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EFFECT OF PHONOLOGICAL AWARENESS STRATEGY ON IMPROVING SPEAKING PERFORMANCE AMONG SENIOR SECONDARY SCHOOL STUDENTS II OF ZONE ONE, KADUNA STATE, NIGERIA

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Abstract

This study focused on investigating the effect of Phonological Awareness Strategy (PAS) on improving speaking performance among Senior Secondary School II students in Zone One, Kaduna State, Nigeria. The study aimed to examine the extent to which PAS enhances students' pronunciation and fluency in English speech production and to assess differences in speaking performance between students taught using PAS and those taught through conventional methods. The study was built on the Phonological Processing Theory (Wagner & Torgesen, 1987) and the Speech Learning Model (Flege, 1995). It employed a quasi-experimental pre-test/post-test control group design. A total of 120 students were randomly selected from four schools, and data were collected using a validated Speaking Performance Test ($\alpha = 0.84$). the results of the study were analyzed using descriptive statistics to answer the research questions and hypotheses were tested using t-test at .05 level of significance. The study also revealed significant improvements in pronunciation and fluency among the PAS group. The study concluded that phonological awareness instruction had significantly enhanced Senior Secondary School II students' speaking performance, and recommended that the findings of the study should be integrated into English pedagogy.

Keywords: Phonological Awareness, Speaking Performance, Pronunciation, Fluency, Secondary School Students

Introduction

Speaking is one of the basic communicative skills used as an essential outcome of secondary-level English instruction. However, many senior secondary students in Kaduna State have poor speech production which results to limited speaking fluency, poor pronunciation, and low intelligibility that weakens language learners' participation and speaking performance. Speaking realities in many secondary schools still show students struggling to speak English clearly

and confidently. Ugwo (2024) reports persistent poor speaking outcomes at secondary level and attributed part of the problem to teaching approaches that under-emphasize structured sound-work and speaking practices. This is particularly important in multilingual learning situations where second language learners have L1-L2 interference and limited exposure to standard English pronunciation. This has given strong evidence that explicitly supports phonological awareness instruction and improves sound-level processing (Dos Santos *et al*., 2024) in a reasonable way that improve sound processing to scaffold better pronunciation and speaking fluency. Here, phonological-awareness strategy has explicitly targeted to improve speaking performance in that context (Ugwo, 2024).

In a second language learning situation, phonological awareness activities have sustained learning improvement using phonemic skills that follow explicit instructions (Schechter, 2023). Similarly, Winrow (2024) and Dos Santos *et al*. (2024) and attributed significant impacts of phonemic-awareness instruction on second language learners' pronunciation abilities. It is also that in multilingual contexts Tembo (2024) documents second language teacher strategies which include: rhyme generation, sound sorts, and multi-sensory instructions to promote learners' sound awareness and communicative confidence effectively. This focuses on second language learners by measuring their speaking performance through phonological awareness strategies. Yan (2024) confirmed that speaking in second language learning situation is widely complex and interactive skill that involves phonological influence, discourse competence and real-time processing skills. This emphasize that English speaking performance is evaluated based on the multiple measures which involve accuracy of phoneme and word-level correctness, fluency in pauses, speech rate and smoothness, and speech intelligibility to listeners.

Alvis (2024) shows that pronunciation is the realization of phonemes and suprasegmental patterns through procedural phonetic instruction that linked to perception tasks to improve both segmental accuracy and prosodic control. For Jara Scholz (2024), fluency in pronunciation concerns with processing aspects of speech. Rattanasak (2025) views articulation as the motoric and phonological realization of individual segments and segment sequences. Thus, the above components are separately conceptualized to improve phonological representations which simultaneously increase second language learning pronunciation (segmental accuracy), fluency (reduce phonological error patterns), and articulation (free processing resources that support smoother speech) (Kou *et al*., 2024). Therefore, Reading Rockets (2024) viewed phonological awareness refers as the conscious sensitivity and ability to manipulate sound structure of a language at the words level, syllables, and phonemes. This is a metalinguistic skill foundational to literacy that influences how speech sounds are mentally encoded and retrieved. For that effective phonemic instruction has largely combined auditory tasks with letter–sound mapping to support second language perception and production pathways in order to promote decoding automaticity, speech fluency and level of intelligibility.

Kou *et al*. (2024) pointed out that second language learners' phonological awareness is interacted with the L1 representations. This involved verbal transfer effects to support or hinder L2 phonological learning based on contrastive similarity between the two languages. Here, phonological-awareness interventions utilized to the second language learners has combined perception training, procedural contrastive instruction, and speech production practices for spoken proficiency performance such as segmental accuracy and prosodic control (Alvis, 2024). Thus, this scaffolded the credibility of verbal transfer by signifying how phoneme-level training changes processing efficiency in auditory–phonological networks (Yan, 2024). This pointed out that the targeted

phonological-awareness instruction is a viable that influences L2 pronunciation instruction (Premarathne, 2024).

Alvis (2024) established that the experiential relationship between phonological awareness and speaking ability is grounded in mechanistic processes such as representational sharpening and enhanced processing efficiency. Building on this, Jara Scholz (2024) demonstrated that integrated phonological–phonetic instruction leads to explicit improvements in second language learners' pronunciation, alongside a reduction in phonological error patterns, with these gains closely linked to increased fluency resulting from greater automaticity in sublexical processing. Similarly, Kou *et al*. (2024) provided empirical evidence that sound-based training modules incorporating auditory–phonological development activities effectively support second language learners' perception and production of the target language. Collectively, these findings underscore the pedagogical significance of phonological-awareness-focused strategies and justify the current study's focus on employing such strategies as a valid means of measuring and enhancing second language learners' pronunciation accuracy, fluency, and articulatory control.

Statement of the Problem

Senior Secondary School students have continued to demonstrate poor speaking performance associated with wrong pronunciation, limited fluency, and low intelligibility. Many second language teachers utilize inappropriate and inconsistent of phonological and phonemic awareness strategies. There is problem of adopting ineffective instructional materials, irrelevant textbooks which do not integrate phonological awareness activities and speaking-based tasks, lack of access to practical models that connect relevant phonological awareness to authentic speaking practice. In Senior Secondary Schools, there is also problem of supplementary teaching materials which limit second language learners' opportunities to internalize correct English pronunciation patterns.

Another critical concern in regards to the present study is the limited of empirical research on the application of phonological awareness strategies at the senior secondary level in Nigeria, textbook writers and curriculum developers that have not fully aligned the English Language curriculum with the current linguistic and cognitive findings in phonological awareness research.

Research Objectives

1. To examine the extent to which phonological awareness instruction improves students' pronunciation in English speech production of SSII students in Zone One, Kaduna State.
2. To examine the extent to which phonological awareness instruction improves students' fluency in English speech production of SSII students in Zone One, Kaduna State.
3. To assess the differences in speaking performance between students taught using phonological awareness strategy and those taught using conventional methods.

Research Questions

1. To what extent does phonological awareness instruction improve the pronunciation of Senior Secondary School II students in English speech production in Zone One, Kaduna State?
2. To what extent does phonological awareness instruction enhance the fluency of Senior Secondary School II students in English speech production in Zone One, Kaduna State?
3. What are the differences in the speaking performance of Senior Secondary School II students taught using the phonological awareness strategy and those taught using conventional instructional methods in Zone One, Kaduna State?

Null Hypotheses (H_0)

1. H_{01}: There is no significant effect of phonological awareness instruction on the pronunciation of Senior Secondary School II students in English speech production in Zone One, Kaduna State.
2. H_{02}: There is no significant effect of phonological awareness instruction on the fluency of Senior Secondary School II students in English speech production in Zone One, Kaduna State.
3. H_{03}: There is no significant difference in the speaking performance of Senior Secondary School II students taught using phonological awareness strategy and those taught using conventional instructional methods in Zone One, Kaduna State.

Literature Review

Alvis (2024) conducted multiple intervention studies that phonemic-level training had significantly improved second language learners' pronunciation accuracy on both segmental and suprasegmental dimensions when paired with phonetic practice. The paper adopted controlled interventions that combined procedural phonological tasks which include segmentation and minimal-pair discrimination with targeted phonetic feedback reported significant post-test gains in phoneme accuracy and oral reading intelligibility (Alvis, 2024).

Benjamin-Ohwodede, Mamudu, & Awunor (2024) investigated classroom-based research in Nigeria similarly indicates that pronunciation pedagogy benefits from blended approaches. The study integrated hybrid or technology-assisted practice with teacher modelling, although local studies also note implementation barriers such as large class sizes and limited instructional time. In the study, smaller empirical projects and case studies also corroborated the cross-lingual transfer effects where instruction that targets L1–L2 contrastive sounds yields measurable reductions in common substitution and deletion errors. The study provided the evidence that supported the targeted phonological-

phonetic training for pronunciation while cautioning that intervention length, measurement type (reading vs. spontaneous speech), and contextual constraints moderate observed effects.

Jara Scholz (2024) conducted an empirical work that suggested the phonological-awareness activities which strengthen sub-lexical processing—such as syllable segmentation, onset–rime blending, and stress-pattern practice—can indirectly improve oral fluency by reducing retrieval load. The study employed experimental and quasi-experimental studies report improvements in speech rate, fewer hesitation markers, and smoother prosodic contours after phonology-focused training, even when fluency was not the primary target.

Premarathne (2024) examined narrative and mixed-method reviews that described how readers' theatre and repeated oral-reading tasks combined with phonemic drills increase automaticity and rhythmic consistency in connected speech. However, the study pointed out that laboratory gains do not always transfer fully to spontaneous conversation, and effects are larger when phonological tasks are embedded in communicative practice rather than delivered as isolated drills.

Almoayidi (2025) investigated the issues of clinical and educational studies which find that phoneme manipulation and articulatory-awareness activities such as mouth-movement modelling, voice-onset-time contrast drills, and explicit articulatory cues improve the precision of segmental production. The study proved that phonetic-practice trials showed measurable improvement in transcription accuracy and production of difficult consonants after focused training. The study also proved that intervention reports indicated reductions in substitution and deletion patterns when tasks target the specific phonological processes underlying the errors.

DergiPark (2024) conducted a study on classroom-teacher surveys and small-scale trials further report gains in intelligibility when phonological-

awareness instruction includes multimodal feedback (visual, auditory, kinesthetic) and repeated production practice. The paper reported that small-n or short-term; stronger evidence requires larger randomized trials with spontaneous-speech measures and follow-up retention tests.

Theoretical Framework

The present study anchored on two complementary theories which involved Phonological Processing Theory (Wagner & Torgesen, 1987) and Speech Learning Model (Flege, 1995). The theories had collectively explained how phonological awareness is used to measure second language learners' pronunciation and fluency in second language learning. According to Wagner and Torgesen (1987) the basic factors to decode and produce speech are phonological awareness, memory, and retrieval which second language learners use to segment and manipulate sounds more accurately. For Flege's model (1995) which emphasizes the interaction between L1-L2 phonetic systems that second language learners are often transferred L1 sound patterns which may lead to L2 articulation difficulties. Thus, phonological awareness exercise enables second language learners to distinguish and produce new L2 sounds effectively. Therefore, the theories justified that phonological-awareness-based instruction to second language learners highlighted the need for utilizing explicit and practice-oriented approaches that integrate sound perception, articulation, and communicative use to enhance second language learners' spoken English competence.

Methods

The study utilized a quasi-experimental design of non-equivalent pre-test and post-test control group design. The study used experimental group which was taught through the *Phonological Awareness Strategy (PAS)* and a control group taught using the *Conventional Teaching*. Pre-tests and post-tests were administered to using a standardized *Speaking Performance Test (SPT)* to measure the treatment effect. The study population comprised all SS II students

in Zone One Educational Zone of Kaduna State, covering Zaria, Soba, Sabon Gari, Kudan, Makarfi and Ikara LGAs, with an estimated 17,850 students across 35 public schools. From this, 120 students were randomly selected from only four schools. Data were collected using a standardized *Speaking Performance Test* which measured students' pronunciation, fluency, articulation, intelligibility, and phonological control. The instrument was validated by expert teachers of English as a second language at Kaduna State University (KASU) and found reliable (α = 0.84). Descriptive statistics (mean, standard deviations) was used to answer the research questions, while, independent t-tests was used to test the null hypotheses at a 0.05 significance level.

Results

Research Question 1: To what extent does phonological awareness instruction improve the pronunciation of Senior Secondary School II students in English speech production in Zone One, Kaduna State?

Table 1: Phonological Awareness Instruction to Improve SSII Students' Pronunciation

Groups	N	Mean	Std. Dev	Man Diff	Std Err. Mean
Experimental Group	60	39.27	11.18	23.47	2.37
Control Group	60	15.80	6.55		

Results from Table 1 revealed that there is significant impact of phonological awareness instruction in improving Senior Secondary School II students' pronunciation in English speech production in Zone One, Kaduna State. The Mean performance Scores of Experimental Group at (M=39.27, DS=11.18); and the Control Group at (M=15.80; SD=6.55) with the mean difference between the groups at 23.47. Therefore, this proved that phonological awareness instruction has significantly improved the pronunciation of Senior Secondary School II students in English speech production in Zone One, Kaduna State.

Research Question 2: To what extent does phonological awareness instruction enhance the fluency of Senior Secondary School II students in English speech production in Zone One, Kaduna State?

Phonological Awareness Instruction to Enhance SSII Students' Fluency

Groups	N	Mean	Std. Dev	Man Diff	Std Err. Mean
Experimental Group	60	47.93	43.97	26.13	3.62
Control Group	60	21.8	12.72		

Results from Table 2 revealed that there is significant impact of phonological awareness instruction in enhancing Senior Secondary School II students' fluency in English speech production in Zone One, Kaduna State. The Mean performance Scores of Experimental Group at (M=47.93; SD=43.97) and the Control Group at (M=21.8; SD=12.72) with the mean difference between the groups is 26.13 (47.93 - 21.8). Therefore, this proved that phonological awareness instruction has significantly enhanced Senior Secondary School II students' fluency in English speech production in Zone One, Kaduna State.

Research Question 3: What are the differences in the speaking performance of Senior Secondary School II students taught using the phonological awareness strategy and those taught using conventional instructional methods in Zone One, Kaduna State?

Phonological Awareness Strategy and Conventional Instructional Methods

Groups	N	Mean	Std. Dev	Man Diff	Std Err. Mean
Experimental Group	60	47.10	22.07	3.90	5.47
Control Group	60	4.00	20.33		

Results from Table 3 revealed that there is significant difference in the speaking performance of Senior Secondary School II students taught using the phonological awareness strategy and those taught using conventional instructional methods in Zone One, Kaduna State. Mean Scores of the Experimental Group was at (M=47.10; SD=22.07) and the Control Group at (M=4.00; SD=20.33) with the Mean Difference (Man Diff) at 3.90. This proved that there is significant difference in the speaking performance of Senior Secondary School II students taught using the phonological awareness strategy

and those taught using conventional instructional methods in Zone One, Kaduna State.

Testing Research Hypotheses

Table 4: Hypothesis One: H_{01}: There is no significant effect of phonological awareness instruction on the pronunciation of Senior Secondary School II students in English speech production in Zone One, Kaduna State.

Phonological Awareness Instruction to Improve SSII Students' Pronunciation

Groups	N	Mean	Std. Dev	Df	t_{-cal}	P-Value
Experimental Group	60	39.27	11.18	118	-9.92	0.002
Control Group	60	15.80	6.55			

Table 4 revealed that there was a statistically significant effect of phonological awareness instruction on improving pronunciation of Senior Secondary School II students in English speech production in Zone One, Kaduna State. The Mean Scores of the Experimental Group (M=39.27; SD=11.18) and the Control Group at (M=15.80; SD6.55) with the t-alculated (t-cal) at -9.92. Therefore, the hypothesis that state "There is no significant effect of phonological awareness instruction on the pronunciation of Senior Secondary School II students in English speech production in Zone One, Kaduna State" was rejected. The result has statistically indicated that phonological awareness instruction has improved pronunciation of Senior Secondary School II students in English speech production in Zone One, Kaduna State.

Table 5: Hypothesis Two: H_{02}: There is no significant effect of phonological awareness instruction on the fluency of Senior Secondary School II students in English speech production in Zone One, Kaduna State.

Phonological Awareness Instruction to Enhance SSII Students' Fluency

Groups	N	Mean	Std. Dev	Df	t_{-cal}	P-Value
Experimental Group	60	47.93	43.97	118	-7.22	0.001
Control Group	60	21.8	12.72			

Table 5 revealed that there was a statistically significant effect of phonological awareness instruction on enhancing fluency of Senior Secondary School II students in English speech production in Zone One, Kaduna State. The Mean Scores of the Experimental Group (M=47.93; DS=43.97) and the Control Group at (M= 21.8; SD=12.72) with the t-calculated (t-cal) at -7.22. Therefore, the hypothesis that state "There is no significant effect of phonological awareness instruction on fluency of Senior Secondary School II students in English speech production in Zone One, Kaduna State" was rejected. The result has statistically indicated that phonological awareness instruction has enhanced fluency of Senior Secondary School II students in English speech production in Zone One, Kaduna State.

Table 6: Hypothesis Three: H_{04}: There is no significant difference in the speaking performance of Senior Secondary School II students taught using phonological awareness strategy and those taught using conventional instructional methods in Zone One, Kaduna State.

Phonological Awareness Strategy and Conventional Instructional Methods

Groups	N	Mean	Std. Dev	Df	t_{cal}	P-Value
Experimental Group	60	47.10	22.07	118	0.723	0.003
Control Group	60	4.00	20.33			

Table 6 revealed that there was a statistically significant difference in the speaking performance of Senior Secondary School II students taught using phonological awareness strategy and those taught using conventional instructional methods in Zone One, Kaduna State. The Mean Scores of the Experimental Group was at (M= 47.10; DS=22.07) for the Control Group, the Mean scores at (M=4.00; DS=20.33) with the t-cal at 0.723. Therefore, the hypothesis that state "There is no significant difference in the speaking performance of Senior Secondary School II students taught using phonological awareness strategy and those taught using conventional instructional methods in

Zone One, Kaduna State." was rejected. The result has statistically indicated that there was a significant difference in the speaking performance of Senior Secondary School II students taught using phonological awareness strategy and those taught using conventional instructional methods in Zone One, Kaduna State.

Discussion

The findings of the studies showed that phonological awareness instruction had a significant positive effect on pronunciation. This supported Wardana, Astuti, and Sukanadi (2022), study using a pre-test/post-test control-group design found that second language learners who received phonological awareness intervention had significantly improved phoneme articulation, stress and intonation compared to those who did not receive such treatment. In the same way, Prahaladaiah and Thomas (2024) stated that phonological and phonetic interventions had significantly enhanced pronunciation proficiency and oral reading performance among the second language learners. Thus, the findings of the study proved positive effect of the strategy by improving pronunciation of segmental phoneme and suprasegmental aspects accurately. Frontiers in Education (2023) also found that perception-based instruction had improved segmental, syllabic, and prosodic accuracy by showing greater gains in global intelligibility and fluency using production-based instruction.

The evidence regarding fluency for Frontiers in Education (2023) study found that production-based instruction had yielded significant improvements in chronological aspects of fluency. Similarly, Wardana *et al*. (2022) focused on fluency and pronunciation accuracy that provided significant improvements in intelligibility and stress which contributed to perceived fluency. However, the study had measured fluency explicitly as a distinct variable. Many studies like Olaofe & Adebayo (2023); Ibrahim (2024); Rattanasak (2025); and Sihombing (2025) combined elements such as pronunciation, intonation, and stress by

emphasizing accuracy over fluency. Therefore, phonological awareness instruction had influenced fluency in English speech production.

Wardana *et al*. (2022) stated that the experimental group taught using phonological awareness strategy had outperformed the control group in reading-aloud tasks on pronunciation and other related phonological features. Similarly, Prahaladaiah and Thomas (2024) found that second language learners who received phonological and phonetic instruction had shown greater improvement in pronunciation and oral reading compared to those taught through conventional teaching approach. In addition, Frontiers in Education (2023) found that phonological awareness strategy had enhanced speaking performance that improved second language learners' pronunciation accuracy and prosody. The findings also suggested that experimental group taught using phonological awareness strategy outperformed traditional instruction in developing basic speaking skills.

Wardana *et al*. (2022); Frontiers in Education (2023); and Prahaladaiah & Thomas (2024) concurred that phonological awareness instruction produces statistically significant improvements in pronunciation and overall speaking performance. It is also proved that there is general consensus that segmental features (phoneme accuracy) are easier to improve than suprasegmental ones (stress, rhythm, intonation). The studies adopted control-group pre-/post-test designs, demonstrating quasi-causal relationships. Frontiers in Education (2023) emphasized perception-based instruction, while others focus on production-based methods.

Recommendations

1. **Pronunciation Instruction:** Based on the findings on pronunciation improvement, English language teachers in secondary schools in Zone One, Kaduna State, should systematically integrate phonological awareness instruction—such as segmental and suprasegmental sound

discrimination, syllabification, stress, and intonation exercises—into regular speaking lessons. Curriculum planners and textbook developers should also incorporate structured phonological awareness activities to enhance students' pronunciation accuracy in English speech production.

2. **Fluency Development:** Given the positive influence of phonological awareness instruction on students' fluency, teachers are encouraged to adopt sound-based instructional strategies that promote automaticity, such as repeated oral practice, phoneme–grapheme mapping, and guided oral reading. Teacher training programs and in-service workshops should emphasize the use of phonological awareness techniques as a means of improving speech fluency among SSII students.
3. **Instructional Method Comparison:** In view of the observed differences in speaking performance between students taught using phonological awareness strategies and those taught through conventional methods, school administrators and education policymakers should prioritize learner-centered, phonological-awareness-based approaches over traditional teacher-dominated methods. Educational authorities should support the adoption of evidence-based instructional strategies through monitoring, professional development, and classroom supervision to ensure improved speaking outcomes.

Conclusion

The study demonstrated that phonological awareness instruction significantly enhances learners' pronunciation, fluency, and overall speaking performance which clearly indicated that students exposed to phonological awareness strategies outperformed those taught through conventional methods. This is specifically strong in segmental aspects while progressing in suprasegmental features depends on phonological awareness instructional focus. Furthermore, phonological awareness approach has tended to improve fluency,

pronunciation and speech flow accurately. Generally, the study led to the rejection of null hypotheses H_{01}, H_{02}, and H_{04} by confirming that phonological awareness instruction employed a significant positive effect on second language learners' English-speaking performance. Hence, utilizing phonological awareness instruction into senior secondary English instruction may foster more effective speaking performance and pronunciation competence.

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