EARLY CHILDHOOD EDUCATION AND ACADEMIC PERFORMANCE OF PUPILS IN PRIMARY SCHOOLS IN ABAK LOCAL GOVERNMENT AREA

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Abstract
This study examines influence of Early Childhood Education on Academic Performance of Pupils in Primary Schools in Abak LGA. The study used survey method in carrying out the study. The study was guided by three major Objectives and three corresponding Research Questions; viz, Influence of Early Childhood Education on Academic performance in Mathematics, English studies, and Social Studies. A sample size of 210 pupils was used out of the population of 2127 and a test was conducted to observe the influence of ECE on the pupils performance and the results showed that: there is a Statistical significant difference existing between the academic achievement scores in mathematics, English Studies and Social Studies of Early Childhood Education and Non- Early Childhood Education primary school pupils in Abak LGA. We therefore, based on our findings made the recommendations that: Every child should be given opportunity to experience Early Childhood Education which is in line, with Universal Declaration on Human Rights and the UN Convention on the rights of the child. Government should ensure that services provided by teachers are incompliance with curriculum in core subjects. Parents and stakeholders should promote Early Childhood Education by providing facilities and instructional materials and infrastructure that would offer individual access to quality Early Childhood Education experience that will ensure Education for All (EFA) for the benefits of the populace.

Introduction

Early childhood education is the term commonly used to describe the formal teaching and care of young children by people other than their family or in settings outside of the home. According to the National Association for the Education of Young Children (NAEYC) the developmental definition of early childhood education, spans the human life from birth to age eight. However, typically early childhood education covers the period from birth to when a child starts school and this can be as early as one and a half year to five years of age. Early childhood development and education is the overall development of the child socially, physically and intellectually. It encompasses the care, development and education of children below the age of five years. Maduewesi, in Osakwe (2019).Omozeghian (1995) defines pre-primary education as education meant for children between the ages of 2 to 6 years. The National Policy on Education (2004) sees pre-primary education as the education given in an educational institution to children aged 3-5 years plus prior to their entering the primary school. Education, as posited in Effiong, (2024), is a social security of every child, who in the near future, becomes a national asset for economic development of any nation that prioritizes education of their children.

Statement of the Problem

Throughout the past years many experts had questioned the value of early childhood education and what role this early education plays in subsequent academic achievement and socialization in the primary grades. Against this backdrop, many parents have been on the dilemma of deciding whether or not to send their children to early childhood education. The foregoing concern was the basis for the initiative of the convention on the rights of the child, drafted by the United Nations Commission on Human Rights (UNCHR) and adopted by the General Assembly of the UN in 1989 (United Nations Children's Fund [UNICEF], 1998). Most countries have turned to universal pre-primary education in order to give children a better start to life (OECD, 2017; UNESCO,2021). There is however some general agreement among experts around the world from developing as well as developed nations that early childhood care and education programs are not only desirable but essential for many children (Sylva &Pugh, 2021).

In Nigeria, for many years, since the Government took over the management of primary education, there has been a debate on the trajectories for delivering early childhood education. The objectives of Early Childhood Development Programme in Nigeria according to National Policy on Education include: providing education geared towards development of the child's mental and physical capabilities; improving the status of the child's health; care and nutritional needs, and link him with health services such as immunization, health check-ups and growth monitoring and promotion. It is also aimed at enriching the child's experiences to enable him cope better with primary school life (Udom, 2018).

However other experts and theories have argued against early childhood education. According to Anderson, 2017 in his study revealed that early childhood education has affected the finances of the parents and this in turn affect economic stability of the parents. The study also revealed that early childhood education exposes the child to western culture which sees African culture as inferior. According to a study by Akpakpan, 2019 the result showed that because of early childhood education, children are early exposed to modern technology and this is the reason they adopt bad tendencies associated with the technology like cultism, kidnapping, prostitution, etc. Based on these divided opinions, we choose to investigate the position of early childhood education in primary school in Abak local government area. This is the height of the problem which this study attempts to analyse if it will give rise to quality outcomes.

Objective of the Study

The broad objective of this study is to examine the influence of early childhood education on academic performance of pupils in primary schools and specifically the study sought to:

i) determine differences in pupils' performance in Mathematics based on Early Childhood Education.

ii) determine differences in pupils' performance in English Studies based on Early Childhood Education.

iii) determine differences in pupils' performance in Social Studies based on Early Childhood Education.

Research Questions

i. How does pupils' performance in Mathematics differences based on Early Childhood Education?

ii. How does pupils' performance in English Studies differences based on Early Childhood Education?

iii. How does pupils' performance in Social Studies differences based on Early Childhood Education?

Research Hypotheses

The following hypotheses were formulated to guide the study:

1. **H_0**: There is no significance difference in pupils' performance in Mathematics based on Early Childhood Education.

2. **H_0**: There is no significance difference in pupils' performance in English Studies based on Early Childhood Education.

3. **H_0:** There is no significance difference in pupils' performance in Social Studies based on Early Childhood Education.

Literature Review and Theoretical Framework

This section discusses issues on theoretical framework. It also focuses on empirical framework which considers review of literature within Nigeria and outside Nigeria.

Theoretical Framework

Jean Piaget Theory of Early Childhood Education (Piaget, 1970)

The foundations laid by Froebel were expanded on by many theorists in the following decades, including Swiss-born educator Jean Paget. In the early 19th century, Piaget began researching the reasons behind incorrect answers children were giving to standardized IQ tests. He concluded that the traditional idea that children were "empty vessels to be filled with knowledge" was incorrect, and instead believed them to be "active builders of knowledge – little scientists who construct their own theories of the world."

Piaget developed a cognitive childhood development theory, which is divided into four crucial stages: Sensorimotor Stage (0-2 years), in which a child learns primarily through their senses; Preoperational Stage (2-6), when a child learns to use words and symbols like numbers; Concrete Operations (6-11), when they understand how to perform mental tasks, like mathematics; Formal Operations (11-adult), when children learn complex and abstract reasoning. Throughout these stages, Piaget argued that a teacher should serve as a guide rather than an instructor, encouraging learners to make mistakes and ask questions to aid learning and growth**.**

Maturation Theory of Early Childhood Education (Arnold Gessell, 1905**)**

The Maturation's Theory was advanced by the work of Arnold Gessell. Maturationists believe that development is a biological process that occurs automatically in predictable, sequential stages over time (Hunt, 1969). This perspective leads many educators and families to assume that young children will acquire knowledge naturally and automatically as they grow physically and become older, provided that they are healthy. Similarly, school readiness, according to maturationists, is a state at which all healthy young children arrive at same time when they perform tasks such as reciting the alphabet, identification and counting of numbers. These tasks are required for learning more complex tasks such as reading and arithmetic. Although development and school readiness occur naturally and automatically, maturationists believe that the best practices are for parents to

teach young children to recite the alphabet and count while being patient and waiting for children to become ready for kindergarten. If a child is developmentally unready for school, maturationists might suggest referrals to transitional kindergartens, retention, or holding children out of school for an additional year. These practices are sometimes used by schools, educators, and parents when a young child's developments lag behind his peers. The young child's underperformance is interpreted as the child's needs more time to acquire the knowledge and skills needed to perform at this level with his peers. Notably, not every child of the same age will arrive at the expected level of development at the same age, due to either individual difference or inheritance influence; this plays a role in a child's comprehension and attainment of academic excellent at this level when the foundation should be laid firmly.

Empirical Literature

Several empirical studies had been conducted locally and at the international level to reveal influence of early childhood education on academic achievement of pupils in primary schools now and how it's subsequently enhanced education in the future. Some of the studies include:

Olaleye and Omotayo (2020) investigated how quality of education in higher schools is influenced by early childhood education. The study collected data using structured questionnaire administered by researchers on teachers, and head teachers of (12) twelve private nursery schools with a sample of 120 pupils. Data obtained were on quality learning outcome, learning activities, teaching staff, environment for teaching and learning. Descriptive statistics was used to analyse results which revealed that: quality of learning activities was on the average to pupils who had early childhood education (ECE). Adequate provision of facilities and learning environment were conducive to both pupils and teachers, which makes learning effective. The study focused on Basic Science and Technology, English Studies and Mathematics in primary school curriculum to measure the academic achievement of pupils which will likely reveal the quality of the pupils.

Osakwe (2019) examined the impact of Early Childhood experience on academic performance of pupils. Scores obtained were pupil's continuous assessment and results of thirds term examination. Result revealed from the null hypotheses, one, two and three, which states that there was significant difference in cognitive activity, social and motor skills of pupils (calculated t-values values were 2:05, 2:66 and 2:49 respectively were greater than critical value of 1:96). This means there was significant difference. Furthermore, the constructed teacher – made validated test by professional teacher in Mathematics, English Studies and Basic Science and Technology and use of check list inventory to assess social and moral behaviour instead of continuous assessment that could be influenced by individuals. Questionnaire was administered with a research assistant (class – teacher). In determining the influence of early childhood education on the pupil's performance, the study used class activities with item obtained from primary school syllabus. The result of the study revealed that pupils who were poor reader in the early years of school were assessed by their teachers as more aggressive, good social skills in kindergarten and first grade were good readers in later years.

Babalola(2017)also conducted a study which focused on the role of parents in Early Childhood Education in the south western (Lagos) State of Nigeria. The study was concerned with variables that early childhood education could have on children performance on other level of education. The study revealed that early childhood education had affected children performance in other level of education positively.

Eva (2020) carried out a study to determine whether early childhood education curriculum made a difference in primary school performance in the Caribbean Island of Trinidad. The study adopted a focused sample, cross-sectional design to explore the types of preschool experience available. This was denoted by types of early childhood education activities which equated broadly to curriculum approaches and whether variation in preschool experience affected core curriculum performance.

Findings showed that a large majority of the sampled children had attended early childhood education and that most of the early childhood education experience were traditional and teacher centred. Neither child centred nor teacher centred early childhood education activities affected academic performance in the core subjects during the primary school years or at the end of their primary school.

Udo and Ntoiden (2015) examined sustainable developmental role of secondary education in Akwa Ibom State. The Paper objectively examined the state of secondary education in Akwa Ibom State, assesses the contents of secondary education programmes, contributions of secondary education to manpower development mostly as it relates to early childhood education, problems of secondary education and ways secondary education could be improved and how it can also improve early childhood education. The paper is based on an analysis of data collected from selected secondary schools in the 3 senatorial districts of the state found out that despite efforts by government to improve secondary education through its funding, secondary education has not been able to achieve completely its developmental roles. Based on the above findings, the study suggested that government should continue to fund secondary education properly and monitor secondary education and create enabling environment to ensure better performance of secondary education in Akwa Ibom state that will enhance sustainable development.

Aldemir & Sezer, (2021) in their study argue that it is not clear whether typical early childhood education programmes improve children's cognitive and academic outcomes. The study found out that early education increases children's academic skills and possibly misbehaviour, but is limited because most experimental studies focus on model programs serving small non-representative samples, whereas larger and more representative studies have typically not adequately addressed the selection biases that may pervade non-experimental designs.

Bukaliya & Mubika (2016) in a study to investigate the effect of early childhood education on academic performance in primary school found out that pupils who received cognitive early education in kindergarten learned better and applied more effectively a range of new academic knowledge in the two years that immediately followed the intervention than did comparable children who did not receive cognitive early education.

Research Methodology

This section discusses the method used in this study. It focuses on the research area and design, sample population, target population and analytical technique. It also discusses data collection procedures for data analysis.

Research design

The research design for this study was descriptive survey type, designed to examine how early childhood education has influenced academic performance of primary school pupils. The design employed survey method. This method was preferred because it is systematic in data collection and description of the result. The method further allowed the researcher to investigate relationship between the two variables, early childhood education and academic performance of pupils in primary schools. The reason for adopting this method is that it will make the measurement more reliable and validin its clear prediction of cause and effect.

Research Area

The research area in this study is Abak local government area of Akwal bom State. Abak local government is bounded by Essien Udim, Oruk Anam, Etim Ekpo and Uyo local government areas. Abak Lies on the South West of Akwa Ibom State and bounded in the North by Ikono Local Government Area, North West by Essien Udim Government Area. West by Etlm

Ekpo and Ukanafun Local Government Areas. South by Oruk Anam and in the East by Uyo Local Government Area. Abak is one of the parent local government areas in Akwa Ibom State (created on September 1987 from Cross River State). It was later sub divided, according to Udoka, (2021), into other Local Governments like Oruk Anam, Etim Ekpo, Ukanafun and Ika Local Government Areas.

Population and the Sample

The population for the study comprised all primary six (6) pupils. There are 2127 primary 6 pupils in Abak LGA as at the time of this study. The Schools also registered for the First School Leaving Certificate conducted by Federal Ministry of Education for pupils in Nigeria.

Sampling and Sampling Technique

Simple random sampling technique was used to select the sample size of 210 respondents. This procedure guaranteed equal selection of the elements in the population. A list of primary schools was obtained from Local Education Authority office while the schools and the subjects were selected by the use of survey method.

Instrumentation

Questionnaire was designed for both pupils and staff of selected schools in Abak Local Government area. In the teachers' questionnaire there were two sections-the personal data section and the section that seek information on the performance of male and female pupils in mathematics, English studies, and social studies during First School Leaving Certificate Examinations. They were also asked to give information on the problems they encountered during teaching the subjects and what could be done to enhance better performance in their schools during this examination.

The questionnaire was presented in a point scaling format of:

Strongly Agree (SA)	-	3 points
Strongly Disagree (SD)	-	2 Points
Undecided (UD)	-	1 Point

Research Procedure

All the selected schools were administered questionnaire on the permission of the selected school heads. After due clarification, copies of the questionnaire were distributed to the respondents for completion. The completed copies were collected the same day to avoid loss or misplacement. The researcher also sought permission from Local Education Authority (LEA) to access the LEA database. The nature and sources of data collected from LEA comprised of examination results for FSLC candidates for the years 2015 to 2021. The researcher also gathered information from the pupils and teachers of the selected schools.

Method of Data Analysis

After data collection, the researcher cross-examined the data to ascertain accuracy, completeness and uniformity. The data was then analyzed and interpreted to provide meaningful and final results. Since there are two variables under the study and the aim of the research was to determine the extent to which early childhood education influences academic performance in primary school, descriptive statistics were used to analyze the data. The researcher presented the data in frequency and percentage tables. Significance test was also carried out.

Data Analysis of Result

This section deals with the results of statistical analysis of data collected for the study.

Testing of Hypotheses

In this study we decided to use these Hypotheses to test and analyse corresponding research questions as illustrated on the tables below and the result of hypotheses testing is as follows;

Hypothesis 1: There is no significant difference in academic achievement scores in mathematics between early childhood education and non-early childhood education primary school pupils. To test the Mean and Hypothesis Early Childhood Education (independent variable) influence on academic achievement scores in Mathematics (dependent variable) of ECE and NECE pupils. The results are shown below thus:

Table 4.1: Summary of „t"-test Analysis in Mathematics of ECE and N-ECE Pupils.

Variable	N	Mean	SD	CAL(t)	Crit (t)
ECE	110	17.53	4.34		
				1.984	1.69
NECE	100	16.60	5.40		
TOTAL	210				

Table 4.1 revealed that the calculated t- value (1.98) is greater than the critical value of t (1.69) at 0.05 level of significance. Therefore because of this the null hypothesis which stated that there is no significance difference in pupils' performance in Mathematics based on Early Childhood Education is rejected. This means there is significant difference in pupils' performance in Mathematics based on ECE. The results also revealed that there is a significant difference existing in the calculated mean of Academic Achievement scores in Mathematics of ECE and NECE primary schools' pupil in which ECE pupils made 17.53 and NECE made 16.60 mean scores respectively (—t‖ =1.984, P=0.048<0.05, df 438).

Hypothesis 2: There is no significant difference in academic achievement scores in English Studies between ECE and NECE primary school pupils.

Table 4.2: t"-test Statistical analysis in English Studies of ECE and NECE primary school pupils

Variable	N	Mean	SD	CAL(t)	Crit (t)
ECE	110	17.53	4.74		
				3.78	1.69
NECE	100	15.66	5.90		
TOTAL	210				

Table 4.2 revealed that the calculated t- value (3.87) is greater than the critical value of t (1.69) at 0.05 level of significance. Therefore because of this the null hypothesis which stated that there is no significance difference in pupils' performance in English Studies based on Early Childhood Education is rejected. This means there is significant difference in pupils' performance in English Studies based on ECE. Furthermore, the results showed that there is a significant difference existing between academic achievement scores in English Studies between ECE and NECE pupils in primary schools. This is as shown in the calculated mean of academic achievement scores in English Studies which are 17.57 for ECE and 15.66 for NECE pupils.

Hypothesis 3: There is no significant difference in academic achievement scores in Social Studies of ECE and NECE primary school pupils.

Table 4.3: Summary of „t"-test Analysis in Social Studies of ECE and N-ECE Pupils.

Variable	N	Mean	SD	CAL(t)	Crit (t)
ECE	110	34.55	4.20		
				4.10	1.69
NECE	100	33.35	23.29		
TOTAL	210				

Table 4.3 revealed that the calculated t- value (4.10) is greater than the critical value of t (1.69) at 0.05 level of significance. Therefore because of this the null hypothesis which stated that there is no significance difference in pupils' performance in Social Studies based on Early Childhood Education is rejected. This means that there is significant difference in pupils' performance in Social Studies based on ECE. The result also revealed that there is a significant difference existing between academic achievement scores in Social Studies between ECE and NECE pupils in primary schools. This is as shown in the calculated mean of academic achievement scores in Social Studies which are 34.55 for ECE and 33.34 for NECE pupils.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This section focuses on summary of the study, conclusion drawn based on the results obtained from the investigation carried out, and recommendations.

Summary

This study was carried out to examine the effect of Early Childhood Education on Academic Achievement Scores in Mathematics, English studies and Social Studies of Primary School Pupils in Abak Local Government Area of Akwa Ibom State. Research objectives, Research questions and Null hypotheses of the study were formulated to guide the research and scope within which research was carried out. The study established statistically significant difference between Early Childhood Education and academic achievement scores in Mathematics, English studies and Social Studies.

Conclusion

Based on the research findings of the study a line of demarcation has been drawn between pupils who had attended ECE experience and those who did not as illustrated in the results above. Early Childhood Education experience enhanced academic achievement scores in Mathematics, English studies, and Social Studies of ECE and NECE pupils which enhance intelligent Quotient for subsequent academic pursuits. The study also revealed, statistically, significant difference among ECE pupils who exhibited acceptable social skills than their NECE counterparts. Earlier exposure to ECE Experience is likely to be a contributing factor to exhibition of confidence without much fear among play mates and is also attributed to affection, sympathetic attitude of teachers, adoption of co-operative play and associative play among peers are responsible for social interaction. Conclusively pupils taught at an early age usually benefit in various ways, which includes social skills, less or no need for special education instruction during subsequent school years, with better grades and enhance attention spans, of young children who experience pre-school programmes usually graduate from high school, attend college and have fewer behavioural problems and do not get involved in crimes in their adolescent and young adult age.

Recommendations

In view of the findings and conclusion of this study the following recommendations were made to enhance the provision of quality Early Childhood Education:

1. Every child should be given opportunity to experience Early Childhood Education which is in line, with Universal Declaration on Human Rights and the UN Convention on the rights of the child.

2. Government should ensure that services provided by teachers are incompliance with curriculum in core subjects.

3. Parents and stakeholders should promote ECE by providing facilities and instructional materials infrastructure that would offer individual access to quality ECE experience that will ensure Education for All (EFA) for the benefits of the populace.

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