

Rhyming, Sound Deletion, Phoneme Substitution Instructional Strategies and Primary Pupils' Reading Performance in English Language in Akwa Ibom North East Senatorial District

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Abstract

The research determined the effect of three phonological instructional strategies on reading performance of primary school pupils in Akwa Ibom North East Senatorial District. In order to carry out the study objectively, three specific objectives, three research, questions and three hypotheses were formulated. The study adopted the pretest, post-test, control group non-randomized quasi experimental research design. The population of the study comprised of 11,180 primary two pupils consisting of 5,361 males and 5,819 females from public primary schools and a sample size of 120 respondents. Instruments titled "Pupils Reading Performance Test (PRPT) was used for data collection. Pearson Product Moment Correlation (PPMC) was used to determine the reliability of the instruments, which gave value of 0.87 for PRPT. Mean and standard deviation were used for answering research questions while analysis of covariance (ANCOVA) was used in testing the null hypotheses at .05 level of significance. The findings revealed that there is no significant mean difference in pupils' reading performance when taught using rhyming, sound deletion, phoneme substitution and Look and Say Instructional strategies. The result shows that the mean gain of pupils when taught reading using rhyming is 42.68, while the mean gain for pupils taught with look and say is 40.88. This shows that pupils taught reading with rhyming slightly performed better than pupils taught using look and say. Hypothesis one showed that there is a significant mean difference in pupils' reading performance when taught using rhyming. Hypothesis two showed that there is a significant mean difference in pupils' reading performance when taught using sound deletion instructional strategy. Based on the findings of the study, it is recommended that teachers should use rhyming, sound deletion and phoneme substitution when teaching spelling in classrooms. The school administrators should consider in-service training for English Teachers in phonological instructional strategies.

Keywords: Reading, rhyming, sound deletion, phoneme substitution, look and say instructional strategies.

Introduction

. Learning how to read is a vital skill that pupils learn in their early childhood education. This skill sets the foundation for academic success. (Shahar-Yames & Prior, 2018) opined that there are many ways to approach the reading process, and teachers rely on numerous reading strategies. Children in kindergarten to nursery classes are in the learning to read phase, while in primary two upwards, children are reading to learn. Reading has to do with making meaning from print. Reading begins with pre-literacy skills which includes learning the alphabet, phonemic awareness and phonics instruction that teaches children how to map sound to letters and sound words (Ankrah, Nyanta & Opoku, 2017).

In the early stages of reading, pupils are learning to sound out words, make meaning of the words in a sentence, and make meaning of the text. This can be difficult for pupils who do not have a solid phonics background and who lack phonemic awareness, sight word vocabulary and the proper knowledge of how to use the reading strategies they have learned. The ability to read is an essential skill for pupils to master English language because information is presented in text throughout the world in websites, books, magazines and newspapers. Educational system rely heavily on text, making it very essential for pupils to be able to read. As they progress in school, textbooks are also introduced. In recognition of the importance of reading abilities of young learners, the National Policy on Education, stipulates that, “the inculcation of permanent literacy and numeracy, and the ability to communicate effectively, and basic rudiment in numbers at the early stage of pupils’ schooling” shall be the main drive of pre-primary and primary education (FGN, 2013).

Our classrooms are made up of pupils at varying levels of proficiency in multiple reading skills, and individuals’ access to background knowledge is vast and immeasurable. Therefore meeting the reading needs of diverse learners is often cited as one of the most challenging tasks for teachers (Dörnyei, 2014). Children do not enter the classroom as blank slates, they come with an individual set of prior knowledge, exposure to language, reading rituals, and cognitive development. This means that teachers must find ways to stimulate and engage these active minds while at the same time providing instruction and support in areas where pupils are struggling. This is why tackling reading strategies across skills and using a balanced approach is vital. In order for pupils to progress in these content subjects, they need to be able to read independently and strategically.

The basic elements of reading are to decode the message, comprehend, analyse and integrate the whole idea of a text (Karademir & Ulucinar, 2016). Children who do not acquire necessary skills are likely to struggle with reading texts across the curriculum and these reading difficulties, if not addressed early, tend to follow pupils through school and beyond. The gap widens between good and poor readers as they progress through school. In other words, good readers acquire many more words at increasingly higher rates than poor readers.

The interactive reading model, as developed by Rumelhart in 1977, postulated that reading combines two types of processes: the top-down, or reader based, approach and the

bottom-up, or text-based approach. The top-down approach, perceptions begin with the most general and move toward the more specific. The bottom up approach begins with letters and sounds, building to morpheme and word recognition, and then gradually moving to grammatical structure identification, sentences, and longer texts. It treats reading skill as a sequential process. The relevance of this theory is that it focuses on the acquisition of cultural knowledge as well as basic linguistic knowledge, using the reader's existing knowledge to help absorb the information in the reading text.

The phonological instructional strategies considered for this work are rhyming, sound deletion and sound substitution. Rhyming is a repetition of similar sounds (usually, exactly the same sound) in the final stressed syllables and any following syllables of two or more words.

Sound -deletion involves having pupils manipulate spoken words by deleting specific phonemes. It is the ability to identify how a word would sound if one phoneme were omitted. The use of sound deletion helps to develop your child's phonemic awareness while Phoneme substitution is where a word is transformed into a new word simply by changing any of its phonemes or sounds. It is the ability to replace a phoneme in a word with another phoneme to form a new word. The conventional instructional strategy is the look and say strategy method based on the recognition and pronunciation of words without any attempt to teach word analysis and synthesis.

Reading is a process that requires the use of complex thought procedures to interpret printed symbols as meaningful units, and comprehend them as a thought unit, in order to understand a printed message. Unfortunately, in recent times primary school Pupils seem to have little knowledge of the activities involved in reading. Teaching pupils to read remains a major goal of education, many pupils have extreme difficulty learning even basic reading skills. When a child struggles with reading life can be difficult and frustrating. The ability or inability to read directly affects every aspect of life. However, the challenge in learning to decode printed words is that children must learn to connect the constituent phonemes to letters and their combinations. For many children, explicit instruction is necessary to learn the dozens of letter-sound correspondences necessary to unlock word pronunciations. However as a backdrop the situation has bred more vices like examination malpractice, low self-esteem and drop out from school. It therefore becomes imperative to investigate how rhyming, sound deletion and phoneme substitution reading performance of primary school pupils in the North-East Senatorial District of Akwa Ibom State.

Purpose of the Study

- i. To determine the mean difference in pupils' reading performance when taught using Rhyming and Look and Say Instructional strategies.
- ii To determine the mean difference in pupils' reading performance when taught using Sound deletion and Look and Say Instructional strategies.

- iii To determine the mean difference in pupils' reading performance when taught using Phoneme substitution and Look and Say Instructional strategies.

1.2 Research Questions

The following research questions were answered in the study.

- 1 What is the mean difference in pupils' reading performance when taught using rhyming and Look and Say Instructional strategies?
- 2 What is the mean difference in pupils' reading performance when taught using Sound deletion and Look and Say Instructional strategies?
- 3 What is the mean difference in pupils' reading performance when taught using phoneme substitution and Look and Say Instructional strategies?

1.3 Research Hypotheses

Three hypotheses were formulated for the study.

- H₀₁: There is no significant mean difference in pupils' reading performance when taught using Rhyming and Look and Say Instructional strategies.
- H₀₂: There is no significant mean difference in pupils' reading performance when taught using Sound deletion and Look and Say Instructional strategies.
- H₀₃: There is no significant mean difference in pupils' reading performance when taught using Phoneme substitution and Look and Say Instructional strategies.

Methodology

This study adopted the pretest, post-test, control group quasi experimental research design. This design was considered appropriate because it allowed the researcher to examine the cause and effect of the independent variables on the dependent variables using a sample of the population and the result was generalized to the entire population.

Uyo senatorial district has a population size of 710,355 males and 652,013 females giving a total of 1,362,368 (NPC, 2006). It comprises nine Local Government Areas, namely; Uyo, Etinan, Nsit Ibom, Uruan, Nsit Ubium, Ibiono Ibom, Nsit Atai, Itu and Ibesikpo Asutan. The choice of the area of study was necessitated by the fact that the literacy level in this district is high and there are many public schools within the area.

The population of this study comprises 11,239 primary two pupils in public primary schools in Uyo senatorial district of Akwa Ibom State. (Department of Planning, Research and Statistics, State Ministry of Education and Universal Basic Education, MOE/SUBEB 2022).

Multi stage sampling technique was used to select the sample .120 pupils out of the 4 schools from four local government area. Simple random sampling was used in each public school, about 30 pupils and a maximum of 35 pupils were selected from each school. This gave a total of pupils.

The researcher developed an instrument tagged “Pupils Reading Performance Test (PRPT). The instrument was used for pretest and post-test on pupils reading ability on three and four lettered words, ability to recognize words, make simple sentences, read and answer questions from comprehension passages. The Pupils Reading Performance Test (PRPT) was designed to contain four sections A, B, C and D respectively. Section A gave demographic data of pupils. Section B and C was made up of 5 questions each. Section D consisted of 10 questions each totaling 20 questions in all. Each question was scored 5 marks each totaling 100 marks. This instrument was used for data collection during the pretest and posttest for the experimental and control groups.

To ascertain the face validity of the instruments for the study, the instruments were given to three research experts for validation. The research experts were selected from the Department of English, Early Childhood and Special Education and Department of Educational Foundations. The experts evaluated the instrument taking into consideration the curricula objective of study and adequacy of the items based on the objectives, research questions, hypotheses of the study and area of coverage of the study. Content validation was done using test blue print as a guide in the development of the test items.

Test-retest reliability method was used to establish the reliability of the instruments. The Instrument (PRPT) was administered on 30 pupils who were not part of the study sample but shared the same characteristics as the population under study. After two weeks of the first administration, the same instruments were administered to the same pupils with the order of the items on the questionnaires altered. This generated data. Pearson Product Moment Correlation (PPMC) was used to determine the reliability of the instrument which gave 0.87 for PRPT. . Generally, if the reliability of a standardized test is above .80 it is said to have a very good reliability. (Cho, 2022)

The sample selected for the study was grouped into three experimental groups and one control group. Experimental groups were assigned the three phonological instructional strategies while the control group remained the conventional classroom. The class teachers were used as research assistants and were trained. After the training sessions, a pretest was given to the pupils in all the groups using the Pupils’ Reading Performance Test (PRPT). After the pretest, the full treatment commenced for the next four (4) weeks, using the rhyming instructional strategy, for group E1, the sound-deletion strategy for group E2 and the phoneme-substitution strategy for group E3, Look and Say method for the control group. There were three contact periods of 30 minutes each per week. Thereafter, a post test was administered to all the groups still using Pupils’ Reading Performance Test (PRPT). The entire process lasted for twelve (12) weeks. The data that was collected from the pretest and posttest administration was collated and subjected to statistical analysis.

Mean and standard deviation was used for answering research questions while analysis of covariance (ANCOVA) will be used in testing the hypotheses at .05 level of significance. The pretest scores were used as covariates to the posttest scores.

Research Question 1: What is the mean difference in pupils' reading performance taught using Rhyming and Look and Say instructional strategies?

Table 1: Summary of mean difference in pupils' Reading performance taught using Rhyming and Look and Say instructional strategies

Group		Posttest PSPT	Pretest PSPT	Mean Gain Posttest-Pretest
Rhyming	N	28	28	
	Mean	77.50	34.82	42.68
	SD	15.66	10.93	
Look and Say	N	34	34	
	Mean	69.26	28.38	40.88
	SD	23.10	10.06	

Table 1. gives the summary of the pretest and posttest mean and standard deviation of performance scores of pupils' in reading when taught using rhyming as well as look and Say instructional strategies. The result shows that the mean gain of pupils in Rhyming is 42.68, while the mean gain for look and say is 40.88. This shows that pupils taught reading with Rhyming slightly perform better than pupils taught using look and say.

Research Question 2:

What is the mean difference in pupils' reading performance when taught using sound deletion and Look and Say Instructional strategies?

Table 2: Summary of mean difference in pupils' reading performance taught using Sound deletion and Look and Say Instructional strategies

Group	SD-LSAY	Pretest SD-LSAY	Posttest SD-LSAY	
Sound Deletion	N	32	32	
	Mean	35.78	86.25	50.47
	SD	10.56	12.57	
Look and Say	N	34	34	
	Mean	28.38	69.26	40.88
	SD	10.05	23.10	

Table 2. gives the summary of the pretest and posttest Mean and standard deviation of performance scores of pupils' performance in reading when taught using sound deletion as well as Look and Say Instructional strategies. The result shows that the mean gain of pupils in

sound deletion is 50.47, while the mean gain for look and say is 40.88. This shows that pupils taught reading with sound deletion performed better than pupils taught using look and say.

Research Question 3: What is the mean difference in pupils' reading performance when taught using phoneme-substitution and Look and Say instructional strategies?

Table 3: Summary of mean difference in pupils' reading performance taught using phoneme-substitution and Look and Say Instructional strategies

Group		Pretest	Phon-	Posttest	Mean Gain
Phoneme-LSAY		LSAY	Phon-LSAY		
Phoneme Sub	N	26		26	
	Mean	33.85		81.50	47.65
	SD	10.71		12.72	
Look and Say	N	34		34	
	Mean	28.38		69.26	40.88
	SD	10.05		23.10	

Table 3 shows the summary of the pretest and posttest Mean and standard deviation of performance scores of pupil's performance in reading when taught using phoneme-substitution as well as look and say Instructional strategies. The result shows that the mean gain of pupils in phoneme-substitution is 47.65, while the mean gain for look and say is 40.88. The mean difference between phoneme-substitution and look and say is 6.77. This shows that pupils taught reading with phoneme-substitution perform better than pupils taught using look and say.

Null Hypothesis 1: There is no significant mean difference in pupils' reading performance when taught using Rhyming and Look and Say Instructional strategies.

Table 4: Summary of Analysis of Covariance Test for difference in pupils' reading performance when taught using Rhyming and Look and Say Instructional strategies

Source	Type II Sum of Squares	df	Mean Square	F	Sig.	decision
Corrected Model	2959.257 ^a	2	1479.629	3.912	.025	
Intercept	19177.717	1	19177.717	50.708	.000	
Pretst_RHY_LSAY	1917.891	1	1917.891	5.071	.028	
Group_RHY_LSAY (Main effect)	316.288	1	316.288	.836	.364	*
Error	22313.727	59	378.199			
Total	355525.000	62				
Corrected Total	25272.984	61				

*Not Significant at $p < .05$.³⁶⁴

The result of analysis on Table 4 gives the summary of the Analysis of Covariance (ANCOVA) test. The result shows that the calculated F value is .836. The probability of F, that is the P value is .364. Since the P-value is greater than the alpha level of .05, the result is statistically not significant and the null hypothesis is accepted. Thus, there is no significant difference in pupils' reading performance when taught using Rhyming and Look and Say Instructional strategies.

Null Hypotheses 2: There is no significant mean difference in pupils' reading performance when taught using Sound deletion and Look and Say Instructional strategies.

Table 5: Summary of Analysis of Covariance Test for difference in pupils' reading performance when taught using Sound deletion and Look and Say Instructional strategies

Source	Type II Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	7708.876 ^a	2	3854.438	12.419	.000
Intercept	17085.041	1	17085.041	55.046	.000
Pretest_SD_LSAY	2952.993	1	2952.993	9.514	.003
Group_SD_LSAY (Main Effect)	2132.734	1	2132.734	6.871	.011 *
Error	19553.624	63	310.375		
Total	423675.000	66			
Corrected Total	27262.500	65			

*Significant at $p < .05$

The result of analysis on Table 5 gives the summary of the Analysis of Covariance (ANCOVA) test. The result shows that the calculated F value is 6.871. The probability of F, that is the P value is .011. Since the P-value is less than the alpha level of .05, the result is statistically significant. Thus, the null hypothesis is rejected. Hence, there is a significant mean difference in pupils' reading performance when taught using sound deletion and Look and Say Instructional strategies.

Null Hypotheses 3: There is no significant mean difference in pupils' reading performance when taught using Phoneme substitution and Look and Say Instructional strategies.

Table 6 Summary of Analysis of Covariance Test for difference in pupils' reading performance when taught using Phoneme substitution and Look and Say Instructional strategies

Source	Type II Sum of Squares	Df	Mean Square	F	Sig.	decision
Corrected Model	6108.284 ^a	2	3054.142	9.810	.000	
Intercept	14024.292	1	14024.292	45.045	.000	
Pretest_Phon_LSAY	3902.668	1	3902.668	12.535	.001	
Group_Phon_LSAY (Main Effect)	858.802	1	858.802	2.758	.102	*
Error	17746.450	57	311.341			
Total	357466.000	60				
Corrected Total	23854.733	59				

*Significant at $p < .05$.

The result of analysis on Table 3.1.3 gives the summary of the Analysis of Covariance (ANCOVA) test. The result shows that the calculated F value is 2.758. The probability of F, that is the P value is .102. Since the P-value is greater than the alpha level of .05, the result is statistically not significant. Thus, the null hypothesis is accepted. Hence, there is no significant mean difference in pupils' reading performance when taught using Phoneme substitution and Look and Say Instructional strategies

Discussion of Findings

This result shows that there is a significant mean difference in pupils' reading performance when taught using rhyming and Look and Say Instructional strategies, with pupils taught with rhyming performed slightly better than those taught with look and say method. This finding is corroborated by Randolph (2012) who studied the effects of Rhyming Instruction on Learning the Alphabetic Principle, Phonemic Awareness, and Rhyming Complexity Skills with At-Risk Prekindergarten Students. The result of the study showed that rhyming enhanced reading skills of students. A significant mean difference in pupils reading performance also exist when taught using sound deletion ,phoneme substitution and look and say instructional strategies with pupils taught with sound deletion and phoneme substitution performed better than pupils taught with look and say method.

Conclusion

. The result shows that there is significant mean difference in pupils' reading performance when taught using Rhyming, Phoneme -deletion and substitution and Look and Say Instructional strategies.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. The school administrators should consider in-service training for English teachers in phonological instructional strategies
2. Teachers effectiveness and class room teaching strategy should be monitored to ensure compliance to phonological instructional strategy.
- 3 Curriculum planners should incorporate Rhyming sound deletion and phoneme substitution strategies into school curriculum to ensure that teacher use them

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