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USE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN TEACHING AND LEARNING PROGRAMS IN SECONDARY SCHOOLS IN NYAMIRA COUNTY

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ABSTRACT

Currently the world has turned into digital age and hardly any aspect of human endeavor can be effectively carried on without Information communication technologies (ICTs) including education. ICT-supported education can promote the acquisition of the knowledge and skills that will empower students for lifelong learning. The study was carried out in secondary schools in Nyamira County which was guided by the following research objectives: to assess the ICT facilities and infrastructure; to determine the teacher's ICT knowledge and skills in application of ICT; to establish how the schools get the ICT technical support in and to establish the school administrative practice that influences the use of ICT in teaching and learning in secondary schools. The findings of the study were of help to stakeholders in education to understand the factors that influence the use of ICT in the education system and make relevant decisions. The study was limited to access of information as some employees were reluctant to give information. Descriptive research design was adopted. Target population was 1134 teachers in Nyamira County. sample size was 113. A sample of 10% of target population was sufficient. Simple random sampling was adopted. Questionnaires were used to collect data. Data was analyzed using statistical package for social sciences. Data was presented using frequency tables.

Key Words: Communication Technology, Education, skills

LIST OF ABBREVIATIONS AND ACRONYMS

ACE - Accelerating Century Education

IRI - Interactive Radio Instructions

IT - Information Technology

MHEST -Ministry of Higher Education, Science and Technology

MoE - Ministry of Education

NCST - National Council for Science and Technology

TSC -Teachers Service Commission

UN - United Nations

INTRODUCTION

Modern discourse on growth always identifies ICT as a prerequisite for fiscal growth and the enhancement of social environment (Korpela 2003). The relation between ICT and development is the gap between developed and developing countries. Major concern lies in the developing countries which are disadvantaged of the opportunity for fiscal development and progress normally earned by developed economies due to the insufficiency of ICT, predominantly restricted Internet connectivity. Ability of a country's ICT will fetch necessary development (Kamal & Qureshi, 2009).

Spence & Smith (2009), Singapore and Malaysia are some of the countries which were like Kenya during independence; today the countries have documented profitable development due to important investment they have done on ICT. Harris (2004), Kozma 2005, further clarifies that knowledge establishment; technical innovation, executive networking, and sharing of knowledge supports both continued economic and social development.

Most of the countries in Africa are trying to stress on learning particularly since independence. Education has helped to alleviate poverty by mounting human capital by growing intensity of communal and confidential benefits. Besides increasing distribution to learning and teaching, countries have tried to reform their education system particularly in developing countries. Education reorganization efforts in developing economies have intended at creating learning an efficient automobile for nationwide growth (Abagi & Odipo, 1997). ICT is currently at the middle of teaching and learning transformational efforts that engage use in synchronization with change in syllabus, instructor training, and evaluation (Kozma, 2000). ICT is an efficient instrument that if incorporated effectively forms a solution mainstay of teaching training (Tomar and Kumari, 2005). The incorporation of information technology into practically every aspect of the financial system and culture is creating a digital country that is accountable for generating monetary growth and wealth (Bollou, 2006). There is a increasing concentration in using computers in secondary school level to progress education which involves multiplicity of application, primarily utilizing access to internet (Bosch & Moulton, 2007) and generate the opportunity to swap thoughts, seek advice from experts, seize students on fundamental field trips (Wartkins, 2009).

The rise in the question about ICT as train of development that is seen as a path to developing nations (Kamal & Qureshi 2009). African counties have been liberalizing their ICT sector and

heavily invested resources on ICT (Ngwenyama, O. 2002) along with other requirements like famine and fighting of diseases. Most of the challenges that face sub-Saharan Africa pose challenges in unusual stability between expertise and requirement of restricted growth.

ICT connectivity in Africa is slow due to; lack of sufficient resources, poor integration of local languages with ICT into the system, variation of the information upgraded unto the system through their websites. Africa has been facing regular inaccessibility and lack of technical expertise in ICT that has resulted into digital segregation with the developed economies. This has led the African countries into over dependence of developed economies in the western countries (Zheng, 2009). It's argued that given that technology outsourced, occasionally it doesn't deal with the local problems, (Conradie et al, 2003). Most of the African countries are poor that connectivity has been a problem that normally requires basic shifts in the inflexible situation, well as transformed consideration to public-private partnerships and social services. Developed economies comprise of 80 per cent of the world's Internet users (UNHD 2001).

According to Spence & Smith (2009) ICT-enabled road and rail network constructed human competence and freedoms with the offer to students of occasion to study how to utilize electronic instruments to contact information and build up study skills to solve problems. United Nations reported that ICT increases accessibility to learning and teaching of the students, training of the teachers and expand accessibility of value education substance for emerging international economies (World Bank 2003).

Most of the schools are streamlining to contain ICT that facilitate provision compact disk information. Majority of the teachers' view ICT as a significant instrument for inspiring students, supporting teaching and learning. The schools recognize that organizational functions have been improved by use of ICT (Oloo, 2009). ICT incorporation in schools consequently requires outlay of tools, expert progress and instructor training, procedural support and digital knowledge procedure.

Like developing and developed in the world, Kenya has urbanized National ICT Policy (2006). The policy sets out aim, principles and plan for the liberation of ICT to progress the living of Kenyans. Ministry of Education introduced an ICT plan for Education and Training (Farrell 2007). ICT in Education discuss conduct in which ICTs is leveraged to sustain and advance the liberation of value teaching and learning of students in secondary schools. The policy also provides wide-ranging probable technology to development of teaching and learning, knowledge and administration. Main purpose of the ICT policy is to assist the government of Kenya to strategize suitable ICT in teaching involvement while moving forward.

From previous research an attempt incorporate ICT in secondary schools in Kenya has been hindered by a range of challenges including inadequate number of computers in secondary schools, insufficient financing, dynamics in technology and high overhead costs, lack of a unified school syllabus in both primary and secondary schools and resistance of the teachers with

fear of losing their jobs (Kidombo 2009 &Farrel 2007). This is supported by the report issued by the government of Kenya on ICT potential in secondary schools (MHEST 2010).

1.10 Definition of terms

Application of ICT: use of ICT to improve training and generate wealthy environment to assist every character to increase strength of indulgent and decisive idea.

ICT infrastructure: substantial equipment that facilitate a network to run ICT: includes technology of both customary and advanced technology projected to accomplish data dispensation and communication.

Innovation: is thought, practice, or entity that is professed as innovative by an individual.

IT capacity building: the procedure of enhancing controlled human and managerial ability to use information technology to carry out precise errands in organization in order to accomplish managerial goals based on the plan of human resources.

Technical support: this is the fundamental ability to conquer technical problems when applying information communication technology is applied.

LITERATURE REVIEW

The education syllabus of United Nations together with UNESCO deal with the different functions and objectives of investing in learning to being constricted the information gap and it is the most vital to the increase in the ability for integrate understanding into communal and monetary actions and for take part in today's digital financial system.

It has been revealed that individuals or entities are existing in the digital era and barely any feature of individual undertaking can be successfully agreed on with no ICT for the ancient times, various nations have worked on investing in ICT in making knowledge determined nation by establishing ICT countrywide policies and strategies in their learning structures (UNESCO 2008). The introduction of technology in teaching and learning is a way of enhancing and extending the instructional technique and learning procedure in the 21stcentury. According to the report by UNESCO 2008confirm that ICT is way for development and a tool for empowering educational transformation and progress.

According to the literature review, most of the developed countries have attained extraordinary investment on ICT by amalgamating ICT in the educational system that described by sound planned ICT countrywide policies and precise plans of ICT in teaching and learning. Contrary to the developing economies like Kenya integrated are rapidly and profoundly investing in ICTs regardless of challenges the economies encounter for example famine and drought. Regardless of the efforts, these developing economies still have low internet connectivity, insufficient power supply particularly in the rural areas where majority teaching and learning institutions are situated together with usual disruption, small number of computers in teaching and learning centers. This creates a digital division amongst developing and developed economies and

therefore the developing economies fail to notice the benefits of ICT in entirely all characteristics together with education that is the foundation of the nation and it is the way of breaking the poverty rotation on the rising economies. The study was done to assess the use of ICT in teaching and learning in secondary schools specifically in Nyamira County

Theoretical Review

The study was supported by Roger's theory of "Diffusion of Innovations."This theory seeks to clarify the rate of development of new ideologies bases on technical know-how multiplied through customs. Originally diffusion of innovations was done in 1903 by a French sociologist; Gabriel Tarde. Diffusion study centers on the state of affairs which increases or decreases the possibility that an innovative idea, invention or practice is approved by element of a known societal system. Rodgers (2003) extended this theory of Diffusion of innovation by trying to explain the variables that manipulate how and why consumers take on innovative information medium for instance Internet.

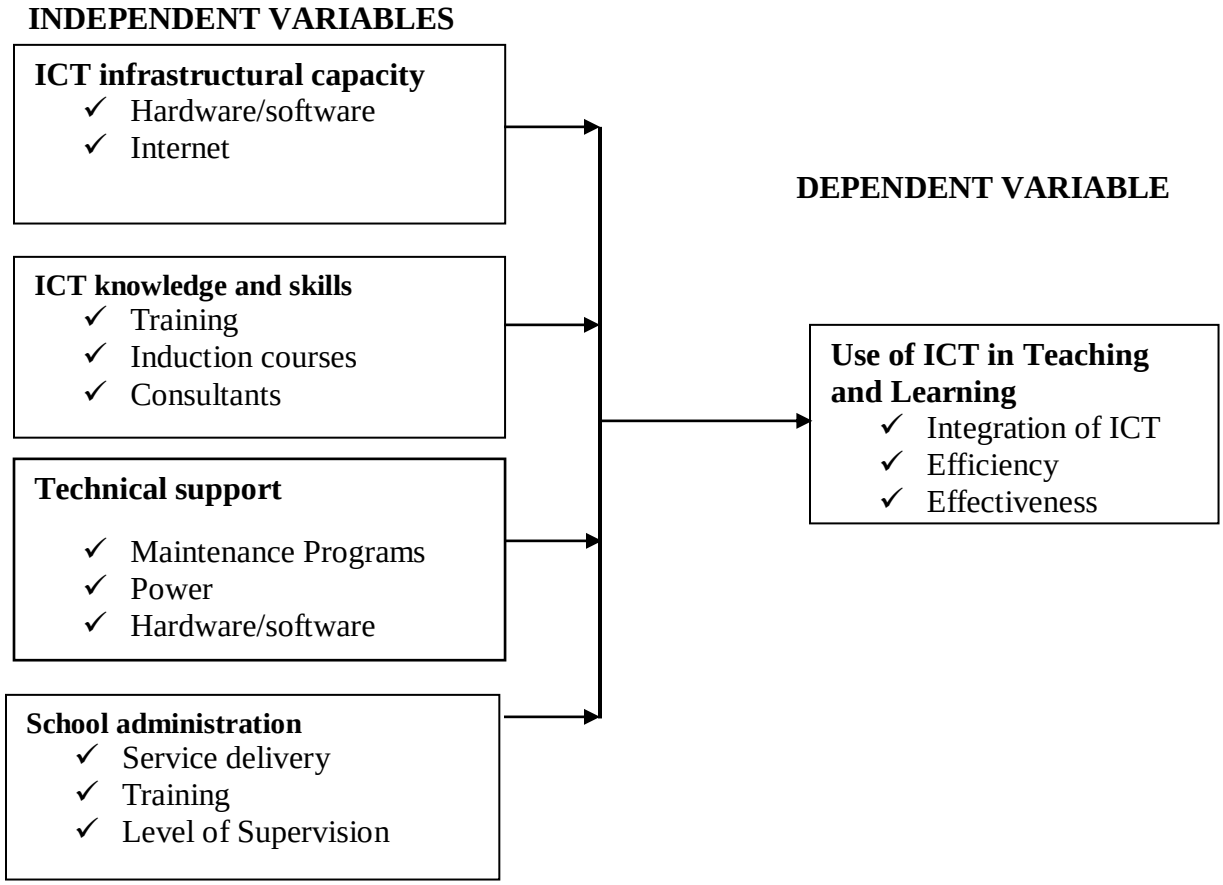
The diffusion of data technology and telecommunications service, hardware and software turn out to be a dominant driver of development that has effects on workers' productivity (Bollou, 2002). Robinson 2009 viewed that, the theory of diffusion of innovations observes revolution as being mainly regarding the advancement of products and services in becoming enhanced hysterics for the requirements of individuals and groups.

The theory of Diffusion of innovation has four essentials that include ideas which are practices which are alleged as original by an entity or individual; communication channel which is a way in which communication is channeled among individuals; time which is the duration necessary to surpass through the decision making practice and finally the social system that is defined as a set of inter connected components which are engaged in combined problem resolving to achieve a frequent objective.

Every individual in the communal system normally face their own innovative decisions which have a five step process that is knowledge, persuasion, decision, implementation and confirmation (Sahin, 2006). This makes the consumer to maintain implementation or eliminate the technology. The approval or elimination of innovations is described by; the comparative advantage, cleanness, trial-ability and observations. So the perception and make use of circulation network can aid plan aimed at rapidly stir up system-wide modify (Robinson 2009& Sahin 2006). Educational stakeholders are responsive in the ICT advancement universally, rate of implementation is still low and particularly in developing economies. (Medlin 2001; Parisot 1995). The study will address the factors that affect the use of ICTs in teaching and learning institutions.

Conceptual Framework

Figure 2.1 shows a conceptual framework of the study, which proposes the relationships between information and communication technology and teaching and learning programs in secondary schools.



Information and Communication Technology

ICT improves all types of information examination, swap, education and decision-making. Transactions related to business are extended and rapidly increased through ICT and industrial opportunity simply recognizes and markets function more proficiently. ICT produce extra understanding of factors affecting personal welfare and enhanced ability to manipulate and take part in decision-making (Labelle 2005)

Right to use to information helps intensify the playing ground by escalating contribution in monetary and individual growth actions and in individuals' application which relies upon information. Information Communication and Technology generate better ecological understanding: information on climate and environment additionally exists. This normally helps in forecasting and prepares for ecological perturbations and organizes for emergency food relief. The ICT enhances and make trade easy and markets more proficient.

With many benefits of ICT, strategic plan must intend to reinforce the viable and relative benefits of software, hardware and ICT service provider from rural areas, country wide and globally.

Infrastructure and ICT

Teaching and learning institutions especially secondary schools should beset/equipped with essential Information Communication Technology infrastructure in order to offer the next generation with required instruments and necessary resources for accessibility and utilize in order to accomplish the anticipated skills (Gulbahar &Guven 2008).The institutions should be equipped with special kinds of hi-tech infrastructure and also electronic resources accessible that is software, hardware and network which have to be accessible to incorporate ICT in teaching and learning (Afshari 2009). Further he suggests that restricted access to computers creates an obstacle to efficiently use computers in the curriculum. Mumtaz (2000) states that a lot of researchers proposed that lack of funds to acquire the essential software and hardware is one of the cause's instructors don't use technical expertise in their lessons. Well-organized and efficient application of technology depends on the accessibility of hardware and software together with equity of right to use resources by students, teachers an administrative staff. Tin (2002) elucidates that appropriate incorporation of ICT requires significant educational element in the ICT syllabus of a few teacher teaching course. He concerns that education ICT as an isolated regulation is not an effectual way to support the use of ICT in education. Obviously, the syllabus must be re-designed or adapted so that it is prepared for ICT incorporation.

Knowledge, skills and technical support and ICT

Teachers' technical growth is a vital factor in the learning development. Therefore, the educator in-service and pre-service training on ICT is a must for appropriate incorporation of ICT in the teaching and learning organization in any state (Tin 2002). The teachers are required to be equipped to empower the students using advantages expertise can convey. Teachers are also liable for ascertaining the classroom surroundings and organizing the education opportunities which assist students with the application of technology to study, and communicate (UNESCO 2008). The recent studies have determined that the majority teacher guidance courses provided more attention on fundamental computer operations more than advanced computer expertise and subject-specific educational application (Tin 2002).

Making use of innovative and modern technology entails current teacher responsibility, modern pedagogies and latest approach to learning and teaching. Previously teachers developed the capability to accomplish each and every one of the above; they ought to have a comfortable level of ICT expertise. The teachers in the teaching and learning institutions must understand ICT skills and knowledge so that they are able to use ICT as a primary instrument for teaching and learning across the core curriculum.

Teachers are required to be knowledgeable and confident user of software and hardware to recognize how to systematize the classroom to arrangement learning responsibilities in order for information technology resources turn into an essential and fundamental component of learning to a certain extent than an attach technical aid. Teaching and learning develop into a method to instigate, make possible and maintain students' education and actualization; consequently, instruct or must take part in a task as a facilitator who assists students learning process.

Consequently, various teachers have initiated to present firm resistance to vary linking technology involvement, technology combination and technology integration (Albirini 2007).

Teachers with ICT knowledge and skills offer considerable learning experiences by preparing students for valid time technological and diverse world involved. The study results specify to facilitate the use of ICT without help does not revolutionize traditional learning and teaching practices and those ICT require to be maintained by modern educational techniques to develop students learning and vigorous relations (Braun & Kraft 1995).

To decrease the anxiety linked with the use of modern expertise by the teachers, there has to be a consistent proficient sustain ability. The technological professionals must be engaged to perform functions the teachers may struggle to perform. Presently there is need for technological sustain organization with high level technical expertise in the maintenance characteristics of ICT.

Due to poor maintenance and inadequate skills to analyze system problems and exchange elements, there are numerous out of action equipment which might simply be reactivated and used. The difficulty of technological know-how is two faceted. First and foremost, few individuals have attained or qualified with ICT expert skills and knowledge with the velocity at which technology is implemented. Secondly, there is a difficulty of brain-drain in which a small number of experts opt for enhanced paying profession abroad (Minishi-Mananji 2007). Having technological team available will also enable them to offer support to students in using software applications, while they are not occupied in servicing the technology.

In several severe cases concerning schools in rural areas, disabled supercomputer take long period of time to be fixed given that there's no technician is accessible in the instant locality and thus the computers are sent to the next city that is very far away. The gap exists where access of ICT technological maintenance is restricted since there is inadequate technical training and quick growth of ICTs that involve usual in service technological training.

School administration and ICT

For successful incorporation of ICT in secondary schools, appropriate strategic plan has to be done at the school level because the institution is required to offer the essential ICT resources to the students and teachers to utilize. An ICT incorporation strategy offers a comprehensive plan of the steps and technique required to interpret the school ICT dream into certainty (Afshari 2009). A strategy is a guide to achievement not an alternative for it; the reality of a written ICT strategic plan doesn't assure the complete utilization of ICT in teaching and learning institutions or whether the nonexistence of an ICT strategy essentially compared to the need of ICT incorporation in a specified school (Bryderup and Kowalski 2002).

Integration of ICT in Kenya as compared to many other nations/states in the world, the country has developed National Information Communication Technology Policy (2006) that lays down out the country's wants, doctrine and policies for provision of ICT to advance the living of Kenyans. The Ministry of Education launched the National Information Communication

Technology policy for teaching and learning (Farrell 2007). This policy provides a chance for establishment origin based communications for understanding distribution (Mureithi and Munyua 2006). The policy presents an all-inclusive variety of prospective technologies to advance education, learning and administration. The intention of the National Information Communication Technology policy facilitates the Kenyan government to plan suitable ICT in teaching and learning involvement as they go ahead with the widespread Kenya Education Sector Support Program.

The Kenyan government has established an ICT Board whose most important goal/idea is to benefit quality and reasonable technical sustainability to the digital community to facilitate their even functioning. The ICT board has technological support that has focused point of consistent technique for test and execution of modern software, improvement of hardware and generally tracking of licenses and tools. The policy also builds up a mutual association with the individuals accountable for technological maintenance and support them to incorporate capacity building in the development of potential changes.

From the previous studies, an effort to incorporate ICT in Kenyan secondary schools are hindered by different challenges including insufficient number of computers/laptops in secondary schools, lack of ability to obtain enough computers or modernizing computers which are outdated that is due to insufficient financing, ever changing technology and increased cost of overhead, overloaded program of study, lack of combined syllabus in both primary and secondary schools, resistance by the teachers to the exploit ICT in teaching and learning in schools, inadequate number of teachers employed by the government especially in public institutions thus the teachers of the institutions are required to employ thus exhausting the limited resources that might be utilized for improving the ICT services offered to the students (Kidombo 2009, Oloo 2009, Farrel 2007).

Summary of Literature review

Literature review has shown that most developed nations made significant venture ICT with integration of ICT in their educational system shown by well-developed ICT nationwide guidelines and particular plans of ICT in education. The developing states, for instance Kenya and others have rapidly and seriously invested in ICT in spite of the additional challenges faced e.g famine and drought. Regardless of these efforts, developing economies inadequate power supply, low number of computers and low internet connectivity in schools. The study was carried out to evaluate the factors affecting use of ICT in teaching and learning programs in secondary schools distinctively in Nyamira County.

DATA ANALYIS AND PRESENTATION

Level of ICT training

In review of literature the researcher established that appropriate use of ICT requires technical expertise and knowledge. The researcher sought to establish the teachers level of ICT training. Table 4.6 below shows the level of ICT training of teachers who took part in the study.

Table 1 level of ICT training

	Frequency	PERCANTAGE
Certificate in computer applications	31	46.3
Diploma in ICT	19	28.4
Not known	17	25.3

Source: Researcher's data, 2017

It was established that 46.3% of the teachers had certificate in computer application while 28.4% had diploma in ICT while 5.3% of the teachers didn't disclose their level of ICT training. The researcher established that most of the teachers had the ability to use the computers but their skills should be advanced.

ICT infrastructural capacity

Accessibility of ICT in secondary schools is very crucial to provide subsequent generation with the desirable instruments and capital for access and use in order to acquire expected skills. Teaching and learning institutions were equipped with different kinds of technical infrastructure like hardware, software and network that must be available to amalgamate ICT in education. The respondents were requested to respond to the statements provided in the questionnaire by indicating whether S.A- strongly agreed, A-agreed, u-uncertain, D-disagreed and S.D-strongly disagreed as shown in table 4.7

Table 2: ICT infrastructural capacity

Statements	SA	A	U	D	SD
There are few computers in the institution	25.2	40.5	5.1	17.1	12.1
There is no internet connectivity	20.1	35.8	6.4	23.5	14.2
Insufficient or irregular power supply	12.1	25.4	9	23.9	29.6
Cost of acquiring hardware and software is high	24.5	25	3.5	26.4	20.6
Most of computers are very old and slow	22.9	25.6	4.5	24.7	22.3

Source: Researcher's data, 2017

From table 4.7above the researcher found out that most of the schools had few computers. 40.5% of the teachers felt that there were few computers within the institution, 25.2% also strongly agreed. 5.1% of the teachers were indifferent. 17.1% of the respondents disagreed and 12.1% strongly disagreed, most of the respondents who disagreed were from private secondary schools and national schools in Nyamira County. Those schools with sufficient computers had internet connection. most of those who agreed there was no internet connection were those who had few computers especially from county schools and day and boarding secondary schools; 20.1% and 35.8% of the respondents strongly agreed and agreed respectively. 6.4% were undecided. 29.6% strongly disagreed whereas 23.9% disagreed.

The researcher sought to establish whether there was insufficient or irregular power supply in the institutions. Most of the respondents, 29.6% strongly disagreed and 23.9% disagreed that there was no was insufficient or irregular power supply in the institutions. 9% of the respondents were indifferent. 25.4% of the respondents agreed there was insufficient power supply and also 12.1% strongly disagreed because there was no power connection in their institutions. There was a mixed reaction on the cost of acquiring hardware and software. 25% agreed that the cost of acquiring software and hardware were high while 26.4% disagreed. 3.5% were undecided on the cost. 24.5% strongly agreed whereas 20.6% strongly disagreed.

There was also a mixed reaction on effectiveness of computers. 25.6% of the respondents agreed that most computers have worn out and very slow. 24.7% disagreed since they had acquired the computers recently. 4.5% of the teachers were indifferent.

ICT knowledge and skills

Use of ICT in teaching and learning institutions requires individuals with knowledge and skills to enable them offer their services effectively and efficiently. The study sought to determine how ICT knowledge and skills improve the efficiency and effectiveness in teaching and learning in secondary schools in Nyamira County. The respondents were asked whether ICT knowledge and skills can improve efficiency and effectiveness in teaching and learning institutions. Most of the teachers, 72.1% agreed that knowledge and skills will improve the efficiency while 27.9% disagreed as shown in table 4.8 below

Table 3: Efficiency and effectiveness in secondary schools

	Frequency	**Percentage**	**Cumulative percentage**
Yes	48	72.1	72.1
No	19	27.9	100

Source: Researcher's data, 2017

The researcher further sought to determine how ICT knowledge and skills affect teaching and learning institution by presenting them with statements on what was not yet achieved in ICT knowledge and skills. Table 4.8, below presents percentages of teachers and how they responded how to the statements presented in the questionnaire. S.A- strongly agreed, A-agreed, u-uncertain, D-disagreed and S.D-strongly disagreed.

Table 4: ICT knowledge and skills

Statements	**SA**	**A**	**U**	**D**	**SD**
There is lack of time for in-servicing staff on ICT	21.1	29.4	6.3	24.3	18.9
Insufficient amount of pre-service training on ICT	28.7	33.4	5.2	23.6	9.1
There is lack of finance to train on use of ICT programs	15.4	50.8	9.0	9.7	6.9

Lack of adequate students training on how to use the computers	40.9	36.7	5.6	13.2	3.6

Source: Researcher's data, 2017

From table 4.9 above, most of the respondents who were teachers agreed that there was lack of time for in-servicing of staff on ICT that affected the efficiency and effectiveness in teaching and learning institutions. 29.4% of the respondents agreed that there's lack of time for in-service training, 21.1% strongly agreed while 18.9% strongly disagreed with 24.3% disagreeing. Only 6.3% of the respondents were indifferent on lack of time for in-service training. Most of the respondents who responded as to whether there was insufficient amount of pre-service training on ICT, 33.4% agreed; 28.7% of them strongly disagreed. 5.2% of the teachers were indifferent. 23.6% of the teachers disagreed while 9.1% strongly disagreed.

Lack of finance to train on use of ICT programs in teaching and learning institutions affects the efficiency and effectiveness. Most of the respondents, 50.8% agreed with 15.4% strongly agreeing. 9% of the respondents were indifferent. 9.7% of the teachers disagreed and 6.9% strongly disagreed that there were insufficient finance of train on use of ICT. To add unto this, most of the respondents, 40.9% strongly agreed that there was lack of adequate students training on how to use the computers. 36.7% of the respondents also agreed, 5.6% of the respondents were indifferent. 13.2% disagreed that there was lack of adequate students training on how to use the computers and 3.6% strongly disagreed.

Technical support

Technical support in ICTs is essential as acknowledged in literature analysis. The study revealed the following in relation to ICTs technical support in secondary schools in Nyamira County. Table 4.10 below shows the percentages on how the principal and the teachers agreed or disagreed with respect to technical support factors in use of ICT in class. SA- strongly agreed, A-agreed, u-uncertain, D-disagreed and SD-strongly disagreed.

Table 5: Technical support

Factors		**SA**	**A**	**U**	**D**	**SD**
Lack of technician to help teachers with the computer hardware or the software	**%**	19.4	55.2	3.0	17.9	4.5
High cost of computer repairs, maintenance and upgrading	**%**	16.4	50.7	7.5	25.4	0
High cost of staff basic training on computer maintenance	**%**	10.4	58.2	9	13.4	9
Fear of computer and technology breakdown during teaching process	**%**	11.9	59.7	6	14.9	7.5

Frequent breakdown of computer and other digital equipment	**%**	11.9	34.3	9	38.8	6

Source: Researcher, 2017

From table 4.10 above, lack of technician to help teachers with the computer hardware or the software was a big challenge. 19.4% of the respondents strongly agreed while 4.5% strongly disagreed. Most of the respondents, 55.2% agreed there was lack of technical support with 3% being indifferent and 17.9% who disagreed.

Due to increased cost of living, most of the respondents also agreed that there was high cost of computer repairs, maintenance and upgrading. 50.7% of the respondents agreed, 16.4% strongly agreed while 7.5% of the teachers were indifferent, 25.4% disagreed with none strongly disagreeing.

Most of the teachers greed that there was a high cost of staff basic training on computer maintenance; where 58.2% agreed, 10.4% strongly disagreed, 9% were uncertain on the high cost of basic training, 13.4% disagreed and 9% of the teachers strongly disagreed.

When the teachers were asked to indicate on fear of computer and technology breakdown during teaching process most of them agreed. 59.7% agreed, 11.9 strongly agreed while 6% were uncertain of breakdown during teaching. 149% of the teachers disagreed with 7.5 strongly disagreeing that there was to be breakdown during teaching.

Further there was a diverse response on frequent breakdown of computer and other digital equipment between those who agreed and those who disagreed. 34.3% agreed while 38.8% disagreed. 9% were uncertain whereas 11.9% and 6% of the teachers strongly disagreed and strongly disagreed respectively.

Administrative practices that support the use of ICT

There has to be proper planning at the school level for integration of ICT in teaching and learning. The researcher sought to determine the administrative practices that support use of ICT in the schools. The school administration was expected to provide necessary ICT resources for both students and teachers. The respondents were asked to respond to the statements in the questionnaire by either S.A- strongly agreed, A-agreed, u-uncertain, D-disagreed and S.D-strongly disagreed as shown in table 4.11 below

Table 6: Administrative practices that support the use of ICT

Statements	SA	A	U	D	SD
There is proper planning at the school level.	7.5	21.7	8.1	35.4	27.3
Administration has provided the necessary ICT resources for the teachers and the students to use	18.7	29.3	7.8	26.8	17.4
Administration has developed infrastructure for knowledge sharing	25.7	22.1	10.5	21.9	19.8

Steps and methods adopted will translate the school ICT vision into reality	23.6	24.5	6.4	25.4	20.1

Source: Researcher's data, 2017

From table 4.11 above, most of the respondents disagreed that there was proper planning by the administration. 35.4% of the respondents disagreed as compared to 21.7% who agreed. Those who agreed were from private institutions and national schools. 27.3% strongly disagreed and 7.5% agreed. 8.1% of the respondents were undecided. Administration had provided the necessary ICT resources for the teachers and the students to use had mixed reactions from the respondents. 29.3% agreed the necessary resources were provided while 26.8% disagreed. 7.8 of the respondents were undecided.

The researcher also established that the administration developed infrastructure for knowledge sharing. 22.1% of the respondents agreed while 21.9% disagreed. 10.5% of the respondents were undecided. 23.6% of the respondents disagreed while 19.8% strongly disagreed. On the steps and methods, the administration and methods adopted to translate the school vision into reality, there was a mixed reaction. 24.5% and 25.4% of the respondents agreed and disagreed respectively. 6.4% were undecided.

CONCLUSIONS

Inadequate ICT infrastructural capacity that included most of the schools have few computers within the institution; with those few devices most of them had no internet connectivity; there was irregular power supply to the schools; cost of acquiring hardware and software by the institutions were high and that most of the devices were worn out and were very slow thereby reducing the efficiency and effectiveness of ICT in teaching and learning institutions.

The study established that there was lack of time for in-servicing to staff on ICT due to insufficient funds of pre-service training on ICT and there was lack of finance to train on use of ICT programs. The students didn't have sufficient skills on use of computers in their schools respectively.

The study also established that there was lack of technical support to help teachers with both computer hardware and software; high cost of computer repairs, maintenance and upgrading; high cost of staff basic training on computer maintenance; the fear of computer and technology breakdown during teaching process and digital equipment.

The study also revealed factors that hinder the administrative practices that support the use of ICT in teaching and learning institutions including poor planning by the school; the administration didn't provide the teachers with necessary ICT resources for the teachers and the students to use and failure of administration to develop infrastructure for knowledge sharing.

Information Communication Technology has numerous benefits in enlightening the entire world as well as the education sector. The researcher consequently established that the relationship of the factors affecting the use of ICTS in teaching and learning institutions have pessimistically influenced and delayed the use of ICTs in teaching and learning in secondary schools.

These factors established include inadequate number of computers; Lack of internet connectivity and access to computers; Insufficient or irregular power supply; Lack of adequate students training on how to use the computers; Insufficient amount of pre-service training on ICT; Poor planning by the school administration and insufficient funds allocated for acquisition of computers for teaching learning in secondary schools.For that reason, there has been inadequate use of ICTs in teaching and learning in secondary school.

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