

Using Synthetic Phonics to Improve the Sound Discrimination and Reading Comprehension Skills of Basic Eight Students at Oyoko Methodist Junior High School

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Abstract: This study was conducted to examine the effect of using synthetic phonics on Basic Eight students' ability to discriminate between the sounds of the letters of the English alphabet and answer reading comprehension questions correctly. The purposive sampling technique was used to sample the forty-four students from the Basic Eight class at Oyoko Methodist Junior High School for the study. The researchers used a combination of observation and teacher-made-test as instruments for the data collection exercise. Data gathered were analysed using frequencies, percentages, means, and range. The study concluded that the use of synthetic phonics is an effective intervention to aid the Basic Eight students of Oyoko Methodist Junior High School to discriminate between the sounds of the letters of the English alphabets and answer reading comprehension questions correctly. Based on the findings of the study, it was recommended that the head teacher of Oyoko Methodist Junior High School should organize school-based in-service training for the teachers on the use of the synthetic phonics approach to enable the teachers of English language to become conversant with the skills of using the approach to teach effectively.

Keywords: Synthetic phonics, Sound discrimination, Reading comprehension,

I. INTRODUCTION

From the psycholinguistic point of view, reading is not primarily a visual process. There are two kinds of information involved in reading. First is visual information, that is, the one that comes from the printed page. The second is non-visual information, that is, the information that comes from the brain of the reader (Ngabut, 2015). Visual information can be seen in a text or any form of writing, while non-verbal information is what the reader already knows about reading, about language, and about the world in general (Smith as cited by Ngabut, 2015). This means that being able to see sentences in front of the eyes is not enough. One must know something about the language in which the material is written, about its subject matter, and about reading itself.

Reading is a process of thinking actively in order to unlock or understand the idea an author portrays (Shihab, 2011). It involves connecting an author's idea to what one

already knows and appropriately coordinating all the ideas for usage. Interpreting, connecting and organizing both the author and reader's ideas requires skills and ability on the part of the reader. Reading therefore, could be defined as a receptive skill, which involves the ability to interpret or decode print symbols. According to Akubuilu, Okorie, Onwuka, and Uloh-Bethels (2015), reading is the active thinking process of understanding an author's ideas, connecting those ideas to what the reader already knows, and organizing all the ideas so that the reader can remember and use them. The learning of reading starts from the mastery of the letters of the alphabet of the language as well as the mastery of the skills required for learning reading.

Reading is a complex, purposeful, interactive, comprehending, flexible activity that takes considerable time and resources to develop (Bojovic, 2010). Reading is rapid, which means that readers should maintain flow of information at a sufficient rate to make connections and inferences vital to comprehension. The reader has a purpose for reading, whether it is for entertainment, information, or research. Reading for a purpose provides motivation – an important aspect of being a good reader. It is an interactive activity in that the reader makes use of information from his/her background knowledge as well as information from the printed page and many skills work together simultaneously in the process (Bojovic, 2010). The reader typically expects to understand what he or she is reading. Reading is flexible, meaning that the reader employs a range of strategies to read fluently.

According to UNICEF (2012), reading readiness is a process of preparing a child for reading, encouraging the child to read and engaging that child in reading. Reading readiness is a state of development which prepares the child mentally, physically, and socially and emotionally for reading experiences. Notwithstanding the chronological age of the child, the point at which the child's growth and development have brought about proper maturation of these factors should be the point at which the reading process begins. Schifferdecker (2007) believed that reading readiness actually

commences from that particular time when a child transforms from being a non-reader to a reader. This can be a tough transition but is very rewarding because not only are children very proud of themselves as they learn to read, but children who learn to read well are better learners throughout their school years (Akubuilu et al., 2015).

Diagnosis and Evidence of the Problem

Reading readiness is influenced by a group of interrelated factors which are broadly classified as physical, mental, and social-emotional readiness. According to the National Open University of Nigeria [NOUN] (2013), physical readiness entails that the child possesses functional speech organs; is able to hear and see and that such child demonstrates evidence of word recognition and perception. Mental readiness has to do with the child's intellectual ability for word recognition, pronunciation of sounds and accurate pronunciation of words. Also, reading connotes the child's ability to demonstrate oral capabilities (listening and speaking), auditory and visual discrimination, speaking in complete sentences, recitation of rhymes and short poems, listening to and telling short stories as well as using a variety of vocabulary items in oral communication and engaging in simple dialogues/conversation amongst others. Socio-emotional readiness requires that the child be emotionally stable and psychologically balanced to accommodate tasks of reading. Apart from showing good emotional adjustment, there must be traces of the child demonstrating keen interest and desire to read and as well show satisfactory demonstration of socialization traits. These factors can only be feasible with a child whose mind is healthy and sound for learning.

The researchers have observed over a period of time that students of Oyoko Methodist Junior High School demonstrate poor reading and comprehension skills. The students appear not to be emotionally stable and psychologically balanced to accommodate tasks of reading and thus shy away from reading simple passages in their English readers. A cursory glance through students' class exercise books showed that the students scored very low marks in English reading comprehension exercises.

Causes of the Problem

According to Akubuilu et al., (2015), some of the major causes of reading deficiency in children include child's socio-economic background, physical abnormalities, mental and psychological imbalance, interest of the child, familiarity with symbols and teachers' ability to help children to learn. The child's social-economic background is a very important factor to be reckoned with in the learning process. Hence, it is a factor to be considered in getting children ready for reading which is not just a matter of sounds, but rather a matter of rapidly and accurately getting meaning of printed words on pages. One of the factors embedded in social-economic background of the child is unhappy home condition. This is a leading cause of reading readiness deficiency among children. Unhappy home condition include loss of one or both parents,

maladjustment, or conflict in the home. These have series of adverse effects on children's reading. For children to have progress in reading, they require an atmosphere of affection and security. In such a situation, teachers have to do something to help such children in the class. It could be in the form of advice, talking to the parents, referring the child to the school counsellor and also giving the child extra attention.

Statement of the Problem

The researchers had observed over a period that students of Oyoko Methodist Junior High School found it difficult to recognize and pronounce key words in simple passages in their English reading books. In addition, they could not discriminate between the sounds of the English alphabet. Hence, majority of the students could not read fluently. Based on this observation, the researchers decided to use the synthetic phonics as an intervention to help the Basic Eight students of Oyoko Methodist Junior High School to discriminate between the sounds of the letters of the English alphabet and answer reading comprehension questions correctly.

Research Objectives

The objectives of the study were to:

1. determine the effect of using synthetic phonics on Basic Eight students' ability to discriminate between the sounds of the letters of the English alphabet at Oyoko Methodist Junior High School.
2. find out the effect of using synthetic phonics on Basic Eight students' ability to answer reading comprehension questions correctly at Oyoko Methodist Junior High School.

Research Questions

The study was guided by the following research questions.

1. What is the effect of using synthetic phonics on Basic Eight students' ability to discriminate between the sounds of the letters of the English alphabet at Oyoko Methodist Junior High School?
2. What is the effect of using synthetic phonics on Basic Eight students' ability to answer reading comprehension questions correctly at Oyoko Methodist Junior High School?

Theoretical Framework

The framework for this study is Early English Language Development (E-ELD) Standards grounded in Vygotsky's theory of cognition and linguistic development. The E-ELD embraces Vygotsky's theory which states that cognitive and linguistic development is socially constructed and that the children's development can be led by appropriately mediated instruction (Berker & Winsler, as cited by Nalisa, Chataa, & Maemeka, 2019). Vygotsky's theory is best understood within the cultural, social, and historical contexts in which it occurs. The paradigm for early second

language acquisition limits children's use of the home language to the earliest stage of second language acquisition. Children will indeed rely on their home language before the cognitive leap of figuring out that a language different than their own is being spoken. It is significant to note that competency in the first language is an important linguistic resource in the acquisition process of the second language (English). Research has demonstrated that bilingual children continuously use their home language to negotiate and construct meaning throughout the English language acquisition process (Nalisa et al., 2019).

II. HISTORY OF THE SYNTHETIC PHONICS METHOD

Up until the 1970s, a mixture of synthetic and analytic phonics was used for teaching reading in British schools. From that time forward, phonics was abandoned altogether in most state primary schools and replaced with the whole word recognition method (sometimes called "look and say"). In the following years the average reading age of children in primary schools fell and the standard expectation for children of various ages were adjusted downward (Johnson & Waston, 2005). Though there were few proponents of phonic methods, the major lobbying bodies such as the Institute of Education and the National Literacy Trust disdained early attention to the alphabetic code in favour of taking clues from the context of the next (such as illustrations).

Synthetic Phonics

Phonics has been in education for many years in various countries throughout the world. In many countries, it is now becoming the latest word in schools. In Ghana, it is coming back alive and teachers and parents are adding phonics to their methods of teaching literacy to children. However, it is the method of synthetic phonics which has gained so much attention. Synthetic phonics involve learning the sounds heard in the English language. The English language is made up of approximately forty-two (42) principal sounds. Once children learn to hear these sounds in words and represent them with letter symbols, they are well on their way to understanding the nature of English language. The children learn how to utilize their knowledge of sounds by blending the sounds together to create a word (Di Mauro & Musgrave, 2005).

It is important to note that synthetic phonics does not involve learning simply the letter names of the alphabet, instead it means learning the sound of letters of English language. For example, the word "rain" has four letters but three sounds; /r-ei-n/. When reading and writing this word, children concentrate on listening for the three sequential sounds in this word. Once children learn how to hear sounds in words and can represent these sounds with symbols, then reading and writing can occur quite smoothly. In order for phonics instruction to be effective, teachers need to consider sounds and train children to hear these sounds. A good phonics programme deals with teaching children more than

just the twenty-six (26) letter sounds of the alphabet. According to Di Mauro and Musgrave (2005), a good phonics programme looks at the forty-two (42) principal sounds and shows that words are made up of a sequence of these sounds. A good phonic programme also looks at how these sounds can be utilized to read words by blending their sounds together (c-a-t for *kæt*) and to write words by segmenting words in the sequence of sounds (b-a-g- for *bæg*). The inclusion of phonics in education places an emphasis on word attack skills rather than expecting children to learn thousands of words by memory.

Teachers who follow a phonics approach to reading and writing believe it is much quicker and easier to learn forty-two (42) sounds rather than thousands of words by sight. Children do not need to rely heavily on their memory recall as they will be able to use their sounds together with the skill of blending to read words for themselves. Once children learn sounds and learn how to blend them together they will be able to read approximately 80% of the words in the English language. The other words that do not follow a phonetic pattern are simply learned by memory. But there are not many of these words. It is amazing to see children reading using the skill of blending the forty-two (42) principal sounds heard in the English language (Di Mauro & Musgrave, 2005).

What Synthetic Phonic Is

Johnson and Watson (2005) described synthetic phonics with the following.

- Synthetic phonics involves the teaching of letter/s-sound correspondence rapidly and systematically; and models how the alphabetic code work by sounding out and blending all-through-the-word for reading and segmenting the individual sounds all-through-the word for spelling sound; and letters are taught in all position of the words but the emphasis is on all-through-the word blending and segmenting from weak ones.
- Synthetic phonics develop phonemic awareness along with the corresponding letter shapes.
- Synthetic phonics teach phonics at the level of the individual phoneme from the outset.
- Synthetic phonic involves the children rehearsing the writing of letter shapes alongside learning the letter/s sound correspondences preferably with the tripod pencil grip. Dictation is a frequent teaching technique from letter to word. Spelling and eventually extending to the next level.
- Synthetic phonics teachers put accuracy before fluency. Fluency will come with time, but the emphasis on thorough letter/s-sound correspondence knowledge and synthesizing enables the reader to become accurate, fluent and to access the meaning of the text at the level of the reader's oral comprehension more readily.

- Synthetic phonics involve the teaching of the transparent alphabet before progressing onto opaque alphabet. In other words, children are taught steps which are straight forward and work before being taught the complications and variations of pronunciation and spelling of the full alphabetic code.
- Synthetic phonics introduces irregular words and stickier words slowly and systematically after a thorough introduction of the transparent alphabet code.
- Synthetic phonics involves a heavy emphasis on hearing the sounds all-through-the-word for spelling and not an emphasis on look, cover, write, or check. This letter visual form of spelling play larger part with unusual spelling and spelling variation though a phonics procedure is always emphasised in spelling generally.
- Synthetic phonics teachers read a full range of literature with the children and ensures that all children have full range of experience of activities associated with literacy such as role play, drama, poetry, but the children are not expected to read text which is beyond them (Johnson & Watson, 2005).

Importance of the Synthetic Phonics Method

The synthetic phonics teaching approach is incredibly effective overall because it not only teaches kids how to pronounce words but it also teaches kids how to pronounce new words as well. This method helps children to associate sounds with specific letters and letter combinations. So, children who have learned how to read by using phonics teaching method will know how to pronounce words they have never learned before. This is because they know how to pronounce the combination of letters that are present within new words. This learning method is much more effective than other learning methods that are available to teach children because it is a very simple method and straight forward in the eyes of a child. Due to the effectiveness of this method, many government organizations around the world are recommending the use of phonics in their schools. There have been many scientific publications and studies that openly promote the use of the phonics learning method. The recommendations have been issued after many scientific studies presented evidence that children learn how to read much more efficiently when using phonics methods (Reutzel & Cooter, 2005).

The synthetic phonic teaching method is also touted to be one of the best teaching methods available to parents and teachers who are teaching children how to read. This is because it teaches the meaning of words and the correct pronunciation of words to children. As kids learn how to pronounce specific letters and letter combinations as well as whole words, they also learn how to associate those letter combinations with corresponding objects that exist in the real world. While using this learning method, many teachers also

rely on this method because it helps readers of all ages. Whether one is teaching a child to learn how to read for the first time, or one is attempting to teach a child how to pronounce and read difficult words found in advanced reading levels, phonics teaching method can assist children during the learning process (Reutzel & Cooter, 2005). Since there are a few techniques that can help kids learn how to read as quickly as the synthetic phonics teaching method, one should certainly be using this method to teach children. As soon as one begins using this teaching method the children will also begin to associate words with their corresponding meanings.

III. METHODOLOGY

The research design employed for this study was action research. Action research is a type of research design in which the researcher works hand-in-hand with other people to solve classroom problem. Action research design enables both the researcher and learners engage in activities to solve a classroom related difficulty. The design was employed specifically to help the Basic Eight students of Oyoko Methodist Junior High School to improve their sound discrimination skills and answer reading comprehension questions correctly. The purposive sampling technique was used to sample the forty-four (44) students of the Basic Eight class for the study. The researchers used a combination of observation and teacher-made-test as instruments for the data collection exercise. The data gathered for the study was obtained from students' tests scores. To ascertain whether there was any difference between the students' pre-test scores and post-test scores, the data was analysed using tables of frequency count, percentages, mean scores and range.

IV. RESULTS

Table 1 presented the performance of the Basic Eight students of Oyoko Methodist Junior High School in sound discrimination activities before the intervention.

Table 1: Students' Pre-test Scores on Sound Discrimination

Marks	Frequency	Percentage
10	0	0
9	0	0
8	2	5
7	3	7
6	6	14
5	10	23
4	9	20
3	7	16
2	5	11
1	2	5
Total	44	100

From Table 1, two, representing five percent of the students scored one mark in the pre-test; five, representing eleven percent of the students scored two marks in the pre-

test; and seven, representing sixteen percent of the students scored three marks; and nine, representing twenty percent of the students scored four marks. Also, from Table 1, ten, representing twenty-three percent of the students scored five marks; six, representing fourteen percent of the students scored six marks; three, representing seven percent of the students scored seven marks; and the remaining two, representing five percent of the students scored eight marks. Thus, from Table 1, the students' pre-test scores on sound discrimination had a mean score of 4.4 marks and a range of seven marks.

Table 2 presented the performance of the Basic Eight students of Oyoko Methodist Junior High School for answering reading comprehension questions before the intervention.

Table 2: Students' Pre-test Scores on Reading Comprehension

Marks	Frequency	Percentage
10	0	0
9	0	0
8	1	2
7	3	7
6	5	12
5	4	9
4	11	25
3	7	16
2	6	13
1	7	16
Total	44	100

From Table 2, seven, representing sixteen percent of the students scored one mark in the pre-test; six, representing thirteen percent of the students scored two marks in the pre-test; seven, representing sixteen percent of the students scored three marks; and eleven, representing twenty-five percent of the students scored four marks. Also, from Table 2, four, representing nine percent of the students scored five marks; five, representing twelve percent of the students scored six marks; three, representing seven percent of the students scored seven marks; and the remaining one, representing two percent of the students scored eight marks. Thus, from Table 2, the students' pre-test scores on answering reading comprehension questions had a mean score of 3.7 marks and a range of seven marks.

Table 3 presented the performance of the Basic Eight students of Oyoko Methodist Junior High School in sound discrimination after the intervention was administered.

Table 3: Students' Post-test Scores on Sound Discrimination

Marks	Frequency	Percentage
10	6	14
9	7	16

8	9	20
7	13	30
6	9	20
5	0	0
4	0	0
3	0	0
2	0	0
1	0	0
Total	44	100

From Table 3, nine, representing twenty percent of the students scored six marks in the post-test; thirteen, representing thirty percent of the students scored seven marks; nine, representing twenty percent of the students scored eight marks; seven, representing sixteen percent of the students scored nine marks; and the remaining six, representing fourteen percent of the students scored ten marks in the post-test. Thus, from Table 3, the students' post-test scores on sound discrimination had a mean score of 7.7 marks and a range of four marks.

Table 4 presented the performance of the Basic Eight students of Oyoko Methodist Junior High School on answering reading comprehension questions after the intervention was administered.

Table 4: Students' Post-test Scores in Reading Comprehension

Marks	Frequency	Percentage
10	3	7
9	5	11
8	7	16
7	7	16
6	10	23
5	9	20
4	3	7
3	0	0
2	0	0
1	0	0
Total	44	100

From Table 4, three, representing seven percent of the students scored four marks in the post-test; nine, representing twenty percent of the students scored five marks in the post-test; ten, representing twenty-three percent of the students scored six marks; seven, representing sixteen percent of the students scored seven marks. Again, from Table 4, seven, representing sixteen percent of the students scored eight marks; five, representing eleven percent of the students scored nine marks; and the remaining three, representing seven percent of the students scored ten marks in the post-test. Thus, from Table 4, the students' post-test scores on

answering reading comprehension questions had a mean score of 6.8 marks and a range of six marks.

V. DISCUSSION

From the data gathered and analyzed for the study, it was reported from Table 1 that the students' pre-test scores for sound discrimination had a mean score of 4.4 marks and a range of seven marks. However, after students had been taken through the intervention lessons, their post-test scores for sound discrimination (Table 3) had a mean score of 7.7 marks and a range of four marks thus, signalling and improvement in the Basic Eight students' ability to effectively discriminate between the sounds of the letters of the English alphabet. This finding was in line with the belief of Di Mauro and Musgrave (2005) that a good phonics program looks at the forty-two (42) principal sounds and shows that words are made up of a sequence of sounds thus, re-echoing the point that in order for phonics instruction to be effective, teachers need to consider sounds and train children to hear these sounds.

Also, from the data gathered and analyzed for the study, it was reported from Table 2 that students' pre-test scores on answering reading comprehension questions had a mean score of 3.7 marks and a range of seven marks. However, after the students were taken through the intervention lessons, their post test scores on answering reading comprehension questions (Table 4) had a mean score of 6.8 marks and a range of six marks. Again, the results from Table 2 and Table 4 showed an improvement in the Basic Eight students' ability to correctly answer questions on reading comprehension. This finding supports the opinion by Reutzel and Cooter (2005) that many scientific studies presented evidence to demonstrate that children learn how to read and answer reading comprehension questions much more efficiently when using phonics methods.

VI. CONCLUSION AND RECOMMENDATION

The study concluded that the use of synthetic phonics had a positive effect on the ability of the Basic Eight students of Oyoko Methodist Junior High School to discriminate between the sounds of the letters of the English alphabet and hence, answer reading comprehension questions correctly. Synthetic phonics and hence, good sound discrimination facilitate or enhance good reading. Proper reading which is also facilitated by proper sound discrimination enhances comprehension skills of learners at all levels of basic education in Ghana.

Based on the findings of the study, it was recommended that head teacher of Oyoko Methodist Junior High School should organize school-based in-service training for the teachers on the use of the synthetic phonics approach to enable the teachers of English language to become conversant with the skills of using the approach to teach effectively. In light of the above, teachers and curriculum developers are admonished to incorporate phonics and hence, sound discrimination throughout the basic level in the country.

It is also recommended that this study is replicated on a higher scale with larger population and varied settings to validate the efficacy of this approach for use across the country to help develop the comprehension skills of students in the basic schools.

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