical analysis using a paired samples t-test confirmed a highly significant improvement ($t(19) = 8.10$, $p < .001$). The large effect size (Cohen's $d = 1.81$) further emphasizes the intervention's considerable impact. Moreover, the decrease in standard deviation from 2.95 pre-intervention to 1.17 post-intervention indicates that the positive effects were consistently observed across the diverse range of student abilities.

Qualitative data from student interviews provided further support for these quantitative findings. The playful and interactive nature of the intervention proved instrumental in fostering several key improvements. Students reported enhanced decoding skills, heightened engagement and enjoyment, increased confidence, and the development of independent learning strategies. These qualitative results underscore the importance of incorporating engaging, multi-sensory activities into phonemic awareness instruction.

RECOMMENDATIONS

This study's findings strongly suggest the integration of Project SOUND-IT-OUT, or similar interventions, into Grade 1 curricula. The structured, engaging approach proved highly effective in improving phonemic awareness. Teacher training should prioritize effective phonemic awareness instruction, emphasizing playful, interactive strategies. Providing teachers with the necessary skills and resources is crucial for successful implementation.

Further research should explore the long-term effects of Project SOUND-IT-OUT on literacy development. A longitudinal study would track students' progress beyond the initial intervention to assess sustained impact on reading and spelling. Investigating the intervention's adaptability to different grade levels and contexts is also warranted.

The development of supplementary resources, such as teacher guides and digital tools based on Project SOUND-IT-OUT, would enhance accessibility and implementation. These resources could make the intervention easier to use in diverse settings and for teachers with varying levels of experience.

Finally, strategies for engaging parents in supporting their children's phonemic awareness development at home should be developed and implemented. Providing parents with resources and guidance on how to continue the playful learning experiences at home would reinforce the skills learned in school and contribute to greater literacy development.

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