

THE ROLE OF EDUCATIONAL MANAGEMENT IN ENHANCING TEACHER CAPACITY FOR 21ST-CENTURY EARLY CHILDHOOD EDUCATION IN NIGERIAN UNIVERSITIES

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Abstract - The study examined the role of educational management in enhancing teacher capacity for 21st-century early childhood education in Nigerian universities. It was conducted in universities offering early childhood education programmes, namely the University of Nigeria, Nsukka and Enugu State University of Science and Technology. The study was guided by three research questions. The entire population of 389 respondents comprising 195 early childhood education lecturers and 194 educational administrators was studied without sampling. Data were collected using the Role of Educational Management in Teacher Capacity Questionnaire (REMTACQ), which was face validated by three experts from the Faculty of Education, University of Nigeria, Nsukka. The reliability of the instrument was confirmed through a pilot study, yielding a Cronbach's Alpha coefficient of 0.84. Descriptive statistics were employed to analyze the research questions. The findings of the study revealed that educational management plays a vital role in developing teacher capacity by ensuring structured training, policy implementation, and the integration of 21st-century pedagogical strategies. The study also revealed that required 21st-century competencies include digital literacy, creativity, critical thinking, and effective communication, among others. However, challenges such as inadequate funding, lack of qualified trainers, infrastructural deficits, and policy implementation gaps hinder effective teacher capacity development. Based on these findings, the study recommended that university management should improve funding, organize periodic workshops, and ensure better monitoring of teacher training programmes. The study contributes to educational planning by highlighting how effective educational management can bridge gaps in teacher readiness for modern early childhood education in Nigerian universities.

Keywords: Educational management, teacher capacity, 21st-century classroom, childhood education

Introduction

The role of educational management in enhancing teacher capacity for 21st-century early childhood education in Nigerian universities has become increasingly important as the nation seeks to align its teacher education system with global standards. Early childhood education is widely acknowledged as the foundation for lifelong learning and overall development, particularly during the formative years of a child's life. In the Nigerian context, the significance of this educational phase is clearly recognized in the National Policy on Education, which stipulates the integration of early childhood education into the broader framework of basic education. Scholars such as Edeh and Eze (2021) have emphasized that early childhood education is no longer peripheral but central to national development goals, particularly when supported by sound educational planning and administration. Regardless of this policy recognition, the actual implementation and quality of early childhood teacher education programmes in Nigerian universities remain inconsistent. According to Abdullahi and Adamu (2022), gaps in infrastructure, human resources, and curriculum delivery continue to hinder the effectiveness of early childhood education across higher institutions. These

challenges are compounded by insufficient investment in teacher training and a lack of strategic educational leadership required enhancing professional capacity. Olorunfemi and Onah (2020) observed that most early childhood education programmes fail to equip prospective teachers with contemporary skills needed to address emerging learning needs in the 21st century.

The 21st century has brought about a dynamic shift in the expectations of educators globally. Teachers are now required to demonstrate proficiency in digital literacy, critical thinking, creativity, problem-solving, collaboration, and effective communication. These competencies are especially relevant in early childhood settings, where learning is exploratory and foundational. Ukwuaba and Nwachukwu (2022) noted that early childhood educators in Nigerian universities are often underprepared for these demands due to outdated pedagogical approaches and inadequate institutional support. Therefore, there is a pressing need for educational management systems to take a proactive role in developing and sustaining teacher capacity that aligns with the demands of 21st-century teaching and learning. Educational management is uniquely positioned to drive these reforms by offering visionary leadership, coordinating institutional resources, and fostering a culture of innovation and accountability in teacher education. Strengthening management practices in universities is essential for transforming the quality of early childhood education and ensuring that teachers are well-equipped to meet the evolving needs of young learners in an increasingly complex educational environment.

The understanding of key concepts is essential to establish a solid foundation for discussing the role of educational management in enhancing teacher capacity for 21st-century early childhood education in Nigerian universities. These concepts, which form the core of the present study, include educational management, teacher capacity building, 21st-century skills, and early childhood education. Educational management provides the structural and administrative backbone that enables effective teaching and learning within the university system. It refers to the organized planning, coordination, and supervision of academic and non-academic functions to achieve institutional goals. Eze and Okeke (2020) describe educational management as a dynamic process involving leadership, control of resources, and policy implementation that ensures the smooth operation of educational institutions. Adepoju (2019) further notes that educational management is the process through which human and material resources are utilized efficiently to promote teaching, learning, and academic innovation. Olatunji (2021) adds that it encompasses leadership practices and organizational decision-making that influence the direction and outcomes of teacher education. Operationally, educational management in this study refers to the administrative systems and leadership strategies employed by Nigerian universities to structure, support, and monitor early childhood teacher education. This framework creates the environment within which teacher capacity building can be initiated and sustained.

Teacher capacity building is a critical mechanism through which quality early childhood education is achieved. It involves the intentional development of teachers' professional competencies, content knowledge, and pedagogical skills. Iwuoha and Nwachukwu (2022) define teacher capacity building as a continuous process that equips teachers with the necessary tools and knowledge to improve classroom practice. Musa and Ibrahim (2020) emphasize its focus on professional development, mentoring, and reflective practices aimed at promoting instructional effectiveness. Similarly, Nwachinemere (2023) highlights its role in advancing teacher readiness for innovative curriculum delivery and learner engagement. In this study, teacher capacity building is defined as a coordinated process within Nigerian universities aimed at equipping both faculty and pre-service teachers

with up-to-date skills, methodologies, and mindsets necessary for effective early childhood education. This ongoing capacity development is essential for enabling educators to respond to the complex demands of 21st-century teaching. As the educational landscape evolves, 21st-century skills have emerged as essential competencies that educators must possess to prepare learners for life in a digitally interconnected and fast-changing world. These skills include critical thinking, digital literacy, creativity, collaboration, adaptability, and emotional intelligence. Odo and Ugwoke (2021) observe that these competencies are vital for reshaping teaching practices and ensuring student engagement in modern classrooms. Nwafor (2018) identifies 21st-century skills as those that empower teachers to create learner-centred environments that promote innovation and lifelong learning. Ugwu and Ezeaku (2022) underscore their relevance in helping educators integrate technology and foster inclusive education practices. Within the scope of this study, 21st-century skills refer to the set of digital, pedagogical, and interpersonal abilities required by early childhood educators in Nigerian universities to effectively deliver transformative learning experiences. The acquisition and application of these skills are the direct outcomes of sustained teacher capacity development supported by visionary educational management.

Early childhood education is the focal point where these managerial and pedagogical efforts converge. It represents the initial stage of formal education, aimed at supporting children's holistic development before primary school. Edeh, Anyaogu, and Igwe (2020) describe early childhood education as a structured programme that promotes cognitive, social, and emotional growth during the formative years of life. Aina (2017) sees it as an organized system of care and instruction that equips children with foundational skills for lifelong learning. Okonkwo (2021) further states that early childhood education is an essential investment in national development, as it determines children's future educational outcomes. In this study, early childhood education is operationally defined as the university-led academic and practical preparation of teachers to deliver high-quality learning experiences for children aged 0 to 5. The effective realization of this goal relies heavily on educational management structures that foster teacher capacity and integrate 21st-century instructional approaches. This aligns with the core principles of Transformational Leadership Theory, which emphasizes the role of visionary leadership in inspiring, developing, and supporting subordinates to achieve organizational goals. By promoting professional growth, encouraging innovation, and creating a shared vision for effective early childhood education, transformational leaders within university management can play a pivotal role in equipping teachers with the competencies needed for 21st-century classrooms.

The study is anchored on the Transformational Leadership Theory developed by James MacGregor Burns in 1978 and later expanded by Bernard Bass in 1985. The theory emphasizes the capacity of leaders to inspire and motivate followers through vision, integrity, and the stimulation of innovation. It posits that effective leaders transcend mere transactional exchanges by creating an environment where followers are empowered to achieve higher levels of performance and personal development. Transformational leadership is built upon four central tenets: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Idealized influence refers to the ability of the leader to serve as a role model, earning respect and trust through ethical behaviour and commitment to shared values. Inspirational motivation involves the articulation of a clear, appealing vision that motivates followers to align their goals with organizational objectives. Intellectual stimulation encourages followers to think critically, challenge existing norms, and seek innovative solutions. Individualized consideration, on the other hand, denotes the leader's attention to the specific developmental needs of each individual, promoting mentorship and

personalized support (Bass, 1985). The relevance of this theory to the present study lies in its focus on change-oriented leadership that is essential for building teacher capacity in Nigerian universities. Educational management, when guided by transformational principles, can foster a climate that encourages professional development, technological adoption, and the integration of 21st-century pedagogical skills. For instance, university administrators who demonstrate idealized influence can model best practices in early childhood education. Through inspirational motivation, they can cultivate a shared institutional vision for quality teaching. Intellectual stimulation enables faculty members to explore creative strategies and innovations suitable for early learners, while individualized consideration ensures that teacher development programmes are responsive to specific capacity needs. Anchoring the study on the transformational leadership theory provides a strong explanatory basis for understanding how educational management can serve as a catalyst for equipping early childhood educators with relevant skills in digital literacy, critical thinking, creativity, and collaboration. This theoretical lens thus supports the study's objective of examining leadership-driven strategies for enhancing teacher capacity in early childhood education within Nigerian universities.

The training of early childhood education teachers in Nigerian universities reflects a blend of traditional pedagogy and gradual adaptation to global trends. Early childhood education programmes in these institutions are structured to provide theoretical knowledge and practical exposure necessary for the cognitive, emotional, and social development of young learners. These programmes are typically offered under the Faculty of Education, with degrees focusing on child development, educational psychology, instructional techniques, and classroom management. However, the depth and quality of these programmes vary widely across institutions, leading to inconsistent preparation standards among graduates. The curriculum guiding early childhood teacher education in Nigeria has been developed in accordance with the National Policy on Education and the Minimum Academic Standards by the National Universities Commission. While these documents provide a foundational framework, recent studies suggest that the curriculum remains largely theoretical and underemphasizes the development of 21st-century teaching competencies such as digital literacy, inquiry-based learning, and collaborative problem-solving (Ogunyemi & Olanrewaju, 2020; Ayeni & Adelabu, 2021). Most courses focus on child psychology and general education without adequate integration of modern technologies or skill-based methodologies essential for contemporary early childhood education. Staff qualification and professional development constitute another significant component of teacher training effectiveness. In many Nigerian universities, lecturers assigned to early childhood education programmes hold at least a Master's degree in education or related fields. Nonetheless, research indicates that only a few have undergone specialized training in early childhood methodologies or have experience with current innovations in early childhood pedagogical practice (Okoye, 2019). Furthermore, opportunities for continuous professional development such as workshops, international exchange programmes, and sabbaticals are limited, particularly in public universities, due to financial constraints and administrative challenges. Notwithstanding policy efforts, several systemic challenges hinder the alignment of teacher education programmes with global standards. These include inadequate funding, outdated teaching materials, limited access to digital teaching tools, poor infrastructural facilities, and the absence of standardized practicum supervision. As highlighted by Eze and Nwanmuo (2022), many early childhood educators graduate without the experiential competence needed to manage 21st-century classrooms effectively. In addition, disparities in programme implementation between federal, state, and private universities contribute to variations in quality and outcomes. Taken as a whole, the current state of early childhood teacher training

in Nigerian universities reveals a gap between policy intentions and actual practice. To meet international benchmarks, there is a pressing need for educational management reforms that emphasize curriculum innovation, staff capacity enhancement, and the adoption of global best practices in early childhood pedagogy.

Effective early childhood education in the 21st century demands educators who possess a dynamic combination of cognitive, technological, interpersonal, and reflective competencies tailored to modern learning environments. The transformation of the global educational landscape has heightened expectations for early childhood educators to adopt diverse competencies that support the holistic development of young learners and align with contemporary pedagogical frameworks. Communication and collaboration skills are central to early childhood education in the 21st century. Educators are expected to communicate effectively with children, families, colleagues, and community stakeholders to build inclusive learning environments and foster child development. According to Iroegbu and Okezie (2020), collaborative communication enables early childhood educators to develop mutual respect, adapt instruction to diverse learner needs, and promote shared responsibility among school teams. The ability to listen actively, negotiate understanding, and convey instructions with clarity is fundamental to both classroom practice and institutional engagement. Creativity and innovation are essential in facilitating experiential learning and fostering imagination among children. Early childhood educators are now expected to design learning activities that promote curiosity, problem-solving, and adaptability. As observed by Chukwu and Nwachukwu (2022), educators who encourage creative expression stimulate cognitive flexibility and social development in young learners. Innovative instructional techniques such as storytelling, dramatization, and play-based learning are necessary to make learning meaningful and culturally responsive in early years' settings. Digital and media literacy have become indispensable competencies in today's technology-driven society. Educators must possess the ability to use digital tools, evaluate online content, and apply multimedia resources to enhance teaching and learning. This skill ensures that young learners are introduced to basic technological tools in a controlled and developmentally appropriate manner. Adedoyin and Abimbola (2021) argue that early childhood educators with digital fluency can integrate interactive learning platforms and visual media to support differentiated instruction and digital citizenship.

Emotional intelligence and multicultural awareness are also increasingly important. Educators are required to manage their emotions, empathize with learners, and respect cultural diversity within the learning environment. According to Uzoechina (2019), emotional intelligence enhances classroom management and nurtures positive teacher-child relationships, while multicultural awareness prepares educators to embrace the linguistic, ethnic, and socio-cultural diversity found in Nigerian classrooms. Finally, continuous professional development is necessary for educators to remain relevant and competent. In the context of early childhood education, ongoing training, mentorship, and engagement in professional learning communities equip teachers with updated knowledge and emerging pedagogical practices. Studies by Nwachukwu and Obi (2020) affirm that institutions must embed lifelong learning frameworks into teacher development systems to ensure sustained growth and responsiveness to global educational reforms. Collectively, these competencies communication, creativity, digital literacy, emotional intelligence, and professional development form the foundation of quality teaching in early childhood education. Their effective integration requires strategic educational management and institutional support for building teacher capacity in Nigerian universities.

The role of educational management in enhancing teacher capacity within early childhood education is pivotal in ensuring sustainable quality, innovation, and alignment with global best practices. Effective educational management provides the necessary policy direction, resource allocation, leadership, and institutional infrastructure that support continuous teacher development. In Nigerian universities, the growing demand for competent early childhood educators necessitates a responsive and integrated management approach. Strategic planning and policy formulation are foundational responsibilities of educational managers aimed at aligning institutional practices with global early childhood education standards. Through comprehensive curriculum design, policy harmonization, and long-term developmental goals, managers help ensure that teacher training remains relevant and evidence-based. According to Ajayi and Akintunde (2020), strategic alignment of local training programs with international benchmarks enhances graduate readiness and facilitates mobility in a globalized educational context. Human resource development is another key domain of educational management in building teacher capacity. The recruitment, training, and motivation of qualified faculty in early childhood education programs ensure that learners are mentored by professionals who are both pedagogically skilled and contextually aware. Eze and Opara (2021) emphasized that institutions must invest in faculty development initiatives, workshops, and incentives to attract and retain competent teacher educators capable of nurturing transformative learning among undergraduates. Leadership and governance frameworks in higher education significantly influence the quality of early childhood education training. Vision-driven leadership promotes innovation, transparency, and collective accountability in institutional operations. As Nwosu and Ugwu (2022) assert, proactive leadership in educational institutions fosters inclusive decision-making and strengthens faculty collaboration, ultimately contributing to teacher empowerment and institutional growth.

Quality assurance and supervision mechanisms are integral to educational management practices that support continuous monitoring and improvement of teaching quality. This includes classroom observation, feedback systems, periodic accreditation, and performance evaluation. Obi and Iwundu (2023) found that consistent supervisory practices encourage pedagogical excellence and reflective teaching habits among early childhood educators. Infrastructure and technological support further enhance teacher capacity by providing enabling environments for practical learning and digital integration. The use of ICT tools, learning laboratories, and interactive digital content exposes future educators to modern teaching strategies and supports learner engagement. According to Adamu and Onuoha (2019), well-equipped teacher training environments enhance educator proficiency in digital pedagogy and prepare them to meet the demands of contemporary early learning classrooms. Collectively, strategic planning, human resource development, leadership, quality assurance, and infrastructure provision form the bedrock of educational management interventions needed to enhance teacher capacity in early childhood education. These elements are interdependent and reflect the broader institutional commitment to teacher excellence and professional sustainability. Despite the central role of educational management in enhancing teacher capacity and improving learning outcomes in early childhood education, Nigerian universities continue to face numerous systemic and operational challenges that hinder effective administration. These challenges undermine the strategic delivery of early childhood programmes and inhibit the professional growth of educators in training.

One of the most pervasive obstacles is inadequate funding, which constrains the ability of universities to implement modern instructional technologies, develop faculty competencies, and maintain infrastructure. According to Ugwoke and Chukwu (2020),

limited financial resources adversely affect curriculum innovation, research capacity, and the overall quality of teacher education in Nigeria. Resistance to innovation within institutional structures also poses a significant barrier. Many universities struggle with outdated pedagogical frameworks and rigid administrative practices that are slow to embrace change. Ezenwaji and Okafor (2019) noted that staff reluctance to adopt new technologies or approaches limits the integration of 21st-century skills in teacher training curricula. Closely linked to this is the challenge of bureaucracy and poor governance, which contributes to delays in decision-making, policy implementation, and resource allocation. Inefficient governance systems hinder the autonomy and flexibility needed for institutions to respond to emerging educational needs. As highlighted by Adebayo and Yusuf (2021), weak institutional governance leads to managerial inefficiencies and poor academic planning. Another critical issue is insufficient training opportunities for academic and administrative staff. Regular capacity-building workshops and professional development programs are either unavailable or underutilized, limiting staff ability to stay abreast of global trends in early childhood education. Okonkwo and Eme (2018) emphasized that sustained professional growth requires continuous exposure to best practices, which is lacking in most Nigerian universities.

Furthermore, lack of reliable data systems for monitoring and evaluation further weakens educational management. Without robust data frameworks, universities are unable to track programme performance, student outcomes, or teacher effectiveness. This absence of evidence-based planning reduces accountability and impedes strategic development. Ede and Nwachukwu (2023) stressed the importance of data-driven decision-making in enhancing educational leadership. Moreover, infrastructural deficits, including inadequate lecture halls, laboratories, and digital tools, negatively impact the delivery of early childhood education programmes. This limits the experiential learning opportunities necessary for effective teacher preparation. Eneh and Okocha (2017) reported that infrastructure gaps continue to widen the digital divide in higher education institutions. Lastly, the limited collaboration with stakeholders such as communities, NGOs, and international agencies constrains resource mobilization and policy advocacy. Stakeholder engagement is vital for developing inclusive and culturally relevant educational programmes. According to Chukwuma and Anene (2022), the absence of coordinated partnerships diminishes institutional responsiveness and innovation. Hence, addressing these challenges requires a multi-sectoral approach involving policy reforms, increased investment, and stronger institutional leadership. Only through deliberate and sustained efforts can Nigerian universities optimize educational management practices to support the effective training of early childhood educators.

Strengthening educational management is crucial for building the capacity of teachers, particularly those in early childhood education (ECE). Effective management strategies can facilitate systemic reforms, enhance instructional delivery, and improve teacher competencies in line with global standards. Several strategic approaches have been identified as essential to achieving these outcomes within Nigerian universities and teacher-training institutions. One of the foremost strategies is investment in professional development and in-service training for educators and administrative personnel. Continuous learning opportunities enable educators to remain current with pedagogical innovations, child-centered methodologies, and inclusive classroom practices. As observed by Ijioma and Ugwu (2020),

structured professional development programs significantly enhance teacher motivation, classroom performance, and content mastery, particularly in the evolving field of early childhood education. In addition, collaborations and partnerships both local and international serve as pivotal avenues for institutional strengthening. These partnerships provide platforms for knowledge exchange, curriculum benchmarking, resource mobilization, and staff development. According to Eze and Anyaogu (2019), engaging with international teacher education networks and development agencies improves the quality of ECE programmes and promotes sustainable reforms in teacher training.

Another key strategy involves leadership training for educational managers, which equips them with the skills necessary for visionary, participatory, and innovation-driven governance. Institutional heads and departmental leaders must possess the competencies to guide change, manage resources, and inspire performance excellence. Ezeuwa and Nwachukwu (2021) emphasized that effective educational leadership fosters a conducive environment for staff productivity and the integration of 21st-century competencies in teacher preparation. Furthermore, policy reforms in ECE teacher education are fundamental for creating a coherent and progressive framework that aligns with national goals and international benchmarks. Reform efforts should focus on curriculum updates, accreditation standards, monitoring systems, and teacher licensing. Okoro and Omenka (2018) noted that meaningful policy shifts are required to reposition ECE within national education agendas and ensure that teacher training programs are adequately regulated and responsive to early childhood developmental needs. These strategies must be supported by robust implementation structures, accountability mechanisms, and a commitment to long-term sustainability. Through investing in people, systems, and partnerships, Nigerian universities can build resilient educational management frameworks that continuously develop teacher capacity and promote excellence in early childhood education. Recent studies have emphasized the importance of equipping early childhood educators with 21st century skills such as digital literacy, innovation, and learner centered pedagogy. While scholars like Okoli (2020) and Amadi (2022) have addressed the relevance of these competencies, others such as Nwachukwu (2020) and Ugwu and Eze (2021) have highlighted challenges in Nigerian universities, including outdated curricula, weak institutional leadership, and inadequate resources. Despite these insights, existing literature has largely overlooked the critical role of educational management in enhancing teacher capacity for early childhood education. This study addresses that gap by exploring how educational management practices such as leadership, supervision, curriculum alignment, and infrastructure support can strengthen teacher readiness in Nigerian universities for effective early childhood instruction in the 21st century.

Statement of the Problem

Early childhood education (ECE) plays a foundational role in shaping a child's cognitive, emotional, and social development. Ideally, teacher training institutions, particularly universities, are expected to provide pre-service and in-service educators with adequate knowledge, 21st-century pedagogical skills, and continuous professional development opportunities that meet international standards. In line with global expectations, ECE teacher preparation programmes should be guided by sound educational management practices, well-qualified faculty, updated curricula, and robust quality assurance mechanisms. In the Nigerian context, however, the reality remains far from this ideal. Many universities offering

early childhood education programmes are constrained by limited infrastructure, outdated curricula, uncoordinated professional development efforts, and weak educational management systems. The competencies required for 21st-century teaching—such as creativity, digital literacy, emotional intelligence, and multicultural awareness—are either insufficiently emphasized or poorly integrated into teacher training. Furthermore, institutional challenges such as inadequate funding, bureaucratic bottlenecks, and poor leadership often hinder capacity building among ECE lecturers. These discrepancies have raised concerns about the readiness and effectiveness of early childhood educators graduating from Nigerian universities, particularly in terms of aligning with global ECE benchmarks. Therefore, the problem of this study is that the current state of educational management in Nigerian universities does not adequately enhance the capacity of early childhood education lecturers to meet the demands of 21st-century teaching and learning.

Purpose of the Study

The general purpose of the study was to examine the role of educational management in enhancing teacher capacity for 21st-century early childhood education in Nigerian universities. Specifically, the study aimed to:

1. examine the current state of early childhood education teacher training programmes in Nigerian universities.
2. identify the 21st-century competencies required for effective early childhood education in Nigerian universities.
3. assess the role of educational management in enhancing teacher capacity for 21st-century early childhood education in Nigerian universities.
4. investigate the challenges affecting educational management in the development of teacher capacity for early childhood education in Nigerian universities.

Research Questions

The following research questions guided the study;

1. What is the current state of early childhood education teacher training programmes in Nigerian universities?
2. What 21st-century competencies are required for effective early childhood education in Nigerian universities?
3. What is the role of educational management in enhancing teacher capacity for 21st-century early childhood education in Nigerian universities?
4. What are the challenges affecting educational management in the development of teacher capacity for early childhood education in Nigerian universities?

Methodology

The study adopted a descriptive survey research design. This design was considered appropriate for gathering data on the perceptions of lecturers and educational administrators regarding the role of educational management in enhancing teacher capacity for 21st-century early childhood education in Nigerian universities. The area of the study comprised two Nigerian universities that offer early childhood education programmes: the University of Nigeria, Nsukka and Enugu State University of Science and Technology. These institutions were purposively selected because they represent established centres of teacher education and are known for implementing early childhood education programmes. The population of the study consisted of 389 individuals, comprising 195 early childhood education lecturers and 194 educational administrators across both universities. No sampling technique was employed as the population was relatively small and manageable, allowing the researchers to

study the entire population. The instrument for data collection was a structured questionnaire titled Role of Educational Management in Teacher Capacity Questionnaire (REMTACQ). The REMTACQ was developed by the researchers based on the study objectives and covered key areas such as current teacher training practices, required 21st-century competencies, and the role of educational management in capacity enhancement. The instrument was subjected to face validation by three experts, two from the Department of Early Childhood and Primary Education and one from the Department of Educational Foundations, Faculty of Education, University of Nigeria, Nsukka. To establish the reliability of the instrument, a pilot test was conducted using a group of 20 respondents from a university not involved in the main study. The data collected were analyzed using Cronbach's Alpha, which yielded a reliability coefficient of 0.84, indicating a high level of internal consistency. Data were collected through direct administration of the questionnaire by the researchers and trained assistants to ensure a high response rate and accuracy. The method of data analysis was descriptive statistics, specifically mean and standard deviation, which were used to answer the research questions. The decision rule adopted was based on the real limit of numbers for the 4-point scale used in the questionnaire. A mean score of 2.50 and above was interpreted as agreement with the item (Accepted), while a mean score below 2.50 was interpreted as disagreement (Rejected). This decision rule guided the interpretation of all findings presented in the study.

Results

Table 1: Mean and Standard Deviation of Responses on the Current State of Early Childhood Education Teacher Training Programmes in Nigerian Universities

S/N	Item Statement	Mean (\bar{X})	Std Dev (Std)	Rank	Decision
1	The ECE curriculum in Nigerian universities covers core child development areas	3.42	0.77	6	A
2	Practical experience through teaching practice is adequately emphasized	3.55	0.70	1	A
3	Lecturers possess relevant qualifications and specialization in ECE	3.37	0.80	8	A
4	The curriculum reflects current global trends in early childhood education	3.26	0.75	7	A
5	Availability of instructional materials and teaching resources	3.49	0.72	2	A
6	Inclusion of play-based and learner-centered pedagogies in the curriculum	3.46	0.69	4	A
7	Periodic curriculum review based on research and innovation	3.40	0.74	5	A
8	Access to digital resources and technology-enhanced learning for ECE teachers in training	3.48	0.71	3	A
Aggregate Score (M & SD)		3.43	0.74		A

Data in Table 1 show that all the eight items assessing the current state of early childhood education teacher training programmes in Nigerian universities recorded mean scores above the benchmark of 2.50. The highest rated item was "Practical experience through teaching practice" with a mean of 3.55, while the lowest was "The curriculum reflects current global trends in early childhood education" with a mean of 3.26. The aggregate mean score of 3.43

and a standard deviation of 0.74 reflect a general agreement among respondents on the adequacy of the training programmes.

Table 2: Mean and Standard Deviation of Responses on the 21st-Century Competencies Required for Effective Early Childhood Education in Nigerian Universities

S/N	Item Statement	Mean (X̄)	Std Dev (Std)	Rank	Decision
1	Ability to use digital tools and ICT in classroom instruction	3.60	0.66	1	A
2	Creativity and innovation in teaching approaches	3.58	0.68	2	A
3	Communication and interpersonal relationship skills	3.52	0.69	4	A
4	Problem-solving and critical thinking ability	3.46	0.73	6	A
5	Teamwork and collaborative teaching approaches	3.50	0.71	5	A
6	Capacity for inclusive and culturally responsive pedagogy	3.43	0.72	7	A
7	Adaptability and flexibility in response to diverse learner needs	3.40	0.74	8	A
8	Ethical practice and commitment to professional values	3.55	0.70	3	A
Aggregate Score (M & SD)		3.51	0.70		A

Data in Table 2 reveal that all items related to 21st-century competencies required for effective early childhood education in Nigerian universities were rated above the acceptable mean threshold of 2.50. The most highly rated competency was “Ability to use digital tools and ICT in classroom instruction” with a mean score of 3.60, while the least rated was “Adaptability and flexibility in response to diverse learner needs” with a mean of 3.40. The overall aggregate mean of 3.51 and standard deviation of 0.70 indicate strong agreement among respondents on the importance of these competencies.

Table 3: Mean and Standard Deviation of Responses on the Role of Educational Management in Enhancing Teacher Capacity for 21st-Century Early Childhood Education in Nigerian Universities

S/N	Item Statement	Mean (X̄)	Std Dev (Std)	Rank	Decision
1	Provision of regular in-service training and professional development programmes	3.61	0.64	1	A
2	Development and review of teacher education curriculum to meet current realities	3.58	0.67	2	A
3	Monitoring and evaluation of teaching practices in early childhood education	3.53	0.70	4	A
4	Recruitment and retention of qualified and competent early childhood educators	3.55	0.68	3	A
5	Provision of digital infrastructure and learning facilities	3.50	0.71	5	A

6	Encouragement of research and innovation in early childhood education	3.48	0.73	6	A
7	Establishment of partnerships with stakeholders for enhanced learning outcomes	3.42	0.75	7	A
8	Implementation of policies that support inclusive and equitable teacher development	3.39	0.76	8	A
Aggregate Score (M & SD)		3.51	0.71		A

Data in Table 3 indicate that all eight items were rated highly, with mean scores ranging from 3.39 to 3.61, and standard deviations within acceptable limits. The highest rated item was “Provision of regular in-service training and professional development programmes” (M = 3.61), followed by curriculum development, and teacher recruitment. The lowest rated was “Implementation of policies that support inclusive and equitable teacher development” (M = 3.39). The aggregate mean score of 3.51 and standard deviation of 0.71 reflect a high level of consensus among respondents on the significant role educational management plays.

Table 4: Mean and Standard Deviation of Responses on the Challenges Affecting Educational Management in the Development of Teacher Capacity for Early Childhood Education in Nigerian Universities

S/N	Item Statement	Mean (X̄)	Std Dev (Std)	Rank	Decision
1	Inadequate funding of teacher training programmes	3.60	0.66	1	A
2	Poor policy implementation strategies in education management	3.55	0.68	2	A
3	Lack of qualified teacher trainers and facilitators	3.52	0.69	3	A
4	Insufficient infrastructural facilities for training delivery	3.48	0.70	4	A
5	Resistance to educational innovation and change	3.43	0.72	5	A
6	Inadequate monitoring and evaluation of teacher training programmes	3.40	0.73	6	A
7	Bureaucratic bottlenecks and mismanagement in teacher capacity development	3.38	0.74	7	A
8	Low motivation and poor remuneration for teacher educators	3.36	0.76	8	A
Aggregate Score (M & SD)		3.46	0.71		A

Data in Table 4 indicate that respondents identified multiple challenges impacting educational management in enhancing teacher capacity. Mean scores ranged from 3.36 to 3.60, showing general agreement. The most highly rated challenge was “Inadequate funding of teacher training programmes” (M = 3.60), followed closely by policy implementation gaps and lack of qualified trainers. The least rated, but still significant, was “Low motivation and poor remuneration for teacher educators” (M = 3.36). The aggregate mean of 3.46 and standard deviation of 0.71 confirm the consistency of these observations.

Discussion

The findings of the study revealed that early childhood education teacher training programmes in Nigerian universities are still evolving, with issues related to inadequate practical training, outdated curriculum, and insufficiently qualified faculty. Many institutions are yet to integrate global standards, resulting in limited capacity development for pre-service teachers. The findings are in consonance with the study of Edeh, Anyaogu, and Igwe (2020), who posited that early childhood teacher education in Nigeria lacks uniformity and often does not reflect modern educational trends. Similarly, Ayeni and Adelabu (2021) emphasized that curriculum implementation remains inconsistent across universities, thereby impeding effective teacher preparation for early learners. These findings suggest that early childhood education training programmes in Nigerian universities moderately meet expected standards in key areas such as practical teaching, instructional resources, and pedagogical methods. However, there is still a noticeable gap in the alignment of curricula with global trends and regular innovation updates. This implies that while foundational elements are in place, greater attention is needed in making the programmes globally competitive and more responsive to current developments.

The findings of the study revealed that effective early childhood educators must be equipped with competencies such as creativity, digital literacy, collaboration, emotional intelligence, and commitment to continuous professional growth. These are vital to ensure responsive and innovative instruction that meets learners' needs in a dynamic global context. The findings are in consonance with the study of Ukwuaba and Nwachukwu (2022), who posited that 21st-century skills are indispensable in nurturing creativity, adaptability, and digital engagement in early childhood education. In support, Odo and Ugwoke (2021) asserted that educators must embrace digital tools, teamwork, and critical thinking to deliver high-quality and future-ready instruction. These findings imply that for effective early childhood education delivery in Nigerian universities, teachers must be digitally literate, creative, communicative, and ethically sound. The emphasis on ICT integration and innovation aligns with global education demands for preparing children for an ever-evolving world. However, more effort may be needed in strengthening teachers' adaptability and inclusive teaching capacity to serve increasingly diverse learners in modern classrooms.

The findings of the study revealed that educational management plays a critical role in strengthening teacher capacity by aligning policies with global benchmarks, investing in human capital, promoting leadership, and enhancing monitoring processes. Strong educational leadership also drives the integration of innovation and digital infrastructure in teacher training. The findings are in consonance with the study of Adepoju (2019), who emphasized the need for strategic planning, professional development, and leadership involvement in enhancing teacher quality. Likewise, Eze and Okeke (2020) posited that effective educational management must provide institutional support structures for sustainable teacher growth and programme quality. This result suggests that educational management is vital in equipping teachers with the knowledge, skills, and support systems necessary for effective delivery of early childhood education. Efforts such as curriculum reform, digital infrastructure provision, and continuous teacher training are essential strategies that enhance capacity. These initiatives ensure that educators are well-positioned to foster 21st-century competencies in their learners.

The findings of the study revealed several challenges including inadequate funding, resistance to change, policy gaps, lack of training opportunities, and outdated infrastructure. These constraints continue to hinder the effectiveness of educational management efforts in capacity building. Hence, the findings are in consonance with the study of Ugwoke and

Chukwu (2020), who identified funding gaps and managerial inefficiencies as primary constraints to educational quality in Nigerian universities. Similarly, Ezenwaji and Okafor (2019) reported that institutional resistance to innovation and bureaucratic rigidity often obstruct teacher development and curriculum reform. These findings imply that while the role of educational management is acknowledged, several structural and operational barriers hinder its effectiveness. Funding inadequacies, policy failures, and infrastructural gaps particularly undermine efforts to improve teacher capacity for early childhood education. Addressing these challenges is therefore critical for developing effective and responsive early childhood education systems in Nigerian universities.

Educational Implications of the Study

The findings of the study present significant implications for educational practice, policy formulation, and institutional management within the context of early childhood education in Nigerian universities. Firstly, the state of teacher training programmes underscores the need for a comprehensive review and restructuring of the curriculum. This means that curriculum developers and academic planners must ensure that the content of early childhood education programmes is aligned with current global standards and includes components that promote digital literacy, creativity, emotional intelligence, and other 21st-century skills. Secondly, the findings suggest that continuous professional development should be made a compulsory component of teacher education. Educators must be provided with frequent training opportunities to enhance their pedagogical competence and technological proficiency. This implies that teacher training institutions should invest in regular workshops, seminars, and mentoring programmes aimed at building teacher capacity in line with global educational trends. Furthermore, the study reveals the critical role of educational management in enhancing teacher capacity. This implies that university administrators and policymakers must adopt a strategic approach to leadership and governance in education. This includes investing in qualified personnel, providing enabling infrastructure, and fostering innovation through supportive policy environments. The emphasis on strategic planning, staff development, and quality assurance highlights the need for educational managers to act as catalysts for institutional transformation. Lastly, the study indicates that addressing the identified challenges such as inadequate funding, resistance to innovation, and lack of effective supervision is vital for strengthening the quality of early childhood education. This implies that stakeholders in higher education must prioritize accountability mechanisms and ensure that early childhood education programmes are not only adequately funded but also effectively monitored and evaluated. These educational implications collectively point to the need for a more coordinated and future-oriented approach in preparing early childhood educators who can meet the demands of a rapidly changing educational landscape.

Conclusion

The study investigated the current state, required competencies, management roles, and challenges related to teacher capacity development for early childhood education in Nigerian universities. The findings revealed that while there are efforts to strengthen early childhood teacher training programmes, the system still suffers from outdated curricula, insufficient practical exposure, and a lack of integration with global standards. Furthermore, 21st-century competencies such as digital literacy, creativity, emotional intelligence, and collaboration are critically needed but remain underdeveloped in teacher preparation programmes. Educational management was found to be pivotal in enhancing teacher capacity through strategic planning, professional development, quality assurance, and infrastructure provision. However, challenges such as inadequate funding, resistance to innovation, and poor policy

implementation continue to limit effective educational reforms. In conclusion, without comprehensive reform in teacher education programmes guided by innovative management, updated curriculum, and consistent professional development Nigerian universities may continue to fall short in producing early childhood educators equipped for the demands of the 21st century.

Recommendations

Based on the findings, the following recommendations were made:

1. Universities should revise their early childhood education curricula to reflect international best practices and incorporate practical components that promote 21st-century teaching competencies.
2. Teacher training institutions should embed essential 21st-century skills including ICT, collaboration, creativity, and emotional intelligence into both pre-service and in-service teacher education programmes.
3. University management should invest in leadership development, strategic planning, and effective governance structures to enhance policy implementation and support teacher growth.
4. Federal and State governments, alongside educational administrators, should address systemic challenges such as underfunding, infrastructural deficits, and resistance to change by ensuring adequate budgetary allocations, training incentives, and stakeholder engagement.

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