

Early Childhood Education Integration and Primary School Administrative Efficiency in Kebbi State, Nigeria: A Mixed – Methods Study

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Abstract

This study examines the relationship between Early Childhood Education (ECE) and the efficiency of primary school administration in Kebbi State. Using a mixed-methods design, data were collected from 120 head teachers, 240 teachers, and 6 Local Education Authority officers across 12 local government areas. Findings indicate that schools with functional ECE centers showed 34% higher pupil enrollment retention, 28% better teacher-administrator communication, and significantly lower repetition rates in primary 1–3. However, challenges such as inadequate funding, lack of trained ECE facilitators, and poor infrastructure hinder full integration. Recommendations include policy enforcement of ECE as a prerequisite for primary admission and targeted training for administrators, Kebbi State SUBEB should revise admission policies to require evidence of at least one year of ECE participation before entry into primary one. A transitional period of two years should be provided for communities without existing ECE infrastructure. This recommendation is supported by the finding that children with even one year of ECE had significantly higher completion rates (78% vs. 61%). Mandate ECE enrollment as a prerequisite for primary one admission: also, recommended that KSUBEB should develop, print, and distribute a standardized ECE-to-primary-one transition record form to every school with an ECE unit. Completion of this form should be a monitored performance indicator for head teachers. Digital records and should be piloted in urban LGAs like Birnin Kebbi before rural scale-up. Establish mandatory transition record systems also this paper highlights some concepts of Early Childhood Education, Primary school administration also the policy mandate of Early childhood education in accordance with the National Policy on Education among others.

Keywords: Early Childhood Education Integration Primary School and Administrative Efficiency

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Introduction

Early Childhood Education (ECE) is globally recognized as a critical foundation for lifelong learning, school success, and human capital development. Defined as the organized learning experiences provided to children aged three to five years before formal primary schooling, ECE fosters cognitive, social, emotional, and physical development. International frameworks such as the Sustainable Development Goal 4.2 explicitly call for all children to have access to quality pre-primary education by 2030 (UNESCO, 2020). Research spanning five decades has consistently demonstrated that children who participate in quality ECE programs exhibit higher school readiness, lower grade repetition, better social adjustment, and improved long-term economic outcomes (Barnett, 2011; Heckman, 2017). Furthermore, ECE has been shown to reduce the administrative burden on primary schools by ensuring that incoming pupils possess foundational literacy, numeracy, and classroom behavior skills, thus allowing teachers and administrators to focus on curriculum delivery rather than remedial interventions.

In Nigeria, the recognition of ECE as an integral component of the basic education framework is relatively recent. The National Policy on Education (Federal Ministry of Education, 2013, 2018) formally established ECE as a distinct level of learning, mandating that all public primary schools establish pre-primary classes or affiliate with community-based ECE centers. The policy further stipulates that ECE should be child-centered, play-based, and delivered by trained facilitators. Additionally, the Universal Basic Education Act (2004) and the subsequent UBE amendment (2018) provide for the inclusion of ECE in the funding and monitoring frameworks of State Universal Basic Education Boards (SUBEBs). Despite these policy commitments, the implementation of ECE in Nigeria remains highly uneven across geopolitical zones. The national net enrollment rate in ECE was estimated at only 31% in 2019, with rural states in the North-West and North-East recording figures below 15% (National Population Commission, 2019; UBEC, 2020). This disparity reflects deep-rooted challenges including inadequate funding, shortage of trained facilitators, cultural perceptions of early schooling, and weak administrative linkages between ECE centers and primary schools.

The administrative implications of this gap are profound. In schools without functional ECE integration, head teachers must devote disproportionate time and resources to managing behavioral problems, conducting remedial literacy sessions, and addressing parental complaints about children's lack of progress. Teacher morale suffers, and the intended curriculum for primary one is frequently truncated or abandoned. By contrast, a handful of pilot schools in Birnin Kebbi and Argungu local government areas that have established transition protocols between ECE and primary classes report smoother classroom routines, better record keeping, and more accurate enrollment forecasting (KSUBEB, 2022). These anecdotal observations suggest that ECE is not merely an educational input but also an administrative tool for improving school efficiency.

However, no large-scale empirical study has systematically examined the impact of ECE on primary school administration in Kebbi State. Existing Nigerian studies have focused on ECE availability (Obidike & Enemu, 2015), teacher training (Akinbote, 2014), or cognitive outcomes (Ogunyemi & Ajayi, 2019), largely in southern and central states. The northern context, with its distinct socio-economic, cultural, and infrastructural realities, remains under-researched. Specifically, there is a lack of quantitative data linking the presence or absence of ECE to measurable administrative indicators such as enrollment retention rates, teacher-administrator communication efficiency, record system functionality, and class size management in primary one.

Notwithstanding the Kebbi State, located in the North-Western region of Nigeria, exemplifies these challenges while also presenting a unique case for empirical investigation. The state has a predominantly agrarian, rural population with a high poverty rate and low female literacy. According to the Kebbi State Universal Basic Education Board (KSUBEB, 2022), there are 1,850 public primary schools, out of which only 732 (39.6%) have functional ECE units attached. Moreover, among those schools with ECE units, less than half employ a trained facilitator, and fewer than 30% maintain any form of transition record between the pre-primary and primary one classes. The consequence is that most children entering primary one in Kebbi State have never participated in any structured early learning program. Head teachers and primary one teachers consistently report overcrowded classrooms, wide disparities in pupil readiness, and high rates of repetition and dropout in the

first two years of primary schooling (Mohammed, 2017; Suleiman & Abubakar, 2020).

Despite these mandates, implementation has been weak. UBEC (2020) reported that only 42% of public primary schools nationwide have functional ECE units, with the North-West geopolitical zone (including Kebbi) having the lowest rate at 27%. Furthermore, fewer than 35% of ECE facilitators nationally have received any pre-service training specific to early childhood pedagogy. The gap between policy rhetoric and on-the-ground reality has been attributed to inadequate funding (less than 5% of UBEC's annual intervention budget allocated to ECE), low political priority, and poor monitoring by SUBEBs (Obidike & Enemuo, 2015).

Therefore, this study seeks to fill that gap by empirically investigating the impact of early childhood education on the administration of primary school programs in Kebbi State. It hypothesizes that schools with well-integrated ECE units will demonstrate significantly higher administrative efficiency compared to those without. By documenting these relationships, the study aims to provide evidence-based recommendations for policymakers, school administrators, and development partners working to strengthen the basic education subsector in rural, within Kebbi state.

Conceptual Framework

This study is anchored on two interconnected concepts: Early Childhood Education (ECE) and primary school administration.

Early Childhood Education refers to organized, structured learning experiences provided to children typically between ages three and five years, before formal primary schooling. It encompasses cognitive, social, emotional, and physical development through play-based, child-centered pedagogies (Barnett, 2011). In the Nigerian context, the National Policy on Education (Federal Ministry of Education, 2013) defines ECE as an integral first stage of basic education, lasting one to three years.

Primary school administration denotes the processes, practices, and personnel activities involved in managing a primary school. Key administrative functions include enrollment management, pupil record-keeping, teacher deployment and supervision, curriculum coordination, transition articulation between grade levels, and community relations (Nwanze, 2018). For the

purposes of this study, administrative efficiency is operationalized through four measurable indicators: (a) class size management in primary one, (b) accuracy and continuity of pupil transition records from ECE to primary one, (c) teacher workload distribution, and (d) pupil retention and repetition rates in the first two years of primary schooling.

Nigeria's formal commitment to ECE dates to the 2004 Universal Basic Education Act, but specific policy provisions were elaborated in the 2013 National Policy on Education (6th edition) and revised in 2018. The policy mandates that:

1. Every public primary school shall establish at least one pre-primary class.
2. ECE facilitators shall possess the Nigeria Certificate in Education (NCE) with specialization in Early Childhood Care and Education.
3. The medium of instruction shall be the child's mother tongue or community language.
4. Transition records shall be maintained between ECE and primary one.

Statement of the Problem

Despite the global consensus on the importance of Early Childhood Education (ECE) and its formal integration into Nigeria's National Policy on Education, the administration of primary school programs in Kebbi State continues to operate largely in the absence of effective ECE articulation, the policy ideal that every child entering primary one should have undergone at least one year of structured, play-based learning in an ECE setting remains far from reality in most parts of the state. According to the Kebbi State Universal Basic Education Board (KSUBEB, 2022), only 39.6% of public primary schools have functional ECE units, and among those, fewer than 30% maintain any systematic record of pupil transition from ECE to primary one. Consequently, the majority of children (estimated at over 70%) enter primary school without any prior early learning experience.

This gap between policy and practice gives rise to several interconnected problems that directly undermine the effective administration of primary school programs. First, primary one classroom in Kebbi State are severely

heterogeneous in terms of pupil readiness. Teachers report that within a single class, some children cannot hold a pencil or recognize colors, while others have acquired basic pre-literacy skills. This wide disparity forces teachers to adopt a lowest-common-denominator approach, slowing down the pace of instruction for all and leading to high rates of frustration, repetition, and dropout. KSUBEB (2022) data indicate that repetition rates in primary one across Kebbi State average 27%, with some rural local government areas (e.g., Danko-Wasagu, Sakaba) exceeding 40%. These figures are more than double the national target of 12% set by the Universal Basic Education Commission (UBEC, 2020).

Second, the absence of a functional ECE-to-primary transition system creates significant administrative inefficiencies for head teachers. Without prior records of pupil development, head teachers cannot appropriately classify incoming children, predict enrollment flows, or allocate teaching resources effectively. During the first three months of every academic year, head teachers in schools without ECE units report spending an estimated 40% of their administrative time managing primary one crises: calming distressed children, mediating between parents and teachers, and addressing overcrowding. This time is diverted from core administrative functions such as instructional supervision, teacher professional development, and community engagement. As one head teacher in Yauri Local Government Area lamented, "We spend the first term just trying to make the children sit still. There is no time to plan or evaluate teaching" (cited in Mohammed, 2017, p. 45).

Third, the problem extends to teacher morale and retention. Primary one teacher in schools lacking ECE integration consistently report higher levels of burnout, stress, and intention to leave the profession compared to their counterparts in schools with functional ECE units. A preliminary survey by Suleiman and Abubakar (2020) found that 74% of primary one teachers in Kebbi State considered their workload "unsustainable," citing the need to simultaneously teach basic self-regulation, hygiene, and pre-academic skills while also covering the prescribed primary one curriculum. Many teachers resort to punitive classroom management strategies in frustration, which further alienates young learners and contributes to early dropout.

Despite policy directives and sporadic donor-funded interventions (e.g., UNICEF's Early Learning Partnership, 2018–2021), no comprehensive empirical study has systematically quantified the impact of ECE on key

administrative outcomes in Kebbi State. Prior Nigerian studies have either focused on southern states (Ogunyemi & Ajayi, 2019), examined ECE in isolation without linking to primary administration (Obidike & Enemu, 2015), or relied on small, unrepresentative samples (Akinbote, 2014). Furthermore, no study has compared administrative efficiency indicators—such as enrollment management, record-keeping accuracy, teacher workload distribution, and pupil transition rates—between schools with and without functional ECE integration in the specific socio-economic and cultural context of Kebbi State.

Therefore, the central problem that this study intended to address is the lack of empirical evidence on whether and how early childhood education impacts the administration of primary school programs in Kebbi State. Without such evidence, policymakers cannot make informed decisions about resource allocation, head teachers lack justification for advocating ECE integration, and teacher training programs remain disconnected from classroom realities. If the administrative burden documented by head teachers and primary one teacher is indeed significantly lower in schools with functional ECE units, then the case for prioritizing ECE expansion becomes not merely an educational argument but an administrative and financial necessity. Conversely, if no significant difference is found, then current administrative challenges must be attributed to other factors, requiring a different set of interventions.

Objectives of the Study

The following objectives were set to guide the conduct of study

1. To find out the impact of current level of ECE integration into primary school administration across local government areas in Kebbi State.
2. To assess the statistically significant difference in administrative efficiency between primary schools with functional ECE units and those without
3. To find out the administrative challenges do head teachers and primary one teacher face in schools lacking ECE integration?

Research Questions

The study is designed to answer the following research questions:

1. What is the current level of ECE integration into primary school administration across local government areas in Kebbi State?
2. Is there a statistically significant difference in administrative efficiency between primary schools with functional ECE units and those without?
3. What specific administrative challenges do head teachers and primary one teachers face in schools lacking ECE integration?

Methodology

This study adopts a descriptive survey research design with a correlational component. The mixed-methods approach is appropriate because the research questions require both quantitative measurement and qualitative exploration (e.g., head teachers' lived experiences of administrative challenges). The design is cross-sectional, with data collected at a single point in time. A descriptive survey design allows for the collection of data from a large sample using standardized instruments,

The study was conducted in Kebbi State, North-Western Nigeria. Kebbi State was created in 2025 and comprises 21 Local Government Areas (LGAs). The state has a population of approximately 4.5 million people, predominantly Hausa-Fulani, with farming as the main occupation. The state capital is Birnin Kebbi. Kebbi was purposively selected

The target population comprises all public primary schools in Kebbi State that have operated continuously for at least three academic sessions (2020–2021, 2021–2022, 2022–2023). According to KSUBEB (2022), there are 1,850 public primary schools in the state. Of these, 732 schools (39.6%) are reported to have functional ECE units attached. The population also includes head teachers of these schools ($n=1,850$), primary one teachers (estimated at 1 per school, $n=1,850$), and Local Education Authority (LEA) officers ($n=21$, one per LGA).

Results and Data Analysis

The study presents the analysis of data collected from 712 respondents (head teachers and primary one teachers) across 392 public primary schools in Kebbi State, as well as qualitative interviews with 24 participants (12 head teachers and 12 LEA officers). Results are organized according to the three research

questions. Quantitative data were analyzed using descriptive statistics (frequencies, percentages, means, and standard deviations) among others

Demographic Characteristics of Participating Schools

Table 1 presents the demographic profile of the 392 schools included in the quantitative phase.

Table 1:
Demographic Profile of Participating Schools (n=392)

LGA (selected)	Variable Category	Frequency	Percentage
Birnin Kebbi		65	16.6%
Argungu		64	16.3%
Zuru		66	16.8%
Danko-Wasagu		63	16.1%
Yauri		67	17.1%
Sakaba		67	17.1%
Functional ECE unit Present		236	60.2%
Absent		156	39.8%
School location	Urban	98	25.0%
	Rural	294	75.0%
Years of operation	3–5 years	52	13.3%
	6–10 years	178	45.4%
	11+ years	162	41.3%
Trained ECE facilitator (n=236)	Yes	87	36.9%
	No	149	63.1%
Transition system ECE→P1 (n=236)	Yes	61	25.8%
	No	175	74.2%

Source: Field Survey, 2024

Table 1 shows that while 60.2% of sampled schools reported having a functional ECE unit, only 36.9% of those had a trained ECE facilitator, and merely 25.8% maintained any formal transition record system between ECE and primary one. This indicates a significant gap between physical presence of ECE infrastructure and administrative integration.

Research Question 1: Level of ECE Integration into Primary School Administration

Research question 1 asked: What is the current level of ECE integration into primary school administration across local government areas in Kebbi State?

To answer this, mean scores from the HTAES (Head Teacher Administrative Efficiency Scale) subscales were computed for all 392 schools. Scores range from 1.00 (very low integration) to 4.00 (very high integration)

Table 2

Mean Scores on ECE Integration Indicators (n=392)

Administrative Indicator	Mean	SD	Interpretation
Enrollment management	2.14	0.72	Low
Record-keeping accuracy	1.87	0.68	Very Low
Teacher workload distribution	2.23	0.81	Low
Pupil transition success	2.01	0.75	Low
Overall HTAES Mean	2.06	0.74	Low
Interpretation scale: 1.00–1.49 Very Low, 1.50–2.49 Low, 2.50–3.49 Moderate, 3.50–4.00 High			

The overall mean score of 2.06 indicates that ECE integration into primary school administration in Kebbi State is low. Record-keeping accuracy was the weakest area (mean=1.87), with many head teachers reporting no standardized forms, no dedicated personnel, and no supervisory requirement for transferring pupil information from ECE to primary one.

Qualitative finding: One LEA officer in Zuru LGA explained:

"We have ECE units on paper. But ask any head teacher to show you the learning progress records of a child who moved from ECE to primary one last year, they cannot. There is no system. Children just walk from one classroom to another: (LEA04, Zuru)

Research Question 2: Difference in Administrative Efficiency between Schools with and Without ECE Units

Research question 2 asked: Is there a statistically significant difference in administrative efficiency between primary schools with functional ECE units and those without?

An independent samples t-test was conducted to compare overall HTAES scores between schools with ECE units (n=236) and schools without ECE units (n=156).

Table 3

Comparison of Administrative Efficiency Scores

School Type	N	Mean HTAES	SD	t-value	df	p-value
With functional ECE unit	236		2.48	0.69	9.87	390 <0.001
Without ECE unit	156		1.53	0.58		

Note: Equal variances not assumed (Levene's test $p < 0.05$)

The difference between the two groups (mean difference = 0.95) is statistically significant ($t(390)=9.87$, $p < 0.001$). Schools with functional ECE units had significantly higher administrative efficiency scores (mean=2.48, SD=0.69)

compared to schools without ECE units (mean=1.53, SD=0.58). The effect size (Cohen's $d = 1.48$) indicates a large practical significance.

Discussion

This study set out to empirically investigate the impact of early childhood education on the administration of primary school programs in Kebbi State, Nigeria. The findings provide strong evidence that ECE integration is associated with significantly better administrative outcomes, but also reveal major implementation gaps.

Finding 1: Low overall level of ECE integration

The overall mean HTAES score of 2.06 (low) confirms the policy-practice gap documented by UBEC (2020) and Obidike & Enemuo (2015). Despite the National Policy on Education (2013) mandate, Kebbi State has not effectively operationalized ECE as an integral part of primary school administration. The weakest area—record-keeping accuracy (mean=1.87)—is particularly concerning because transition records are the administrative linchpin linking ECE to primary instruction. Without such records, each primary one teacher must start from zero, wasting instructional weeks and duplicating effort. This finding aligns with Mohammed (2017), who found similarly poor record-keeping in Birnin Kebbi.

Finding 2: Statistically significant advantage for schools with ECE units

The large, significant difference in administrative efficiency between schools with and without ECE units ($t=9.87$, $p<0.001$, $d=1.48$) is consistent with international evidence from Barnett (2011), Heckman (2017), and the World Bank (2021). However, this study extends that evidence by focusing specifically on administrative indicators (enrollment management, record-keeping, teacher workload, pupil transition) rather than child cognitive outcomes. The finding suggests that ECE is not merely an educational input but an administrative tool that reduces system friction at the primary school level.

Importantly, even schools with ECE units scored only in the "low" to "moderate" range (mean=2.48), indicating that mere presence of an ECE classroom is insufficient. The qualitative data revealed that many ECE units

operate without trained facilitators (63.1%) and without transition records (74.2%). This nuance is critical: it is not ECE per se, but well-integrated, quality ECE that improves administration.

Recommendations

Based on the findings, the following recommendations are offered to policymakers, school administrators, and development partners.

1. Kebbi State SUBEB should revise admission policies to require evidence of at least one year of ECE participation before entry into primary one. A transitional period of two years should be provided for communities without existing ECE infrastructure. This recommendation is supported by the finding that children with even one year of ECE had significantly higher completion rates (78% vs. 61%). Mandate ECE enrollment as a prerequisite for primary one admission
2. KSUBEB should develop, print, and distribute a standardized ECE-to-primary-one transition record form to every school with an ECE unit. Completion of this form should be a monitored performance indicator for head teachers. Digital records and should be piloted in urban LGAs like Birnin Kebbi before rural scale-up. Establish mandatory transition record systems
3. KSUBEB, in collaboration with colleges of education, should conduct a six-month certification program for untrained ECE facilitators (currently 63% of those in position). Concurrently, head teachers should receive a two-day workshop on managing ECE-primary articulation, including record-keeping, enrollment forecasting, and classroom observation. Train all ECE facilitators and head teachers on transition management

Conclusion

This paper has conclusion and made several recommendations with significant and statistical analysis which in line with the current issues of education childhood education in Kebbi state. But is open with any observation and correction most welcome

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