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Effect Of Digital Literacy Program on Learning in Early Childhood CENTRES in Municipality Zone KANDUYI Division, Bungoma County

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ABSTRACT : Digital literacy in early childhood goes beyond simply knowing how to use a tablet or watch videos online. It's about fostering a set of skills that help children understand and interact safely with digital environments. Hence Digital literacy is a way of using modern and more advanced method in providing of education to the learners via use technological devices. The Kenya Government like other Governments is keen to reap from the benefits of technology. To harness this effectively, there is need for an effective and efficient way tomanage digital literacy programs in ECD centres. This stud investigated the effects of Digital Literacy Program (DLP) in ECDE centres in Kanduyi Municipality, Bungoma County. The study focused on three (3) tenets of the program: Infrastructure/Facilities; Choice of Digital Devices and Business Continuity Plans (BCP). Purposive sampling, targeted only respondents involved in, with knowledge of or affected by theDigital Literacy Program in the target area will be used. The respondents included teachers andheadteachers. Piloting was done to ascertain validity and reliability of the tools. Secondary data was collected from relevant literature, government policy documents and publications. Primary datawas obtainedthrough focusedinterviews andstructured questionnaires. The study concludes that digital literacy program played a major role in time management, improved literacy and communication skills among preschoolers and made it easier to obtain relevant and important information. The study recommended the following; teachers need to have competence in digital literacy programmes and tools to build competency and mastery of skills and digital programmes, increase in the infrastructure at all learning levels with this it will ensure that teachers knowledge and attitude advance in digital literacy in classroom and Further research recommendations in order to be effective in policy making.

KEY WORDS: *DIGITAL literacy, Early childhood Education, Early Childhood Education Centre, Effect of digital literacy*

I. INTRODUCTION

In today's digital world, children are growing up surrounded by technology. But digital literacy in early childhood is about much more than just screen time. It's about helping children understand, navigate, and interact safely with digital content in meaningful ways. Hence the need to infuse digital skills to enable our children develop essential skills they'll need for school and beyond. Digital literacy program is a technological programme that helps one acquire skills needed to live, learn and work in a society where communication and access to information is increasingly through digital technologies like internet platforms, social media and mobile devices (Western Sydney University). According toPaul Gilster (1997) Digital Literacy is logical extension to literacy meaning the ability to understand and use the information in multiple formats from a wide range of sources when it is presented through computers. It has often lays emphasis on mastery of skills and tools in order to use digital technology, communication tools or network to locate, evaluate, use and create information. It also referees to the ability to understand and use information in multiple formats from wide range of sources when presented through digital environment United Nations Educational Scientific and Cultural Organization (UNESCO 2013). Digital Literacy tools technology application is being utilized in various Early childhood educational environment across the world.Although there were initialconcerns by educators and parents concerning the digital literacy among young children,later research proposed most of these fears were un founded (plowman&Mcpace 2013). The implication technology can be comfortably utilized in early childhood centers to supplement their growth and development by early exposure to the devices and shown alternative ways to interact with technology other than recreational purposes. Digital literacy has placed parents in dilemma regarding what is best for their children. Computers have become an essential tool in all sectors of the world. It's used for communication, news source, distance education to name just but a fewIn the first world Studies

have shown that early exposure to digital literacy by preschoolers has both negative and positive effects on development. Care givers can support the enhancement to positive interactions with technologies devices while safeguarding the young leaners from not only external threats but also physical and social risks as well. A sample of 25 participants, were drawn from the population of an early childhood center in the suburbs of south Africa. Semi structured interviews took place, and the study concluded that the introduction of technology to young children enhanced learning. It however stated that future studies may consider replicating these finding with lager sample for greater validity. Future studies may address the significant of the effects to build an efficient, impactful curriculum for young children. The South African Academy of pediatrics made recommendations about importance of digital literacy among preschooler's caregivers provide for young children a healthy balance in use of technological experiences (Aubrey &Dahl, 2014) children have a natural curiosity to learn about the world around them and their interest in technology is no different from them learning how to ride a bike or race around. The inclusion of this type of learning tool has opened an entity new kind of discovery both to their immediate environment and the world as a whole. In Kenya, over 230,000 learners from seven counties are already using the EIDU program. Bungoma County signed a contract with EIDU to roll out a digital learning program targeting young learners in the county 36 different centers. EIDU is a technology-enhanced platform which integrates various high-impact interventions into a single, coherent system that is easy to use by teachers, students, and government officials. The Education executive hailed the partnership as a major step in integrating technology into the learning system at the county level. Through this partnership, we are taking a proactive step towards modernizing our education system and ensuring that our students have access to the latest educational tools and resources. About 3,233 learners in PP1 and PP2 will benefit from the enhanced learning experience offered by the digital learning program. In addition, 108 teachers will be trained on how to use smart teaching devices to plan and deliver highly engaging lessons in the classroom. This initiative aligns with our commitment to making quality education accessible to all. We look forward to witnessing the positive impact this partnership will have in Bungoma," EIDU's managing director Max Dohna said. Learners and teachers can use smartphone devices to access the EIDU School App equipped with Mathematics and Language content in line with CBC and approved by the Kenya Institute of Curriculum Development (KICD). Hence the need to establishthe impact of Digital Literacy Programme in Kenya. According to the early childhood teachers, pupils have become more alert and learning is more practical and fun. Cases of absenteeism have reduced and also there is an increase in number of pupils being admitted in public. Early Childhood Centers. This stud investigated the effects of Digital Literacy Program (DLP) inECDE centres in Kanduyi Municipality, Bungoma County. The study focused on three (3) tenets of theprogram:Infrastructure/Facilities;ChoiceofDigitalDevicesandBusinessContinuityPlans(BCP). Purposive sampling, targeted only respondents involved in, with knowledge of or affected by theDigital Literacy Program in the target area will be used. The respondents included teachers andhead teachers.

II. THEORETICAL FRAMEWORK

The theoretical framework that guided for this study is based on the structure of two theorists: Howard Gardner and Lev Vygotsky. Gardner's Ml theory (1983) was based on neurological and social research that purported that intelligence is not based on a single cognitive ability. Instead, it is derived from seven entities that are interrelated: logical mathematical, spatial, musical, bodily- kinesthetic, linguistic, interpersonal and interpersonal. Later Gardner added the eight, natural intelligence (Leshkovska&Spaseva, 2016). Technology in the classroom is attractive to students because it integrates the many bits of intelligence that Gardner identified. With the proper instructions, accessibility, and interaction all knowledge can be reached, allowing children to use classrooms technology at not only their level of development but also their preferred modality. Gardner encouraged educators to suggest approaches to curriculum, pedagogy, assessment learning differences, use of computers, place of arts indeed and almost any issue which educators are interested in (Gardner & Davis, 2011), Gardner and his colleague, Katie Davis at Harvard University, studied the role of technology and educational programs. On the other hand, Vygotsky explores the need to mentor or scaffold our children culturally in new skills to bolster their performance. The use of cultural appropriate tools like local language in the new technological applications makes it easier to grasp the concepts. Hence teachers ought to have higher competence in Digital applications and interpret the language children are familiar with.

III. METHODOLOGY

This research utilized both descriptive and exploratory research designs. Descriptive research wasselected in order to study the effect of digital literacy program on learning in early childhood centers. The exploratory research design was used to study the creation of safe information through digital technologies. Thisstudy was applied thequantitativeresearchmethodtocollectandanalyzedataonthe effect of digital literacy program.

Location of study

This research was done in public early childhood education centers in Bungoma municipality Kanduyi Division, Bungoma County, Kenya. Municipality zone is an area that is cosmopolitan and made of elite parents with better equipped schools compared to those in peri -urban or rural areas. It is about 1441. 27 meters above sea

level. It has a marine west coast, warm summer climate. Temperature in the zone is 26.52^{0}C on the higher side while about 18.0^{0}C on the lower side. It lies between the longitude 34.558 and latitude 0.569. Agriculture is the major economic activity in the zone, due to the sufficient high rainfall between the months of March to June and September to November. Municipality zone is bordered by Chwele municipality on the north, Webuye municipality towards the south and Busia county towards the west. It has many feeder roads and major main roads.

TargetPopulation

Target population of this study comprised of 526 ECDE learners of which 201 are boys while 329 are girls, 21 ECDE teachers and 3 teachers in charge, 3 school administrators

Table 1. Target population

POPULATION DESCRIPTION	TARGET POPULATION
CSO	1
School administrators	3
Teachers in charge	3
Teachers	21
Learners	357
TOTAL	**385**

From the table 1 apart from learners, it was important to include other care givers like teachers and Curriculum Support Officers who offer technical support and advice to schools.

SamplingFrameandTechnique

Thesampling technique used was the Random Stratified sampling technique, Simple Random andPurposive sampling technique.Stratification was to include schools within the town Centre and in the suburbs of the town.Purposive sampling topick one Coordinatorin charge of the ECDE Centre the sampled cluster and three centres of excellence from each cluster. These were centres running the Digital Literacy program.Simple Random helped sampling pupils undergoing Digital Literacy training. Data was collected from three representativesof each of these ECDE centers. Head teachers automatically became part of the target population due to their being part of the sampled ECDE centers automatically. That is to say each school had one school administrator therefore 1×3=3 each ECDE Centre had one teacher in charge 1×3=3.the ECDE Centre enrolment was as follows**;**

Table 2

POPULATION DESCRIPTION	TARGET POPULATION	%
CSO	1	0.26
School administrators	3	0.78
Teachers in charge	3	0.78
Teachers	21	5.5
Learners	357	92.7
TOTAL	**385**	**100**

Therefor the researcher had a total target population of 554. Therefore 1 CSO, 3 administrators and 381 learners gives a total of 385 target sampled population. Having chosen to work with 95% confidence level, a standard Deviation of 0.5 and a confidence interval (margin error) of ±5% i.e $\{(1.96)^2 \times 0.5\ (0.5)\}/(0.05)^2$ $=3.8416\times0.25/0.0025 =0.9604/0.0025 =384.16$ (385).

Datacollection Tools

The study used both primary and secondary methods of collecting data. Secondary data obtainedfrom Government policy documents, academic publications, past studies and parastatal websites.Primarydata obtained throughinterviews and questionnaires.

a) Interviews

b) The researcher conducted unstructured personal interviews through a series of meetings with relevantauthorities and correspondents in the study area. This was mainly to seek the perspectives of the correspondents to clarifythepurposeandnatureofthestudy.

c) Questionnaires

Structured questionnaires were created based on the research objectives. Thequestionnairestestedtheconstructsofchoiceofdigitaldevices and facilities.Thequestionswaseitheropen(i.e.,invitingfree response) or closed (i.e., of the type ‘yes’ or ‘no’). Likert

scale-based questions, where numberswasassignedtotherangeofresponseswereused.Thesewas basedonascaleof1to5.

PilotTesting: **Validity and Reliability of Research Instruments**

Is a research study conducted before the intended study.it was executed as planned for the intended study.it involved selecting few people and trying out the study on them.it helped the research identify gaps, spot ambiguity, test (book)

a) Validity

That is whether the instruments measure what they are supposed to measure in line with the purpose of evaluation, investigation, examination or the study itself. The researcher utilized the services of other specialists to refine the questions and eliminate any ambiguity.

Reliability

In other words, the consistency of the measurements. Reliability evaluation method produces similar results on separate occasions when the methods and tools are applied under similar circumstances decisions made on the basis of unreliable measures are not reliable. Reliability of the tools were measured by Cronbach Alpha giving an average value of 0.7 meaning the tool is reliable.

Findings and Discussions

Effects of ability to communicate using digital technology

This section represents the responses of teachers and learners on communicating using digital technology

Table 3

NUMBER	TYPES OF DIGITAL LITERACY	PERCENTAGE OF INTERACTION
1	Build communities	60
2	Language development	80
3	Collaboration	62
4	Self-paced learning	75

Having computer compliant teachers at the ECDE level such an above average percentage is a great human resources in the field. Such teachers help the learners developed the skills they need to use technology effectively. These include teaching learners how to carry out basic research of their age level on various topics outline, create digital document.

Effects on the ability to create information safely

The following table represents the criterion and the performance level that is as a result of digital learning literacy.

Table4

PERCENTAGE	CRETERION	CBC PERFOMANCE INDICATORS	ACHIEVEMENT LEVEL
86	Creativity	4	E.E
78	Innovation	4	E.E
49	Multiple learning style	2	A.E
52	Individual differences	3	M.E
69	Opportunity for information processing	4	E.E
75	Learning to learn	3	M.E

From the table abovethere is high achievement in creativity, innovation and opportunity for information processing whereas those approaching expectation in multiple learning style scored 49% while those meeting expectation under learning to learn scored 75% out of the entire population.

Effect on the ability to integrate digital content

The table below indicates the data collected during the research show the effect of the ability to integrate digital content in the learning process.

Table 5

NUMBER	LEARNERS ABILITY TO INTEGRATE DIGITAL CONTENT	ABILITY LEVEL

1	Easy access to information	High
2	Boost creativity	High
3	Development of social skills by interacting with software	High
4	Independence	High

The results show that there is high ability level in ease access to information, boosting of creativity, development of social skills and interaction with software as well as independence.

Demographic data

Digital literacy

Table 6

Computer package	NO	frequency	% of interaction
Introduction to ICT	21	5	23.8
Microsoft word	21	6	28.6
Microsoft power point	19	2	5.4
Microsoft access	11	10	27.0
Microsoft excel	6	5	13.5
Internet& Email	21	4	10.8
Database management	12	5	23.8
Total	111	37	100

From the analysis it is quite evident that digital teachers handling ECDE learners are all trained in or more packages From the data collected and analysis carried out showed that including digital literacy programme has a positive effect on learning in ECDE centers in municipality zone.Digital literature materials and multimedia has revealed that digital literacy has scored very effectively on teacher-learner assessment, very good on digital self-evaluation and good on peer evaluation. On the basis on assessment task learners' responses can be recorded in soft copies and retrieved whenever necessary. Assessment can also be done automatically since the gadgets are automated. Digital based assessment involves the use of digital tools for carrying out online assessment. This research has revealed that the delivery of assessment, tests, surveys and other measures via digital devices such as LDD'S and tablets. The evolution of assessment technological tools and the benefits of the introduction of new technology in the teaching and learning process and meaningful learning experiences such as kahootgamifield learning, access building communities, language development, collaboration, self-paced learning at quite high percentages.

Digital devices in schools

Table 7

Device	No of gargets	Ratio per learner	Ratio per teacher
Desktops	210	3	20
Laptops	3	0.1	0.5
LDD	259	3.1	23
TDD	6	0.4	0.5
Projectors	3	0.3	0.5
Interactive whiteboard	5	0.2	
CAP(content access point	3	0.3	0.5
Content server(no. of gargets connected	310	4	25
Router	3	0.3	0.5
Wi fi connectivity	200	2.9	21
Smart TV	3	0.3	0.5

The availability of various digital tools in ECDE Centers ensures (descriptive) data in order to gain an understand of individual social reality, attitudes motivation ability, knowledge, experience, exposure, as well as competencies. This method helped the research explore and gain insight into classroom learning experiences The research method was most appropriate because it enabled the research gather data and explain effects of digital literacy program on learning in Early childhood centers in municipality zone.

The study showed that the ratio of digital devices in the targeted popular was excellent,

Learners engagement

Table 8

Area	frequency	Percentage
Gamifield learning	10	30
Kahoot	15	55
Access	5	15
TOTAL	20	100

The construct of learners engagement in digital literacy is developed basing on the self-determination theory (SDT) where both intrinsic and extrinsic motivation are decisive factors of individuals competence autonomy and relativeness , Digital literacy has been seen to facilities the integration of technology in to the curriculum , allowing for the development of engaging immerse learners in interactive learners experience using virtual and augmented reality . Virtual field trips. simulations 3 D models among others enhances understand by providing a tangible and immersive blendedlearning environment. Digital devices offer a wealth of interactive resources that are not available in traditional textbooks.Various animations and simulations are used to help learners understand complete concepts whole quizzes and games help reinforce learning , making it more engaging. Using computers and other devices in conjunction with digital tools allowed students to play a more proactive role and be at the centre of the process [[Osadchvyi, 2021], [Borthswick, 2015], [Desai, 2010]]. The instructor becomes a guide in this process and can approve learning efficiency. Using the myriad of digital resources, learners may download the required information or upload their content. The web 2.0 technologies (wikis, podcasts, blogs etc.) facilitate learners to generate content, collaborate with others, assess each other work and move toward co-learning. Consequently, Digital technologies made it easy to use classroom tactics like gamification or approaches like flipped classrooms that optimise learning. Learning landscapes have evolved as a didactic tool that mixes several techniques and enables distinct itineraries to be presented to each student. Technology makes the instruction more inspiring and meaningful [[Kumar, 2022], [Avcher, 2014], [Aromatario, 2019]].

Improved performance

Table 9

Criterion	frequency	Performance level
creativity	2	BE
innovation	4	EE
Access to infrastructure	4	EE
Digital simulation & mode	4	EE
assignments	4	EE
Projects	2	AE
Research	1	BE

This study has also clearly shown that digital literacy program has improved academic standards by enhancing concentration, participation, involvement, comprehension and determination of information among ECDE learners. This is evidenced by indication in table 9 where by E according to the competency based curriculum, creativity, innovation, opportunity for information processing, access and infrastructure, digital simulation and modalities and assignment scored 4 registering (EE) exceeding expectations. However, project scored 2 translating it into AE-approaching expectation while research BE-below expectation. The globalization of education has already necessitated the application of digital technologies. Online platforms were available for conducting classes, sharing resources, doing the assessment and managing the day to day activities of academic institutions. However, the use of these platforms was proactive. The COVID-19 Pandemic has forced the institutes to adopt the online teaching mode to sustain the education system. Developed countries were well equipped to deal with this crisis. However, developing countries worked hard to meet this requirement. Digital technologies have emerged as the saviour of education in this critical time [[Seale 2021], [Burlacu, 2011], [Araujo, 2021], [Dufuor, 2010]]. This global crisis highlights the need to be internationally integrated into the education system. Digital technologies assist in developing abilities that will require students' professional performance, such as problem-solving, thinking structure creation, and process comprehension. They are also preparing for a more unpredictable and changing future in which technology will play a critical role. Students' acquired qualities and abilities will be essential to their professional success. Educational resources and digital tools help to improve the classroom atmosphere and make the teaching-learning process more compelling. Furthermore, they give each educational institution greater flexibility and customisation of curriculum based on the requirements of each student [[Dudar, 2021], [Somehk, 2004].Children might become more engaged in learning if technology is used in the classroom. Because youngsters nowadays are pretty accustomed to the usage of electronic gadgets, incorporating them into schooling would undoubtedly assist in piquing their interest and enhancing their involvement levels. Integrating technology into education provides students with an engaging learning experience, allowing them to remain more interested in the subject without being distracted. The utilisation of projectors, computers, and other cutting-edge technical gear in the classroom

may make studying fascinating and entertaining for students. Student learning can become more dynamic and engaging by establishing tasks in class that incorporate technology resources, oral presentations, and group participation. Participation can extend beyond verbal communication as well [[Lopez, 2021], [Halverson, 2012], [Kovacs, 2015]]. Jewitt et al., (2011) found that the use of learning platforms (LPs) (virtual learning environments, management information systems, communication technologies, and information- and resource-sharing technologies) in schools allowed primary and secondary students to access a wider variety of quality learning resources, engage in independent and personalized learning, and conduct self- and peer-review; LPs also provide opportunities for teacher assessment and feedback. Similar findings were reported by Fu (2013), who documented a list of benefits and opportunities of ICT use. According to the author, the use of ICTs helps students access digital information and course content effectively and efficiently, supports student-centered and self-directed learning, as well as the development of a creative learning environment where more opportunities for critical thinking skills are offered, and promotes collaborative learning in a distance-learning environment. Higgins et al. (2012) found consistent but small positive associations between the use of technology and learning outcomes of school-age learners (5–18-year-olds) in studies linking the provision and use of technology with attainment. Additionally, Chauhan (2017) reported a medium positive effect of technology on the learning effectiveness of primary school students compared to students who followed traditional learning instruction.

Group collaboration

Table 10

Area	Very high	high	moderate	low
Breakout rooms	•			
classblogs	•			
Digital file sharing DFS				•
URL			•	
Open education	•			
Cloud documents		•		
Tech savvy	•			
Assistive technology	•			
Computer aided		•		

This study revealed that digital literacy programme enhanced collaborations learning in areas like break out rooms, classes blogs, open educations. Tech savvy and assistive technologies very highly cloud document ion and computer acted designs are high however URL sharing is low. This opens out another new window for further research in the near future.

Data storage

Table 11

TYPE	YES	NO
Authentication		No
Back-up	Yes	
Back-end	Yes	
CPU	Yes	

This study has shown concerning data storage that files and documents are recorded digitally and saved in a storage system for future retrieval. Storage system may rely on electromagnet, optical or other media to preserve and restore data if needed. It has been evidenced that physical hard drives, USB drives, disk drive or virtual on cloud. The important thing hence is that files are backed up and easily available should the system even crash beyond repair. Some of the most important factors that were considered in terms of data storage are reliable, how robust security features tend to be and the cost to complement and maintain the infrastructure. There are two broad storage used to direct attach storage. There are many devices that fit into each of these categories. The research showed that most learners scored under the **(yes)** choice in comparison to **(no)** choice from the questions given.

Decentralized learning

Table 12

TYPE	YES	NO
Web quests	Yes	

Websites	Yes	
Blogs		No
Class blogs	Yes	

Under the decentralized learning, web quest, websites and class blogs seemingly were most effective unlike general blogs.

Acquisition and enhancement of computer

Table 13

Activity	%
Digital presentation	62
Multimedia creation	27
Paint	90
Policy awareness	84
Basic tools	94
Digital class presentation	76
Planning	48
Designing	39
Assessment and evaluation	75

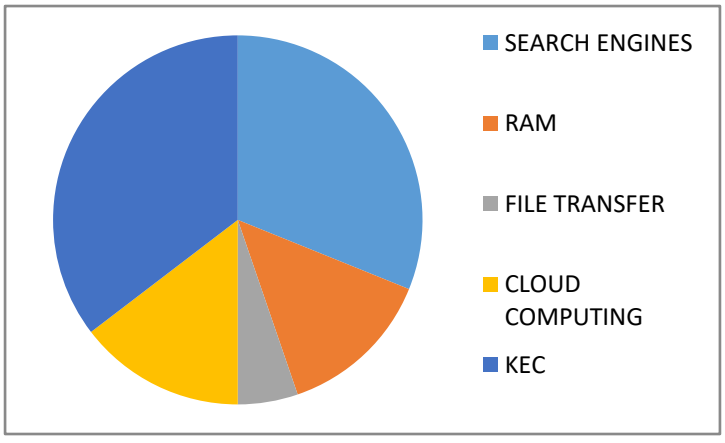
Acquisition and enhancement of digital competencies has helped learners understand how to identify and avoid fake news and online scams. Utilize online research tools safely to conduct research for their own projects, create and edit digital media such as simple videos and graphics. Safely participate in online communities and forums to share knowledge and connect with likeminded individuals. Very appealing percentages were registered ranging up to as high as 94% in basic tools storage. This is very encouraging. Most competencies scored between 62% and 94%. Only two scored 27% and 39%. Scores above 50% were 7 while only two scored below 50%.

Assignment projects in degrees

Table 14

SEARCH ENGINES	106.4
RAM	46.6
FILE TRANSFER	18
CLOUD COMPUTING	50
KEC	121

Figure 1

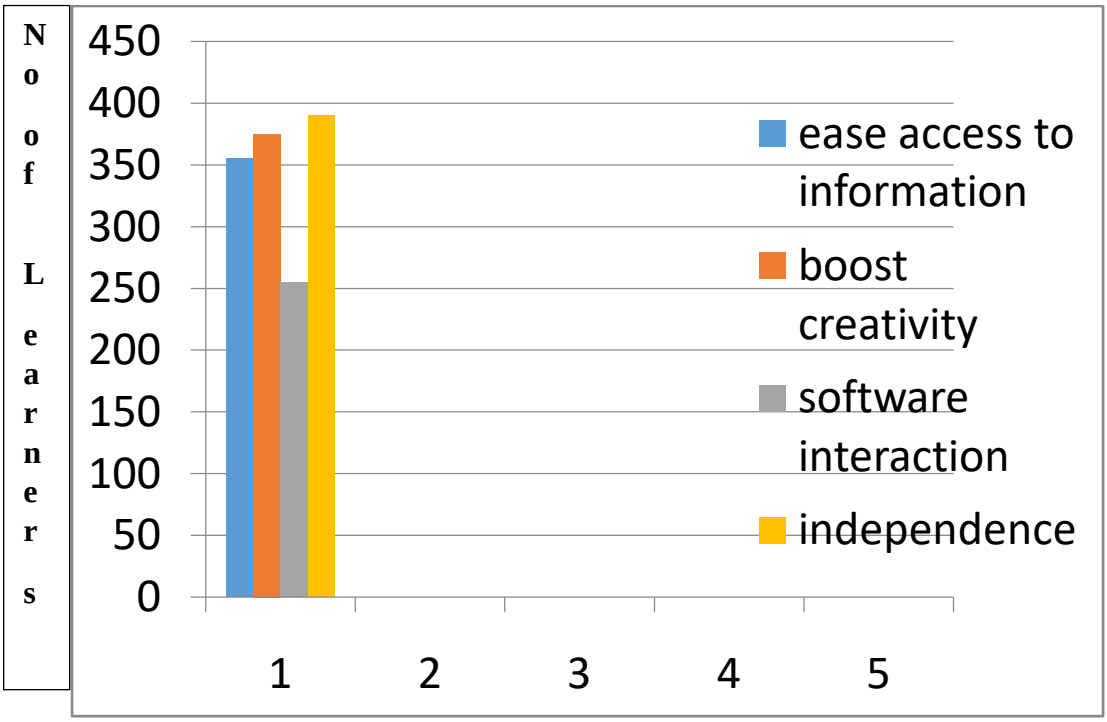


Pie cart on assignment projects.

The representation of the pie chart gives us the findings that learners who were able to use digital literacy in working out assignment, project and research shows 121 degrees represented (KEC) Kenya education cloud, 106.4 degrees represented those who were able to use research enquiries, 46.6 degrees for RAM 18 degrees under file transfer while 50 degrees cloud computing. KEC and search engines are completely used by learners and they and they are the most convenient ones for carrying out assignment, project and research.

Effect on ability to integrate digital content

Figure 2



Last but not least are the findings on effect of digital literacy on ability to integrate digital content as shown by the bar graph where 330/3 easily accessed information using digital gadgets 354/8 showed a boost in creativity, 261/__ had excellent use of software interaction while 278 could work independently using digital devices.

Digital technologies have brought changes to the nature and scope of education. Versatile and disruptive technological innovations, such as smart devices, the Internet of Things (IoT), artificial intelligence (AI), augmented reality (AR) and virtual reality (VR), blockchain, and software applications have opened up new opportunities for advancing teaching and learning (Gaol&Prasolova-Førland, 2021; OECD, 2021). Hence, in recent years, education systems worldwide have increased their investment in the integration of information and communication technology (ICT) (Fernández-Gutiérrez et al., 2020; Lawrence & Tar, 2018) and prioritized their educational agendas to adapt strategies or policies around ICT integration (European Commission, 2019). The latter brought about issues regarding the quality of teaching and learning with ICTs (Bates, 2015), especially concerning the understanding, adaptation, and design of education systems in accordance with current technological trends (Balyer& Öz, 2018).The impact of ICT use on students' knowledge, skills, and attitudes has been investigated early in the literature. Eng (2005) found a small positive effect between ICT use and students' learning. Specifically, the author reported that access to computer-assisted instruction (CAI) programs in simulation or tutorial modes—used to supplement rather than substitute instruction – could enhance student learning. The author reported studies showing that teachers acknowledged the benefits of ICT on pupils with special educational needs; however, the impact of ICT on students' attainment was unclear. Balanskat et al. (2006) found a statistically significant positive association between ICT use and higher student achievement in primary and secondary education. The authors also reported improvements in the performance of low-achieving pupils. The use of ICT resulted in further positive gains for students, namely increased attention, engagement, motivation, communication and process skills, teamwork, and gains related to their behaviour towards learning. Evidence from qualitative studies showed that teachers, students, and parents recognized the positive impact of ICT on students' learning regardless of their competence level (strong/weak students). Punie et al. (2006) documented studies that showed positive results of ICT-based learning for supporting low-achieving pupils and young people with complex lives outside the education system. Liao et al. (2007) reported moderate positive

effects of computer application instruction (CAI, computer simulations, and web-based learning) over traditional instruction on primary school student's achievement. Similarly, Tamim et al. (2011) reported small to moderate positive effects between the use of computer technology (CAI, ICT, simulations, computer-based instruction, digital and hypermedia) and student achievement in formal face-to-face classrooms compared to classrooms that did not use technology.

IV. SUMMARY FINDINGS AND DISCUSSIONS

Thepurpose of this study was to investigate the effectiveness of the digital literacy program on learning in early childhood center in municipality zone.A case sturdy of descriptive design was used because it collects data from respondents about their opinions on the digital literacy program. Students, teachers that included head teachers, parents and various stakeholders were the targeted individuals thought this research.

Conclusion

The study concludes that digital literacy program has added value and played a major role in time management, improving literacy and communication skills among learners, supplemented face to face contact between the learner and the trainee, made it easy to obtain relevant and important information, enabled learning of new words amongst the learners too. Secondly, Digital literacy also faced various challenges in its growth; lack of motivation to the content creators, insufficient trainees, insufficient material and resources, inadequate and lack of access to information among other challenges. Use the software interaction while 287 could work independently using digital devices.

Recommendation

The study recommended the following: teachers need to develop competence in digital literacy programmes and tools to build competency and mastery of skills and digital programmes and integration which is appropriate to their needs could not put into good use for instructional delivery.

Focused teacher technological training programs.

Increase the infrastructure at all learning levels. This it will ensure that teachers knowledge and attitude advance in digital literacy in classroom

Further research recommendations in order to be effective in policy making it is important to carry out research in a wider region within the county to get the real presentation of the effect of DL Program some schools within the cloudy that are in the rural parts that may not fully be a presentation of the sampled out centers.

Establish appropriate assessment of learners' to be very effective.

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