

AVAILABILITY AND UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN EARLY CHILDHOOD EDUCATION IN ILORIN, NIGERIA

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Abstract

The study investigated the availability and utilization of Information and Communication Technology (ICT) in early childhood education in Ilorin, Nigeria. It also found out if ICT facilities were available in schools and if such facilities were utilized to teach the pupils. The descriptive method of the survey type was employed to carry out the study. The research sample comprised of two hundred and sixty teachers randomly selected from fifty nursery and primary schools in Ilorin metropolis. Two research questions were raised and answered. The results indicated that ICT tools were available in early childhood schools in Ilorin metropolis and it is been utilized by teachers. Based on the findings, it was recommended that more effort should be expended in making more provisions for availability and utilization of ICT tools in ECE.

Keywords: Availability; Utilization; Information and Communication Technology (ICT); Early Childhood Education

Introduction

The world is experiencing technological breakthrough in teaching and learning. Early childhood education is not left out of the race because children live in rich communication environment. Information Communication Technology can be defined as an avenue through which communication takes place. It involves the use of electronic gadgets like computers, phones, digital camera, puppet, video disk and electronic toys for communication purposes. Bolstard (2004) also posited that these technologies offer new opportunities to strengthen many aspects of early childhood education. Siraj-Blatchford and Whitebread (2003) defined ICT as anything which allows an individual to have flow of information to communicate with each other or have an effect on the environment using electronic equipment.

An ICT emergence could turn the whole world into a global village where interaction is fostered even to remote area within a second through phones. ICT has enabled us to have access to unprecedented amount of information. Abolade and Yusuf (2005) posited that ICT has become an indispensable part of contemporary world; it enables people to interact through media to create and interpret in conducive atmosphere to foster good health, clear and sound education. This could support, as well as promote improved teaching and learning techniques at the early childhood education stage for optimum academic

performance through the development of psychomotive skills of the learning domain in children. The prevalence of information and communication technology in the lives of young children means that they are spending an increasing number of hours per week in front of and engaged with screens of all kinds, including televisions, computers, smartphones, tablets, handheld game devices and game consoles (Common Sense Media, 2011).

Early childhood educators need to be aware of all the information and communication technology available in order to understand the critical role that they as educators play in mediating technology for young children. The challenge for early childhood educators is to make informed choices that maximize learning opportunities for children by mediating the potential for misuse and overuse of ICT, even as these devices offer new interfaces that increase their appeal and utilization. Thus, the need to find out the availability and utilization of information and communication technology tools for teaching in early childhood education in Ilorin, Nigeria.

Early Childhood Education (ECE) refers to the type of education received between ages 3 to 5 within the school environment. It is sometimes referred to as nursery school or play group (Farrant, 1982). The National Policy on Education (FRN, 2009) classified ECE as educational institution for children prior to their entry to primary school, where children are left in the care of individual or organization. Pupils see the teacher as “mother substitutes” and sometimes refer to teacher as aunties or uncles. ECE is necessary to prepare the child for smooth transition from home to school; it provides adequate care and supervision when parents are away at work or for business engagements. The propaganda of education for all has made it difficult to get house help and most parents are business men and women, hence the need for children enrollment into nursery school.

At school, the child is provided with stimulating materials to learn through play. Ajayi-Dopemu (1985) and Mignez, Santos and Amido (2009) emphasized that play is the expression of inner feeling, curiosity and creativeness that involves exploratory behavior and problem solving. Artkhar (2010) submitted that pre-school provides stimulating play environment for physical, intellectual and emotional development for children. Children's attentions are caught by handling, touching and manipulating objects to play, which eventually leads to learning. Adeyemo (2008) posited that learning that involves the multisensory organs is highly qualitative because children are able to interact using all the five sense organs. It is realistic because children are encouraged to participate actively.

These objects or devices include DVD, Television, electronics, phones, digital camera, computers, programmable toys, robotics and electronic musical instrument. Bolstad (2004) added that video game and multimedia resources especially those that combined education with entertainment are well accepted by children. If children interact with these devices, it will foster development of psychomotor skills.

ICT can be used to support language development and mathematical thinking of the children. Examples are Sesame Street (The notable American TV series). It was described by Price (2006) as “The largest single educator in the world”. It has been ascertained to

successfully impact literacy and numeracy information and offers racial interaction to children worldwide. It provides opportunity for pupils to weave words together through pictures, sound and practice what is watched, thereby helping pupils communicate their thoughts, ideas and feelings. Computers, Phones and Video packages encourage pupil's participation, because they have the opportunity to operate the tools to suit their own purposes. They encourage discussion forum where children from different environment interact to learn new ideas, songs and games. Luke (1999) supported that in the current dispensation, children's early literacy and play experiences are shaped.

If ICT is introduced early, children would have been grounded in it before they get to higher institutions. For example, the tertiary institution examinations are being conducted through computer; many children who are not computer literate or well-groomed in computer skills find the computer based examinations difficult. Information and communication technology are here to stay and young children live in a world of interactive media. They are growing up at ease with variety of ICT devices that are rapidly becoming the tools of culture at home, at school, at work and in the community (Berson & Berson, 2010; Calvert, Rideout, Woolard & Strouse, 2005; Kerawalla & Crook, 2002; Rideout, Lauricella, & Wartella, 2011). The utilization of technology tools for communication, collaboration, social networking and user-generated content could transform mainstream early childhood education in developed countries of the world.

In particular, these tools have transformed how parents and families manage their daily lives and seek out entertainment, how teachers use materials in the classroom with young children and communicate with parents and families and how they deliver teacher education and professional development (Rideout & Hamel 2006; Rideout, Vandewater, & Wartella, 2003). Also, Adeyemo (2008) developed a puppet video package which operates on ICT platform for teaching color magic to junior secondary students and it was revealed that students taught with ICT tools have been known to perform better than students taught with face- to -face teaching method. This supports that ICT has produced better results in terms of teaching and learning, hence, this study intends to look at availability and utilization of ICT tools for teaching in early childhood education which is very important in global development in Ilorin.

This study is significant and may be of benefit to government, in order to determine the approval of establishment of nursery schools base on availability of ICT. This study also provides useful empirical information for the inspectorate division of ministry of educations on availability and utilization of ICT tools in early childhood education. It may, in addition, encourage proprietors of early childhood education schools to employ computer literate teachers and by extension, provide background information that will assist in determining ICT scheduling lessons per week.

Research Questions

Answers were provided to the following research question:

- (i) Which ICT tools are available for utilization for early childhood education?

- (ii) What is the level of utilization of ICT among teachers in early childhood schools in Ilorin?

Methodology

The study is a descriptive research of the survey type. A questionnaire adapted from Thomas, Bossley, Santos, Gray and Hong (2007) on a checklist of ICT tools from ECE curriculum were used for the study. Section A of the questionnaire contained bio-data of teachers in early childhood schools – age, name of school, gender, teaching experience and qualification. Section B contained the checklist of facilities or tools while section C contained questions on teacher utilization of the ICT facilities and tools. The questionnaire was validated by two Educational Technologist in the Department of Science Education, University of Ilorin. Frequency count and percentages were employed to analyze the responses collated from the questionnaires.

The study was limited to early childhood school teachers in Ilorin metropolis in which three local government areas was selected; Ilorin West, Ilorin South and Ilorin East. The researchers concentrated on privately-owned Nursery Schools that have been in existence for over ten years. The population for this study was all teachers in ECE schools in Ilorin metropolis and three hundred (300) were randomly selected and sampled from fifty (50) early childhood schools. Two hundred and sixty (260) copies of questionnaires out of the three hundred were returned and are subsequently subjected to statistical analysis.

Results

Table 1: Distribution of ECE teachers by professional qualifications and years of experience in Ilorin

Levels Gender	Qualified	%	Unqualified	%	Inexperienced (0-5 years)	%	Experienced (5-10 years)	%
Male	58	22.3	131	50.4	82	31.5	107	41.2
Female	15	5.8	56	21.5	17	6.5	54	20.8
Total	73	28.1	187	71.9	99	38.1	161	61.9

Table 1 revealed that 73 teachers (58 males and 15 females) had professional teaching qualification training GDH and National Certificate in Education (NCE). While 187 teachers (131 males and 56 females) did not have teaching qualifications. Majority had senior school certificate (SSCE) and ordinary national diploma (OND) in various fields. The information deduced from Table 1 indicates that 28.1% of ECE teachers were qualified while 71.9% were not qualified to teach. It revealed that the proprietors employed unqualified teachers of NCE, grade two and SSCE holder's certificates who are not trained specifically to teach the nursery school children.

Research Question 1: Which ICT tools are available for utilization for early childhood education?

Table 2: Data on ICT tools availability early childhood schools in Ilorin

ICT Tools	Available	%	Not Available	%
Computer	152	58.5	108	41.5
Video	23	8.8	237	91.2
Television	67	25.8	193	74.2
Digital camera	21	8.1	239	91.9
Cell phone	154	59.2	100	40.8
Electronic toys	35	13.5	225	86.5
Puppets	138	53.1	122	46.9
Audio CD/Radio	106	40.8	154	59.2

Table 2 revealed that 59.2% and 58.5% teachers responded that cell phone and computers were available with both accruing the highest percentages accordingly among other ICT tools. Meanwhile, 53.1%, 40.8%, 25.8%, 8.8% and 8.1% of ECE teachers responded that puppets, audio CD/radio, television, video and digital camera respectively are available.

Research Question 2: What is the level of utilization of ICT tools among teachers in early childhood schools in Ilorin?

Table 3: Teachers' utilization of ict tools in early childhood schools in Ilorin

ICT Tools	Frequently Used	%	Seldom Used	%	Not Used at all	%
Computer	65	25	97	37.3	98	37.7
Video	16	6.2	21	8.1	219	84.2
Television	41	15.8	32	12.3	187	71.9
Digital camera	20	7.7	21	8.1	219	84.2
Cell phone	61	23.5	99	38.1	100	58.5
Electronic toys	21	8.1	29	11.2	210	80.8
Puppets	33	12.7	63	24.2	164	63.1
Audio CD/Radio	24	9.2	21	8.1	215	82.7

Table 3 revealed that the most frequently used ICT tools are the computer and cell phone with 25% and 23.5% of respondents acknowledging their utilization at the ECE. However, other ICT tools like television, puppets, audio CD/radio, electronic toys, digital camera and video were used at 15.8%, 12.7%, 9.2%, 8.1%, 7.7% and 6.2% respectively based on respondents' judgment.

Conclusion

Based on the findings reflected on the result displayed above, the following conclusions were drawn:

- (i) That computer and cellphone are in high percentage compared to others in terms of availability of ICT tools.

- (ii) That both computer and cellphone are more often used by ECE teachers in teaching children compared to other ICT tools.
- (iii) That there are more unqualified ECE teachers than the qualified ones in Ilorin metropolis.
- (iv) That ECE teacher that have spent more than five years are in higher proportion compared to those that have spent less than five years in the system.

Recommendations

From the conclusion stated above, the following recommendations were drawn out:

- (i) More provisions need to be made in regard to availability of ICT tools for teaching at early childhood education level.
- (ii) Early childhood teachers need to be encouraged to use all ICT tools effectively for teaching children.
- (iii) Meanwhile, aside computer and cellphone that has the highest positive (62.3% and 61.6%) responses from ECE teachers respectively, other ICT tools should also be used accordingly.

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