

**INFLUENCE OF INFORMATION COMMUNICATION
TECHNOLOGY ON TEACHING AND LEARNING OF
ENGLISH IN PUBLIC SECONDARY SCHOOLS MARANI
SUB-COUNTY, KISII COUNTY, KENYA**

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DECLARATION

This research project is my original work and has not been submitted for award of a degree in any other university.

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DEDICATION

To my husband Mr. Boniface Ondoro Ombogo and my children Brilliant, Betty and Brighton for their support to make me achieve my dreams.

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ABSTRACT

Over the last few decades, ICT has become increasingly important in all organizations in modern societies including schools. Expectation about ICT and its role in developing and transforming the educational process through its inclusion in the daily school environment is increasing in many developed and developing countries. The purpose of the study was to establish the influence of Information Communication Technology on teaching and learning of English in public secondary schools in Marani sub- County. The specific objectives were: to examine how use of ICT influences teaching and learning of reading, writing, speaking and listening skills in English language. This study adopted a mixed approach both quantitative and qualitative methods were used to collect data. The study targeted all the 30 public secondary schools, 82 teachers of English, 2,851 Form 2 and 3 students as well as the Quality Assurance and Standards Officer (QASO) study area. A total sample of 368 respondents who consisted of 285 students and 82 teachers. The researcher used both descriptive and inferential statistics regression analysis to establish the relationship between the independent variables and dependent variables of the study. The study established that most students in study area enjoy computer assisted lessons, ICT influence learning of English skills in reading, writing, speaking and listening however most secondary schools in study areas do not have adequate ICT tools and infrastructure as well as that most teachers do not have advanced training on computer which was found to be hampering the transfer of such skills to students. The major conclusions were that; ICT is critical tool to enhance teaching and learning of English as a subject, It is also an important resource and most effective when embedded in the curriculum and integrated into units of work and therefore English teacher can maximize their impact if ICT is available in their classrooms by ensuring that they and their students use ICT as an integral part of teaching and learning of English lessons. The key recommendations for the study were that there is a need for teachers to be well trained to enable integration of ICT in teaching and learning of not only English but all subjects. The government should enhance the economic stimulus program to enable more schools access ICT infrastructure since it is the major challenges among the public schools in Marani Sub-County and that there is need to examine other factors affecting adoption of ICT like lack support from the community and understaffing.

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ABBREVIATIONS AND ACRONYMS

CDF	Constituency Development Fund
CKRC	Constitution of Kenya Review Commission
GOK	Government of Kenya
ICT	Information Communication Technology
IT	Information Technology
KCSE	Kenya Certificate of Secondary Education
KICD	Kenya Institute of Curriculum Development
KNEC	Kenya National Examinations Council
MOE	Ministry of Education
MOEST	Ministry of Education Science and Technology
NACOSTI	National Commission for Science Technology Innovation
SCDE	Sub-County Director of Education
SQASO	Sub-County Quality and Standards Officer

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Information technology has played a big role in accelerating the movement of learning opportunities to all parts of the world, to learners of all cultures and nationalities. Information technology is widely recognized as a vital resource in economic, social and political development. In the present world the skills of information technology are more than ever in great demand in all sectors including education, government, business and commerce (World Bank, 2004).

With the rapidly increasing popularity of the internet in recent years, the diversity of learning programs continue to shift and change according to the demands of society. Since the development of communicative skills, language learning requires social interaction between the teacher and the students and among the students themselves, the use of computers has for a long time been regarded only as a support tool with regard to certain skill areas (Brandal, 2005).

The importance of computers in life cannot be overemphasized as they deal with learning, employment, productivity and fun (Okumbe, 2001). Colantonia (1992), points out that, computers are used in banks, offices, military installations, stores, factories, schools/colleges, government agencies and even other organizations. Computers have created a revolution in the production, processing and transfer of information, primarily because of their ability to handle colossal amount of data within a very short time. The main use of computers, regardless of

the application area, is processing or manipulation of data fast and efficiently in order to obtain information that is complete, accurate, timely, economic and relevant. Computer users today are not computer professionals; rather, they are people who need information to do their jobs effectively. Electronic technology was in the past very mystified. It was extra-ordinary and belonged to only the experts and specialists. Yet in the recent past there has been transformation of learning through technology in all levels, removing inhibitions, obstacles and challenges that were thought impossible (Zezeza & Kakoma, 2003). Computerization has set off new image identities and subjectivities in the learning environment (Benner, 2003). It is therefore not surprising that modern curriculum, instruction and education thinkers and practitioners all over the world have been swept off-balance by the new technological transformation taking place around the world. Learners are more informed about the possibilities that a computer can provide more than their instructors (Leask & Meadows, 2000).

The Philippines Department of Education has formulated policies for ICT use to make learning easier and interactive among students and teachers. This has also been done in Indonesia, Malasia, Uzbekistan & Vietnam. In Asia and the pacific, including emerging countries, teachers in primary, secondary and tertiary levels are being trained in the use of ICT in education with varying degree of scope. Most of the training programs carry general objectives aimed at developing awareness, knowledge and skills in either the use of computers in teaching and learning (IPS, 2003). In Canada school principals and teachers use computers for

educational purposes such as activities directed towards lesson preparation, execution and evaluation.

Information Communications Technology is often used to talk about computers and other technology use in schools. Grammar has been taught in various ways throughout the history of language learning. In the 19th century grammar was the most important part of learning a foreign language, while during the 1980s grammar was not supposed to be taught at all. Nowadays most people agree that some grammar might benefit the pupils, but how it is to be taught is still a controversial issue.

Fakeye (2010) in Nigeria, the level of knowledge of ICT possessed by English language teachers are poor and as such, they rarely use ICT in English language instruction. There is also a significant difference in the male and female teachers' knowledge of ICT with the males demonstrating a higher level of knowledge than their female counterparts. There is lack of accessibility that greatly hinders the use of ICT with the lack of technical knowledge and qualification of the part of the teachers. ICT brings about innovation in the teaching and learning processes as it improves lifelong learning habits in students. Moreover, Amri (2001) identified certain areas of ICT as important for language teachers, for example, the use of a word processor, e-mail, and multimedia.

Some of the available ICT applications and facilities that can be used to enhance learning, make lessons interesting and enliven the classroom in a

language class include, but are not limited to, interactive boards and presentation applications, such as Microsoft PowerPoint, Adobe Photoshop, Corel Draw, and Picasa. These and many more may be adopted by language teachers to enhance their effectiveness and relevance in the knowledge society where emphasis is placed on intellectual capabilities (to use ICT effectively) and not on physical input of available (ICT) resources. The use of such resources is however dependent on availability, accessibility, skills, and ease of use (Adetimirin, 2011). Research conducted on young people showed a remarkable trend, it revealed that children retain 20% of what they hear, 40% of what they see and hear, and 75% of what they see and do. Its overall effectiveness needs to be enhanced by better software and hardware as well as greatly increased availability (Aktaruzzaman, Shamim, & Clement, 2011).

Teachers have great influence on students through the learning process and can enhance pupils' cognitive growth (Ogunsaju, 2009). As learning in the ICT age no longer restricted to the four walls of the classroom, students with internet enabled mobile phones can do basic searches online and obtain information that may not be within the teacher's reach at the point of disseminating the instructional content. Teachers must as a result exploit ICT with comparable or better technology to enliven their lessons; thereby facilitating better assimilation of the instructional content and keeping teachers abreast of current updates in their subject of specialization (Ogunsaju, 2009).

Language teachers are responsible for developing students' abilities in reading, writing, listening, and speaking of the language being taught and as such should be in the forefront of leveraging technology in the classroom. Moreover, Amiri (2000) opined that there is general agreement among teachers and teacher educators that information technology (IT) has become so important, both in our everyday lives and in education, that it is necessary for teachers to know how to use ICT effectively in their teaching.

In Kenya through the Economic stimulus Programme and equipping of five public secondary schools from each constituency with comprehensive ICT infrastructure for those schools that benefited from this, teachers are positive in the adoption of this new educational and teaching approach (Ogunsaju,2009). All subjects and departments in these schools are now ICT compliant. According to the Daily Nation of 31st March 2014, most schools are passive in the use of ICT to deliver curriculum content. While all the 32 teachers have access to the computers, only two use them for academic purposes in Kenya schools.

Amutabi (2004) says that, since the 1980s integration of ICT in education has been compulsory in the developed nations, this is not so in developing world nations like Kenya, where ICT featured in 2005 as one of the priority areas identified. The first draft ICT strategy was completed in August 2005. In the same year USAID facilitated a team of consultants to evaluate the various possible options which the ministry would consider in integrating ICT in the sector

(National Strategy for Education and Training, June, 2006). With the development and approval of Ministry's policy through the sessional paper No. 1 of 2005 and the approval of the National ICT policy in 2006, the strategy gives a snapshot of what is required for ICTs not only to have an impact in reducing the digital divide but also as a tool for curriculum delivery and learning.

In the year 2005, it was estimated that there were 1.7 million children and youth of school going age in Kenya who are unable to access conventional education due to special circumstances or various socio-economic reasons. While these children can be found throughout the country, two areas in particular contain a larger percentage of these 1.7 million children; Arid and Semi-arid lands (ASALs) and urban slums (G.O.K., 2006a). The adaption of ICTs such as Interactive Radio Interaction (IRI) for educating children, especially girls, in ASALs and urban slums is an option that Kenya can employ for both formal schooling and Non-Formal Education (NFE) centers.

Learning is not a spectator sport. Students do not learn much just sitting in classes listening to teachers, memorizing prepackaged assignments, and spitting out answers. They must talk about what they are learning, write reflectively about it, relate it to past experiences, and apply it to their daily lives. They must make what they learn part of themselves (Chickering & Gamson, 2007). The education sector in Kenya is still in its infancy in the inclusion and use of ICT. To integrate ICT appropriately in order to increase the quality of education, technology and

teaching methods and education should go hand in hand. ICT pursues an integrated approach and simultaneously work with several national institutions that have mandates to strengthen the capacity of education managers at different levels, as well as that of teachers to foster the use of ICT in schools as a means of instruction

The Kenya National Examination Council (2006) spells out that learners are required to write essays based on the set books. However, essay writing is an area that has received frequent criticism. One particular concern has been with persistent students' errors in the KCSE English examination. This can be as a result of problems encountered in grammar and other skills in English. The KNEC report for the year (2008) results showed that most students' writings in English were irrelevant, sketchy and gave dismal accounts. Candidates also made frequent construction errors, hence making their English minimally intelligible. This is an observation that has persisted to the present. The KNEC report for 2010 results indicated that many candidates showed low level of content mastery since a number of them gave literal translations and not the sense conveyed, wrote irrelevant pieces, demonstrated poor word choice, grammar, spellings, and lacked logical argument and coherence. This is shown by the KCSE performance in English in the National Level in Table 1.1.

Table 1.1

Candidates' Overall Performance in English for 7 Years nationally-(2009-2015)

Year	Candidature	Mean Score
2009	335,415	27.25
2010	354,935	25.81
2011	403,144	28.32
2012	427,303	37.88
2013	439,941	27.47
2014	489,721	25.81
2015	596,857	31.51

Source: KNEC Report, (Kenya National Examinations Council 2015)

Table 1.1 reveals that overall performance in English at KCSE in the National level has is consistent with an average of 29.15 in a period of 7 years. In Marani Sub-County of Kisii County the performance in English language has been dismal as indicated in Table 1.2.

Table 1.2
Candidates' Performance in English for 7 Years in Marani Sub-County

Year	Candidature	Mean Score
2009	2110	25.15
2010	2650	27.01
2011	2860	28.42
2012	3012	32.66
2013	3512	29.58
2014	4216	28.38
2015	4386	23.21

Source: SCDE, Marani Sub-County, 2015

The statistics in Table 4.2 clearly indicate the deteriorating state of performance in English language in the target area which prompted the study as compared to National performance as shown in Table 1.1. Difficulties students face in English writing have been partly attributed to inadequate practice and teaching of English grammar (National examination council, 2009). What this has meant is that teachers do not adequately teach all of English language. Reporting on students' low achievement in English, the KNEC report for the year (2011) noted that most students failed to read and understand the set texts and literally concepts. In Marani sub- county, there seem to be a general know-how of the existing technologies changes in the industrial sector, however, the use of computers in public secondary schools seem to be inadequate (Republic of Kenya, 2011).

The use of computers in teaching and learning was limited to few public secondary schools. In addition, the overall performance in English has been dismal which prompted a study on the influence of ICT on teaching and learning of English in public secondary schools in the sub- County.

1.2 Statement of the problem

Despite the fact that English language plays a central role in the country not only as an important subject but as the medium of instruction, students continue to perform poorly in the language in the National examinations (Kenya National Examination Council, 2011). The Kenya National Examination Council report (2012) indicated that most of the questions attempted and performed poorly by candidates in the KCSE English language papers could have been due to the inappropriate teaching and learning of the subject. The results of KCSE (2013) indicated that on average there was dismal performance in English in Marani Sub-County with the mean standard score being 3.765.

The KNEC (2011) report in English identified poor teaching methods as a reason for the dismal performance in English. It is against this background that the present study sought to establish the influence of Information Communication Technology on teaching and learning of English in public secondary schools in Marani sub- County in order to improve the performance in the subject which has deteriorated over time as indicated in Table 1.2.

1.3 Purpose of the study

The purpose of the study was to establish the influence of Information Communication Technology on teaching and learning of English in public secondary schools in Marani sub- county, Kenya.

1.4 Objectives of the study

The study was carried out to achieve the following research objectives;

- i. To examine the extent to which ICT influences teaching and learning of reading skills in English language in public secondary schools in Marani sub- County.
- ii. To establish the extent to which ICT influences teaching and learning of speaking skills in English language in public secondary schools in Marani sub- County.
- iii. To establish the extent to which ICT influences in teaching and learning of listening skills in public secondary schools in Marani sub- County.
- iv. To examine the extent to which ICT influences teaching and learning of writing skills in English language in public secondary schools in Marani sub- County.

1.5 Research questions

The study sought to answer the following research questions;

- i. To what extent does ICT influences the teaching and learning of reading skills in English in public secondary schools in Marani sub- County?
- ii. To what extent does ICT influence the teaching and learning of speaking skills in English language in public secondary schools in Marani sub- County?
- iii. To what extent does ICT influences the teaching and learning listening skills in English in public secondary schools in Marani sub- County?
- iv. To what extent does ICT influences teaching and learning of writing skills in English in public secondary schools in Marani sub- County?

1.6 Significance of the study

It is hoped that finding of this study will be useful to the Ministry of Education, Science and Technology, the Teachers Service Commission (TSC) in reviewing policies in regard to teaching practices to enhance effective learning and teaching environment. Among other factors ICT usage among schools can benefit both teachers and learners and can significantly improve performance of both parties.

The Kenya Institute of Curriculum Development (KICD) may use the findings in designing teaching courses for the teachers that are essential in implementing quality of education to the student. The findings may also be used

as reference by other researchers who would be interested in carrying out further research in the same area or a related area of study. The study may help teachers to develop more efficient methods of teaching and learning of English to ensure that the learning process is learner centered. It may as well help the students participate more in the learning process and hence making it enjoyable

1.7 Limitations of the study

According Best and Khan (2004), limitations are conditions beyond the control of the researcher that may place restrictions on the confusions of the study and their application to other situations. Most public secondary schools are located in the rural areas, where accessibility of the institutions is a challenge. This was a hindrance to the researcher in reaching such schools. To curb this challenge, adequate time was created for data collection in these areas. The researcher made a pre-visit to mitigate the possible factors.

The researcher used data provided by the schools' department of English and the Sub-County Director of Education records. This might not have been well up-dated or current expected by the researcher. However, the researcher used the available records and compared with the current expected standards by the Ministry of Education.

1.8 Delimitations of the study

According to Mugenda and Mugenda (2003), delimitations are the boundaries of study. The researcher used teachers, students and SQASO as the

only respondents. However, there may be other members or individuals who may offer useful information to the study who are not in this category. It was hoped that the respondents gave the information that could be used to generalize the ideas.

Information was sought from teachers of English and students of the public schools in Marani sub-County. Factors outside work environment were not sought. The study dwelt on ICT usage in public secondary schools only leaving behind other important institutions like the universities, colleges and others therefore the findings might not reflect the situation of ICT across all levels.

1.9 Assumptions of the study

While carrying out the study the researcher assumed the following:

- i. That respondents gave accurate and honest information
- ii. That the respondents had adequate knowledge on ICT

1.10 Definitions of significant terms

The following are the definitions of operational terms as used in the study;

Information and Communication Technologies refers to the technology including computers, telecommunication and audio-visual systems, that enable the collection, processing, transportation and delivery of information and communication services to users.

Information technology refers to the process of managing and processing information using computer.

Listening skills refers to students paying attention during the English lesson and taking into account of what they have listened to.

Reading skills involves application and reading strategies for language activities that include asking questions after reading a story, keeping a reading log on the kind of material read and how often they are read.

Speaking skills refers to students being able speak and pronounce English words correctly and accurately.

Writing skills is a language skill in which students communicate in written language.

1.11 Organization of the study

The study is divided into five chapters , Chapter one discusses the background to the study, statement to the problem, purpose of the study, objectives of the study, research questions and significance of the study, Chapter two deals with literature review that is how ICT can be used in teaching and learning of speaking skill in English language, the level of using ICT in teaching and learning of speaking skills the role of ICT in teaching and learning of listening skills and the use of ICT in acquiring writing skills in English summary, theoretical framework and conceptual framework.

Chapter three stipulates the research design and methodology used in the study namely the research design, target population, sample size and sampling procedures, research instruments, validity, reliability, data collection procedures. Chapter four presents data analysis of the study where it shall focus on response rate, demographic data and finally focusing on findings.

Lastly chapter five will deal with summary to show a brief recap of the entire study it will also deal with conclusions which will focus on presenting conclusion from the finding and result of data analysis. Lastly the last part of chapter five will be recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The literature has been reviewed under the following headings: concept of ICT and teaching and learning of English, ICT and reading skills, ICT and writing skills, ICT speaking skills as well as ICT and listening skills. In addition, this section contains the theoretical framework and conceptual framework.

2.2 ICT and teaching and learning of English

ICT is an available tool to enhance teaching and learning for teachers. It is a professional resource and most effective when embedded in the curriculum, and integrated into units of work (Dickson, 2014). English teacher can maximize their impact if ICT in their classrooms by ensuring that they and their students use ICT as an integral part of lessons, present ideas dynamically, and use a range of media (Bacta, 2016), for example, while pupils are using a desktop publishing package to create a school newspaper they are also developing their ability to communicate more effectively. This provides both content and a meaning for the ICT activity (Levisham, 2010).

Hartoyo (2012) also asserts that English language teaching has been shaped by the search for the ‘one best method’ of teaching the language. Regardless of whether the focus of instruction has been reading, the grammatical rules and vocabulary of the target language (e.g. Grammar Translation Method), speaking

(how to communicate the target language such as Direct Method, Audio-Lingual Method, The Silent Way, Suggestopedia, Community Language, Communicative Approach), or other issues (for example. The Total Physical Response Method), the attempts of the teaching profession have been shaped by a desire to find ‘a’ better way of teaching than the existing method. The latest method that is developing is Computer Assisted Language Learning (CALL). Some experts and practitioners of education learning language in CALL, strongly supports the utilization of ICT in language learning to improve efficiency and effectiveness of learning that can improve the quality of understanding and mastery of the language studied. In other words, the integration of ICT in the field of language learning is inevitable known that the ICT and language learning are two aspects which support each other like two sides of the coin inseparable (Hartoyo, 2010).

Fortunately, the use of Computer Assisted-Learning language (CALL) has increased noticeably by English teachers. Consideration of Computer Assisted Language Learning is using computer. This tool is flexible, rich and interactive. It is flexible in the term of time and place. It has also assumed that more than other media can encourage students in learning language. This is due to the computer’s ability to present material is more diverse ways than either book or video does. In addition, CALL is able to generate interaction and improve communicative competence, including providing authentic material to the class or self – learning. The method focuses in computer utilization to enhance language learning.

2.3 ICT and reading skills in English

In reading skills, Litman (2015), states that learning should be focused on reading for comprehension. Language activities involved in reading include asking questions after reading a story, keeping a reading log on the kind of material read and how often they are read. Because of its interactive and dynamic nature of learning, ICT has the potential to meet the needs of individual students by providing opportunities to direct their learning and to pursue information or complete tasks, in ways which meet their own interests and needs computer based technologies in English (KLA, 2012).

English language is a necessity for most people in today's world, while technology development always has a very high and also contributed towards the development of education, especially English. As English is one of difficult lessons, teachers must create interactive teaching and learning to make students interested. According to Kent "ICT in education point of view refers to "Information and communication Technology (ICT) such as computers, communications facilities and features that variously support teaching, learning and a range of activities in education (QCA Schemes of Work for ICT in Kent Country Council. 2004). Moreover, the term information and Communications Technologies includes technologies in which the computer plays a central role, i.e. Computer Assisted Language Learning (CALL), the internet, and variety of generic computer application (Fitzparick & Davies, 2012).

The development of information technology, the internet, directs the history of educational technology in the new groove. Online services in the education of both degree and non-degree are basically providing educational services to users using the Internet as a medium. Online services can be composed of various stages of the process of educational programs such as: registration, test entry, payment, and learning, case assignments, case discussions, exams, assessments, discussions, and announcements. Nothing the positive impact of various studies on the use of ICT to support learning in the school, it is a must if the school is not excessive in this country also have the prospect of a future that allows for deploying ICT in supporting learning and they are: Using ICT enables English teachers to tap into this learning style and the dominantly youth culture. Many modern ICT texts can also be used as a starting point for the exploration of traditional tests. Smithson, (2015) for example an interactive site such as the virtual tour of the Globe Theatre site allows us to bring Shakespeare's world to life through this the students are highly motivated by this activities and provide stimulus to undertake tasks that students may otherwise avoid.

2.4 ICT and writing skills in English

Despite the existence of many studies showing positive effects of using Information and Communication Technology (ICT) in the teaching and learning process in general, the use of ICT in teaching writing skills in English as Second Language (ESL) classrooms is still not very encouraging. This study attempts to seek findings on the use of ICT in the teaching of ESL writing skills in Kenyan

secondary schools. Writing is a language skill in which students communicate in written language. Using ICT changes the nature of composing and allows the writing process to become more fluid students creating both traditional and multimodal tests using ICT will often attend to the visual and spatial qualities of test creation early in the design process as in selecting fonts, templates or choosing images (Interactive Education, 2016).

ICT enabled students to organize and present information in variety of forms and compose their work more easily and professionally. Word processing software allows them to access tools professional editor use and to manipulate text in ways that previously were difficult or unmanageable. ICT provides tools for composing and publishing a range of both conventional and multi-media tests so that students can read, compose and transform tests in novel and challenging ways.

2.5 ICT and speaking skills in English

Successful use of ICT is most effective when embedded in the curriculum, and intergraded into units of work. According to Dickinson, (2012) English teachers can maximize the impact of ICT in their classrooms by ensuring that they and their students use ICT as an integral part of the lessons, present ideas dynamically, and use a range of media. According to Nikolova (2013) in (Scheinin, 2014) numerous studies suggest that computerized media and a multimedia environment can be helpful for learning and speaking English

language vocabulary. However, the materials in the studies have mainly been commercial or teacher-produced. Student authoring in computer-based material designed for foreign language learning has been shown to enhance vocabulary learning. It has been asserted that on-line debate is an excellent medium for generating social construction of knowledge (Fujike, 2014).

According to Elia, (2015) “ICT plays a part in fostering intercultural competence”, which is a part of learning English language. ICT provides a variety of different approaches as well as learning styles that reinforce the material delivered in other formats. Enjoyment is very much a part of effective learning, thereby captivating learners’ interest, increasing personal discovery, generating enthusiasm and the desire to learn thereby instilling an interest from within to improve the learners’ motivation. Students love working with ICT and especially using ICT as an instrument to aid in the development of their language skills. Using ICT attracts them because it is challenging, yet it is a part of their everyday lives. Nevertheless, when students use ICT in the class the “... undeniable improvement of language skills and strategies related to handling information and the language through which it is conveyed in the stages of searching, analyzing and processing information”, (Lanni, 2015) when mixed together along with other skills students are benefited and gain much more than what was expected. Nevertheless, due to the students’ simultaneous, natural and often incidental acquisition of IT skills, that are needed in order to manage hardware and software

so that various tasks are completed and problems are resolved. Jarvis (2014) believes that by integrating basic IT skills in the language speaking classroom, we are developing language skills and equipping learners with technology skills. The applications of these technology skills go beyond the language learning

2.6 ICT and listening skills in English

ICT also enables a representation to language as a symbolic system. Furthermore the use of well- designed ICT environments can help students grasp abstract concepts such as imagery, literary relations, and morphology (Interactive education, 2016). Teachers can use a range of teaching tools such as discussion boards, forums, video as tools for delivery of class program. This opens reciprocal dialogue between members of the class community and may be extended to the school community at large through activities such as blogs (Kinzie, 2015).

To develop oral skills through the use of ICT (Information and Communication Technology), a wide variety of tools available through the Internet and new emerging Web 2.0 technologies and applications can be found to be used in different types of learning environments, such as distance learning, e-Learning, blended learning, mobile learning and online learning environment (Patrick, 2014). But not all of them are appropriate for every situation; so it is the instructional designers' responsibility to investigate which tools offer the best solution for the different tasks in synchronous and asynchronous interactions and collaboration (Beldarrain, 2015).

As West (2015) suggests, the combination of several online tools can be much more powerful to match the strengths and features of each with the requirements of the activity at hand. So the use of one of them does not mean that you have to abandon other useful tools. According to this idea, we think that every tool that has been developed fulfills with the requirements for which it has been designed. There are different applications, but all of them are somehow useful and the election depends on the type of activity that you want to design

2.7 Summary

The chapter gives literature on the influence of Information Communication Technology on teaching and learning of English in public secondary schools. ICT is an available tool to enhance teaching and learning for teachers. It is a professional resource and most effective when embedded in the curriculum, and integrated into units of work. Technologies augment this teaching-learning process in various ways. Human communication, or teacher-pupil interaction, is central to the process of learning. Despite the existence of many studies showing positive effects of using Information and Communication Technology (ICT) in the teaching and learning process in general, the use of ICT in teaching writing skills in English as Second Language (ESL) classrooms is still not very encouraging. This study attempts to seek findings on the use of ICT in the teaching of ESL writing skills in Kenyan secondary schools.

2.8 Theoretical framework

The research was anchored on pedagogy theory by Ramsden (1992) who indicated that using ICT tools for teaching and learning should focus beyond individual learner but to the social and cultural learning context within which they are situated. This holistic framework which applies to all subjects defines areas of ICT competency organized in four groups namely content and pedagogy, collaboration and networking, social issues and technical issue.

Content and pedagogy focus on instructional practices of teachers and their knowledge of the curriculum. It requires that teachers apply ICT in their respective disciplines to support and extend teaching and learning while collaboration and networking showcase the communicative potential of ICT to extend learning beyond the classroom and necessitate the development of new knowledge and skills. The real power of ICT comes from new ways of communicating beyond the four walls of the classroom and by locating information from worldwide sources wherever these may be located. The implication for teachers as they assist their students in collaborating with other learning groups and using networks to research assignment topics is that they cease to be the main source of knowledge in the classroom. Instead, teachers' roles change from being "a sage on the stage" to becoming a guide on the side". Through collaboration and networking, professional teachers promote democratic learning within the classroom and draw upon expertise both locally and globally (Resta, 2002).

Social issues imply that teachers can acquire an understanding of social issues, including the recognition and understanding of legal and moral codes such as copyright and intellectual property rights; participation in debates on the impact of ICT on society; and the use of ICT in the promotion of a healthy society. Awareness of such issues will lead to suitable application of ICT in pedagogy and development. Technical issues that include teacher adoption of new teaching skills and methodologies include technical proficiency and the provision of both technical infrastructure and technical support for ICT integration throughout the curriculum. These core competencies can be seen as ‘cluster objectives that are critical for the successful use of ICT as a tool for learning’ (Resta, 2002). The most crucial factor in integrating ICT into teaching and learning depends on the extent to which various guiding principles of the integration are formulated and applied.

2.9 Conceptual framework

The conceptual framework for this study is based on the effectiveness of the use of ICT in teaching and learning of the writing reading speaking and listening skills in English language. Figure 2.1 shows the relationship between the independent and dependent variables.

INDEPENDENT VARIABLE

DEPEDENT

VARIABLE:

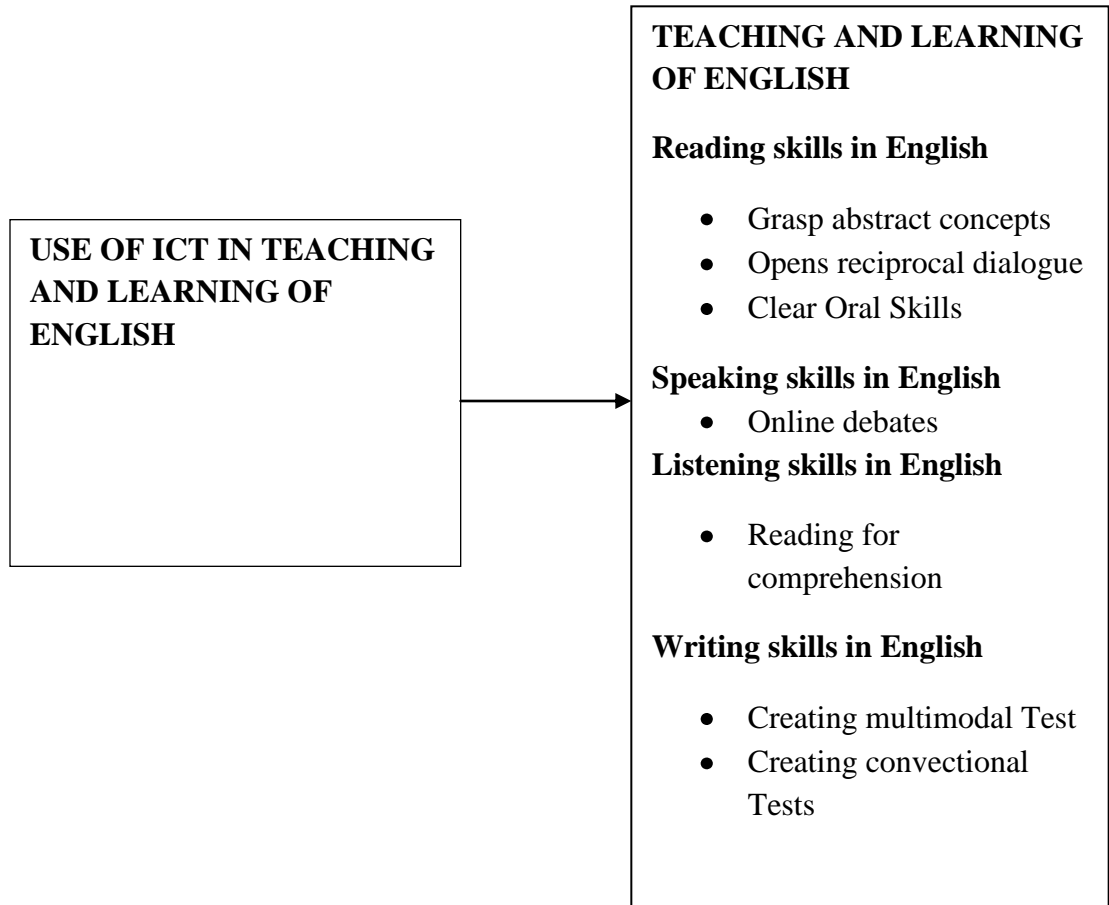


Figure 2.1: Conceptual Framework

In this study the researcher conceptualizes a situation where ICT enhances the learning and teaching of English language and in turn lead to development of English language skills of writing, reading, listening and speaking. The ICT use in listening, writing, speaking and reading skills are the independent variables and which will lead to an outcome of influencing the English language among learners

who are taught using the ICT integrated approach. It is against this background that the present study sought to establish the influence of Information Communication Technology on teaching and learning of English in public secondary schools in Marani sub- County in order to improve the performance in the subject which has deteriorated over time as indicated in Table 1.2. The purpose of the study was to establish the influence of Information Communication Technology on teaching and learning of English in public secondary schools in Marani sub- county, Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers the research methodology. It is organized under the following headings: research design, target population, sample and sampling procedures. It also constitutes the research instruments, validity and reliability of the instruments, data collection procedures and data analysis techniques.

3.2 Research design

This study adopted a mixed methodology design. According to Gay (2006), a descriptive research is a process of collecting data in order to answer questions concerning the status of the subjects in the study. Descriptive survey designs are used to allow researchers to gather information, summarize, present and interpret for the purpose of clarification (Orodho, 2002). Kothari (2009) noted that mixed research methodology is intended to produce statistical information about aspects of education that interest policy makers and educators. The survey research was therefore useful because it was economical to take a sample of the population to generalize results for the entire population.

Mixed research design was employed because it guarantees breadth of observation and also provide for the accurate descriptive analysis of characteristics of a sample which can be used to make inferences about population (Kothari, 2009). Mixed design methodology is a method of collecting information

by interviewing or administering a questionnaire to a sample of individuals. It can be used when collecting information about people's attitudes, opinions, habits or any of the variety of education or social issues (Orodho, 2002). Mixed design methodology enabled the researcher to obtain both qualitative and quantitative information from respondents which was generally a representative sample from a specific population. This became cost effective and feasible in terms of time and other resources.

3.3 Target population

The study targeted all the 30 public secondary schools, 82 teachers of English, 2,851 Form 2 and 3 students as well as one sub-county quality assurance and standards officer (SQASO) in Marani sub-County. The Form 2 and 3 students were targeted because they were more experienced than form ones and form twos since they had been in secondary school a longer time. The form fours could not participate in the study because they were preparing for their mock examinations by the time the researcher was collecting data, and were more focused on the impending national examinations therefore the accessible population was 2,934 respondents.

3.4 Sample size and sampling procedure

Orodho (2004) defines a sample is a section of a target population which is representative of the characteristics of the entire population. The researcher sampled 285 students out of 2851 that is, 10.0 %. This was based on the Central

Limit Theorem which states that, for any sample size, $N \geq 30$, sampling distribution of means is approximately a normal distribution irrespective of the parent population. Using the theorem, the 10 percent of the accessible students was within the range of normal distribution. Stratified sampling was used to create 4 different strata based on the number of zones in Marani Sub-County, Kisii County. From each stratum 71 students were selected using a simple random sampling. Simple random sampling was suitable for this selection since this helped avoid the feeling of bias amongst the respondents. Due to small population of teachers, the researcher used the entire population of 82 teachers where purposeful sampling was used since the study targeted English language teachers and not other teachers. The researchers also used purposeful sampling to choose the SQASO who was only single in the Marani Sub -County.

Table 3.1
Target population and sample size

Respondents	Target population	Sample size	Percentage
Teachers of English	82	82	100.0
Students	2851	285	10.0
Sub-County Quality and Standards Officer	1	1	100.0
Total	2934	368	70.0

A total sample of 368 respondents who consisted of 285 students and 82 teachers were used for the study.

3.5 Research instruments

In this study, questionnaires and interview schedules were used. The instruments were used to supplement each other and to give a deeper and wider exploration into research perspective which would give the research more quality. The use of questionnaire as a tool in this research was quite efficient because through them the researcher was able to obtain personal views from the respondents. In the questionnaire, structured or closed ended questions were used. Closed ended questions were used with the aim of helping the researcher to obtain the personal views of the respondents. The higher the score the more positive the opinion towards the subject, with the exception of questions which are negative and could show a lower score to indicate a more positive opinion. The questionnaires were administered to teachers of English and students.

An interview schedule is an oral administration of a questionnaire, which involves a face-to-face interaction. The interviews were administered to the SQASO. The interview schedule were semi-structured to enable the researcher obtain both qualitative and quantitative data for the study.

3.6 Validity of the instruments

Validity is defined as the accuracy and meaningfulness of inferences, which are based on the research results Mugenda and Mugenda (2009). Validity is the degree to which results obtained from the analysis of the data actually represents the phenomena under the study.

Validity deals with the adequacy of the instruments (Wiersma, 2005). For example, the researcher needs to have adequate questions in the written task in order to collect the required data for analysis that can be used to draw conclusions. The content validity of research instruments was established before data collection by research experts in the Department of Curriculum Studies of University of Nairobi to evaluate the items contained in various instruments. The suggestions and clarifications by the experts were used to improve the instruments designed.

3.7 Reliability of the instruments

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trial (Kothari, 2005). The researcher, sought help of the supervisors, to critically assess the consistency of the responses on the pilot questionnaires to make a judgement on their reliability. The researcher piloted the research instruments before the actual day of the study. It was conducted amongst 2 public secondary school teachers and students in Githimbo Sub-County which is a neighbouring Sub County. The choice of the

location for piloting of research instruments was due to an observation that the schools in the region have the same challenges as envisaged by the purpose of the study. The purpose of conducting the pilot study was to assess the suitability and the clarity of the questions on the instruments designed, relevance of the information being sought and the language used and to test the reliability and validity of the research instruments. The respondents who participated in the pilot study were not included during the actual data collection.

The researcher examined the research instruments for appropriateness of items so as to identify any ambiguous and/or unclear items. Such items were restated to ensure that the respondents clearly understood them. From the results of the pilot study, reliability coefficient was determined using Pearson's Product Moment Correlation Method where a reliability coefficient value of 0.78 was established. According to Orodho (2004) a correlation co-efficient of about 0.8 is high enough to judge the instruments as reliable for the study and this applied in this study.

The researcher utilised Pearson's product moment formula.

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N\sum X - (\sum X)^2\}[N\sum Y - (\sum Y)^2]}}$$

Where r- The Pearson's correlation coefficient

X- The result from the first test

Y-The result from the second test

N- The number of observations

3.8 Data collection procedures

Before data collection, the researcher sought for permission from the University of Nairobi to enable her get a research permit from the National Council for Science, Technology and Innovation (NACOSTI) under the Ministry of Education, Science and Technology (MOEST). After acquiring the permit, the researcher further sought for permission from the Sub-County Deputy Director of Education (SDDE) of Marani Sub-county to collect data from public secondary schools in the Sub-county. The researcher also sought for permission from the principals of selected schools. This was done before the actual collection of data. The questionnaires were administered by the researcher to the respondents in an effort of minimizing biasness, and to assure confidentiality.

3.9 Data analysis techniques

Study data were organized, presented, analyzed and interpreted using descriptive statistical techniques. The descriptive statistics that were used to summarize data include percentages and frequencies while inferential statistics was used to establish relationship between dependent and independent variable.

Collected data were first coded, sorted and organized for analysis. Qualitative data were analyzed using content analysis. From the interviews, the researcher focused on statements, words and concepts used by the respondents

when responding to interview questions posed by the researcher. For quantitative data, summary statistics like the mean and standard deviation were used to analyze the data. The mean, for instance, was used to find the average response of a respondent concerning a given item determining the effectiveness of the administration. Percentages were used to show the proportion of teachers that gave a particular response. Graphical presentations such as bar graphs and tables were used to describe the nature of the distribution of the data obtained from respondents. Bar graphs were used, for instance, to display how the demographic characteristics of the teachers responding to questionnaires. Tables complemented bar graphs in showing the demographic characteristics of the teachers responding to questionnaires. They were also used to show how teachers responded to various questions in the questionnaire. To analyze the influence of Information Communication Technology on teaching and learning of English, a regression analysis was conducted.

The regression method was used since there are data collected by use of the Likert Scale concerning the dependent variable and independent variables in this research which was use of ICT in teaching and learning of the writing, reading speaking and listening skills in English. Regression model shows the relationship between the independent and dependent variables in the study.

The regression model took the form below.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

Where

Y = Teaching and learning of English language proficiency

β_0 = Intercept term

X_1 = ICT and reading skills in English

X_2 = ICT and writing skills in English

X_3 = ICT and speaking skills in English

X_4 = ICT and listening skills in English

β_i = Intervening variables i

To test the statistical significance of each of the regression variables β_0 and the β_i the T-tests at 95 % confidence level was used. The p value at 95 % was used to test the statistical significance of the whole regression. The p value was set to <0.05 as recommended in social sciences (Kothari, 2003). The coefficient of determination R^2 and the adjusted R^2 were used to determine the strength at which the variation in the independent variables explains the variation in the dependent variable.

3.10 Ethical considerations

An introductory letter was obtained from the university requesting authorities at the schools to allow the research to be carried out from their schools. The researcher requested to meet the students to whom the purpose of study was explained and the students were requested to participate. The participants were told the duration and the procedure that was to be followed and how their privacy would be respected. Participation in the study was voluntary and participants were allowed to withdraw from the study if they wished to. Participants' rights to privacy were not violated; all the information about participants acquired during the study were treated as highly confidential and were not made available to others. Research results were reported fully and accurately.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND PRESENTATION

4.1 Introduction

This chapter presents a description of analysis, data presentation, interpretation and discussion. The study was on the influence of ICT on teaching and learning of English language among secondary schools in Marani Sub-County, Kenya. The following research objectives were formulated for the study: to examine the extent to which ICT influences teaching and learning of reading skills in English; to establish the extent to which ICT influences teaching and learning of speaking skills in English; to establish the extent to which ICT influences in teaching and learning of listening skills and to examine the extent to which ICT influences teaching and learning of writing skills in English language. Descriptive and inferential statistics were used to analyse the data where the results were presented in form of frequency tables and figures.

4.2. Questionnaire return rate

The questionnaires were administered in person to the teachers and students. Out of the 367 questionnaires administered, 282 were successfully filled and returned. This gave the return rates as indicated in Table 4.1.

Table 4.1

Questionnaire return rate

Respondents	Sample	No. returned	percentage
Teachers	82	72	87.8
Students	285	210	73.6
Total	367	282	76.8

As indicated in Table 4.1, 87.8 percent of teachers returned their questionnaires and also 73.6 percent of students returned their questionnaires. The response rate achieved for the two sets of questionnaires was 76.8%. The response can be interpreted to show a willing participation from the sampled respondents. This was attributed to the fact that the researcher administered the questionnaires personally.

4.3 Demographic characteristics of the respondents

The research instruments solicited background information on demographic details of the respondents which were the teachers and students. These included gender, age, and level of academic qualification, level of experience for teachers while for student's class, gender and age. This background information of key respondents was imperative to confirm whether the research reached the targeted audience and whether or not the research

captured the information it effectively sought. The presentation of the information was separated in two tables since the characteristics of the respondents differed and therefore it was not possible to merge the two tables.

Table 4.2

Demographic background of teachers

Variable	Type	Frequency	Percentage
Gender	Male	43	60
	Female	29	40
	Total	72	100
Age	26-34 Years	20	28.3
	35-44 Years	20	28.3
	45-54 Years	17	23.3
	Above 50 Years	16	20.2
	Total	72	100.0
Experience	1-5 Years	31	43.4
	5-10 Years	41	56.6
	Total	72	100.0
Education Level	Diploma	24	33.7
	Bachelors :B.E.D	20	27.7
	ATS	7	9.6
Total		72	100.0

In the Table 4.2, 60% of the teachers were male while 40% were female. Most teachers belonged to the age bracket of between 26-34 years and the least were above 50 years of age. Minimum qualification of teachers in the study area was a Diploma accounting to 33.7%, while highest qualification was bachelor (B.ED) degree accounting to 27.7%.

Table 4.3
Demographic background of students

Variable	Type	Frequency	Percentage
Class	Form 2	113	54.0
	Form 3	97	46.0
	Total	210	100.0
Gender	Male	118	56.0
	Female	92	44.0
	Total	210	100.0
Age	Below 14 Years	77	36.7
	14-15 Years	133	63.3
Total		210	100.0

Data revealed that most of the students accounting to 44.0% were form two students while the other 35.0% who were in form three. The age distribution of students also varied with 63.3% being between the ages of 14-17years and the rest being in age of 14 years or below.

4.4 Availability of ICT as a learning tool

The study sought information on the availability of ICT as a learning tool in terms of hardware and software skills among teachers and students.

4.4.1 Where the students started to use computers

In order to establish the level of exposure of students to computer as ICT equipment the researcher sought information of when the students started to use computers for the first time. The findings are as indicated in Figure 4.1.

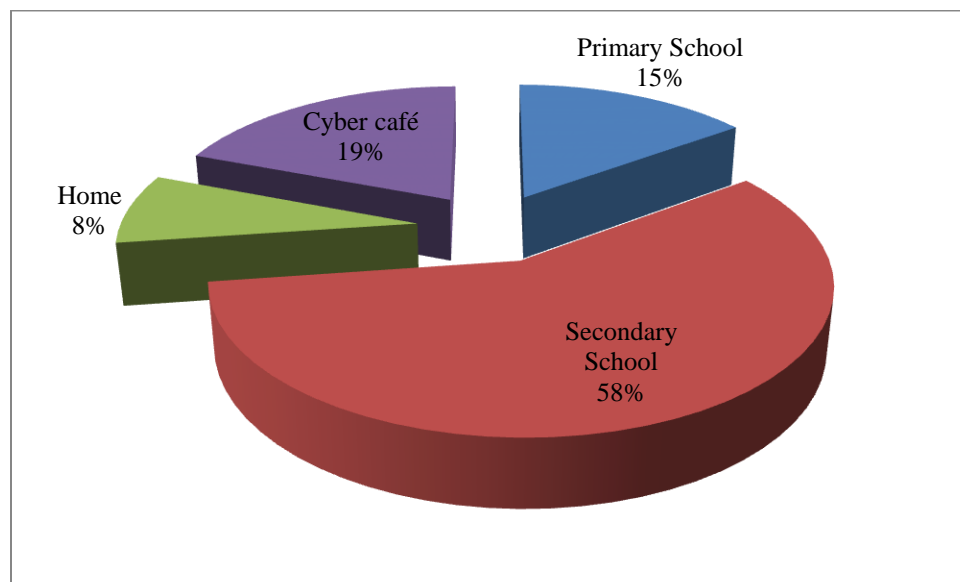


Figure 4.1: Where the students started to use computers

From findings in Figure 4.1, most students accounting to (58%) indicated that started to use computers when they joined the secondary schools while least had used computers at home (8.0%). These findings can be deduced to mean that most students in Marani Sub-County began using computers when they joined the

secondary schools. Despite the existence of many studies showing positive effects of using Information and Communication Technology (ICT) in the teaching and learning process in general, the use of ICT in teaching writing skills in English as Second Language (ESL) classrooms is still not very encouraging.

4.4.2 Number of computers in schools

The researcher wanted to identify the number of computers in order to establish their availability of ICT tools for use for teaching and learning in selected secondary schools. The findings are as indicated in Table 4.4.

Table 4.4

Number of Computers in the school as indicated by students

ICT tools	Frequency	Percentage
Less than 5	21	10.0
6-15	84	40.0
16 and above	105	50.0
Total	210	100.0

It was evident that majority school had over 16 computers, followed by 40.0% of students indicating they have 6-15 computers in the school, and only 10.0% indicating they have less than 5 computers. This was deduced to mean that

computers were available in most schools in the study area. Therefore English teacher can maximize their impact if ICT in their classrooms by ensuring that they and their students use ICT as an integral part of lessons, present ideas dynamically, and use a range of media (Bacta, 2016).

4.4.3 Number of printers available as indicated by students

The researcher wanted to identify the number of printers available for use by students and teachers for teaching and learning purposes which helped to availability of ICT tools in the sampled secondary schools. The findings are as indicated in Table 4.5

Table 4.5

Number of printers available in the school as indicated by students

Number of computer lab	Frequency	Percentage
None	11	5.0
One	116	55.0
Two	63	30.0
3 and above	21	10.0
Total	210	100

It was evident that majority students said that the school had one printer in the school, followed by the students who indicated they have two printers accounting to 30.0%, the rest 10.0% of students indicated they have more than 3 printers in the school. This was deduced to mean that there few number of printers in the sampled schools. According to Kent (2009) “ICT tools in education point of need to in various varieties such as computers, printers, communications facilities and other support features that variously support teaching, learning and a range of activities in education which can help to maximize the teaching and learning processes

4.4.4 Number of LCD projectors

The researcher sought to identify availability of LCD projectors as an ICT tool used for presentation to aid in teaching and learning in the sampled schools. The findings are as indicated in Table 4.6.

Table 4.6

Number of LCD projectors in the sampled schools as indicated by students

Number of LCD Projectors	Frequency	Percentage
None	168	85.0
One	32	15.0
Total	210	100.0

Data revealed that the most schools do not have LCD Projectors since majority 168(85.0%) of the students indicated that their secondary schools do not have any LCD Projectors. Other 15% of students are the one who indicated that their secondary schools have single LCD projectors in the school. This finding was deduced to mean that there is inadequate provision of some ICT tools like LCD Projectors. According to Nikolova (2013) in (Scheinin, 2014) numerous studies suggest that computerized media like LCD projectors offer a multimedia environment can be helpful for learning and speaking English language vocabulary.

4.4.5 Number of computers servers: modems and routers

The researcher wanted to identify the number of ICT tools like ICT servers in order to establish their availability of such advanced ICT tools for use for teaching and learning in selected secondary schools. The findings are as indicated in Table 4.7.

Table 4.7

Number of servers in the computer Laboratory in schools as indicated by students

Servers	Frequency	Percentage
None	105	50.0
One	84	40.0
Two	21	10.0
Total	210	100.0

Data revealed that the half (50.0%) of the secondary schools do not have servers connected with routers which is used to connect computers into a local area network. Other schools accounting to 40.0% have a single server in the school as indicated by students. This finding was deduced to mean that there is inadequate provision of some ICT tools like servers and so computers serves in a standalone environment. The most effective teaching and learning requires that teachers apply ICT in their respective disciplines to support and extend teaching

and learning while collaboration and networking showcase the communicative potential of ICT to extend learning beyond the classroom and necessitate the development of new knowledge and skills. The real power of ICT comes from new ways of communicating beyond the four walls of the classroom and by locating information from worldwide sources wherever these may be located.

4.4.6 Number computers connected to the internet

The researcher wanted to identify the number of computers connected to the internet in order to establish their availability of internet for use for teaching and learning in selected secondary schools. The findings are as indicated in Table 4.8.

Table 4.8

Number of Computers connected to the internet

ICT tools	Frequency	Percentage
Less than 5	168	80.0
6-15	21	10.0
Total	210	100.0

Data revealed that the more than 80.0% of secondary schools have less than 5 computers with internet connection in the entire schools. Only 10 % of schools have more than 5 computers. These findings could be explained by the

fact that most secondary schools have not installed servers to interconnect the computers and therefore they use individual modem to access internet. The most crucial factor in integrating ICT into teaching and learning depends on the extent to which various guiding principles of the integration are formulated and applied.

4.4.7 Places where computers are installed in schools

The researcher sought to find places where computers are installed for use in teaching and learning of English language in selected secondary schools. The findings are as indicated in Table 4.9

Table 4.9

Where students use computers in school

ICT tools	Frequency	Percentage
Computer Lab	189	90.0
Classrooms	21	10.0
Total	210	100.0

Data revealed 90.0% of secondary schools students' use computer in the computer laboratories while only 10.0% indicating that they access computers in classrooms or any other places. Which is an indication of inadequacy of ICT tools like computers since in well automated schools, the ICT tools are available in different department.

4.4.8 Types of Operating Systems installed in the computers

The researcher wanted to know which operating systems are installed in the computers that are available in the sampled secondary schools in Marani Sub County, in order to establish their availability and relevance use for teaching and learning in schools. The findings are as indicated in Table 4.10

Table 4.10

Students responses on type of operating system installed in the school

Operating System	Frequency	Percentage
Window XP, Linux	105	50.0
Window Vista and Version 7.0, 10.0	105	50.0
Total	210	100.0

Data revealed that half of(50.0%) of secondary schools students in Marani Sub-County are using windows XP version and Linux for the computers operating systems while another 50.0 are using and newer version of windows 7 and above. This is an indication that half of schools are using a very old almost obsolete operating system while another half are using newer and more stable operating systems Linux and Window7.

4.4.9 Students exposure to internet and email

The researcher sought to find out whether students use internet and email services. This information was important to establish student's level of exposure to the internet and email technology. The findings are as indicated in Figure 4.2

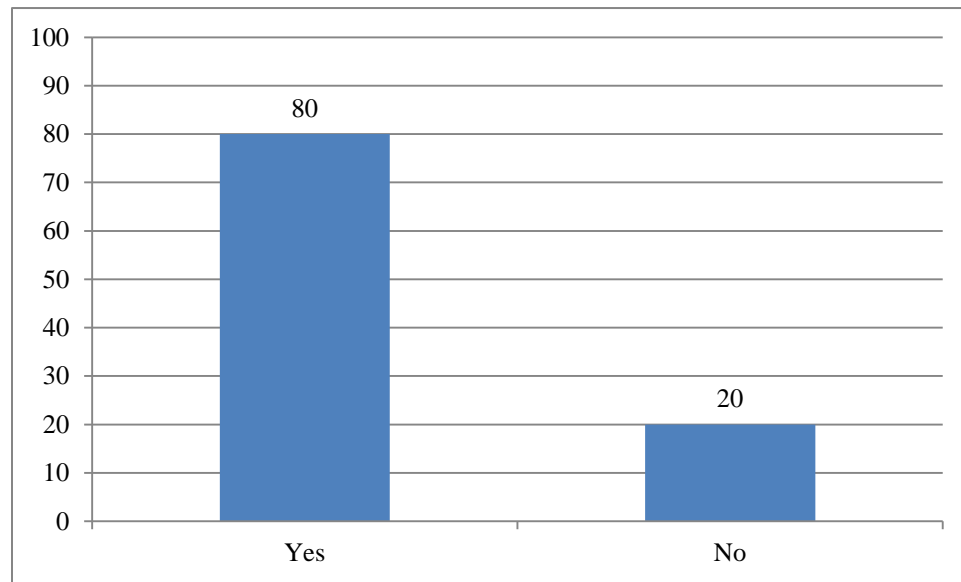


Figure 4.2 :Whether students currently use internet and Email

The findings in Figure 4.2 indicates that most (80.0%) of secondary students in Marani Sub-County used internet and email, whereby from qualitative comments from interview most indicated that they use mobile phones to access the internet and email systems with the most popular internet use being accessing social media application ,face book, twitter and Yu-Tube.. Technologies augment this teaching-learning process in various ways. Human communication, or teacher-pupil interaction, is central to the process of learning.

The use of Instant Messaging tools which include e-mail exchanges, audio and video conferencing could facilitate information exchange, giving feedback and provide opportunities for asking questions (Lamy, 2004; Stepp-Greany, 2002; Sotillo, 2005).

4.4.10 Reasons for accessing internet tools

The research sought information from students on the reasons why they access internet in order to assess their awareness of different features that are provided by the internet applications. The findings are as shown in Table 4.11.

Table 4.11

Reasons why students access internet tools

Use of Internet technology by students	Frequency	Percentage
I use internet to interact with friends	42	20.0
I use to download music, videos and for other entertainment	67	32.0
Sending and receiving mails letters	44	21.0
I use internet to keep updated with current affair, news and trend	42	20.0
To learn more on different subjects to supplements class work	15	7.0
Total	210	100.0

The research established that in most cases students' used various internet application for personal entertainment which includes downloading music and videos (32.0%) while least 7.0% used internet for learning school subjects matters. From the findings it was deduced that most students used internet applications for social networking and communication more than for learning and seeking classroom information. The use of Instant Messaging tools which include e-mail exchanges, audio and video conferencing could facilitate information exchange, giving feedback and provide opportunities for asking questions (Lamy, 2004; Stepp-Greany, 2002; Sotillo, 2005).

4.4.11 Students' computer application skills

The research sought information on students' computer application skills order to ascertain their readiness to use ICT for learning english in secondary schools. This was done using a 5 level likert scale where the lowest (1) was lowest and highest (5) was excellent. The findings are as tabulated as shown in Table 4.12.

Table 4.12**Students' responses on computer application skills**

Computer areas	Poor 1	Fair 2	Good 3	Better 4	Excellent 5	Mean	SD
Word processing	9.0	10.0	28.0	28.0	25.0	1.88	.683
Spread sheets	10.0	15.0	22.0	28.0	25.0	1.65	.783
Database	8.0	20.0	20.0	25.0	27.0	1.47	.706
Power point	5.0	16.0	15.0	34.0	30.0	1.69	.850
Internet	15.0	22.0	20.0	21.0	22.0	1.80	.393
Developmetn of web pages	8.0	10.0	27.0	27.0	28.0	1.06	.639
Basic repair and maintance	32.0	25.0	25.0	10.0	8.0	1.20	.632
Total=210							

From Table 4.12 it was established that the most students possess 'fair' computer application in word-processing, spread sheets and power point as well as internet ($M=1.88$; $SD=.683$). However most of learners are poor in basic computer repair and maintenance, development of web pages and even data base creation and management as indicated by ($M=1.06$; $SD=.632$) which was rated as , 'poor'. This clearly indicates that there is need to students to be sensitized and trained on basic computer skills before they can apply them in learning of any subject, English included. This shows the extent of the research problem in the area of study.

According to Jarvis (2014) for teaching and learning to be productive in teaching English language adequate IT skills, are needed in order to manage hardware and software so that various tasks are completed and problems are resolved. Jarvis (2014) believes that by integrating basic IT skills in the language speaking classroom, we are developing language skills and equipping learners with technology skills. The applications of these technology skills go beyond the language learning. Similarly according to Elia, (2015) “ICT plays a part in fostering intercultural competence”, which is a part of learning English language? ICT provides a variety of different approaches as well as learning styles that reinforce the material delivered in other formats.

4.4.12 Teachers computer application skills

The research sought information on teachers computer application skills in order to ascertain their readiness to use ICT for teaching students. The findings were tabulated as shown in Table 4.13.

Table 4.13**Teachers' responses on computer application skills**

Computer areas	No expertise 1	fair 2	Good 3	very Good 4	Excellent 5	Percent	Mean	SD
Ms word	9.0	10.0	28.0	28.0	25.0	100.0	3.85	.683
Spread sheet (Excel)	10.0	15.0	22.0	28.0	25.0	100.0	3.10	.738
DTPs (MS publisher)	8.0	20.0	20.0	25.0	27.0	100.0	3.33	.706
Data base (Access)	5.0	16.0	15.0	34.0	30.0	100.0	3.28	.584
Power point	15.0	22.0	20.0	21.0	22.0	100.0	2.66	.584
Internet	8.0	10.0	27.0	27.0	28.0	100.0	3.30	.545
Development of web pages	32.0	25.0	25.0	10.0	8.0	100.0	2.13	.547
Basic repair and maintenance	37.0	33.0	18.0	6.0	6.0	100.0	1.89	.619
Total =72								

From Table 4.13, teachers were on average found to be good in basic computer skills including word processing, spreadsheet, PowerPoint and internet (M=3.40; SD=.600), with the lowest skills being in development of web pages (M=2.01; SD=.547) and basic repair and maintenance of computers. This shows that the teachers possess basic skills to delivery ICT aided teaching and learning among students in Marani Sub-County. According to Jarvis (2014) for teaching

and learning to be productive in teaching English language adequate IT skills, are needed in order to manage hardware and software so that various tasks are completed and problems are resolved. Jarvis (2014) believes that by integrating basic IT skills in the language speaking classroom, we are developing language skills. In reading skills, Litman (2015), states that learning should be focused on reading for comprehension.

4.4.13 Rating of teacher's on use of ICT tools for teaching and learning of English subjects

The research sought to rate the teachers on how ICT tools can be used for teaching English subjects in secondary schools. The findings were tabulated as shown in Table 4.14

Table 4.14

Teachers' ratings on use of computers in teaching and learning of English

Statement	SA	A	U	D	SD	Mean	SD
Computer assisted lessons are dull	0	0	6	18	58	1.37	.688
Computer assisted lessons are difficult	0	0	0	34	48	1.41	.618
Computer assisted lessons are interesting	42	28	10	2	0	4.34	.793
Students like the computer assisted lessons	32	38	8	4	0	4.20	.488
The quality of student work has improved	36	29	15	2	0	4.26	.558
Students understand better when they use a computer to learn	28	22	32	0	0	3.95	.737
Total =72							

The findings in Table 4.14 indicated that quality of their work improve through use of computers in learning as shown by (M=4.26; SD= .558, most teachers perceive that computer assisted lessons are interesting to students this is shown by a (M=4.34; SD=0.793), most students like the computer assisted lessons this is also shown by a mean of (M=4.20;SD= .488). This shows that given the infrastructure and skill-empowerment, teachers expect student performance to improve significantly. Hence teachers disagree that computer lessons are dull and difficult for both learners and teachers.

Computers are meant to make learning and teaching easier for students and teachers respectively. ICT integration in teaching and learning is a key way of improving teaching and learning. The standard deviation measures how concentrated the data are around the mean; the more concentrated, the smaller the standard deviation, the more it close to zero or close to 1. Standard deviation is a "measure of dispersive tendency". It is how wide a range the values span. A smaller standard deviation means the variation of opinion of respondents was small. A large standard deviation means the variation is large. ICT also enables a representation to language as a symbolic system. Furthermore the use of well-designed ICT environments can help students grasp abstract concepts such as imagery, literary relations, and morphology (Interactive education, 2016). Teachers can use arrange of teaching tools such as discussion boards, forums, video as tools for delivery of class program. This opens reciprocal dialogue

between members of the clad community and may be attended to the school community at large through activities such as blogs (Kinzie, 2015).

4.5 Students and teachers perception towards use of ICT in teaching and learning English Language

How students feels towards use of ICT in the reading, writing, listening and speaking skills in English language public secondary schools in Marani sub-County.

4.5.1 Students and teachers perception towards use of ICT in teaching and learning English Language

The study sought from students and teachers on how they felt towards use of ICT in teaching and learning of reading skills in English language. 5 level likert scale was used to assess how the 'feeling' or the perception where the highest level is 5 strongly agree (SA), 4 = agree (A), 3=Undecided (U), 2=disagree (D) and the lowest level strongly disagree (SD) towards use of ICT in teaching and learning of reading skills in English language. In the study percentage frequency, measure of central tendency (mean of respondents) and measure of dispersion (Standard deviation) were used for interpretation. In this study percentage frequency and mean has the same trend in the interpretation, however standard deviation is a "measure of dispersive tendency". It is how wide a range the values span.

A standard deviation far from absolute 1, means that the variation of opinion of respondents was huge, whereas a standard deviation near absolute 1, means that the variation is large. A large mean or a small mean is not necessarily accompanied by a large or small standard deviation since whereas majority of respondents may hold an opinion; there is also a chance of other dispersed opinions on the same subject or high agreement in the rejection of the statement provided. The standard deviation measures how concentrated the data are around the mean; the more concentrated, the smaller the standard deviation, the more it is close to zero or close to 1. Standard deviation is a "measure of dispersive tendency". As West (2015) suggests, the combination of several online tools can be much more powerful to match the strengths and features of each with the requirements of the activity at hand. So the use of one of them does not mean that you have to abandon other useful tools.

4.5.2 Students and teachers perception towards use of ICT in teaching and learning of reading skills in English language

The study sought from students how they felt towards use of ICT in teaching and learning of reading skills in English language. The findings are as shown in Table 4.15

Table 4.15**Students perception towards use of ICT in teaching and learning of reading skills in English language**

Statements	SA	A	U	D	%	SD	Mean	SD
Reading skills								
Computer assisted lessons materials are easy to read	33.0	45.0	12.0	5.0	100.0	5.0	4.33	.811
Computer assisted lessons are interesting and Interactive	42.0	40.0	10.0	4.0	100.0	4.0	4.46	.614
Computer motivates me to read and also has an assistant who assists in improving reading skills	54.0	30.0	10.0	3.0	100.0	3.0	4.60	.673
Computer assisted lessons have no handwriting challenges hence easy to read	45.0	40.0	10.0	2.5	100.0	2.5	4.72	.685
Total =210								

Findings in Table 4.15 shows that most students agreed that computer assisted lessons are easy to read (M=4.33, SD=.811), the students similarly agreed that computer assisted lessons are interesting and interactive which also enhances reading skills this is also shown by a mean of a (M=4.46 and a SD= .614.),Most students agreed indicated that ICT motivates the individual students to read and that it also has an assistant who assists in improving reading skills as shown by a (M= 4.60 and a SD= .673) and also that computer assisted lessons have no

handwriting challenges hence easy to read as shown by (M= 4.72 and a SD= .685).

This shows that learners appreciate that ICT help them to improve on reading skills. Mean of level 4 in the likert scale and a standard deviation of close to absolute 1, indicating the variation of opinion of respondents was small. Smithson, (2015) mentions that interactive site found in the internet improves interaction of students and ensures that students are highly motivated by this activities and provide stimulus to undertake tasks that students may otherwise avoid. Computer assisted lessons materials may be easy to read because ICT is interactive and dynamic in nature and can meet the needs of individual students (KLA, 2012).Most teachers similarly agree with students on all the statements on disagreeing on standard deviation indicating trend of lack of uniformity in the opinion of teachers.

Table 4.16**Teachers perception towards use of ICT in teaching and learning of reading skills in English language**

Statements	SA	A	U	D	%	SD	Mean	SD
Reading skills								
Computer assisted lessons materials are easy to read	30.0	48.0	9.0	9.0	100.0	5.0	4.00	.400
Computer assisted lessons are interesting and interactive	35.0	40.0	17.0	3.0	100.0	5.0	4.00	.400
Computer motivates me to read and also has an assistant who assists in improving reading skills	49.0	36.0	7.0	6.0	100.0	3.0	4.14	.314
Computer assisted lessons have no handwriting challenges hence easy to read	40.0	45.0	15.0	0	100.0	0	4.80	.385
Total=72								

From the findings it was deduced that teachers and students have the same ‘feeling’ or perception that use of ICT enhances teaching and learning of reading skills in English language, however whereas most students were unanimous on the benefits, some teachers differed with the opinion as was indicated by the standard deviation. The standard deviation measures how concentrated the data are around the mean; the more concentrated, the smaller the standard deviation, the more it close to zero or close to 1.

As West (2015) suggests, the combination of several online tools can be much more powerful to match the strengths and features of each with the requirements of the activity at hand. So the use of one of them does not mean that you have to abandon other useful tools. According to this idea, we think that every tool that has been developed fulfills with the requirements for which it has been designed.

4.5.3 Students and teachers perception towards use of ICT in teaching and learning of writing skills in English language

The study sought from students and teachers on how they felt towards use of ICT in teaching and learning of reading skills in English language. The findings are as shown in Table 4.17

Table 4.17
Students perception towards use of ICT in teaching and learning of writing skills in English language

Statement on writing skills	SA	A	U	D	SD	Percent	Mean	SD
Computer assisted lessons are easy to write.	30.0	48.0	10.0	6.0	6.0	100.0	4.65	.612
The quality of my work has improved via Computer use	32.0	25.0	30.0	10.0	3.0	100.0	3.73	.613
Total=210								

Findings in Table 4.17 shows that most students agreed that computer assisted lessons are easy to write as shown by (M=4.65, SD=.612), that the quality of their class work have improved as a result of computer use (Mean=3.73, SD= 0.613). However most student could not agree or disagree with statement that their handwriting has improved due to imitation of computer assisted lessons (Mean=of 3.38, SD=.648). This shows that with ICT learners can understand better, be attentive and embrace clear communication due to computer aid. The speaking skills are also expected to improve if only computers can be availed together with the skill empowered teachers who are able to transfer the computer knowledge to the learners. As West (2015) suggests, the combination of several online tools can be much more powerful to match the strengths and features of each with the requirements of the activity at hand. So the use of one of them does not mean that you have to abandon other useful tools.

Table 4.18
Teachers perception towards use of ICT in teaching and learning of writing
skills in English language

Statement on writing skills	SA	A	U	D	SD	Percent	Mean	SD
Computer assisted lessons are easy to write	2.0	3.0	20.0	30.0	45.0	100.0	1.56	.310
The quality of my work has improved via Computer use	2.0	3.0	20.0	30.0	45.0	100.0	1.74	.313
Total=72								

However concerning the ICT and writing skills most teachers disagreed with various statement which include that quality of student work has improved via computer use comparing to previous times shown by (Mean= 1.56 and SD= .310), Quality of student work has improved since students commenced using ICT tools as shown by (Mean1.74 and SD= .413) which also strongly differed students the opinion. The findings can be deduced to mean that many teachers still prefer the traditional approach in writing unlike the students who seems to favour the computer enabled writing techniques.As West (2015) suggests, the combination of several online tools can be much more powerful to match the strengths and features of each with the requirements of the activity at hand. So the use of one of them does not mean that you have to abandon other useful tools.

4.5.4 Students and teachers perception towards use of ICT in teaching and learning of listening skills in English language

The study sought from students on how they felt towards use of ICT in teaching and learning of listening skills in English language. The findings are as shown in Table 4.19

Table 4.19
Students Perception towards use of ICT in teaching and learning of listening skills in English language

Statement on	SD	A	U	D	SD	%	Mean	SD
Listening skills								
I understand better if i use a computer to learn	10.0	10.0	55.0	15.0	10.0	100.0	3.43	.510
I remain attentive when learning via computer	36.0	28.0	20.0	10.0	6.0	100.0	4.48	.701
Computer assisted lessons have voice systems which enable in translation English from computer assisted lessons is clear and easy to understand.	35.0	35.0	20.0	1.0	0.0	100.0	3.59	.756
English from computer assisted lessons is clear and easy to understand.	30.0	46.0	10.0	7.0	7.0	100.0	4.42	.882
Total=210								

Findings in Table 4.19 shows that most strongly agree with the statement that when using ICT they remain attentive as indicated by a mean of (M=4.48 and SD .701) while being in agreement that the English from computer assisted lessons is clear and easy to understand(M=3.59; SD=.756),computer assisted lessons are friendly (M=4.62; SD=.909), Computer assisted lessons have voice

systems which enable in translation and clear communication which enables them to listen well and being attentive (M=3.59; SD=.756)but could neither agree nor disagree that with ICT they understand better the learning(M=ICT they understand better the learning(M=3.53; SD=.510). However the findings were different with teachers disagreeing with all statement apart from agreeing that computer assisted lessons have voice systems which enable in translation and clear communication which enables students to listen well and attentive(M=4.00; SD=.510).

ICT also enables a representation to language as a symbolic system. Furthermore the use of well- designed ICT environments can help students grasp abstract concepts such as imagery, literary relations, and morphology (Interactive education, 2016). Teachers can use arrange of teaching tools such as discussion boards, forums, video as tools for delivery of class program. This opens reciprocal dialogue between members of the clad community and may be attended to the school community at large through activities such as blogs (Kinzie, 2015).

Table 4.20
Students Perception towards use of ICT in teaching and learning of listening
skills in English language

Statement on Listening skills	SD	A	U	D	SD	%	Mean	SD
I understand better if I use a computer to learn	10.0	15.0	50.0	12.0	13.0	100.0	3.45	.310
I remain attentive when learning via computer	30.0	25.0	25.0	10.0	10.0	100.0	3.25	.400
Computer assisted lessons have voice systems which enable in translation	40.0	30.0	10.0	5.0	5.0	100.0	4.00	.310
English from computer assisted lessons is clear and easy to understand.	30.0	46.0	10.0	7.0	7.0	100.0	4.42	.882
Total=72								

From the findings teachers and students differed on the variation of agreement and on uniformity of the opinion as shown by differing means and standard deviation. The standard deviation measures how concentrated the data are around the mean; the more concentrated, the smaller the standard deviation, the more it close to zero or close to 1. Standard deviation is a "measure of dispersive tendency". It is how wide a range the values span. A smaller standard deviation means the variation of opinion of respondents was small. A large standard deviation means the variation is large.

As West (2015) suggests, the combination of several online tools can be much more powerful to match the strengths and features of each with the

requirements of the activity at hand. So the use of one of them does not mean that you have to abandon other useful tools.

4.5.5 Students and teachers perception towards use of ICT in teaching and learning of speaking skills in English language

The study sought from students on how they felt towards use of ICT in teaching and learning of speaking skills in English language. The findings are as shown in

Table 4.18

Table 4.21

How students perceive use of ICT in teaching and learning of English language and speaking skills

Speaking Skills	SA	A	U	D	SD	%	Mean	SD
Computer assisted lessons have improved my spoken English	22.0	45.0	20.0	7.0	6.0	100.0	3.55	.613
Computer assisted lessons are friendly	35.0	45.0	6.0	8.0	6.0	100.0	4.34	.895
Computer assisted lessons are clear and visible	40.0	40.0	10.0	5.0	5.0	100.0	4.62	.909
Computers with their speaking aids help in improving spoken in students spoken English	35.0	35.0	10.0	10.0	10.0	100.0	3.89	.631
Total=210								

Findings in Table 4.21 shows that most strongly agree with the statement that the computer assisted lessons are clear and visible (M=4.62; SD=.909) and that computer assisted lessons are friendly (M=4.62; SD=.909), they as well agree with the statement that computer assisted lessons have improved students spoken English as shown by (M=3.55; SD=.613) and computers with their speaking aids help in improving students spoken language (M=3.89; SD=.631). The standard deviation of .500 in all statement was relatively in proximity to absolute 1 indicating the variation of opinion among respondents was small. This was deduced to mean that the speaking skills are expected to improve if only computers and other ICT tools can be availed together with the skill empowered teachers who are able to transfer the computer knowledge to the learners.

Jarvis (2014) believes that by integrating basic IT skills in the language speaking classroom, we are developing language skills and equipping learners with technology skills. The applications of these technology skills go beyond the language learning. According to (Lanni, 2015) when different ICT Tools are mixed together along with other skills students are benefited and gain much more than what was expected.

Table 4.22

How teachers perceive use of ICT in teaching and learning of English language

Speaking Skills	SA	A	U	D	SD	%	Mean	SD
Computer assisted lessons have improved my spoken English	22.0	40.0	25.0	5.0	7.0	100.0	3.45	.400
Computer assisted lessons are friendly	5.0	5.0	10.0	40.0	40.0	100.0	2.34	.600
Computer assisted lessons are clear and visible	40.0	30.0	20.0	5.0	5.0	100.0	4.00	.413
ICT aids help in improving spoken Skills	10.0	15.0	10.0	35.0	40.0	100.0	2.00	.400
Total=72								

The respondents from teachers varied from students in that most teachers could neither agree nor disagree with statement that computer assisted lessons have improved students spoken English (M=3.45; SD=.400), they disagreed also with other statements, only being in agreement that computer assisted lessons are clear and visible and that computers speaking aids help in improving students spoken English spoken skills. The standard deviation measures how concentrated the data are around the mean; the more concentrated, the smaller the standard deviation, the more it close to zero or close to 1. Standard deviation is a "measure of dispersive tendency". It is how wide a range the values span. A smaller

standard deviation means the variation of opinion of respondents was small. A large standard deviation means the variation is large.

As West (2015) suggests, the combination of several online tools can be much more powerful to match the strengths and features of each with the requirements of the activity at hand. So the use of one of them does not mean that you have to abandon other useful tools.

4.6 Influence of information communication technology on teaching and learning of English

The main objective of the research was to establish the extent to use of ICT in schools in teaching and learning English influences reading, writing, speaking and listening skills in public secondary schools in the study area. Therefore ICT use in teaching and learning of English language was the independent variable used to predict the development of various skills in English language amongst students. This was done by finding the relationship between the dependent and the independent variables using multiple regression analysis. Multiple regressions were used to analyse the hypothesized relations of the dependent and independent variable in 3 stages.

The first step involved determination of coefficient of relationship (Adjusted R), which measured the size of effect of independent to dependent variable. Adjusted R is the most reliable coefficient for determination rather than

using R or R squared since the size of error is minimal (Kothari, 2004). The closer the R is to absolute 1 the higher the effect of independent variables to the dependent variables (Kothari, 2004).The second stage was to indicate the significance of the joint effect (ANOVA) of dependent variable on the independent variables. The third step indicated the standardized score of each of the coefficient (Beta) indicating how use of ICT in teaching and learning of English Language in sampled schools in study area could have contributed in development of each of the four skills namely reading , writing ,speaking and listening individually.

4.6.1 Size of effect of use of ICT in teaching and learning of English on skills development

The research sought to determine the extent to which development of skills in English language could be attributed to the use of ICT tools in teaching and learning of English language in selected schools in the study area. This was determined by use of coefficient of determination which measured the size of effect of independent to dependent variable.

Table 4.23

Regression model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.881 ^a	.747	.698	.71250

a. Dependent: (Constant), English Language Skills: Listening , Speaking ,, Reading Skills, Writing Skills in English

b. Predictors Variable: Use of ICT in teaching and learning of English skills

From findings in Table 4.23 the regression summary show that coefficient of determination (adjusted R) was 0.698 which implies that use of Information Communication Technology in teaching and learning of English in public secondary schools can be attributed to influence 69.8% of the development of teaching and learning skills such as writing, reading, listening and speaking. This finding was found to be in agreement with Elia, (2015) who indicated that ICT plays a part in fostering inter-linking skills and competence, which is a part of learning English language.

4.6.2 Significance of the regression effect

In order to indicate that the findings of the regression are accurate and are not due to chance but because of absolute relationship between independent and dependent variables. The findings are as shown in Table 4.24.

Table 4.24

Significance of model

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.306	4	4.327	8.523	.020 ^a
	Residual	34.013	67	.508		
	Total	51.319	71			

a. Dependent: (Constant), English Language Skills: Listening , Speaking ,, Reading Skills, Writing Skills in English

b. Predictors Variable: Use of ICT in teaching and learning of English skills

Table 4.24 indicate that the variation of the model was statistically significant at $p < 0.05$, The relationship between dependent and independent variable was not due to chance and so the findings can be applied in other settings. With this finding English teacher can maximize their impact if ICT in their classrooms by ensuring that they and their students use ICT as an integral part of lessons, present ideas dynamically, and use a range of media (Bacta, 2016).

4.6.3 Coefficients of regression of effect of use of ICT in teaching and learning English on individual skills development

The purpose of the study was to establish the influence of Information Communication Technology on teaching and learning of English. The standardized regression coefficient indicated the influence of ICT in the development of each of the four skills namely reading skills, writing skills, speaking and listening skills in English as shown in Table 4.21

Table 4.25

Coefficient of reading, writing, listening and speaking skills

Model	Coefficients ^a				t	Sig.
	Unstandardized Coefficients		Standardized Coefficients			
	B	Std. Error	Beta			
1 (Constant)	3.161	.567			5.574	.234
Reading Skills in English	.716	.147	.690		2.467	.010
Writing Skills in English	.656	.228	.546		.746	.035
Speaking Skills in English	.606	.082	.592		.685	.040
Listening Skills in English	.644	.302	.623		2.145	.020

a. Dependent: (Constant), English Language Skills: Listening , Speaking ,, Reading Skills, Writing Skills in English

b. Predictors Variable: Use of ICT in teaching and learning of English

From the findings in Table 4.25 first the regression model output generated by SPSS Version 20.0 indicated that use of ICT in selected schools for teaching and learning English language contributed significantly to development of each of the four language skills namely reading, writing ,speaking and listening skills which was indicated by p value of <0.05 . However the use of ICT predicted more the development of reading skills in English with the highest standardized coefficient ($\beta=0.690$, 69%), secondly it was followed by development of listening skills with a standardized coefficient of ($\beta =0.623$ (62%), Thirdly it was followed by development of speaking skills in English with a $\beta =0.592$ (59.2%) and finally development of writing skills in English with a $\beta =0.546$ (54.6%).

The fact that use of ICT in teaching and learning of English language was found to have greatest effect in development of reading skills in English could be attributed to the fact that highest effect of Language activities involved in reading include asking questions after reading a story, keeping a reading log on the kind of material read and how often they are read. Because of its interactive and dynamic nature of learning, ICT has the potential to meet the needs of individual students by providing opportunities to direct their learning and to pursue information or complete tasks, in ways which meet their own interests and needs computer based technologies in English (KLA, 2012).

4.7 Analysis of interview schedule for SQASO

The researcher sought to find out the general analysis of the sub-county status on usage of computers in teaching and learning of English language through government policy interventions, resource empowerment, research and development, training of human resource base in Marani Sub-County. The District quality Assurance Officer was therefore interviewed and the findings are summarized below.

There are currently 32 secondary schools in Marani District sub-County where 30 are public while 2 are private secondary schools. 26 schools have access to computers while the remaining 6 do not have computers or related accessories. These schools however do not have well equipped computer labs or up to date computers. This also hampers their usage of computers for learning. The government has deployed 10 Information Technology teachers which implies that 10 schools do offer computer lessons or subject which is examinable by the Kenya National Examinations Council. The government through the Economic Stimulus Programme under the Ministry of Planning did equip 5 schools each with 10 modern computers, 1 Duplex printer, 1 laptop, 1 scanner and internet connection which can also be used or accessed by neighboring schools. Some of the subjects like sciences and languages do use computers as teaching aids.

A number of teachers in the sub-county are computer proficient with the Economic Stimulus training almost 50 of the teachers recently on basic computer and internet usage. The sub-county has advocated for integrated learning of English via use of Technology to access learning materials, teaching and learning of languages and sciences. The government is in the process of training all teachers to be ICT proficient via an ICT champion who was trained and given mandate of training other teachers. The process of equipping other schools with computers is on phase 2 of Economic Stimulus Program and also through the Constituency Development Fund and other donors.

4.8 Summary of the findings

The study found that most schools did not have the trained teachers to implement ICT integration in learning and teaching. The schools didn't have the necessary ICT infrastructure and equipment. Most teachers didn't have a formal training on computer usage; this indicates a majority of the teachers need training before implementation of ICT integration in learning of among other subjects, English language. In this study the researcher established that ICT enhances the learning and teaching of these skills and in turn lead to proficiency in English language in skills like listening, writing, speaking and reading skills therefore there is a need of acceleration of use of ICT in secondary schools.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the study, conclusion, recommendations and suggestions for further research.

5.2 Summary of the study

The purpose of the study was to establish the influence of Information Communication Technology on teaching and learning of English in public secondary schools in Marani sub- county, Kenya. The study was carried out to achieve the following research objectives; to examine the extent to which ICT influences teaching and learning of reading skills in English language in public secondary schools in study area, to establish the extent to which ICT influences teaching and learning of speaking skills in English language in public secondary schools in study area, to establish the extent to which ICT influences in teaching and learning of listening skills in public secondary schools in study area and to examine the extent to which ICT influences teaching and learning of writing skills in English language in public secondary schools in study area.

This study adopted a mixed methodology by use of both questionnaires as quantitative tools and interview guide as qualitative tool. Most of respondents

returned the research tools which were interpreted to show a willing participation from the sampled respondents.

The study indicated that in most of selected public secondary schools in study area some ICT tools are available in adequate quantities while others ICT Tools are not available at the time of the study. Only computers were found to be readily available in most public secondary schools, Others tools such printers, LCD projectors, computer servers and internet enabled and interconnected computers in the sampled schools were in small quantities and only in few schools. Data also revealed that computers in school computer are only accessed in laboratories only few access computers in classrooms and none indicated that they access computers in either classrooms or any other places.

There was an indication that most secondary schools in Marani Sub county have inadequate operating systems since schools are using very old almost obsolete operating system like window XP and Linux while another half are using newer and more stable operating example Window7. Majority of the teachers and students have good skills in basic computer like word processing, databases, spreadsheets, presentation and internet and email but lack advanced skills including hardware and web designing there was indication that most learners do not use the online platform for learning but for entertainment and communication. It was evident that amongst the students with knowledge of ICT,

can use it positively in tackling assignments, sharing knowledge with teachers sharing work with other classmates or to their teachers.

This shows that there is need to avail the ICT infrastructure, human resource and platform for the students to be equipped with skills and knowledge before applying it in learning. The students generally agreed that computer assisted lessons are easy to read, interesting and interactive, motivates one to read and have no handwriting challenges.

This is an indication of a positive perception even if most schools do not have access to computers. The students also agree that computer assisted lessons are easy to write, improves quality, teach new writing techniques via calligraphy and promotes variety. Smithson, (2015) mentions that interactive site found in the internet improves interaction of students and ensures that students are highly motivated by this activities and provide stimulus to undertake tasks that students may otherwise avoid. Most teachers similarly strongly agreed with students that ICT enhance students skills development in reading although there were some dissenting opinion on the same. Similarly most teachers agreed that computer assisted lessons are easy for students to as well as that ICT based lessons are interesting and interactive.

Most students strongly agreed that computer assisted lessons are easy to write and that quality of their class work have improved as a result of computer use. This shows that with ICT learners can understand better, be attentive and

embrace clear communication due to computer aid. The speaking skills are also expected to improve if only computers can be availed together with the skill empowered teachers who are able to transfer the computer knowledge to the learners. Writing is a language skill in which students communicate in written language. Using ICT changes the nature of composing and allows the writing process to become more fluid students creating both traditional and multimodal tests using ICT will often attend to the visual and spatial qualities of test creation early in the design process as in selecting fonts, templates or choosing images (Interactive Education, 2016).

Also most students agreed that English from computer assisted lessons is clear and easy to understand. According to Nikolova (2013) in (Scheinin, 2014) numerous studies suggest that computerized media and a multimedia environment can be helpful for learning and speaking English language vocabulary. However, the materials in the studies have mainly been commercial or teacher-produced. Student authoring in computer-based material designed for foreign language learning has been shown to enhance vocabulary learning. It has been asserted that on-line debate is an excellent medium for generating social construction of knowledge (Fujike, 2014).

Similarly students agreed that computers with their speaking aids help in improving student's spoken language. The speaking skills are also expected to improve if only computers can be availed together with the skill empowered

teachers who are able to transfer the computer knowledge to the learners. ICT also enables a representation to language as a symbolic system. Furthermore the use of well- designed ICT environments can help students grasp abstract concepts such as imagery, literary relations, and morphology (Interactive education, 2016). From findings, coefficient of determination (adjusted R) was 0.698 which implies that use of Information Communication Technology in teaching and learning of English in public secondary schools can be attributed to influence 69.8% of the development of teaching and learning skills such as writing, reading, listening and speaking. This finding was found to be in agreement with Elia, (2015) who indicated that ICT plays a part in fostering inter-linking skills and competence which is a part of learning English language.

5.4 Conclusions

Most teachers didn't have a formal training on computer usage with 62 out of 82 teachers within the sample frame being without training. This indicates a majority of the teachers need training before implementation of ICT integration in learning of among other subjects, English language. The learners were found to enjoy computer assisted lessons and this was found to foster learning and performance therefore. It points out the there is a significant influence of ICT on teaching and learning of English in public secondary schools.

There is a positive outcome because of use of ICT in teaching and learning of the writing reading speaking and listening skills in English language.

The key challenges highlighted to have hindered ICT usage among the public secondary schools in Marani Sub-County in Kisii County were inadequacy of trained staff among the schools, lack of ICT tools and equipment and the necessary infrastructure and lack of good will from school management, government and sponsors.

In this study the researcher established that ICT enhances the learning and teaching of these skills and in turn lead to proficiency in English language in skills like listening, writing, speaking and reading skills therefore there is a need of acceleration of use of ICT in secondary schools. Teachers indicated that the best approach is not to abandon the traditional teaching and learning processes but rather using the ICT for complementing each other.

5.5 Recommendations

- i. Procurement of more varieties of ICT facilities to fill the gap that is existing and in particular acquisition of ICT facilities that can assist in sharing resources widely example servers. In a network environment ICT resource can be shared across departments like printers.
- ii. Development of electronic content that can be used for training English subject ICT makes lessons easy to understand and therefore if integrated to learning can foster student academic performance. This was based on the findings that there is inadequate content for training English subject

- iii. Since the study came into conclusion that there is a significant influence of ICT on teaching and learning of English in public secondary schools and that there is a positive outcome because of use of ICT in teaching and learning of the writing reading speaking and listening skills in English language the government should enhance the Economic stimulus program to enable more schools access ICT infrastructure since it is the major challenges among the public schools in Marani Sub-County.
- iv. In this study the researcher established that ICT enhances the learning and teaching of these skills and in turn lead to proficiency in English language in skills like listening, writing, speaking and reading skills therefore there is a need of acceleration of use of ICT in secondary schools. Teachers indicated that the best approach is not to abandon the traditional teaching and learning processes but rather using the ICT for complementing it.

5.6 Suggestions for further research

The following areas were suggested for study

- 1) The role of ICT in improving academic performance among students in secondary Schools in Kenya
- 2) Challenges facing ICT integration among secondary schools in Kenya
- 3) A study on effects of students' characteristics on performance in KCSE.

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APPENDIX 1

LETTER TO THE RESPONDENTS

Evarine Kabaka
P.O BOX 3528-40200
Kisii-Kenya

To
The Principal
-----Secondary School
P.O Box
Kisii-Kenya

Dear Sir/Madam,

RE: APPLICATION FOR PARTICIPATION IN REASERCH

I am a postgraduate student undertaking MED course at the University of Nairobi. I am conducting a research as a requirement in partial fulfillment of the degree course. This research seeks to investigate the influence of use of information and communication technology on teaching and learning of English in public secondary schools in Marani Sub-County, Kenya.

You have been selected to take part in this research. I therefore humbly request for your participation in volunteering answers to all the questions in the questionnaires. Please provide relevant information to the best of your knowledge. All responses will be used for research purpose only and identity will be treated with strict confidentiality.

Thank you in advance.

Yours faithfully

Kabaka Evaline
E55/61402/10

APPENDIX 2

QUESTIONNAIRE FOR TEACHERS

Instructions

Please read the instructions provided for each question. A number of questions only require you to indicate your response(s) by marking a tick in the notes provided. In cases where you are required to write down your responses(s) or comments, write them in the spaces immediately after the questions. Be brief and precise.

BACK GROUND INFORMATION

1. What is your gender? Male () Female ()
2. What is your age bracket? Below 25 years () 26- 34 years ()
3.33-44 years () 45- 54 years () Above 50 years ()
3. What is your level of experience in teaching?
1-5 Years () 5-10 Years () 10-15 years ()
Above 15 years ()
4. What is your education status? Diploma () Degree () Postgraduate ()

SCHOOL ICT EQUIPMENT BACKGROUND

1. For each of the following indicate the number available in your school
 - a) Computers
 - b) Printers

- c) LCD projectors
 - d) Computer server e.g. modem, routers etc
 - e) Computers connected to the internet
2. Which operating system (s)are installed in the computer(s) (select all that apply)
- i) Windows XP
 - ii) Windows 2000
 - iii) Windows NT
 - iv) Windows 95/98
 - v) Other

Specify.....

- vi) Not applicable/Do not have computer(s)
3. Which of the following activities do you use your computer(s) for? Select all that apply.
- i) Word processing
 - ii) Emailing
 - iii) Teaching
 - iv) Data base for students records e.g. report forms
 - v) Data base for school record e.g. fees registers
 - vi) Data base for teachers notes e.g. schemes of work and record of work
 - vii)Data base for teachers record

viii) Other Specify.....

ix) None of the above

Learning Techniques

4. How do you rate your skills in the following computer areas?

	Computer areas	5 No expertise	4 Fair	3 Good	2 Very Good	1 Excellent
1	Ms word (typing)					
2	Spread sheet (Excel)					
3	DTPs (MS publisher)					
4	Data base (Access)					
5	Power point					
6	Internet					
7	Development of web pages					
8	Basic repair and maintenance					

5. Answer the following questions related to towards the use of computers in teaching. The letter choices are: -

SA= Strongly Agree 2. A=Agree 3.U= Undecided

4. D= Disagree 5. SD= Strongly Disagree

	Statement	1	2	3	4	5
		SA	A	U	D	SD
B	Computer assisted lessons are dull					
C	Computer assisted lessons are difficult					
E	Computer assisted lessons are interesting					
G	Students like the computer assisted lessons					
H	The quality of student work has improved					
I	Students understand better when they use a computer to learn					
J	Students remain attentive when learning via computer					
L	Computer assisted lessons are friendly for both teachers and					

	students					
M	Computer assisted lessons are clear and visible for learners and teachers					

a). Did you have formal training in computer use?

Yes No

b). If yes, to what level?

9.0 Tick in the box that corresponds with how you really feel towards the use of

ICT by your students. The letter choices are: - 1.

SA= Strongly Agree 2. A=Agree 3.U= Undecided 4. D=

Disagree

5. SD= Strongly Disagree

	Statement	1	2	3	4	5
		SA	A	U	D	SD
	Reading skills					

A	Computer assisted lessons are easy to read					
B	Computer assisted lessons are interesting and interactive					
C	Computer motivates students to read and also has an assistant who assists in improving reading skills					
D	Computer assisted lessons have no handwriting challenges hence easy to read					
	Writing skills					
E	Computer assisted lessons are easy to write					
F	The quality of my students work has improved via computer use					
G	handwriting for students has improved due to imitation of computer assisted lessons					
H	Computer assists students to learn new writing techniques which has improved my hand writing					
I	Due to a variety of theme fonts, students have learnt how to work on my hand writing					
	Listening skills					

J	Students understand better if they use a computer to learn					
K	Students are attentive when learning via computer					
L	Computer assisted lessons have voice systems which enable in translation and clear communication which enables students to listen well and attentively					
M	English from computer assisted lessons is clear and easy to understand.					
	Speaking skills					
N	Computer assisted lessons have improved my students spoken English					
O	Computer assisted lessons are friendly					
P	Computer assisted lessons are clear and visible					
Q	Computers with their speaking aids help in improving students spoken English					

Thank you for taking your time to complete the questionnaire

APPENDIX 3

QUESTIONNAIRE FOR STUDENTS

Instructions

Please read the instructions provided for each question. A number of questions only require you to indicate your responses(s) by marking a tick (√) in the boxes provided. In cases where you are required to write down your response (s) or comments, write them in the spaces immediately after the questions. Be brief and precise.

Background Information

1. What is your gender(tick where appropriate)

Male

Female

2. Where did you first have an encounter with computers?(tick where

appropriate)

Primary school

Secondary school

Home

Cyber café

3. Where did you use computers in your school? (tick where appropriate)

Computer lab Library Classroom Others

Specify.....

.....

How would you rate your skills in the following computer areas?

	Computer areas	5 Poor	4 Fair	3 Good	2 Better	1 Excellent
A	Word processing					
B	Spread sheets					
C	Data base					
D	Power point					
E	Internet					
F	Development of web pages					
G	Basic repair and maintenance					

4. Do you have an email address?

Yes No

5. Do you have a social network account?

Yes No

6. If yes which one(s) (select all that apply)

Facebook My space Twitter Others

Specify.....

.....

7. Answer the following questions related to availability of ICT as a learning tool

	Question	Yes	No
A	Do you use computers to help you learn academic subjects in school?		
B	Do you use computers to assist you in answering assignments?		
C	Do you access computers easily?		
D	Do you use internet to share knowledge with other students and teachers?		
E	Do you use computer software to help you learn on your own?		
F	Have you used computer to present what you have learnt to your classrooms or teachers?		

8. Tick in the box that corresponds with how you really feel towards the use of ICT. The letter choices are: - 1.

SA= Strongly Agree 2. A=Agree 3.U= Undecided 4. D=
 Disagree
 5. SD= Strongly Disagree

	Statement	1	2	3	4	5
		SA	A	U	D	SD
	Reading skills					
A	Computer assisted lessons are easy to read					
B	Computer assisted lessons are interesting and interactive					
C	Computer motivates me to read and also has an assistant who assists in improving reading skills					
D	Computer assisted lessons have no handwriting challenges hence easy to read					
	Writing skills					
E	Computer assisted lessons materials are easy to write.					

F	The quality of my work has improved via computer use					
G	My handwriting has improved due to imitation of computer assisted lessons					
H	Computer assists me to learn new writing techniques which has improved my hand writing					
I	Due to a variety of theme fonts, I have learnt how to work on my hand writing					
	Listening skills					
J	I understand better if I use a computer to learn					
K	I remain attentive when learning via computer					
L	Computer assisted lessons have voice systems which enable in translation and clear communication which enables me to listen well and attentively					

M	English from computer assisted lessons is clear and easy to understand.					
	Speaking skills					
N	Computer assisted lessons have improved my spoken English					
O	Computer assisted lessons are friendly					
P	Computer assisted lessons are clear and visible					
Q	Computers with their speaking aids help in improving my spoken English					

Thank you for taking the time to complete the questionnaire.

APPENDIX 4

INTERVIEW SCHEDULE FOR SQASO

Instructions

This interview schedule will take at most 15 minutes of your time to respond to. The questions are meant to establish the influence that ICT has on the teaching and learning of English among public secondary schools in Kenya with a special focus on Marani Sub-County. The study is for academic purposes only.

1. What is the number of schools in your sub-county?
2. How many schools have access to computers
3. Do these schools have well equipped computer labs?
4. How many IT teachers are there in the sub-county
5. Do students take computer lessons?
6. How many schools have been equipped by the government with computers and other accessories?
7. Are other subjects allowed to use the computers to aid in their learning especially English language?
8. How do you compare the performance of students in English for those schools with computers to those that don't?
9. Are teachers in the sub-county ICT proficient?
10. How has ICT affected learning of English in Marani Sub-County?
11. What initiatives has the Ministry of Education put in place to aid in ICT integration in learning among secondary schools in Marani Sub-County?


12. How can teaching and learning of English be enhanced through ICT integration?

APPENDIX 5

RESEARCH PERMIT NACOSTI

THIS IS TO CERTIFY THAT:
MISS. EVARINE OKENYURI KABAKA
of UNIVERSITY OF NAIROBI, 3528-40200
KISII, has been permitted to conduct
research in Kisii County
on the topic: INFLUENCE OF USE OF
INFORMATION COMMUNICATIONS AND
TECHNOLOGY IN TEACHING AND
LEARNING OF ENGLISH IN PUBLIC
SECONDARY SCHOOLS IN MARANI
SUB-COUNTY, KENYA
for the period ending:
11th December, 2016

Permit No : NACOSTI/P/15/51729/8742
Date Of Issue : 14th December, 2015
Fee Received :Ksh 1,000




Applicant's Signature

Director General
National Commission for Science,
Technology & Innovation

CONDITIONS

- 1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit**
- 2. Government Officers will not be interviewed without prior appointment.**
- 3. No questionnaire will be used unless it has been approved.**
- 4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.**
- 5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.**
- 6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.**

REPUBLIC OF KENYA



National Commission for Science,
Technology and Innovation

RESEARCH CLEARANCE
PERMIT

Serial No. A 7554

CONDITIONS: see back page