Assessment of Instructional Materials and Pedagogies in The Implementation of Early Childhood Education Curriculum in Pre-Primary in Zamfara State

ISSN: 3027-0618

¹Sani Abubakar SADIQ & ²Halilu RABIU

Corresponding author: sanisadeeq@gmail.com

¹Department of Curriculum/Educational Technology, Federal University of Education, Kontagora

Niger State, Nigeria

²Department of Education, Zamfara College of Arts and Science, Gusau, Zamfara State Nigeria

DOI: https://doi.org/10.5281/zenodo.16149545

Abstract

This study assessed the Instructional materials and Teaching Pedagogies on implementation of ECE curriculum in public pre-primary schools in Zamfara State. Two specific objectives guided the study among which is to: examine the adequacy of instructional materials for implementing the ECE curriculum in public pre-primary schools in Zamfara State, Nigeria. Descriptive survey design was adopted with a population of 2,545 comprising 457 headteachers, 2,033 ECE teachers and 55 quality assurance officers. The sample size for the study was 333 respondents, multi-stage sampling technique was used. Data were collected using a structured questionnaire. Data collected were analysed using mean and standard deviation to answer the research questions while Kruskal-Wallis H test was used to test hypotheses at a 0.05 level of significance. The findings revealed that (88%) of the respondents agreed that instructional materials were not adequate for the implementation of the ECE curriculum in public per-primary schools in Zamfara State. The study concluded that, implementation of ECE curriculum was generally low and most public pre-primary schools lack instructional materials. It was therefore recommended that; Stakeholders should ensure that ECE centres are provided with adequate and qualitative instructional materials that would support science and mathematical learning such as manipulative, toys, seashells, balance scales, attributes blocks, coloured beads and colours.

Keywords: Instructional materials, Teaching Pedagogies, Implementation, ECE Curriculum

Introduction

It is acknowledged that education is the key to national development and there is a need to maintain every level of education especially the pre-primary stage. This is because the pre-primary stage is the bedrock upon which all other educational levels are built, such as primary, secondary and tertiary. Once a child misses that early stage of education, it is usually difficult for the learner to get back to the basics. Pre-primary education is a common practice in most societies; they make provision for early childhood education programs of various types for children below the official school age (usually 6 years) mainly to prepare them for the rigours of primary education and beyond (Obiweluozor, 2015).

Obiweluozor (2015) added that, early childhood education is targeted at developing the cognitive, affective and psychomotor skills needed for a smooth transition from the linkage classes to the primary school level. When children are exposed to quality early childhood education, they develop superior communication skills, necessary physical ability and sociality needed in adult life. Most importantly, the acquisition of the skills and needed physical ability required later in life is achieved through a well-implemented quality early childhood education (Salami, 2016). The 1990 World Declaration of Education For All (EFA) at Jomtien, Thailand conceived Early Childhood Care Development and Education (ECE) as a fundamental right for every child throughout the world. It recognized that learning begins at birth and Nigeria as a participant at that conference was influenced to enforce ECE. In this regard, it was not surprising that ECE became a part of Nigeria's Universal Basic Education programme that was launched in 1999. Thus, the Universal Basic Education (UBE) Act of 2004 and the National Policy on Education (NPE) of 2004 duly recognized ECE as a part of the Nigerian education system. Despite the well-articulated goals and objectives of early childhood education as specified in the NPE, the actualization of these goals does not seem successful. Not with standing, the UNICEF's guidelines on the operation of early childhood education programmes in Nigeria and other developing countries, the goals of which are yet to be actualized. For any educational programme such as early childhood education to achieve its goals, some factors would have been adequately addressed. Such factors include qualified teachers, appropriate funding, provision of infrastructural facilities, adequate supervision, among others and presently, the level of provision of these requirements seems uncertain (Amakievi, 2015).

The effect of poor instructional materials and use of inappropriate teaching methods, have resulted in degeneration and declining in educational standards from primary, secondary and tertiary level and even the obvious low academic performance of students in the national examinations such as West African Examinations Council (WAEC), National Examinations Council (NECO) and Joint Admission and Matriculation Board (JAMB). Effective implementation of the early childhood education curriculum is therefore, a necessary intervention for the success of primary education and the entire education sector in Nigeria. This study specifically attempts to investigate the level of implementation of the ECE curriculum in terms of provision of instructional materials and use of appropriate teaching methods in public pre-primary schools. It is timely and useful in providing the needed empirical data that will assist and address the teaming challenges bedevilling early childhood education as a field of study with a view of providing enabling environment for effective learning.

Curriculum is a planned programme of learning opportunities aimed at achieving broad goals and related objectives adding that it could be viewed from different dimensions (Yusuf, 2012). She opined that, firstly, it is an arrangement of materials of instruction, extending over a considerable period of time and planned for a specific group of students/pupils. Secondly, it is the interchange between students, faculty and subject matter. Lastly, it is the subject matter taught to students;- a sequence of experiences set up by the school to discipline students in a group; a means to facilitate the growth of students and the planned engagement outcomes. She further opined that curriculum is the art and science of what is planned for and done in and outside the school for the purpose of effective teaching and learning. From the above definitions, one can see curriculum as it considered being those things we wish our children to learn that will make their Ilife useful to themselves and the society at large under the guidance of the teachers.

The curriculum experiences are to be developed for early childhood education in these core areas such as health, nutrition and stimulation. Early childhood curriculum should be defined to harmonize home and school activities, bringing both parents and teachers as partners and major operators of the home/school curriculum (Janguza, 2013). Early childhood is a period roughly covering the first five years of life, prior to entry into primary school. It is a period of rapid physical growth, including the development of the brain almost to its full adult size and critical period for the development of cognitive functions. The key factors for child growth and development in these formative years are adequate care, health, nutrition and stimulation (Situ, Utim & Aliyu, 2009). Early

childhood period is a period in life when children particularly need high quality personal care and learning experiences. Ekanem, Essien and Ekenem (2011) described early childhood period as a time frame covering the first five years of life prior to entering primary school.

The ECE as the care, protection, stimulation and learning promoted in children from age 0 – 4 years in a crèche or nursery. While Kindergarten Education is the One-Year Education given to children aged 5 prior to their entering primary school (FRN, 2013). Janguza (2013) opined that early childhood education is the type of education given to the child between the ages of 2-5 years. At this period, the child is mainly able to form mental pictures of things and use symbols in an attempt to communicate. A child at this stage demand to be matured in a self and secure environment which allows them to become healthy alert and able to learn. This stage entails taken into cognizance the needs interest and aspiration of the child as an individual.

Learning has been found to be optimally enhanced by adequate and appropriate selection and use of instructional materials by the teacher and the learner as well (Azikiwe, 2019). For successful implementation of any curriculum, there is need for the acquisition and provision of adequate and relevant instructional and learning materials that are suitable and appropriate to the age and interest of the learners. Adesola, Olorade and Aramolate (2022) defined instructional materials as any animate materials or inanimate objects as well as human and non-human resources that a teacher may use in teaching and learning situations to facilitate desired learning outcomes. This is because instructional and learning materials bring life to learning by stimulating students to learn. Good teaching materials in the classroom have the potential to help the teacher explain new concepts clearly to students (Tuimur & Chemwei, 2015). These materials include: Block material, Library materials, Writing materials, Creative arts materials, Manipulative/Table Toys, Sand/Water Materials, Natural science materials, Computer materials, Music materials, Cozy area, etc. Pupils learn what they are taught and how they are taught. In any teaching-learning process, the teacher should be concerned with how best to help pupils learn effectively, and to expect changes in the behaviours of the learners. Indeed, children particularly the younger ones learn when they are actively involved in the learning process. The teacher should ensure their active involvement in the teaching-learning process through the appropriate choice of teaching methods.

Methods refers to that set of instructional techniques and strategies which enable teaching and learning to take place and provide opportunities for the acquisition of knowledge, skills and attitudes

dispositions within a particular social and material context (Anders, 2015). Teaching methods should be suitable and appropriate to the age, ability of the learners. The use of a variety of instructional methods is necessary for effective and efficient implementation of curriculum (Yusuf, 2012). The following are some of the methods by According to Yanware (2017), there are some instructional methods recommended for use in the process of handling ECCE classes, such instructional methods includes (a) Guided Discovery Methods, in this method, children are allowed to find out new knowledge through their efforts under the guidance of their teacher. For instance, pupils could be asked to go out within the school premises to collect different items or things around, (b) Story Telling Method, by this method, information, or knowledge is imparted fully or partially through the medium of the verbally narrated story or parable. It has been described as an illustration method that is the method of using story to illustrate a point, (c) Demonstration Method: this method simply involves displaying something. Teachers can also plan a manipulation of equipment and materials for the pupil to observe a scientific phenomenon. In this method, a skill, experience or activity is shown to the children in a class. The demonstrator can be a teacher, a pupil, teacher and pupils, or a resource person invited from the community. Moreover, in the demonstration method, the teacher may use actual objects to explain concepts or figures, (d) Recitation Method: in this method, the children are being actively involved by saying aloud a piece of poetry, songs or literature which they have been taught. The teachers should note that when employing this method, a short and a very interesting poem or song can be used. For instance, in pre-reading activities, letter and word-picture matching can be used. Thus, when teaching A for Ant/Apple, B for Book, C for Cup, D for Dog and E for Egg, the teacher also, can illustrate by drawing, or placing the picture on the chalkboard or using cardboard paper. With this method, young children will be encouraged to learn how to read and memorize simple words with a short poem, (e) Play Way Method: this is a valuable method of teaching ECCE classes. Play is important to children at this stage of development; 'all work and no play makes Jack a dull boy'. Maria Montessori and Froebel were pioneers in introducing this method because of the natural value of play to the teaching and learning process.

This study is based on Montessori (1870-1952), her education theory is related to his study because it gave insight on early childhood care development and education and specifically, it stresses the kind of learning environment that is prepared to stimulate children for optimal development. This study also emphasizes the type of facilities and equipment needed in the centres for the free movement

of children. This study also anchored with The CIPPC model which is a modified form of Stufflebeams (1971). This model according to Achebe (2004) is used to evaluate a programme about the context in which it operates the input of the programme process through which students go and the product of the programme as well as the problems militating against the implementation of the programme.

Objectives of the Study

The study was being guided by the following specific objectives, to:

- examine the adequacy of instructional materials for implementing the ECE curriculum in public pre-primary schools in Zamfara State, Nigeria; and
- 2. find out the teaching pedagogies employed by teachers in implementing the ECE curriculum in public pre-primary schools in Zamfara State, Nigeria.

Research Questions

The following research questions were raised and guided the study:

- 1. How adequate are the provisions of instructional materials in the ECE centres in public preprimary schools in Zamfara State?
- 2. What types of teaching pedagogies are being used by teachers in implementing the ECE curriculum in public pre-primary schools in Zamfara State?

Hypotheses

The following null hypotheses were formulated and tested to guide the study:

HO1: There is no significant difference in the opinion of the respondents (Headteachers, ECE Teachers and Quality Assurance) in the adequacy of instructional materials for the implementation of ECE curriculum in public pre-primary schools in Zamfara State, Nigeria;

HO2: There is no significant difference in the opinion of the respondents (Headteachers, ECE Teachers and Quality Assurance) in the pedagogies used by ECE teachers in implementing the ECE curriculum in public pre- primary schools in Zamfara State, Nigeria;

Methodology

The study adopted descriptive survey research design following the recommendation of Dada (2016) who stated that descriptive survey research is a detailed study, which strives to explain or determine and report the way things are. The choice of descriptive survey design for this research was based on the fact that the entire population cannot be covered, and so a sampling procedure was done. The population of this study comprised of 2,033 ECE teachers teaching in four hundred and fifty-seven

(457) public pre-primary schools, 457 Headteachers and 55 LGEAs quality assurance officers, all in fourteen 14 LGEAs of the three senatorial districts in Zamfara State, giving a total of 2,545 (ZSUBEB/EMIS, 2022).

A sample size of 333 respondents participated in the study. This was based on the sample size selection Table of Research Advisor (2006), which suggests that for a population of 2,500 and above, a sample size of 333 is sufficient for generalization at a 95% confidential level and a 5% margin of error. Multistage sampling technique was used as recommended by Alvi (2016) who explained that this type of sampling technique can be used when the elements of the population are spread over a wide geographical region. At the first stage, a purposive sampling technique was used to select two LGEAs from each senatorial district; which six LGEAs namely, Gusau, Tsafe, Kaura-Namoda, Zurmi, Anka and Talata-Mafara selected for this study. The same technique was used to select 79 public pre-primary schools from the selected LGAs. According to Black (2010), purposive sampling can be used when the researcher relies on his or her judgment in choosing members of the population to participate in the study. It is used to obtain a representative sample by using sound judgment, which will result in the collection of reliable data, saving time and money.

At the second stage the researcher used the simple random sampling technique (by balloting) to select 60 Headteachers, 265teachers that are in charge of early childhood classes from each school and 8quality assurance officers. Which gave 333 respondents that form the sample size of the study. This technique according to Emmanuel (2013) involve

the selection of a unit or element for inclusion in a sample by criteria alone, and no one is deliberately omitted. At the third stage, a proportionate sampling procedure was adopted to composed the sample size of 333 among the elements of the population (ECE teachers, Headteachers and quality assurance officials) which Sulaiman (2015), explained that proportionate sampling is used when the elements of the populations vary considerably in size because it assures that those in larger sizes have the same probability of getting into the sample as those in the smaller sizes.

A questionnaire titled "Assessment of the Implementation of Early Childhood Care Education and Development Curriculum" was developed by the researcher. The questionnaire was made in three parts- A, B and C, Part A obtained the respondents' general information while Part B consisted of 10 items statements related to provision of instructional materials and Part C consisted of 10 items statements related methods of teaching using four points modified Likert scale of Strongly Agreed

(SA), Agreed (A), Disagreed (D) and Strongly Disagreed (SD) in line with the Nworgu (2002) with the values of 4, 3, 2, and 1 respectively. The questionnaire was validated by the experts in the Department of Educational Foundations and Curriculum, Faculty of Education Ahmadu Bello University, Zaria, and after the pilot study was conducted, the data collected was statistically analysed for reliability coefficient using Cronbach Alpha and the reliability coefficient of 0.78 was obtained.

The data collected was analysed using both descriptive and inferential statistics. Mean and standard deviation were used analysed the research questions, while hypotheses were tested using nonparametric statistics of Kruskal-Wallis H test which deals with the three independent sample groups in the study. This test is used to determine if there are statistically significance differences among three or more groups of independent variable on continuous or ordinal dependent variable by researcher (Kruskal and Wallis, 1952).

Results

Research Question 1: How adequate are the provisions of instructional materials in the ECE centres in public pre-primary schools in Zamfara State?

Table 1: Responses of the respondents on the Provision of Instructional Materials in ECE centres in public pre-primary schools in Zamfara State

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S/N ITEMS	SA	A	D	SD	M	STD
11. Printed instructional materials such as	s 00	20	174	137	1.65	.59
textbooks, journals, magazines, charts	,					
newspaper <mark>s, drawings, phot</mark> ographs	,					
graphs, et <mark>c. are adequatel</mark> y available in	1					
Public pre-primary primary Schools in	1					
Zamfara State.		-				
12. Audio-visual materials (motion pictures	, 01	39	129	162	1.63	.70
television, computer and video) are	2					
adequately provided for the implementation	1					
of the ECE curriculum in Public Pre	-					
primary in Zamfara State.						
13. Instructional materials provided in public	2 06	23	154	148	1.66	.69
pre-primary schools in Zamfara State are of	f					
high quality.						
14. Visual materials such as photo, slide,	, 01	25	140	165	1.58	.64
filmstrip and overhead projectors are	;					

15.	adequately provided in public pre-primary schools in Zamfara State. Instructional materials to support mathematical learning such as bottle tops, seashells, balance scales, attribute blocks, coloured bread are sufficiently provided in public pre-primary schools in Zamfara	00	18	146	167	1.55	.60
	State.						
16.	Pre-primary school provides ECE centres with cardboard papers to prepare/improvise instructional teaching materials.	01	50	94	186	1.59	.75
17.	ECE teachers improvised instructional materials if they are not provided in public pre-Primary schools in Zamfara State.	12	18	198	103	1.81	.69
18.	Electronic instructional materials such as television sets, projectors, computers etc. systems are sufficiently provided in public	01	35	174	121	1.75	.65
10	pre-primary schools in Zamfara state.	0.1	40	101	100	1 (1	7.1
19.	Art materials, clay, drawing materials (crayons, pencils), papers, wet sand and writing materials are adequately provided in pre-primary schools.	01	49	101	180	1.61	.74
20.		26	54	129	122	1.95	.92
	Cumulative Mean/STD					1.68	.70
Decisi	on mean = 2.50						
C	E'-111 (2022)						

Source: Field work, (2022)

Table 1 shows the result of the opinion of the respondents on the provision of instructional materials in public pre-primary schools in Zamfara State. The finding presented indicated that most of the respondents are not in agreement with the majority of the items and this revealed that instructional materials were not adequately provided in ECE centres of public pre-primary schools for the implementation of ECE curriculum in Zamfara State.

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Research Question 2: What types of teaching methods are being used by teachers in implementing the ECE curriculum in public pre-primary schools in Zamfara State?

Table 2: Responses of the respondents on the Pedagogies used by teachers in implementing the ECE curriculum in public pre-primary schools in Zamfara State

S/N	ITEMS	SA	A	D	SD	M	STD
21.	ECE teachers are using instructional	33	23	139	136	1.85	.98
	methods that are appropriate to the age and						
	maturity of the learners of public pre-						
	primary schools.						
22.	ECE teachers are always interested in using	207	112	09	03	2.45	1.07
	new methods and strategies of teaching						
	during the lesson.						
23.	ECE teachers used child-centred methods	71	23	133	104	2.37	1.70
	in the implementation of the ECE						
	curriculum in public pre-primary schools in						
	Zamfara State.	0.0	70	0.5	0.0		=-
24.	• •	83	79	87	82	2.56	.73
	Teachers in developing children's social,						
25	emotional and cognitive development.	60	26	101	112	0.01	0.1
25.	The Discovery method is predominantly	60	38	121	112	2.21	.81
	used by ECE Teachers to help learners to						
	discover new facts and acquire necessary						
26	skills for problem-solving.	25	92	124	100	1 45	1.40
26.	The Field trip is being used by ECE	25	82	124	100	1.45	1.40
	Teachers to enables learners to visit places						
	like zoo, museum, post office, garden and tourist attraction centres.						
27.	Governments and Non-Governmental	25	65	125	114	1.98	.96
21.	organizations are from time to time	23	03	123	114	1.70	.50
	organizing workshops for teachers on new		200				
	instructional methods of teaching ECE						
	pupils in Zamfara State.						
28.	Dramatization method is being used by	46	59	133	93	2.03	92
_0.	ECE Teachers to teach pupils on how to	10		133	73	2.03	• / =
	perform different roles.						
29.	Storytelling used by ECE teachers arouses	23	48	143	117	1.43	.89
	the interest and curiosity of pre-primary	_5		- 10		2.10	,
	school children and makes them attentive						
	in the classroom.						

30. ECE teachers are using the discovery 14 59 115 143 1.64 .97 method of teaching to provide the learner with necessary opportunities to discover new facts, techniques for solving problems.

Cumulative Mean/STD 1.99 1.04

Decision mean = 2.50

Source: Field work, (2022)

The result presented above in Table 2 shows the responses of the respondents on the instructional methods used by ECE teachers for the implementation of the ECE curriculum in Zamfara State. The result presented indicated that most of respondents did not agree with the items. This shows that the majority of ECE teachers are using inappropriate teaching methods for the implementation of the ECE curriculum in Zamfara State.

Hypothesis one: There is no significant difference in the opinion of the respondents (Headteachers, ECE Teachers and Quality Assurance) in the adequacy of instructional materials for the implementation of ECE curriculum in public pre-primary schools in Zamfara State, Nigeria.

Table 3: Kruskal-Wallis (H) test on the opinion of the respondents on the adequacy of instructional materials for implementing the ECE curriculum in public preprimary schools in Zamfara State, Nigeria

Respondents	N	Mean Rank	$H(X^2)$	Df	A	Sig.	Decision
Headteachers	60	179.50					
ECE Teachers	265	163.09	5.01	2	0.05	0.37	Retained
Quality Assurance	08	157.37	_				

Source: Field work, (2022)

The result of the Kruskal-Wallis (H) test in Table 3 above reveals that there was no significant difference among the opinion of the respondents on the adequacy of instructional materials for the implementation of the ECE curriculum in Public Pre-primary Schools in Zamfara State, Nigeria. Mean Rank of 179.50, 163.09 and 157.37 for the three groups of respondents was obtained, calculated H(X2) of 5.01 and p-value 0.37> α =0.05 level of significance was obtained, therefore, the null hypothesis was retained.

Hypothesis Two: There is no significant difference in the opinion of the respondents (Headteachers, ECE Teachers and Quality Assurance) in the methods used by ECE teachers in implementing the ECE curriculum in public pre-primary schools in Zamfara State, Nigeria.

Table 4: Kruskal-Wallis (H) test on the opinion of the respondents on the teaching methods employed by teachers in implementing the ECE curriculum in public pre-primary schools in Zamfara State, Nigeria

Respondents	N	Mean Rank	$H(\mathbf{X}^2)$	Df	A	Sig.	Decision
Headteachers	60	156.56					
ECE Teachers	265	167.97	2.89	2	0.05	0.47	Retained
Quality Assurance	08	171.85			1		

Source: Field work, (2022)

The result of the Kruskal-Wallis (H) test in Table 4 above reveals that there was no significant difference among the opinion of the respondents on the methods used by ECE teachers in implementing the ECE curriculum in Public Pre-primary schools in Zamfara State, Nigeria. Mean Rank of 156.56, 167.97 and 171.85 for the three groups of respondents was obtained, calculated H(X2) of 2.89 and p-value $0.47 > \alpha = 0.05$ level of significance was also obtained, therefore, the null hypothesis was retained.

Discussion of Findings

This section discussed the findings of the study, alongside the findings of other researchers, also the discussion is based on the variables contained in the study which were guided by the research questions and research hypotheses tested. The first finding revealed that there was no significant difference among the opinions of the respondents on the adequacy of instructional materials for the implementation of ECE curriculum in public pre-primary schools in Zamfara State, Nigeria. Based on descriptive analysis the study found that instructional materials were not adequate for the implementation of the ECE curriculum in public Per-primary schools in Zamfara State, Nigeria, This finding is in line with the outcome of a National Inventorisation Survey on ECC models, facilities and practices in Nigeria carried out by the Nigerian Educational Research and Development Council (NERDC) (2003) in conjunction with UNICEF which reported that there were inadequacies in learning environments/instructional/play materials, teaching personnel and rearing practices (Viatonu, Usman & Dagundur, 2011).

Chiriswa (2013) also reaffirmed the relevance of instructional materials and submitted that effective teaching and learning depends on the utilization of suitable adequate resources such as books, laboratories, library materials and a host of other visual and audio teaching aids which enhance good performance in the examination. In the same vein Oladipo (2014), asserted that instructional materials are important tools for enriching, visualizing, simplifying, transmitting and accelerating the teaching and learning processes.

The second finding further showed that no significant difference among the opinions of the respondents on the methods used by ECE teachers in implementing the ECE curriculum in Public Preprimary schools in Zamfara State, Nigeria. It showed that ECE teachers are not using appropriate methods of teaching for the implementation of the ECE curriculum in Public Pre-primary schools in Zamfara State, Nigeria. This was opposed the assertion made by Jacob (2012), that pupils do not like the school not because the work is too hard but for being boring! Moreover, they agreed that even though the play is quite a time consuming, still it should be used as a teaching method at the ECE level because it involves all of the child's senses of touching, hearing, seeing and at times counselling, all of which stimulate development.

Conclusion

Based on the results of the findings, the study concluded that implementation of the ECE curriculum was generally low as most public pre-primary schools lack instructional materials, audiovisual and other necessary support materials for teaching various areas in all the pre-primary schools are in short supply and some cases, virtually non-existent. Also pre-primary school teachers are not using appropriate instructional methods.

Recommendations

The following recommendations were made:

- 1. Stakeholders should ensure that ECE centres are provided with adequate and qualitative instructional materials that would support science and mathematical learning such as manipulative, toys, seashells, balance scales, attributes blocks, coloured beads and colours;
- 2. ECE teachers need to be conversant with the appropriate and innovative/modern teaching methods and strategies and as well employ them while teaching pre-primary pupils.

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