

Early Childhood Care and Education in the Digital Age: Emerging Opportunities and Challenges

Saminu Alhaji Inuwa¹

07060773854

saminuinuwacollege@gmail.com

Sadiya Muhammad¹

07030390888

umarsadiya89@gmail.com

¹Department of Educational Psychology, Sa'adatu Rimi College of Education Kumbotso, Kano.

Abstract.

The digital age has brought about significant changes in the way we live, work, and learn. Early childhood care education (ECCE) is no exception, with technology increasingly being used to support young children's learning and development. This paper explores. A brief history of early childhood education in Nigeria, Concept of Early Childhood Care and Education, the emerging opportunities and challenges in ECCE in the digital age, highlighting the potential benefits and drawbacks of technology integration in ECCE settings. Coming to a conclusion about the emerging opportunities and offering recommendations about the paramount benefits.

Keywords: Early Childhood, Digital Age, Technology

Introduction.

Early years in life are very crucial to the formation of intelligence, personality and social behavior of a child. The year before a child reaches Kindergarten are among the most critical in his or her life to influence learning. That is why modern societies show serious concern for the education of their young ones by providing needed support to prepare them to succeed later in school (Ejeh, 2006). It is common practice in most societies to make provision for early childhood education programs of various sorts for children below the official school-going age (usually 6years) mainly to prepare them for education in primary schools (Obidike, 2012). The Federal Government of Nigeria recognizes the importance of early childhood education in Nigeria and as a result it was given prominence in the National Policy of Education (FRN, 2004) as one of the programs in the Nigerian educational system. Bagudo (2008), posited that reports across the globe revealed that an estimated figure of one hundred million children, struggle daily for survival in villages and cities, and are exposed to the risks of hunger, poverty, disease, illiteracy and abuses. In support of this view, Mahuta (2007) stresses that the need to address the problems and salvage these children and the next generation of children from these menace, has necessitated the programme of Early Childhood Care Development and Education (ECCDE). Mahuta (2007) also stated that the aim of ECCDE is to foster the proper development of the children, identify and address their problems, harness their potentials, mould their character, enhance their learning,

equip them for life, so that their actions are channeled towards positive personal, communal and global development in all ramifications of life.

ECCE as a critical foundation for a child's future success, technology can play a significant role in supporting young children's learning and development. The digital age has brought about new opportunities for ECCE, including access to a wide range of digital resources, tools, and platforms. However, it also raises important questions about the potential impact of technology on young children's learning and development. In Nigeria ECCE started as a Sunday school program during the colonial era, teaching them literacy skills and bible stories. This was done to preserve and provide basic education to the children of colonial officials and children who have been converted by missionaries, hence, early years in life are the most important to the formation of intelligence, personality and social behavior of a child.

Historical Perspective of Early Childhood Education in Nigeria

In Nigeria, organized education of the child below primary school age did not receive official recognition until very recently, it received the attention it deserved. The concept of infant schools was introduced in Nigeria by the missionaries in the early 20th century when such schools were set up in the Western and Eastern regions of Nigeria. Early Childhood education in the form of nursery school or pre-primary education as we know it today in Nigeria is largely a post-colonial development. The semblances of it during the colonial era were the kindergarten and infant classes, which consisted of groups of children considered not yet ready for primary education. As groping for instruction in schools was not age-based during that period, some children aged six or even more, could be found in some of the infant classes (Tor-Anyiin, 2008). With the phasing out of infant classes, some parents began to feel the need for nursery schools. During that period, (pre-independence) all efforts for provision of early childhood education were confined to the voluntary sector and received little or no support from the government (TorAnyiin, 2008). It was for the first time in 1977 with the introduction of National Policy on Education by the then military government of Nigeria that the importance and need for early childhood education was given official recognition and linked with the child's educational performance in primary school. Gradually, early childhood institution stayed, and by 1985, Nigeria had about 4200 early childhood educational institutions. While by 1992 the number increased to about 8,300 (Federal Government of Nigeria/UNICEF 1993).

Nowadays, early childhood educational institutions are located in various places and buildings campuses of universities and Colleges, premises of some industries and business organizations, church premises, residential buildings with unprecedented expansion owing to the high demand for early childhood care and education by parents (Ejeh, 2006).

Concept of Early Childhood Care and Education

Maduwesi (1999) refers to early childhood care and Education as the education offered to children who have not yet reached the statutory age of beginning primary school. He further maintained that it is a semi-formal education arrangement, usually outside home where by young children from about the age of 3 years are exposed through play like activities in a group setting through mental, social and physical learning suited to their developmental stages, until the mandatory age of government approved formal schooling. FRN (2004) refers to early childhood

care and Education (pre-primary education) as an education given in an educational institution to children aged 3-5 plus prior to their enrollment in the primary school. Four (4) Objectives of Early Childhood Education according to FRN (2004) are: 1) to effect a smooth transition from home to school 2) to prepare the child for the primary level of education 3) to provide adequate care and supervision for the children while their parents are at work (in the farm, in the market or offices) 4) to inculcate social norms, values and the spirit of inquiry as well as creativity through the exploration of nature, the environment, art, music and playing with toys and so on. 5) to Develop a sense of cooperation and team spirit 7) to learn good habits, especially good health habits and teach the rudiments of numbers, letters, colors, shapes, forms and so on through play.

The integration of technology in early childhood care education (ECCE) has brought about several emerging opportunities, including: **Personalized Learning** Technology can be used to personalize learning experiences for young children, tailoring instruction to meet their individual needs and interests (Burnett, 2010). This can be achieved through: - Adaptive learning software - Learning apps - Online educational platforms **Access to Digital Resources** The internet and digital libraries provide access to a vast array of educational resources, including: - E-books - Videos - Educational apps - Online learning platforms **Enhanced Engagement** Technology can be used to enhance young children's engagement and motivation, making learning more fun and interactive (Prensky, 2001). This can be achieved through: - Ramification - Interactive simulations - Virtual field trips **Improved Assessment and Feedback** Technology can be used to assess young children's learning and provide immediate feedback, helping to identify areas where they need additional support (Pellegrini & Galvin, 2015). This can be achieved through: - Online assessments - Digital portfolios - Learning analytics **Increased Accessibility** Technology can increase accessibility for young children with disabilities, providing them with equal opportunities for learning and development (Warschauer, 2003). This can be achieved through: - Assistive technology - Accessible digital resources - Inclusive learning platforms Conclusion the emerging opportunities in ECCE offer a promising future for young children's learning and development. By leveraging technology, educators and policymakers can create effective and engaging learning environments that support the diverse needs of young children.

Emerging Challenges.

The integration of technology in early childhood care education (ECCE) has brought about several challenges, including: Screen Time and Health Concerns, Excessive screen time can have negative effects on young children's physical and mental health (Hinkley & Taylor, 2012). This can lead to: - Obesity and sedentary behavior - Sleep disturbances and eye strain - Decreased attention span and social skills.

Not all children have equal access to technology, creating a digital divide that can exacerbate existing inequalities (Warschauer, 2003). This can lead to: - Limited access to digital resources and online learning opportunities - Disparities in technology skills and digital literacy - Widening of the achievement gap

Cyber security and Safety Concerns

The internet can pose risks to young children's safety and security, including exposure to:

- Inappropriate content and online predators
- Cyberbullying and harassment
- Data breaches and privacy concerns

Teacher Training and Support

Teachers need training and support to effectively integrate technology into ECCE settings (Knez, 2015). This can include:

- Professional development and training programs
- Technical support and infrastructure
- Curriculum and instructional design.

Commercialization and Marketing.

The increasing use of technology in ECCE has led to concerns about commercialization and marketing to young children (Buckleitner, 2015). This can include:

- Targeted advertising and marketing
- Collection and use of children's data
- Impact on children's values and behaviors.

Conclusion

The integration of technology in early childhood care education (ECCE) has brought about both opportunities and challenges. While technology offers many benefits, such as personalized learning and enhanced engagement, it also raises concerns about screen time, digital divide, cyber security, and teacher training. To ensure that technology is used in a way that supports young children's learning and development, it is essential to:

- Develop clear guidelines and policies for technology integration in ECCE settings
- Provide teachers with training and support to effectively integrate technology into their practice
- Ensure equal access to technology for all children, regardless of their background or socioeconomic status.

Continuously monitor and evaluate the impact of technology on young children's learning and development, by taking a thoughtful and informed approach to technology integration, which can harness the potential to enhance ECCE and support the diverse needs of young children.

Additionally, the digital age can bring about significant changes in ECCE, offering both opportunities and challenges. By understanding the potential benefits and drawbacks of technology integration, educators and policymakers can work together to create effective and engaging learning environments that support young children's learning and development.

Recommendations.

The recommendations for enhancing early childhood care education in the digital age, consider the following: Recommendations

1. Develop clear guidelines and policies, establish comprehensive guidelines for technology integration, ensuring a balance between screen time and other activities.
2. Provide teachers with training and support, offer professional development opportunities to enhance teachers' technology skills and confidence.
3. Ensure equal access to technology, implement strategies to bridge the digital divide, providing equal opportunities for all children to access technology.
4. Continuously monitor and evaluate, regularly assess the impact of technology on children's learning and development, making adjustments as needed.

5. Prioritize child-centered approaches, ensure technology integration is child-centered, focusing on individualized learning and development.
 6. Foster a collaborative environment, encourage collaboration among teachers, parents, and caregivers to support children's learning.
 7. Emphasize digital literacy, teach children essential digital literacy skills, including online safety and responsibility.
 8. Developing clear guidelines and policies. Governments and educational institutions should develop clear guidelines and policies for technology integration in ECCE settings.
 9. Providing teacher training and support. Teachers should receive training and support to effectively integrate technology into ECCE settings.
 10. Ensuring equal access to technology. Efforts should be made to ensure that all children have equal access to technology, regardless of their background or socioeconomic status.
 11. Monitoring and evaluating the impact of technology the impact of technology on young children's learning and development should be regularly monitored and evaluated.
- By considering these recommendations and additional factors, educators and policymakers can harness technology's potential to enhance early childhood care education.

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