
Selected Digital Media Tools and Language Instructions Among ECDE Teachers in Kenya

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Abstract: Language is the most important aspect in the life of all human beings as it is used to express inner thoughts and emotions, make sense of complex and abstract thought, to learn to communicate with others, to fulfill our wants and needs, as well as to establish rules and maintain our culture. Teachers are required to ensure ECDE learners are fully prepared and equipped with the literacy skills relevant for them to be independent in learning language for coping with their everyday lives. This has seen most of them struggle to incorporate diverse instructional resources in their language instruction as a teaching strategy. Literature has shown a majority of studies on instructional resources integration in learning and especially Information, Communication and Technology (ICT). However, minimal research relating to digital media use in ECDE language instruction hence the specific focus on influence of selected digital media tools and ECDE Language instruction. This study sought to investigate selected digital media tools and language instruction among ECDE teachers in Meru South Sub-County, Tharaka-Nithi county, Kenya. The study was guided by Bronfenbrenner's Ecological systems theory and social constructivism theory. To achieve the objectives descriptive survey research design was adopted. A sample of 243 respondents who included both head-teachers and ECDE teachers responded to questionnaires. Data obtained was analyzed descriptively and inferentially. Findings indicated that YouTube, WhatsApp and Facebook were the digital tools with comparably high extent of use. It was also established that use of digital media tools significantly influences ECDE language instruction. It is therefore recommended that ECDE teachers enhance the extent of use of media gadgets such as computers and tablets as well as tools such as Twitter and Instagram to enhance their benefits in language instruction. School administration should enhance digital resource base of their ECDE centres with adequate digital media gadgets and tools to promote their utilization. Administrators should also capacity build their teachers to enable them be more equipped and effective in integrating the media tools in classroom instruction.

Keywords: Digital Media Tools, Influence of Use, Ecde, Language Instruction

1. Introduction

Early childhood development is a multifaceted stage, requiring a lot of inputs before the child may reach an ideal stage. It is the time when children start learning about themselves and the world around them [1]. They start to learn about the world around them through first-hand encounters as a part of their lifelong learning process. Therefore, to be able to offer them an optimal learning experience, caregivers need to make available to them all factors and elements that have an impact on human existence from birth with a precise

balancing of hereditary and environmental influences [2]. This is the whole essence of Early Childhood Education and Care (ECEC). In recognition of its significance, the World Bank (2014) and the European Union (2018) both state that "participation in high-quality ECEC is a fundamental step in children's development and their success in later life. In emerging economies such as Kenya, any form of education at this stage that spans 4 to 9 years in a child's life is what entails Early Childhood Development and Education (ECDE).

The fundamental goal of ECDE in Kenya is to assist the child in developing language and communication abilities, manipulative and quantitative skills in idea management,

reading and writing abilities (ECDE Policy Guidelines, 2006). Additionally, the child should develop favorable attitudes toward schooling as well as physical, moral, spiritual, and emotional development. The child is anticipated to discover how to react favorably to different circumstances and should learn to respond well to natural cues as well as develop necessary social skills [3]. According to the curriculum planners, during ECDE learning, children should enjoy non-serious play directed activities and it is the duty of the pre-school teacher to turn these non-serious activities into learning concepts. Similarly, National Commission for Early Childhood Education (NACECE) Report of 2002 contends that learners need a kid-friendly setting where teachers build up learning areas with plenty of materials in accordance with the theme or activity content. This, according to them encourages children to explore and learn freely in both indoor and outdoor activities. One of the learning areas where such an arrangement is critical is language activities.

Language, according to Rizqiningsih and Hadi in a study done in Thailand is a medium of communication which is inseparable from a people's culture [4]. According to the researchers, it is developed early in the life of a child as they go about interacting with their immediate social environment. Therefore, the significance of this development is that children become enculturated into a given language early in life because such a language is part of the way of life of their society [5]. Language learning within the ECDE setting is critical to a child's learning and development. It essentially revolves around transmitting the skills of listening, speaking, writing and reading. Outlined in KIE is that Preschool language activities play an important role in the development of a child's vocabulary, listening skills, and communication skills. Such skills are significant for the child's overall wellbeing and imply that all factors necessary for their acquisition should be put in place.

Learning environment is key in helping learners acquire required language skills. It includes the availability and efficient utilization of instructional resources [6]. Such resources could either be standard, improvised or community based. Previously, it has been shown that learners gain more if their teaching and learning environment is resource rich (Ministry of Education, 2003). These resources would offer learners an optimum opportunity to interact with the resources as well as the concept to be learnt. The resources make learning process to be active by enabling the learner to be active participants rather than passive recipients of knowledge [7]. Such learning environment, research show is the most preferred for young children in ECDE. In a study, Omaiyo indicate that as much as possible ECDE learners should be provided with adequate instructional resources to enable them actively interact not only with the concepts of language activities they are being exposed to but also the resources themselves to ensure optimal learning [8]. Similarly, Gather and Lawson noted that training of language skills is reliant on accessibility, utilization of resources and ability of teachers to deliver content appropriately [6]. The study observed that the core components of effective

preschool teaching and learning should include well-managed learning settings, appropriate social and emotional supports, the utilization of curriculum materials, and meaningful instructional interactions to promote children's conceptual and motor development, an aspect that is corroborated by [8].

In reality, many ECDE teaching and learning environments have been shown to have insufficient instructional resources suitable for language instruction. This means that in such environments, instructors have insufficient instructional resources to enable them effectively implement curriculum for ECDE language activities. For instance, Ofo and Egbo in their study observed that pre-school instructors only employed textbooks and chalkboards during language instructional process [9]. The use of textbooks hindered ECDE learners in fostering their distinctive capacities thereby acquiring relevant language skills. According to Kibe, teachers lag behind in adopting instructional resources, particularly when it comes to teaching language concepts [10]. This is despite some educators being fascinated by the potential of instructional materials to improve teaching and learning. The study noted that although instructional resources help the learning process in classrooms, pre-schools only receive a limited number of resources, and some pre-school teachers are not qualified to use those resources.

It has been shown that using variety and sufficient instructional tools in pre-school classes piques children's interest and keeps it there [11]. Learners feel motivated and maintain concentration while working on various tasks. A good attitude toward language can be fostered in learners early on by providing them with adequate educational resources. There should be an abundance of educational tools so that each student in the classroom has a variety of options for interaction. Landu contend that adequate instructional materials facilitate a significant role in ensuring divergent multi-sensory platforms, experiences and concretize the teacher's language instructions enhancing understanding of abstract concepts [12]. On a similar view, Adipo opines that instructors have a prime responsibility of ensuring proper utilization of varied instructional resources for better acquisition of early literacy skills as outlined in the Education Policy Review Commission Report (EPRC, 2002). The availability and sufficiency of instructional materials for classroom learning determine the caliber of education and involvement instruction provided to preschoolers. The goal of formal instruction should be to develop learners' knowledge and capacities to perform tasks while also providing them with practical skills (National Policy on Education, 2004).

The insufficient instructional resources especially in most public ECDE centers in Kenya have been attributed to a number of reasons. Key among them is allocation of limited financial and instructional resources by education stakeholders to ECDE centers. Within the Country, ECDE learning is a devolved function. This means that it is the responsibility of the devolved governments (Counties) to

cater for ECDE learning including provision of physical facilities and equipping them, employment and remuneration of ECDE teachers as well as provision of instructional resources. According to Wacuka, head teachers of public primary school complained of lack of instructional resources in ECDE centers in their schools due to the reluctance of County governments to adequately provide for the centers even though ECDE learning is a devolved function [13]. In addition, a study conducted by Boera on decentralized functions on quality ECDE pointed out that the county government had not provided adequate instructional resources which affected quality ECDE by hindering ECDE learners to achieve relevant competencies [14]. The studies therefore proposed that in the absence of adequate instructional resources especially as provided for by stakeholders, ECDE teachers should improvise other forms of resources that could also effectively enable instruction of language activities. One category of resources with the ability to provide multimedia forms of resources thus adequately provide for a variety of learners instructional needs is the digital media.

Digital media is any form of media that requires electronic devices for creation, viewing and distribution. Digital media is one of the technologies that is influencing both individual and societal daily life, maybe as a result of the expansion of the global economy [15]. The UN (2017) claims that delivery of the new Sustainable Development Goals (SDGs), which went into force in 2016, has been entirely correlated with the use of digital media. Therefore, the way in which learners learn and study is being impacted by the use of digital media. It is no longer possible to think about technology in education as a separate class taking place in a lab, claims [16]. Thus, digital media in education opens up a world of possibilities on how a teacher conveys, shares and engages with learners when presenting different ideas, facts and theories. Digital media is associated with a wide range of opportunities and possibilities due to its ability to offer a multiplicity of tools that enriches the instructional environment

The expansion of information and technology offers various resources for language learning, including ways to boost pupils' speaking abilities [17]. One of the technological developments that can be used as learning media is digital media. Digital media tools provide various platforms with different contents related to learning. The educational systems now have some tools thanks to digital media. Digital media, from the standpoint of early childhood education, enables quick communication between parents and the early childhood [18]. Additionally, a lot of digital media platforms have been developed for the purpose of sharing activities, and these platforms make it simple to introduce audiovisual resources into the early childhood classroom [19]. In learning language, learners can find various types of videos that can help the learning process. Since digital media is a big resource with various language teaching aids, it might be effectively used as a resource pool.

In South Africa, Oke and Fernandez claims that

technology transformations, particularly the birth of digital media platforms like Facebook has fundamentally disrupted the known pattern of academic instruction and learning with its effects leading to the socialization of learning [20]. The study argues that such digital media platforms like YouTube have largely transformed the delivery of information within areas of professional knowledge sharing such as educational institutions which continue witnessing far-reaching changes in curriculum instruction including the rise in Massive Open Online Courses. Despite these findings agreeing to the sentiments of the current study, it doesn't show how these digital media tools are utilized in ECDE language instruction which this study sought to establish.

According to one of Global System for Mobile communications (GSMA's, 2016) most recent publications on media-learning in Africa, more than half of all young people surveyed in Ghana, Uganda, and Morocco who have accessed the internet did so via a mobile-based platform. Similarly, Ogundijo in a study undertaken in Kwara State, Nigeria which showed that majority of learners spend most hours of their day interacting with their peers across digital media platforms [21]. The study further revealed that digital media use varied with gender with secondary school learners found to particularly use digital media in engaging with peers or friends, family with key activities being among others socializing and initiating new friendships [21]. Though these study findings revealed use of digital media tools in classroom interactions, it is not clearly known if teachers use these social platforms in their language instruction especially among ECDE teachers which the present study sought to establish.

In Kenya, digital media integration in learning has particularly been a challenge following the stalling of the Kenyan government's efforts to successfully deploy technology use in schools despite the efforts having been initiated in 2013 [22]. A recent study by Uwezo in Kenya revealed that only 27% of learners with digital proficiency were able to receive instructional material through WhatsApp despite the advent of the COVID-19 pandemic necessitating all learning to take place through online platforms [23]. These revelations are a manifestation that a lot is yet to be done to properly integrate digital media use in language instruction and learning in the educational system in Kenya, the ECDE setup notwithstanding. Another study by Mwadime found that high school learners in urban areas specifically Westlands Sub-County, were more engaged in their usage of digital media [24]. This study focused on the effects of social platforms on scholastic outcomes among those learners. The learners mostly used digital media for informational purposes. The learners used several digital media platforms for socializing and enjoyment purposes in addition to connecting with family, friends, teachers, and other learners. The learners actively engaged in conversation with their peers and exchanged films and images with them. In a limited way, the learners used digital media to expand their knowledge and impart it to their peers. The current study sought to digital media influences on language

instruction among ECDE teachers.

In their study, Muthui and Sirera looked at the effects of digital media use on learners' academic performance in Nakuru East's public day secondary schools. The survey indicated that despite the restriction on cell phone use in classrooms, learners nevertheless managed to smuggle their devices inside and utilize them to access various social networking sites [25]. The majority of the learners completed their homework while also speaking with their friends about trending issues throughout their long hours spent on the online forum. These behaviors had a negative impact on their academic performance. Nevertheless, a lot of learners communicated with their teachers and classmates about schoolwork while conducting research on digital media. This meant that digital media was a tool with the potential to affect how people learned. Therefore, the current study sought to focus on how digital media influence ECDE language instruction among early childhood learners.

According to a study in Machakos county on evaluation of the impact of using digital media in teaching and developing reading abilities among preschool learners [26]. The survey found that PCs and tablets accounted for a sizable portion of the digital media utilized in ECDE teaching and learning. The findings showed that learners in ECDE centers were taught and learned to read by using digital media in a significant and beneficial way. The study came to the conclusion that using digital instructional material significantly and favorably impacts how reading skills are taught and acquired by learners in ECDE Centers. Though the cited study constituent in arguments in the current study, the research scope did not focus on selected digital media tools used in language instruction.

In a study involving ECDE children in Bungoma County, Kenya, Wangila found that language instruction in ECDE schools faces challenges including inadequacy of learning and teaching resources, lack of government good will, poor training of ECDE educators, and financial constraints [27]. These challenges continue to affect the inclusion of Facebook and WhatsApp digital media platforms in Kenyan ECDE schools. Many ECDE learning and teaching environments have insufficient learning and teaching facilities and resources suitable for language instruction. In this regard, instructors have challenges in instruction however the study didn't show what challenges instructors have in using digital media to effectively teach ECDE language activities which the current study sought to establish. A study by Hani posits that WhatsApp can be used in favor of education by helping teachers utilize its features to facilitate learning of vocabularies, words and writing skills in ECDE classrooms [28].

2. Literature Review

Digital media tools especially WhatsApp has been found to have adverse effects on learners' language learning. According to Songxaba and Sincuba language learning especially essay writing is adversely affected since most

learners use abbreviations, unnecessary short forms and emoticons instead of complete word forms [29]. This implies that learners are copying the writing styles of digital media tools in their formal language instruction classes. Most of the learners showed positive opinion when called upon to incorporate technology. The cited study focused on effects of WhatsApp on Language learning whereas the current study sought to establish the influence of digital media tools use in language instruction.

In a similar vein, Gaytan in a study carried out in the United States finds that student language learning abilities elevate with greater involvement in digital media tools activity [30]. The study further shows that with the amount of student engrossment in social network-oriented activity, student communication is more likely to elevate in leaps and bounds in the near future. This implies that more student exposure to the interactive nature of digital media tools sites is increasingly likely to translate to greater language proficiency, understanding and learning. The study was done in USA to investigate on how use of digital media improves language learning ability among students but the current study was done in Meru south sub county in Kenya on use of digital media in language instruction among ECDE using descriptive survey design. This helped in bridging the contextual gap.

The importance of digital media tools in facilitating language learning among learners is manifest in the utilization of Web 2.0 or internet-enabled podcasts in improving student's listening skills. The importance of podcasts in sharpening the listening skills of learners is particularly enhanced by the argument made by Rahman in a study conducted within Indonesia showing that the success of language teaching and learning lies on listening [31]. According to a view espoused by Rahman this socializing technology (podcast) engages in language learning and teaching by modifying the language teaching and learning process as well as bringing learners within the reach of a specific target language [31]. The current study sought to use the theory of ecological system to investigate and document on the use of digital media in learning processes. Furthermore, the researcher sought to use Descriptive survey research design and questionnaire as tools of data collection.

A study conducted in the Philippines by Cabrera defines digital media tools as an array of web-oriented services whose offering fosters knowledge sharing and relationship building inclinations for human users [32]. This study found that children with greater access to textual and non-textual content shared across various digital media tools wield relatively greater access to language instruction and learning potency than those with limited or scant access [32]. The study avers that digital media tools integration within the ambit of academic institutions grants preschool learners the opportunity to interact, socialize and collaborate more with others. These attributes make digital media tools an effective avenue for facilitating language learning. Hence, the current study sought to establish the level of utilization of specific selected tools among ECDE teachers. This improves their

level of interaction and participation in language activities. s

In a qualitative study, Sun investigated how Taiwanese pre-service teachers used YouTube technology into their microteaching videos on YouTube [33]. Twelve participants took part in this study. The results showed that teachers used different styles and approaches. They indicated positive perspectives towards use of YouTube in their teaching; they faced with technical difficulty in creating microteaching videos. Some factors consisting of changing motivation, sources of anxiety, focusing on visuals and personal appearance and lack of interaction and feedback could affect sending, receiving, and quality of microteaching lessons. The cited study shows a positive relationship between digital media use and teaching; however, it varies from current study since it sought to find out the influence of digital media use on language instruction among ECDE teachers.

In a similar view, Alwehaibi carried out the experimental study to find the effect of use of YouTube on language classroom. The author concluded that YouTube could have interaction on increasing content learning of EFL college students [34]. The researcher considered YouTube as an important teaching resource. In Ghana, Mingle & Adams also looked at students' use of digital media networks and how well they performed academically. The study found that participation in these networks had a negative impact on students' performance [35]. Different from this study, the current study sought to find out if digital media use influence language instruction. According to Fuente Facebook Messenger, in particular, comprises an app that encourages student language learning by enabling them to make voice calls, video calls and also send text messages to other users [36]. Findings in the study are also backed by related findings of a study undertaken in Kenya by Ogaji et al. which showed that learners in Kenya's Kenyatta University wield a relatively high propensity for utilizing digital media tools in language learning [37]. The researcher sought to investigate the influence that digital media tools have on language instruction among ECDE teachers filling both a conceptual and a contextual gap which the study did not address.

According to Anjugu, digital media exists in a variety of formats, including social networking sites, instant messaging, photo and video sharing websites, podcasts, wikis, widgets, and virtual reality environments [38]. Digital media is frequently used for connecting with people and exchanging information. Utilizing digital media on a personal level makes it easier to communicate with family and friends and encourages learning new information. A study by Odhiambo on how instructional media affects how well preschoolers in the Nyaharwa zone of Siaya County perform in linguistic activity skills [39]. The study's findings were used to help the researcher come up with suggestions for actions that could be taken to encourage the use of instructional materials in the learning or teaching of language activity skills in all pre-materials. The study found that the insufficient and improper use of instructional media during the learning or teaching of the activity was the cause of the poor performance in linguistic activity skills. The cited study shows a positive

relationship between digital media use and teaching; however, it varies from current study since it sought to find out the how digital media use influence language instruction among ECDE teachers.

Digital media and web 2.0 technologies can be used as an inclusive strategy to help learners improve their educational quality in order to achieve the Sustainable Development Goals (such as SDGs 4 and 17). Early childhood teachers, parents, and young children can communicate and work together more easily and affordably with the use of digital media tools. A study carried out in the Southeastern region of the United States by Martin et al, revealed that many middle school learners had started using social platforms at age nine or younger [40]. In addition, for most of the learners, the parents did not monitor their digital media use. The learners surveyed mainly accessed Instagram, Snapchat, and YouTube. They mainly used digital media to connect with their friends, share photos, and find out what others were doing. This study focused on secondary schools whereas the current study sought to investigate digital media use among ECDE language instruction.

A study conducted by Ajjan and Hartsome within the United States points out that digital media tools add significant value to language learning efforts undertaken within the ambit of the traditional classroom [41]. The study emphasizes that learners are currently able to utilize such digital media tools in the creation of collective knowledge amassed via interacting with others within the virtual space. This bestows learners with a rare opportunity of gathering and connecting disparate pieces of information for purposes of creating new information worth sharing with others. The implication of using such technology medium for language learning and development is that learners who make greater use of such digital media tools are increasingly likely to develop their language learning capabilities better than those who inherently on the conventional classroom teaching per se. even though the study agrees to the current study's assumptions, it majorly focused on secondary school learners hence there is need to investigate on digital media influence on language skills acquisitions among early years learners

According to a study undertaken by Thomas and Thomas in the United Kingdom, Web 2.0 technologies have fundamentally impacted how people across the globe interact and communicate [42]. This manifests that resultant digital media tools platform such as LinkedIn, Facebook, and Twitter have since their invention become critical disruptive technologies with the propensity of establishing new cutting-edge educational management models. In concurrence, the study executed by Khan, et al digital media is construed to imply a computer-mediated array of tools whose various platforms such as Facebook, LinkedIn, and Twitter and among others, YouTube allow for content creation and sharing with such content appearing in video, picture form, textual or other formats [43]. The study focused more on general classroom instruction however, the current study investigated on use of digital media on ECDE language instruction.

While concurring with this, Al-Rahmi and Zeki in a study in Malaysia denotes that advent of Web 2.0, brought to life various interactive digital media tools such as YouTube, Facebook and among others [44]. In Turkey's Sakarya University, similar postulation made by Cam and Isbulan opine that digital media tools enable users to transfer audio-visual content following the advent of Web 2.0. It is critical to note that the utility of Web 2.0 to language instruction within the educational sector is evinced in its capacity to provide useful digital media tools [45]. Through these platforms, users are able to engage in emergent learning opportunities and experiences via the creation, navigation, collaboration and communication of educational material. The current study sought to find out if the same happens in the ECDE language instructions in Meru south sub county, Kenya.

In Australia, Fan and Yost discovered that digital media technologies might improve communication, collaboration, and family involvement if both parents and ECDE teachers adopted them [46]. According to their research, ECDE instructors thought that utilizing Twitter and Facebook to engage with parents could be more effective than using other digital media platforms. A study conducted by Tezci and İcen, high school learners' digital media use habits in İstanbul, Turkey, revealed that the learners mostly used YouTube and Facebook while Myspace and LinkedIn were the least accessed digital media sites [47]. The learners' primary reason for using digital media was that they wanted to share documents, information, and opinions and sought to be entertained. There were also gender differences in the way the learners used digital media. Moreover, the learners accessed and utilized digital media mainly through their smartphones, where they spent between 1 to 3 hours on the internet community daily. However, these studies did not study the extent these digital media tools are used in ECDE language instruction which the current study sought to investigate.

A study by Gedik and Cosar exploring the perception of digital media use among secondary school learners in Turkey [48]. The study found that most of these learners had access to digital media. The learners preferred using Facebook, Messenger, Instagram, WhatsApp, Twitter, Wattpad, Snapchat, and YouTube to communicate with others, be entertained, get and exchange information, pass the time, and study purposes. Another study conducted in Malaysia by Bani and Nordin explored the extent to which a platform of YouTube animation videos could be utilized as a medium for educating and facilitating learning among young children [49]. The study further discusses the nature of the content posted through YouTube. Nonetheless, it hardly explores YouTube's interaction on language instruction within the ECDE setting which constitutes a key lacuna that this research sought to fill. The current study sought to find out if the same happens in the ECDE language instructions in Meru south sub county, Kenya.

In his study in Arabia, Abdullah sought to determine how much ICT-based technology is used in the classroom by

ECDE-level teachers [50]. The findings showed that teachers use ICT-based technologies for administrative and learning processes in moderation. On a similar view, Al Jaraydeh did a study on how ICT-assisted grammar instruction affected pupils in the first secondary grade [51]. The study demonstrated that learners in the first secondary grade who used an ICT-assisted method performed better on tests of Arabic grammar than those who did not. Additionally, the findings indicate that female learners in the first secondary grade performed significantly better than male learners in Arabic grammar, according to statistical analysis [51]. Although the studies above found out that ICT-based technologies enhanced learners' performances, they did not focus on early years thus the current study sought to investigate how specific digital media tools influenced language instruction among ECDE teachers.

While examining the interaction of digital media on learning habits of secondary learners in schools within the municipality of Moshi, Tanzania. Moshi, found that there was extensive use of digital media on student learning within the municipality [52]. The study further found that the most widely used digital media platforms among the learners in the municipality were Facebook and WhatsApp with other noted platforms comprising LinkedIn, Instagram and Twitter. This presents a contextual gap which the present study sought to fill by establishing the extent digital media tools are utilized in language instruction among ECDE teachers in Meru-South Sub-County.

In Kisii County, Kiplagat & Ombiro also investigated the impact of high school learners' use of digital media tools on their academic performance [53]. The study found that the learners were using digital media, with WhatsApp being one of the most widely used. The study also discovered that student's frequent digital media tools sites and spend more than two hours online on their own, especially those who attend day schools. The websites were mostly used for entertainment, conversation, watching pornographic videos, uploading photos, news, and sports. This current study sought to not focus on the performance of learners rather it sought to know extent of use of digital media in language instruction in ECDE classroom. This provided a conceptual gap.

A study by Mbithe on the impact of digital media on secondary school students' conduct in Machakos County's Machakos Sub-County reported 97.4% of secondary learners regularly used digital media [54]. The learners favored Facebook, Instagram, YouTube, and WhatsApp. The study also discovered that the majority of students used digital media at home and at school mostly at night, on weekends, and during game and break times. Despite the fact that digital media use in schools was only permitted for educational purposes and during computer studies, many pupils were still able to access digital media using illegally brought in phones and other electronic devices. Even though the study looked at digital media use, the study varies in subject areas and the target population providing a conceptual gap for the present study.

3. Theoretical Framework

The study adopted Bronfenbrenner's Ecological Systems Theory of 1979 which outlines how human and environment interact daily. Bronfenbrenner outlined the daily experiences as molar activities which affect human development and this was looked at and explained in deep in the view of digital media tools. He emphasized the importance of these daily activities in human development especially the habits, skills, social relations and learning. As stated earlier, media has proven to be a part of our daily life as we incorporate it in our everyday activities. Adding on, Johnson & Poplumpu observed that when looking at media tools from an ecological standpoint, it's possible to say that media tools and messages are interwoven into all of the systems that surround an individual [55]. Jordan [asserts the direct and indirect effects of media on an individual's development can be observed and that children's physical, psychological, and emotional development would be influenced by interaction with the media [56]. Young children are being exposed to all forms of media since day one of their life. Those around children use the different kinds of digital media tools to communicate, share knowledge, social and play [57]. Since digital media tools activities occur as part of human lives, their effect is undoubtedly felt in human development. They interaction the thinking, feeling behaving and acting in children.

The Bronfenbrenner's environmental systems are as follows; the microsystem which are what the individual is born into, the mesosystem which deals with relations of the microsystem such are school, parents among others, the exosystem which are the indirect relations for instance parent-parents' workplace, the macrosystem which mainly involve the customs and cultures of an individual and the chronosystem which implies the time one is living in. According to O'Neill digital media tools cannot be placed in just one layer in the ecological systems theory therefore all digital media tools are integrated into all layers [58]. For the microsystem as the immediate interaction level, digital media tools are found on smartphones, tablets and computers offer a lot of messages, videos which has effect on the children's daily lives.

In line with child development, digital media tools can have detrimental effects on a child easily noticeable via their physical, cognitive and social development [56]. If properly used they could also influence their language instruction [61]. Children interact directly with this digital media tools which have very significant effect in their language instruction. In the mesosystem, child language learning is easily influenced by the connections digital media tools allow between systems. This could be between peers, parents or even the teachers as they interact in their daily language instruction [55]. It is brought about by sharing the different content at different context within their daily activities. For instance, digital media tools use regulations within the school environments could affect child language instruction [57]. The social networks allow view of personal content such as videos of one's assignment or child homework (microsystem) by other

users who are your friends (mesosystem) or friends friend (exosystem) which influences the relations and in turn the language instruction.

For the exosystem, child's language instruction is influenced by other indirect environments. Here parent's digital media tools use at work or teacher's digital media tools use in school could affect child's digital media tools use as well as language instruction [55]. In the macrosystem, language instruction can be influenced by social ideologies and cultural values. Digital media tools can be used in spreading wrong information, cyber bullying or even promoting wrong use of vocabularies which can affect child language instruction. Digital media tools can be used to spread language cultures that can affect the child learning.

Technology have been changing over time and significantly affecting the child learning. McHale et al. asserts that home settings have really changed with the technological devices been readily available [57]. These devices facilitate use of digital media tools thereby enhancing language instruction at ECDE level as learners can learner new words, second languages and vocabularies. Relating to the ecological systems theory, this usually happens in the chronological system where time depicts what learning will take place. The above discussions sum up how digital media tools was examined in Bronfenbrenner's Ecological Systems Theory.

4. Methodology

The study adopted descriptive survey research design. Study sampled consisted of 243 grade 1, 2 and 3 teachers and their head teachers sampled from 612 respondents. Sample size was determined using the Krejcie and Morgan table of determining sample size [60]. Data was collected using questionnaires for both the ECDE teachers and their head teachers. Data obtained was analyzed quantitatively using descriptive statistics with the help of SPSS software 25.0 version.

4.1. Research Questions

The study sought to answer the following research questions:

To what extent are selected digital media tools used in language instruction among ECDE teachers?

What is the relationship between digital media tools on language instruction among ECDE teachers?

4.2. Study Variables

The study utilized the following variables: Extent of Use of Digital Media Tools was assessed using a set of seven Likert scaled statements where 1=Not At All to 5=Often in testing general use in language instruction as well as 1=Small Extent to 5= Very Great Extent in assessing use in enhancing language skills. The variable attained reliability index of 0.837 thus was found to be reliable for use. Use Digital Media Tools in Language Instruction was assessed using a set of five Likert

scaled statements where 1= Strongly Disagree to 5= Strongly Agree. The reliability index for used digital media tools (0.655) was below the required threshold. This was brought by a low reliability index for Snapchat (0.115) and LinkedIn (0.044) hence the two were not adopted for further analysis.

5. Results and Discussion

The study sought to examine the extent and influence of digital media tools on language instruction among ECDE teachers.

5.1. Extent of the Use of Digital Media Tools on Language Instruction

The study sought to determine the extent of digital media usage in language instruction among ECDE teachers in Meru South sub county. Teachers and head teachers view on the extent of use of the selected digital media tools was sought using a set of seven Likert scaled statements. The findings were summarized as presented in Table 1 and Table 2. Table 1 presents information on extent of use of media tools in language at the ECDE centres.

Table 1. Extent of Digital Media Tools usage in Language Instruction.

Tools	Teachers (N=181)		Head Teachers(N=61)	
	NAA/R/S (%)	O/A (%)	NAA/R/S (%)	O/A (%)
Facebook	79.4	20.6	62.3	37.7
WhatsApp	70.7	29.3	55.7	44.3
YouTube	75.6	24.4	49.2	50.8
Instagram	95.6	4.4	88.5	11.5
Twitter	96.1	3.9	93.4	6.6

Key: NAA- Not At All, R- Rarely, S- Sometimes, A-Always, O- Often

According to the data provided, the extent of use of media tools was generally low, WhatsApp (29.3%), Facebook (20.6%) and YouTube (24.4%) though appearing to have the highest extent of use often/always each had low extent of use. Others such as Instagram (4.4%) and Twitter (3.9%) even reported much lower extent of use often/always. Findings mean that the extent of media tools use was equivalent to 24.8% which is very low.

Information from headteachers seemed to confirm class teachers' assertion, their perception of class teachers' extent of use of digital media tools being a bit better. Specifically, only about half of the headteachers reported that their teachers use YouTube (50.8%), followed by WhatsApp (44.3%) and Facebook (37.7%) in a decreasing order. Instagram (11.5%) and Twitter (6.6%) were reported to be used even less often/always among teachers by headteacher. In agreement to the findings, Sibanda et al. found that secondary schools in Kwekwe, Zimbabwe, used ICTs for teaching and learning to a limited extent [61]. This agrees to a study conducted in South Africa, Govender and Chetty found that while teachers recognized the potential benefits of digital media tools, they lacked the necessary skills to use them effectively in the classroom [62]. Table 2 presents information on the extent

of use of digital media tools specifically in enhancing language skills in ECDE instruction.

Data obtained from teachers show that a small number of respondents used YouTube (24.3%) in great extent followed by WhatsApp (23.9 %) and Facebook (16.1%) in enhancing language skills. However, Instagram and Twitter have much lower adoption rates, ranging from 4.4% to 4.7%. Information obtained from sampled headteachers show that YouTube (44.3%) had the highest extent of use in enhancing language skills followed by WhatsApp (42.6%) then Facebook (37.7%). Similarly, a lower extent of use was reported among Instagram (13.1%) and Twitter (6.6%) by the sampled headteachers confirming to their teacher's views. The respondents agreed that there is a low extent of use of digital media tools in enhancing language skills. These findings are consistent with a study conducted by Martin-Gutierrez et al which found that WhatsApp was a popular tool among teachers for communication and collaboration, as it allowed for quick and easy sharing of resources and ideas [63]. This also conforms with the study by Nair on global use of digital media tools in language learning and teaching in India that found that digital media had the potential to enhance student engagement and motivation [66].

Table 2. Extent of Digital Media Tools Usage in Enhancing Language Skills.

Tool	Teachers (N=181)		Head Teachers (N=61)	
	None/SE/AE (%)	GE/VGE (%)	None/SE/AE (%)	GE/VGE (%)
Facebook	83.9	16.1	62.3	37.7
WhatsApp	76.1	23.9	57.4	42.6
YouTube	75.7	24.3	55.7	44.3
Instagram	95.3	4.7	86.9	13.1
Twitter	95.6	4.4	93.4	6.6

Key: SE- Small Extent, AE- Average Extent, GE-Great Extent, VGE-Very Great Extent.

5.2. The Relationship Between Use of Digital Media Tools and Language Instruction

The study sought to investigate the relationship between use of digital media on language instruction in Meru South

subcounty. The views of the teachers and headteachers were sought in a five set Likert scaled statements and findings presented as in Table 3.

Table 3. Digital Media Tools usage and Language Instruction.

Statements	Teachers (N=181)		Head Teachers(N=61)	
	SD/D/UD (%)	A/SA (%)	SD/D/UD (%)	A/SA (%)
Digital media tools are very resourceful in language instructions	34.3	65.7	13.1	86.9
Use of digital media tools make language instruction easier and efficient	30.9	69.1	16.4	83.6
Use of Facebook has enhanced my learners’ language skills	49.3	50.3	24.6	75.6
Use of WhatsApp has enhanced my learners’ language skills	42.5	57.5	21.3	78.7
Use of YouTube has enhanced my learners’ language skills	34.8	65.2	19.7	80.3

Key: SD- Strongly Disagree, D- Disagree, UD-Undecided, A- Agree, SA-Strongly Agree

According to the findings, about two thirds of the respondents (65.7%) agreed that digital media tools are very resourceful in language instructions, slightly more than this proportion (69.1%) confirmed that use of digital media tools make language instruction easier and efficient and about a half (50.3%) suggested that use of Facebook has enhanced the learners’ language skills. Also, more than half of the sampled teachers (57.5%) indicated that use of WhatsApp has enhanced the learners’ language skills and a majority (65.2%) were of the opinion that use of YouTube has enhanced the learners’ language skills. Findings therefore imply that a majority (61.6%) of the sampled teachers had a positive conception of the contribution of digital media tools in language instruction among ECDE learners.

Data obtained from sampled headteachers show that more than three-quarters (86.9%) were in agreement to the teachers’ view that digital media tools are very resourceful in language instruction with a slightly lower than that proportion (83.6%) indicating that digital media tools made language instruction easier and efficient. About a three-quarter of the respondents (75.6%) agreed that use of Facebook has enhanced the

learners’ language skills and slightly above this proportion suggesting use of WhatsApp has enhanced the learners’ language skills while about 80.3% confirming use of YouTube has enhanced the learners’ language skills. This implies that headteachers confirmed their teachers view that digital media tools positively influenced language instruction at the ECDE level.

The findings show that teachers agree with the valuable insights into the practical applications and benefits of digital media tools in classrooms while headteachers confirms if digital tools are embraced in a positive way it helps in language instructions. This is in line with previous research which suggests that teachers and school leaders may have differing views on the use of technology in education, however they all agree they influence classroom instruction [65]. In a similar vein, Gaytan in a study carried out in the United States finds that student language learning abilities elevate with greater involvement in digital media tools activity [30]. To test the hypothesis, a Crosstabulation of the data obtained yielded information as presented in Table 4.

Table 4. Use of Digital Media Tools Versus Language Instruction.

			Use of Digital Media		Total
			Low	High	
Language Instruction	Negative	Count	40	44	84
		% of Total	22.1	24.3	46.4
	Positive	Count	15	82	97
		% of Total	8.3	45.3	53.6
Total	Count	55	126	181	
	% of Total	30.4	69.6	100.0	

Data obtained show that more than two thirds of the respondents (69.6%) use digital media highly for language instruction compared to those whose level of use is low. Comparatively, more of those who use digital media highly (45.3%) believe that it affects language instruction positively compared to those who believe its effect is negative (24.3%).

Contrary to this however, more of those who used digital media lowly (22.1%) believe its effect was negative compared to those who perceived its effect is positive (8.3%). Chi square interpretation of this relationship is presented in Table 5.

Table 5. Influence of Digital Media Tools on Language Instruction.

	Value	df	Asymptotic Significance (2-sided)	Sig.	CC
Pearson Chi-Square	22.004 ^a	1	.000		
Continuity Correction ^b	20.510	1	.000		
Likelihood Ratio	22.498	1	.000		
Fisher's Exact Test				.000	.329
Linear-by-Linear Association	21.882	1	.000		
N of Valid Cases	181				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 25.52.

b. Computed only for a 2x2 table

Chi-square results $\chi^2(1) = 22.004$, $p < 0.001$ indicated a significant influence of digital media on language instruction. Contingency Coefficient measure of association (CC) illustrated a 32.9% variation in language instruction due to digital media. Therefore, the null hypothesis H_{01} , which stated that there is no significant influence of digital media on language instruction among ECDE learners in Meru south subcounty was rejected. Findings imply that use of digital media enhances language instruction. In a Chinese study, [19] denotes that digital media platforms enhance children's development in a variety of ways when they are utilized carefully. Findings in the study are also backed by related findings of a study undertaken in Kenya, Ogaji et al. which showed that learners in Kenya's Kenyatta University wield a relatively high propensity for utilizing digital media tools in language learning [37].

6. Conclusion

The study sought to examine the extent and influence of digital media tools on language instruction among ECDE centers. Findings on extent of use of digital tools showed that use of digital media tools was generally low, WhatsApp, Facebook and YouTube having comparatively higher extent of use often/always. It can therefore be concluded that whereas digital media tools have low extent of use at the ECDE centers, WhatsApp, Facebook and You Tube have a comparable high extent of use among the other digital media tools. Relative to influence of digital media tools, descriptive findings showed a positive conception of the use of digital media tools in language instruction by a majority of the teachers. Inferential analysis illustrated that use of digital media significantly influenced language instruction. It can therefore be concluded that use of digital media tools has a significant influence on language instruction. The study therefore recommends that school administration should enhance digital resource base of their ECDE centres with adequate digital media gadgets and tools to promote their utilization and enhance ECDE teachers' competencies in use of digital resources through training and technical support to promote the use of the digital resources in language instruction.

Conflicts of Interest

The authors declared no conflicts of interest.

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