



ACADEMIC QUALIFICATION AND TEACHING SKILL IN CHILDHOOD EDUCATION: AN EXPLORATORY STUDY

Maimuna Ibrahim El-Yakub, Mahmoud Zubair Imam and Salisu Ahmad Sidi Ali
moonaelya@gmail.com,

Sa'adatu Rimi College of Education Kumbotso, PMB 3218 Kano-Nigeria

ABSTRACT

The exploratory study was carried out on 22 Early Childhood Education teachers in selected primary schools in the local government education authorities that previously received State Education Sector Project (SESP) intervention for the advancement of Early Childhood Education (ECE) in Kano State. The study covers level of sustainability of SESP intervention, exploring academic qualification of the teachers, extent of teachers' academic qualification influence on their teaching skills. The study comprises all nursery class teachers in the selected LGAs public primary schools from Garun Malam, Makoda, Minjibir, Takai and Ungogo that received initial SESP intervention in Kano State in 2011. The population is made of 22 nursery class teachers 2 from each of 11 primary schools. The population of the study was selected from the initial 11 schools in the 5 LGEAs supported by SESP. Purposive sampling using Slovin's Formula was used to confirm the samples which were all the 22 teachers; confidence level of 95% that the real value is within $\pm 5\%$ of the measured/observed rating value. Their ratings were compared using Fleiss' Kappa inter-rater reliability in order to ascertain (for 3 or more) the level of agreement among the raters. Using the classification scale, since Fleiss' Kappa (κ) = .064, this represent a good strength agreement. Therefore, as is known so far there was good agreement between the observers, with Kappa value of .064 and a 95% confidence interval (CI) between, 060 and .068. The research found that over 60% of the ECCE classes visited in 2011 are still in existence but only 18.18% of the other infrastructure provided by SESP remain. Noticeable changes in pupils' behavior including sharing, ability to read 3 letter words, identification and sorting of items by color and size exhibited.

KEYWORDS: Early Childhood Education; Academic Qualifications; Teaching Skills; Exploratory Study

INTRODUCTION

Early childhood education lays a solid foundation for future academic success, social development and emotional wellbeing. Effective teaching is crucial in this stage, as it significantly impacts children's cognitive, emotional and social growth. However, concerns have been raised about the quality of teaching in the early childhood education (ECE) settings. Identification of key factors of poor education outcomes include; high level household poverty, poor school infrastructure and instructional materials, a lack of qualified teachers, as well as weak governance and low accountability ESSPIN (2013c), in Kano State by education sector support in Nigeria (ESSPIN) has led to the setting up of state education sector project (SESP) in Kano State from 2007 to 2011 (Cameron & Ruddle, 2015).. This scenario of the state of education has become a major challenge for the overall educational advancement in the state, more especially in the area of teaching and learning at the pre-primary level of early childhood care education. For teaching quality at early childhood to success, qualified teachers that are academically fit to teach are necessary, for effective teaching of children.

Cambridge online Dictionary defines 'qualification' as an ability, characteristic or experience that makes one suitable for a particular job or activity; while, Kassema (2019) sees skill as the ability of carrying out a task with an expectation of a certain outcomes or results. Therefore, teachers' qualification is a particular skill or type of experience or knowledge someone possesses to make him or her suitable to teach Abe, (2019). Teachers' qualifications could, according to Singh, Allen, and Rowan, (2019) therefore; mean all the skills a teacher required to teach effectively. Such skills include formal education, experience, subject matter knowledge, pedagogy studies, duration of training, certificate/licensing and professional development. Teaching qualification is what equips one as a teacher with necessary skills required for teaching well in schools (Kim, Raza, & Seidman, 2019). Teacher qualifications according to Kennedy, (2004) include teachers' educational degrees and personal qualities such as knowledge, skills and expertise, beliefs, attitudes and values, credentials, and personal traits. In the early years education, therefore, a high quality early childhood education will relies on well-educated specialists or educators who benefit from strong foundational initial education and training and continuing professional development which supports and extends their work throughout their careers. Initial career specific qualifications and high quality continuing professional development for all educators according to Nutbrow, (2021) is vital if they are to have a freedom and capacity to be innovative and creative in meeting young children's individual and specific needs. El-Yakub, Suleiman, and Halilu, (2011) carried out assessment on the sustenance of SESP initial intervention in the five LGEAs that confirmed lack of it's sustainability with dilapidated classes or centres, inadequate teaching/learning facilities, lack of continue professional teachers' development. The present study, therefore, attempts to revalidate the 2011 research with specific interest on teacher qualification and its impact on teaching skill in SESP supported work carried out by the previous researchers on early childhood care and development (ECD) assessment in five LGEAs of Garun-Malam, Makoda, Minjibir, Takai and Ungogo in Kano State.

The exploratory study was carried out on 22 ECCE teachers in selected primary schools in the LGEAs that previously received SESP intervention for the advancement of early childhood education in Kano State. The study covers level of sustainability of SESP intervention, exploring academic qualification of the teachers, explores extent of teachers' academic qualification influence on their teaching skills.

Research Questions

1. Do State Education Sector Project (SESP) intervention sustained in the selected ECCE classes?
2. Do teachers in the selected schools have the required qualification to teach in ECCE classes?
3. Do the ECCE pupils display some form of competence?

MATERIAL AND METHOD

This research used exploratory research design as its major objective is to explore nursery class teachers' qualification impact on their teaching skill, as well as extent of sustainability of previous intervention for the teachers' professional advancement including level of their qualification. Data collection involved the use of Nursery Class Teaching Observation and Rating Scale (NUCTORS) to rate the teaching skill of the teachers in the five LGAs selected primary schools in Kano State.

As the population of the study are all the 22 teachers in the 11 ECCE classes in the selected 5 LGAs that have the initial SESP intervention nursery class teachers and observation rating scale (NUCTORS) designed by the researchers was used to rate the teaching skills of the teachers. The rating was under the following 5 scale of 1 poor, 2 below average, 3 average, 4 above average and 5 excellent for each of the skill recorded. NUCTORS was given to 3 experts to face and content validity. Its reliability was determined by giving to 2 guided research assistants who observed two ECCE class teachers in primary schools outside the areas of the study. Their ratings were compared using Fleiss' Kappa inter-rater reliability in order to ascertain the level of agreement among the raters. Using the classification scale, since Fleiss' Kappa (κ) = .064, this represent a good strength agreement. Therefore, as is known so far there was good agreement between the observers, with Kappa value of .064 and a 95% confidence interval (CI) between, 060 and .068.

Target Population

The study comprises all ECCE class teachers in the selected LGAs primary schools from Garun Malam, Makoda, Minjibir, Takai and Ungogo that received initial SESP intervention in Kano State. The population is made of 22 ECCE class teachers 2 from each of 11 primary schools.

Sample Size and Sampling Procedure

Sampling involves the process of selecting a portion of from the target population of the research. Purposive sampling was employed for this study since the whole of the nursery class teachers in the selected five LGEAs was used. To determine the sample size Slovin's formula for purposive sampling was applied as determinant of the sample size for the study. Slovin's Formula provides the sample size (n) using the known population size (N) and the acceptable error value (e). Fill the N and e values into the formula:

$$n = \frac{N}{1 + Ne^2}$$

The resulting value of n equals the sample size to be used.

Sample size is 22. This means 22 or measurements/observation ratings are needed to have a confidence level of 95% that the real value is within $\pm 5\%$ of the measured/observed rating value. Hence, all the 22 nursery class teachers were selected from the 11 selected primary schools that have the initial SESP intervention in the five LGEAs.

Method of Data Analysis

The mode of analysing the data collected is based on averages which include percentage to analyse the observation rating scale. The t-test of independent samples was used to further determine the applicability of the research questions of the study.

RESULT AND DATA ANALYSIS

This section deals with analysis of data. The research findings are also presented.

Table 1: Demographic Profile of the Nursery Class Teachers

Variables	Frequency	
	Male	Female
Gender		
	08 (36.36%)	14 (63.64%)
Age		
20-25	01 (5.55%)	05 (22.73%)
26-30	04 (18.18%)	04 (18.18%)
31-35	01 (5.55%)	04 (18.18%)
36-40	02 (9.09%)	01 (5.55%)
Educational Background		
Bachelor Degree	02 (9.09%)	00 (00.00%)
N.C.E/Diploma	03 (13.64%)	08 (36.36%)
GR II/SSCE	03 (13.64%)	06 (27.27%)
Teaching Experiences		
1 year	01 (4.55%)	02 (9.09%)
2 years	00 (00.00%)	02 (9.09%)
3 years	01 (4.55%)	01 (4.55%)
4 years	02 (9.09%)	01 (4.55%)
6 years & above	04 (18.18%)	08 (36.36%)

From the table above, as per gender 36.36% were male while 63.64% were female. This is in line with the other researches. Female teachers outnumber their male counterparts. UNESCO (2019) reported that women account for 94% of the ECCE teachers worldwide and 93.5%. In Kenya however, the male outnumber the female (Wanjinku, 2013)

On age 5.55% and 22.73% of the male and female teachers were within the age bracket of 20-25 years old. The percentage of the teachers within 26-30 age brackets were 18.18% for both male and female. 5.55% is for male while 18.18% is for female that fall within the age bracket of 31-35. The teachers' percentages that were within 36-40 age brackets were 9.09% for male and 5.55% for female. Cumulatively over 60% are between 25 and 44 years of age which agrees with the findings of ILO (2018) and UNICEF (2019).

The educational background strength of the teachers' percentage were 9.09% for male with bachelor degree while female is 00.00%, those teachers with N.C.E. percentage were 13.64% for male and 36.36% for female there were none with diploma certification. GR II and SSCE certificate holders' percentage were 13.64% and 27.27% for male and female respectively. Globally, majority of the ECCE teachers (55%) are found to have found to have post graduate qualifications (OECD, 2019); 26% hold Diploma and Certificates (UNESCO, 2019) while 19% hold secondary certificate (ILO, 2018).

Teaching experiences of the ECCE teachers were calculated as 1 year 4.55 male 9.09% female, 2 years 9.09% for female only, 3 years were 4.55% for male as well as female, those with 4 years working experience were 9.09% male and 4.55% female and for 6 years and above percentage fall within 18.18% and 36.36% for male and female respectively. This shows sign of sustainability in the areas of ECCE teachers are over 54% have been involved with this level of education for 6 years.

Research Question 1

Do state education sector project (SESP) intervention sustained in the selected primary schools nursery classes?

The reason for this research question is to find out extent of the sustainability of (SESP) intervention on capacity development of early childhood teachers in the selected LGEAs in Kano State. When the SESP was introduced, selected schools were provided with items. Furniture, teaching aids and numerous materials were provided. During the recent visits, these items are mostly not available anymore. Basic furniture in Makoda, Garun Malam and Takai were completely absent. Same could be said of the teaching aids as the dedicated classrooms were bereft of any posters that were initially supplied. In one of the schools in Garun Malam and all the schools in Takai, Ungogo and Minjibir, there were playing grounds with recreational items like swings, slides, see-saw, etc. As for teaching posters, schools in Minjibir and Ungogo have more of the posters and other teaching aids. This is similar to the findings of Wanjiku (2013) in Vihiga District of Kenya. That research found that resources are not maintained as they should mainly because there are no policy guidelines to that effect.

Picture of Nursery School Classes that Received Initial (SESP) Intervention



A Pictorial representation of some Nursery Classes with some labels and other require materials for an ECCE in the visited LGEAs that have initial SESP intervention. Only the few school that maintain some degree of prepared environment for teacher-child interaction in an early childhood centre.

The global challenge of maintain infrastructure in early childhood education (ECE) classrooms is a pressing issue, particularly in low-and middle-income countries. Many regions face significant funding gaps, leading to inadequate facilities that hinder the quality of education. For example, a lack of safe and stimulating environment in schools is common, with deteriorating classrooms and insufficient resources being the major concerns (UNESCO, 2021). In Africa and South Asia, poor infrastructure, such as overcrowded classrooms and limited sanitation, has a direct impact on children's learning and health outcomes (World Bank, 2020). Efforts to address these challenges, such as public-private partnerships and international aid, have shown promise, but substantial investment is still need to ensure equitable access to quality ECE facilities (OECD, 2019).

Research Question 2

Do teachers in the selected primary schools have the required qualification to teach in nursery classes?

The reason for this question was to investigate the extent of teaching skill possess by the nursery class teachers in the primary schools that have initial SESP intervention in the selected LGEAs in Kano State. This is in addition to the basic teaching qualifications as contained in Table 1 above, ECCE teachers are required to display some specialised skills.

Table II: Interpretation of the teaching skills ratings

VARIABLES	FREQUENCY		
	Poor	Below Average	Average
Using appropriate beginning	6 (4.65%)	8 (5.48%)	7 (4.79%)
Using explain skill	7 (5.43%)	10 (6.85%)	8 (5.48%)
Fluency of explaining	3 (2.33%)	7 (4.79%)	7 (4.79%)
Appropriate demonstration skill	7 (5.43%)	7 (4.79%)	8 (5.48%)
Realization of Objectives	8 (6.20%)	8 (5.48%)	8 (5.48%)
Simple / Order / Sequence / Probing Questioning	7 (5.43%)	8 (5.48%)	7 (4.79%)
Promoting cue / hint questioning	8 (6.20%)	8 (5.48%)	5 (3.42%)
Refocusing questioning	8 (6.20%)	8 (5.48%)	10(6.85%)
Redirected questioning	9 (6.98%)	6 (4.11%)	8 (5.48%)
Increasing critical awareness	5 (3.88%)	7 (4.79%)	9 (6.16%)
Standing position of the Teacher	7 (5.43%)	8 (5.48%)	3 (2.05%)
Facing towards the Students	8 (6.20%)	7 (4.79%)	6 (4.11%)
Legible Writing	6 (4.65%)	6 (4.11%)	8 (5.48%)
Structuring of pupil responses	7 (5.43%)	9 (6.16%)	8 (5.48%)
Relevant to topic, concept, ideas and teaching points	5 (3.88%)	7 (4.79%)	7 (4.79%)
Creation of appropriate situation	3 (2.33%)	7 (4.79%)	7 (4.79%)
Adequacy of manipulative skill	7 (5.43%)	8 (5.48%)	8 (5.48%)
Appropriateness (age/level/topic)	7 (5.43%)	7 (4.79%)	8 (5.48%)
Pupils involvement	5 (3.88%)	6 (4.11%)	6 (4.11%)
Generalization	6 (4.65%)	4 (2.74%)	8 (5.48%)

From the Table II above, according the ratings of the researchers of the ECCE teachers in 20 number teaching skills in the selected LGEAs, they were generally founded to be lacking in all. None of the 20 skills was found to have an average score of 50% meaning, none of the skills is being exhibited by up to half of the ECCE teachers. Only one of the 20 skills has an average ratio of 42.9%. Seven others have a score of 38.1% including. The least skill is the standing position of the teacher with 14.3%.

Globally, the teaching proficiency among early childhood educators remains a key concern, with significant variations in quality across regions. In many low-income countries, a lack of formal training and professional development opportunities for ECE teachers contributes to lower educational outcomes (UNICEF, 2020). In Sub-Saharan Africa and parts of South Asia, teachers often lack specialised training in early childhood pedagogy, with many entering the field without adequate qualifications (Ardanaz *et al*, 2015). Nigeria is both a low-income and situated in Sub-Saharan Africa, thus, the situation is expected to be huge. Even in higher-income countries, the challenge persists due to low wages, high turnover rates and limited professional growth opportunities, all of which affect teaching quality (OECD, 2022). Addressing these disparities improved training programmes, better working conditions and ongoing professional development is crucial for enhancing the global standards of early childhood education.

Research Question 3

How do the ECCE students behave in class?

Most of the pupils in these classes are attending formal setting schools for the first time. They are expected to display some transformation as they progress. Twenty items have been listed as the behaviours expected of the pupils. Items 1-11 are positive while items 12-20 are negative behaviours. These sections depict the rating of the 3 researchers of the classroom behaviour of the ECCE pupils. For the positive behaviour a mean score above 1.99 is good. For the negative however, a score above 1.99 is poor.

Table III: children classroom behaviour ratings by the three researchers

S/N	Variables	1 st Rater				2 nd Rater				3 rd Rater				Mean scores
		1	2	3	4	1	2	3	4	1	2	3	4	
1	Listening attentively	✓					✓				✓			1.33
2	Paying attention	✓				✓					✓			1.67
3	Inattentive	✓						✓				✓		1.67
4	Can ask question		✓				✓				✓			1.67
5	Work on his own		✓				✓			✓				1.67
6	Responding to the teacher		✓				✓			✓				2.00
7	Participate in group work	✓				✓				✓				2.33
8	Sort object by size	✓						✓			✓			2.33
9	Sort object by colour		✓					✓				✓		2.33
10	Read three letter word		✓					✓				✓		2.33
11	Sharing		✓					✓				✓		3.00
12	Fight in the class	✓					✓					✓		1.00
13	Inconsiderate	✓						✓			✓			2.00
14	Staring into space		✓				✓				✓			2.00
15	Withdrawn			✓			✓				✓			2.00
16	Inattentive			✓			✓				✓			2.33
17	Destroy material		✓				✓			✓				2.33
18	Poor concentration		✓			✓				✓				2.67
19	Restless					✓				✓				2.67
20	Easily cries		✓			✓					✓			2.67

From Table III above, the 3 researchers observation ratings were compared using inter-rater reliability (Cronbach's Alpha) in order to ascertain the reliability level of agreement among the raters. Thus, inter-rater reliability values obtained ranged as 0.65, 0.66 and 0.63 for CCBRS in this study. Thus, the average reliability value of 0.64 in this case was considered adequate in showing the inadequacy of children classroom behaviour for the study.

For the positive, items 1-5 have scores ranging from 1.33 to 1.66 which is below the pass mark of 2.00. The pupils have been found to be poor in listening, paying attention, drawing, asking question and work on their own. They were however found to be responding to the teacher, participate in group work, able to sort objects by size and colour, read 3 letter words and sharing what they have with their colleagues. As for the negative, they were found not to fight much in the class. And they have high scores in the remaining items i.e. they were found to be inconsiderate, inconsistent, restless, destructive, withdrawn and cries a lot.

Research in preschool classrooms has shown that misbehaviour is positively associated with teacher attention. However, these previous findings relate primarily to total attention, ignoring that many different types of teacher attention that are likely to have different antecedents and consequences (Dobbs-Oates, Arnold and Doctoroff, 2004).

Major Findings

The findings from the study indicated that early childhood education is still toddling and lacking in sustainability in almost all ECCE classes in the public schools in Kano State. This trend continues persistently as the study shows despite huge human and material resources invested by both local, national and international agencies in various forms (e.g. continue professional development, indoor and outdoor facilities, upgrading of learning environment, etc).

The findings again revealed that the teaching skill possessed by the teachers does not commiserate with the need of the category of learners (e.g. ECCE class children) in the selected LGEAs of Kano State. A clear picture emerged from the findings of the study that revealed the inadequacy of preparation made by the selected institutions towards making the programme of early childhood education relevant and successful as it should be. Looking at the amplification of as skill a combinations of automaticity and awareness (i.e. conscious monitoring and possible correction in the performance of the task) (Tonnessen & Henning, 2015). In addition to required manpower, the need for appropriate indoor and outdoor facilities and teaching-learning materials is huge deficits that require urgent attention with all the seriousness necessary (Roger, and Berwyn, 2018). In other words, what is taught refers to the contents of instructions, whereas how it is taught refers to the skills, teaching materials, teaching environment, the various approaches used by preschool teachers and elements of diversity interaction with children, parents and family (Nair & Yassin, 2017).

The study revealed the dearth of requires manpower with necessary qualification that should be able to make the programme of early childhood education moving and sustainable in the state. Seidel and Sharelson (2007) observed that researchers and practitioners have long hold the view that quality of teachers and quality of their instructions are key determinant of students learning outcomes. Singh, Allen, and Rowan, (2019) believes that conceptually, measuring teaching quality ought to be a high priority of any examination of teaching and learning. Lewis, Perry, and Murata, (2006) amplification on teacher quality holds that it entails 'teacher academic qualification and teaching practice. Teacher qualification according to (Yaman, Incebacak and Tungac, 2024) are his/her education journeys and certifications while teaching practices involve the quality of teaching teachers exhibit in their classroom For a successful early childhood education qualified teaching and administrative staff need to be provided and all mechanism that will make the programme sustainability a reality should be encouraged.

Finally, the research has found that there are behavioural changes in the ECCE pupils. The most pronounced is sharing. The pupils share the little they have with their colleagues. There is little incidences of fighting among the pupils despite their age. But they are found to be restless, withdrawn and cry easily.

CONCLUSION AND RECOMMENDATIONS

This study has revealed some pertinent findings. Firstly, the findings indicate that the ECCE teachers' academic qualifications have a significant contribution on their teaching ability and lack of it has an adverse effect on children learning outcome. Secondly, the results clearly show that ECCE teachers with higher academic qualifications have better perceptions of the quality of ECCE teaching-learning environment compared with their counterparts with lower academic qualifications, and the difference is significant. Thirdly, the findings affirm that the ECCE teachers with higher professional qualifications have a significantly better understanding of the ECCE teaching skill compared to those with lower professional qualifications. Fourthly, the results reveal that ECCE teachers' academic qualifications have a significant effect on their understanding of teaching and learning processes. Fifthly, the results revealed lack of sustainability of SESP intervention in ECCE teacher professional development in Kano State. Therefore, the Ministry of Education should take this matter seriously and take the necessary steps to provide funding and training to preschool teachers to enhance their academic and professional qualifications. In order to come up with viable remedy, and should also train more preschool teachers at degree level to enhance our preschool education to be on par with other developed countries

There are some limitations in this study; firstly this study only employed qualitative data through observation and to a limited extent interview to investigate whether academic qualification have some influence on teaching skill in selected LGAs schools that have initial SESP intervention. As such future research will employ quantitative study from survey and experimental research designs.

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