ANALYSING ICT RESOURCES AVAILABLE FOR INTEGRATION IN TEACHING AND LEARNING KISWAHILI FASIHI SIMULIZI IN PUBLIC SECONDARY SCHOOLS IN KENYA

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Abstract
The study sought to analyse ICT resources available for integration in teaching and learning Kiswahili fasihi simulizi in public secondary schools in Kenya. The qualitative study adopted the Siemens' Connectivism learning Theory and used exploratory research design. Data was collected from public secondary school principals and teachers of Kiswahili. Krejcie and Morgan sampling table was used to arrive at sample size of 113 schools, which were randomly sampled from a population of 172 public secondary schools in Baringo County. The total participants were 276 principals and teachers. Instruments for data generation were Questionnaires, interview schedules and Checklist. The data collected was qualitative and was presented in themes and percentages. The study found out that ICT resources were inadequate in most public secondary schools and those that had ICT resources did not use them for teaching and learning Kiswahili fasihi simulizi but were used for administrative work. The study recommends that the cost of ICT resources and equipment be reduced by waving import tax and that computer-assisted instructions materials be assembled locally. The school administrators and managers therefore should plan and set aside funds to purchase ICT resources to promote ICT integration in teaching and learning Kiswahili fasihi simulizi.

Key terms: Information and communication technology (ICT), school, integration.

1.0 INTRODUCTION

Integration of information and communication technology (ICT) in instruction enables learning in an interactive way with the use of ICT-based tools and technologies. To better meet the requirements of individual students, teachers can create and customise instructional materials using technology integration and e-devices (Josh & Guru, 2019). Ghavifekr and Rosdy (2015) opine that reference instructors are viewed as the primary players in adopting ICT in their classrooms in order to prepare pupils for the contemporary digital era. This is a result of ICT's ability to provide an active and dynamic teaching-learning environment (Arnseth & Hatlevik, 2012). ICT integration aims to elevate the level of instruction delivery to students' quality, accessibility, and cost-effectiveness (Albirini, 2006).

Kenya's MoE policy on teaching and learning demands transformation by incorporating learning and teaching methods that are suitable in this 21st century. This will make it easier to use ICT effectively, enhancing access, learning, and management while delivering educational programs and services (ROK, 2016). If Kiswahili fasihi simulizi is taught through the integration of ICT, this policy can be achieved, and its abstract content will be real to learners, thus improving their achievements. Suggestions given by KNEC in support of the MoE policy are that teachers should integrate ICT in teaching Kiswahili, which would help learners understand the abstract areas. This calls for support from all stakeholders, including the policymakers and administrators, for the provision of ICT resources and equipping teachers with ICT skills.

However, it appears that ICT is not fully integrated into teaching and learning Kiswahili fasihi simulizi. Traditional methods are still used in teaching fasihi simulizi, which has made learners take the learning area as abstract, and this has continuously made the learners' achievement in the area to be below average. Due to this, the Ministry policy has not been achieved, and learners are not able to construct their own knowledge and connect with others or be self-reliant in fasihi simulizi learning. Therefore, the learner's academic achievement will remain below the Ministry's expectations if no intervention measure is taken. This is evident as indicated by the Kenya National Examination Council report 2019. KNEC reports that in 2019, 16 per cent of candidates in Kenya scored 0 per cent in Kiswahili paper 3, which tests fasihi simulizi, among other areas. If candidates had scored in fasihi simulizi, they would have improved their achievement in the paper (KNEC, 2019). The researcher thus proposed to analyse the ICT resources available for teaching and learning Kiswahili fasihi simulizi in public secondary schools in Kenya. Several studies have been conducted on using ICT in teaching and learning Kiswahili in public secondary schools. However, none had been carried out on fasihi simulizi in Kenya, the present area of study.

2.0 LITERATURE REVIEW

Information and Communication Technology (ICT) is viewed in different ways, and some scholars view it as a set of information via electronic means. ICT, as defined by BECTA (2000), refers to methods used by individuals to share, disseminate, and gather information as well as to communicate using computer networks and computers. According to library scientists, ICT is a broad category of technological resources and techniques used to produce, distribute, store, and manage information (Primo, 2013). Hardware, software, and network connectivity make up ICT tools used in teaching and learning. The technological tools are suitable for students and teachers, and they include Desktops and laptops, projectors, Digital cameras, printers, photocopiers, tablets, popplet, pen drives, iPods, ipads, whiteboards, scanners,

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microphones, interactive whiteboards, DVDs and CD'S, flask discs, videogames among others (Kumar, 2018). Information and Communication Technology ICT include items that process, transmit, duplicate, convert, store, or receive electronic data. These items include computer operating systems and software, web-based information and applications like distance learning, phones and other telecommunications equipment, video equipment and multimedia products that can be distributed via email, the internet, CDs and DVDs, photocopiers, and fax machines, office supplies like calculators and fax machines, and computer hardware. ICT also includes things like electronic textbooks and educational software.

ICT is a development that is crucial to the 21st century. According to Selwyn (2011), it makes it easier to give and receive feedback and enables students to gradually revise their work. According to Keengwe and Onchwari (2011), ICT implementation in schools can enable real-time discussion, learning by doing, directed instruction, and delayed time conversations, all of which can result in high-quality teaching and learning. The new educational paradigm, which encourages students to take an active role in their own learning and assume greater responsibility for it, is being embraced by people all over the world. This paradigm aims to equip students with the knowledge, skills, and attitudes necessary for lifelong learning. In many nations, technology serves as the main means of knowledge transfer. Through breakthroughs, technology integration has revolutionised our societies as well as how people live, work and think (Grabe, 2007). So as to prepare students for life in a "knowledge society," schools and other academic facilities must think about integrating ICT into their curricula (Ghavifekr et al., 2012). The ICT initiative has taken centre stage in the region as a means of encouraging educational institutions to accept and apply technology to the pursuit of knowledge. Students raised in the digital age are exposed to a wide range of media. Major high-tech corporations are providing financing to schools so they can teach their kids using technology, including Google, Verizon, and Microsoft. According to Song and Kang (2012), this may result in better student performance.

It is true to suggest that with technology-based tools and equipment, students may learn nearly all subject areas, including mathematics, physics, languages, arts, and humanities, among other key fields (Ghavifekr & Rodsy, 2015). ICT offers assistance and complementary support for students and teachers when it comes to effective learning using computers as learning aids (Jorge et al., 2003). UNESCO promotes ICT in education in a holistic and thorough manner. They can primarily address issues with access, inclusion, and quality. Through the collaboration of three of its sectors—communication, information, education, and science—the organisation's intersectional framework for ICT in education concentrates on these concerns. ICT has undergone advancements, reshaped our society, and fundamentally altered how people think, work, and live (Grabe & Grabe, 2007). ICT integration into the curriculum is necessary since schools and other academic facilities are expected to educate learners to live in the "knowledge society."

Because of the universal connectivity provided by information technology, digital multimedia is now available for all uses, everywhere and at any time (Murray & Walter, 2007). Information technology facilitated the development of the global society and is required at educational institutions to assist activities like the delivery of teaching and managerial decision-making through the use of learning management systems (LMS). In terms of education, we are able to deliver, monitor, manage, and train. Teachers can monitor student progress, attendance, and time spent on tasks, publish announcements, take part in class discussions, and check course activities. Information and communication technology (ICT) is transformed into education technology.

ICT is a cornerstone for global curriculum convergence and resource sharing in East Africa and beyond since it is adaptable, borderless, and timeless. ICT will raise educational standards and, as a result, the quality of education as a whole. This is because ICT will improve the standard of teaching, learning, and management systems in schools. Students can conveniently access course materials, participate in asynchronous learning, and do their studying whenever and wherever they like (NSBA, 2011). Today's students live in the ICT era when technology should be used wisely to give them power and endless educational opportunities. Rapid economic and technological advancements have resulted in the formation of knowledge societies, which require all individuals to utilise ICTs to operate more effectively.

On the other hand, instructional technology involves all kinds of soft and hard media used to communicate in the classroom and make instruction easier for learners and teachers. It is non-textual content that a teacher could employ during the teaching process (Garrison & Anderson, 2003). The emphasis on content in traditional instruction has led to lectures, presentations, tutorials, and learning exercises meant to help students remember and practice the material. However, contemporary settings are presently favouring curricula that promote competency, performance and capabilities. In many nations, technology serves as the main means of knowledge transfer. Through breakthroughs, technology integration has revolutionised our societies and the way individuals live, work and think (Grabe & Grabe, 2007). In order to give students preparation for life in a "knowledge society," schools and other educational institutions must think about integrating ICT into their curricula (Ghavifekr et al., 2012).

It is true to suggest that with technology-based tools and equipment, students may learn nearly all subject areas, including mathematics, physics, languages, arts, and humanities, among other key fields (Ghavifekr & Rodsy, 2015). ICT offers assistance and complementary support for teachers and students when it comes to effective learning using computers as learning aids (Jorge et al., 2003). Information and communication technology integration may energise both educators and pupils. Offering curricular support in challenging topic areas can help develop and improve the quality of education. Teachers must participate in collaborative projects and intervention strategy creation in order to meet these goals. These strategies should include teaching partnerships that use ICT as a tool. Thus, this study aimed at identifying ICT materials and resources available in schools and accessible to the Kiswahili fasihi simulizi teachers and learners in public secondary schools. Materials and resources are crucial to the teaching and learning processes in the school curriculum because they simplify difficult subject matter or concepts and facilitate learning. In addition, the materials can be manipulated to enhance learning and retention among learners. Materials and resources should thus enable the teachers and their learners to easily achieve teaching and learning objectives.

In the study, ICT materials and resources included computers/laptops, printers, multimedia (MM), overhead projectors (OHP), interactive whiteboard, e-mail address, power bank device, modem (external & internal), DVD/VCD, Audio and video clips, interactive radio, flash disk, teleconferencing, photocopiers, smartphones, iPad, electricity, television, smartphones and programmed instructional materials. However, satellite systems, software, hardware, computer networks, mobile phones, television, radio, and several applications and services associated with them, including videoconferencing, are all included under the general term ICT (information and communication technology) (Hannessy et al., 2010). ICT includes radio, internet, networking, telephony, computers, mobiles and data processing capabilities, and the software for using these technologies. ICT offers the ability to use information, apply it, and spread knowledge in all kinds of human activity (Kwapongo, 2007).

According to Assar (2019), three broad categories of ICT artefacts can be employed in instruction. Which are: Stand-alone digital resources can be utilised for didactic and/or purposes of assessment to assist learning inside of a course, also called Digital Learning Materials (DLM) or learning objects. They include video clips like you-tube fragments, illustrations, instances, photos, drawings, simulations, and interactive assessment resources like a quiz. Social networks, online conferencing, wikis, chats, voice-over IP, blogs and Really Simple Syndication (RSS) are examples of common communication and information dissemination platforms. Learning Management System (LMS) use a software system to run a course. They are complex tools with educational software packages for online course administration and delivery. Their primary responsibilities include organising and presenting course material, monitoring student activity, managing class activities, facilitating communication between teachers and students, and providing tools for student evaluation and grade books. These terminologies can also be referred to as "learning platforms," such as "Moodle", "blackboard", "virtual learning environments" (VLE), or "web-based learning systems" (WBLS) for higher education.

Learning materials like a video sequence or a quiz can be combined to create more complicated educational tools and made independently available via interactive web resources or CD-ROM. They may also be a component of sophisticated software programs created specifically to help students. The use of computer resources, infrastructure, and equipment is essential for ICT integration. However, studies from across the world indicate that schools and teachers cannot use computers for teaching and learning due to a lack of funding and computer resources (Hadad & Draxler, 2002). Information and communication technologies (ICT) have clearly had an impact on teaching and learning in the field of education (Yusuf, 2005).

ICT has the potential to increase teaching, expedite learning, deepen understanding of concepts, and engage students by connecting classroom learning to real-world applications. It also has the potential to assist future workers in becoming economically viable (Ul Amin, n.d). A person must have a basic education in order to access and use knowledge in a world that is changing quickly. In the global village, ICT is one such capability. Information and Communication Technology, when employed as a tool for school communication, technology in schools can enhance student learning and lead to better teaching methods (Ajay, 2016). Schools have adapted school communication software to send, save, share or exchange information as education technology has progressed. ICT in education has forced many schools to become accustomed to smart technology in this era of technology. The communication medium for this educational software is computers, the internet, and multimedia.

One of the components of school communication tools that help students improve their learning skills through computer-aided education is computer-based learning. It gives learners computer skills and makes it possible for them to access a lot of information from different websites (Ajay, 2016). Ajay contends that education has undergone a revolution in the two decades since computers were first introduced to classrooms. It reduces the amount of time needed for mechanical operations like rewriting and producing graphs and broadens the search field. It aids in information discovery and information organisation, making it simpler to share with others. The last three decades have seen information and communication technology (ICT) grow greatly, which has led to positive effects in daily living and within society. ICT use in education is currently receiving more interest, funding, and attention from individuals all

around the world (Yuen et al., 2013). Besides, the efforts employed in the use of ICT to enhance learning and the growth of the knowledge economy have both led to a significantly increased focus on education.

Many nations have developed a variety of ICT in education solutions (Pelgrum & Anderson, 2011). These tactics demonstrate how educational innovations and ICT have been gradually integrated into a larger framework of educational reforms designed to increase students' abilities to study on their own, solve problems, find and evaluate information, and think critically. Additionally, students gain skills in communication, teamwork, and learning, which were considerably less stressed in the earlier curriculum. For instance, this more general educational policy is shared by the Hong Kong Special Administrative Region (SAR) government's five-year strategic plan on ICT adoption in schools, which was released in late 1998. (Yuen et al., 2013). Hong Kong embarked on a very exciting phase of rapid growth and development in information and communication technology with the launch of this program. The issue at hand demanded innovation rather than just the adoption of new technology, which required resources like money and training.

Since the 1970s, when ICT integration in education first became popular in Africa, its proponents have asserted that it will alter and preserve education (Lockard & Abrams, 2011). The acceptability of ICT increased in the late 1980s, with an emphasis on the curriculum rather than the instrument. Its supporters believed that pupils would pick up new abilities, as they were required to in order to utilise the computer effectively. The computer may then be treated more naturally and seen as a companion rather than a challenger (Lockard & Abrams, 2011). The use of computers in African classrooms was given more attention in the 1990s. ICT resources are available in some developing countries like Kenya and Uganda though they are not fully utilised for teaching and learning as expected (Kulik, 2014). A teacher is better equipped to employ current practical pedagogical abilities when there are adequate instructional materials that promote structured teaching and learning. ICT use can reduce differences in content and content delivery between rural and urban schools. Students participate in large numbers (NSBA, 2011). For pupils, the internet has revealed a world of opportunity. On a worldwide scale, learners of all ages may connect, share, and learn. Computers, document cameras, digital, audio and video cassettes, video conferencing, teleconferencing, smartphones, mobile and the internet and interactive whiteboards are the most recent teaching aids. Through improved information distribution, these technologies can make instruction more remembered and engaging for students.

Modern technology supports a variety of cognitive and learning styles. Any content may be translated into another medium using them, making it memorable, exciting, and available to all types of learners (Geer & Sweeny, 2012). The subject of these new technologies' accessibility in schools arises since they are crucial to instruction. Are schools genuinely equipped to house ICT resources? However, only a few nations, such as Rwanda, have made strides in embracing information and communication technology (ICT) as a vital instrument for restructuring their economies, with the education sector playing a crucial role in creating the requisite human resources. For instance, the National Information and Communication Infrastructure (NICI) strategy, which the government launched in 2000, aims to advance ICT throughout the nation between 2001 and 2005. The second NICI plan (2006–2010), the third NICI plan (2011–2015), and the fourth NICI plan were used to accomplish this (2016–2020). The NICI strategy acknowledges the importance of ICTs in pedagogy as a force for growth (Rubagiza et al., 2011). The utilisation of ICTs for informal and formal education, increasing public knowledge of ICTs, assisting educational institutions in

improving their commercial operations, and promoting research and development are only a few of the education policy initiatives connected to NICI.

Kiswahili fasihi simulizi teachers can use computer-based teaching by developing samples of fasihi simulizi like songs, narratives and short forms (tongue twister, puns, proverbs riddles); feed them on computers and ask learners to use them in their study or give assignment from such samples. This will give learners a chance to participate in constructing knowledge just with guidance from their teachers. Teachers can also download concept map tools and install them on computers the guide learners to construct knowledge using the information they have to construct a drawing by connecting concepts. With the development of ICT in education, ICT may also be used for classroom instruction. Students' learning is experimental and experiential, thanks in part to classroom instruction. In addition to actively participating, students can actively listen to the teacher or instructor and get visual cues from PowerPoint presentations, hand-outs, or whiteboard lists. Students get the chance to ask questions and take part in live discussions thanks to these quick exchanges (Ajay, 2016). Due to the increased personal interaction that classrooms provide between students and teachers, this school communication software module also aids in establishing and maintaining personal and professional ties.

Kiswahili fasihi simulizi teachers can further use video conferences as a medium of communication with learners. This can be achieved in a situation whereby the teacher is teaching a large group of learners in a school set-up that has video conferencing connectivity. Presently with the COVID-19 pandemic, many schools are teaching their learners online using Google Meet, Zoom, and KENET, among others. Social media can also be used in education by sharing materials and ideas among students and teachers, like Whatsapp.

According to Ajay (2016), the usage of ICT in education improves learning effectiveness while also adding value to teaching and learning. ICT has given learning a new dimension that was not before the present. Students now find learning in a technologically enhanced environment to be more fascinating and engaging than in a traditional classroom setting with the introduction of ICT in education. However, with present changes in social and economic status in the world, the old knowledgeable people who are custodians of oral literature are rare and, in some cases, completely not there. Language of communication may also be a hindrance for those available because learners are not fully acquainted with the local languages. Following this, the use of ICT for instruction is necessary, whereby an expert can do a presentation in a local language to bring about its originality and later interpret it into a language of instruction like Kiswahili.

Another media that can be utilised in fasihi simulizi teaching and learning is audio-visual technology. It is important to not undervalue the use of audio-visual technology in education, particularly in the teaching and learning of fasihi simulizi. An environment that is exciting and participatory is created when learning is done through audio-visual means. We are, in any case, in an audio-visual age. This means that your chances of finding a job in the future depend on your ability to use audio-visual equipment. Due to this, it is essential that students be exposed to audio-visual technology in the classroom, and regular exposure to visual technology helps students become proficient with it. One of the audio-visual technologies used in education currently is a mainly interactive whiteboard. The interactive whiteboard helps in improving learning in education. They enable teachers to enhance presentation content, for instance, by making it simple to incorporate a variety of items into a class. Additionally, they enable teachers to quickly and

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simply customise learning objects from a variety of pre-existing content and adjust them in real time to the needs of the class. By relieving them from taking notes, they enable students to participate in group conversations and absorb knowledge more readily. They enable students to collaborate on projects or in shared workspaces.

For many years, audio-visual technology has been used in schools in the UK. To present short educational films, audio-visual technology was only used in the form of television and video players. These instructive videos are currently shown on computers, which are also used for doing homework. 2015's Fitting Image Audio-visual tools allow teachers the possibility to promote each child's unique learning style because children learn in different ways. The teacher and the students are surrounded by audio-visual equipment, and the students are eager to grasp technology. This medium combines images, sounds, and attention-getting content. Kiswahili fasihi simulizi teachers can take advantage of the learners' interest in the use of audio-visual media in teaching abstract fasihi simulizi sections and make learning real. The utilisation of audio-visual equipment to provide information to students as well as their everyday interaction with audio-visual technology helps them become proficient users of technology. However, researchers have cited barriers to the use of audio-visual technology in teaching and learning in schools are occasionally reluctant to acknowledge the advantages that technology gives to kids who interact with them on a daily basis. On the other side, a student's technological aptitude could surpass that of the instructor (Burns, 2012). This clearly puts a barrier in the way of successful audio-visual use in teaching.

According to a report by BECTA (2004) on a review of the research literature on hurdles to teachers' adoption of audio-visual materials, resistance to change is a barrier to ICT integration in the classroom. The research also revealed that teachers' level of technology confidence is a key factor in determining how engaged they are with ICT. Teachers who are hesitant or insecure about using computers in the classroom will try to steer clear of them altogether. Therefore, in order to use audio-visual technology successfully, those barriers have to be overcome. There is potential for extensive resource sharing when fully integrated into the virtual learning environment (VLE) and learning objects repository. They can quickly give students feedback when utilised for interactive comprehension assessment for the entire class. Making decisions requires regular monitoring and investment in the ICT sector (Hudson, 2013). ICT would promote development in Africa in four different ways, according to Thompson and Walsham (2010). These elements are access to resources and international markets, institutional infrastructure governance, economic activity, service output, civil society and accountability.

Little is known about how ICT might enhance learning results in poor nations, according to research on the linkages between ICT and policy challenges in Sub-Saharan Africa, particularly Kenya. In addition, little is understood about how those conclusions should influence ICT regulations in the educational field. In developing countries, ICT-related investments and activities have grown quickly in recent years (Wagner, 2014). In light of these opinions, Nyagowa et al. (2013) urged African researchers to participate more actively in the national and international discussion of ICT policy, contending that the rapid growth of ICT investment necessitates a thorough analysis of the implications for educational policy. According to Iniesta-Bovillo & Schlesinger (2013), a major aspect of the worldwide agenda for educational reform is the adoption of ICT in the education sector. ICT is taught as a subject in several nations, including Kenya. However, this approach to using ICT in education runs counter to trends in the outside world.

ICT is not a secluded aspect of life but a social, economic and social tool (Kessy et al., 2006). Similar to this is the views of (Rubagiza et al., 2011). Burders and Shea (2013) support that isolating ICT as a subject yields a limited impact on students' learning outcomes. Gichovi's (2013) study found that infrastructure had an impact on ICT integration in pedagogy since the analysis demonstrated that schools lacked the necessary resources. The study further revealed that most schools were not designed to include ICT, and redesigning would take time and be expensive. There was no physical security of the hardware and software. The survey also discovered that although resource providers were absent from Kirinyaga East District, principals encouraged a climate of trust and resource sharing. On ICT literacy level among teachers, the study indicated that the level of ICT proficiency among the teachers was generally low. This became a barrier to the use of ICT in instruction and learning.

ICT was initially viewed as an instrument to streamline administrative tasks, such as official school procedures, so that records, enrolment data, and staff information could be efficiently managed (Hannessy et al., 2010). In the same line, ICT implementation is still in its infancy in most Sub-Saharan African schools, according to Ngololo et al. (2012). They specifically mention Namibia's ICT strategy and the fact that when it is utilised, it is often for management. Technical issues are a significant issue, a source of aggravation for students and teachers, and they disrupt the teaching and learning process in most institutions. Teachers will shortly be unable to use the computer if there is no technical support or repair done (Jamieson-Proctor et al., 2013). As a result, teachers are discouraged from utilising computers out of concern about equipment failure because they are not provided with any training on how to utilise them.

In Kenya, the Ministry of Education Science and Technology (MOEST, 2014) is focused on improving quality and utilising ICT to enhance learning outcomes. The creation of a national ICT policy in Kenya's policy environment reflects this intention (ROK, 2006). The National Educational Sector Plan (NESP) (MOEST, 2014) and the Sessional Paper No. 14 of 2012 (ROK, 2012), the sector's main policy documents, both place a considerable emphasis on information and communications technology. Thus, policymakers must understand the value of technology in schools, particularly in the context of the teaching and learning environment (Kirimi, 2013). This argument, therefore, suggests that high-level policies need to be redesigned to address how ICT is used as a pedagogical instrument in an educational setting. Few schools in Kenya possess suitable ICT facilities, making it impossible to integrate ICT into the teaching and learning process, according to a study by Kamau (2012) on the barriers to ICT usage in the teaching and learning environment.

Kamau also discovered that the majority of schools with computers lacked relevant educational applications and internet connections. Although there is proof that ICT supports active learning, there is limited agreement on the best pedagogical paradigm to use. Regarding this, some educators have argued in favour of more adaptable mobile devices, while others have argued in favour of stationary technology like laptop computers and desktops (Hennessy et al., 2010). ICT is essential to the effectiveness, efficiency, and provision of services in the field of education, but its adoption in Kenyan schools has lagged behind (Nchunge et al., 2012). According to the author, there was a view among users that ICT was tough and complex, many potential users lacked acceptable technological literacy, there was a lack of psychological and technical preparation, and there were not enough policy guidelines. They added that insufficient technical and psychological readiness prevented behavioural and attitude adjustments, which in turn prevented technology deployment in schools. Similar to Kamau's (2012) views, (Nchunge et al., 2012) opined teachers' readiness for the required psychological and technical abilities depends on training and

greater investment in ICT facilities. There is a need to investigate and implement ICT-focused pedagogical paradigms into the teaching process (Amatubi, 2004; Macharia & Pelser, 2012). This suggests that the emphasis must switch from outcome-based ICT programs that link ICT to improve teaching and learning to output-based programs that focus on ICT. If this change is implemented, Kiswahili teachers will teach Kiswahili fasihi simulizi using ICT, and this would have the benefit of preparing future citizens for lifelong learning.

3.0 RESULTS AND FINDINGS

ICT Resources Available for Integration in Teaching and Learning Kiswahili Fasihi Simulizi in Public Secondary Schools in Kenya

A Checklist was used, and the participants were to indicate whether specific resources were available in sampled schools. The results are as indicated in table 1.

Table 1: Resources available for integration

No.	Item	Available	Not available
	Computers	88(84%)	17(16%
	Multi-media projector	64(61%)	41(39%)
	Internet	75(71%)	30(29%)
	e-mail	75(71%)	30(29%)
	Interactive radio	26(25%)	79(75%)
	Computer Laboratory	49(47%)	56(53%)
	Teleconferencing	0	105(100%)
	Photocopiers	86(82%)	19(18%)
	Printer	94(90%)	11(10%)
	Smartphone	60(57%)	45(43%)
	I pad	8(8%)	97(92%)
	Electricity	88(84%)	17(16%)
	DVD/ VCD	64(61%)	41(39%)
	Interactive whiteboard	11(10%)	94(90%)
	Television	86(82%)	19(18%)
	Power bankdevices	64(61%)	41(39%)
	Audio and videoclips	41(39%)	64(61%)
	Modem (internal and external	56(53%)	49(47%)

On the availability of computers, the study found that out of 105 sampled schools, 88 of them, representing 84 per cent, had at least one computer in school, while 17 schools representing 16 per cent, did not have them. The study further aimed to find out if multimedia projectors were available in sampled public secondary schools. Multimedia projectors enable teachers to simultaneously present a variety of materials to all pupils in the room, giving them an opportunity to study visually and colourfully, much like in fasihi simulizi. The study revealed that 64 out of 105 public secondary schools that participated in the study had multimedia projectors representing 61 per cent, while 41 schools representing 39 per cent, did not have projectors.

On internet connectivity within the public secondary schools, the study showed that 75 out of 105 public schools were connected with the internet, representing 71 per cent, while 30 public schools representing 29 per cent, had no internet within the schools. The internet is a vital resource in teaching and learning because its use enhances teacher and peer interaction. It is an effective teaching tool, which can enable Kiswahili fasihi simulizi teachers to keep updated with the latest information by connecting with other teachers in the same field.

On the availability of e-mail addresses for schools, 75 public secondary schools had email addresses representing 71 per cent, while 30 schools did not, which represented 29 per cent. Email is a flexible, quick, affordable, and efficient communication tool that may be used to connect with students as well as among them, as well as with professors and management. In addition to communication, other uses include but are not limited to keeping references, collaboration, storage and task management. A teacher can send learning materials to all learners in the classroom or provide individual feedback on essays. Delivering course materials using interactive radio generally combines many types of involvement, for instance, in classroom discussions. It has been proven effective in supporting teacher-led learning. An education program can be conveyed by the use of interactive radio. The study thus revealed that 26 schools representing 25 per cent, had interactive radio while 38 schools out of 79, representing 75 per cent, did not have one.

The study further sought to find out whether public secondary schools had computer laboratories. A computer laboratory would be used to store computers, computer accessories and data. The study revealed that 49 schools out of 105, representing 47 per cent, had computer laboratories while 65 schools out of 105, representing 53 per cent, did not have computer laboratories. The study also sought to find out whether public schools had teleconferencing resources. The study found that 105 schools out of 105, representing 100 per cent, did not have teleconferencing rooms and resources. The study revealed further that 86 schools out of 105, representing 82 per cent had photocopiers while 19 out of 105, representing 18 per cent, did not. Photocopiers are important in pedagogy because they are used in the mass production of teaching materials.

The study further sought to establish if printers were available in public secondary schools in Kenya. The study revealed that 95 out of 105 schools representing 90 per cent, had printers while 11 schools representing 10 per cent, did not have printers. On whether smartphones were available in schools, 60 schools out of 105, representing 57 per cent, had them, while 45 out of 105 schools representing 43 per cent, did not have smartphones. The researcher also wanted to know if schools had Ipads for teaching and learning Kiswahili fasihi simulizi. The study revealed that 8 out of 51 schools representing 8 per cent, had them while 97 out of 105 did not, which represented 92 per cent.

The study revealed further that 88 out of 105 public secondary schools had electricity, which represented 84 per cent, while 17 schools did not, which represented 16 per cent. DVDs and VCDs are also important in the integration of ICT in teaching and learning Kiswahili fasihi simulizi. The study revealed that 64 out of 105 represented 61 per cent, while 41 schools out of 105, representing 39 per cent, did not have them. With the development of technology, an interactive whiteboard is an essential resource for use in integration in teaching and learning. The study revealed that only 11 schools out of 105, representing 10 per cent, had, while 94 schools representing 90 per cent, did not have whiteboards. Television is a major resource in teaching and learning. The study sought to establish whether public secondary schools had televisions. It revealed that 86 out of 105 schools had television representing 82 per cent, while 19 schools out of 105, representing 18 per cent, did have television.

The power bank is a relevant accessory for ICT integration in teaching and learning. The study revealed that 64 out of 105 schools representing 61 per cent, had power bank devices while 41 schools out of 105, representing 39 per cent, did not. The study further sought to identify whether schools had audio and video clips. 41 out of 105 schools representing 39 per cent, had the clips for teaching and learning fasihi simulizi, while 64 out of 105 schools representing 61 per cent, did not. A modem is important in accessing the internet on computers and laptops. The study revealed that 56 out of 105 schools representing 53 per cent had modems while 49 out of 105 schools representing 47 per cent, did not.

Principal's responses on Adequacy of ICT Resources for Integration in Teaching and Learning Fasihi Simulizi
The principals were asked to respond on the adequacy of ICT resources in their schools for integration in teaching and learning. The responses are as indicated in table 2.

Table 2: Administrative Response on Adequacy of ICT Resources for Integration in Teaching and Learning Fasihi Simulizi (N=105)

No.	Statements	SA	A	D	SD
	There are enough computers in my school	15(14%)	26(25%)	42(41%)	21(20%)
	My school has educational software for teaching	8(8%)	35(33%)	39(37%)	21(20%)
	Computers in my school are connected to the internet	15(14%)	47(45%)	4(4%)	39(37%)
	We have interactive boards in our school	4(4%)	6(6%)	39(37%)	56(53%)
	There are television sets that we can use for teaching	21(20%)	30(29%)	30(29%)	23(22%)
	We have enough printers	15(14%)	43(41%)	21(20%)	26(25%)
	There are photocopiers in my school	26(25%)	54(51%)	21(20%)	11(10%)
	Multimedia faculties are available for teaching Kiswahili fasihi simulizi	4(4%)	21(20%)	43(41%)	37(35%)
	We have projectors in the school	21(20%)	41(39%)	21(20%)	23(22%)
	We have a virtual library or e-learning	0	4(4%)	35(33%)	66(63%)

Table 2 represents principals' responses to the adequacy of ICT resources in public secondary schools. On whether computers were enough in their schools, 15(14%) strongly agreed, 26(25%) agreed, 43(41%) disagreed and 21(20%) strongly disagreed. On whether schools had educational software for teaching, 8(8%) strongly agreed, 35(33%) agreed, while 39(37% disagreed and 21(20%) strongly disagreed. The

study further aimed to establish whether computers in schools were connected to the internet. Out of 105 principals, 15(14%) indicated that they strongly agreed, 47(45%) agreed while 4(4%) disagreed and 39(37%) strongly disagreed.

On whether schools had interactive whiteboards, the principals responded as follows; 4(4%) strongly agreed, 6(6%) agreed while 39(37%) disagreed and 56(53%) strongly disagreed. On the availability of television sets that could be used for teaching, the principals' responses were as follows: 21(20) %) strongly agreed, 30(29%) agreed, while 30(29%) of the principals disagreed, and 23(22%) of principals strongly disagreed. On whether printers were enough in public secondary schools, 15(14%) strongly agreed, 43(41%) agreed, while 21(20%disagreedand 26(25%) strongly disagreed. On the availability of photocopiers, 26(25%) principals strongly agreed, 54(51%) agreed while 21(20%) disagreed and 11(10%) strongly disagreed. The researcher further asked whether multimedia faculties were available in public secondary schools. Out of 105 public secondary school principals, 4(4%) strongly agreed, 21(20%) agreed while 43(41%) disagreed and 37(35%) strongly disagreed. On the availability of projectors in schools, 21(20%) of principals strongly agreed, 41(39%) agreed while 21(20%) disagreed and 23(22%) strongly disagreed. The study further aimed to establish whether the virtual library was available in public secondary schools. Only 4(4%) of principals out of 105 agreed, while 35(33%) disagreed and 66(63%) strongly disagreed.

From the data presented, the study revealed that 51 per cent of the principals did not have enough computers in their schools, and they did not have any educational software for teaching Kiswahili fasihi simulizi. The study also showed that 59 per cent of the selected schools had internet-connected PCs. The study also revealed that schools had television sets that could be used for learning and teaching. Additionally, the survey revealed that 55 per cent of the principals held that they had enough printers and photocopiers in their schools. The study also revealed that 76 per cent of the schools did not have multi-media faculties for teaching and learning through few had projectors. Public schools also lacked virtual libraries for e-learning. The study found that majority of the schools had resources that could be used for the integration of ICT in learning and teaching Kiswahili fasihi simulizi. Of the sampled schools, 84 per cent of the schools had electricity, computers, television, photocopiers and printers. If teachers are well equipped with ICT skills, they can comfortably use these resources in teaching. Most of the schools had internet connectivity by use of WI-FI, or an internet network was available in 71% of the schools. Likewise, 71 per cent of the schools had an e-mail address and multi-media projectors.

However, in most schools, other resources that would be used together with the available resources were missing. For instance, schools lacked audio and video clips that could be played on the computers; they lacked external and internal modems to use on the computers the schools did not have internet connectivity. Few schools (25%) had interactive radio, and 10 per cent had an interactive whiteboard. On the other hand, 61 per cent of the schools had DVD/VCD though most of them were for Kiswahili set books, and few had content for fasihi simulizi. Smartphones could be used for connecting Kiswahili teachers with other Kiswahili teachers to exchange ideas. However, only 57 per cent of the schools had smartphones meaning it would be difficult to connect with other teachers and share information. The study also found that only 8 per cent had Ipad, and none of the schools used teleconferencing for teaching and learning. The majority of the schools (53%) did not have a computer laboratory, and available resources were left in the school secretaries' office while others were kept by teachers; thus, there was no safe custody of the available resources though 61 per cent of the schools had power bank devices

connected to computers. From the results of this study, it can be concluded that few schools had ICT resources, with the majority lacking them. The study further showed that the available resources were, however, not meant for teaching and learning but were used for administrative work.

The study revealed that public secondary schools did not have adequate resources for the integration of ICT in teaching and learning. This means that teachers did not use ICT in teaching and learning Kiswahili fasihi simulizi. This could be a possible clarification for why fasihi simulizi remained abstract among Kiswahili learners in Baringo County. The study also showed that most schools were not designed to include ICT in teaching and learning. Similarly, Egomo et al. (2012) found that the availability of ICT tools for effective instructional delivery was relatively low, with the exception of laptops, multimedia projectors, and internet facilities, in their research paper titled "Availability and use of ICT tools for efficient teaching process in tertiary institutions in Cross river state, Nigeria."

These results are the same as those of a study carried out by Gichovi (2013) demonstrated how infrastructure has an impact on how well ICT was integrated into teaching and learning. The investigation also revealed that schools lacked the necessary tools to integrate teaching and learning. Similarly, the study also showed that most schools were not designed to include ICT in teaching and learning; thus, the study recommended redesigning the schools' set-up, which would be expensive. The study also revealed that most schools in Baringo County were equipped with computers, electricity, printers and internet. The available resources were, however, not meant for teaching and learning but were used for administrative work. There were few schools that had other resources like CDs, DVDs, email addresses, internet connectivity and modems. However, ICT resources were not used in teaching and learning; thus, the study shows that ICT resources were not integrated into teaching and learning Kiswahili fasihi simulizi.

A similar study carried out by Haggins and Moseley (2011) revealed that most schools were connected with electricity, which would facilitate the integration of ICT in teaching and learning Kiswahili fasihi simulizi. The results are contrary to deductions by Rebecca and Marshall (2012), who argued that the lack of electricity in most Kenyan rural schools remained a challenge. However, the results concur with a study carried out by Mathevula and Uwizeyimana (2014) that the main challenges facing teachers in the ICT integration and implementation in education include access to the internet, which is limited in rural rears and poor infrastructures such as the supply of electricity and ICT tools. According to a similar survey on e-learning preparedness in public secondary schools in the Nakuru Municipality conducted by Karanja (2011), there is insufficient ICT infrastructure and connection in secondary schools in Kenya to facilitate efficient e-learning delivery. The survey also discovered that there are not any standardised digital resources or software applications to improve e-learning. Teachers are unable to effectively incorporate ICT into the classroom. This particular study did not particularly look at the preparation phase because it was more interested in whether schools were prepared for e-learning.

The study found that majority of the schools had ICT resources that could be used for integration in teaching and learning Kiswahili fasihi simulizi. Of the sampled schools, the majority of the schools had electricity, computers, television, photocopiers and printers. If teachers were well equipped with ICT skills, they could comfortably use these resources in teaching. Most of the schools had internet connectivity of wifi or internet network in most schools. Likewise, the majority of the schools had e-mail addresses and multi-media projectors.

The study also found that only 8 per cent had Ipad, and none of the schools used teleconferencing for teaching and learning. The majority of the schools (53%) did not have a computer laboratory; thus, there was no safe custody for the available resources though 61 per cent of the schools had power bank devices connected to computers. From this study's findings, it was concluded that few schools had ICT resources, with the majority lacking them. The study further depicted that the available resources were, however, not meant for teaching and learning but were used for administrative work. ICT integration in learning and education was influenced by infrastructure since studies revealed that schools lacked sufficient resources. The study further showed that most schools were not designed to include ICT, and redesigning would take time and be expensive. There was no physical security of the hardware and software resources.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The findings summary shows that most public secondary schools in Baringo County have a variety of ICT resources. However, they are typically insufficient. Efforts should thus be made to ensure teachers integrate them into their process of teaching because ICT resources are very important in teaching and learning. The study, therefore, concludes that ICT resources in most public secondary schools are inadequate, and teachers are not well skilled and competent enough to integrate these resources in teaching and learning. Internet network is similarly a major challenge in most areas in Baringo; thus difficult for Kiswahili teachers to connect with others within and outside the county. The ministry of education should prioritise connectivity and push the Kenya Power and Lighting Company to provide electricity in areas that are yet to be connected. Therefore, ICT integration is not fully adopted in teaching and learning Kiswahili fasihi simulizi, and this explains why achievement has been low in Kiswahili.

Recommendations: The study recommends that the cost of ICT equipment and resources be reduced by waiving import tax and that computer-assisted instructions are assembled locally. On the other hand, school administrators and managers should plan and set aside funds to purchase ICT resources to promote ICT integration. The ICT resources need to be stored safely and well maintained to avoid damage. Internet providers should also reach rural and remote areas so that all learners can have equal opportunities to be taught using modern technology. Kenya Power and Lighting Company (KPLC) should also put effort into connecting all areas with electricity, or alternative sources of power explored like wind energy, solar energy or schools to invest in generators.

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