Research Paper Education

Effects of Picture Books on Early Childhood Care (ECC) Children's Pre-Reading Skills Acquisition

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ABSTRACT

The study investigated the effect of picture books on Early Child Care (ECC) children's pre-reading skills acquisition. Three research questions and three hypotheses guided the study. The design of the study was quasi-experimental non-randomized pretest- post test control group design involving one control group and one experimental group. The sample consisted of 83 ECC III children in four primary schools in Nsukka Central Education Authority. The instruments used for the study were researchers developed observation checklist, a picture book with a corresponding work book titled Pre-reading Skills Acquisition Test (PSAT) which were validated by an expert each in Childhood Education, Psychology, Language Education and Science Education. Mean, standard deviation and Analysis of Covariance (ANCOVA) were used for data analysis. Major findings of the study indicate that using picture books as instructional medium greatly enhanced ECC III children's acquisition of pre-reading skills. Gender had no significant effect on the mean scores of ECC III children exposed to picture books and those not exposed. ECC III children in the urban area exposed to picture books did not perform better than their counterparts in the rural area. A major recommendation made was that the Federal and State Ministries of Education should make available colourful picture books to the schools so that the children can have access to them and be enabled to develop the necessary pre-reading skills.

KEYWORDS Picture books, early childhood care, pre-reading skills, gender, location

Introduction

Language is an indispensible tool for the education of man. It is learnt in the same way a child learns to walk, climb, play a game or swim. According to Mgbodile (1999), language is a learned, systematic, symbolic, vocal behavior, a culturally acquired universal mark of man. It is a process that begins in early infancy and depends crucially on skills from a variety of domains including perception, cognition, motor development and socialization (Beller, 2008). Language development proceeds in four sequential, though somehow interrelated stages manifest in the skills of listening, speaking, reading and writing. These four language skills play crucial roles in human learning and intellectual activities. Reading plays the most crucial role in formal learning situations which require effective use of books and other written materials for intellectual development.

Reading involves the recognition of graphic symbols, followed by the deciphering or decoding of such graphic symbols and finally the interpretation of such symbols verbally and visually to make them meaningful (United Nations International Children's Education Fund, UNICEF, 2005). It is a complex cognitive process of decoding symbols for the intention of deriving meaning and/ or constructing meaning (Vaugha & Bos, 2009). In other words, reading is a means of language acquisition, communication and sharing information and ideas. Many researchers like Obanya (2002), Adeniji &Omale (2010), are of the view that reading is basically the act of getting or interpreting meaning from printed or written words or symbols. Reading is a complex system of deriving meaning from print that requires skills to understand how speech sounds and print are connected, ability to decode unfamiliar words, ability to read fluently, adequate vocabulary and background information to foster reading comprehension and engender the motivation to read (Partnership for Reading, 2006).

The central position of reading in the educational pursuit of a child has been widely acknowledged by scholars because it is a skill that is not limited to language learning but an indispensible tool for knowledge acquisition generally in all school subjects (Fakaye, 2008). Learning to read is a complicated process that is built on a foundation of communication skills that children start learning at birth. It is a skill of fundamental importance. If a child is unable to read, the child suffers from various handicaps not only in school but later in life. According to Adeniji &Omale (2010), the ability to read is one determinant of students' success or failure. Good reading habit and culture contribute to life- long education and personal satisfaction. The more informed one is, the better life decisions one is able to make. With expanded vocabulary, one is enabled to be more articulate and express oneself better. Reading, according to James (2010), increases one's vocabulary, gives information, feeds one's imagination and inspires one. In addition, learning to read is an effortful, long term process that requires sustained motivation on the part of the reader.

The goal of reading, especially at the primary school level is that each child should be functionally literate, being able to communicate effectively even when the child's academic pursuit terminates at the primary school level. This goal cannot be achieved without the necessary fundamental reading readiness skills. It is at the Early Child Care (ECC) school level that the proper foundation is established for the acquisition of basic literacy and numeracy skills. While children at the ECC level spend time on recognition of objects within and around their environment, at the early primary school stage, they are expected to recognize these objects and read their names.

Early Child Care (ECC) education is the education given in an educational institution to children prior to their entering the primary school. It includes the crèche, the nursery and the kindergarten (FRN, 2004). One of the objectives of ECC educa-

tion in Nigeria is the teaching of the rudiments of numbers, letters, colours, shapes, forms, among others through play. It can be deduced that by the age of six when a child should have left pre-primary school and be in primary one, the child should be able, with good pre-reading background, to read simple sentences. But some children could read earlier than others due to differences in children's reading abilities. Research evidence (Barnett, 2006; Rolinick &Grunewald,2003) indicate that early childhood education has positive influences on children's affective, conceptual and social development in subsequent years. Therefore, learning to read and reading to learn are two of the most important missions of ECC education.

For this study, Early Child Care (ECC) III was the focus. This class was specifically used because in the public schools, this is the terminal class before a child enters primary school. It is expected that by this class, a child should have acquired the pre-reading skills necessary for reading in primary one. For, according to the National Policy on Education (FRN, 2004), one of the purposes of pre-primary education is to prepare the child for the primary level of education.

The importance of reading at the ECC level is obvious. Freedom-Devito (2004) says reading helps children develop vital language skills, opens up new worlds and enriches children's lives. It also enhances their social skills, improves hand –eye co-ordination and above all, provides children with plenty of fun. Reading helps children develop proper grammar and phrasing thereby enhancing the development of spoken language skills and new vocabulary. It exposes them to other people and cultures and new experiences and ideas. Children are able to flex their critical thinking skills and develop self confidence through reading.

Pre-reading skills are those skills children need to help them become good readers. These pre-reading skills, according to the Partnership for Reading (2006), include matching, rhyming, letter skills, concept of prints, narrative skills and language skills. Some approaches have been adopted in teaching pre-reading skills to pre-primary school children. Sholes (2008) highlighted two of them as whole language and phonics. Other methods include fast mapping, direct explanation, alphabetic method, whole word, look and say and sentence methods. However, evidence abound that despite these methods and the importance of reading, it has been observed that many children at the lower primary level are not able to read well or are not able to read at all (Fafaye, 2008; Omojuwa,2005). This points to the fact that they may not have developed the requisite pre-reading skills at the pre-primary level or the methods employed in teaching pre-reading skills were ineffective. The need for another approach arose to see if there will be an improvement in the pre-reading skills acquisition of ECC III children. The use of picture books is one of such approaches.

A picture book is a book designed for children in which pictures and illustrations are employed to tell a story. It may convey the meaning of a story entirely through pictures with or without text. Also, a picture book may tell a story in words and pictures with each making an important contribution to the way the story is developed and the meaning created (Gleeson, 2003). Bright colourful images in picture books serve the function of conveying meaningful experiences and concepts. They also help in identifying words through picture clues which introduce meaning of words and concepts. Literature tends to suggest that picture books can improve reading at this level (Musiyinwa, 2006; Makoe, 2006; Ranweiler,2004). Many of these literatures are alien to the Nigerian child. Nigerians live in a different environment with a different culture. Also, there is paucity of literature that have investigated the effect of picture books on the development of pre-reading skills among children in the Nsukka Cultural Zone of Enugu State, Nigeria.

Location could be a factor in children's acquisition of pre-reading skills. The location of a school, according to Okoye (2009) has a significant effect on the academic performance of the child. The location of a school may affect a child's ability to study and perform at the level expected of the child. The rural areas, according to Abidogun (2005), are seen as having the greater challenges concerning educational development than urban areas due to the peculiar socio-economic and institutional structures in the rural areas. Specifically, according to Okoye (2009), in Nigeria, most rural-based schools lack enough qualified teachers, are poorly equipped and lack basic amenities, all serving as inhibiting factors to good academic performance. It is obvious therefore that the degree of interest and motivation a child derives from a learning environment may affect the child's performance.

Child characteristics such as gender have also been linked to early measures of language and learning. Girls tend to have a slight advantage over boys in the early stages of vocabulary development (Tamis Le Monda & Rodriguez, 2008). Contrarily, Okeke (1999) posits that some socio-cultural impediments such as sex role stereotyping and the belief that reading is a male gender subject pose obstacles to female pupils' participation in reading. Research on reading has indicated that there may be sex differences. Two major theoretical explanations have been given, namely inherent biological differences or maturational differences between males and females and cultural or environmental sources (Okeke, 1999). While some researchers claim male superiority to reading, others claim female superiority. Meanwhile, the controversy continues.

2. Statement of the Problem

In spite of diversity in the methods currently in use in teaching reading at the ECC III level, the development of pre-reading skills among early childcare children has continued to pose problems to children and caregivers. Picture books abound in markets and book shops in Nsukka Central Education Authority. Unfortunately, these picture books are not available in the schools. Where a few copies are available, the teachers do not usually make use of them. Rather, they use the rote and "repeat after me" methods. Children are made to memorize unfamiliar concepts and words without knowing what they mean. The researchers decided to find out if the proper use of picture books will help the ECCIII children relate the words and concepts to their corresponding pictures and be able to make meaning out of them.

To guide the study, the following research questions were posed.

1. What are the mean of the pre-reading skill acquisition scores of ECC III children exposed to picture books and those not exposed?
2. What is the difference in mean pre-reading skills acquisition scores of male and female ECCIII children exposed to picture books and those not exposed?
3. What is the influence of location on the pre-reading skills acquisition of ECC III children exposed to picture books and those not exposed?

The following null hypotheses were tested at 0.05 probability.

1 .There is no significant difference in the mean pre-reading skills acquisition scores of ECC III children exposed to picture books and those exposed to the conventional method.
2. There is no significant difference in the mean pre-reading skills acquisition scores of male and female ECC III children based on exposure to picture books.
3. There is no significant difference in the mean pre-reading skills acquisition scores of ECC III children from urban and rural areas exposed to picture books.

3. Method

The study adopted the quasi-experimental design. The population of the study comprised all the 688 (347 males and 341 females) ECC III children in Nsukka Central Education Authority of Enugu State, Nigeria. The sample was made up of 83 children, 44 from the urban area and 39 from the rural area,

40males and 43 females. In composing the sample, the researchers used the multi stage sampling technique to identify the schools that had ECCIII. The schools in the urban and rural areas were then identified from these schools. From the identified schools, the four schools for treatment and control were selected, two each from the urban and rural areas. In each of the schools, intact classes were used. One school in the urban area was assigned to treatment and the other control. The same procedure was used in the rural area. The instruments for data collection were an observation checklist developed from a picture book and the corresponding work book. The check list had eleven items meant to check how well the children have been able to master the necessary pre-reading skills. The instruments were face validated by an expert each in Childhood Education, Educational Psychology, English Language Education and Science Education. The data were presented using means and standard deviation. The hypotheses were tested at 0.05 level of probability using Analysis of Covariance (ANCOVA) statistic.

4. Results

Table 1

Mean scores and standard deviation on the PSAT of ECC III children in experimental and control groups

	N=83	Pretest		Posttest		
Groups	n	X	SD	X	SD	Mean gain score
Treatment	35	1.60	.69	3.06	.73	1.46
Control	48	1.63	.70	1.79	.62	0.16

Results in Table 1 show the pretest and posttest mean scores of Early Child Care (ECC) III children in the treatment and control groups. Those children exposed to picture books had a pretest mean score of 1.60 with standard deviation of .69 and a posttest mean score of 3.06 with standard deviation of .73. The mean gain score is 1.46 and 0.16 respectively for treatment and control groups

The ECC III children in the control group had a pretest mean acquisition score of 1.63 and standard deviation of .70 and a posttest mean acquisition score of 1.79 with standard deviation of .62. The pretest- posttest main gain score is 0.16. From the results, it implies that those ECC IIIchildren exposed to picture books performed better than those in the control group.

Table 2

Summary of the two way analysis of covariance (ANCOVA) on the mean scores in the Pre-reading Skills Acquisition Test (PSAT)

Source	sum of squares	df	mean square	F	Sig	Decision
Corrected model	69.673	16	4.355	10.743	.000	
Intercept	231.500	1	231.500	571.122	.000	
Pretest	4.228	1	4.228	10.430	.002	
Treatment	59.629	3	19.876	49.035	.000	*S
Location	.101	1	.101	.249	.619	*NS
Gender	.303	1	.303	.749	.388	*NS
Error	54.721	135	.405			
Total	1252.000	152				
Corrected Total	124.395	151				

a R Square =.560 (Adjusted R. Squared =.508)
*S = Significant at 0.05 level
*NS = Not Significant at 0.05 level

Data presented in Table 2 show that treatment as main factor had significant effect on the pre-reading skills acquisition scores of ECCIII children, F(3,135) 49.035 = p =.000. The F-value of 49.035 was significant at .000 and also significant at 0.05 level of significance. The hypothesis of no significant difference in the mean pre-reading skills acquisition scores of ECC III children exposed to picture books and those exposed to the conventional method was rejected. The adjusted R squared of 0.508 suggests further that 51% of total variance on the dependent measure was contributed by the treatment conditions.

Table 3

Gender difference in the mean scores and standard deviation of ECC III children in Treatment and Control groups.

		N=83	Pretest		Posttest		
Groups	Gender	n	X	SD	X	SD	mean gain score
Picture book	Male	14	1.57	.76	3.00	.68	1.43
	Female	21	1.62	.67	3.10	.77	1.48
Control Group	Male	26	1.69	.74	1.65	.69	-0.04
	Female	22	1.55	.67	1.95	.49	0.40

From result in Table 3, it can be observed that male children exposed to picture book had a pretest mean score of 1.57 with standard deviation of .76 and a post test mean score of 3.00 and .68 as standard deviation. They had a mean gain score of 1.43. Their female counterparts had a pretest mean score of 1.62 and .67 as standard deviation and a post test mean score of 3.10 with .77 as standard deviation and a mean gain score of 1.48. For the control group, the pretest mean score and standard deviation for the males are 1.69 and .74 respectively. Their post test mean score and standard deviation are 1.65 and .69 respectively. Their mean gain score is 0.04. The females had a pretest mean score of 1.55 with .67 as standard deviation and a post test mean score of 1.95 with .49 as standard deviation. Their mean gain score is 0.04. Results from Table 3 show that both males and females in the experimental group benefitted more than those in the control group.

Results from Table 2 show also that there is no significant difference in the mean posttest scores of male and female ECC III children in pre-reading skills acquisition, F (1,135) = .749, P = .388. The F-value of 0.749 with respect to gender as main factor was not significant at 0.05 probability level. The null hypothesis of no significant difference in the mean pre-reading skills acquisition of male and female ECC III children is not rejected. This implies that both the male and female ECC III children did not differ significantly in the pre-reading scores. Gender is therefore not a significant factor in the pre-reading skills acquisition of ECC III children.

Table 4

Locational Differences in the mean scores and standard deviation of ECC III children in the Treatment and Control groups.

	N = 83		Pretest		Posttest		
Groups	Location	n	X	SD	X	SD	Mean Gain Score
Picture Book	Urban	20	1.60	.68	3.10	.72	1.50
	Rural	15	1.60	.74	3.00	.76	1.40
Control Group	Urban	24	1.63	.71	1.83	.64	0.20
	Rural	24	1.63	.71	1.75	.61	0.12

Data presented in Table 4 indicate the pretest-post test mean scores of ECC III children's pre-reading skills acquisition based on location. For the treatment group, those in the urban area had a pretest mean score of 1.60 and standard deviation of .68 with 3.10 and .72 as their posttest mean scores and standard deviation respectively. Their mean gain score is 1.50. Those in the rural area had a pretest mean score of 1.60 and standard deviation 0f .74 and a posttest mean score of 3.00 with .76 as standard deviation. Their mean gain score is 1.40. For the control group, children in the urban area had a pretest mean score of 1.63 with .71 as standard deviation and a posttest mean score of 1.83 with .64 as standard deviation. Their mean gain score is 0.20. Those in the rural area had a pretest mean score of 1.63 with .71 as standard deviation and a posttest mean score of 1.75 with .61 as standard deviation and a mean gain score of 0.12. The results show that children in the urban area exposed to picture book benefitted more than those in the rural area. The results show further that children in the urban area in both the experimental and control groups performed better their counterparts in the rural area.

Result in Table 2 also indicate that location as a main factor has no significant influence on the pre-reading skills acquisition of ECCIII children, F (1,135) = .249, P=.619. The F-value of 0.249 with respect to location as main effect was not significant at 0.05 probability level. The null hypothesis of no significant difference in the mean pre-reading skills acquisition scores of children from urban and rural areas was not rejected. Location is therefore not a significant factor in the pre-reading skills acquisition of ECC III children.

5. Discussion

Results indicated that the use of picture books had a significant effect on ECC III children's acquisition of pre-reading skills. The children exposed to picture books benefitted more than those exposed to the conventional method. The findings may have come out the way they did because the children, with the aid of the picture books can now relate or connect sounds and words both verbally and visually. They were thereby enabled to understand what sound or word stood for which picture. This was unlike their counterparts who did not have the opportunity of seeing the pictures of what they were told to read. This study supports the findings of Musiyinwa (2009), Makoe (2006) and Ranweiler (2004) that picture books improved reading at the pre-primary level of education.

Results also showed that there was no significant difference in the mean pre-reading skills acquisition test scores of male and female children. There was no significant difference in the pre-reading skills acquisition scores of ECC III male and female children exposed to picture book and those not exposed. The result suggests that no child is inherently born a better reader merely by being male or female. Rather, one's ability to develop the pre-reading skills depends on the child's early exposure to an environment that engenders opportunity for reading skills acquisition. The findings however contradict some earlier findings by Tamis Le Monda and Rodriguez (2008) that girls have a slight advantage over boys in the early stages of vocabulary development and Okeke (2000) that boys perform poorer than girls irrespective of the criteria used for assessment. Results of this study indicate that both male and female ECC 111 children benefitted equally from the treatment. Gender is therefore not a significant factor in the pre-reading skills acquisition of ECC III children. The findings will help in resolving the common debate that either males or females are superior in pre-reading skills acquisition.

Results also indicate that location had no significant influence on the pre-reading skills acquisition of ECC III children. The results show that children in the urban area did not perform significantly better than those in the rural area in the pre-reading skills acquisition test. Children are the same everywhere irrespective of where they reside or the location of their school. The critical factor is the nature of available learning resources. The findings contradict the views of Okoye (2009) that the location of a school has a significant effect on the academic performance of the child as most rural-based schools lacked enough qualified teachers, were poorly equipped and lacked basic amenities. The findings are also contrary to the views of Abidogun (2003) that the rural areas are seen as having greater challenges concerning educational development than urban areas due to the peculiar socio-economic and institutional structures in the rural area. The interesting aspect of the finding of the study is that it suggests that differences emanating from locational differences are indeed external to the children. If opportunities are made equal, urban and rural children will be equally educable.

6. Conclusion

The study has shown that where children undergo instruction with picture books, it helped them improve their acquisition of the pre-reading skills better. It also showed that the acquisition of the pre-reading skills does not depend on whether the child is a boy or a girl or where the school is located. Differences observed in reading skills among pre-school age children are generally due to differences in available or accessible opportunities and not merely determined by the child's sex or location. Based on the findings, the following recommendations were made:

- Teachers should make concerted efforts to teach the children with picture books.
- Institutions responsible for early childhood education teacher preparation should incorporate the use of this method into the curriculum so as to make these teachers well grounded in the use of picture books.
- Workshops should be organized for teachers already in the field to make them conversant with the use of picture books in instruction.
- Federal and State Ministries of Education should undertake and sponsor the production of quality picture books for pre-primary school children and make them available to children even in the remotest areas.
- Schools should make learning more child- centred by ensuring that children actively participate in the learning process.
- Early intervention is critical to harness natural endowment of all children.

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