

ICT UTILIZATION FOR INSTRUCTIONAL DELIVERY IN EARLY CHILDHOOD CARE AND EDUCATION

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Abstract

Information and Communication Technology (ICT) have become one of the basic building blocks of modern society as they are becoming indispensable in every step or level of education. Children begin to manipulate ICT materials as soon as they grow old enough to manipulate things. There is need to provide ICT learning experience that can aid their holistic development. This paper examined the rationale for using ICT for instructional delivery in early childhood care and education (ECCE).

Information and Communication Technology (ICT) is an indispensable part of a contemporary world. Infact, culture and society have to be adjusted to meet the

challenges of the knowledge age. The pervasiveness of ICT has brought about rapid technological, political and economic transformation which has eventuated in the network society organized around ICT (Akawu 2009). The field of education has not been unaffected. We can hardly imagine an educational institution today without the presence of and that does not have need for ICT. As Siraj-Blatchford and Whitebread (2003) pointed out, young children today are growing up in a world which not only contain but is also increasingly shaped by ICT. More and more children encounter a computer before they go to school, even before they go to pre-school. Naturally, it is then noticed that they are exposed to all kinds of impacts of ICT's. Thus, Early Childhood Care and Education cannot ignore any of them. It must look for procedures and strategies and how best to engage them so that the learning objectives area achieved in a way closer to 21st century expectation and requirements.

An important contribution to the process of integration of ICT into Early Childhood Care and Education (ECCE) come in the form of a report from the New Zealand Ministry of Education (2004), which became the foundation of the Government ICT framework for Early Childhood Care Education and also influenced the curriculum for Early Childhood Care and Education in New Zealand (Ministry of Education, 2009) and in several similar ICT frameworks in other countries. We are in the world of 'Digital Native' (Children of nowadays). According to Olowe and Kutelu (2014), these children are born into a world of ICT driving society where remote control, mobile phone, programmable toys, digital camera and computer among others are tools that are available for them to use at home as soon as they have grown enough to manipulate play materials. They noted further that these children can press play and stop button on DVD and CD player, use the remote to operate television channels, use mobile phone to play game, select their favourite music and take photographs of their siblings, type letters on computer and view them on screen and operate programmable toys for play and fun. It is imperative therefore, that they should be given the opportunity to enjoy many benefit that ICT can provide them in their learning process and development.

Concept of ICT

ICT can be defined according to Siraj-Blatchford and Siraj-Blatchford (2003) cited in New Zealand council for Educational research 2004 as anything which allows us to get information, to communicate with each other or to have an effect on the environment using electronic or digital equipment. ICT is defined as computer base tools used by people to work with the information and communication processing needs of an organization .It encompasses the computer hardware and software, the network and several other devices (videos, audio, photographic camera etc) that convert information (text),images, sound and motion and so on in to common digital form. Obilade and Mejiunni (2006) defined ICT as the electronic and non-electronic technologies and infrastructure system used to create, store, manipulate, retrieve and communicate or disseminate information. Generally the term ICT refers to any

arrangement that is capable of capturing, storing, retrieving, manipulating, transmitting or receiving information or data. In a broad sense they include Television sets, bulletin boards, radios, record players, disc players, still cameras, video cameras, projectors, computers, integrative white board, internet and internet resources.

In Early Childhood Education, New Zealand council for Educational research 2004 cited in Olowe (2012), submitted that the term ICT could include computer hardware (including desktop, laptop and handled computers);digital cameras and digital video cameras; creativity and communication software and tools ;the internet ;telephones, fax machines, mobile telephones, tape recorders, interactive stones, stimulated environment and computer games programmable toys and control technologies video conferencing technologies and Closed-Circuit Television, data projectors, electronic white board and more. A look of this information and technology materials show that some of them are available in individual homes .Many children would have had access to interacting and using some of them before ever going to school. What this implies is that the children are born into a world where technology permeates (Olowe and Kutelu, 2014).

Concept of Early Childhood Education in Nigeria

Early Childhood periods refers to a period in life between birth and 8years of age. While Early Childhood Education is Education given in an educational institution to children from birth to 8years old. It includes Daycare, playgroup/crèche, kindergarten/nursery or lower primary (UNESCO, 1998). Early childhood is a time of significant discovery and development in all facets of children's life. Beginning with their cognitive worlds, and stretching as far as their physical and emotional worlds, children are growing and advancing at an exponential rate.

In Nigeria's National policy on Education (NPE 2013), Early childhood Education otherwise known as pre-primary education is defined as "the education given in an educational institution to children prior to entering primary school".

The objectives of Early Childhood Education as stated in the policy include among others;

To effect smooth transition from home to school

To prepare a child for primary level of education

To inculcate in the child the spirit of enquiry and creativity through the exploration of nature, the environment, art ,

music and playing with toys etc (Federal Republic of Nigeria, 2013).

Although development occurs at different pace for each individual child at this age, the sooner they are exposed to a stimulating learning environment and given the necessary tools (technologies) to learn, the more successful they will become.

Rationale for the use of ICT for Instructional Delivery in Early Childhood Education (ECE)

At this junction, there is need to briefly examine the reason that make ICT matters in ECE .The New Zealand council for Education research (2004) noted that available literature on the use of ICTs in Early childhood education suggests at least three reasons why ICTs should be used at this level of education. These three reasons are briefly discussed below;

ICT already affect the people and environment that surround young children's learning.ICT is becoming ubiquitous component of the physical and social worlds occupied by young children. (New Zealand Council for Educational Research, 2004). In Nigeria, ICT is an important fact of the private and work lives of most people who support young children's learning and development, whether as parents, family members, caregivers, or early childhood educators. Since children's Early Childhood Education experiences reflects and connect with their experience in the wilder world, ICT's is of utmost importance. It is important in Nigerian Early Childhood Education because ICT's already have effects on the people and the environments that surround our young children's learning and well-being.

The second reason that makes ICT important in Early Childhood Education relates to the opportunities and potentials that these technologies offer the sector. ICT offers new opportunities to strengthen many aspect of Early Childhood Education practice. In affirmation of this role, some available literature in Nigeria have shown that ICT's have opportunities to support and enhance children's learning and play experiences. They can strengthen practitioners' professional learning and development and also support and strengthen relationships and communication between Early Childhood Education centers, parents and other people connected to the Early Childhood Education setting (New Zealand Council for Education Research,2004;and Yusuf 2010). There is support for the development and integration of ICT in Education policy, curriculum and practice across the whole education sector.

The third reason why ICT is important in Early Childhood Education is that there is a strong focus on the development of ICT policy and integration of ICTs in curriculum and practice across the whole education sector. ICT's have become important concept in primary, secondary, and tertiary education. This account for the reason why the Government of Nigeria came up with her own National policy on information technology in 2001. Again, researcher and practitioner in Nigeria have also published books, articles and guideline which provide information and guidance about ICT in Nigerian Education (Yusuf 2007; Adomi and Kpangban,2010).

Use of ICT for Instructional Delivery in Early Childhood Education

Aladejana (2013) gave account of how ICT could be used for instructional delivery in Early Childhood Education as it is very useful to the teaching of children at

any level. For instance, video CD or disc could be used by nursery school teachers to teach a lot of concepts; texts, graphics, telling stories, animation, counting video and sounds using a computer could be very useful in teaching children at their early level of their schooling. Concepts ranging from alphabets, to numerals and biblical stories, all of which could be made more meaningful when they are animated or acted using cartoons. As children grow older, they can be encouraged to record and assess their learning. Images children create with digital camera or mobile phones can also be used to create stories for learning specific concepts.

Teacher can also use DVD, video series ,television, multimedia computer software, interactive radio having sound effect, songs, dramatization, comic skits and other performance conventions to compel children to listen and become involved in the lessons being delivered in any subject area and these would make otherwise dry topic to be interesting and very exciting. This will also no doubt make the teaching job easier and more productive.

Children can also be encouraged to access the internet and thousands of online databases, as there are now many educational sites on the net where children can access educational information and play. ICT can help to develop children's dispositions to learn by increasing self-esteem and confidence or by supporting independence and persistence in the face of initial difficulties. It also has potentials for promoting pleasure in learning by enhancing engagement, motivation and the desire to learn. Using ICT in the classroom over a sustained period will boost the academic performance of children with learning difficulties by as much as 9% and of children who are on track by 7% (Aladejana, 2013)

Early childhood education is concerned about providing quality experience for children in order to aid their cognitive , physical and social-emotional development. ICT can play vital role in supporting children and media rich content integrated with the curriculum. Technology experiences are associated with better language and literacy outcomes, such as letter recognition, sequencing and sounds; listening and comprehension; vocabulary; and understanding concept skills of reasoning, predicting and problem-solving especially when they play games, operate television channels with remote controls and interact with touch screen media tools among others.(McManis and Gunnewig, 2012; and Olowe and Kutelu, 2014).

Since children are active and mobile, they need frequent changes in learning modalities. Thus, in the area of physical development, Olowe and Kutelu (2014), noted that children can develop their fine motor skills while manipulating buttons or keys on technology material such as mouse, remote control, mobile phones, computer keys and programmable toys, they can also develop their gross motor skill while crawling or running after a movable programmable toy or moving around the school premises to use battery powered Walkie-Talkie. As for social-emotional development, they can walk and play together to use technology tools. In the process, they would have opportunity to relate to one another, share materials, cooperate in achieving given task and accept

others. Apart from this, ICT would enable the teacher to provide experiences with technology materials so that they can make learning interesting and sustain children's attention in learning activities. ICT contains lots of educational tools that assist educators in the teaching and learning process (Peucker and Reiter, 2007).

Conclusion

In the introductory part, this paper has successfully made it clear that it is imperative that children should be given the opportunity to enjoy many benefits that ICT can provide them in their learning process and development. The concept of ICT, concept of early childhood education in Nigeria, rationale for the use of ICT for instructional delivery in early childhood education, and how ICT can be used for instructional delivery in early childhood education were also well discussed. Recommendations made among others include: ICT component should be an integral part of teacher education programme for pre-service teachers training in all teachers training institutions.

Recommendations

Since ICTs have been recognized to have very great benefits for successful teaching and learning in early childhood education, efforts must be made to ensure that it is fully integrated into Nigeria's early childhood education. This is because early childhood is a time of significant discovery and development in all facets of children's life. The sooner children are exposed to stimulating learning environment and given the necessary tools i.e. technologies to learn, the more successful they become. It is therefore recommended that ICTs component should be an integral part of teacher education programme for pre-service teachers training in all teachers training institutions. Government, School Management as well as concerned organizations like UNICEF and UNESCO should train Nigerian early childhood care and education instructors in the use of ICT for teaching and learning. Also, the government, the school management as well as parents through the parent teacher association should join hand by pulling resources together to provide pre-primary schools with relevant ICT materials.

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