

To Assess The Influence Of Teacher-Related Factors In Integration Of Ict On Acquisition Of Literacy Skills Among Pre-Primary Children In Kasarani Sub –County.

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Abstract

Early literacy skills play a significant role of communication in everyday life and from infancy through early childhood to primary levels of education. However, in Kasarani Sub-county, acquisition of literacy skills amongst ECDE learners has been erratic. ECDE learners' manifest cases of poorly developed reading, writing and speaking skills despite the emerging trend of global investment in ICT to improve literacy skills development. Thus, the purpose of the study was to assess the influence of integration of information communication and technology on acquisition of literacy skills in ECDE centers in Kasarani Sub-county, Nairobi County, Kenya. The study was guided by the network society and language acquisition theories. The study applied mixed methods approach and thus concurrent triangulation research design. The target population was 918 respondents comprising of 27 headteachers, 81 ECDE teachers and 810 ECDE learners. Validity was established through expert judgment. Reliability was established using test retest technique and reliability index, $r = 0.944$, was obtained using Cronbach Alpha Method which indicated high internal reliability. Credibility was established by data triangulation through multiple researcher whereas dependability was established through detailed reporting. Data analysis began by identifying common themes from respondents' description of their experiences. Qualitative data was analyzed thematically along the study objectives and presented in narrative forms whereas quantitative data was analyzed descriptively and inferentially using ANOVA using Statistical Packages for Social Science (SPSS 23) and presented using tables and charts. The study established that teachers' characteristics, availability of ICT facilities and school management support influence integration of ICT as a strategy for enhancing ECDE learners' acquisition of literacy skills. The study thus recommends that the training for ECDE teachers should incorporate technological aspects to enable them integrate ICT in teaching. The stakeholders should provide adequate ICT facilities and resources for effective integration of ICT in ECDE centers.

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I.Introduction

Background Information of the Study

As a result of globalization and the spread of ICT across all sectors of society, we currently have a social system that is information-based and progress-driven. The notion of Proficiency abilities securing rely on ICT integration and the impact of educator's components, openness of ICT resources and school back on integration of ICT. Penuel's (2012) randomized-controlled preparatory tried the impacts of a media-rich capability capacities supplement that pre-owned TV appears in early childhood instruction proficiency abilities ponder corridors, and the results appeared that kids who got the media supplement made more significant improvements on letter affirmation, phonics, print, and story thoughts.

Statement of the Problem

Preschoolers in Kasarani Sub-County have struggled to develop their language skills. Most children in preschool and kindergarten have not met expectations in terms of their literacy development (reading, writing, and speaking skills). To combat this, the use of ICT has been identified as a tool to enhance the development of reading and writing skills in elementary school students. To better ensure that young children are equipped with the knowledge and skills they need to navigate the rapidly evolving digital world, educators may want to consider incorporating ICT into the process of gaining these skills. Despite this improvement, pre-primary school students in Kasarani Sub-County continue to demonstrate inadequate reading, writing, and speaking skills. Without skilled human back who deeply qualify on the ICT control, and without an ICT strategy, the necessary bolster instrument, in this case ICT, may end up dropping.

Purpose of the Study

The study inspected the impact of integration of ICT on securing of education abilities among Pre-Primary understudies in Kasarani Sub-County, Nairobi Province, Kenya.

Significance of the Study

The study could be useful for pre-primary teachers because it could provide data on the use of ICT to ensure students' educational development. The assessed writing could provide more data on how well schools in Kasarani Sub-County are set up for coordinated ICT. This research could help the Service of Instruction identify and address gaps so that schools can more easily coordinate ICT in acquiring competency skills. The findings may also encourage pre-primary students to strongly grasp the use of ICT in securing conceptions of proficient abilities, therefore the investigation may be useful for them. To keep up with the rapid pace of technological advancement, this may be necessary. Children in pre-primary grades would benefit from the seamless integration since it would expose them to new areas of study that will help them develop to their fullest potential.

The study could be useful for pre-primary educators if it includes information on the effectiveness of ICT in ensuring the development of teaching skills in the youngest students. The data gathered by evaluating the submitted writing would improve school ICT planning in Kasarani Sub-County. The information gathered from this study may help the Benefit of Instruction fill in the gaps and better serve the schools. ICT for simple skill development and expansion. Students in elementary school and even pre-school might profit from this line of thinking, as the information provided could encourage them to more fully grasp the application of ICT in the acquisition of capability capacities concepts. Given the state of the art in machinery, this may be crucial in coordinating the necessary oversight. Young pre-primary students might benefit greatly from the integration because it would assist show them targeted areas of data that they could use to their fullest capacity.

II. Literature Review

The Concept of Acquisition of Literacy Skills

According to Savage and Egerton (2000), gatekeepers are crucial to the development of children's language skills since they are the preschoolers' first and most important teachers. Different gatekeepers may not be successful in their attempts to teach children how to read. Pappas (2013) observed that a variety of experiences, including travel and sightseeing, reading and viewing visual media, hearing stories told aloud, and answering questions, all tend to contribute to understanding ability because they provide the foundation of spoken language that is so important for the development of acquired language.

The Concept of ICT Integration in Early Childhood Education

The phrase "ICT integration" is used to describe a spectrum of learning environments, from using a computer provided by the testing center to having the computer itself guide the exam using pre-made, teacher-verified software (Tay, 2011). Changing the way people interact, gather, and disseminate information in order to improve education is what the term "information and communication innovation" refers to (Tubbs, 2013). The use of electronic media, the internet included, has also reorganized the process of securing educational capacities. Guidelines have improved in youth tutoring centers thanks to the construction and implementation of incorporating machines and PCs within the safeguarding of capacity capacities system throughout the world, as indicated by Tubbs (2013). This has led to advances in public health and financial stability. There are a number of advantages to combining information communication innovation, such as expanding access to far-flung learning resources that would be difficult to access when relying only on printed books, advancing collaborative learning, piqueing the interest of pre-essential students through the use of recordings, TV, and blended media PC programming that combines the force of content, sound, and beautiful moving pictures, and guaranteeing pre-essential understudy-centered instruction (Tubbs, 2013).

Teacher Factors and Integration of ICT

There are many different factors that go into deciding how much of a development a teacher gets, such as their experience, age, sexual orientation, how often they interact with students, how well they know their way around a computer, and how they act towards computers (Schiller, 2003). Teachers are expected to learn how to incorporate information and communication technologies (ICT) into lessons in order to help students acquire new skills and knowledge. However, the development's legitimacy is determined not by its mere presence in the youth preparation center debate but rather by teachers' ability to successfully incorporate ICT into lessons (Jones, 2001). Teachers' views on progress profoundly influence how they deploy and modify computing resources to safeguard instructional capacities.

ICT Resources and Acquisition of Literacy Skills

Access to ICT resources and system, in addition to teachers' lack of restraint and attitude toward ICT use, are crucial factors for incorporating ICT in achieving capability capabilities level in youth tutoring centers. Makewa, Meremo, Part, and Part (2013) cite a study conducted in the United States in 2000 by the National Center for Education Statistics (NCES) using the Fast Reaction Overview Framework (FRSS), which found that 99 percent of full-time standard government-subsidized teachers shifted toward using computers or the internet in their classrooms.

Summak and Samancioglu (2011) conducted research in the Netherlands and found that the availability and sensitivity of the ICT disobedient such gear, programming, and fringe equipment provided in the classroom are measured by the ICT system. In a similar vein, in Austria, where Pelgrum (2001) focuses, ICT setup refers to the availability of hardware, software, internet access, and similar resources within the institution. These revelations acknowledge the progress that has been made in organizing and enabling schools' information and communication technology (ICT) resources and classrooms to support the ongoing modification and enhancement of students' diverse reading and writing skills.

School Support and Acquisition of Literacy Skills

School administration provides some helpful data with which to analyze efficient routines for acquiring skills. However, a great deal of the research is narrow in scope, focuses on ICT commitments to the training cycle as restricted to outcomes, uses data that are essentially roughly related with the Proficiency capacities thoughts being analyzed, or uses relevant examination approaches from which it is difficult to pick causal associations or scale up to different populations (Adre and Sullivan, 2008). Therefore, there is still a lot to learn about efficient procedures for advancing the acquisition of teaching skills through the coordinated use of ICT amongst school administrators. According to Adelman (2006), educators provide students with ICT tools, organize seminars, and provide guidance so that elementary school students may adapt to underutilized ICT frameworks for learning a variety of concepts in the Education Capabilities topic area.

III. Research Methodology

Research Design

A well-defined overall strategy was used in this investigation. This made it possible to gather data through in-person meetings, regulated surveys, or tests of persons (Orodho, 2003). This strategy allowed the researcher to simultaneously implement both quantitative and subjective approaches, without incurring any undue resource costs (Creswell 2009). This approach was selected because of its malleability, which allowed for the inclusion of both quantitative and subjective data, leading to a more complete comprehension of the topic under investigation. The research was carried out in the Kasarani Sub-County of the Nairobi Province. A target population of 918 respondents was included in the study including 27 headteachers, 81 pre-essential instructors and 810 pre-essential students. The data collection tools like these let researchers' piece together crucial facts about their chosen fields of study. Which were questionnaire for pre-primary Teachers, interview guide for headteachers and observation checklist analysis guide. The preliminary test of the examination disobedient in order to bolster its genuineness, reliability, validity, and consistency. The investigation utilized essential and discretionary data. Basic data was acquired utilizing survey & meet plan that were customised and maintained by researcher. Secondary Information was acquired by Writing survey & through government and private division distributions.

The related information was put into phrases or sentences that show a single, clear idea. The answers to the next things that were wrapped up were coded. Ethical considerations in research include telling people what the study is about and what is expected of them, getting their informed consent, and making sure they are treated equally.

IV. Results And Finding

ECDE Teachers' Characteristics and Integration of ICT in Acquisition of Literacy Skills

As per question one, the study sought to establish how ECDE teachers' characteristics influence integration of ICT in acquisition of literacy skills. Data was collected from ECDE teachers, organized and summarized and results are shown Table 1:

Table 1: ECDE Teachers' Views on the Influence of Teachers' Characteristics on Integration of ICT in Acquisition of Literacy Skills

Summary of Test Items	SA %	A %	U %	D %	SD %	Mean	St. Dev.
ECDE teachers' level of education has not enhanced ECDE learners' acquisition of reading skills	70.4	12.9	1.3	10.1	5.3	4.287	0.952
ECDE teachers' level of education has not enhanced ECDE learners' acquisition of writing and speaking skills	66.9	13.2	2.4	12.7	4.8	4.074	0.905
Teaching experience has not enhanced ECDE learners' acquisition of reading skills	80.5	12.4	1.6	3.3	2.2	4.902	1.088
Teaching experience has not enhanced ECDE learners' acquisition of writing and speaking skills	67.4	19.7	3.5	5.3	4.1	4.105	0.911
ECDE teachers' competency in ICT has not enhanced ECDE learners' acquisition of reading skills	69.6	13.8	1.6	10.6	4.4	4.239	0.941
ECDE teachers' competency in ICT has not enhanced ECDE learners' acquisition of writing and speaking skills	61.8	14.5	2.1	15.2	6.4	3.764	0.836
ECDE teachers' ICT exposure has enhanced ECDE learners' acquisition of reading skills	57.9	15.5	1.9	20.3	4.4	3.526	0.783
ECDE teachers' ICT exposure has not enhanced ECDE learners' acquisition of writing and speaking skills	59.9	11.7	2.7	18.6	7.1	3.648	0.810

Source field Data (2020)

Table 1 reveals that majority (70.4%) of the ECDE teachers strongly agreed with the view that ECDE teachers' level of education has not enhanced ECDE learners' acquisition of reading skills. At the same time, 12.9% agreed. However, only a paltry 1.3% of the ECDE teachers were undecided, 10.1% disagreed whereas 5.3% strongly disagreed. On average, these findings generated a mean of $M = 4.287$, Std. Deviation = 0.952. The study also revealed that a fair majority (66.9%) of the ECDE teachers strongly agreed with the view that ECDE teachers' level of education has not enhanced ECDE learners' acquisition of writing and speaking skills as did 13.2% of the ECDE teachers. At the same time, 2.4% of the ECDE teachers were undecided, 12.7% disagreed whereas 4.8% strongly disagreed. On average, these findings generated a mean of $M = 4.074$, Std. Deviation = 0.905.

These findings corroborate the assertions of Schiller (2003) that ECDE teachers' characteristics such as educational level in computer for educational purpose and attitude towards computers can influence the integration of a technology. The study also revealed that an impressive majority (80.5%) of the ECDE teachers strongly agreed with the view that teaching experience has not enhanced reading skills and ECDE learners' acquisition of writing and speaking skills as did 12.4% of the ECDE teachers. However, 1.6% of the ECDE teachers were undecided, 3.3% disagreed whereas 2.2% strongly disagreed. On average, these findings generated a mean of $M = 4.902$, Std. Deviation = 1.088.

A fair majority (67.4%) of the ECDE teachers strongly agreed with the view that ECDE teachers' competency in ICT has enhanced ECDE learners' acquisition of reading skills. 19.7% agreed. However, 3.5% of the ECDE teachers were undecided, 5.3% disagreed whereas 4.1% strongly disagreed. On average, these findings generated a mean of $M = 4.105$, Std. Deviation = 0.911. These findings lend credence to the findings of a study conducted in Czech Republic in which Wheeler (2000) found out that teacher demographics such as age, gender and teaching experience influence the integration of ICT in teaching in ECDE centers. These findings were also consistent with the findings of a study conducted in Venezuela in which Tubbs (2013) indicated that ECDE teachers who have fewer years of experience are more likely to use computers in their classes than ECDE teachers with a lot of years of experience. These findings affirm the fact that new ECDE teachers who have been exposed to computers during their training and therefore have more experience in using the tool. The study also revealed that a fair majority (69.6%) of the ECDE teachers strongly agreed with the view that ECDE teachers' competency in ICT has not enhanced ECDE learners' acquisition of writing and speaking skills as did 13.8% of the ECDE teachers. On the other hand, 1.6% of the ECDE teachers were undecided, 10.6% disagreed whereas 4.4% strongly disagreed. On average, these findings generated a mean of $M = 4.239$, Std. Deviation = 0.941.

The study also revealed that a fair majority (61.8%) of the ECDE teachers strongly agreed with the view that ECDE teachers' competency in ICT has not enhanced ECDE learners' acquisition of writing and speaking skills as did 14.5% of the ECDE teachers. On the other hand, 2.1% of the ECDE teachers were undecided, 15.2% disagreed whereas 6.4% strongly disagreed. On average, these findings generated a mean of $M = 3.764$, Std. Deviation = 0.836. These findings corroborate the findings of a study conducted in Lagos State in Nigeria in which Oladosu (2012) asserted that an important additional determinant of ECDE teachers' engagement in the use of new media in classrooms is their confidence in using technology.

ECDE teachers with little confidence in using ICT in their work will try to avoid them. Oladosu (2012) reported that many ECDE centers ECDE teachers who were not using computers were doing so because they lacked confidence with or felt frightened by computers. These findings hence affirm the fact that lack of ICT-competence is clearly a barrier to ECDE teachers' use of new media in classrooms.

In other words, ECDE centers ECDE teachers who have a reasonable amount of technical skill and who use computers to address their own professional needs use computers in broader and more sophisticated ways with ECDE learners than ECDE teachers who have limited technical skills and no personal investment in using computers themselves. Slightly more than half (57.9%) of the ECDE teachers strongly agreed with the view that ECDE teachers' ICT exposure has not enhanced ECDE learners' acquisition of reading skills. 15.5% of the ECDE teachers agreed. On the contrary, 1.9% of the ECDE teachers were undecided, 20.3% disagreed whereas 4.4% strongly disagreed. On average, these findings generated a mean of $M = 3.526$, Std. Deviation = 0.783.

Similarly, more than half (59.9%) of the ECDE teachers strongly agreed with the view that ECDE teachers' ICT exposure has not enhanced ECDE learners' acquisition of writing and speaking skills. 11.7% of the ECDE teachers agreed. On the contrary, 2.7% of the ECDE teachers were undecided, 18.6% disagreed whereas 7.1% strongly disagreed. On average, these findings generated a mean of $M = 3.648$, Std. Deviation = 0.810. These findings lend credence to the assertions of Tubbs (2013) in Venezuela indicates that ECDE teachers who have fewer years of experience are more likely to use computers in their classes than ECDE teachers with a lot of years of experience. This is attributed to the fact that new ECDE teachers who have been exposed to computers during their training and therefore have more experience in using the tool.

A similar coincidence was observed by the study of (Supon and Ruffini, 2019).when One reason for this may be the absence of examples on how to use technology effectively for learning purposes, as well as challenges related to contextual factors like class size and student abilities. Additionally, Brush, Glazewski, and Hew (2018) discovered that teacher training programs do not adequately equip pre-service teachers with ICT knowledge to support technology-based teaching or provide proper guidelines for integrating technology into a curriculum. Therefore, there is a need for more training in ICT skills during pre-service teachers' education, and these skills must be applied in the classroom to effectively integrate technology strategies.

Inferential Findings on ECDE Teachers' Characteristics and Integration of ICT in Acquisition of Literacy Skills

To verify the possibility of difference between ECDE teachers' characteristics and ECDE learners' acquisition of reading, writing and speaking skills, data was collected on the number of ECDE teachers with ICT training and ECDE learners' performance in reading, writing and speaking skills and results are indicated in Table 8:

Table 2: Results of Number of ECDE Teachers with ICT Training and ECDE Learners' Performance in Reading, Writing and Speaking Skills

ECDE Teachers with ICT Training	Performance in Literacy Skills (%Mean score)		
	Reading Skills	Writing Skills	Speaking Skills
11	21	23	19
17	27	29	33
23	43	50	51
33	61	59	58

Source field Data (2020)

Table 2 indicates that there is difference between ECDE teachers' training in ICT and ECDE learners' acquisition of writing and speaking skills. Those who had ICT exposure and manifested good mastery of ICT skills and their ECDE learners register impressive average mean scores. These findings corroborate the assertions of Oladosu (2012) who reported that many ECDE teachers who are not using computers were doing so because they lack confidence with or felt frightened by computers. In other words, lack of ICT-competence is clearly a barrier to ECDE teachers' use of new media in classrooms other than level of ECDE teachers' training in ICT. These results were subjected to ANOVA and results are indicated in Table 3:

Table 3: ANOVA Analysis of the Difference between Means of the Number of ECDE Teachers with ICT Training and ECDE Learners' Performance in Reading, Writing and Speaking Skills

Test Item		Sum of Squares	df	Mean Square	F	Sig
Number of ECDE Teachers with ICT Training		2820.250	3	940.083		
Reading Skills	Writing Skills	1040.250	3	346.750	14.634	.001
	Speaking Skills	213.250	9	23.694		
	Total	1253.500	12	104.458		
Total		4073.750	15	271.583		

Grand Mean = 34.8750
Source field Data (2020)

From the ANOVA Statistics in Table 3, the processed data, which is the population parameters, had a significance level of 0.001 which shows that the data is ideal for making a conclusion on the population's parameter as the value of significance (p-value of 0.001) is less than 5%, that is, $p\text{-value}=0.001 < 0.05$. It also indicates that the results were statistically significant and that there is significant difference between means of scores for reading, writing and speaking skills of ECDE learners. These results were consistent with the findings of a study conducted by Lawrence and Veena (2013) which generated a p-value of $0.044 < 0.05$. These findings affirm the fact that an understanding of personal characteristics that influence ECDE teachers' integration of ICT into teaching is relevant in enhancing reading skills and ECDE learners' acquisition of writing and speaking skills. In other words, ECDE teachers' preparedness to integrate ICT into teaching determines the effectiveness of the technology and not by its sheer existence in the ECDE centers.

This was similar to study by Nikolopoulou et al (2019) It is important to prioritize the training of teachers in ICT since they play a crucial role in maximizing the educational opportunities presented by technology. To achieve this goal, teachers at every level, including pre-primary to university, must receive training in ICT. While government support for pre-school education, particularly in curriculum development, is a relatively new trend.

Thematic Analysis of Qualitative Findings on ECDE Teachers' Characteristics and Integration of ICT in Acquisition of Literacy Skills

Headteachers were also interviewed. The interviewees too indicated that ECDE teachers' level of education has not enhanced ECDE learners' acquisition of reading skills and enhanced ECDE learners' acquisition of writing and speaking skills. Just like in quantitative data, these views lend credence to the assertions of Schiller (2003) that teacher' characteristics such as educational level in computer for educational purpose and attitude towards computers can influence the integration of a technology. The interviewees also indicated,

“Teaching experience has enhanced reading skills and ECDE learners' acquisition of writing and speaking skills as did their teaching competency”.

In the same vein, these views lend credence to the findings of a study conducted in Czech Republic in which Wheeler (2000) found out that teacher demographics such as age, gender and teaching experience influence the integration of ICT in teaching in ECDE centers. These views affirm the fact that ECDE teachers who have fewer years of experience are more likely to use computers in their classes than ECDE teachers with a lot of years of experience. Besides, new ECDE teachers who have been exposed to computers during their training and therefore have more experience in using the tool. The interviewees indicated that an important additional determinant of ECDE teachers' engagement in the use of new media in classrooms is their confidence in using technology. This point to the fact that ECDE centers ECDE teachers with little confidence in using ICT in their work will try to avoid using the ICT.

These views further attest to the fact that many ECDE centers ECDE teachers who were not using computers were doing so because they lacked confidence with or felt frightened by computers. In addition, these findings hence affirm the fact that lack of ICT-competence is clearly a barrier to ECDE teachers' use of new media in classrooms. ECDE centers ECDE teachers who have a reasonable amount of technical skill and who use computers to address their own professional needs use computers in broader and more sophisticated ways with ECDE learners than ECDE teachers who have limited technical skills and no personal investment in using computers themselves. The interviewees were also in favor of the fact that ECDE teachers who have fewer years of experience are more likely to use computers in their classes than ECDE teachers with a lot of years of experience.

V.Summary, Conclusion And Recommendation

Summary ECDE Teachers' Characteristics and Integration of ICT in Acquisition of Literacy Skills

The study established that ECDE teachers' characteristics influence integration of ICT in acquisition of literacy skills. The study has also found out that ECDE teachers' level of education has enhanced ECDE learners'

acquisition of reading skills and enhanced ECDE learners' acquisition of writing and speaking skills. Similar results have also been established for ECDE teachers' experience, mastery of ICT skills and exposure to ICT. These findings thus affirm the fact that ECDE teachers' characteristics such as educational level in computer for educational purpose and attitude towards computers can influence the integration of a technology. Teacher demographics such as age, gender and teaching experience influence the integration of ICT in teaching in ECDE centers. In other words, ECDE teachers who have fewer years of experience are more likely to use computers in their classes than ECDE teachers with a lot of years of experience.

Therefore, this points to the fact that new ECDE teachers who have been exposed to computers during their training and therefore have more experience in using the tool. Besides, an important additional determinant of ECDE teachers' engagement in the use of new media in classrooms is their confidence in using technology. ECDE centers ECDE teachers with little confidence in using ICT in their work will try to avoid them. Many ECDE centers ECDE teachers who are not using computers are doing so because they lack confidence with or feel frightened by computers which are indicative of the fact that lack of ICT-competence is clearly a barrier to ECDE teachers' use of new media in classrooms.

In other words, ECDE centers ECDE teachers who have a reasonable amount of technical skill and who use computers to address their own professional needs use computers in broader and more sophisticated ways with ECDE learners than ECDE teachers who have limited technical skills and no personal investment in using computers themselves. In addition, ECDE teachers who have fewer years of experience are more likely to use computers in their classes than ECDE teachers with a lot of years of experience. This is attributed to the fact that new ECDE teachers who have been exposed to computers during their training and therefore have more experience in using the tool.

The technology integration outcomes are also influenced by various internal factors. These internal factors relate to teachers and include their understanding of how to use ICT, their beliefs which may clash with the application of ICT, their attitudes towards technology integration, their perceptions such as their intention or motivation to use ICT, their level of self-confidence and knowledge, their technology skills, their readiness to use ICT, and their technology self-efficacy.

Conclusion

It is evident that ECDE teachers' characteristics influence integration of ICT in acquisition of literacy skills and availability of ICT infrastructure in schools is futile if ECDE teachers lack the knowledge and the skills on how to use these instruments to deliver their subject matter and to engage ECDE learners through ICT. The study has also found out that ECDE teachers' level of education has enhanced ECDE learners' acquisition of reading skills and enhanced ECDE learners' acquisition of writing and speaking skills. ECDE teachers' experience, mastery of ICT skills and exposure to ICT too revealed similar results. This implies that ECDE teachers' characteristics such as educational level in computer for educational purpose and attitude towards computers can influence the integration of a technology. Teacher demographics such as age, gender and teaching experience influence the integration of ICT in teaching in ECDE centers.

Recommendations for Practice

The study makes the following recommendations;

On ECDE teachers' characteristics, the training curriculum for ECDE teachers should incorporate technological aspects so as to enable the ECDE teachers gains both theory and practical skills for use in implementing ICT in acquisition of literacy skills. This may go a long way in providing adequate training opportunities for all ECDE teachers must be prioritized by the Department of Education to enable ECDE teachers to get to grips with new technologies which can impact and enhance teaching and learning. In the same vein, the ECDE teachers must be encouraged to consult ICT competent ECDE teachers for help and work collaboratively with peers in order to learn from their expertise and experiences. The online teacher development communities need to be introduced for support, sharing of knowledge and discussion pertaining to ECDE teachers' activities especially those that entail ICT integration.

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