

## *Original Paper*

# Effects of Two Phonics Instructional Modes on English as Second Language Learners' Achievement in Reading

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### **Abstract**

*This study examines the effects of two phonics instructional modes on the reading achievement of Nigerian learners of English as a second language. The design of the study was quasi-experimental. The study specifically adopted the non-equivalent, non-randomized control group design. The sample of the study were 118 primary one school pupils who were drawn from four public primary schools in Enugu, South East, Nigeria using multi-stage sampling technique. The participants who were assigned to experimental and control groups were pretested and post tested. The experimental group was taught using synthetic phonics while the control group was taught using analytic phonics. Data were generated with Means, Standard Deviation and Analysis of Covariance (ANCOVA). While Means and Standard Deviation were used to answer the research questions, ANCOVA was used to test the hypothesis at  $p < 0.05$ . The findings of the study indicated that Synthetic phonics significantly improved pupils' achievement in reading more than analytic phonics. Based on the findings, it was concluded that synthetic phonics is a more effective mode of teaching beginning reading than analytic phonics. A proper exposure of pre and in-service teachers to the techniques and activities involved in synthetic phonics as well as the adoption and proper implementation of the method for reading instruction in Nigerian primary schools were recommended.*

### **Keywords**

*Reading instruction, beginning reading, synthetic phonics, analytic phonics, reading achievement*

## 1. Introduction

Reading is one of the four basic language skills that have enjoyed progressive and unending research due to its pervasive and overriding influence and role in every aspect of human society. It is multifaceted, multidimensional and multidisciplinary in nature. Reading involves a number of activities that help in the interpretation of meaning and comprehension of a written text. The National Reading Panel (2000) refers to it as a complex system of making meaning out of print. This complex system comprises a number of strategies which include the necessary reading skills that are relevant to the reading process. The reading process involves the ability to perceive the relationship between written symbols (letters) and sounds of a spoken language which is used to decode unfamiliar words during oral reading.

Oral reading is the act of reading printed or written text aloud. It is seen as the preferred mode of reading at the beginning reading stage since beginning readers depend on their oral language to make meaning out of the printed or written text. Gibson (2008) notes that reading aloud at the primary school stage generally promotes children's reading skills through linking sounds and alphabetic improvement. Reading skills such as decoding, word recognition, fluency and spelling are sharpened when children engage in oral reading. Oral reading can also promote and improve independent and silent reading as it assists anxious and shy learners to become confident.

Reading is seen as an indispensable learning tool (Amadi, 2018). It plays a very important role in education as it makes learning other subjects possible since it pervades through the entire school curriculum. The educational system demands a lot of reading and so tends to use the ability to read proficiently and fluently as a benchmark for intellectual ability. The ability to read is therefore used to assess the intellect. Hence, reading is the key to educational achievement. In other words, a child who has been exposed to the knowledge of print and has acquired the necessary basic reading skills is expected to make wonderful achievements in different school subjects. On the other hand, a child who is deficient in basic reading skills is not likely to succeed in other subjects. Without a basic foundation in reading, it may be difficult for children to access a rich and diverse curriculum provided in the educational system.

The obvious importance of reading in every aspect of life explains why the Nigerian National Policy on Education (NPE) highlights literacy and ability to communicate effectively as two of the outstanding objectives of primary education in Nigeria (FRN, 2013). Since a child begins his or her formal literacy journey the first day he/she enters school, it is expected that the development of literacy skills would begin simultaneously as well. However, research findings have shown that quite a number of children lack the necessary reading skills they require in their literacy journey.

Research has shown that there are serious reading problems among Nigerian primary school pupils at all levels of primary education (Ajayi, 2004; Idogo, 2011). The studies of these scholars revealed that primary school pupils lack basic reading skills that will assist them in further learning. Studies of Olajide (2004) and Fabunmi and Folorunsho (2010) have further shown that primary school pupils

exhibit reading problems in their oral reading. These reading problems may expose them to reading with difficulty. And that may lead to failure in the comprehension of various school subjects. More so, children who display much of the problems find it difficult to understand the information or messages encoded in a written or printed text.

The report of Nigerian Education Data Survey (NEDS) (2015) further validates the claims of researchers on the prevalent reading problem among Nigerian primary school pupils. NEDS (2015) report indicated a low reading achievement across all levels of primary education in different states in Nigeria. According to the report, 25% of primary one school pupils could read one or more words in 2010; and in 2015 the percentage was still below 30%. This shows a very marginal increase in reading achievement over the period. The less than 5% percent increase in reading achievement among Nigerian primary school pupils over a period of five years disclose the level of reading problem they have.

Most of the reading problems exhibited by Nigerian primary school pupils in the reading process are said to be as a result of poor methods of teaching reading. Adeniji and Omale (2010) affirm that some English teachers are behind in their approach to teaching reading. Such teachers according to them, lack effective methods of imparting reading skills to the pupils. Ekpo, Udosen, Afangideh, Ekuinam and Ikorok (2007) also lament that teachers worsen children's lack of reading readiness due to their incompetence in helping them master reading skills. Amadi and Olajide (2011) in a survey of the methods of teaching initial reading in Nigerian primary schools discovered that traditional methods were very much in vogue among Nigerian primary school teachers while phonics method was rarely used. The problems associated with traditional methods of teaching reading coupled with the poor reading ability of Nigerian primary school pupils could be the reason for the introduction of phonics in Nigerian Primary English Studies Curriculum.

Phonics being one of the contents of the curriculum describes the relationship between letters and sounds of a language. It is used to convert written symbols into speech sounds. In other words, phonics establishes the relationship that exists between written and spoken language. As a method of reading instruction, phonics is used to teach children letter-sound correspondence and how to apply the knowledge to improve their reading and spelling abilities. For children learning to read in English, phonics instruction unlocks a large proportion of the system of English orthography (Memser & Griffith, 2006). Phonics is also known to increase word recognition skills and enhance reading fluency and comprehension. It can be taught through either the analytic or the synthetic mode.

Analytic phonics uses the whole-to-part approach. It exposes children learning to read in English to associate sounds to letters based on already learned words. In other words, analytic phonics uses whole words to teach the sounds of a spoken language. The National Reading Panel (2000) notes that the approach helps beginning readers to analyse letter-sound correspondences in already learned words to avoid the pronunciation of words in isolation. With this approach therefore, sounds are not pronounced independently. Children are made to analyse the common sounds in a set of words to which they were

already exposed.

Synthetic phonics on the other hand, is based on the premise that ability to decode words early brings about later success in reading. It uses a part-to-whole approach in teaching pupils to convert letters to sounds. This type of phonics instructional mode teaches children to first pronounce the sounds associated with specific letters and then combine them to form words in both the spoken and written language. Through synthetic phonics the pupils are made to understand that the letters of the alphabet are speech sounds which can be used to form words. Synthetic phonics seems to improve beginning readers' alphabetic knowledge and word reading skill. It can also enable the child to form, spell and pronounce new words independently. The child may also be able to recognise and read unfamiliar words in new contexts.

A lot of studies have been conducted on the use of different methods for beginning reading instruction. The studies of Johnston and Watson (2005) which compared the effectiveness of synthetic phonics teaching to a standard analytic phonics programme as well as an analytic phonics programme that is combined with a phonemic awareness programme on reading and spelling skill revealed that the synthetic taught group performed better than the two other groups in terms of non word reading and ability to spell dictated words. Dixon, Schagen and Seedhouse (2011) also observed that children who were taught with synthetic phonics performed better than those taught with rote-learning method in reading and spelling, as well as the ability to sound out words (decoding).

The study of Ekpo et al. (2007) showed that Jolly phonics (a technique of synthetic phonics) was effective in enhancing pupils' reading skills. Similarly, Osuorji (2006) who compared the effectiveness of three instructional methods on pupils' reading achievement discovered that phonics was the most effective. Furthermore, Ofodu and Lawal (2011) who compared the effects of Think-Pair-share and Reciprocal Teaching techniques of cooperative instructional approach on students' performance levels in reading comprehension observed the superiority of the cooperative teaching methods over the conventional methods. The findings of Eshiet (2012) also revealed that students taught with synthetic phonics made progress in the knowledge of sounds and blending while those in the control group made more progress in the reading and spelling tests though the results were not statistically significant. Most of these studies particularly those conducted in Nigeria, only compared phonics instruction with other traditional methods of reading instruction. Hence, the need for this study which determines the relative differential effects of two phonics instructional modes on pupils' achievement in reading with a view to finding a lasting solution to the persistent reading problems among Nigerian primary school pupils.

## **2. Research Questions**

The findings of the study answered the following research question:

1. What is the differential effect of synthetic phonics and analytic phonics on pupils' achievement in reading?

### 2.1 Hypothesis

One hypothesis was formulated and tested at  $p < .05$  to guide the study:

$H_{01}$  There is no significant difference in the mean achievement scores of pupils taught reading with synthetic phonics and those taught using analytic phonics.

### 2.2 Theoretical Framework

The study aligns with the Bottom Up theory of the reading process. The theory which is also referred to as a data-driven process depicts the processes that take place during initial or beginning reading. It conceptualises reading as an act that begins with the processing of visual information displayed in a text from the lowest linguistic unit to understanding of the author's message. Gough (1972), and LaBerge and Samuels (1974) (the chief proponents of the theory) developed models which emphasise that reading progresses from low-level information processing to high-level processing in a sequential and serial manner. They hold that information is received and processed from the smallest linguistic units ranging from sounds to letter-blends, words, phrases and sentences to the bigger task of meaning. Hence, beginning readers are required to acquire a set of sub-skills that lead to the development of comprehension ability which will subsequently transform them to skilled and fluent readers.

Reutzel and Cooter (2005) note that teachers who believe that bottom-up theories fully explain how children become readers often teach sub-skills first before other reading skills. Their reading instruction begins with the introduction of letters and sounds, pronunciation of whole words, and then connecting word meanings to comprehend texts. By implication, such teachers use phonic skills to facilitate comprehension of text. The instructional pattern of phonics follows a sequence as depicted in the bottom-up theory of the reading process. The sequence covers all grapheme-phoneme correspondence ranging from short and long vowels, vowel and consonant digraphs, blends of letter-sounds, decoding of sounds to recognising unfamiliar words, combination of words to form sentences and then comprehension of texts. Phonics instruction presents reading in a linear process such that readers are taught to decode texts letter by letter, sound by sound and word by word before moving to connecting words to form phrases and then sentences as depicted in the Bottom Up theory of the reading. The present study therefore draws from the Bottom-up theory as it is concerned with using phonics systematically and sequentially to teach children the letter sounds of English which facilitates the acquisition of basic reading skills. The study thus examines the effects of two phonics instructional modes on pupils' achievement in reading.

### 3. Method

The study adopted the non-equivalent non-randomized control group quasi-experimental design. The sample of the study was 118 pupils in four intact classes drawn from four public schools in the 63 public primary schools in Enugu East Local Government Area of Enugu State using multi stage sampling technique. The schools were assigned to experimental and control groups through tossing of coin while balloting was used to draw intact classes from the schools. The experimental group was the

synthetic phonics group while the control group was the analytic phonics group. The instrument used for data collection was the Initial Reading Achievement Test (IRAT) which was constructed to test pupils' achievement in different initial reading skills. The instrument which yielded a reliability coefficient of 0.85 was administered as pretest and posttest before and after treatment. The post test was administered eight weeks after the subjects were taught with synthetic and analytic phonics. Data collected was analysed using Mean, Standard deviations and Analysis of Covariance (ANCOVA). Mean and Standard deviations were used to answer the research question while Analysis of Covariance was used to test the hypothesis at 0.05 level of significance ( $p < 0.05$ ).

#### 4. Results

##### 4.1 Research Question One

What is the differential effects of synthetic phonics and analytic phonics on pupils' achievement in reading?

**Table 1. Mean and Standard Deviation of Achievement Scores of Pupils Taught Reading Using Synthetic Phonics and Those Taught Using Analytic Phonics**

Groups	Pre-test		Post-test		Gain Scores	Gain Scores Difference
	N	Mean	SD	Mean		
Synthetic Phonics	56	25.52	8.92	41.59	14.61	16.07
Analytic Phonics	62	24.47	4.62	30.47	5.59	6.0

Table 1 shows the mean and standard deviations of achievement scores of pupils exposed to synthetic phonics and analytic phonics. The result reveals that the mean achievement scores of 25.52 and 24.47 with standard deviations of 8.92 and 4.62 were obtained by the synthetic phonics and analytic phonics groups respectively in the pre-test. Similarly, in the post-test, the mean achievement scores of 41.59 and 30.47 with standard deviations of 14.61 and 5.59 were recorded for the two groups respectively. A mean score difference of 10.07 was recorded between the two groups in favour of synthetic phonics group. The result of the finding therefore indicates that synthetic phonics proves to be superior to analytic phonics in improving pupils' achievement in reading. The level of significance of the difference in achievement of the two groups was further verified by testing hypothesis one.

##### 4.2 Hypothesis One

There is no significant difference in the mean achievement scores of pupils taught reading with synthetic phonics and those taught using analytic phonics.

**Table 2. Summary of Analysis of Covariance (ANCOVA) of Pupils' Mean Achievement Scores in Reading When Exposed to Synthetic Phonics and Analytic Phonics**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	11332.930 <sup>a</sup>	8	1416.616	25.945	.000
Intercept	2347.979	1	2347.979	43.003	.000
Pretest	2168.188	1	2168.188	39.710	.000
Method	3718.308	1	3718.308	68.100	.000
Gender	7.251	1	7.251	.133	.716
Location	1382.405	1	1382.405	25.319	.000
Method * Gender	53.622	1	53.622	.982	.324
Method * Location	838.079	1	838.079	15.349	.000
Error	5951.443	109	54.600		
Total	168060.000	118			
Corrected Total	17284.373	117			

Table 2 shows ANCOVA for significant difference in the mean achievement scores of pupils taught reading using synthetic phonics and those taught using analytic phonics. The result shows that teaching method is a significant factor on pupils' achievement in reading;  $F(1,109) = 68.100, p = .000$ . Thus, the null hypothesis of no significant difference is rejected. This is because the exact probability value of .000 is less than the level of significance set at 0.05 ( $p < 0.05$ ). Hence, there is a significant difference in the mean achievement scores of pupils taught reading with synthetic phonics and those taught using analytic phonics in favour of the synthetic phonics group.

## 5. Discussion

The results of the study shown in Table 1 revealed that pupils exposed to synthetic phonics had higher mean scores than those exposed to analytic phonics. The difference in the mean achievement scores was further validated by Analysis of Covariance (ANCOVA) in Table 2 which showed a significant difference in the mean achievement scores of pupils taught reading using synthetic phonics and those taught with analytic phonics. The result is in agreement with Johnston and Watson's (2005) study which revealed that synthetic phonics taught groups performed better than other two groups in non word reading and ability to spell dictated words. The study is also in tandem with Dixon, Schagen and Seedhouse (2011) who discovered that synthetic taught group performed better than the rote-learning taught group in reading and spelling as well as the ability to sound out words. It also corroborates Ekpo et al.'s (2007) findings that jolly phonics (a strategy of synthetic phonics) was effective in enhancing pupils' reading skills. However, the result is at variance with Eshiet's (2012) study which showed that pupils in synthetic phonics group made progress only in the knowledge of sounds and blending while

those in the control group made more progress in reading and spelling tests though the results were not statistically significant.

The findings of this study also confirm the studies of Osuorji (2006), and Ofodu and Lawal (2011) that reported the positive effect of innovative and activity-based instructional methods on students' achievement in reading. The reason why pupils in the synthetic phonics group achieved better than those in the analytic phonics group may be attributed to the fact that activities involved in the use of synthetic phonics expose pupils to early knowledge of the letter sounds of English which enables them to independently generate the pronunciation of unfamiliar words for themselves. The approach has proved to be more effective in producing positive achievements among pupils learning to read than analytic phonics.

However, though the synthetic phonics taught group performed better than those in the analytic phonics group, it could be observed that they did not score up to the average pass grade. This could have been influenced by the time interval used in conducting the experiment which may not have been enough to meaningfully expose the pupils to all the letter sounds of phonics. A proper grasp of all the letter sounds would enable the pupils to make greater achievements in reading. Therefore, it is expected that the use of synthetic phonics would produce more effective results when used for a longer period. The obvious importance of reading in the overall academic achievement of the child calls for the adoption and proper implementation of innovative and activity-based instructional methods such as synthetic phonics in the teaching and learning of reading in English as a second language in Nigerian primary schools.

## **6. Conclusion and Recommendations**

With reference to the findings of this study, it is concluded that synthetic phonics is a more effective method of teaching beginning/initial reading than the analytic phonics. This is supported by the findings that pupils taught reading with synthetic phonics achieved significantly higher than their counterparts taught with analytic phonics. The adoption of effective and innovative teaching methods such as synthetic phonics that would better enhance pupils' achievement in reading is thus recommended. Teachers should also complement the use of synthetic phonics with analytic phonics at some stages of primary education to ensure a comprehensive teaching of reading since the pupils did not achieve up to the average pass grade in the synthetic phonics group. Government should also properly expose pre and in service teachers to the techniques and activities involved in synthetic phonics and adequately monitor the proper implementation of the method for reading instruction.

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