INTEGRATION OF INFORMATION COMMUNICATION AND TECHNOLOGY IN TEACHING ENGLISH IN SECONDARY SCHOOLS OF KIRINYAGA EAST, KIRINYAGA COUNTY, KENYA

BY

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DECLARATION

I declare that this thesis is my original work and has not been presented in any other university/institution for consideration of any certification. This thesis has been complemented by referenced sources duly acknowledged. Where text, data (including spoken words), graphics, pictures or tables have been borrowed from other sources, including the internet, these are specifically accredited and references cited using the current APA referencing format in accordance with anti-plagiarism regulations.

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DEDICATION

This work is dedicated to my late wife Mercy Wambeere, my son Robinson Mugweru and daughter Maureen Wanjiku.

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ABBREVIATIONS AND ACRONYMS

BECTA: British Educational Communications and Technology Agency,

BOM : Board of Management

CPU : Central Processing Unit

DI : Independent Variables

ECDE : Early Childhood Development Education

FDSE: Free Day Secondary Education

GoK : Government of Kenya.

ICT : Information Communication and Technology

IDRC : International Development Research Centre

IQ : Intelligent Quotient

IT : Information Technology

ITU : International Telecommunications Union

KCSE : Kenya Certificate of Secondary Education

KESSP: Kenya Education Sector Support Programme

KICD : Kenya Institute of Curriculum Development

KNEC: Kenya National Examinations Council

LAN : Local Area Network

MDG : Millennium Development Goal

MOEST: Ministry of Education Science and Technology

NATE : National Association for the Technology of English

NCST : National Council for Science and Technology

NEPAD: New Partnership for Development

NGO **:** Non-Governmental Organization

PPP : Private-Public Partnership

PTA : Parents Teachers Association

PTTC : Primary Teachers Training College.

QoS : Quality of Service

TTC : Teachers Training Colleges

UN : United Nations

VD : Dependent Variables

VLE : Virtual Learning Environment

WSIS : World Summit on Information Society

ABSTRACT

Being the official medium of instruction in institutions of learning, English language proficiency is pivotal to successful undertaking of professional courses pursued in tertiary colleges and universities. When dismally performed in Kenya Certificate of Secondary Examination (KCSE), it heralds to major concerns. This has been the predicament in Kirinyaga East secondary schools year in year out. The title of this study is "Integration of Information Communication and Technology in teaching English in secondary schools of Kirinyaga East, Kirinyaga County, Kenya". The purpose of this research was to establish its use in relation to teaching. The objectives of the study were to find out English language teachers' preparedness in using ICT; investigate ICT integration by teachers; establish the accessibility of available ICT facilities to English language teachers and students, establish usefulness of ICT integration on teachers and learners, and find out ICT technicians' role in teaching. The significance of this study was to equip instructors and learners with requisite information on how to use available ICT facilities to acquire apt proficiency in reading, writing, listening and speaking English; improve pedagogic skills in line with modern technology of teaching; indicating how English content information from the internet can be accessible; enable curricula developers update syllabi to reflect current instructional methods; and aid teacher trainers in preparation of student-teachers adequately on how to integrate ICT skills and facilities. Theoretical framework involved Constructivism while the conceptual one adopted E-learning Acceptance Model (E-LAM) for teaching and learning. A pilot study was conducted in one school outside the main study sample to establish the feasibility, suitability, validity and reliability of research instruments. Random and purposive sampling procedures were used to obtain 11 schools, 11 school Principals, 19 teachers, and 600 students. Research instruments were questionnaires for Principals, teachers and students, an interview schedule for teachers, and classroom observation checklist. Quantitative and qualitative data analyses were conducted. The Statistical Package for Social Sciences (SPSS) version 16.0 was used to analyze coded data. Research findings showed the majority of teachers were prepared to use and operate ICT facilities; many computers were not installed with educational software for teaching English; majority teachers rarely integrated ICT; some ICT facilities were inaccessible to both teachers and students; tutors and learners appreciated ICT integration but many schools do not have ICT technical support staff. The study concluded that although teachers were prepared and competent to use ICT facilities, lack of appropriate software, inaccessibility of ICT facilities and shortage of ICT technicians have gravely hindered dissemination of skills. Research results were presented descriptively as well as in basic statistics namely frequency counts, percentages and means. The study recommended teachers to be attending ICT workshops, appropriate English language software to be installed in computers, easy accessibility to computers for teachers and students, recruitment of ICT experts for schools, and encouragement of instructors and learners to use their smart phones to access information on English from the internet.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

The chapter discusses background to the study; statement of the problem; purpose of the study; objectives; research questions; significance, scope, limitations, delimitation and assumption of the study; theoretical and conceptual framework as well as definition of operational terms,

1.1 Background to the study

The world has become digital through embracing Millennium Development Goal (MDG) as indicated by United Nations (UN) to eradicate poverty though education. This implies that institutions of learning must be equipped and facilitated by various governments to effect digitalization. Computer hardware, software and mobile phones would play a key role in achieving it. Information Communication and Technology (ICT) integration in teaching is therefore inevitable. Understandably, this is the ability to use technology as a tool to research, organize, evaluate and communicate information (Kenney, 2006). Furthermore, Amara (2006) postulates integration of computers as an extent to which teachers utilize ICT for teaching and includes multimedia projectors, overhead projectors (OHP) and mobile phones. In line with this, Pernia (2008) perceives ICT to entail actual application of computers and internet technology to enhance quality teaching and learning. Apparently, ICT consists of hardware, software, networks and media.

On the benefits of ICT integration, Selwood, Fung and O'Mahony (2003) hold that tutors who comfortably embrace and competently integrate it in teaching record

improved academic performance on their students. This view is supported by Wagner (2005) who acknowledges that ICT technology is crucial in enhancing quality of learners' performance. The implication of this underscores the expectation for better national examination results upon utilization of ICT integration. In relation to this, education curriculum has to be in tandem with the digital content covering all subjects taught in schools. Apparently, official language of instruction takes centre stage as it is the medium of instruction across the curriculum.

Using ICT in teaching English language resonates well with our students. It eases accessibility to range of texts which in effect improves writing, reading, speaking and listening skills. These inevitably support collaboration, creativity, individualized learning and reflection. All these can be realized when teachers maximize the impact of ICT by making it an integral component in their lessons and relevant idea dynamically projected in variety of media.

Evidently, the technology enables students to quickly, efficiently; confidentially and accurately locate relevant information. In an environment of viable connectivity, students access a wider range of online texts, talks as well as reading and writing for various purposes with different types of people. In effect, this encourages variety of interaction and promotion of collaborative learning. Basically, use of ICT in teaching English will positively impact on the four skills of listening, speaking, reading and writing, to the learners. Underwood (1997) contended that talking books aid learners with emergent language since they enhance literary vocabulary and comprehension. According to Reid (2002), digital video production positively impacts on social

learning communication, negotiation and problem solving skills. This is facilitated by the fact that learners use more abstract and complicated language when narrating about movies they made using digital video.

On reading skills, Birmingham and Davies (2001) postulated that learners utilizing ICT easily understand, visualize and interpret difficult texts. This is enhanced when they interact with story books which develop their vocabulary repertoire. Writing skills improve through ICT as learners embark on editing digital video films. Their literacy and understanding of the narrative aid the writing skill. This is due to the fact that learners will be writing for real audience using internet or e-mails Karchmer (2001).

Teachers' preparedness in using ICT integration in teaching should always be factored in. For efficiency and effectiveness in using ICT, professional development must be undertaken Higgins and Moseley (2002). Identification of specific objectives within English language curriculum in aid of learners compel instructors to possess apt ICT skills, adequate and frequent use of ICT facilities, as well as accessibility to reliable technical support.

Kenya, through the Ministry of Education Science and Technology has embarked on introducing Information Communication and Technology tools in some schools as stated in Vision 2030, aiming at catching up with the world of technology. It has the principle priority objective of making profound investment in Kenyans for the advancement of all strata of people's quality of life. One of the main flagship projects

earmarked for attention was the establishment of a computer supply. Ministry of Education's ingenuities in ICT is directed towards popularizing information technology in basic education in public institutions. This development as supported by the inherent policy of using English across the curriculum can advance the quality of education. Apparently, English language was explicitly and implicitly entrenched in High status in the entire educational system and therefore plays a pivotal role in education.

The Kenya government has enacted some educational policy in line with the digitization of instructional interlude in secondary institutions. Resources have been donated by stakeholders in the education sector such banks, Parents Teachers Association (PTA), schools' Boards of Management (BOMs), Non-Governmental Organizations and engagement with private-public partnerships (PPP. This project, accordingly, displays the commitment of the government to embark on introduction of ICT in learning institutions from primary schools to tertiary colleges. The trickledown effect of these endeavours would be quality education with positive transition to university. The ultimate measure of effectiveness of ICT integration is quality grades in the summative entry examination to university which is Kenya Certificate of Education (KCSE) examination. This is administered by national examining body which is The Kenya National Examinations Council (KNEC).

This is reflected in Sessional Paper No.1 of 2005 and ICT Draft Policy of 2006, where the government is expected to supply ICT resources like computers, computer hardware, software and technical expertise. The initiative by parents, community and

politicians saw a rise in the numbers of secondary institutions which acquired computers. Well-wishers also donated some computers Kavagi (2001). However, the progression of this trend has been hampered by educational institutions' failure to accept ICT innovation due to inadequacy of funding from the government Richardson (2007). The purchase of learning material and recruitment of teachers through grants remain the prerogative of the government.

The Kenyan government recognizes IT training in schools as exclusively crucial. The Budget Reading of June, 2006 posted a scrapping of tax for computers and related accessories as a step towards encouraging buying and usage. The overall government objective remains to furnish learners with contemporary ICT skills. Access to useful teaching and learning material for teachers and students is enhanced. English language teachers using ICT in their instructional interlude would have better examination results.

In English language, ICT plays a pivotal role in researching, composing, responding and representing information. The implication is that with the enormous input of ICT in teachers colleges and secondary schools, English language instructors should improve their pedagogy in teaching and learning. This would be the product of the spillover effects of colossal investment in teacher training colleges. The effect would be improved reading, writing, listening and speaking skills of the learners. Good examination results would be the product.

Effectiveness of ICT integration in teaching English language would be efficient when technical support staff is made an integral component preparation of teaching. English language teachers would in effect have adequate time for teaching. The ICT laboratory technicians would operate in collaboration with the teachers. With these in place, the entire process of integration would be superb.

Accessibility to the available ICT facilities in our learning institutions could superbly facilitate English language teachers and students to undertake integration. The implication of this would be efficient acquisition of language skills which would be reflected in good KCSE performance. Learners would also appreciate ICT integration in teaching and learning.

The Government of Kenya (GOK) through the Ministry of Education Science and Technology (MOEST) in collaboration with Teachers Service Commission ensure professionally trained and qualified teachers are deployed to all the schools. Kenya Institute of Curriculum Development plays its role in providing guidance to be effected by school teachers. ICT integration is well outlined on how it should be implemented by respective subject teacher in classroom. The expected outcome is good KCSE results in all subjects. English language being a core subject in the curriculum should be put in perspective. The Kenya National Examinations Council ranks performance from lowest grade "E" to the highest which is "A". Grade "E" has a mean point of 1.0 while "A" has m mean point of 12.0. All other grades (D, C, and B) are in between the two extremes. This is the normative and conventional way of grading from poor to excellent.

Kirinyaga East Sub- County has been posting very low grades at KCSE English year after year. The table 1.1 shows the performance in English for three consecutive years according to DQASO in the sub-county.

Table 1.1: performance in KCSE English in Kirinyaga East Sub-county

Year	mean score	mean grade
2010	5.0384	C-
2011	5.1097	C-
2012	5.4275	C-

Source: Kenya National Examinations Council

Apparently, the results are below average and show a serious problem in the sub-county. The government deployed qualified teachers of English to these schools.

There are ICT facilities in most secondary schools courtesy of stakeholders: Parents Teachers Association (PTA), Schools' Board of Management (BOM), Non-Governmental Organizations (NGO), Corporate Organizations, and the Ministry of Education. English language results are inconsistent with the ICT facilities in the public secondary schools. The researcher sought to investigate the use of ICT in teaching English language in the secondary schools of Kirinyaga East Sub-County.

1.2 Statement of the Problem

With the supply of ICT facilities in Kirinyaga East Sub-County secondary schools, English language teachers were expected to have expeditiously integrated the technology in training learners on the skills of reading, writing, listening and speaking. The effectiveness of ICT integration in teaching English language could be

good KCSE grades. However, the performance in English has persistently been poor or below average; mean grade of **C-** (**5 out of 12 points**) at the KCSE. Since English language is a compulsory subject in secondary schools and a medium of instruction across the curriculum, its poor performance affects all other subjects. The implication of this is low number of students joining public universities. Furthermore, those enrolled in higher institutions of learning cannot take professional courses like medicine, law and engineering. This crystallized into a grave problem of concern. The study sought to establish use of ICT integration in teaching English language skills in secondary schools of Kirinyaga East Sub-County.

1.3 Purpose of the Study

The purpose of the study was to establish integration of ICT in relation to the teaching English language in secondary schools of Kirinyaga East Sub-County.

1.4 Objectives of the study

The objectives of the study were to:

1. Find out English language teachers' preparedness in using ICT to teach English.
2. Investigate ICT integration by teachers in teaching English language skills.
3. Establish the accessibility of available ICT facilities to teachers of English and students.
4. Establish effects of ICT integration on teachers and learners of English language
5. Find out ICT technicians' role in teaching English language.

1.5 Research Questions

The study was guided by the following research questions:

1. How prepared are English language teachers in using ICT to teach English?
2. How do teachers of English integrate ICT in teaching English language?
3. Are the available ICT facilities accessible for use by teachers and students?
4. What are the effects of ICT integration to teachers and learners of English?
5 what is the role of ICT technicians in the integration of teaching English language?

1.6 Significance of the Study (Rationale**)**

The outcome of this research was significant for the following reasons: Students in secondary schools may be equipped with the requisite information on how to use available ICT facilities to acquire apt proficiency in reading, writing, listening and speaking English. Teachers may improve their pedagogic skills in line with the modern technology of teaching which would allow them access the current teaching trends and information from the internet. English language Curriculum developers may use the results to review the English language syllabus to reflect and accommodate the current instructional methods. The results would also inform learners on benefits of using ICT. Teacher trainers in teacher training colleges could benefit from this study by learning the benefits of integrating technology during teaching. This implies that they can prepare the student teachers adequately to use ICT facilities.

1.7 Scope, Limitations and Delimitations of the Study

1.7.1 Delimitation

It focused on teachers of English language in Kirinyaga East Sub-County secondary schools. The research was carried out in 11 out of 36 schools, 11 out of 36 principals, 19 out of 80 teachers and 600 out of 6000 students from the sampled schools. The specific focus was the imparting knowledge of the four English language skills of reading, writing, listening and speaking to the learners. The focus was on the ICT integration in teaching English language in secondary schools of Kirinyaga East sub-county, Kirinyaga County, Kenya.

1.7.2 Limitations

Learner's Intelligent Quotient was a factor beyond the control of this study. The study used questionnaire and interview schedule on sampled population. This might not have reflected the total population. These limitations were mitigated through purposive sampling to obtain a representative sample population. This was a limitation in that it studied 11 out of 36 secondary schools. Some moral dimension limited the study because some information held by the informant might not have been obtained by the researcher. Finally, it was difficult to generalize the findings because it was worked with only a sample of the population.

1.8 Assumption of the Study

It was assumed that all the secondary schools in Kirinyaga East Sub-County had qualified teachers of English language who also had the ICT knowledge for teaching the English language skills. All the secondary schools in the Sub-County were expected to have had ICT facilities and equipment accessible to English language teachers.

1.9 Theoretical and Conceptual Frameworks

1.9.1Theoritical framework

Research on use of ICT in teaching and learning has brought to the fore various theories in the instructional field. There is the socio-cultural theory spearheaded by Vygotsky with the view that human learning is a social process and therefore interaction is fundamental in the development of cognition. Technologically based theoretical models include Theory of Reasoned Action, Theory of Planned behaviour, Diffusion of Innovation Theory, Technology Acceptance Model, and Unified Theory of use and Technology Acceptance. All these exhibit some level of interdependence with ICT manifesting some internal coherence in their utilization in teaching and learning process. Basically, their convergences are technological integration, acceptance, effectiveness and efficiency in their use in dissemination of knowledge and skills. For the purpose of this research, constructivist theory of teaching and learning was used.

The ICT integration of English language skills would intrinsically involve constructivism theory of teaching and learning. Its tenet holds that people produce knowhow and connotations from collaboration between their experiences and concepts. Basically, learners create knowledge for themselves. Individually and communally, each learner creates implication in the learning process. In essence, through experiencing and reflecting on those experiences, people make individualized perceptions and knowhow of the world. In this respect, learning embraces a productive progression in which a student builds an interior exemplification of knowledge and self-elucidation of the experiences. This depiction is incessantly

exposed to alteration with its edifice and links developing the ground to which other knowledge structures are involved. Acquisition of knowledge is an active progression where meaning is accomplished based on experience. But this interpretation does not essentially discard the reality of the actual world because it contends realism attaches restraints on the discernments which are in concurrence with all we perceive of the world. Conceptual growth is brought by involvement of several perceptions and the concurrent fluctuation of our innermost illustrations in rejoinder to those perceptions together with accumulative experience Bednar, Cunnigham, Duffy, Perry (1995).

Constructivists hold that the nature of learning is situational and interactive, and that of knowledge is perspectival, conventional, tentative and evolutionary. Accordingly, objectives must be discussed with learners, constructed on their own felt essentials and programmed activities which must surface from within premises of their lived worlds. Learners must work in collaboration with colleagues in the social construction of personally important meaning, and evaluation to be an individualized on-going as well as collective analysis of development Hanckbarth (1996). In support of this view of knowledge, Bednar, Cunnigham, Duffy& Perry(1995) state that learning should be positioned in an opulent framework reflective of actual world, for the constructive process to occur as well as its transference outside the classroom. How efficient or contributory the student's knowledge organization is in expediting intellect in the content zone is the extent of learning.

In the teaching space, constructivist interpretation of learning points to diverse training practices. In general, it is meant to encourage learners to practise dynamic

methods to generate extra information and then reflect on it, discourse on things they are undertaking and how their comprehension is varying.

The foundation of this theory is based on concepts of John, D.(1938), Montessori, (1965) and Kolb (1975). On this, Von Glasersfeld (1965) describes constructivism as "a theory of knowledge with roots in philosophy, psychology, and cybernetics". It is believed that a pupil's capability to study depends principally on what they previously discerned. Besides, acquirement of knowledge ought to be an individually tailored progression of construction. Using ICT in learning emanated from the social constructivism paradigm. Understandably, most unreceptive conducts like reading and listening are attributed to studying from ICT while most receptive ones like creating, writing and updating are related to learning with ICT Harris & Rea(2009).

Pedagogy is a very crucial tenet in instructional interlude through ICT devices. Of importance is the acquisition of pedagogical abilities of operating through ICT for development of the process of imparting knowledge to the learners, rather than simply focusing on methodological abilities of teachers--blackboard and chalk in the classroom. Noteworthy, ICT and pedagogical skills of integrating ICT tools are totally two different things. The learners and teachers ought to actively interact with the accessible facilities to construct knowledge. The resultant interactive lessons should take into consideration the principles of the constructivist learning theory which takes it less as an outcome of inactive communication than a progression of dynamic construction where students make their individual acquaintance founded on prior knowledge Duffy et al (1993).

Largely based on constructivism theory, the ICT integration would constitute a learning environment that is very rich for both teachers and learners to construct knowledge to advance the expertise in reading, writing, listening and speaking. ICT integration facilities such as computers, PowerPoint projectors, mobile phones, internet facilities, video decks and comfortable classrooms facilitate the learning of English language and offer intrinsic and extrinsic motivation as the users yearn to explore the world of knowledge through the internet. English language skills would be enhanced as the teachers and the learners intensively and extensively interact with the ICT.

For this reason, this study found it appropriate to base the ICT integration in teaching English to be aptly achieved through learners constructing knowledge from the exposure to the ICT facilities. The objectives of this study such as English language teachers' readiness to use ICT in teaching, how they affect the integration and learners 'attitude in using ICT were met. This is enabled by the fact that teachers and secondary school learners would be interacting with information and language experts from the internet. Through this, they will construct knowledge and understanding. Secondary schools in Kirinyaga East Sub-County can access all these. As such, the constructivists' theory was appropriate for the research.

1.9.1 Conceptual Framework

The model has taken a multi-faceted dimension from constructivists, Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT) and E-learning Acceptance Model (ELAM). However, the latter is predominant as it encompasses most of tenets in the others.

Apparently, conceptualization of this framework has adopted a lot from the E-learning Acceptance Model for teaching and learning English language skills of listening, speaking, reading and writing. ICT tools like computers, mobile smart phones, and internet have been utilized to enhance and create e-learning resources such animations, video as well as other educative programs which support teaching and learning interludes.

Parameters of usage of ICT are commenced with performance expectancy. This is the conviction by English language learners that one can acquire listening, speaking, reading and writing skills through ICT tools. The expectancy is that learners of English would enhance their thinking skills; get extrinsically motivated as well as getting facilitated in learning the language skills using the facilities, perceived is of using ICT tools is crucial for instructors as it raises their confidence and competence to achieve targets of the subject. Interaction between teachers and students as they use ICT facilities is an appropriate measure for utilizing them. Flexibility is crucial in this process as it accommodates teachers and students' preferences in terms of topics to be taught.

At the Effort Expectancy parameter, teachers are expected to realize their subject goal of delivering and imparting English language skills of listening, speaking, reading and writing through ICT tools. Notably, means of content delivery and communication is significant as learners become active participant and teachers diversify their pedagogy even with mobile smart phones.

Under social influence, which is the extent to which English language teachers embrace and accommodate social platform to use ICT, would entail collaborative teaching and learning, online teachers and peers from English speaking countries as well as internet use. Intrinsic motivation among users of ICT facilities to boost their image and esteem, and also increase their desire to be associated with using computers and smart phones.

Facilitating conditions, which refer to the extent to which teachers and students of English language perceive their schools' support for ICT usage, entail the technological infrastructure, schools' ICT policy, and training and support for ICT technical support to assist teachers and learners English.

Behavioural intention which is the individual teacher and student's decision on prospective utilization of ICT in disseminating and acquiring English skills is necessitated by performance expectancy, effort expectancy and social influence. This inevitably enhances learner-centeredness, and personal decision regarding prospect of ICT usage as well as e-learning. However, other mediators or intervening variables have some significant effect on this parameter. These are students learning style such as collaborative and independent learning, internets, emails and blogs; and also teaching style like interactive, student-centred and online.

Finally, there is the actual ICT usage. This is basically actualized by the facilitating conditions where schools establish ICT infrastructure, engage ICT technical support staff, offer leadership in the process as well as setting conducive ICT policies the school. The end product of all the variables would be improved listening, speaking, reading and writing skills which form English language.

USE OF ICT IN TEACHING ENGLISH CONCEPTUAL FRAMEWORK

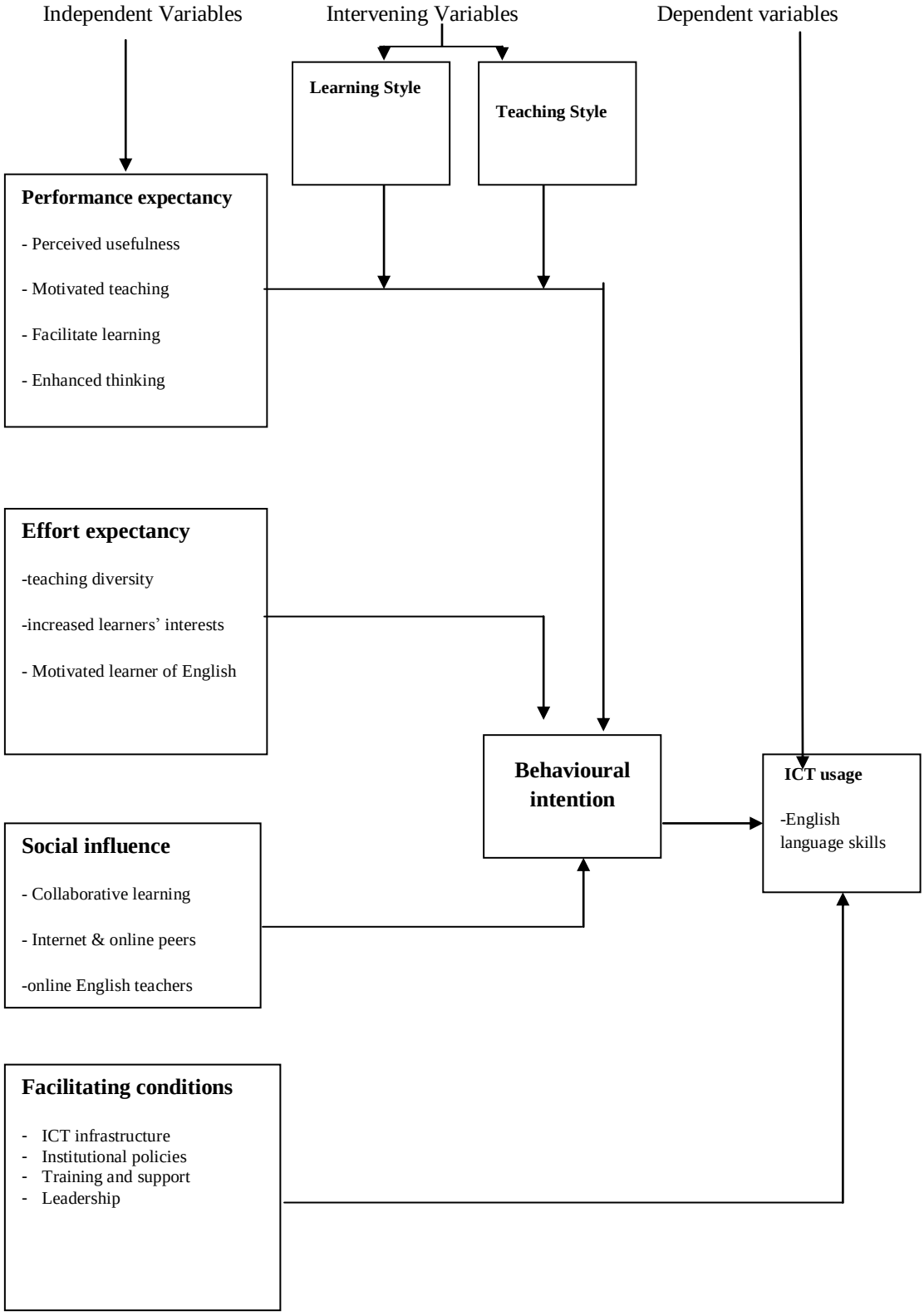


Figure 1.1 source: E-learning Acceptance Model (ELAM)

1.10 Definition of operational of terms

With the purpose of appreciating the results of the study, it is obligatory that the sense in which some terms were used is understood.

ICT Integration : Refers to usage of digital or computer technology in communication, data processing and storage to introduce, reinforce, supplement, extend skills and impart the knowledge on learners

Language skills : Refers listening, speaking, reading and writing

Performance : used interchangeably with achievement to mean the level of acquisition of knowledge based on KCSE examination and achievement test score.

Vision 2030 : A Kenyan government initiative to improve the living standard of all citizens and eliminate poverty by the year 2030.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

Chapter two discusses teaching of English in Kenya; Information Communication and Technology policy in Kenya; research done on use of ICT in Kenya; use of ICT in teaching English; modes of integrating ICT in teaching English; and the summary.

2.1 Teaching of English in Kenya

Despite the fact that English remains the main medium of instruction in Kenyan Education system, its teaching in secondary schools remains a challenge. This is aggravated partly by the adoption of the outdated modes of teaching devoid of the current technological media of instruction in the world. As such, chalkboard, text-books and printed material can no longer sustain effective delivery of viable information to the learners. Consequently, many secondary schools in Kirinyaga East Sub-County continue to post poor Kenya Certificate of Secondary Education (KCSE) examination results in English performance.

English language basic skills taught in secondary schools are writing, reading, speaking and listening. For the language to be appropriately acquired, learners must be proficient in the four skills which are mutually inclusive. It should further be realized that the 8-4-4 English language syllabus lays emphasis on the integrated approach which includes the integration of literature and English.

The course books for secondary schools in Kenya act as the guidelines on the teaching of the four skills. The current class texts are: The New Integrated English Books 1-4, The New Horizon English books1-4, Excelling in English books 1-4, and the Head start English books 1-4. Each of these textbooks teaches integration of the four skills.

For example, in the New Integrated English, Gathumbi et al(2008) give a sketch on how the teacher could conduct a lesson for the development of the basic skills. Evidently, this is followed by most teachers of English in the schools. In listening skills, the teacher follows three phases: pre-listening (questions to think and talk about), during listening (focuses the learner on particular aspects of the text), and post-listening (focuses on inspiring learners to discourse what they have heard). For the reading skill, the teacher is expected to use a wide range of materials such as prose passages in the text-books, newspaper cuttings, journalistic material, and literature in science. These have the ultimate objectives of improving reading speed, reading for pleasure, developing learner's sensitivity to the usage of linguistic in perspective and the mastery of study techniques and practical reading skills among others. The course book has also focused on three kinds of writing spearheaded by the teacher: controlled writing, expository writing (guiding the learner through a well-planned logical progression in composition writing, and creative writing which enhances the learners' imagination. Finally, in teaching the speaking skill, the teacher guides the learners in practising four aspects— learning individual sounds, semi-controlled conversational practice based on short topical dialogues, poetry recitations to reinforce sounds and practice rhythm, stress and intonation, and free speech during class discussion.

It is evident that the teacher is mostly steering the instruction of the four basic skills. However, inadequacy of the resources inhibits the implementation of the integration of the language skills. This makes teaching and learning teacher-centred. As a result, the learner doesn't participate fully and cannot discover and explore on his or her own. Hence, there is poor acquisition of the language skills.

In line with this, Thornburg (1999) postulates that education requires to nurture all-time students, to transmute the value we accord on what we already know, and to construct first-hand linkages for discourse, replication and contextual applications of acquisition of skills in realistic world. Furthermore, first-hand purpose of teaching English is to enable students to link with others, look for pertinent and precise facts for the undertaking at hand, and to be collaborative students with instructors in various situations which transcend institution fortifications. It is imperative that teachers infuse learner-centeredness' phenomenon in teaching and learning language skills to make learning more meaningful. This research therefore sought to document the availability of ICT facilities in relation to its integration in the teaching of English in Kirinyaga East secondary institutions.

2.2 The Information Communication and Technology policy in Kenya

In line with Information Communication and Technology (ICT) advancement in the world, the government of Kenya has made some tremendous steps in the education sector. This is in response to the reduction of poverty through education proposed by the United Nations (UN) to the world in the Millennium Development Goal (MDG). Apparently, this was to be achieved through embracing the educational technology to acquire relevant information. This technical advice has gone a long way in propelling ahead the advancement in educational technology. It is a veiled way of insinuating that poverty and retrogression can partly be stopped through viable utilization of appropriate educational technology.

In Kenya, the Sessional Paper No.1 of 2005 and Kenya Education Sector Support Program (KESSP) manuscript highlight and underscore the need to embrace technology in our education system. It stressed the need to have teachers and educationists utilize the computers, ICT, to open up learners to the world of technology. Most of the internet resources are in English and, therefore, these points to the dire need to increase and or improve the proficiency of Kenyan learners of English language. The document stipulated that technicians would be employed and deployed to fix and maintain computers in some institutions.

The Kenya government has embarked on investing in upgrading of computer laboratories in Teachers' Training Colleges (TTCs) with the aim of improving the utilization of ICT in schools. Moreover, computer laboratories were established and considerably operationalized in TTCs and universities so that the spillover effects (benefits) would be felt in schools' graduates who would be teaching. But is the curriculum in tandem with the emerging scenario of ICT world of education?

During the national Budget Reading in June 2006, computers and their accompanying accessories were exempted from tax as a measure of encouraging their acquisition and usage. The overall government objective was to furnish learners with contemporary computer techniques with an aim to attaining the vision's objective of channeling the digitalized information to institutions. Basically, the advantage would be an improved accessibility to ICT facilities and services in schools countrywide. To realize this noble objective, the Kenyan government is duty-bound to initiate a deliberate policy to reflect the same. This would determine the nature of information resources from within and without, accessible to employees, the program types which

might be installed in their computers as well as exclusive rights to reserving network ones. Worth noting is the relationship of policy to Quality of Service, for it can give a definition of precedence by users, workgroup or application regarding linkage bandwidth reservation.

The government should include education stakeholders such as Universities, Schools, Non-Governmental Organizations (NGOs), ICT bodies like Kenya ICT Federation, Telecommunication Business actors amongst them Safaricom, Airtel and Telkom in formulating ICT policies. Sponsors like (International Development Research Centre (IDRC) from Canada that funded the national ICT initiative in Kenya), International Telecommunications Union (ITU), Safaricom and Parents Teachers Association (PTA). Stakeholders are earmarked for quick facilitation of implementing the ICT technology in our schools. Who are the "stakeholders"? According to The World Summit on the Information Society (WSIS) which is a United Nations conference led by the International Telecommunications Union, Stakeholders refer to governments, the private sector and civilian citizenry. Furthermore, there are numerous UN organizations and transnational groups participating in the process.

Facilitation of ICT in our schools is solemnly undertaken by the government. Through Kenya Institute of Curriculum Development (KICD), the Ministry of Education has come up with digital content for arithmetic and science for standards four to seven in primary schools as well as twelve subjects in forms one and two for secondary schools. Noteworthy is the Ministry's establishment of unique model center at St. Peter Cleavers School a computer-based Centre for grown-up students. Overall

government objective is to furnish learners with contemporary Information Communication Technology (ICT) expertise with a view to achieving Vision 2030 objective of mainstreaming information technology in institutions. As a result of all these, it was imperative that this study was conducted to establish the English language teachers' readiness for ICT integration in the teaching of English language in secondary schools.

2.3 Research done on use of information and communication technology in Kenya

Mwirigwa (2012) conducted research on preparedness of teachers in the use of ICT for teaching Mathematics in secondary schools of Tigania East Sub-County. This research focused on Mathematics in relation to the use of ICT and available resources. Kamau (2012) studied the constraints in the use of ICT in teaching processes in secondary schools in Nyandarua South Sub-County, Nyandarua County. His study revealed that most teachers (in all disciplines) lacked the basic computer skills and training. Students were found to engage in computer games whenever they accessed the few available computers. Another study entitled 'challenges of information and communication technology (ICT) integrated in secondary education: A case study of Nakuru County, Kenya, was conducted by Kinuthia Ngugi Elias. He found myriad of problems, mostly shortage of computer facilities and lack of knowledge of ICT by teachers.

In 2012, the department of Education management, policy and curriculum studies of Kenyatta University carried out a research on secondary schools' preparedness for the use of ICT in teaching and learning, in Thika West Sub-County, Kenya. The study

discovered that more than half (51%) of the resources are not fully utilized, and the secondary schools in Thika are not prepared to integrate ICT in teaching and learning. Many of the schools have no computers or computer facilities, and teachers are not trained to integrate technology during teaching. In most cases, the computer available in school is kept in the school principal's office.

Ogutu (2005) carried out a study titled: The impact of ICT integration in the six NEPAD e-schools in Kenya. The study aimed at investigating the impact of ICT integration in six schools. The revelation was that whereas most Kenyan schools own some computer apparatus, only a minute portion is equipped with basic ICT infrastructure.

The Education Management Information System (EMIS) survey (2003/2004) showed that many parts of Kenya do not or cannot easily get internet services because of the poor telephone connectivity. Over 90% of the secondary schools need Local Area Network (LAN). Solar panels could also be used to alleviate the problem of lack of electricity. For these reasons, this research sought to investigate the availability and accessibility of the computers and accessories to facilitate integrating ICT in teaching English in Kirinyaga East Sub-County secondary schools. It was evident that researches had been conducted but none had ever been done on English language in the Sub-County. This research would therefore fill the gap of knowledge in Kirinyaga East.

2.4 Use of ICT in teaching English

As demonstrated by existence of large number of researches pertaining education technology, it is crystal clear that when its application is diligently executed, it can improve acquisition of knowledge especially in comparison to the archaic techniques of teaching. Fayer (1997) and Carmen et al (2003) postulate that incorporating ICT facilities in instruction can realize improved learners 'competencies as well as better prospects for communications. Integrating ICT in teaching and learning brings more benefits—raise self- esteem through learner's interaction, verbalization and involvement in collaborative learning. However, the benefits cannot be sufficiently disconnected from other variables that influence education in the greater instructional framework. In spite of these outcomes, most systems in institutions of learning are being requested to validate usage of technologies associated with computers to boost acquisition of knowledge in an institutional environment McMillan-Culp (1999).

The role of human beings in the process of integration cannot be alienated from the impact of technology. On studying 15 school sites, Yakel and Lamerski(2000) established it was the mankind networks which facilitated the efficacious incorporation of technological expertise into institutions as well as the communities around them by means of vital corporations, communal sustenance, besides persons in education. The networking people incorporated inventions in digitals which promoted institutions and surrounding community. It was significant individuals and personalities who spearheaded the vicissitudes and influenced use of digitalized computerization. This implies that effective ICT integration in teaching English in our schools must involve all stakeholders.

Assuming that individuals need chances for imaginative problem resolving, Boyle and Rigg (2000) accentuate that human beings' erudition should be the target. On education, Bransford, Brown, and Cocking (1999) advocate that technological expertise can aid acquisition of knowledge variously: bringing into instructional rooms stimulating curricula that is constructed on real-life challenges by involving learners in identifying them and collaboratively indulging other pupils or experts yonder institutional premises; providing facilities and enhancement which improve learning, aid cogitation and challenge elucidating, create events with guided training, variety of information representation, and are partly inclusive of coherently systemic educational approach; giving learners plus tutors supplementary prospects for reaction, reminiscence, besides modification, inclusive of where learners appraise the worth of self-cogitating and outcome, access prospects of interacting with functioning scientists, receiving assessment from variety of sources inclusive of their associates, and experiencing cognitive tutors (brain) and tutoring in zones where progress is necessary; building home-grown and world-wide societies who include instructors, managers, parents, learners, operating experts as well as other interested society entities, enlarging learning environment; extending chances for tutor education inclusive of facilitating them to differently contemplate about pupils and learning, decrease obstacles between students and teachers as learners (learning as they teach), constructing novel corporations amongst learners and parentages, too, expanding populations of students who aid current confabulation and expert progression of educators.

With installation and subsequent utilization of the available ICT facilities in our classrooms, teaching and learning English language can be a lot easier and more exciting for second language learners. Most dictionaries currently have appropriate software to facilitate pronunciation, spelling, writing, reading and general syntax and semantic (sentence structure and words meanings). All skills and information required by English language students with their tutors in the classroom to facilitate training and learning is accessible. The dictionaries commonly used in schools include: Oxford Advanced Learners Dictionary, Oxford Concise Dictionary, Macmillan Advanced Learners Dictionary, Longman Contemporary Learners Dictionary, Webster Dictionary etc. Other types of dictionaries are available for free download from the internet. Through the internet, English language teachers can download free translators' software. This can facilitate teaching and learning through changing pedagogic strategy. Though old, translation model of teaching can be very efficient when the software is aptly used. For example, a learner whose ($L_{1)}$ is Kiswahili can have the word "mti" translated to English (L_2) to be "tree". This can make learning very exciting for the learners. As Green and Staley (2000) postulated, technological expertise like tele-conferencing might entail provision of productive instructional opportunity where their intensions remain of constructing a secure milieu and interactive affinity. This is our task –means of designing educational systems where technological expertise is used to support diverse learners and learning milieux. The attainment of the noble objective shall have the evaluation query partly addressed.

Information Communication and Technology (ICT) integration in teaching English will basically motivate learners to utilize computer programmes to perform various

tasks. For example, the Microsoft word programme has the ability to teach correct spelling, correct grammar in sentence construction and even hand-writing. It is obvious that there is numerous numbers of fonts for teachers to instruct learners to emulate for the improvement of their handwriting. Through discovery method (learners working on their own), learners can choose the appropriate font to use. In this regard, individual difference (ability to use the font you can adopt) is taken care of when this technology is embraced by all.

Although language laboratories are expensive to establish in many of our schools, the ordinary computer desktops and laptops can be installed with software that acts more or less like the language laboratory. It helps the learners to correct their pronunciation errors by speaking at the computer and it responding by giving the correct model. Accessible ICT facilities will allow students to check on correctness of their pronunciation at their own free time.

Use of Power point projector and computer in the teaching of English language will make the learning efficient and effective. This is due to the fact that it is easier and cheaper to maintain and operate them. Just a single computer and a power point projector is sufficient to teach a very large class. All the English language skills can be taught using computers and projectors for a successful lesson delivery to the learners.

Technology is utilized in simulating actual circumstances and as O'Leary (1998) observes; it assists students in assuming control over the instructional progression. Luckily for English language learners, it is the language used by most people in the

world, partly due to globalization and dire affiliation to world trade with many scientifically-oriented resources accessibly available in English. Khan (2005) asserts that progresses in information technology in addition to modern evolution in scientific learning offer openings for creating well- designed, student-centred, collaborating, inexpensive, effectual, and flexible e-learning milieus.

Surfing and browsing over the internet is an alternative technique of studying English language since web-based technological know-how and potent internet connectivity offer variety of new-fangled potentials for teachers and learners. It should be noted that electronic media and internet as well as using cyber space are mutually inclusive elements of education in contemporary world. We should ensure that the information and communication technology (ICT) and the virtual learning environment (VLE) meet the demands of communication today.

Computer-generated teaching of English in secondary schools has a lot of positive impact to both the learners and teachers. This is due to the fact that it facilitates learners to meet their educational needs. Information Communication and Technology (ICT) has the potentiality of meeting the essentials of distinct learner through provision of prospects for learning and getting necessary information and completing chores, in techniques in line with their own desires, interests and essentials (Computer based technologies in English KLA, 1997, p6). In relation to this study, individual differences would be catered for because the learner would study at their own pace.

Using ICT facilitates English language instructors to hit into this erudition bravura together with the main juvenile ethos. Voluminous contemporary computer simulated scripts might as well be utilized as onset for examination of old-fashioned editions (Smithson, 2005). For instance, a communicating site like the computer-generated tour of the Globe Theatre location permits us to fetch Shakespeare's world to life. As for the learners, ICT as a classroom tool delivers exceedingly stimulating accomplishments for learners. Originally, virtual actions make available impetus to embark on assignments which scholars might otherwise circumvent. Connections with other institutions of learning and real-life circumstances which exhibit gender-sensitivity and diversity of culture boost chances for learner's ability to interact and make decision. This communicating procedure has the potentiality of catering for individualized learning modes.

From researches done on speaking and listening, integrating ICT in language teaching in classroom indicates that computers might be employed effectively to improve the skills. Becta (2006). Lankshear and Knobel (2006) similarly deliberate the novel social relationships initiated by ICTs which have the potentiality of changing individual and social interaction in the schoolroom. It should be noted that as an effect of cyber technological application, teaching and learning are given some impetus, and learners learn faster and easier than earlier on.

The availability and accessibility of computers in the institutions will have a positive impact on the students. Moreover, as Krashen (2007) contends, operating computer and voluntarily surfing will inspire learners to browse through the internet and read

what benefits them. Peterson (2005) says when learners are actively engaged in communication, it would expedite development of second language competence. Hove (1999) argues that computers aid students to collaboratively utilize their know-how in effectual ways and improve comrade rectification and linguistic patch-up. It also enables students to toil at their own speed. When ICT is integrated in the instruction of English and Literature in English, the issue of web-based learning is embraced.

As a communicative and cooperative mode of expression, ICT permits responding, creating, and production of documents. These can easily be shared. They also offer learners prospect to discover the linguistic scripts ingeniously and progress as orators, writers and readers for an insatiably broadening range of uses and listeners. In view of this discussion, the research sought to establish the students' attitude about use of information communication and technology in teaching English language in secondary schools of Kirinyaga East Sub-County.

2.5 Modes of integrating ICT in teaching English

Information and Communication Technology (ICT) is regarded as a podium for acquainting students with prospects in any area of study (King, 2002; Rovai, 2002). Researches have been undertaken on the incorporation of ICT into schoolroom training complementary and modification of the pedagogical practice. As a consequence of related development in the arena of instruction, ICT is regarded as a prospective instrument for transformation and innovation in education and so

governments should invest in ICT assimilation in knowledge acquisition (Eurydice (2001) and Papanastasiou and Angeli (2008).

Study shows that to affect ICT efficaciously in their schoolrooms, tutors should comprehend what computer literacy is and reconsider what learning to read and write means in the 21st century (Goodwyn et al,(1997) and (Reid et al,2002). It has been revealed by many researchers and scholars that ICT is mostly efficient once entrenched in the prospectus, as well as being assimilated into units of work Dickinson(1998). It should be noted that the usage of ICT ought to be a significant chunk of an activity where it is utilized to amalgamate or spread out learners' learning. A study has revealed that despite the fact that some writers have recommended that tutor methodologies impact the schoolroom undertakings Brossard (1966), others submitted that it is ICT usage that causes exemplary variations in practice Laberge (2004). But as Teresa (2013) states that for ICT integration to be effective, computer experts or the technicians must be available to ensure the facilities are successfully utilized.

Wiki systems, which act as collaborative platforms, facilitate scripting, editing and discoursing online didactic content, constructing virtual lexicons and repositories of supplementary instructive resources Reinhold (2006). Wiki technological expertise is frequently utilized in support of numerous online training and learning actions and it might substitute the old-style rectilinear tactic of displaying the course content with, for certain arenas of know-how, a more suitable networked methodology Bruns (2005). Progression of virtual interaction literateness, cooperative construction of course content and peer-to-peer learning can add to learners' experience Bubas et

al.(2006) and Majchrzack (2006). In connection to this study, wiki system can be applied in the secondary schools to enhance teaching and learning English. This would indeed complement what the teacher teaches.

Electronic mail (E-mail) is a device of communication which can be utilized for language learning. As such, both foreign and local instructors and learners might link e-mail aided linguistic by receiving a solitary e-mail account for school work activities. In addition, for English language learners, an e-mail address generates an excellent technique of communicating with their tutors because of its utility and convenience. Le Loup (1997) asserts that with a single email account, distant educators and learners can integrate e-mail based undertakings into their curriculum. This can pave way for integration between them. Assignment can easily be given to the students and the answers and feedback given through the e-mail. Learning English through the technology becomes quite exciting. Most importantly, English language teachers can benefit from websites, internet providers and programs.

Integrating ICT into the teaching of English language would also bring the weblog or blog in the classroom activities. These are usually in form of images, texts and objects which are chronologically organized. The maintenance and operationalization of blogs is done individually and always updated. More often than not, they embody topical issues as well as current feelings of bloggers. They entail functions of a diary where one can learn about personalities, events and places from all over the world. In fact, weblogs are like a personal journal or diary where we can look into another individual's life and learn about people, events, places, and much more from millions

of people around the world. Nardi et al. (2004) acknowledge that blogs are suitable for serving as online private diaries for learners, principally because they facilitate uploading and connecting libraries. Students of English and literature might employ a private blog, connected to a path as electric portfolios to writers of journals. All accessible sources provide learners appropriate studying materials and aiding in the discovery of concealed strata of implication in artistic work. Noteworthy is the fact that by publishing a blog on internet, learners have a possibility to write for their school peers. Pinkman (2005) postulates that blogging can communicate and interact especially when contributors embrace compound tasks in jotting progression, for instance as authors who send as person who reads or commentators who reply to other authors' posts and as writers' readers who, responding to their writings, respond to censure of their own posts.

Information Communication and Technology (ICT) integration in instruction of English brings on board Instant Messenger. Over the span of time, diversity of messenger services such as Yahoo has been serving people. Students' skills of writing, speaking and listening could be enhanced if the above websites are appropriately utilized. Learners can utilize them with their e-friend ideas and interpretation about a literary work. English language learners might as well have better collaborations with instructors in the virtual environment. Inevitably, sharing of information is between teachers and peers. As learners exchange with friends or teachers in English language, they develop their listening and speaking skills.

Skype is yet another item of ICT integration in teaching English. It is in form of a system which operates by straight communication between operator's laptops on the internet, devoid of central server. Learners can interact with teachers and friends in a distant. Wu (2005) asserts that it is an effective technology whose latent usage acquisition of English language needs to be understood through learners' possibilities of speaking with native speakers of English and compare their pronunciation.

Mobile devices bring with them the enhancement of ICT integration of teaching English. This is mobile learning wherever and whenever people want using their mobile phones. According to (Lehner&Nosekabel, 2002), mobile learning is a facility which avails general electronic info and instructive resources that aids in acquisition of knowledge to a student, regardless of location and time. On the same, Vavoula (2002) suggests three techniques in which learning might be well-thought-out mobile in different areas of life, and it is mobile with respect to time. In the process of integrating technology, the devices could be employed for teaching language and literature. Furthermore, our cell phone handsets are effective tools for learning English. Evidently, very many Kenyans and teachers in particular own viable mobile phone handsets which can easily and cheaply access internet for educational material. Mobile handsets have voice mail functions which can be utilized to teach listening and speaking skills. Assignments can be issued using the mobile phones. Of course this can be possible if some of the retrogressive Ministry of Education policies and directives banning mobile phones in schools for students are relaxed. If we become intellectually pragmatic, we can advance instruction and impart language skills to learners a great deal.

IPods are convenient for production, organization, delivery and media usage for operators. There is sharing scripts, imageries, audiovisual presentations between students with their colleagues as well as tutors. It should be noted that the technological expertise and pedagogic of utilizing podcasting and iPods might be refining acoustic for linguistics. Shinagwa & Schneider (2007) argue that an improved element of iPod permits even extra potentials for acquisition of linguistic skills. Instructors send text communications and the learners read them then answer. IPods are specifically expedient to visually impaired learners as they would be able to access internet materials by listening to presentations.

An important element in ICT integration involves three classifications: synchronous, asynchronous, and the blend of synchronous and asynchronous. Synchronous means that the e-learning needs tutor and all the learners to be connected at the same period throughout the tutoring progression. In asynchronous, the e-learning might be utilized by the instructor plus the learners without necessarily being online simultaneously in the learning practice (Lee & Owens, 2004). Learners leave a missive to be responded to by a tutor later (Roblyer & Doering, 2010). The amalgamation of synchronous and asynchronous is the assimilation of offline and online instruction. Hence, integrated online and offline learning (Fee, 2009). Research indicates that enactment of ICT efficaciously in their schoolrooms, instructors should comprehend what computer-generated literacy is and reconsider what knowing how to read and write means in the 21st century (Goodwyn et al,, 1997) and (Reid et al., 2002). It has been revealed by many researchers and scholars that ICT is most effective when language tutors might

optimize the effect of ICT in their schoolrooms by guaranteeing that their learners employ ICT as a vital part of teaching, presenting ideas dynamically(dynamics of technology), and utilize a variety of media. It is out the discussion above that the study seeks to establish the availability and accessibility of ICT facilities in relation to the Information communication and Technology integration in the teaching of English language in secondary schools of Kirinyaga East Sub-County.

2.6 Summary

The teaching of English language has over the years been relying on the teacher, course books and chalkboards. It has since taken the electronic media in form of audio-visuals through Kenya Institute of Curriculum Development (KICD) broadcast. The government of Kenya (GOK) has advanced through deliberate effort to mobilize and facilitate the NGOs and bilateral partners to assist in providing ICT in schools. Vision 2030 outlines the ICT policy framework. The Ministry's ICT initiatives aims at mainstreaming information technology and furnish learners with contemporary Information and Communication Technology (ICT) skills in order to achieve the Vision 2030 goal of mainstreaming information technology in schools. The Sessional Paper No.1 of 2005 and KESSP emphasize on use of ICT and this has led to the GOK upgrading TTC computer labs and zero rating tax on purchase of computers. The advantages in doing this include enhancing learning environment, developing creativity, and making teaching and learning more exciting. Various modes of integration available and innovations geared towards this are explored. In this regard, this research would establish the expertise that the teachers of English have to facilitate ICT integration in teaching English language in secondary schools. The results of this investigation would enable the teachers concerned to rejuvenate their

classroom instructional methods with the available ICT facilities. The data is expected to form the basis of curriculum evaluation for a better design of English language syllabus in secondary schools.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter discusses the following: research design, locale of the study, target population, sampling procedure and sample size, research instruments, pilot study, data collection procedure, data analysis, logistical and ethical consideration.

3.1 Research Design

Orodho (2008) defines a research design as the arrangement of conditions for collection and analysis of data in a manner that aims to combine significance to the research purpose with economy in the procedure. The study adopted a descriptive survey design to help in data collection as well as answering the research questions. The design helped to determine how use of ICT integration in teaching English language affected the outcome of KCSE results in Kirinyaga East sub-county secondary schools. Mugenda and Mugenda (2003) explain that descriptive survey design determines and reports the way things are, and attempts to describe things such as possible behaviour, attitudes, values and characteristics. Furthermore, (Orodho ,2002) asserts that descriptive survey designs are utilized in preliminary and exploratory studies to let researcher collect information, summarize, present and interpret data for the purpose of illumination This research design was effective in collecting data on English language skill dissemination through ICT integration by teachers of English in Kirinyaga East Sub-County. The research design is shown in figure 3.1:

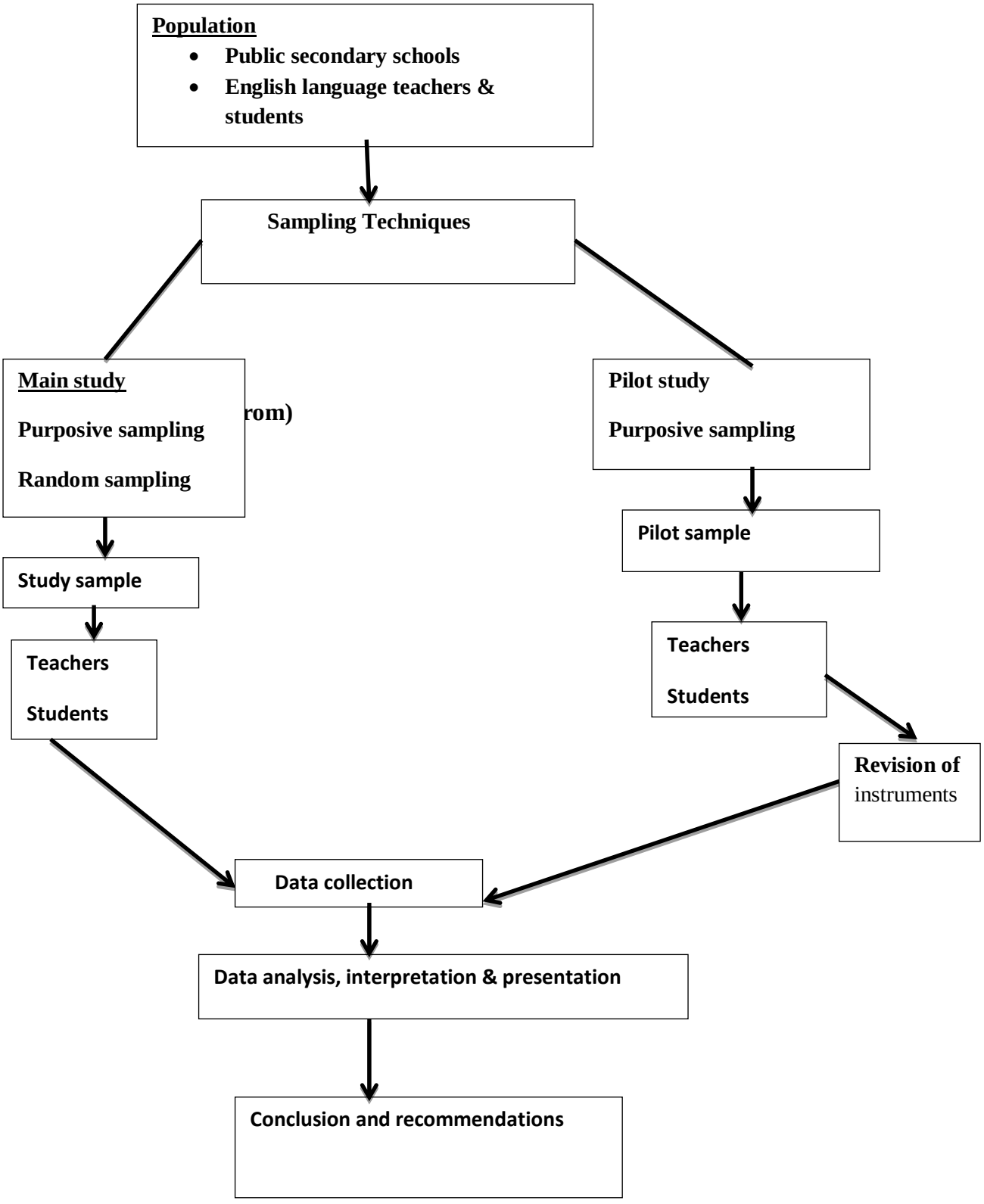


Fig. 3.1 Research Design Adopted from Cohen et al. (2011)

This research design investigated independent, dependent and intervening variables. Independent variables were teacher training and learning environment. These influenced the dependent variables of English language—listening, speaking, reading and writing. Intervening variables included learner motivation, and education ministry's ICT policy. The interaction of all these variables was a key in the process of integration.

3.2 Locale of the study

The study was undertaken in Kirinyaga East Sub-County of Kirinyaga County whose inhabitants are agriculturalists. Selected secondary schools were a reflection or representation of the nature of schools commonly found in the locale. The suitability of the choice of the Sub-County was necessitated by availability of computers and teachers in the schools. In spite of the poor road network, the schools and the teachers were accessible to the researcher. Singleton (1993) contends that the ideal setting for any study is one that is directly related to the respondent's interests. The schools in this locale had been posting poor performance in English at the summative KCSE examinations year after year.

3.3 Target population

The target population was 80 teachers of English language, 6000 students in 36 public secondary schools in Kirinyaga East Sub-County. The students were in their 3rd year of secondary school education (form 3) and their teachers. This was due to the fact that form four students were busy preparing for the KCSE. The examination candidates' inputs would not have had any impact on the outcome of the study as they were outgoing.

3. 4 sampling procedure and sample size

Nkpa (1997) Sampling refers to picking a given number of subjects from a well-defined populace, as a representation of the populace. The researcher had, therefore, chosen, a sample huge enough to progress the likelihood of obtaining outcomes which were similar to what would be gotten using the entire populace. Mugenda and Mugenda (1999) recommend the usage of a population sample size of 20-30% for small population while use of 10% could apply for a large sample in a survey.

3.4.1 Sampling procedure

The study used random sampling procedure to avoid bias in the sample selection. Respondents and schools were coded and numbers picked at random from a box. In this case, a portion of the population was randomly drawn to ensure the possession of the same characteristics as the population. Every person or school had an opportunity to be selected to form the sample.

3.4.2 Sample size

The research sample comprised 11 out of 36 schools which was (30.5%), 19 out 80 teachers which was 23.75% and 600 out of 6000 students which constituted 10% of the students. The categories of sample schools were county and sub-county boys and girls boarding schools as well as mixed gender day schools. The selection of the sample was done through purposive and random sampling. Schools were categorized according to gender to ensure each and every category was represented as illustrated in the sampling grid under table 3.1

Table 3.1Sampling grid

Target	sample size	Boys	Girls	Mixed	Total	Percentage
Population						
36 Schools		3	3	5	11	30.56%
80 Teachers		6	6	7	19	23.75%
6000 Students		150	150	300	600	10.00%
36 Principals		3	3	5	11	30.56%

3.5 Research instruments

The study used principals', teachers' and students' questionnaires (forms 1, 2 and 3 because they were not preparing for national examinations like the form fours), teachers' interview schedule and a classroom observation guide, all administered by the researcher. Use of triangulation through multiple instruments was necessary to limit the data bias that might have resulted from using one type of instrument.

3.5.1 Questionnaires

Best and Kahn (1998) assert that questionnaires allow the individual overseeing their administration, elucidate the aim of the research and provide clarification of intended meaning of items which might not be clear. In addition, Mugenda and Mugenda (1999) say that questionnaires are used to obtain important information about the population. Most importantly, (Achola and Bless, 1988) state that questionnaires are preferred due to:

- Their cost effectiveness in terms of time and personnel in relation to coverage of an expansive zone
- Anonymity of the respondents make them give authentic information

- They avoid biases that are characteristic of interviews
- They allow respondents time to give thought out answers.

This was evidenced by the researcher in the field. For instance, cost effectiveness, anonymity of the respondents, avoidance of biases and allowing respondents' time to give their thought were witnessed.

The questionnaires were used to collect data from 19 teachers of English, 600 students and 11 principals. They contained both closed and open ended questions. Likert Scale was used in questions testing on the degree of respondents' agreements with particular variables under investigation or the extent of the effect of factors.

3.5.2 Interview schedules

This was used to collect data from randomly sampled teachers of English from the sampled schools who were not filling in the questionnaires. These were teachers from the schools near the researcher's locality. As Kerlinger (1973) puts it, more respondents willingly communicate verbally than in writing and would consequently be ready to offer information in an interview. Out of the 19 teachers, 5 were interviewed. This method really proved effective in obtaining information for this research.

3.5.3 Observation

An observation guide was also used to collect data in the computer laboratory and to ascertain availability or unavailability of ICT facilities. Also the researcher attended English language lessons during the session as teachers taught (Randomly selected). This saved cost and time of asking some questions. Where schools had the facilities, the researcher could see and observe the learning activities that went on there.

3.6 Pilot study

The pilot study was undertaken to determine the reliability of the research instruments, duration of time appropriate conducting the research and to understand possible responses likely to be received from the respondents. Mugenda and Mugenda (2003) argue that a pilot sample of 1% for a large sample and 10% for a small sample would be adequate. In this particular research, 1 out of 36 schools sampled (2.8%), 1 principal, 1 teacher of English, 2 students from each form (1, 2, and 3 who were not part of the main research) making a total 6 were piloted. The questionnaires were administered to the sampled students using split half technique to determine reliability. As Kombo and Tromp (2006) state, the aim of pilot research is testing the validity of research instruments as well as to check the presence of ambiguity and researcher's bias. In this regard therefore, the pilot assessed its viability of the study based on locale and nature of the sample in terms of suitability and levels of language for various respondents. Appropriate improvements were effected in the instruments accordingly. The pilot study helped identify the ambiguity in some items in the instruments. Though minor cases emerged, the feedback helped improve the research instruments as well as determine the final form in which the items were phrased for the main study.

3.6.1 Validity

Borg and Bell (1989) state, validity is the degree by which a sample of test items is a representation of content the test is designed to measure. Sherman and Webbs (1997) define validity as the degree to which the participants' observation achieves what it purposes to discover. Coolan (1994) asserts that validity of an instrument is the degree

to which it measures what it should measure. It is also the degree to which results obtained from an analysis of data actually represent the phenomenon under investigation (Orodho, 2004). The researcher tested both face and content validity. Face validity is the likelihood that a question would be misunderstood or misinterpreted. According to Wilkinson (1991), pre-testing a survey is a good way to increase the likelihood of face validity. Face validity was tested by considering subjective judgment. As pertained content validity, Mugenda and Mugenda (1999) state that the usual procedure in establishing the validity of a measure is, for example, to use a professional or expert in the particular field. To ensure content validity of the instrument from the pilot study, the researcher sought opinion of experts from Educational Communication and Technology Department, Kenyatta University. In this regard, the experts assessed the relevance of the content used in the instruments and their feedback was used to revise the instruments before preparing the final copy.

3.6.2 Reliability

Gay (1976) defines reliability as the degree in which a test consistently measures what it is meant to measure. Reliability for this research was used to focus on the degree to which empirical indicators or measures of a theoretical concept were stable or considered across two or more attempts to measure the theoretical concept. A test, re-test method was used to estimate the degree to which the same results would be obtained with a repeated measure of accuracy of the same concept. The aim was to determine the reliability of the instruments. Creswell (2003) says qualitative data could be made reliable and valid by triangulating different data sources of information by scrutinizing evidence from the sources and utilizing it to establish justification of terms.

In this study, the following test, re-test techniques were undertaken:

- The developed questionnaire was given to a sample of a few teachers of English and their students;
- The answered questionnaire was scored manually
- The same questionnaire was administered to the same group of subjects after a period of one week.
- The questionnaire responses were scored manually again.
- A comparison of both results was made.

After the piloting, the results were analyzed and the reliability coefficient (consistency) α of the instruments calculated using Spearman Brown formula (Gibson et al., 1987). A correlation coefficient of 0.8 was evident. This authenticated the instruments.

3.7 Data collection procedure

First the researcher obtained authority to conduct research from the National Council for Science and Technology, Ministry of Education Science and Technology (NACOST), County Director of Education, Sub-County Education officers and Principals of sampled schools. The researcher visited the sampled schools and organized with the administration of the institutions on when it was most convenient to collect data. He sought assistance from the English language teachers to administer questionnaires in order to reduce the Hawthorne's effect. The respective teachers introduced the researcher to the informants to avoid impressionistic factors. Then the

researcher took cue to introduce himself, and he explained to the informants what was expected of them in filing the questionnaire.

- Questionnaires were administered to the sampled English language teachers and their students by the researcher. There were 3 different questionnaires; for the principals, teachers, and students. Some questionnaires were left to be collected later on an agreed date. Others were filled and collected on the spot.
- An Interview schedule was used to collect data from teachers who were not filling in the questionnaires. The researcher arranged with the teachers of English and the principal on the most appropriate date and time to conduct the interviews.
- The researcher personally used the observation schedule to record classroom transactions and teaching in all the sampled schools. This was meant to see whether teachers were using ICT facilities like cell phones, power point projectors, tablets and computers.

3.8 Data analyses

Primary data from the field was first edited (a process of examining collected raw data to detect errors and omissions with an aim to correcting them). Responses to closed-ended questions were assigned numbers 1 for 'yes' and 2 for 'no' while open-ended ones coded according to themes (specific categories for analysis). These were teachers' level of education, competence and readiness to use ICT, availability of support staff and software, frequency of ICT integration, and students' view of ICT usage and accessibility. This was followed by frequency tally which was used to assign each expected response the related theme. Numerical values are then assigned and tallied respectively. Later the values were keyed into a computer and analyzed

using the statistical package for social sciences (SPSS) version 16.0. For the purpose case processing summary, the data were converted into percentages and presented in frequency tables and charts. These were used to allow the researcher reduce large quantities of information into a form that can be more easily handled by computer programs. Descriptive statistics: frequencies, percentages, means and standard deviations were used to analyze the data. As Mugenda and Mugenda (2003) put it, descriptive statistics allow the researcher to evocatively describe a dissemination of scores or measurements using a few indices or statistics. This gave accurate and correct interpretation of data. Some data were presented descriptively. Statistical inferences were conducted using an alpha=5 %($P<0.05$)

3.9 Logistical and ethical considerations

The researcher obtained consent to collect data from: the respondents, National Council for Science and Technology (NACOST) and Ministry of Education Science and Technology, County Director of Education, Sub-County Education officer, and the Principals of the sampled schools. Kothari (2005) states that respondents of a research should be made to comprehend the nature of the study in a clearer and comprehensible language. In the light of this, informed consent was documented and anonymity and confidentiality were guaranteed. The information collected was taken with utmost confidentiality and was used purely for academic purposes. Ethical considerations that go with use of human subjects in the research process were adhered to strictly. Confidentiality of the samples and information collected from them was strictly maintained.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS AND DISCUSSION

4.0 Introduction

This chapter presents a summary of the findings, interpretations and discussion of the data collected from 600 secondary school students from forms 1, 2 and 3 , 19 English language teachers, and 11 Principals of secondary schools from Kirinyaga East Sub-county, Kirinyaga County, Kenya. Data analysis and report of the findings were presented using descriptive statistics and in the form of tables, frequencies and percentages. Findings of the study were discussed under the following research objectives:

i. Find out English language teachers' preparedness in using ICT to teach English language skills;
ii. Investigate ICT integration in teaching English language skills;
iii. Identify the accessibility of available ICT facilities to teachers and students.
iv. Establish the effects of ICT integration on teachers and students.
v. Find out ICT technicians' role in teaching English language skills of listening, speaking, reading and writing.

The findings were presented per each objective.

4.1 Background information of respondents

Respondents used in the analysis included forms 1-3 students, English language teachers and secondary school principals. Teachers' items included gender, age and educational background to provide information on their characteristics.

4.1.1Teachers' level of education

English language teachers were asked to indicate their educational background. The results of their responses were presented in table 4.1

Table 4.1 Teachers' Educational Background

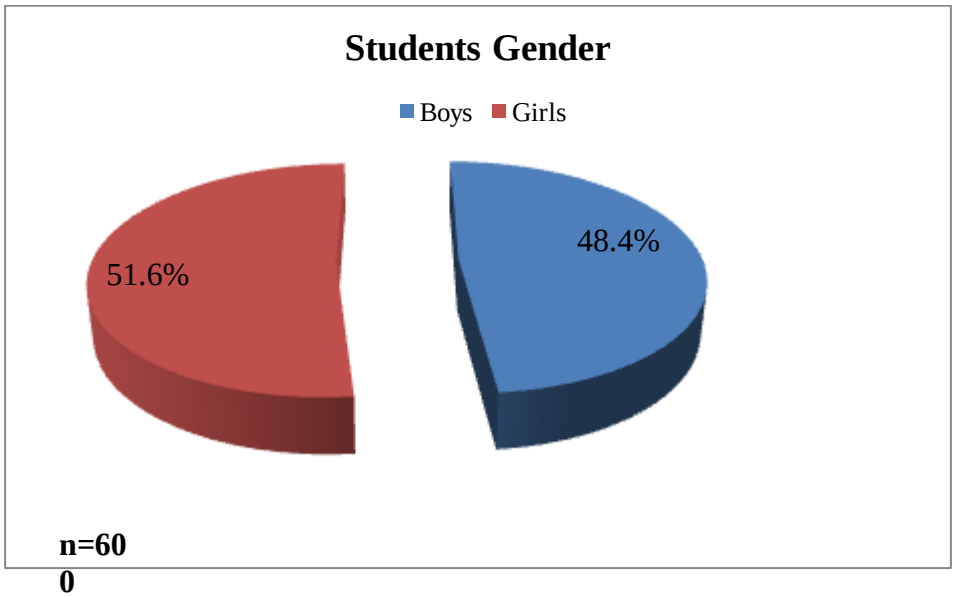
Level of education (n=19)	Frequency (f)	Percentage (%)
Diploma in education	3	15.79
Bachelor of education	14	73.68
Master of education	2	10.53
Doctor of Philosophy	0	0.0
Total	**19**	**100**

Majority of teachers have a Bachelors' degree in education. The remaining number which is more than a quarter has at least a diploma in education and a Master of Education degree in education. This implies that the respondents to the teacher's questionnaire are professionally qualified teachers of English in secondary schools. The respondents were therefore appropriate for this study.

4.1.2 Students' Gender

The sampled students' were asked to indicate their gender in the questionnaire. The results of their response were as represented in figure 4.1

Figure 4.1 Students' gender



Students' gender

Figure 4.1indicated the gender of the respondents. This was aimed at ensuring equity in terms of those interviewed. .Boys comprised 48.4% while girls were 51.6% of the total student sample. This was a near gender parity in the students' respondents. The slight difference was caused by some students' failure to respond to the questionnaire i.e. some were unfilled. However, the results were quite representative and credible. The research was devoid of gender bias.

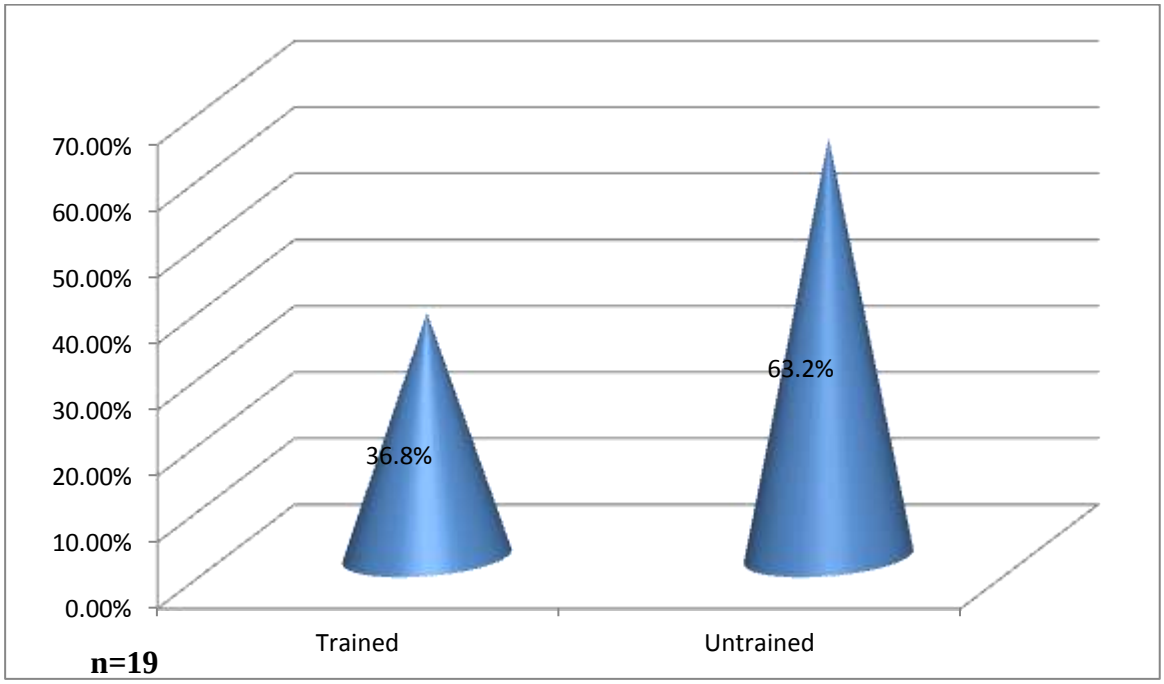
4.2 Find out English language teachers' preparedness in using ICT to teach English language skills

According to Kamau (2012) teachers' major constraints in ICT integration was lack of basic computer training.

This item sought to find out English language teachers readiness to integrate ICT in teaching. They were asked to indicate whether they were trained or untrained in using

ICT for integrating in teaching English at their respective teacher training colleges and universities. The results were as shown in figure 4.2

Figure 4.2 Preparedness in using ICT to teach English language skills



The results showed that majority of the teachers (63.2%) were never trained to integrate ICT for teaching English language skills. Barely a third of them (36.8%) had some basic training. But when the same teachers were asked how competent and proficient they were in using (ICT), the results were as shown in table 4.2.

Figure 4.2 Competence of English language teachers in ICT

Competency (n=19)	frequency	percentage
Poor	4	21.05%
Fair	7	36.84%
Good	6	31.58%
Excellent	2	10.53%
Total	**19**	**100.00%**

The results showed over three quarters (78.95%) of English language teachers could use ICT integration to teach the skills. Barely a quarter (21.47%) of the teachers interviewed was not prepared. Apparently majority teachers of English can comfortably use and operate ICT facilities for teaching English. This implied that the teachers may have had some computer training after leaving teachers training colleges.

4.3 Investigate ICT integration in teaching English language skills

This is in relation to Pernia (2008) who argued that ICT entails actual application of computer and internet technology to enhance quality teaching and learning. Most importantly, ICT consists of hardware, software, network and media. This part of the item required the researcher to investigate how ICT integration is effected with the available English language software in the computers. The research sought to establish whether or not the ICT facilities were installed with educational software. Information obtained was as shown in table 4.3

Table 4.3 Installation of English language software in computers

Question n=19	Frequency (f)	Percentage (%)
Yes	6	31.58%
No	13	68.42%
Total	**19**	**100%**

Majority of the computers (68.42) were not installed with language educational software for teaching English language skills. But almost a third (31.58) of them had some software. However the research revealed that all the computers had Microsoft related packages like word and power-point which aid in teaching and learning English language skills. The third of computers had Encarta software which had resources for the listening, speaking, reading and writing skills. Emphasis is therefore on the need to install educational software in all computers used in secondary schools.

4.3.1 Frequency of ICT integration in teaching English language

This item was intended to find out how often teachers of English language integrate ICT in their teaching. The findings were as summarised in table 4.4:

Table 4.4 Frequency of ICT integration while teaching English

Integration (n=19)	Frequency(f)	Percentage (%)
Often	1	5.3%
Sometimes	6	31.6%
Rarely	10	52.6%
Never	2	10.5%
Total	**19**	**100%**

More than half (52.6%) of English language teachers rarely integrated ICT in teaching English. About a quarter (31.6%) uses ICT integration sometimes and as the situation appropriated. On what skills ICT integration was used for, teachers' response was as indicated on table 4.5

Table 4.5 English language skills taught through ICT integration

Language skills	frequency (f)	percentage %
Listening only	0	0%
Speaking only	1	5.26%
Reading only	2	10.52%
Writing only	1	5.26%
All the 4 skills	15	78.95%
Totals	**19**	**100%**

Over three quarters (78.95%) of teachers affirmed that whenever they integrated ICT in teaching, they teach the four language skills. These were listening, speaking (pronunciation), reading and writing as well as vocabularies. The study also found that about 10% of the teachers used ICT facilities to teach reading skills. Paltry 5.26% was each used to teach speaking and writing only. None taught listening skills only. The few times English language teachers integrate ICT in teaching English language, they taught all the language skills.

4.4 Identify the accessibility of available ICT facilities to teachers and students

This was in line with the study carried out in 2012 by the department of Education Management, Policy and Curriculum Studies of Kenyatta University on "Schools' preparedness for the use of ICT and learning." It was found out that more than half (51%) of the resources were not fully utilized. Many of the available computers were kept in the School Principal's office. According to Krashen (2007), operating computers at liberty and voluntarily browsing and surfing the internet will inspire learners to read what benefit them. The students were asked whether or not the available ICT facilities were accessible or inaccessible to them. The findings were as shown in the table 4.6:

Table 4.6 Accessibility of ICT facilities to students

accessibility (n=600)	**frequency**	**percentage**
Accessible	55	9.2%
Inaccessible	545	90.8%
Total	**600**	**100%**

There was a need to find out if the available ICT facilities were accessible to the students for learning English language skills of listening, speaking, reading and writing. Majority (90.8%) of the students were unanimous that ICT facilities in their schools were inaccessible while only a small proportion (9.2%) of the students had access. The effectiveness of English language skills acquisition by students through ICT integration in secondary schools of Kirinyaga East sub-county was grossly compromised.

4.5 Effects of ICT integration in teaching and learning English language skills

On studying the impact of ICT integration Ogutu (2005) revealed that whereas most Kenya schools own some computer apparatus, only a minute portion was equipped with basic ICT infrastructure. Carmen (2003) put it that incorporating ICT facilities in instruction could realize improved learner's competencies. This idea was reinforced by Lankshear and Knobel (2006) who argue that novel social relationships initiated by ICTs have the potentiality of changing individual and social interaction in the classroom. The study sought to establish if the learners are receptive to the use of ICT integration in the teaching and learning of English language. The findings were as shown in the table 4.7

Table 4.7 Effects of ICT integration on students

Reception (n=600)	**Frequency (f)**	**Percentage (%)**
Appreciated	360	60
Unappreciated	240	40
Total	**600**	**100**

Nearly two thirds (60%) of the students appreciated the ICT integration in learning English language. They were able to explore through ICT facilities and acquire listening, speaking, reading and writing skills. This means they acknowledged the importance of ICT in learning. Barely over a third (40%) of students did not appreciate the integration a scenario possibly occasioned by unavailability of ICT facilities. The limited exposure of students to ICT facilities impeded their appreciation.

4.6 Find out ICT technician's role in teaching English language skills

It is imperative that ICT technicians must be available at all times to ensure that ICT facilities are successfully utilized. It was in light of this that English language teachers and Principals of their respective schools were asked to indicate whether or not they had ICT technical support staff to aid in use of computers. The findings from English language teachers are as indicated in table 4.8

Table 4.8 Availability of technical support staff (T)

Technicians n=19	**Frequency (f)**	**Percentage (%)**
With Technical support	6	31.58
Without Technical support	13	68.42
Total	**19**	**100**

More than two-thirds (68.4%) of the polled teachers established that their schools do not have technical support staff to enhance the ICT integration in the reaching of English language. Only one-third (31.6%) were found to have had the technical support staff. Majority teachers would therefore organize everything for enhance their teaching through ICT integration. This might have been a hindrance to effective and

effective teaching English language skills of listening, speaking, reading and writing. The same scenario was confirmed the principals whose response was presented in table 4.8.1

Table 4.8.1 Availability of ICT support staff (P)

ICT technicians(n=11)	frequency	percentage
Schools with ICT support staff	3	27.27%
Schools without ICT support staff	8	72.73%
Total	**11**	**100%**

4.7 Summary of the chapter

This chapter has presented data analysis, interpretation and discussion of the outcome. The study sought to obtain data on the use of ICT integration in the teaching of English language in secondary schools of Kirinyaga East sub-county. Results revealed that:

- About a third (36.2%) of the secondary schools teachers of English have had training on the use of ICT at college while the rest (63.2%) do not. This is a limitation in the use of ICT in the teaching of English in Kirinyaga East sub-county. After teacher training college about 42% teachers acquired computer literacy elsewhere and therefore they can use ICT in teaching English in the secondary schools.
- Two-thirds (68.42%) of available computers in secondary schools do not have any educational software to help teachers and learners of English language.
- Most (60%) students appreciate use of ICT in teaching and learning English in the secondary schools.

- Almost all (90.83%) computers in the secondary schools are not accessible to teachers and students for learning English.
- Majority (68.42%) secondary schools do not have technical support staff (computer technicians) to assist English language teachers in teaching and learning.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter discusses summary of the findings, conclusions of the study recommendations.

5. 1 Summary of the findings

The study sought to find out English language teachers' preparedness in using ICT to teach language skills; investigate ICT integration in teaching English language skills; identify the accessibility of available ICT facilities to teachers and students; establish the effects of ICT integration on teachers and students; and find out ICT technician's role in teaching English language skills of listening, speaking, reading and writing. The sample consisted of 600 forms 1-3 students, 19 teachers of English language and 11 Principals of secondary schools of Kirinyaga East Sub-county. Summary of the research findings were based on research questions which guided the study. The major findings were discussed under the following themes:

5.1.1 Summary of findings on background information

The respondent students' background information showed a near gender parity for the sampled population in terms of the schools and students. With regard to teachers, they are from 3 girls', 3 boys' and 5 mixed boys' and girls' schools. Teachers' responses indicated they are trained professionals passed through credible teachers training colleges and universities. Principals from the respective schools are evidently qualified professionals experienced in educational matters.

The findings of this study were, therefore, obtained from well - balanced samples which gave accurate and relevant information on the use of ICT in teaching English

language in secondary schools. They gave information on the research questions; teachers' preparedness in using ICT to teach English, integration of ICT in teaching, accessibility of available ICT facilities to teachers and students, effects of ICT on students and the role of ICT technicians in assisting teachers to teach English language skills.

5.1.2 English language teachers' preparedness in using ICT to teach

Evidence from the study showed that (63.2%) of the teachers are not trained to teach English language using computers while only 36.8% got ICT training at the teachers training colleges. The research, however, revealed that at least 78.95% are competent in using computers in class while 21.05% teachers are poor at using computers and other ICT facilities. On whether the available computers are installed with educational software, the study revealed that 31.58% had them but 68.42 had not.

Use of ICT in teaching English language in secondary schools of Kirinyaga East sub-county is not done due to lack of apt teacher training at colleges. Logistical challenges emanating from absence of educational software for use in teaching are a limitation to the English language teachers.

5.1.3 Preview of how teachers integrate ICT in teaching English

When asked how often they integrate ICT in teaching English, teachers revealed that the majority (52.6%) rarely do it. Only 31.6% used ICT in teaching sometimes. However, a negligible number (5.3%) often use ICT to teach English and 10.5% never use. Use of ICT in teaching English in Kirinyaga East sub-county secondary schools is not core to the teachers.

5.1.4 Accessibility of available ICT facilities to teachers and students

Majority (90.83%) students revealed that the available computers in their schools are inaccessible and only paltry number (9.17%) stated ICT facilities were accessible to them. English language teachers indicated similar scenario as most (68.42%) had never had accessibility to the available computers. However, minority (31.58%) teachers acknowledged having had access to the available ICT facilities.

It is evident that the available ICT facilities are neither accessible to teachers nor students. This means that use of ICT in the teaching of English in secondary schools of Kirinyaga East sub-county is almost impossible or cumbersome to teachers and learners. Bureaucratic and administrative processes are the causes of this handle.

5.1.5 Effects of ICT integration on teachers and learners

Most (60%) students appreciated the use of ICT in teaching and learning English language while a less number (40%) do not appreciate. This means that majority of students would do a lot more in learning English using ICT. However, quite a number who do not appreciate is because of limited exposure to ICT facilities. Use of ICT in teaching English in secondary schools of Kirinyaga East sub-county is yet to be undertaken.

5.1.6 Role of ICT technicians in teaching English language

Principals and English language teachers of respective schools were asked if technical support staff for ICT integration was available to facilitate ICT integration. Most (68.4%) teachers stated that technical support staff was not available except a small portion (31.6%) where they had some. On the same question majority (72.73%) principals acknowledged absence of ICT technical support staff and only a negligible

number (27.27%) stated they had some in their schools to assist English language teachers. There is a positive correlation between the teachers and the principals' response on the availability of computer technical support staff. This authenticates the study on the issue of ICT integration in the teaching. The findings imply that English language teachers do not have any assistance in the use of ICT for teaching. Teachers therefore hardly have adequate time to organize for the use of ICT in the classrooms.

5.2 Conclusions of the study

Conclusions of the study findings were made based on the relationships that were established for each of the different objectives. From the foregoing presentation of the findings, it can be concluded that:

1) English language teachers were prepared and competent to use ICT facilities like computers and smart phones.
2) ICT integration in teaching English language skills was not effected due to lack of appropriate educational software for teaching listening, speaking, reading and writing skills in many schools.
3) Inaccessibility to the available ICT facilities due to bureaucratic process may have caused students' proper acquisition of English language skills. This could have contributed to the dismal KCSE performance in English in the sub-county.
4) Despite numerous hindrances encountered by teachers and students in integrating ICT in teaching English language skills, they were motivated and appreciated the technology.

5) In almost all in all secondary schools in Kirinyaga East, there were no ICT technicians who could assist English language teachers in ICT integration during teaching.

Although teachers were prepared and competent to use ICT facilities and were well motivated while using them, inaccessibility to school computers as well as acute shortage of ICT technicians to aid in integration, performance of English at KCSE had to be poor. There is a need to address the use of ICT integration in the teaching and learning English language in secondary schools of Kirinyaga East Sub County.

5.3 Recommendations

- English language teachers should be attending workshops and seminars on the current trends of ICT integration in teaching English. They should also create opportunities for students in their respective institutions to access computers and internet to interact with the outside world with an aim to improving English language skills of listening, speaking, reading and writing.
- Schools should install appropriate software in computers facilitate teaching and learning listening, speaking, reading and writing skills. English language teachers should be encouraged to use their smart phones to download learning material which could boost the acquisition of the skills and subsequently post better KCSE grades for English.
- Secondary schools administrators eradicate some bureaucratic handles which hinder easy accessibility by teachers and students to acquire English language skills of listening, speaking, reading and writing through the internet.

Similarly learners of English language should be encouraged to utilize smart phones both at home and school so as to improve on English language skills.

- Institutional principals should strive to recruit ICT technical expert to be helping English language teachers during teaching through integration. This would save time as well as assisting teachers who are not competent enough to operate ICT facilities.

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APPENDIX I: PRINCIPALS' QUESTIONNAIRE

This questionnaire was part of a research whose aim was to establish use Information Communication and Technology in teaching of English language in secondary schools of Kirinyaga East, Kirinyaga County. Your school has been selected for the study. Please fill in the questionnaire with factual and honest responses. All the information that you give will be used only for academic research purposes.

SECTION A: Background information

Type of school: boys [ ] Girls [ ] Mixed [ ]

Category of school: Girls boarding [ ] Boys boarding [ ] Day [ ] National [ ] County [ ]

Sub-County [ ]

Your highest qualification: diploma [ ] degree [ ] masters [ ] PhD. [ ]

SECTION B: Competence on use of computer

1. Does your school have ICT facilities to aid teaching English language? Yes [ ] No [ ]
2. Do your English language teachers attend ICT related workshops? Yes [ ] No [ ]
3. Do English language teachers integrate ICT in teaching English language skills? Yes [ ] No [ ]
4. Do you think English language teachers are well prepared with ICT expertise to handle integration? Yes [ ] No [ ]

SECTION C: Management of Technical Support

5. Are the available ICT facilities accessible to teachers and students? Yes [ ] No [ ]
6. Does the school have an ICT technician to assist in ICT integration in teaching English language? Yes [ ] No [ ]

7. Does he/she support the English language teacher? Yes [ ] No [ ]. Explain

   ---

8. Does the school administration support integration of ICT? Yes [ ] No [ ]
9. Which of these facilities do teachers use? Smart phone [ ] computers [ ] Both smart phones and computers [ ]
10. Is your school connected to the internet service provider? Yes [ ] No [ ]
11. What do you think is the effect of ICT integration on teachers and students?---

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    Thank you.

APPENDIX II: TEACHERS QUESTIONNAIRE

This questionnaire was part of a research whose aim was to establish use of Information Communication and Technology in teaching of English language in secondary schools of Kirinyaga East, Kirinyaga County. Your school has been selected for the study. Please fill in the questionnaire with factual and honest responses. All the information that you give will be used only for academic research purposes.

SECTION A: Background information

Gender: Male [ ] Female [ ]

Your highest qualification: Diploma [ ] Degree [ ] Masters [ ] PhD [ ]

Which resources have you used to teach English? Computer [ ] video recorder

cell phone [ ] Radio cassette player [ ]

SECTION B: Competence on use of computers

1. Have you been trained to use computers to teach? Yes [ ] No [ ]

2. Have you been trained on how to integrate ICT in teaching English? Yes [ ] No [ ]

   If yes, where did you train? ----------

3. Do you feel well prepared to use ICT in teaching English language skills? Yes [ ] No [ ]
4. Rate your competence in ICT integration. Poor [ ] Fair [ ] Good [ ] Excellent [ ]
5. What ICT facilities do use when teaching English language skills? Smart phone [ ] computers [ ] Both smart phones and computers [ ]

6. Are your school computers installed with English language software? Yes [ ] No [ ]. Name them----------
7. Outline English language skills you teach using ICT facilities: a)---------b)----------c)----------d)----------

SECTION C: Management of Technical support

8. Is your school connected to any internet service provider (ISP)? Yes [ ] No [ ]
9. Are the available computers accessible to teachers of English? Yes [ ] No [ ]
10. Do you allow students to interact with the computers? Yes [ ] No [ ]
11. How many times per week do you use computers to teach English? [ ]
12. Do you think your school is supportive of using ICT integration? Yes [ ] No [ ]. Explain how----------
13. How often do you integrate ICT in teaching English? Often [ ] sometimes [ ] rarely [ ] Never [ ]

Thank you.

APPENDIX III: STUDENTS QUESTIONNAIRE

This questionnaire was part of a research whose aim was to establish use of Information Communication and Technology in teaching English language in secondary schools of Kirinyaga East, Kirinyaga County. Your school has been selected for the study. Please fill in the questionnaire with factual and honest responses. All the information that you give will be used only for academic research purposes.

Tick where appropriate

SECTION A: Background information

Gender: Male [ ] Female [ ]

Type of the school: Boys [ ] Girls [ ] Mixed [ ]

Use of ICT in learning listening, speaking, reading and writing skills

1. Have you ever used any of the following ICT facilities in learning English in school?

   Computer [ ] smart phone [ ]

2. Are you allowed to access school computers? Yes [ ] No [ ]

3. Do you think computers useful to your learning English? Yes [ ] No [ ]

4. Which skills of English language do you improve in after using ICT facilities?

   Reading [ ] Writing [ ] Speaking [ ] Listening [ ]

5. Which of the following does your English language teacher use to teach in class? Smart phone [ ] computer [ ] both smart phone and computer

6. Do you feel motivated using computers or mobile phones to study English language? Yes [ ] No [ ]

7. Does your school have an ICT laboratory technician to help you study listening, speaking, reading and writing skills? Yes [ ] No [ ]
8. Do you he or she is helpful to your learning English language? Yes [ ] No [ ]

   Briefly explain how----------

   Thank you.

APPENDIX IV: OBSERVATION CHECKLIST

The researcher was directly involved in establishing and documenting the ICT facilities in the sampled secondary schools in Kirinyaga East. The following observation schedule was used:

a) A matrix with all the ICT resources which could be used in teaching English was developed and noted down the ones used, how and when.

b) Visited the ICT facilities of the sampled schools. For instance, counting the computer in the respective schools.

c) Sat in the classrooms as English language was taught to the students using ICT facilities

d) Participated in the usage of the computers by the students and the teachers of English language.

ITEM	✓ **AVAILABLE**	✓ **UNAVAILABLE**
Computers		
Smart phone		
ICT technician		
ISP(internet)		
ICT integration		
Teaching software		

ICT integration

item	✓ **Present/Yes**	✓ **Absent/No**
Teacher's motivation		
Learner's motivation		
Accessibility to ICT		
Language skills taught		

APPENDIX V: INTERVIEW SCHEDULE (teachers)

This interview schedule was part of a research whose aim was to establish the use of Information Communication and technology (ICT) in teaching English language in secondary schools of Kirinyaga East. Your school has been selected for the study. All the information given was used only for academic research purposes.

SECTION A: Background information

- ✓ **TICK WHERE APPROPRIATE**

Gender: Male [ ] Female [ ]

Type of school Boys [ ] Girls [ ] Mixed [ ]

SECTION B: ICT preparedness and competence

1. Are you trained to use ICT facilities when teaching English language? Yes [ ] No [ ]. Indicate where you trained----------
2. Rate your competence in ICT integration.

   Poor [ ] Fair [ ] Good [ ] Excellent [ ]

3. What ICT facilities do you use? Smart phones [ ] Computers [ ]

   Both smart phones and computers [ ]

4. Mention English software found in your computers. ----------
5. Are available computers accessible to teachers and students? YES [ ] NO [ ]
6. What skills of English language do you teach using ICT facilities?

   Listening [ ] speaking [ ] reading [ ] writing [ ]

7. Do you think ICT integration is useful for teaching English language skills? Explain how----------
8. Is ICT integration motivating in teaching and learning English language? Yes [ ] No [ ]

9. Does your school have an ICT technician to aid in integration? Yes [ ] No [ ]

10. State whether or not your school is connected to the internet? Yes [ ] No [ ]

Thank you

APPENDIX VI: RESEARCH BUDGET

The research required money to make it operational. The budget of this research was approximately KSH 150,000/= i.e. One hundred and fifty thousand shillings; to cover travelling, air-time, stationery, photocopying, purchase of a laptop and a printer, and some miscellaneous expenditure. The researcher was self-sponsored and therefore met all the expenses by himself. The entire research was undertaken practically by the researcher himself without any research assistant.

Travelling	30,000
Air-time	2,000
Stationery	8,000
Photocopying	10,000
Laptop	50,000
Printer	25,000
Miscellaneous expenditure	25,000
TOTAL (KSH.)	**KSH 150,000.00**

APPENDIX VII: TIME FRAME

The research took one calendar month, thirty days. It was undertaken in the month of May, 2016. One day was spent in each sampled school by the researcher to administer the questionnaire and observe actual teaching. Since it covered eleven schools, it meant that twelve working days were spent collecting data. Ten days were used to analyze the data and had it ready for presentation and or correction by the supervisors.