



Influence of School Ownership and Centre Age on Staff Adequacy in Early Childhood Education Centres in Edo State, Nigeria

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ABSTRACT

This study investigated the influence of school ownership and centre age on staff adequacy in Early Childhood Education (ECE) centres in Edo State, Nigeria. Two research questions and two hypotheses guided the study. A descriptive survey design was adopted. The population comprised all 1,572 public and private ECE centres in Edo State during the 2022/2023 academic session. A sample of 162 ECE centres was selected using multi-stage sampling technique. One instrument titled "Early Childhood Education Staff Adequacy Checklist (ESAC)" was used for data collection. Data were analysed using descriptive statistics and chi-square at 0.05 significance level. The findings revealed that there is a significant difference in staff adequacy based on school ownership ($\chi^2 = 24.24, p < 0.05$), with private ECE centres having higher staff adequacy. There is also a significant difference in staff adequacy based on centre age ($\chi^2 = 22.86, p < 0.05$), with centres below 20 years having higher staff adequacy. Consequently, both null hypotheses were rejected. The study concluded that school ownership and centre age significantly influence staff adequacy in ECE centres. It was recommended that schools above 20 years should be renovated to meet the modern trend in ECE centres and government should enforce regulations regarding staff qualifications in both public and private centres.

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INTRODUCTION

Early Childhood Education (ECE) is education which is designed to develop and improve the social, physical, and mental well-being of young children. It encompasses the nurturing, growth, and education of children younger than six. Among the purposes of ECE as stipulated by the National Policy on Education (FRN, 2023) are: effecting a smooth transition from home to school, preparing the children for primary level of education, providing adequate care, supervision and security for the children while their parents are at work, inculcating social, moral norms and value in the children, teaching the rudiments of numbers, letters and shapes, and inculcating in the child the spirit of enquiry and creativity.

Staff adequacy refers to the availability of staff in relation to enrolment in early childhood education centres. The personnel who constitute the staff for the programme must be adequate in quality to match the enrollment of the children. Staff ranges from unskilled to highly skilled and it plays a major role in ECE centres. Staff adequacy in Early Childhood Education centres explores the crucial role of staffing levels in ensuring quality care and education for young children.

The ownership of an early childhood education (ECE) centre—whether public or private—can significantly affect staff adequacy, which includes both the quantity and quality of staff. Public Centres (government-owned) often receive stable funding, allowing for better salaries, benefits, and training programmes. They typically follow government staffing regulations (e.g.,

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qualified teacher-child ratios). However, they may face bureaucratic delays in recruitment and resource allocation. Private Centres (for-profit or non-profit): For-profit centres may prioritize cost-saving, leading to lower salaries, higher staff turnover, and limited professional development. Non-profits often reinvest earnings in staff and programmes, but may depend on inconsistent donations or grants.

Before the UBE programme was introduced by the government in 2004, the pre-primary education was not recognized by the government of Nigeria; this level of education was only scantily operated by the private owners. The aim was to assist interested parents with the service of helping them to take care of the children below primary school aged children while they are away from home. As population increases with the yearning need for education and care by the citizens, the government saw the need to integrate the early childhood education and care into the owned schools and also approved private participation.

The age of early childhood education centres can influence staff adequacy through its impact on infrastructure, regulatory compliance, staff retention, community perception, and access to training and professional development opportunities. Older centres may have outdated facilities and limited resources compared to newer ones. This can impact staff adequacy by affecting the centre's ability to provide a safe, conducive learning environment and adequate support for children's developmental needs.

Staff members may be less inclined to remain in older centers if they lack modern amenities, equipment, and resources. High staff turnover can impact management's ability to maintain staff adequacy levels and continuity of care, potentially leading to challenges in providing consistent quality programming. Older centres may face challenges in providing ongoing training and professional development opportunities for staff members due to limited resources or outdated practices.

In Edo State, Nigeria, a burgeoning population coupled with increasing educational demands has prompted a heightened focus on the

quality of early childhood programs but has been allegedly marred with insufficient staff. Where staff adequacy is certain; there is allegedly doubt that the supply of personnel is not lopsided across the ECE Centres. There are situations where there are surplus staff in some schools while in others there are shortages resulting in staff taking up tasks that are not for them, like the case of teacher being responsible for cleaning of the class. This situation is worrisome, hence the need for analysis of staff adequacy in ECE centres in Edo State.

STATEMENT OF THE PROBLEM

Education is a deliberate process of equipping people with functional, relevant skills and knowledge. The society therefore uses it deliberately to equip her citizens to make them perform socioeconomic roles that makes the society grow economically and also experience development. Hence, the rate of socioeconomic development of any society is a function of the number of people in that society that has access to education.

Based on the importance of education to the society therefore, the Federal Government of Nigeria declared free and compulsory education particularly at the basic level to give the pupils the opportunity to access pre-primary education from their formative years. One of the goals of early childhood education is affecting a smooth transition from the home to school. To achieve this, a lot of staff are required to carry out this purpose. Despite the government effort to providing staff, there seems to be staff inadequacies. What could be responsible for this? Could it be that staff are adequate in the public than private ECE centres? Or could it be that there more staff in older school than newer school? This situation is very worrisome, hence the need to study staff adequacy in ECE centres in Edo State.

Research Questions

The following research questions were raised to guide the study:

1. Is there a difference in staff adequacy in Early Childhood Education Centres based on school ownership (public or private) in Edo State?



2. Is there a difference in staff adequacy in Early Childhood Education Centres based on the age of Centres in Edo State?

Purpose of the Study

The purpose of the study is to analyse the staff adequacy in Early Childhood Education centres in Edo State. The specific objectives are to:

1. Investigate the staff adequacy in Early Childhood Education Centres based on ownership (public or private);
2. Assess staff adequacy in Early Childhood Education Centres based on the centres age.

Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance:

Ho₃: There is no significant difference in staff adequacy in Early Childhood Education centres based on School ownership in Edo State.

Ho₄: There is no significant difference in staff adequacy in Early Childhood Education centres based on the centre age in Edo State.

Theoretical Framework

This study is hinged on the Bio-ecological system theory, which was developed by psychologist Urie Bronfenbrenner (1999). This theory is widely influential in human development, especially as it relates to the ways in which various environmental factors impact a child's growth over time. The theory suggests that development is shaped by the interaction between individuals and their multiple environmental systems, ranging from immediate surroundings to broader societal influences. The theory can be visualized in the context of staff adequacy in early childhood education as follows: the microsystem is the closest, most immediate environment in which a child lives and directly interacts, including relationships with family, friends, teachers, and caregivers, where the quality of interactions with teachers and peers significantly influences a child's social and emotional development.

The ecosystem refers to the larger social systems that indirectly affect a child's development, including parents' workplaces, extended family, neighborhood communities, and broader social networks, where staff adequacy can be impacted by funding determining staff salaries, hiring practices, and resources, as limited resources at this level can strain staff adequacy in centers, affecting the quality of education and care.

The macrosystem encompasses the broader cultural and societal context that influences all other layers, including societal values about early childhood education, labor policies, and education standards, where a society that values and invests in early childhood education is likely to support policies that promote staff adequacy, offering competitive wages and encouraging professional development for educators; and the chronosystem captures the impact of time and changes over the life course, such as changes in a child's family situation or developments in education policy, where recent shifts towards greater recognition of the importance of early childhood education may lead to improvements in staff adequacy through increased funding and support for training.

The theory is relevant to the study because it provides a better understanding of staff adequacy in terms of teacher-to-child ratios, educator qualifications, and the quality of interactions within this microsystem. In early childhood education, using Bronfenbrenner's framework, we can better understand how staff adequacy is influenced by multiple interconnected layers, including school ownership and centre age. This theory reinforces the need for well-rounded support systems, highlighting that nurturing, collaborative, and resourceful environments can have long-lasting positive impacts on children's growth. Applying this theoretical lens, the study is better positioned to examine the complex interplay between staff adequacy, environmental factors, and children's developmental outcomes, thereby providing a comprehensive understanding of the challenges and opportunities in early childhood education settings.



Empirical Studies

School ownership could have imparted on the staff adequacy in the management of Early Childhood Education centres. School could be public or privately owned institutions. The public schools are owned by both state and Federal Government while the privately owned schools are established and managed by proprietors. The ownership of Early Childhood Education centers may direct the school towards such possible potentials that may determine staff adequacy in the Early Childhood Education centers.

An investigation conducted in 2003 revealed that more than two-fifths (42%) of the sampled Early Childhood Centres facilities in Nigeria was private-owned. Government-owned accounted for 34%, and 21% by local communities (UNESCO, 2017). As time went on, it became necessary for the government to increase its being in order to assist and bring early child care within the reach of majority of Nigerian children, particularly those in rural and low socio-economic areas. The study done by Hamid et al. (2020) in Malaysia used quantitative research with a sample of 3,519 respondents consisting of operators, supervisor, principal childcare provider and teachers.

The findings indicated that the work force in the government childcare centres had more staff with educational and professional qualification as well as experience. The study also found significant differences in the private and government ECE centres. As the value for private ECE centres was slightly higher than the government ECE centres. This is due to the fact that private centres were largely driven by parental demand and expectation as such they are better managed. This is in agreement with the studies of Chudgar and Quin (2022) who have shown that private educational institutions sometimes engage in such practices to enhance their market appeal.

Recent studies like García and Weiss (2021) have further explored the impact of ownership on educational outcomes, emphasizing the role of financial resources and governance structures in shaping both staff adequacy and quality. The study of Rolleston and Moore (2018) support the findings that public schools, while

often disadvantaged by bureaucratic constraints and budgetary limitations, tend to maintain higher standards in staff qualifications and training. The age of early childhood education centres can influence staff adequacy through its impact on infrastructure, regulatory compliance, staff retention, community perception, and access to training and professional development opportunities. Older centres may have outdated facilities and limited resources compared to newer ones. This can impact staff adequacy by affecting the centre's ability to provide a safe, conducive learning environment and adequate support for children's developmental needs.

Research conducted by Budharso and Tarman (2020), the availability of school facilities can impact the standard of education provided by the centers and ultimately impact on the students' performance. According to Ajayi (2019), the current emphasis all over the world among educational practitioners is on learner-friendly school environment with learner-friendly instructional delivery system. Observations from Oyeleye and Ayodele (2022) further revealed that in the public secondary schools in southwest, Nigeria today, the principals in most of the schools are often faced with different challenges in performing their managerial duties. Some of these challenges are shortage of teaching and non-teaching staff, lack of physical facilities, poor school building, unconducive staff office, ill-equipped school library and laboratory, lack of medical facilities, among others. This is the characteristics of older schools in Nigeria.

In the findings of Amadi and Ezeugo (2019), it was revealed that both students and teachers need facilities such as libraries, laboratories, good buildings, classrooms, good water supply, toilet facilities, security, etc, for teaching and learning to take place. Older schools may have established policies and procedures for staff recruitment, training, and management that contribute to staff adequacy. The newer schools may have refined these processes over time through experience and feedback, leading to more effective staffing practices.



METHODOLOGY

The study adopted a descriptive survey design, which was used because it sought to observe and describe all variables used in the study as they naturally unfold over time without interfering with them. The researcher does not have direct control over the independent variables but only described and observed them as they exist. The population of the study constituted all the 1,572 Early Childhood Education Centres in all the 18 local government areas in the three Senatorial districts of Edo State as at 2022/2023 academic session (SUBEB, 2023), with the head teacher in the centres serving as respondent.

A total of 162 ECE Centres that cut through the dichotomy of public and private, rural and urban, large and small, and old and younger ECE Centres categories which represent 10% of the ECE centres in Edo State was used for the study. The sample was drawn within 10% of the entire ECE centres, and the multi-stage sampling technique was adopted for the study. At Stage One, the sampling area was stratified into three senatorial districts in Edo State, resulting in sampling distribution as follows: Edo South (87), Edo Central (32) and Edo North (45) making a total of 164. At Stage Two, the sampling area was further stratified into eighteen local government areas of Edo State. At Stage Three, within each Local government, the ECE centres were randomly stratified such that the spread covers the dichotomy in each LGAs based on ownership (Private/Public) and age of centres. At Stage Four, within the ownership (private and public), the ECE centres were randomly selected to accommodate the age of the centres (20 years and above and below 20 years).

The research instrument used to collect data for this study was a checklist titled: the ECE Staff Adequacy Checklist (ESAC), which comprised sections A, B, C and D. Section A elicited the demographic information on the school namely: school ownership, school location, school age and school size, while Sections B, C, and D were used to collect information about the staff adequacy. The instruments were administered by the researcher and three research assistants who helped to administer the checklists to the sampled ECE centres. Each of the research assistants was assigned to assist in each senatorial district; they were individuals who had knowledge about the designated locations within the senatorial district.

The checklists were administered to 164 ECE centres across the 3 senatorial districts, and the entire collection and collation of data spanned through three months. One hundred and sixty-two (162) checklists were returned out of 164 administered, while two were missing because the head teacher of the school refused to give the necessary data, accounting for about 98.7% return rate of the checklists. Research questions were answered using descriptive statistics (frequency, percentages, mean and ranks), while research questions 1 and 2 were turned into hypotheses 3 and 4 and tested using appropriate inferential statistics (Chi-square). All hypotheses were tested at 0.05 significant levels.

RESULTS

Hypothesis Three:

There is no significant difference in staff adequacy in Early Childhood Education centres in Edo State based on school ownership.

Table 1: Chi-Square Test of Difference in Staff Adequacy in ECE Centres in Edo State by School Ownership

Adequacy	School Ownership			Total		Remarks
	Public School	Private School	Christian School			
Adequate	Observed Freq.	28	50	7	85	Significant
	Expected Freq.	43	35.2	6.8	85	
Not Adequate	Observed Freq.	54	17	6	77	
	Expected Freq.	39	31.8	6.2	77	
Total	Observed Freq.	82	67	13	162	

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Adequacy	School Ownership			Total		Remarks
	Public School	Private School	Christian School			
	Expected Freq.	82	67	13	162	

$\chi^2 = 24.24$, $\alpha = 0.05$, $df = 2$, $p\text{-value} = .000$; Significant

Results in Table 1 show a Chi-Square test of significant difference in the level of staff adequacy in Early Childhood Education centers in Edo State based on school ownership. The $\chi^2 = 24.24$, with a degree of freedom = 2, and a $p\text{-value} = .000$. Testing at 0.05 alpha (α) level of significance, the $p\text{-value}$ is less than alpha level. Hence, the hypothesis is rejected at $P < 0.05$. Therefore, there is a significant difference in staff

adequacy in Early Childhood Education centers in Edo State based on school ownership. Thus, staff adequacy in Early Childhood centres is much higher in private ECE centres.

Hypothesis Four:

There is no significant difference in staff adequacy in Early Childhood centres based on centre age.

Table 2: Chi-Square Test of Difference in Staff Adequacy in ECE Centres in Edo State by Centre Age

Adequacy	Age		Total		Remarks
	20 Years and Above	Below 20 Years			
Adequate	Observed Freq.	36	49	85	Significant
	Expected Freq.	50.9	34.1	85	
Not Adequate	Observed Freq.	61	16	77	
	Expected Freq.	46.1	30.9	77	
Total	Observed Freq.	97	65	162	
	Expected Freq.	97	65	162	

$\chi^2 = 22.86$, $\alpha = 0.05$, $df = 1$, $p\text{-value} = .000$; Significant

Results in Table 2 show a Chi-Square test of significant difference in the level of staff adequacy in Early Childhood Education centers in Edo State based on school age. The $\chi^2 = 22.86$, with a degree of freedom = 1, and a $p\text{-value} = .000$. Testing at 0.05 alpha (α) level of significance, the $p\text{-value}$ is less than alpha level. Hence, the hypothesis is rejected at $P < 0.05$. Therefore, there is a significant difference in staff adequacy in Early Childhood Education centers in Edo State based on school age. Thus, the level of staff adequacy in Early Childhood centres is much higher in centres below 20 years of age.

DISCUSSION OF FINDINGS

The finding showed that privately owned centers generally have higher staff adequacy compared to government ECE centers. This finding supports Hamid et al. (2020) who reported

that the work force in the government childcare centres had more staff with educational and professional qualification as well as experience and that there was significant differences in the private and government ECE centres. As the value for private ECE centres was slightly higher than the government ECE centres. This is due to the fact that private centres were largely driven by parental demand and expectation as such they are better managed and the staff adequacy is higher in the private than the government ECE centres. Private ECE centers, driven by profit motives and the need to maintain competitiveness, often prioritize hiring an adequate number of staff (Chudgar and Quin, 2022).

The pressure to attract and retain students necessitates maintaining certain staffing levels, even if this does not always equate to higher staff adequacy. Although private early

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childhood centres often face market pressures that incentivize them to maintain adequate staffing levels to meet the expectations of parents and regulatory bodies. However, these centers may focus more on quantity rather than quality, which could explain the gap in staff adequacy and quality between private and public centers (García and Weiss, 2021). Government-owned ECE Centres often suffer from inadequate funding, impacting their ability to hire sufficient staff, which is reflected in their lower staff adequacy. Public centers typically rely on government budgets, which may be constrained due to competing priorities across various sectors.

However, despite these constraints, public centers tend to prioritize staff quality, ensuring that their limited staff possess higher educational qualifications and certifications. This focus on quality over quantity aligns with the higher average qualification scores observed in public centers. The study support Rolleston and Moore (2018) that public schools are often disadvantaged by bureaucratic constraints and budgetary limitations, tend to maintain higher standards in staff qualifications and training, which aligns with the higher qualification scores observed in public ECE Centres. Recent studies like García and Weiss (2021) have further explored the impact of ownership on educational outcomes, emphasizing the role of financial resources and governance structures in shaping both staff adequacy and quality.

The study revealed that staff adequacy was significantly higher in the ECE centres below 20 years (<20 years) than in ECEs above 20 years. This study agrees with Siswanto and Hidayati (2020) finding that the age of early childhood education centres can influence staff adequacy through its impact on infrastructure, regulatory compliance, staff retention, community perception, and access to training and professional development opportunities. The newer school tend to have modern facilities of the new trend in ECE centres and may have developed and expand their facilities to meet the needs of early childhood education. The new centres have more teaching and support staff,

staff have undergone professional development compared to older schools.

The findings also agreed with other researchers such as Budharso and Tarman (2020) and Ajayi (2019) pointing out that the age of establishing a school can influence staff adequacy in early childhood education centers in several ways: new schools may have had time to establish funding streams and acquire resources for hiring qualified staff. They may have a larger pool of experienced educators and administrators to draw from, which can contribute to greater staff adequacy. The higher staff adequacy in new ECE centres suggests that they are more willing to retain staff and have strong community perception. The older school have their legacies built over the years, more importantly as most of the ECE centres are public centres and Private centres built more than two decades and have gained experiences of ECE education over the years (Budharso and Tarman, 2020). Some staff like to work and remain in big schools with longer years as they like to have work experience from such schools as it adds to their academic profile.

However most older schools have dilapidated structure and facilities, this in turn brings about low enrolment of children and low staff adequacy (Ajayi, 2019). The current emphasis all over the world among educational practitioners is on learner-friendly school environment with learner-friendly instructional delivery system (Oyeleye and Ayodele, 2022). Modern school environment put emphasis on the provision of facilities such as adequate and spacious classrooms, workshops/laboratories, computers, good water source/supply, toilet facilities, functional libraries, transportation, and communication systems among others. All these facilities are required in appropriate quantity and quality.

CONCLUSION

Based on the findings, it was concluded that there is a significant difference in staff adequacy in ECE Centres based on school ownership in Edo State, with private ECE centres having higher staff adequacy. There is also a significant difference in ECE Centres based on



centre age in Edo State, with centres below 20 years having higher staff adequacy. Both null hypotheses were rejected.

Based on the findings from the study on staff adequacy in Early Childhood Education Centres (ECEC) in Edo State, the following key recommendations are proposed:

1. Schools above 20 years should be renovated to meet the modern trend in ECE centres.
2. The government should enforce the regulations regarding the qualifications and continuous professional development of staff in ECE centres.
3. The government should create policy for quality control unit, this unit should be responsible for monitoring the quality of ECE centres and bridged the gap between policy and practice.
4. Government should provide more funding to public ECE centres to improve staff adequacy.

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