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Perceived Role and Information and Communication Technology Use in the Professional Practice of Education for young Children in Lagos State

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Abstract: *The study looked into perceived role use of information and communication technologies in the professional practice of instruction for young children in Lagos State. The participant this study are caregivers in public education for young children centres in two local government areas in the state of Lagos. The study's sample consists of 200 caregivers in education for young children centre from two Local Government Education Authority Lagos State. Simple random technique was use to select the respondents with teaching background regardless of gender, age, teaching experience and academic qualification. Two instruments were designed for the research title "Teachers' Perception on Information Communication Technology Use Questionnaire (TP_OICTUQ) and Rating Scale on 'Teachers' Utilization of EKOEXCEL devices scale (TUoEDS). The Cronbach Alpha and Split half of reliability was used to determine the reliability of the instruments and a co-efficient value of r= 0.88 and 0.77 were obtained. Finding shows that there is a significant negative relationship between early childhood teachers' qualifications and utilization of EkoEXCEL device. The study recommended that government should give caregivers opportunities to actively engage in dialogue to explore and articulate their pedagogical approach to EKOEXCEL device in education for young children.*

Keywords: Instructional Materials, Utilization, Information Communication Technology, Professional Practice.

Introduction

Technology used in communication and information is also the use of computer based technology for communication which serves as network of finding information. However, it consists of information resources as well as tools and software for using computers for both education and learning. (Goay & Wong 2003). Hence, ICT have allowed children and pupils to research background information related to practical work being conducted.

It also allows children and pupils to choose the research areas they want to study, the depth for the study and given internet access at home. In Education for young children, it is used to conduct background research before the work is carried out; it is also used to support practical work. ICT is also a technology that helps to record, stores, process, retrieve, transfer and receive information (Asnati 2005). ICT also bring about interaction between the user and the data (Zamani 2005). ICT significantly affect all spheres of human activity (Brakel and Chisenga, 2003). It also has the potential to accelerate, enrich and deepen skills, to motivate and engage children and pupils, to help relate school experience to work practices, create economic viability for tomorrow's workers as well as strengthening teaching and helping school change the discipline education for young children subjects (Davis and Tearle, 1999, Lemke and Coughlin 1998, cited by Yusuf, 2005).

The need of ICT application in schools in relation to instruction and learning of education for young children cannot be overemphasized. Utilizing ICT has allowed for increased individualization of learning. Schools where new technologies are used, pupils and youngsters have; give insightful and prompt feedback for literacy improvement that isn't always fully applied in various school systems (Emuku and Emuleu 1990 and 2000). ICT applications improve Nigeria educational system and giving children better education. ICT is a device and a means to improve the pedagogy of teaching, building a more effective organization structure in schools, stronger links between schools and the community and empower children (Chan 2002).

Moor (2005), stated that effects of ICT on children learning, such as increased their motivation to stay on task and drive them to behave better and produce high quality work. In using ICT, pupils learn more independently and did more work at a fast pace. It is however, important, to acknowledge the place of our interest in technology education with the wider range of economic, political and social change (Dele 1999).

Chowcoat et al, 2008, identifying patterns that have an impact on the use of technologies in learning such as economic policy, globalization, and capital investment programmes expands children's workforce, non-traditional education provider and commercial technological innovation. Kress and Pachler argue that digital technologies and media have shafted not only social and cultural

contacts, but also approaches to the environment for learning. Although serious and systematic research on the history in education would go beyond the study's parameters, we decided to include a short overview of how the idea of using ICT emerged, as far as we find it relevant and important for creating a complex picture.

French educator Celestin Freinet (1896-1966) was a real forerunner and precursor of using ICT in early education. He integrated the classical and modern pedagogical ideas and ICT existing in the 1930s to formulate a sample of school that might recognized as an instructional plan for many modern applications use of ICT in Preschool Education. We have copied the following passage from Freinet site 12, where you can find more references: This involved the kids using a printing press to replicate text that they had independently written.

The pupils wrote down their own personal adventures, the accidents that they had experienced inside and outside the classroom, and so on. Usually these texts were then presented to the class, discussed, corrected and edited by the class as a whole before being finally printed by the children themselves working together. Freinet called this approach “free writing” (Textelibre). Later these texts would be assembled to create a class Journal (“Lirre de vie”) and a school Newspaper (Journal Scolaire).

His class's output, particularly the school newspapers, began to be frequently exchanged with other French elementary school classes in 1926, whose teachers were also engaged in creative instruction. Freinet calls this the technique of school correspondence (Correspondence Scolaire). Later, this correspondence would spread throughout the world. The French teacher who used learner printing and others who were beginning to make and use movies and sound recordings with their classes came together in 1928 and founded the Public Educators’ Co-operative (Cooperative de l’Enseignment Laic, C.E.L), likely to be known as the "Freinet Movement" or "Freinet Pedagogy". They started editing "The Proletarian Educator" in 1932. (L’Educateur Proletarien). The Freinet pedagogy is implemented today in schools of many countries. It is clear from this short description that modern ICT are “tailor-made” for this pedagogy that is inherited by many educational systems from Ancient Greece to the 20th century. This means that ICT School is not something completely new, foreign and invented.

However, learning is becoming one of the most common means of using ICT to provide education to pupils by means of outline teaching offered via web based system (Yusuf 2005, Matala 2003). Access to a wealth of up-to-date information is made quick and simple by technology used in information and communication. Additionally, it gives researchers method to further explore the results (Yusuf and Onasanga 2004).

Nigeria as a Nation has progressed dilatory in the use of ICT in all sectors of the Nations especially in teacher’s education. The dilatory access to basic ICT equipment low internet connectivity and inadequacy in the use of audio visual materials and equipment in teachers education programmes are barriers to the effective and professional development of teachers in Nigeria (Olulube 2005). Hence, teacher education and training are means for professional updating which deals with all development functions directed at the maintenance and enhancement of one’s professional competence. However, teacher’s professional growth supports the idea that ICT in teacher education and training is an important factor in their job effectiveness and development (Larose, et al 1999).

Technology used in information and communication helps students learn a variety of expertise and information at their own pace. Additionally, it gives the student practice in the professors' and students' improvement of technology used in information and communication. The teachers could use the advantages of ICT to demonstrate some difficult concept theories and principles in education for young children. This gives to the classroom instruction, also enhance the teaching and make it an exciting one. Though, teacher’s using young childhood education course on technologies of information and communication will be able to present a well-planned set of lesson and the pupils will experience this lesson in an exciting environment.

Ikoh and Nwankwo, (2013), the computer reinforces and enhances the teacher’s lesson. ICT in the classroom can help education for young children to become independent learners about the individual progress of all education for young children and capable of developing critical thinking and problem solving strategies, collaborative work efficiency. Though, Nigeria is rich in natural resources and a wealth country but majority of the citizen still wallow in poverty. The population of those who operate with ICT with their own finance is incredibly low. That is why education researchers cannot afford pieces of equipment that are needed to operate multimedia device like compact disk read only memory (CD ROM) which come with some international books. Inadequate policy formulation and implementation and other problems includes, lack of serious democratic norms, high cost of operation and service (OnwuBalil, 2005).

ICT (Ikoh and Nwankwo, 2013) state that has a profound impact on the instruction and learning of young children. It is an effective tool for teaching and communication. It has the capacity to satisfy the demand for practical methods of constructively guiding their own learning activities and complete assignments in a way to fit their own interests and need because of its interactive nature. However, according to Dale, Robertson, and Shortis (2002), there are considerable obstacles that are thought to prevent the use of ICT in early childhood education, including the availability of professional development for teachers and the equitable access to equipment. According to Dale, Robertson, and Shortis (2002), there are comprehension gaps that are "far wider than has previously been the case with any other teaching technology" between students' and teachers' understanding of the affordances of ICT as a teaching technology. According to Plowman and Stephen, pre-school settings are less controlled in terms of course content and

evaluation, and pre-school policy documents do not yet explicitly specify the role that computers play in raising standards (2005). According to them, pre-school settings typically do not have a high level of ICT resources. They also claimed that pre-school practitioners have a broad range of training and experience and that setting occasionally have very little staff.

Professionalism in the education for young children environment has recently attracted a great deal of attention (Caulfield, 1997; Harte, 2011; Tigistu, 2013). The 2010 National Association for the Education of Young Children (NAEYC) Standards for Initial & Advanced Early Childhood Professional Preparation Programs state that teachers candidates who have completed early childhood degree programs should identify and act as members of the profession, be aware of and adhere to ethical standards, and make use of other professional standards relevant to early childhood practice (NAEYC, 2012). Teacher candidates appeared to comprehend that being an early childhood professional included having an awareness of the specialized knowledge necessary to be successful in educating young children, in accordance with the 2010 NAEYC Standards. A crucial component of the early childhood profession, they also seemed to understand, is delivering responsive, supporting curricula that respects the entire kid, family, and their cultural origins.

A disciplined group of people who uphold ethical standards is what the Professional Standards Council (2015) defines as a profession. This group takes satisfaction in possessing exceptional knowledge and skills within a body of generally accepted knowledge acquired through top-tier research, education, and training, and is recognized as such by the general public. A professional is also eager to put their skills and knowledge to other people's use.

A professional is a member of a profession. Professionals are sworn to uphold their fields of specialization, competency, integrity and honesty, altruism, and the advancement of the common good and are bound by codes of ethics. Professionals have societal and public obligations (PSC, 2015). Personal values regarding how one should behave themselves professionally make up professionalism. Typically, professionalism is understood as acting in conformity with established professional standards or ethical guidelines (Castle, 2009). It frequently has to do with upholding the rules, regulations, morals, and customs of a particular profession (PSC, 2015). Professionalism is a current problem in education, especially in early childhood education and care (Brock, 2006).

Individuals who offer direct services to young children and their families (from infancy through age 8) as well as those who oversee the programs in which these individuals operate are considered professionals in the field of teaching young children (NAEYC). Being a professional in this sector includes adhering to the requirements for education and training that provide aspiring early childhood teachers with the particular expertise and abilities required to carry out the duties of an early childhood educator. The quality of caregiving practices and interactions between professional caregivers and the children and families they deal with are improved by using a shared set of abilities, according to Caulfield (1997), who claims that being a professional in early childhood requires having certain talents. Young children's education is distinct from other sectors in that it has certain characteristics with other professions (Caulfield, 1997). Early childhood educators find it difficult to describe their profession because those in the area do not decide on these features of professionalism (Watts, 2009).

Despite the fact that there are standards that outline the requirements for being a professional in the field of education for young children (e.g., the 2009 Division for Early Childhood code of ethics and the 2005 NAEYC code of ethical conduct), the goal of this qualitative study was to investigate teacher candidates' perceptions of their level of preparation and readiness to enter the field.

Professional preparation

Early childhood professionals are being asked to have in-depth knowledge of child development and learning as well as provide all the children in their care with extensive, fulfilling educational opportunities due to the increased focus on the role early care and preschool play in young children's education (Sheridan, Edwards, Marvin, & Knoche, 2009). The intricacy of educating young children necessitates the capacity for reflection, activity, and enthusiasm in order to create an environment that is suitable, interesting, and intellectually challenging. There is a connection between excellent programs and qualified staff (Bredekamp & Goffin, 2012). In light of this, early childhood educators who have undergone extensive training, policymakers, and concerned citizens are fighting to guarantee that all children receive the foundational experiences required for the best possible learning.

Graduate programs preparing candidates for leadership positions in the field as accomplished teachers, administrators, state early childhood specialists, child and family advocates, professional development specialists, teacher educators, and researchers use the 2010 National Association for the Education of Young Children (NAEYC) Standards for Early Childhood Professional Preparation Programs (Standards). The following seven fundamental standards outline the knowledge and skills well-prepared teacher candidates should possess:

1. Encourage learning and growth in children.

2. Build ties with your family and your community.

3. To support young children and families, observe, record, and evaluate.

4. Connect with children and families by using ways that are developmentally effective.

5. Build meaningful curricula using your expertise of the subject.

6. Develop professionally.

7. Take part in field trips for young children.

The NAEYC Standards represent a long-term vision for the early childhood industry, particularly for the worker training programs (NAEYC, 2012). A national vision of excellence for early childhood workers is represented by these standards. The requirements for early childhood teacher preparation serve as a guide for excellent and professional instruction (Gordon & Browne, 2015).

According to Boulton (2017), perceptions are the attitudes, behaviors, self-beliefs, and/or viewpoints that a person has formed toward anything. After applying Boulton's definition to this study project, it can be said that teachers' perceptions refer to their attitudes, behaviors, self-beliefs, viewpoints, and understanding of using ICT in the classroom. Teachers' perceptions provide an explanation for their opinions regarding the value of integrating ICT into instruction and learning as well as their perceptions of the challenges associated with doing so in the classroom (Hutchison & Reinking, 2011). Additionally, how teachers view using ICT might reveal how they feel about it, including how confident they are in their ability to integrate it into both teaching and learning. According to Wang (2002), the teacher's perception of using ICT may be defined as the viewpoint, understanding, and interpretation that teachers have on using technology in instruction and learning.

While Kologet et al. (2018) found that senior high schools in Ghana do not permit their students to use mobile devices on school grounds, ICT is regarded to be a tool for facilitating both education and learning. Some education stakeholders are concerned about this policy. These researchers entered the discussion of whether or not students should be able to use mobile devices in the classroom. According to the researchers, the reason for this regulation is due to the detrimental effects that mobile devices will have on students' academic performance. The majority of participants, though, argued in favor of including mobile devices under stringent guidelines. With this conclusion, the researchers advised schools to permit student usage of mobile devices under controlled, rigorous guidelines based on the view of the stakeholders.

Different perspectives on the use of ICT in the classroom are held by teachers. The success or failure of integrating ICT in the classroom heavily depends on teachers' opinions (Apeanti, 2014). In light of this, it is crucial that academics compile data on teachers' concerns with the use of ICT in the classroom. The classroom or topic teachers are responsible for deciding whether and/or how to use ICT in the classroom. According to a report, teachers' attitudes on the use of ICT in the classroom and learning need to be examined in order for the education sector to make significant changes from classroom teaching techniques (Hutchison &Reinking, 2011). For instance, Gebremedhin and Fenta (2015) found a strong correlation between the use of ICT and teachers' perceptions of its integration into the teaching and learning process in the classroom. Gebremedhin & Fenta (2015) contend that a number of other aspects in schools, such as staff motivation, desire to use ICTs, and resource accessibility, also play a role in this association.

Gebremedhin and Fenta (2015) examined how teachers felt about using ICT in the teaching-learning process at Adwa College in Ethiopia. According to the investigation, teachers struggle with the shortage of ICT resources for both teaching and learning. The research revealed that few college professors used ICT to instruct their courses. According to Mac-Callum and Jeffrey (2014), evaluating teachers' attitudes and views toward the technologies is a prerequisite for the adoption of cutting-edge technology in both education and learning. In their 2014 study, Mac-Callum and Jeffrey looked into the elements that influence instructors' use of mobile learning. Three main factors—digital literacy, ICT anxiety, and ICT teaching self-efficacy—were the focus of this study. Mac-Callum and Jeffrey (2014) looked into the behavioral intentions of teachers to adopt mobile learning based on these factors. The study discovered that each component had an impact on the teachers' behavioural intentions to integrate mobile learning into their academic activities. Mac-Callum and Jeffrey (2014) employed the Technology Acceptance Model to carry out their investigation (TAM). The perceived utility, simplicity, or effort required to learn how to use new technologies in the classroom, the teachers' digital literacy or technological proficiency, their self-efficacy as ICT teachers, and ICT anxiety are additional factors that may influence their use and perception of new technologies. Hlasna, Klmová, and Poulova (2017) stressed the significance of providing primary school teachers who include ICT into their lessons with proper training. The researchers discovered that by effectively utilizing ICT, this training will boost teaching output. Based on their research, Hlasna et al. (2017) concluded that teachers who have received methodological training in the use of ICT in the classroom are willing to use it, whereas the reverse is hesitant. This highlights the requirement for educators to receive ICT training.

Sim and Theng (2007) looked at both positive and negative opinions among instructors toward using ICT in the classroom. Additionally, instructors believe that using ICT in the classroom helps them be more organized and productive in their work. Additionally, by utilizing ICT, teachers may better fulfill the diverse requirements of their students and rely less on textbooks. The use of various technologies in the classroom, according to some teachers, enriches lesson plans, improves the flow of class activities, and enables teachers to meet the needs of every student. There are some signs that teachers are eager to include more ICT applications into their lesson plans (Sim & Theng, 2007). According to Silviyanti and Yusuf (2015), many instructors are highly motivated to

use ICT in preschool instruction. Further research reveals that teachers recognized the value of ICT in young children's education since it improves learning outcomes such as enjoyment, interest, and effectiveness. One of the main motivators for teachers is the conviction that technology can have positive effects, such as on the improvement of higher order thinking abilities and topic mastery for language learners.

Although not all instructors have a negative opinion of using ICT in the classroom, Silviyanti and Yusuf (2015) claim that this is one of the obstacles that prevents teachers from using ICT effectively. Additionally, the instructors' personal attitudes and concerns that drive their probability to use technology impact how well ICT is used in the classroom (Angers &Machtmes, 2005). It is undeniable that how teachers view their jobs in the classroom will affect how they use technology to teach. The use of ICT in classrooms is prompted by teachers' favorable attitudes toward including ICT in the teaching-learning process, which in turn fosters students' original thought and comprehension of pedagogical content. To be relatively blunt, "lessons should be ICT driven yet centered on clear both education and learning objectives where ICT is employed as a vehicle to support the fulfillment of those objectives" (Kizlik, 2008).

In order to better understand how teachers use ICT for teaching and learning, Kreijns (2013) looked into their intents, attitudes, norms, and self-efficacy. Teachers frequently use ICT based on their prior ICT usage, perceived knowledge, and ICT device usage skills (Kreijns, 2013). According to Adam (2017), using ICT to educate students with learning disabilities motivates students to achieve higher academic results.

Technology for information and communication has been widely accepted as an integral part of all professions. It has evolved. a world-class standard in any organization including institutions of learning regardless of the level because of the importance. However, the employing of ICT in the classroom requires competencies on one of the teacher and has indeed made the profession more challenging experience and retained knowledge for a long time. Teachers need to actively participate in using ICT also, to teach pupils using smart phones or other devices for learning during class time. Contrary to popular belief ICT has play a vital role in the life of the pupils, there is still exists a gap in the literature on the effective utilizing ICT in instructional materials, assessment and evaluation of pupils in the classroom. Thus, this study therefore investigated on the effective use of EkoEXCEL device on the assessment and evaluation of primary school pupils in Ojo and Badagry Local Government Education Authority.

Research Questions

1. What are the perceived roles of EkoEXCEL device among early childhood teachers in Ojo and Badagry local government area of Lagos State?

2. What are the teachers' perception on the use of EkoEXCEL in both education and learning?

3. To what extent do the early childhood teachers use EkoEXCEL device to teaching

4. To what extent do the early childhood teachers use EkoEXCEL device to instructional materials.

5. To what extent do the early childhood teachers use EkoEXCEL device to assess pupil’s performance.

Methodology

The research design used in it was a descriptive survey research design. Participants in this research are caregivers in public education for young children and development centres two Local Government Areas in the state of Lagos. The two local governments are Local education authority for Ojo and Badagry local education authority government which has 627 and 695 teachers respectively. The sample of this study consist of 200 caregivers in public education for young children 2 centres from two Local Government Education Authority Lagos State. The simple random technique was used to select the respondent with teaching background regardless of gender, age, teaching experience and academic qualification. There are no preferences set by the researchers as long as the respondents come with teaching background especially in public primary school, as the researcher randomly selected 20 public early childhood schools, and 10 teachers each will be selected from the schools. Two instruments was designed for the study title; Teachers’ Perception on the Use of Information Communication Technology Questionnaire (TPUoICTQ). 10 questions were related to teachers' perception on the use of EKOEXCEL in the both education and learning. This section is made of four items on a four point Likert scale (Strongly Agree, Agree, Disagree, and Strongly Disagree) and Rating scale on Teachers’ Utilization of EKOEXCEL devices scale (TUoEDS). This section is made of four items on a four response scale of 4, 3, 2, and 1 (very high (4), high (3), fairly used (2) and rarely used (1) respectively). The CronbachAlpah techniques was used which obtain reliability co-efficient of r=0.88 on TPUoICTQ. The Split-Half techniques as featured in SPSS was used to obtain reliability co-efficient of r=0.77 on TUoEDS. Descriptive statistics of frequency count, percentages, mean, and weighted mean was employed for data analysis.

Results

Research question 1: What are the perceived roles of EkoExcel device among early childhood teachers in Ojo and Badagry local government area of Lagos State?

Table 1 showing perceived roles of EkoExcel device among early childhood teachers in Ojo and Badagry local government area of Lagos State

S/N	ITEMS	SA	A	D	SD	MEAN
1	I know that EKOEXCEL device enhances teachers' learning in teaching-learning process.	77 (41.3)	72 (38.5)	33 (17.6)	5 (2.7)	**3.18**
2	EKOEXCEL device presents teacher life-like applications in teaching-learning process.	42 (22.5)	95 (50.8)	46 (50.8)	4 (2.1)	**2.936**
3	I consider EKOEXCEL device as valuable tool in learners' learning in the classroom.	61 (32.6)	79 (42.2)	27 (14.4)	20 (10.7)	**2.968**
4	I perceive EKOEXCEL device as powerful tools helping learners' understanding of abstract content.	47 (25.1)	58 (31.0)	66 (35.3)	16 (8.6)	**2.727**

Table above showing perceived roles of EkoExcel device among early childhood teachers in Ojo and Badagry local government area of Lagos State. The detailed analysis shows that early childhood teachers agreed that I know that EKOEXCEL device enhances teachers' learning in teaching-learning process (Mean=3.18), I consider EKOEXCEL device as valuable tool in learners' education in a classroom (Mean=2.97), EKOEXCEL device presents teacher life-like applications in teaching-learning process (Mean=2.94) and I perceive EKOEXCEL device as powerful tools helping learners' understanding of abstract content (Mean=2.73).

To answer this research question one, the following are the perceived roles of EkoEXCEL device among early childhood teachers:

- I know that EKOEXCEL device enhances teachers' learning in teaching-learning process.
- I consider EKOEXCEL device as valuable tool in learners' learning in the classroom.
- EKOEXCEL device presents teacher life-like applications in teaching-learning process.
- I perceive EKOEXCEL device as powerful tools helping learners' understanding of abstract content.

Research question 2: what are the teachers' perception on the use of EKOEXCEL in both education and learning?

Table 2: showing teachers' perception on the use of EKOEXCEL in both education and learning

S/N	ITEMS	SA	A	D	SD	MEAN
1	EKOEXCEL device makes my teaching easier.	77 (41.3)	72 (38.5)	33 (17.6)	5 (2.7)	**3.18**
2	EKOEXCEL device enhances my learners' critical thinking	42 (22.5)	95 (50.8)	46 (50.8)	4 (2.1)	**2.936**
3	EKOEXCEL device promotes innovation and problem-solving skills of my learners	61 (32.6)	79 (42.2)	27 (14.4)	20 (10.7)	**2.968**

4	EKOEXCEL device enhances collaborative learning among learners and teachers	47 (25.1)	58 (31.0)	66 (35.3)	16 (8.6)	**2.727**
5	EKOEXCEL device promotes research-based both education and learning	45(24.1)	80(42.8)	54(28.9)	8(4.3)	**2.86**
6	Using EKOEXCEL device helps to ensure quality education	42(22.5)	99(52.9)	38(20.3)	8(4.3)	**2.93**
7	Lack of EKOEXCEL device makes it difficult for teachers to keep up with the new development in education	34(18.2)	63(33.7)	70(37.4)	20(10.7)	**2.59**
8	Schools need to prioritize the EKOEXCEL device pedagogical training in their Continuous Professional Development (CPD)	50(26.7)	63(33.7)	62(33.2)	12(6.4)	**2.80**
9	Teachers need to be encouraged to use EKOEXCEL device in their both education and learning activities	60(32.1)	89(47.6)	30(16.0)	8(4.3)	**3.07**
10	I find the use of EKOEXCEL device in both education and learning a time consuming.	61(32.6)	47(25.1)	71(38.0)	8(4.3)	**2.86**

Table 2 affirms teachers' perception on the use of EKOEXCEL in both education and learning. The detailed analysis reveals that early childhood teachers agreed that: EKOEXCEL device makes my teaching easier (Mean=3.27), EKOEXCEL device enhances collaborative learning among learners and teachers (Mean=3.10), Teachers need to be encouraged to use EKOEXCEL device in their both education and learning activities (Mean= 3.08), Using EKOEXCEL device helps to ensure quality education (Mean= 2.94), EKOEXCEL device enhances my learners' critical thinking (Mean= 2.91), I find the use of EKOEXCEL device in both education and learning a time consuming (Mean=2.86), EKOEXCEL device promotes innovation and problem-solving skills of my learners (Mean=2.88), Schools need to prioritize the EKOEXCEL device pedagogical training in their Continuous Professional Development (CPD) (Mean=2.81) and Lack of EKOEXCEL device makes it difficult for teachers to keep up with the new development in education (Mean= 2.59).

Therefore, to answer this research question 2, the following are the perceptions of early childhood teachers on the use of EkoEXCEL device in both education and learning:

- EKOEXCEL device makes my teaching easier
- EKOEXCEL device enhances collaborative learning among learners and teachers
- Teachers need to be encouraged to use EKOEXCEL device in their both education and learning activities
- Using EKOEXCEL device helps to ensure quality education
- EKOEXCEL device enhances my learners' critical thinking
- I find the use of EKOEXCEL device in both education and learning a time consuming.
- EKOEXCEL device promotes innovation and problem-solving skills of my learners
- EKOEXCEL device promotes research-based both education and learning
- Schools need to prioritize the EKOEXCEL device pedagogical training in their Continuous Professional Development (CPD)
- Lack of EKOEXCEL device makes it difficult for teachers to keep up with the new development in education

Research question 3: To what extent do the early childhood teachers use EkoEXCEL device to Teaching

Table 3 showing extents do the early childhood teachers use EkoEXCEL device to Teaching

S/N	ITEMS	4	3	2	1	MEAN
1	The teacher uses EKOEXCEL device when teaching in the classroom.	135 (72.2)	39 (20.9)	5 (2.7)	8 (4.3)	**3.61**

2	Teacher teach using EKOEXCEL device during the both education and learning process.	130 (69.5)	49 (26.2)	4 (2.1)	4 (2.1)	**3.63**
3	Teacher doesn't have enough time to use EKOEXCEL device in the both education and learning process.	36 (19.3)	28 (15.0)	40 (21.4)	83 (44.4)	**2.09**
	WEIGHTED MEAN = 3.11					

Key Note: very high (4), high (3), fairly used (2), rarely used (1)

Table 3 above showing extents the early childhood teachers use EkoEXCEL device to teaching. The detailed analysis reveals that early childhood teachers very high: teacher using EkoEXCEL device during the both education and learning process (Mean=3.63) uses EkoEXCEL device when teaching in the classroom (Mean=3.61) and fairly used: teacher does not have enough time to use EkoEXCEL device (Mean=2.09).

The weighted average of the table is 3.11, which implies that the extent the early childhood teachers use EkoEXCEL device is high.

Research question 4: To what extent do the early childhood teachers use EkoEXCEL device to Instructional materials

Table 4 showing extents do the early childhood teachers use EkoEXCEL device to Instructional materials

S/N	ITEMS	4	3	2	1	MEAN
1	Teacher uses EKOEXCEL device to enhance pupils' accessibility to content.	115 (61.5)	51 (27.3)	9 (27.3)	12 (6.4)	**3.43**
2	Teacher uses resource materials when using EKOEXCEL device in both education and learning process.	63 (33.7)	56 (29.9)	32 (17.1)	36 (19.3)	2.781
3	Teacher uses EKOEXCEL device to do other school co-curricular activities like quiz and debate competitions	12 (6.4)	28 (15.0)	40 (21.4)	107 (57.2)	1.706
	WEIGHTED MEAN = 2.64					

Key Note: very high (4), high (3), fairly used (2), rarely used (1)

Table 4 shows the extent early childhood teacher use EkoEXCEL device to instructional materials. The detailed analysis reveals that early childhood teachers highly use to enhance pupils' accessibility to content (Mean=3.44) and use resource materials (Mean=2.78) while fairly used to do other school co-curricular activities like quiz and debate competitions (Mean=1.71).

The weighted average of the table is 2.64, which implies that the extents the early childhood teacher use EkoEXCEL to instructional materials is high.

Research question 5: To what extent do the early childhood teachers use EkoEXCEL device to Assess pupil's performance

Table 5 showing extents do the early childhood teachers use EkoEXCEL device to Assess pupil's performance

S/N	ITEMS	4	3	2	1	MEAN
1	Teacher uses EkoExcel device to give pupils assignment in the both education and learning process	87 (46.5)	40 (21.4)	32 (17.1)	28 (15.0)	2.99
2	Teacher uses EKOEXCEL device to give test to pupils in the classroom	135 (72.2)	28 (15.0)	13 (7.0)	11 (5.9)	3.53
3	Teacher operate EKOEXCEL device to record continuous assessment of pupils in the both education and learning process.	151 (80.7)	28 (15.0)	4 (2.1)	4 (2.1)	3.74
4	Teacher use EkoEXCEL to pupils grade performance pupils during the both education and learning process	159 (85.0)	16 (8.6)	8 (4.3)	4 (2.1)	3.76
	WEIGHTED MEAN = 3.51					

Key Note: very high (4), high (3), fairly used (2), rarely used (1)

Table 5 showing extents early childhood teachers use EkoEXCEL device to assess pupils' performance. The detailed analysis reveals that very highly early childhood teacher utilize the EkoEXCEL to: to grade pupils performance (Mean=3.77), to record continuous assessment of pupils in the both education and learning process (Mean=3.74) and give continuous assessment (Mean=3.54) while highly utilize to give pupils assignment (3.00).

Therefore, the weighted average of the table is 3.51, which implies that the extent early childhood teachers use EkoEXCEL device to assess pupils' performance is very high.

Conclusion

This study investigated perceived role and utilization of technology used in information and communication in the professional practices of education for young children using a descriptive survey research design. The study was based on Urie Brofenbrenner's Ecological Systems Theory and based on the findings, the following conclusions were reached. There is a notable disparity between early childhood teachers that are male and female on perceived roles of EkoEXCEL devices. Lastly, there is a significant negative relationship between early childhood teachers' qualifications and utilization of EkoEXCEL device.

Recommendations

1. Teachers should communicate and utilize EKOEXCEL device effectively with their pupils to extricate fear that may show up amongst them.

2. Teachers should help to create opportunities for young children to understand and appreciate the benefits of visual images and graphics in knowledge which are part of their everyday experiences.

3. The educational resource centers should join hand with state Ministries of Education to create awareness about EKOEXCEL device and the usefulness to the teachers. Also, both parties should organize workshops and seminars for in-service teachers irrespective of their gender, experience and qualification on the application of EKOEXCEL device for effective delivery of instructions.

4. Government should give teachers opportunities to actively engage in dialogue to explore and articulate their pedagogical approach to EKOEXCEL device in education for young children.

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