CHALLENGES FACING EFFECTIVE USE OF GEOGRAPHY INSTRUCTIONAL RESOURCES BY TEACHERS IN PUBLIC SECONDARY SCHOOLS, BURETI SUB-COUNTY, KERICHO COUNTY-KENYA

BY

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DECLARATION

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

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DEDICATION

This thesis is dedicated to my late Dad Joseph Soy and Mum Ann Soy for laying a firm foundation of education in my life.

To my beloved wife Lillian, our children Jeff Kipruto, Kipchumba Kibet and chepchumba Chepkirui whose sacrifice, inspiration, patience, understanding and encouragement were very instrumental to completion of this work

May God bless you all abundantly
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ABBREVIATIONS AND ACRONYMS

AASL: American Association of School Libraries

BECTA: British Educational Communication and Technology Agency

CBI: Computer Base Instruction

DEO: District Education Officer

DN: Daily Nation

FPE: Free Primary Education

GIS: Geographical Information System

GoK: Government of Kenya

HOD: Head of Department

ICT: Information and Communication Technology

KIE: Kenya Institute of Education

KNDEC: Kenya National Examination Council

MOEST: Ministry of Education Science and Technology

SPSS: Statistical package for social sciences

UNESCO: United Nations Education Scientific and Cultural Organization
ABSTRACT

Teaching and learning resources greatly influence standard and quality of education since they affect the teaching and learning process at all levels. The purpose of this study was to investigate the challenges facing effective use of learning resources in public secondary schools in Bureti sub-county. The specific objectives of this study were: to determine the instructional resources needed in the teaching and learning of Geography in Bureti sub-county secondary schools, to the extent to which instructional resources are used in the teaching and learning of Geography in Bureti sub-county secondary schools and to suggest strategies to overcome challenges facing the utilization of instructional resources in Bureti sub-county secondary schools. The study adopted descriptive survey design. The study’s population comprised of forty five schools, fifteen thousand two hundred and seventeen students and seventy seven Geography teachers. Nine public schools were selected for study using purposive sampling techniques based on school categories and students’ gender composition such as one county boy and girl and three mixed schools, one girls and three mixed sub-county schools. The study used stratified sampling to collect data from Ten Geography teachers and three hundred and forty two form two students. Piloting was carried out in two schools within the sub-county that were not included in the study. Errors encountered during piloting were corrected before the main study and instrument were tested for reliability validity and clarity. The data were collected using questionnaires for students and teachers. An interview schedule was administered to HOD and resources checklist used to find out the resources available in schools. The data obtained were analyzed using descriptive statistics and presented in frequency tables, percentages, pie charts and graphs. The study revealed that instructional resources like textbooks were used but they are inadequate. It also found that textbooks, globe and maps were frequently used while diorama, internet and radio were rarely used. The study showed that most of the teachers never used computer at all since most of them are not computer literate and for those who used, minimal time is allocated to them. The study also revealed that most of the teachers never used field trip as it requires a lot of time and finance to which most of the school do not give priority. The study recommends that serious training and re-training of teachers inform of workshops, seminars, in-service on how to produce or improvise instructional resources for the learning/teaching of Geography. It also recommends that there is need for the development of positive attitude by teachers towards the use of instructional materials for their students. This will encourage the development of their proficiency
CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Instructional resources are the different kinds of materials or resources that teachers and classes use in the teaching-learning processes in order to make it more effective and productive (Onuoha 2011). Sometimes the term instructional resource is used interchangeably with other terms like teaching-learning materials, instructional materials, instructional aides, teaching resources, audio-visual aids, curriculum materials, and educational materials and so on although slight differences may exist among these terms. Ofoegbu (2009) defines teaching resources as those resources that facilitate the achievement of goals of education.

It is important to study geography because it impacts the development of cultures and civilization and helps put current events in context. Geography not only puts current events in perspective, it helps us understand history (Lambert, 2011). For instance, a person can’t understand World War II without understanding the roles of the continental Russian Winter or the English Channel. Geography allows you to understand the place where you live. People settle in specific places because of the landscape. For example, cities are almost always built on a river or other reliable water supply (Butt, 2011). According to Standish (2009), Geography helps you understand and appreciate the incredible diversity of cultures around the world. Geography has a fundamental relevance to young people because it relates to many aspects of their lives and the environment in which they are growing up ... study at regional, national, international and global level is
required as ... all are vital for pupils’ understanding of the increasingly complex interdependent global village in which we live” (Rigg, 2007 p. 89).

According to Nazli (2009) there are problems and difficulties faced in learning Geography. His study established that the main problems are that instructors are not sufficient in geography education; that the removal of some geography courses in the syllabus negatively affects geography education; and that teacher trainees in the field have low motivation. When planning for teaching and learning in the area of geography a variety of teaching strategies need to be considered (Standish, 2009). When the teacher is designing, planning, and structuring geography lesson, potential areas of difficulty may emerge for these students as they engage with classroom experiences and methodologies while learning Geography. Therefore is a need to use some resources to facilitate the teaching and learning of Geography.

There are many problems to effective management and use of instructional materials. The first problem is the kind of resources teachers in public schools in use to teach Geography (Rutoh & Ndolah, 2013). Kinds of instructional materials to be used in the geography teaching include World Globe which is essential instructional media that a geography teacher should always make reference during his/her teaching. It can be used to teach topics such as the earth’s spherical shape, latitude, and longitude, global land and water distribution, world continents, locations of places on the globe, rotation and revolution of the earth among others (K.I.E, 2002). Maps are the important tools while teaching geography by the teacher for locations of places on the maps; atlas can be conveniently used (Rutoh & Ndolah, 2013). However, all these depend on the
availability of these various types of maps in the school, models, charts, diagrams and pictures, real objects, meteorological instruments and Chalkboards just to mention a few.

The study was informed by the fact that Geography teachers in secondary schools face challenges in the use of instructional media in the teaching of Geography. These challenges range from the teaching methods, the teaching resources, their availability and the managerial support (Tonne et al., 1998; Eshiwani, 1992). Students regard the subject as a subsidiary compared with other subjects like Mathematics, English, Kiswahili and the sciences. This creates a situation in which the Geography lessons are never taken seriously by students who believe that the subject is not essential to the current job market. The Geography teachers therefore face a difficult task in convincing the students that the subject is essential to their future professional development (Komen, 1991). Lack of direct relevance to the job market is compounded by the fact that the Geography teachers rarely impart practical skills to the learner. This makes the teacher to rely on theoretical skills. The greatest challenge in this case lies in how practical skills can be incorporated in the teaching of the subject and their unwillingness to invest in the instructional materials. Practical skill is important as it helps the student relate to many aspects of their lives and the environment in which they are growing up.

The magnitude of the problem is great and serious as funds from the government are allocated more to technical and science subjects compared to humanities on the pretext that humanities are subsidiary. Since Geography is a bridging subject (KIE, 2006) that equips the learner with knowledge and skills that are of great educational value even for other subjects, it requires instructional material use to strengthen it. There has been a shortage of text books and other instructional materials in most of the schools where studies have been done. Management
support to the teaching and learning of Geography has been found to be lackluster. Instructional materials are essential in the teaching of Geography since they are designed to help the teachers to understand and to implement the ideas contained in the curriculum. They can also help students to achieve the learning objectives intended to be achieved (Ayot et al., 1992). In addition, Nabwire (1998) states, the availability and quality of instructional materials are important for the implementation process to take place. Besides, curriculum implementation requires change in the provision of relevant and adequate text books, facilities and other required teaching and learning aids. Although the resources are available in schools, lack of time is an impediment and does not allow teachers to access these resources. There may be technical equipment available but there is no time for the teacher to operate efficiently in the teaching. However, access to instructional resources can help teachers increase their competence with experts. The opportunities for development of teachers’ skills and their access to instructional resources can be increased by providing them with technical support and sufficient time. The ability of existing educational approaches to impart knowledge, skills and values appropriate to a rapidly changing world has been questioned by educationists, researchers as well as employers (Ruto & Ndalo, 2013). Such concerns are stimulating a growth in the application of instructional resources. It provides new opportunities for more student centered teaching, opportunity to reach more learners, greater opportunity for teacher-to-teacher and student-to-student communication and collaboration, greater opportunities for multiple technologies delivered by teachers, creating motivation in learning amongst students and offering access to a wider range of courses, (MOEST, 2005).

Many schools face escalating demands on access to instructional resources and lack of access at required times often discourage Geography departments from using them. In many schools, weaknesses in Geography education are associated with limited use of instructional media. Good
teaching ought to be based on clear expectation of geographical outcomes with good preparation and planning which provide a number of linked activities to maintain pace and people’s interest. (United Kingdom, 2004).

In Kenya and other developing countries, there is currently limited inclusion of real-world learning experiences in the traditional classroom setting (Kinuthia, 2009). Mostly the content presented in the classroom is disconnected from its real world context. This contextual dichotomy tends to have a negative impact on the learning process, adversely affecting learner motivation in particular. At the same time real world learning situated in real world context has been shown to have positive impact on learning and learner motivation. Educational simulations have been found to provide a solution to these by providing some aspects of real world learning in the traditional classroom (Henning, 1998).

The British Educational communication and Technology Agency, Becta (2004) asserts that, confidence in using instructional resources help a teacher to teach effectively. Lack of confidence is a problem linked to the previous two issues: lack of access to resources and lack of teachers’ competence. Understanding the level in this study at which these barriers prevent teachers from using instructional media may help educators to decide how the barriers can be tackled. Teachers should be convinced of the importance of using instructional media in the classroom. Then they should be provided with access to resources successfully. Access to instructional media and the ability to use it cannot be possible without sufficient time, effective training and technical support.

Integrating the new technologies into educational settings require change and different teachers will handle this change differently. Different teachers’ attitudes to change are important because teachers’ beliefs influence what they do in classrooms. Becta (2004) claims that one key area of
teachers’ attitudes towards the use of instructional media, is their understanding of how it will benefit their teaching and their students’ learning. Earle (2002) asserts that the change from present level to a desired level of performance is facilitated by driving (encouraging) forces such as the power of new developments, rapid availability, creativity, accessibility or ease of communication. However it can be delayed by resisting (discouraging) forces such as lack of technical support teacher expertise or time for planning. Playa (1985), has advocated for revitalization policies intended to provide learning resources so as to safeguard and improve education quality in Africa. It states that education quality in Africa is rapidly falling mainly due to the inadequate supply of key instructional materials and the decline in their utilization.

In Kenya effective use of teaching and learning resources in schools has been of utmost concern to the government. The need for all schools to acquire and utilized learning resources have been documented on educational reports such as the Kenya National Committee on Education Objectives and Policy Report (1976). It emphasized the need for all schools to acquire adequate teaching and learning resources. It also stresses the need for all schools to plan and make available learning resources, to enhance teaching and learning.

In addition, this report stressed that teaching and learning materials should be planned and utilized in the most cost effective manner so as to bring out effective provision of quality and relevance in education. Similarly, the Kenya Education Commission Report (1964) called for more adequate supply of simple learning resources in the teaching and learning process to achieve the intended goals. Kimui (1988) asserts that resources cannot be used in any manner simply because they are supposed to be used. They have to be the most ideal, depending on the prevailing factors. Teachers with little awareness on the availability, importance and potentialities of the existing resources cannot select and use them expertly and effectively.
Teachers with negative attitude towards the use of resources will also tend to avoid them when teaching. The study sought to investigate the barriers to effective utilization of geography instructional materials by teachers in public secondary schools in Bureti sub-county.

1.2 Statement of the problem
The failure of school management to recognize, appreciate and cater for the factors that influence instructional materials uses has contributed to low and ineffective use of resources during teaching and learning (Ayot & Patel, 1992). Several factors influence instructional materials use, these factors include attitude, access, self sufficiency and technical support according to (Kenya National Committee on Education Objectives and Policy Report, 1976). Unavailability of adequate supply of text books, teachers guides and supplementary reading books have a major impact on students’ performance. These resources improve students’ achievement; utilization of learning / teaching resources has a major impact on students’ performance. According to Mwangiru and Njue (1985), students are unable to relate theory and practice in Geography because of their lack of exposure to geographical reality in the field and because of their non-participation in carrying out the actual measurements and observation. Jacinta and Regina (1987), note that if the impression on the senses is vivid, arresting and eye striking our learning is more effective. This can only be achieved when instructional materials are appropriately selected and used. According to KNEC (2009), Kenya Certificate of Secondary Education Examination report, it is important that both teachers and students consider practice of map reading and use of atlas, drawing of maps/diagrams as an integral part of the teaching and learning Geography. These are not optional activities if one has to master and understand concepts in the subject. Instead they form part of the teaching/learning process through which students enhance their understanding of Geography. Mworia (1991) notes that Geography
teachers should make use of field work as a multi-method approach to teach the subject and further argues that students should be helped to be responsible to ascertain facts and be able to draw up independent conclusions. Ogomo (1985) argues that a teacher should avail to the pupils a variety of relevant resources in various formats for them to obtain knowledge that they are required to have. This study therefore sought to investigate the challenges to effective utilization of geography instructional materials by teachers in public secondary schools in Bureti District.

In response to poor performance in Geography in KCSE examination in Bureti sub-county in terms of mean between the year 2006 - 2009 as evidenced by the Table 1.1 below.

**Table 1.1 showing, KCSE Geography mean scores National and District**

<table>
<thead>
<tr>
<th>Year</th>
<th>KCSE Bureti Sub-county mean score</th>
<th>KCSE national mean score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>47.61</td>
<td>83.44</td>
</tr>
<tr>
<td>2007</td>
<td>53.42</td>
<td>93.62</td>
</tr>
<tr>
<td>2008</td>
<td>45.20</td>
<td>74.01</td>
</tr>
<tr>
<td>2009</td>
<td>48.09</td>
<td>75.75</td>
</tr>
</tbody>
</table>

**Source Bureti, DEO Report**

As shown in Table 1.1 above, teachers might be facing serious challenges that concern the utilization of instructional resources in the teaching and learning of Geography hence the study. Over the last four years Geography performance has been poor in KSCE in the district as evidenced in the table 1.1 this prompted the researcher to investigate the challenges facing teachers in the utilization of instructional resources in learning and teaching of geography despite the district being relatively endowed with learning resources.
1.2.1 Purpose of the Study

The purpose of this study was to investigate challenges facing teachers in use of teaching and learning resources in Bureti sub-county public secondary schools.

1.3 Objectives of the study

The specific objectives of the study were to:

i. Determine the instructional resources needed in the teaching and learning of Geography in public secondary schools in Bureti Sub-county.

ii. Carry out an analysis of syllabus for form two and the materials needed for teaching.

iii. Establish the instructional resources used by Geography teachers in public secondary schools in Bureti Sub-county secondary schools.

iv. Establish the factors affecting the use of instructional resources in the teaching of Geography in Bureti Sub-county secondary schools.

v. Find out suggestions to improve on the use of instructional resources in Bureti Sub-county secondary schools.

1.4 Research questions

The study sought to answer the following questions:

i. What are the instructional resources needed the teaching and learning of Geography in public secondary schools in Bureti Sub-county?

ii. To what extent do instructional resources used by Geography teachers in public secondary schools in Bureti Sub-county secondary schools?

iii. What are the factors affecting the use of instructional resources in the teaching of Geography in Bureti Sub-county secondary schools?
iv. What suggestions are there to improve on the use of instructional resources in Bureti Sub-county secondary schools?

1.5 Significance of the study

The findings of the study are useful to lecturers and tutors when training Geography teachers who are to teach Practical Geography as it will enable both teachers and students understand the practical aspect of Geography by using instructional resources. They are also beneficial to the policy formulators in the Ministry of Education and Kenya Institute of Curriculum Development as it may use the research in recommending appropriate resources while developing curriculum for teaching Practical Geography. The finding draw the attention of resources that are available for use in teaching Geography and provoke the Kenya Institute of Curriculum Development and other commercial publishers to come up with relevant instructional resources to be used in Geography teaching. The practical value will enable the students understand its physical environment while the theory of behind usage of instructional resources will enable the learners to logically understand their surroundings.

1.6 Limitations of the study

The study was limited by the following factors;

1. An exhaustive study of all the secondary schools in Bureti Sub-county that offer Geography as a subject in the curriculum was not possible. This was due to the intensive nature of investigation expected in each school. It is therefore inevitable that few schools were selected to reflect the varied and diverse background of Bureti schools. Total of (9) schools were selected on the basis of students’ gender composition (provincial boys, girls or mixed schools and District boys, girls or mixed schools).
2. The study limited itself to Form Two students and not across section of all the students in all forms since Geography is a compulsory subject in the lower forms that is, one and two.

1.7 Basic assumptions of the study

The following assumptions were be made in this study;

1. The Geography teachers’ personal notion of the relative importance of various learning -teaching resources in the school curriculum should reveal the approach to teaching Geography he/she is likely to promote.

2. The teachers’ attitudes towards instructional media are assumed to be either negative or positive.

1.8 Theoretical Framework

This study is guided by social cognitive theory advanced by (Bandura, 1982). Social cognitive theory is an updated version of the social learning theory. The theory states that environment and personal variables, which include cognition, emotions and psychological processes, influence human behavior. The construct of self-efficacy is a central face of social cognitive theory; the theory is based on constant of self- efficacy which was a very important independent variable in this study. The theory suggests that behavior is best understood in terms of “triadic reciprocity” Bandura, (1982) believes that two cognitive process influence ones behavior. These are outcome expectancy that is one’s beliefs that behavior will produce a desired effect. The other is self efficacy which is one’s belief in his / her ability to perform the behavior in a given situation. Self efficacy influences behavior through and selection process (Bandura 1982). People who feel that they will be successful on a given task are more likely to be so because they adopt
challenging goals, try harder to achieve them persist despite setbacks, and develop coping mechanism for managing their emotional states.

Self-efficacy is situational of specific; it is not generalized expectancy. Bandura (1982) suggested that self efficacy is a determinant of choice of behavior because it influences the choice of behavior settings, when people recognize coping as inadequate for addressing threatening situations they avoid the situations.

In the content of teaching “enactive experience” (proper training in the use of instructional resources) increases self-efficacy and can be achieved through successful experience with instructional media during training. Lack of adequate instructional resources make it impossible for all teachers to build instructional self efficacy beliefs. Vicarious experience through direct observation of experienced teachers using instructional media in teaching poses similar problems and verbal information has limited application unless teachers have opportunities to use media in teaching.

From the stand point of social cognitive theory the best method for developing teachers’ self efficiency for media use would be to provide them with proper and appreciated training for the use of instructional media which includes methods of teaching with them and support to successfully work in their classrooms.

Social cognitive theory is selected for this study because “self efficacy” which is a very important variable in this study plays on central role in human behavior and is linked to behavior. The theory is important in regard to the teacher’s behavior. If the teachers believe that using instructional media is to bring about the required result they will have a high outcome efficacy: On the other hand if teachers feel competent to use instructional media they will use them in classroom instruction.
1.9 Conceptual framework

The literature reviewed points to some areas or variables that are significant in understanding teacher’s instructional media use. These are levels of instructional media self-efficacy, time support and technical support received by teachers in their schools.

The concept of attitude formation is very important in instructional media use. This kind of attitude held by teachers towards instructional resources and the use of them in teaching determine whether the teachers will use them or not. Teachers who have positive attitude towards instructional media may use them when all other factors are gathered for.

Teachers with high level of instructional media self-efficacy may use the resources more frequently than those teachers with low level. The level of time and technical support received by teachers in their schools may make teachers to use or not to use instructional media in teaching.

The diagram shown below illustrates some of the variables that are likely to influence instructional media use and subsequently impact on students’ learning outcomes.
The above figure shows the variables which influence instructional media use. Attitudes towards instructional media, instructional knowledge, instructional self-efficacy, time support and technical support influence instructional media use, which subsequently impacts on students’ learning outcomes. Attitude towards instructional media is directly related to instructional media use. Instructional media knowledge influence attitudes towards the instructional media, instructional media self – efficacy and instructional media use. Both time and technical support
directly influence instructional media use and are related to attitudes towards instructional resources.

1.10 Definition of terms
The terms listed below are subjected to various interpretations depending on the context in which they are used. For the purpose of this study the meanings that are intended to convey are given as follows:

**Efficacy** – belief in personal capacity to affect a behavior

**Instructional media self efficacy** – refers to teachers belief in their abilities to use of instructional media in teaching

**Instructional resources**- These are the materials use by the teacher and the learner in the teaching-learning process. They include people, objects, facilities, equipments, reading materials and other sources of instructional support.

**Media**- Materials used as a means of communicating information in the teaching-learning process. It can be in print form like books, magazines and newspapers or in non-print from like film, film strips, slides, recorded tapes e.t.c.

**Utilization**- Making use of something. It is used here to mean making use of teaching and learning resources.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter deals with a review of the literature related to the area under study. The review is done under sub-heading based on the study objectives.

2.2 Importance of Geography in Curriculum

According to KCSE regulations and syllabus (1999) within the limit of Geography teaching, the Ministry of Education gives special emphasis to practical Geography thus the importance of teachers and students utilizing material resources in the teaching and learning of Geography. The syllabus builds on the knowledge, skills and attitudes acquired at the primary schools level, at the same time prepares the learners for further studies. In the syllabus, fieldwork, map work photograph and statistical methods are emphasized so as to equip learners with practical skills. The teaching of Geography like any other subject in the school curriculum requires some educational insight which will be useful to the child, even after school. The present teaching however, places undue emphasis on examination and leads to narrow academic formalism.

2.3 Strategies of Teaching Geography

Teaching strategies are processes or ways and means which the teacher uses to arrange learning experiences for the students. According to Gerlach and Ely (1971) there are two main teaching approaches or strategies i.e. expository and heuristic. However, teaching methods fall between the two approaches. Ayot and Patel, (1992), assert that teaching methods are in a continuum within these two extremes. The methods range from teacher-centered approaches such as the
lecture method to learner-centered approaches such as the project method. There is a wide range of methods to choose between these two strategies and: any method used by any teacher, any time will be within these two extremes (Ayot & Patel, 1992).

Many teachers put a lot of emphasis on the learner-centered approach to education, though a combination of expository and heuristic approaches can bring satisfactory results in teaching and learning. Shiplen and Fleck (1968), feel that the most effective way of making teaching interesting is by combining different procedures or methods in a lesson. To support this Majasan (1995), says that a well qualified teacher: must vary his method between these two extremes to suit his/her pupils subject matter and the environment. Twoli et al, (2007), state that while the teacher is planning for content, the approach or method has to go with the resources that go with the lesson activities.

2.4 Importance of instructional resources in teaching and learning

In technology advancement, the usage of the instructional media has dramatically increased in the last two decades. According to Abu (1987), the importance of instructional media for both the teacher and student cannot be overemphasized. The adaptation and widespread use of modern instructional technology in education has greatly increased exposure to information and varied learning experience on the learners. The American Association of School libraries (1975), says that through the use of media the learner acquires and strengthens the skills of reading, observing, listening and communicating ideas.

Many researchers have recognized the importance of instructional media in teaching and learning. David (1994) observes that strategies for dealing with new aspects of the media in their
own teaching, media have been used as evidence and stimulus for many years in education. Media education recasts assumptions about the ways learning those subjects through media takes place, at the same time extending understanding of how teaching can develop more effective learning. Media education offers the possibility of a more transactional pedagogy through a conceptual framework and a classroom practice that seeks to encourage learner’s understanding and sense of self, quite directly. It gives an experience that lasts for a long time helping the student to remember easily. As more and more media become available, teachers should make it increasingly possible for students to use all their senses.

Douglas (1968), says that various senses condition the reception of messages in the communication act. His research showed that learning through the five senses was as follows;

1% through sense of taste

1.5% through sense of touch

3.5% through sense of smell

11% through sense of hearing

83% through sense of sight

Learning through various senses is supported by Wiman (1972). He feels that effective teaching should involve as many of the learners’ senses as possible for they enable them remember what they learn. Dale, (1969), argues that stimulus richness and variety enhance motivation and that use of resources reduces the degree of obstruction which is a critical variable in learning.

Through the use of teaching and learning resources, the teacher gives the learner a chance to use the five senses, allowing him to interact with the environment and allowing him to participate
directly in the learning experience. This supported by Wittich and Schuller (1967), when they assert that the use of audio visual materials makes it possible to improve learning efficiency by choosing for classroom instruction audio-visual experiences which reinforce one another. They go on to assert that when a variety of media is carefully coordinated, the learning that results can be much more than the sum of the individual parts.

Erickson and Curl (1972), state the fact that audio visual materials provide rich opportunities for learners to develop communication skills while actively engage in solving meaningful problems through individual activities, in groups or in class project. Gagne and Medsker (1969), says that as children learn to respond appropriately to symbols, pictures, diagrams, printed words and numerals, this adds another dimension to their capabilities as human beings. Consequently models enhance long term memory which acknowledges the possibilities of encoding in terms of verbal prepositions and images, pictures and diagrams may be used in instruction to provide concrete visual images to serve an encoding function. The use of images can be suggested to learners, who then form their own pictures that support the encoding process.

Jacobson et al. (1989), argue that good classroom manager uses audio-visual and other resources to make lessons interesting by presenting subject matter in a vital and enthusiastic manner. The teacher, therefore, should be enthusiastic and search for the most appropriate materials for the teaching task.

Modern educators recognize basic values such as on concreteness enrichment and dynamic interest in the use of instructional materials. According to Kinder (1965), instructional materials illustrate and clarify non-verbal symbols and images, quantitative relationships, complex and abstract relationships. Ayot (1984) asserts that resources enhance interest in learning among children to have practical experience of skills and concepts. Resources therefore aid teaching and
learning of a topic thus save teachers in covering the topics and also give an accurate impression to the pupils.

2.5 Importance of instructional resources in Geography teaching and learning

Instructional resources which are educational inputs are of vital importance to the teaching of any subject in the school curriculum. The use of instructional resources would make discovered facts give firmly to the memory of students. Savoury (1958), he add that a well planned and imaginative use of visual aids in lessons should do much to banish apathy, supplement inadequacy of books as well as arouse students interest by giving them something practical to see and do, and at the same time helping to train them to think for themselves. He further suggests that a catalogue of useful visual aids that are good for teaching geography i.e. pictures, post cards, diagrams, filmstrips and models.

Moistad (1974), found out that the proper use of instructional media positively affects students’ achievement. Boardman (1985) says that there are substantial numbers of classes in Kenya where no use is made of atlases, maps or globes which are basic to the effective teaching. He further asserts that in the majority of classes, essential skills and ideas are rarely given sufficient attention. He adds that research has shown that classes where teachers employ minimal resources in their teaching register low performance.

Fitzpatrick (1993), asserts that multi-media in particular appropriate for Geography education since its concept should be learned through text, maps, pictures and sound to achieve the fullest learning experience.
Coucleus (1998), state that human beings have a natural ability to process visual information quickly and efficiently. Their capacity to readily understand spatial relationships facilities interpretation of images that stimulate Geography that refers to both the ability to process visual information and the design of concrete visual representation meant to assist such processing.

In computer based instructional media, Davidson (1996), states that the use of such media in geography lesson is imperative as it make a valuable contribution to the quality of student’s learning. Such media can be use in several ways in geography lessons. PowerPoint, for instance can be used to present geographical issues and data loges for collective weather data electronically. He also found that computer graphic maps are effective way of presenting spatial information and for geography courses such maps, which are considered the most important for illustrations. Teachers need to use them effectively in the classrooms and give opportunity to pupils to learn about different types of maps starting from simple maps to most complexes geographical information system (GIS) mass.

In Geography, a child learns better if the teaching is supported by concrete and objective materials that give the child firsthand knowledge and experience. For example when teaching field work a trip to the riverside, a visit to a factory, a forest, some specimens of seeds, fruits or vegetables, rocks and minerals would form concrete illustrations in geography lesson. Some difficulties of apprehensions are cleared up with the use of illustration since explanation are simplified and given vividness with the help of illustrations.

2.6 Related studies on the use of instructional resources

Studies done in Kenya on the availability and utilization of instructional resources show that our schools have scanty resources whose use are very vital in teaching and learning process. Ogoma
(1987), in a survey of resources used for teaching social studies in Nairobi primary schools, found out that resources use by teachers are non-recommended textbooks, charts and realia. He says that most of the resources are bought while others are improvised by both teachers and learners. Audio and visual resources such as cassettes players and projectors are lacking in most schools.

Kimui (1988), reveals that teaching institution lack many instructional media, in a study of the availability and use of resources in Kenya, teachers training colleges. Print media and chalkboard were used widely. Okoko (1991) observe that there was an acute shortage of textbooks in the teaching and learning of history in secondary schools in south Nyanza. However, she did not look at other instructional media in her study.

Orina (2001), also found out that print media were widely used in the study of the availability, acquisition and use of instructional media besides print in teaching Geography were limited. In a survey of the availability, acquisition and utilization of instructional resources in the teaching of Geography in secondary schools of Kisii district, he reveal that the least available resources were, geographical magazines encyclopedia, posters, models, cameras, and television sets. The available resources were found inadequate. However, most of the resources available in school were accessible to the teachers. Some textbooks, encyclopedia and audio visual such as films and film projectors, video, tape recorder, television sets, radio, camera and radio cassettes were inaccessible to the students in some schools.

**2.6.1 Time support in the use of instructional resources**

Teachers require enough time for teaching with resources. Availability of time to learn how to use instructional resources and plan to use them motivate the teachers. Nantz and Lundgren
(1998) report that it takes time for teachers to learn computer technology, and it takes even more time to develop or obtain instructional materials that utilize the technology. Sammons (1994) support the observation by saying that lack of time to learn about computers, plan for computer instruction and use computers in instruction is a major deterrent to the adoption of computers.

2.6.2 Technical support
Availability of technical support encourages instructional resources use in teaching. Office of Technology Assessment 1995 remarks that successful technology implementation includes providing not just the technology but also support in integrating technology into curriculum and should include support in teaching with new teaching methods. One area of concern for teachers is technology support; Bialo and Sivin (1980) observes that a learning environment supporting exemplary computer using educator within the same school, applying computers to many different uses support in the form of staff development and a full time coordinator leads to effective computers use.

The teacher who receives technical support while using instructional resources, teach with them while those who do not will not use. This is because fear of failure while using computer discourage teachers from using (Nantz and Lundgren 1998). As teachers and children use computers, the helping hand of support staff will make the experience easier. Institutional commitment in form of financial support infrastructure and support personnel is essential for the successful development of instructional technology (Albright 1996).

Computers in schools are under-utilized due to lack of technical support. In the national ICT strategy the Ministry of Education reports that there is adequate technical support in schools to
facilitate effective use and maintenance of computers in schools (Government of Kenya 2006). The Ministry also reveals that most schools use less than 40% of the available ICT resources by students, teachers and administrators in order to exploit the educational potential of the technology. The Ministry of Education further reports that very few schools are using ICT in delivering school curriculum (Government of Kenya 2006). Thus pre-school and lower primary school teachers in Kenya need technical support to assist them when fault occurs while using computers.

2.7 Challenges facing Teachers on effective use of instructional resources

2.7.1 Teachers attitudes towards the use of instructional resources

Developing teachers’ computer requires changing teachers’ attitudes toward computers as learning resources because their application in their classroom is affected by their attitudes. Albion (2001), stressed that teachers’ beliefs and attitudes toward computer are among the significant issues to be addressed. The point of view was supported by the results of some researchers who found that teachers’ attitudes towards computers strongly affect their use of computers and the belief in their benefit (Keiffer et al, 1998, Bullock, 2004). Also some researchers found that teacher planning and classroom practice are strongly related, these beliefs and attitudes which influence their behavior in the classroom (Marankiewicz, 1994).

Oliver and Shapiro (1993), indicate that there was evidence to support the importance of this construct as a critical predictor of future trends. Computer is strongly influenced by teachers’ attitude toward their use and their belief in the value of their use, Al-oteowi (2002) concludes that teachers who showed negative attitudes toward using computers in teaching lack knowledge and experience which lead to lack of confidence to introduce this learning resources in their instruction.
However, these differences in attitudes vary according to gender. Some studies show that males hold higher positive attitudes towards the use of computer as teaching/learning resource than females. Wilder et al, (1985). Massoud (1991), Durndell and Thomson (1997) while other studies showed that female prefer the use of computers and have more knowledge about them than males (Allen, 1995). However, Galanouli et al (2004) found no difference between males and females. In general the literature shows that males hold more favorable attitudes towards computer as learning resources than females.

2.7.2 Challenges of inadequate teaching and learning materials

Wernerfelt (1984), comments that if resources are limited there is varied implication on teaching and learning where people have restricted access to resources, the possibilities of independent studies are reduced; therefore quality and standards will be wanting. The world education forum in Darkar (2000) noted that more than one third of world secondary schools have no access to new skills and technologies that could help in process of acquisition of knowledge. This is the situation in Kenya secondary schools and it needs a study to be done to verify the situation. The report adds that where resources are limited, the range of work is reduced. The role of ICT in education cannot be under estimated. ICT makes learning interesting and motivates learners. Industrialization will be achieved once learners adopt/undertakes courses which are scientific and technological oriented; and this can only be possible if ICT is integrated in teaching and learning process.

Various authors have cited problems which are related to this are. Inadequate ICT infrastructure in schools limits the teachers and learners to embrace contemporary forms of knowledge acquisition. Digolo (1986) did a research on availability of community resources in primary
schools and his study revealed that there was inadequacy of teaching and learning materials resources. He is supported by the works of Khisa (1995) who did a study on learning resources in Nairobi primary schools and found that most of the books used were outdated.

Misoy (1987) did study on instrumental materials used for teaching Geography in Kericho secondary schools and found out that many school had inadequate text books and other instructional resources like projectors.

2.7.3. Quality and quantity provision of learning resources

The resources should be provided in quality and quantity in classroom for effective teaching-learning process (Umeoduagu, 2000) and (Nwoj, 1999) in an empirical study revealed that essential facilities such as equipment like radio, television, computers, chemicals, specimens, video tape, stove, burners, models and charts are not available in schools. This inadequacy of teaching materials resources, laboratory equipment/reagents/chemical and laboratory space, has been of serious concern to educators.

(Fabayo, 1998), and Farombi (1998); Mapaderon (2002) and Oni, (1995) also emphasized that the availability and adequacy of these facilities promote effective teaching and learning activities in schools while the inadequacy affect the academic performance negatively. In 2003, the Kenya government introduced subsidize secondary education which led to increase population in secondary schools hence create a challenge in the quantity of learning resources. The literature reviewed uncovers the gaps that are notice in the challenges focused in the use of teaching and learning resources, in the teaching of geography. This compounded by negative attitude of both teachers and learners quantity and quality of learning resources due to increase learners’
population. No research has been conducted regarding this in secondary schools. This will study sought to fill these gaps in order to contribute to improving teaching and learning of geography.

2.7.4 **Summary and gap analysis**

The chapter reviewed issues related to challenges on effective utilization of teaching / learning resources by teachers with particular emphasis on relevance strategies of teaching Geography, importance of instructional resources in Geography teaching and learning, teachers’ attitude towards the use of instructional resources, inadequacy of teaching and learning materials, quality of instructional resources in Bureti Sub-county. Challenges into effective utilization of instructional resources have not been reviewed scholarly and researcher found the need to its attention.

The existing literature on effective use of Geography instructional resources are not current and are scanty. This study sought establishes the current trends that reflect the educational reality on Geography resource utilization. Secondly, challenges on the use of instructional resources in teaching and learning Geography have limitations in that they are presented generally and not specifically. This makes it hard to bring about meaningful interventions. This sought to establish concrete challenges that hinder effective use of geography instructional materials. This was concretely addressed in the study. This study sought to identify relevant problems that can lead to right educational resources and interventions.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the procedures and strategies that will be used to collect and analyze data. It focuses on research design, location of the study, target population, sampling techniques and sample size, description of pilot study and an outline of methods and techniques that will be used to collect analyze and present data.

3.2 The Research Design

This study employed descriptive survey research design. Ingule and Gatumu (1996), say descriptive statistics survey is a tool to describe, summarize or reduce to a manageable form the properties of a mass of data for a particular sample which is under consideration. Descriptive methods are widely used to obtain data useful in evaluating, present, practices and providing a basis for decision making. This design mainly uses the techniques of data collection such as questionnaires and observation guide; other procedures to be followed include identifying target population, conducting field test, selection of relevant sample, administration of questionnaires and data analysis using tables, means, frequencies and percentages. The description research design in this study involved challenges faced in the use of instructional resources in the teaching of geography in secondary school in Bureti Sub-county. The stages of the research procedures that were adhered to are shown in Figure 3.1
Source: Adapted and modified from Cohen and Marion (1994:89)
Figure 3.1 shows the target population from which the sample of 9 schools was picked. It also shows the methods of sampling that was used. The instruments that were used also are identified and the entire process that was also used is shown.

3.3 Location of the Study
The study was carried out in Bureti Sub-county of Kericho County Kenya. From the reviewed literature, efficient initialization of the available instructional resources translates to enhance teaching and learning and hence good academic performance. For example, Dale (1969) maintains that the use of a variety of teaching and learning materials increases the efficiency of learning and results to better learning outcomes.

3.4 Target Population
The target population comprised of forty five (45) secondary schools in Bureti Sub-county out of these three, (3) were County boys’ secondary schools, four (4) were County girls’ secondary schools, thirteen (13) mixed County schools, two (2) sub-county girls’ and twenty three (23) sub-county mixed schools. There were seventy seven (77) geography teachers and fifteen thousand two hundred and seventeen (15217) students of whom seven thousands six hundred and six (7606) boys and seven thousands two hundred and eleven (7211) were girls.

3.5 Sample Size and Sampling Procedure
3.5.1 Sample Size
The sample size was determined by a prior calculation of the sample required to meet specified confidence limit for the population values. For descriptive research 10% to 20% of the accessible population is accepted (Nkpa, 1997). This study therefore, randomly selected nine (9) secondary
schools. One (1) County boys’ school, one (1) County girls’ school and three (3) County mixed schools ,one (1) sub-county girls school and three (3) sub-county mixed schools. Ten (10) Geography teachers were selected for the study out of approximately 77 Geography teachers in the district. This constituted approximately 13% of the total Geography teachers’ population. Similarly, four hundred and thirty eight (432) form two students were selected from three thousand six hundred and forty five (3645) which constituted 12% of all the form two students in the sub-county. The distribution of the schools that were sampled and the respondents of the study were summarized in Table 3.2

Table 3.2: Sample grid of schools categories, students and teachers in Bureti Sub-county

<table>
<thead>
<tr>
<th>School categories</th>
<th>School type</th>
<th>Number of school</th>
<th>Student population</th>
<th>Selected number of schools sample</th>
<th>Form two students</th>
<th>Sample Size</th>
<th>Selected teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td>Boys</td>
<td>3</td>
<td>2401</td>
<td>1</td>
<td>560</td>
<td>85</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>5</td>
<td>3214</td>
<td>1</td>
<td>921</td>
<td>87</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Mixed</td>
<td>16</td>
<td>6112</td>
<td>3</td>
<td>1528</td>
<td>89</td>
<td>2</td>
</tr>
<tr>
<td>Sub-county</td>
<td>Boys</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>2</td>
<td>400</td>
<td>1</td>
<td>264</td>
<td>85</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Mixed</td>
<td>38</td>
<td>3090</td>
<td>3</td>
<td>372</td>
<td>86</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>45</td>
<td>15217</td>
<td>9</td>
<td>3645</td>
<td>432</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: Bureti Sub-county education office

Table 3.2 shows the total schools in the district in their categories and nine (9) schools which were sampled to represent other schools in the sub-county.

3.6 Research Instruments

The nature of the study lent itself to the use of various research instruments for data collection where three instruments were used. These were questionnaires, observation/checklists and
interview guide. There are two questionnaires, one for geography teachers and one for form two students. Observation checklist showing resources was used in the teaching and learning of Geography indicating quality, quantity and utility.

3.6.1 Teachers’ Questionnaires

The questionnaires (Appendix D) are the main tools that were used for data collection. The teacher questionnaires (Appendix C) consisted of eighteen items. The preliminaries of the questionnaires require the respondents to give their personal data such as gender, professional background and teaching experiences.

Each of the items in the questionnaire deals with a single or specific aspect of one of the objective of the study. These are to find out resources teachers used in teaching geography, self--efficacy, time and technical support affect teachers instructional resources use, find out challenges facing teachers and its strategies in the use of instructional media. The questionnaires had both closed and open ended items. The open ended items gave the respondents a greater freedom of expressing their ideas and opinions allowing them to make suggestions.

The closed ended item requires subjects to select the appropriate responses from the choice given. The closed item has the possibility of limiting the subjects’ views among the alternatives. Therefore the researcher include ‘any other’, for each item except in items such as gender, class, level (in cases of students) and also in items which require “yes” or “No” responses. Closed items are convenient to fill as the respondents simply select responses out of the supplied one.
3.6.3 Students’ Questionnaires

The students’ questionnaire (Appendix D) comprised of items that answers the research objectives. This included challenges experienced when using geography instructional materials, student use instructional resources, and the kind of geography instructional resources they use.

3.6.4 Classroom Observation Guide

The observation guide (Appendix G) which consisted of items focusing on how Geography teachers use instructional resources in the classroom to teach geography. The classroom observation guide was used to supplement the information the questionnaires and ascertain whether what the researcher observed in the classroom.

3.6.5 Interview Schedule

Interviews were conducted with heads of Geography Departments in each sample school. The interview mainly dealt with areas which were not covered in the teachers’ questionnaire including administration in the department. The interview was conducted in a private setting so that the subject feels free to express himself-herself fully and truthfully. Interview sessions accorded the researcher an opportunity to set and induce the subject heads to air their views on challenges facing teachers in the utilization of instructional resources in schools.

3.6.6 Observation checklist

The researcher prepared an observation checklist (Appendix E) containing forth possible instructional resources which could be used in teaching and learning geography at school. The researcher used the observation checklist to ascertain the instructional resources that are
available for teaching geography in the sampled schools. A total of twenty four observation checklist was used in this study.

3.7 Administration of Research Instruments.

3.7.1 Pilot Study

After pre-testing was over, research instruments were revised and piloting done in two schools which were similar to the ones used in the final study. Piloting involved presenting questionnaires to the teachers and students of Geography and directing them on how to fill them. As part of piloting, lesson observation was made to examine teaching and learning resources and challenges facing teachers when using them. The reason for piloting was to further test the instruments to check:

i. Ambiguities, inadequacy and misunderstanding in the items.

ii. If the instruments are suitable for generating the required information.

iii. If the items are logically arranged to facilitate responding.

iv. If resulting data could be quantified and analyzed in the intended manner.

Weaknesses of the research instruments was made possible from the data collected during piloting. The results were analyzed to determine the feasibility of the study. Descriptive statistics such as tables, frequencies, percentages and averages were used to analyze the data. On the basis of whatever weaknesses identified in the tools after piloting, necessary alteration and modification was made.

3.7.3 Validity and Reliability of the Research Instruments

3.7.4 Validity of Research Instrument.

The validity of the research instrument was established using content and face validity. Mugenda and Mugenda (1999) state that content validity is a measure of the degree to which data collected
using a particular instrument represent a specific domain of content. Theoretically, a content valid measure should contain all possible items used in measuring the content. However since it is impossible to construct an instrument that includes all possible items, the procedure is to use professionals in the field.

3.7.5 Reliability of the Research Instruments

The reliability of a research instruments refers to its dependability as a measuring device. Mugenda and Mugenda (1999) states that it is the measure of the degree to which a research instruments yields consistent data after repeated trials. Thus the reliability of the research instruments in this study was established by using split half technique. Data received from the pre-test was analyzed for this purpose. The instrument was divided into two parts by including all the even – numbered items in one group and all add numbered item in another group. The scores in the items were ranked and their differences found. The scores were then correlated using the Spearman Brown proficiency formula

\[
R = 1 - \left( \frac{6 \sum D^2}{n(n^2 - 1)} \right)
\]

Where, \( r = \) correlated coefficient between rank order

\( D^2 = \) difference between the rankings

\( n = \) number of pairs of rankings

The study obtained a correlation coefficient \( r \) of 0.789 which was acceptable.
3.8 Data Collection Procedures

On the first day, the researcher visited the sample schools and introduce himself to the head of the institution, explained the purpose of the visit in order to enlist co-operation from the schools administration. After the permission was granted to conduct the research, the researcher met geography teachers and head of department to arrange when and how to conduct the study, arrangement were made and date set for the administration of the research instruments. On the second visit, the researcher with the help of Geography teacher randomly selected students from form two to fill the questionnaires. The researcher observed geography lessons in progress to note the utilization of teaching learning materials in use and its challenges. Checklist gave the researcher an opportunity to view and see the state of learning resources which was shown by geography teachers. After two weeks, the researcher made a third visit to collect the questionnaires and held an interview with the head of department concerning challenges faced by teachers in the utilization of teaching/learning resources in school.

3.9 Data Analysis and Interpretation

The data collected were both quantitative and qualitative. Quantitative data were entered into the statistical packages for social sciences (SPSS) Program to give descriptive statistics such as means, mode, frequency and percentages. Analyzed data were tabulated using graphs, tables and pie charts. Qualitative data on the other hand was analyzed by arranging responses according to the research objectives and questions. After that the researcher drew inferences, recommendations and conclusions based on the findings. Bell (1993), maintains that when making the results known to a variety of readers, percentages have a considerable advantage over more complete statistics. He adds that the most widely used and understood standard proportion
is the percentage hence data will be presented in tables and frequency distributions to enhance clarity.

3.9.1 Logistical and Ethical Consideration

After getting research permit, booking for head teachers’ appointment for data collection was sought. For ethical consideration, participants were informed of the nature of the study and allowed to choose whether to participate or not. To safeguard the privacy of the participants, respondents were kept in a private environment away from passersby or intruders. Asking participants not to write their names on the questionnaires during the research also helped ensure anonymity. While preparing for data collection and analysis, the researcher maintained anonymity by separating information such as code numbers from the data itself. During the research, participants were requested not to write their names on the questionnaires.
CHAPTER FOUR

FINDINGS, INTERPRETATION AND DISCUSSION

4.1 Introduction

The study sought to establish the challenges facing effective use of geography instructional materials by teachers in public secondary schools in Bureti Sub-county of Kericho County. The study was based on the following objectives to: find out the kind of resources teachers in public schools use; assess the extent to which instructional media are used in the teaching and learning of Geography; find out the challenges facing teachers in the use of instructional media in the teaching of Geography. The study also sought to find out strategies used by teachers to overcome challenges that hinder the effective use of instructional media in Bureti Sub-county secondary schools. A total of 400 questionnaires were distributed but 336 questionnaires were answered and returned which was 84.0% return rate.

4.2 Demographic Information

For establishment of the demographic information of the respondents, the study was carried out on the gender, types of school, age of the teachers and the academic qualification. The researcher sought to determine the demographic characteristics of the teacher respondents in order to understand the teachers’ capacity to implement the Geography curriculum based on the use of instructional resources.
4.2.1 Gender Analysis

In terms of students’ gender, the finding of the study is indicated in Figure 4.1 below.

![Gender of the Students](image)

**Figure 4.1: Gender of the Students**

The findings revealed that 50.3% were male while 49.7% female. The questionnaires were distributed such that both genders were sampled proportionately. The study involved 336 students and the study findings revealed that there were more male students as compared to females which can be attributed to the interest in geography by male students as compared to their female counterparts.

4.2.2 Age of Teachers

The study sought to determine the age distribution of the respondents. The study findings as presented in Figure 4.2.
Figure 4.2: Age of the Teachers

As shown in Figure 4.2, majority, 42.9% were aged 20-30 years, followed by 28.6% who were aged 31-35 years and 14.3% between 36-40 years and 41-45 years respectively. About half of the teachers were above 30 years. This indicated that most of the respondents had sufficient experience in handling the subject. The proportion of teachers could also be attributed to prevalent transfers and promotions.

4.2.3 Highest Qualification of Teachers

The study sought to find out the highest qualifications of the Geography teachers and the findings are presented in Figure 4.3.
Figure 4.3: Highest Qualification

Figure 4.3 shows that majority 85.7% had a degree in education while only 14.3% with diplomas. The findings can be attributed to recruitment procedures by the TSC (Teachers’ Service Commission) which requires those employed to have undergone teacher training. The degree holders have more marks when it comes to rating the candidates hence a majority secure the teaching positions. This shows that all the teachers who participated in the study have the necessary teacher qualifications to handle the teaching of Geography subject. The researcher further assumed that qualification of the teachers counts much on their teaching effectiveness and also on the students’ understanding of what is taught.

4.2.4 Teaching Experience

Teachers were asked to indicate the period for which they had taught in school. The study found that 25.0% of the respondents indicated that they had taught for a period less than 5 years. The study also found that 40.0% of the respondents had taught for a period between 6-10 years,
(25.0%) had taught for a period between 11-15 years and (10%) had taught for a period of above 20 years. From the findings of the study, it can be said that majority of geography teachers interviewed had taught for a long period of time. Focusing on teacher experience and effective curriculum delivery, Clotfelter, Ladd and Vigdor (2006), found that teachers with more experience are more effective than those with less experience. The researcher therefore considered the information given by the teachers to be reliable as it was given out of experience.

4.2.5 Type of School
An item was included in the questionnaire which asked the students to state the type of school. In response, figure 4.4 presents the findings.

![Figure 4.4: Type of Schools](image)

As presented in Figure 4.4, majority 39.9% were from boys’ school, 35.1% from girls’ school and 25.0% from mixed school. This is part of research design.
4.3 Instructional Resources for Teaching and Learning Geography in Secondary Schools

4.3.1 Textbooks Used in Teaching Geography

Teacher respondents were given a list of different resources used for teaching and learning Geography and were asked to indicate whether they were available and their appropriateness for teaching Geography. Table 4.1 presents the findings

Table 4.1: List of Geography Textbooks in Secondary Schools

<table>
<thead>
<tr>
<th>Title of the book</th>
<th>Author</th>
<th>Year of publication</th>
<th>Very useful</th>
<th>Not useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary Geography book 2</td>
<td>KLB</td>
<td>2013</td>
<td>78.5%</td>
<td>21.5%</td>
</tr>
<tr>
<td>Certificate Geography</td>
<td>Paul Kibuka &amp; Robert</td>
<td>2008</td>
<td>90.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td></td>
<td>Karuga</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary Geography</td>
<td>F. Omwoyo &amp; Dr. Kisovi</td>
<td>2009, 2013</td>
<td>88.9%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Top Mark Geography</td>
<td>KLB</td>
<td>2007</td>
<td>96.9%</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

In Table 4.1, the textbooks shown above formed the majority of books used for teaching geography. However an examination of the responses within the secondary schools revealed that some schools did not have the several Geography textbooks.

In terms of availability and adequacy, the study found that text books were available as indicated by 98.0% but they were inadequate as indicated by 73.0% of the respondents. The students also revealed in the study that 95.2% shared textbooks and 4.8% did not. The provision of instructional materials enhances curriculum syllabus coverage because they greatly contribute to effective teaching. They further help the learner to acquire and strengthen skills in reading,
observing, listening and communicating. However, one should note that the teacher is a major resource without whose contribution other resources cannot be effectively used.

### 4.3.2 Other Print Resources

Instructional resources are essential in teaching Geography since they are designed to help the teachers to enhance their understanding of the subject and implement the ideas contained in the curriculum. The students were asked to indicate whether the following resources were used in learning Geography and Table 4.2 presents the findings.

**Table 4.2: Learning Resources**

<table>
<thead>
<tr>
<th>Learning Resources</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maps and Diagrams</td>
<td>324</td>
<td>96.4</td>
</tr>
<tr>
<td>Magazines</td>
<td>151</td>
<td>44.9</td>
</tr>
<tr>
<td>Journals</td>
<td>77</td>
<td>22.9</td>
</tr>
<tr>
<td>Computers</td>
<td>62</td>
<td>18.5</td>
</tr>
<tr>
<td>Internet</td>
<td>23</td>
<td>8.6</td>
</tr>
<tr>
<td>Radio</td>
<td>31</td>
<td>9.2</td>
</tr>
<tr>
<td>TV</td>
<td>52</td>
<td>15.5</td>
</tr>
</tbody>
</table>

As shown in Table 4.2, above the study found that apart from text books, resources such as maps and diagrams, magazines were frequently used while internet and radios were rarely used. A radio is a resource that at times can supplement the teacher’s work, especially during radio broadcasters to schools. The findings indicated inadequacy of audio-visual and audio aids for teaching Geography. This was attributed to the fact that the audiovisual aids, though important,
were expensive resources, yet schools did not have funds to purchase them. Availability and frequent use of this resource can help leave a permanent mark in the minds of the learners. Therefore, such resources should not be over-looked; instead the relevant authorities should make efforts of providing for them.

4.3.3 Other Teaching Resources (Models)

The students were asked in the questionnaires to state the types of resources they used in learning Geography and in response, Table 4.3 presents the findings.

Table 4.3: Other Teaching Resources

<table>
<thead>
<tr>
<th>Learning Resources</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Globes</td>
<td>98</td>
<td>34.5</td>
</tr>
<tr>
<td>Diorama</td>
<td>83</td>
<td>29.2</td>
</tr>
<tr>
<td>Models</td>
<td>95</td>
<td>33.5</td>
</tr>
<tr>
<td>Video Show</td>
<td>4</td>
<td>1.4</td>
</tr>
<tr>
<td>Power Point</td>
<td>4</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Table 4.3 shows that majority 34.5% of the teachers used globes, 33.5% used models and 29.2% used diorama. Teaching aids should be used to supplement the process of teaching. Most of the teaching aids are to make teaching concrete, effective and interesting. Instructional materials used in teaching geography are instrumental in the entire education process. There are many methods a teacher can use in class. The instructional methods commonly used in the teaching and learning of Geography included charts, maps models, discussion, video show, and power point among others. This indicates that the teachers are well prepared on the general methods of teaching and that is why they are better placed and grounded to teach the subject. Thus, as found
in the study, instructional methods are important to the teaching and learning of the subject matter.

From the findings of the study, it can be concluded that most of the schools studied did not have resources for teaching and learning Geography and those which had the resources, were not adequately equipped. A survey by MoEST (2010) concluded that there was a critical shortage of textbook equipment and physical facilities in most public schools. This is an indication that unavailability and inadequacy of teaching and learning resources hindered proper effective use of geography instructional materials in secondary schools in Bureti District.

Several instructional materials for Geography such as chalkboard, models, graphs, charts, maps, pictures, diagrams, cartoons, slides, films, radio and television which are all useful in enhancing teaching in the subject. However, properly used, they go a long way in making a Geography lesson more interesting and meaningful.

Instructional materials, especially audio visual aids like computers, radios and TVs are useful both for the teacher and the learners because they help the teacher clarify certain points in the lesson. They also offer a substitute for direct experiences which are difficult to provide within certain settings. It makes the teacher achieve the objectives and makes learning clearer and easier for the students by stimulating them and making the environment more conducive. Teaching and learning materials are very essential for effective teaching.

4.4 Factors Affecting Use of Instructional Resources in Teaching Geography

4.4.1 Adequacy of Time allocated for teaching Geography

Teacher respondents were asked to indicate the level of adequacy of time allocated to use instructional resources for teaching Geography and Table 4.4 presents the findings
As shown in Table 4.4, majority 50.0% of the teachers had 30 minutes allocated for them to use instructional resources like computers while 15.7% had either one hour or over three hours. Learners were also asked to state the adequacy of time for them to learn using instructional resources like computers and in response majority 75.0% reported that the time was inadequate. This was mainly attributed to the fact that majority 80.1% of the learners were not computer literate as only 19.9% were computer literate.

On the other hand, the study revealed that 42.9% of teachers never used computers all, 28.6% rarely used computers and only 28.6% used the computers and this affected the input of instructional resource usage. From the findings of the study, it can be said that time allocation for the use of computers in teaching Geography was a challenge to its implementation. This finding negates Wamutitu (1991) who observed that Geography as a subject requires sufficient time for a teacher to be able to merge theory, content and application together in the experience of the students.

### 4.4.2 Computer Literacy

The students were asked to state whether they were computer literate, and which area for computer literacy. In response, the study revealed that only 18.9% were computer literate and the areas of literacy were as presented in Table 4.5 below.

<table>
<thead>
<tr>
<th></th>
<th>0 hours</th>
<th>30 minutes</th>
<th>One Hour</th>
<th>Over Three Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16.7%</td>
<td>50.0%</td>
<td>16.7%</td>
<td>16.7%</td>
</tr>
</tbody>
</table>

#### Table 4.4: Time allocated for Use of Instructional Resources
Table 4.5: Area of Computer Literacy

<table>
<thead>
<tr>
<th>Area</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Browsing in the internet</td>
<td>33</td>
<td>33.7</td>
</tr>
<tr>
<td>Exchanging ideas using e mails</td>
<td>26</td>
<td>27.4</td>
</tr>
<tr>
<td>Typing geography statements</td>
<td>37</td>
<td>38.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>95</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

As shown in Table 4.5, the study revealed that those who could access internet were mainly browsing or exchanging mails but not using internet for academic purpose. Since the internet and other media have been adopted and integrated into the daily lives of an increasing number of young students, there is a debate on the impact of these new media on the activities of mainly younger generations including class work.

4.4.3 Challenges facing Teachers in the use of Instructional Resources

To establish the challenges facing teachers in the utilization of Geography teaching and learning resources, the respondents were asked to indicate their level of agreement with different statements. This was tested on a five point likert scale of “Strongly Agree”, “Agree”, “Not Sure”, “Disagree” and “Strongly Disagree”. The results were as presented in the Table 4.6 to Table 4.10
Table 4.6 Teacher Related Challenges of Utilization of Resources.

<table>
<thead>
<tr>
<th>Teacher Related Challenges</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of teacher interest</td>
<td>14.3%</td>
<td>71.4%</td>
<td>14.3%</td>
<td>-</td>
</tr>
<tr>
<td>Lack of knowledge</td>
<td>14.3%</td>
<td>57.1%</td>
<td>28.6%</td>
<td>-</td>
</tr>
<tr>
<td>Lack of technical assistance</td>
<td>28.6%</td>
<td>71.45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.7 School Related challenges of Utilization of Resources.

<table>
<thead>
<tr>
<th>School Related Challenges</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate text and reference books</td>
<td>28.6%</td>
<td>57.1%</td>
<td>14.3%</td>
<td>-</td>
</tr>
<tr>
<td>Lack of time for improvising resources</td>
<td>42.9%</td>
<td>42.9%</td>
<td>14.3%</td>
<td>-</td>
</tr>
<tr>
<td>Over enrolment</td>
<td>42.9%</td>
<td>28.6%</td>
<td>14.3%</td>
<td>14.3%</td>
</tr>
<tr>
<td>Lack of support from the school authorities</td>
<td>14.3%</td>
<td>42.9%</td>
<td>14.3%</td>
<td>28.6%</td>
</tr>
</tbody>
</table>

Table 4.8 Student Related challenges of Utilization of Resources.

<table>
<thead>
<tr>
<th>Student Related Challenges</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of time for improvising resources</td>
<td>42.9%</td>
<td>42.9%</td>
<td>14.3%</td>
<td>-</td>
</tr>
<tr>
<td>Lack of student interest</td>
<td>28.6%</td>
<td>14.3%</td>
<td>57.1%</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 4.9: Curriculum Related challenges of Utilization of Resources.

<table>
<thead>
<tr>
<th>Curriculum Related Challenges</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too wide geography syllabus</td>
<td>28.6%</td>
<td>42.9%</td>
<td>28.6%</td>
<td>-</td>
</tr>
<tr>
<td>Technology changes</td>
<td>14.3%</td>
<td>42.9%</td>
<td>28.6%</td>
<td>14.3%</td>
</tr>
</tbody>
</table>
Table 4.10: Infrastructure Related challenges of Utilization of Resources

<table>
<thead>
<tr>
<th>Infrastructure Related Challenges</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unreliable electricity supply</td>
<td>42.9%</td>
<td>42.9%</td>
<td>14.3%</td>
<td>-</td>
</tr>
<tr>
<td>Lack of internet connection in school</td>
<td>57.1%</td>
<td>42.9%</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Insufficient number of computers</td>
<td>42.9%</td>
<td>42.9%</td>
<td>14.3%</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 4.6 to Table 4.10 Show that the respondents agreed that inadequate text and reference books, lack of time for improvising resources and lack of teacher interest was a serious challenge facing teachers in the utilization of Geography teaching and learning resources. Insufficient number of computers, unreliable electricity supply, lack of internet connection in school and lack of technical assistance were also noted. On the hand the respondents disagreed that there were challenges concerning student interest and support from school authorities in the utilization of teaching and learning resources in Bureti Sub-county.

Teacher respondents were further asked to mention other challenges. The following challenges were mentioned: students dropping Geography in form two, inadequate time for syllabus coverage, negative attitude among students towards Geography as a subject and large class sizes. Other challenges included: Inadequate teaching and learning resources, disconnect between how marking is done in KCSE and what is covered in class and in text books, perception that the subject is too hard thus only a few students choose it, inadequate funds for field work, poor performance in National examinations and inadequate time allocation for Geography as a subject.

To further establish the challenges associated with the use of instructional methods as perceived by teachers of Geography in secondary schools. Teacher respondent were asked to state whether they had taken their students on field/educational trips to study Geography. In response, only
18.2% have ever gone a geography trip while 81.8% have never gone. This implies that, the challenge for the geography teacher does not only lie in the availability of these materials, but in their other factors as well.

According to students, the following were the challenges stated when using geographical resources during learning as shown in Table 4.11

**Table 4.11: Challenges Students face on the Utilization of Learning Resources**

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geography textbooks are inadequate</td>
<td>227</td>
<td>71.6</td>
</tr>
<tr>
<td>Lack of variety textbooks</td>
<td>215</td>
<td>68.5</td>
</tr>
<tr>
<td>There is unreliable power supply in the school</td>
<td>65</td>
<td>20.7</td>
</tr>
<tr>
<td>There is no enough skill to find information from web</td>
<td>189</td>
<td>60.2</td>
</tr>
<tr>
<td>Teachers are unwilling to use some resources</td>
<td>71</td>
<td>22.6</td>
</tr>
<tr>
<td>We are not allowed to access school computers</td>
<td>123</td>
<td>40.6</td>
</tr>
<tr>
<td>We do not have enough time for using the resources</td>
<td>108</td>
<td>35.6</td>
</tr>
</tbody>
</table>

**4.5 Strategies for Improving the Availability and Use of Instructional Resources in Geography.**

The following were suggested ways of overcoming the above challenges;

- Teachers should be involved in the development of the resources to be used in Geography curriculum. This will enhance the utilization of the available resources as teachers will feel that they are part of the curriculum formulation.
• Secondary school principals should assist other teachers in the facilitation of field studies to break monotony of class room teaching. This will enhance learning outside the class room; reduce of the number of topics to be covered in Geography hence proper utilization of the available resources.

• Adoption of computer aided technology for effective delivery of Geography as this will enhance understanding of Geography among students and provision of teaching and learning resources to enhance effective implementation of Geography curriculum.
CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter focuses on the summary of the study findings based on the objectives, conclusion made and the recommendations. The chapter also gives suggestions for further research. The study investigated challenges facing effective use of Geography instructional materials by teachers in public secondary. The findings were based on the following objectives: find out the kind of resources teachers in public schools, assessed the extent to which instructional media are used in the teaching and learning of Geography; found out the challenges facing teachers in the use of instructional media in the teaching of Geography and strategies used by teachers to overcome some of the challenges that hinder the effective use of instructional media in Bureti sub-county secondary schools.

5.2 Summary of Study

Several factors influence instructional materials use, these factors include attitude, access, self sufficiency and technical support. Unavailability of adequate supply of text books, teachers guides and supplementary reading books have a major impact on students’ performance. These resources improve students’ achievement; utilization of learning / teaching resources has a major impact on students’ performance. It is important that both teachers and students consider practice of map reading and use of atlas, drawing of maps/diagrams as an integral part of the teaching and learning Geography. These are not optional activities if one has to master and understand concepts in the subject. This study therefore sought to investigate the challenges to effective utilization of geography instructional materials by teachers in public secondary schools in Bureti sub-county. The purpose of this study was to investigate the challenges facing effective use of
learning resources in public secondary schools in Bureti sub-county. The specific objectives of this study were: - to identify Geography teaching and learning resources available in Bureti sub-county secondary schools, to assess the extent to which instructional resources are used in the teaching and learning of Geography in Bureti sub-county secondary schools and to suggest strategies to overcome challenges facing the utilization of instructional resources in Bureti sub-county secondary schools. The study adopted descriptive survey design. The study’s population comprised of forty five schools, fifteen thousand two hundred and seventeen students and seventy seven Geography teachers. Nine public schools were selected for study using purposive sampling techniques based on school categories and students’ gender composition such as one county boy and girls and three mixed schools, one girl and three mixed sub-county schools. The study used stratified sampling to collect data from Ten Geography teachers and three hundred and forty two form two students.

5.3 Summary of Findings

A majority of the teacher respondents noted that the availability of instructional materials in their schools was a serious challenge. The instructional materials included textbooks, charts, radio, models, diorama, maps, films, realia among others. However, it was noted that there were disparities on the availability of the instructional materials in the various schools of the respondents. Some materials were reported to be found in most of the schools. These included textbooks, maps, charts, but models, diorama, films and radio were minimal. The study established that the instructional materials that are mostly purchased were available and in large numbers. Thus as illustrated, it was noted that the most frequently used instructional materials like text books, maps, charts, but radio are not available and least accessed to in the schools.

The study established that most of the teachers never used field trip and other methods in instruction. The Geography teachers noted that the time allocated for field trip and role play
methods of teachers teaching was not enough and this posed a challenge which needs to be addressed if the objectives of teaching the subject are to be realized. These were identified as methods which demand a lot of time for successful use. This method was also noted to involve a lot of resources in terms of time, money and materials which result in financial strains not only on the teachers but also the school administration. Thus coupled with other factors, the instructional methods used is a challenge to the teaching and learning of Geography subject in secondary schools.

The study found out that a list of learning /teaching resources in Geography was neither exhaustive nor prescriptive. Teachers therefore suggested that a wealth of other learning/teaching resources could be explored by sharing experiences with colleagues within the school and in other institutions of learning. Some of the resources could be improvised or prepared through project work. Other resources maybe collected during field trips and those that are unaffordable could be borrowed or share to enhance the utilization of teaching and learning resources.

5.4 Conclusions

The study findings indicated that teachers play an important role in the teaching and learning process. Thus the limited use of various and appropriate instructional resources is a factor that poses a challenge to teaching and learning of Geography subject. Moreover, the teaching and learning of Geography is affected by the availability of instructional materials in the schools. Instructional resources are important inputs for effective teaching and learning. As noted in the study, most schools lacked instructional materials. An examination of the findings on the extent of teacher’s use of instructional materials show that, the availability of instructional materials has an impact on the teachers ‘use of the materials in teaching of the subject. It was found that few 28.4% teachers used textbooks and maps in teaching the subject in their schools. However,
limited use 31.5% of other instructional materials was noted to some extent in the schools that participated in the study. This could be attributed to the situations in their institutions which dictate the availability of instructional materials that can be adopted for use in instruction to ensure better results in Geography. The availability of instructional materials to a large extent is influenced by the teacher’s instructional approaches and also determined use in classroom teaching.

Taking cognizance of the importance of material resources to teaching and learning, adequate instructional aid should be provided for the teaching of Geography in order to increase students’ performance in the subject. Both teacher quality and material resources are intimately related. Teachers can be frustrated without adequate supply of materials needed to teach their subjects. It is therefore highly essential to provide adequate and relevant materials for the teaching and learning not only of Geography.

Instructional materials must be directly relevant to the Geography lesson. It must be integrated with the teacher’s whole approach and subject presentation. It must be preceded and followed up by work calculated to ensure maximum comprehension. Therefore, educational objectives must determine the instructional materials. The effectiveness in the use of instructional materials lied on the fact that both the selected learner participate actively. All these were conspicuously lacking like lack of textbook 68.5%, unreliable power supply 20.7%, access to computers 40.6% among other challenges in public secondary schools, Bureti Sub-county, Kenya.

The availability and quality of Geography instructional materials are important for the implementation process to take place. Besides, proper utilization of resources requires change in
the provision of relevant and adequate text books, teachers guide books, supplementary readers, facilities and other required teaching and learning aids. Teachers ought to be aware of the most important contribution instructional resources can offer to facilitate learning. As indicated in the findings, most of the schools had a challenge on the availability and use of instructional materials. It points out that most of the instructional materials which require funds were unavailable or minimal as the schools could not avail them for use. The fact that the types of learning resources for teaching geography were not available in schools could affect the effective use of geography instructional materials by teachers in public secondary schools; mainly because for any subject to meet its objectives, all the necessary types of learning resources should be availed.

5.5 Recommendations
Based on the study findings, the study made the following recommendations:

- Since the study established that the challenge related to the teaching and learning of Geography has to do with the use of instructional materials, the Geography teachers are therefore called upon to consider the relevance of the content, usability, appropriateness in choice and use of teaching materials.
- It is clear from the study that various teaching methods are effective depending on the purpose of instruction. There is, therefore, need for the Geography teachers to consider such purpose as preparation for exams, enhancing student understanding, realization of lesson objectives and the syllabus coverage in the use of various methods of instruction.
- Public secondary schools in Kenya should be provided with adequate and a variety of instructional media. If teachers in public secondary schools in Kenya
are to assume new roles and use new technology-supported instructional tools, they should become familiar with a variety of instructional delivery methods, rather than relying on textbooks, chalkboard and lecture method in Teaching not only Geography but all subjects.

- There is also need for the development of positive attitudes by teachers towards the use of instructional materials for their students. This will encourage the development of their proficiency.
- The cost of procuring instructional materials should not be too high so that many stakeholders will be able to afford.
- Regular supply of instructional materials should be embarked on by the Governments at all levels
- There is need for serious training and re-training of teachers in form of workshops, seminars, in-service and sandwich programs on how to use or produce instructional materials. This will help to make their class very interesting and stimulating.

5.6 Suggestions for Further Research
This study was carried out in public secondary schools in Bureti Sub-county to establish the effective use of geography instructional materials by teachers.

i. The researcher therefore recommends that another study be carried out in other district to investigate the factors influencing the choice of Geography as a subject among students, which was not a concern of this study.
ii. A study needs to be carried out in private secondary schools to see whether findings are of similar trend.

iii. There is need to carry out a research to find out the specific areas in geography syllabus which are difficult or challenging (or both) to students and teacher.
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Good, C.V (1992) *Essentials in Research Methodology and Design*, New York:

*Government in Secondary Schools in Kenya*


APPENDIX A

LETTER OF INTRODUCTION

Ngeno Japheth Kipkirui
Department of Educational Communication and Technology
Kenyatta University

To,

The Principal,

Dear Sir/Madam,

RE: INTRODUCTORY LETTER

I am a post graduate student at Kenyatta University, currently conducting a study on: Barriers to effective utilization of geography instructional materials by teachers in public secondary schools, Bureti district, Kenya

The purpose of this letter is to inform you that I wish to be in your schools to collect data on……………… I look forward to receive assistance to accomplish my research.

I intend to use HOD Geography Department, Geography teachers and form two students as respondents. The findings will assist in making recommendations aimed at solving challenges facing teachers in the use of instructional materials in the district.

Thanks in advance.

Yours sincerely,

Ngeno Japheth K.
APPENDIX B

PUBLIC SECONDARY SCHOOLS IN BURET SUB-COUNTY

1. Kapkisira mixed secondary
2. Getaruet mixed secondary
3. Roret mixed secondary
4. Kabartegan mixed secondary
5. Tulwet mixed secondary
6. Mabasi mixed secondary
7. Kaminjeiwet mixed secondary
8. Kabitungu mixed secondary
9. Reresik mixed secondary
10. Kapchelach mixed secondary
11. Cheptendeniet mixed secondary
12. AIC Litein girls secondary
13. Tengecha boys high
14. Chelilis girls
15. Emmanuel Boito girls
16. Chaplanget mixed secondary
17. Kapsogut mixed secondary
18. Tengecha girls
19. Chepwagon boys
20. Cheplanget mixed secondary
21. Kapsinendet mixed secondary
22. Chebitet mixed secondary
23. Kapkarin mixed secondary
24. Kapsogeruk mixed secondary
25. Chemoiben mixed secondary
26. Kamanamsim mixed secondary
27. Kusumek mixed secondary
28. Kapkatet mixed secondary
29. Butiik mixed secondary
30. Cheborgei boys
31. Korongo girls
32. Siongi mixed secondary
33. Cheborgei girls
34. Kapsogut mixed secondary
35. Ngororga mixed secondary
36. Mombwo mixed secondary
37. Kelunet mixed secondary
38. Kiptewit mixed secondary
39. Kamanjeiwa mixed secondary
40. Arokyet mixed secondary
41. Kibogat mixed secondary
42. Kaptele mixed secondary
43. Tebesonik mixed secondary
44. Kabusienduk mixed secondary
45. Tiriita mixed secondary

SOURCE. BURETI DEO OFFICE
APPENDIX C

QUESTIONNAIRE FOR GEOGRAPHY TEACHERS

The purpose of this questionnaire is to obtain information on challenges facing teachers in the use of teaching and learning resources in your school. Please answer the following questions as honestly and accurately as possible by writing your answers in the space provided or ticking (✓) against the appropriate response(s) from the alternatives given.

1. Name of school________________

2. (a) Your age

   20-25 [ ]

   26-30 [ ]

   31-35 [ ]

   36-40 [ ]

   41-45 [ ]

   46 and above [ ]

(b) Gender

   Male [ ]

   Female [ ]

(c) Highest professional qualification

   S1 [ ]

   Dip [ ]

   BED [ ]

   MED [ ]

3. (a) Teaching experience______________ years
(b) Do you have a copy of Geography syllabus you can refer to when necessary?

Yes [ ]  No [ ]

If your answer is yes, indicate the year it was published____________________

4. Which of the following categories of resources exist in your school?

i. Printed [ ]

ii. Projected [ ]

iii. Non-projected [ ]

iv. Any other (specify) ____________________________________________

5. List the main geography textbook that you use in your form two class. Indicate if you have enough copies(using ) and if inadequate(use )

<table>
<thead>
<tr>
<th>Titles</th>
<th>Author</th>
<th>Year of publication</th>
<th>Number of copies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. Apart from the main textbook which reference (supplementary books) do you use in your form two class?

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Year of publication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7. When you are selecting geography textbook what qualities do you look for in the book?
   i. _________________________
   ii. _________________________
   iii. _________________________
   iv. _________________________
   v. _________________________
   vi. _________________________

8. List the problem which you face in the use of Geography textbooks
   i. _________________________
   ii. _________________________
   iii. _________________________
   iv. _________________________
   v. _________________________
   vi. _________________________

9. What other materials apart from textbook are available in your school for Geography teaching/learning. Put a tick (√) or a cross (x) against each material to supply the required information in the columns provided below.
10. Give reasons why you consider some of the materials you have listed in question 9 above are not to be of good quality

<table>
<thead>
<tr>
<th>Name of material</th>
<th>Reasons why it is not of good quality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. (a) Give reasons for not using some of the materials you have listed in question 10 above

<table>
<thead>
<tr>
<th>Name of the material</th>
<th>Reasons why it is not utilized</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12. Which of the following electronic resources exist in your school for teaching and learning of Geography

<table>
<thead>
<tr>
<th>Electronics</th>
<th>Total</th>
<th>No. in use</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Televisions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii. Radios</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii. Video recorder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv. Computers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Any other (specify) ______________________________________________________

**Computer self efficacy**

13. Do Geography teachers generally have knowledge/skills on computer use in teaching?

Yes [ ]

No [ ]

14. If yes in question 13 above list the application programmes they are using

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft word</td>
<td>[ ]</td>
</tr>
<tr>
<td>Microsoft excel</td>
<td>[ ]</td>
</tr>
<tr>
<td>Power point</td>
<td>[ ]</td>
</tr>
<tr>
<td>Microsoft access</td>
<td>[ ]</td>
</tr>
<tr>
<td>Internet explorer</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

Any other (specify) ____________________________________________________________________________
**Time support**

15. Give the appropriate response (√)

How many hours per week are you provided to use computers to teach Geography lesson.

<table>
<thead>
<tr>
<th>0 hrs</th>
<th>½ hrs</th>
<th>1 hrs</th>
<th>2 hrs</th>
<th>3 hrs or more</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Technical support**

Tick your best response. The responses are

A = Always  
O = Often  
R= Rarely  
N = Never

16. How often teachers uses computers in your school to teach Geography?

<table>
<thead>
<tr>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>O</td>
</tr>
<tr>
<td>S</td>
</tr>
<tr>
<td>R</td>
</tr>
<tr>
<td>N</td>
</tr>
</tbody>
</table>

17. How do you acquire resources for use in teaching and learning of Geography

i) Improvisation  
ii) Purchase by parents  
iii) Purchase school administration
iv) Donation from well wishers

v) Supply KIE

vi) Any other (specify)______________________________________________________________

18. (a) Challenges facing teachers in the utilization of geography teaching and learning resources in school. Indicate by using the following phrases strongly agree (SA), Agree (A), Not sure (NS), Disagree (D) and strongly Disagree (SD). Tick as appropriate

<table>
<thead>
<tr>
<th>Challenges</th>
<th>SA</th>
<th>A</th>
<th>NS</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate text and reference books</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of time for improvising resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of student interest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of teacher interest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unreliable electricity supply</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of knowledge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insufficient number of computers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of internet connection in school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of technical assistance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over enrolment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Too wide Geography syllabus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of support from the school authorities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology changes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Any other specify______________________________________________________________
b) Suggest ways of overcoming the above challenges

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

19. (a) Have you ever taken your students on field/educational trips to study Geography?

Yes [ ] No [ ]

(b) If your answer is Yes, list down the places visited

i. ______________________

ii. ______________________

iii. ______________________

iv. ______________________

v. ______________________

vi. ______________________

20. (a) State some of the challenges you face at different stages in the field trip

i. At preparation state  ____________

________________________

________________________

ii. Actual visit day  ____________

________________________

________________________
iii. After the visit


(b) Suggest possible ways of overcoming the above challenges

____________________________________________________________________

____________________________________________________________________

Thanks for your co-operation
APPENDIX D

QUESTIONNAIRE FOR FORM TWO STUDENTS

The following questions aim at obtaining information on the extent to which you use instructional resources in learning Geography in your school. Please answer the following questions as honestly as possible by writing in spaces provided or ticking (✓) against the appropriate response(s) from the alternatives given.

1. (a) Name of your school___________________________

   (b) Type of school

      i. Boy’s school [ ]
      ii. Girl’s school [ ]
      iii. Mixed school [ ]

   (c) What is your gender? (only in mixed school)

      Male [ ] Female [ ]

2. (a) List the main Geography books which are used and put a tick(✓) to indicate how useful they are.

<table>
<thead>
<tr>
<th>Title of the book</th>
<th>Author</th>
<th>Year of publication</th>
<th>Very useful</th>
<th>Not useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(b) If you do not find the textbook useful give reasons

i. _________________________

ii. _________________________

iii. _________________________

iv. _________________________

3. Who provides you with the Geography textbooks which you use?____________________

_________________________________________________________________________

4. (a) Do you share Geography textbooks with other students?

   Yes [ ]  No [ ]

   (b) If your answer is yes, how many students share one textbook?____________________

5. What problems do you face when using Geography textbooks?

   i. _________________________

   ii. _________________________

   iii. _________________________

   iv. _________________________

   v. _________________________

6. How do you overcome the problem you have listed in question (5) above?

   i. _________________________

   ii. _________________________

   iii. _________________________

   iv. _________________________

   v. _________________________
b) Apart from the textbooks indicate whether you use the following resources in learning geography

i. Maps and diagrams [ ]
ii. Globe [ ]
iii. Models [ ]
iv. Diorama [ ]
v. Charts [ ]
vi. Magazines [ ]
vii. Journals [ ]
viii. Computer [ ]
ix. Internet [ ]
x. Radio [ ]
xi. TV [ ]

Any other (specify) ____________________________________________________

7. (a) Are you computer literate?
   Yes [ ] No [ ]

(b) If your answer is yes, state by ticking appropriate areas where you use your computer skills to enhance learning.

i. Browsing in the internet [ ]
ii. Exchanging ideas using e-mail [ ]
iii. Typing Geography statements [ ]

Any other (specify) ____________________________________________________
8. (a) Does your Geography teacher sometimes ask you to assist in preparing some learning resources?

Yes [ ]  No [ ]

(b) If the answer is Yes, indicate by ticking (√) where appropriate the type of resources you help to prepare

i. Charts [ ]

ii. Maps [ ]

iii. Models [ ]

iv. Diorama [ ]

v. Video show [ ]

vi. Power point presentation [ ]

Any other (specify) __________________________________________

9. Tick with( ) whether the following are some of the challenges facing you when using Geography instructional resources during learning

i. Geography textbooks are inadequate [ ]

ii. Lack of variety of textbooks [ ]

iii. There is unreliable power supply in the school [ ]

iv. There is no enough skill to find information from web [ ]

v. Teachers are unwilling to use some resources [ ]

vi. We are not allowed to access school computers [ ]

vii. We do not have enough time for using the resources [ ]

Any other (specify) __________________________________________
10. Suggest possible ways of overcoming the challenges mention in question (9) above?
   i. ____________________
   ii. ____________________
   iii. ____________________
   iv. ____________________
   v. ____________________
   vi. ____________________

11. Has your Geography class ever gone on a study tour/field trip to learn Geography?
   Yes [ ] No [ ]

   (b) If yes, name the places you visited and what you learned from these places
   
   Place visited | what you learnt
   ---------------|------------------
   1. _______________ | __________________
   2. _______________ | __________________
   3. _______________ | __________________
   4. _______________ | __________________
   5. _______________ | __________________

12. What are some the challenges you faced?.
   __________________________________________
   __________________________________________

__Thanks for your co-operation__
# APPENDIX E

## CHECKLIST FOR GEOGRAPHY RESOURCES IN SCHOOL

### SCHOOL

<table>
<thead>
<tr>
<th>Type of resource</th>
<th>Available</th>
<th>Adequate</th>
<th>Accessible</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Print materials</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Textbooks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspaper</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geography magazines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geography journals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Templates</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handouts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programmed materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microforms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encyclopedia</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | | |
|                      |           |          |            |
| <strong>2. Non-projected / Display materials</strong> |           |          |            |
| Graphs                 |           |          |            |
| Charts                  |           |          |            |
| Cartoons                |           |          |            |
| Posters                 |           |          |            |
| Wall maps               |           |          |            |
| Globes                  |           |          |            |
| Pictures                |           |          |            |
| Photographs             |           |          |            |
| Flash cards             |           |          |            |
| Reading                 |           |          |            |
| Models                  |           |          |            |
| Specimen                |           |          |            |
| Chalkboard              |           |          |            |
| Magnetic board          |           |          |            |
| Felt boards             |           |          |            |
| Flannel boards          |           |          |            |</p>
<table>
<thead>
<tr>
<th>3. projected / Audio visual Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Films</td>
</tr>
<tr>
<td>Slides</td>
</tr>
<tr>
<td>Transparencies</td>
</tr>
<tr>
<td>Film projector</td>
</tr>
<tr>
<td>Overhead projector</td>
</tr>
<tr>
<td>Opaque projector</td>
</tr>
<tr>
<td>Video tape recorder</td>
</tr>
<tr>
<td>Television</td>
</tr>
<tr>
<td>Reel to reel</td>
</tr>
<tr>
<td>Record player</td>
</tr>
<tr>
<td>Radio</td>
</tr>
<tr>
<td>Camera (s)</td>
</tr>
<tr>
<td>Radio cassette.</td>
</tr>
</tbody>
</table>
APPENDIX F

INTERVIEW GUIDE

Guiding questions

1. What are the recommended books for teaching and learning of geography?

2. Comment on the quantity and quality of the recommended geography textbooks available in your school?

3. What criteria do you use to select the teaching and learning instructional materials for Geography?

4. What is the current level of use educational media service in your school?

5. How do you acquire teaching learning resources for your school?

6. When you acquire any new resource do you inform the teachers of it?

7. Available resources being use effectively during the teaching learning of geography lesson?

8. What are some of the problems teachers and students face when using teaching and learning instruction materials for geography?

Time support

How many hours per week do teachers make use of computers to teach geography?

<table>
<thead>
<tr>
<th>Time support</th>
<th>0hrs</th>
<th>½ hrs</th>
<th>1 hrs</th>
<th>2hrs</th>
<th>3hrs or more</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Technical support

Tick the appropriate response

A = Always
O = Often
S = Sometimes
R = Rarely
N = Never.

How often are teachers and students access the use instructional resources in the teaching and learning of Geography

<table>
<thead>
<tr>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
</tbody>
</table>

Thank you for your cooperation
APPENDIX G

OBSERVATION SCHEDULE

A RECORD SHEET

1. (a) Name of the school___________
   (b) Type of school______________
      i. Provincial________ District
      ii. Boys’   Girls’
      iii. Mixed

2. Gender:       Male_______
                  Female_____  

   Academic qualification ______________

   Professional qualification___________

   Teaching experience_______________

3. Class level___________

   Number of students___________

4. Effective use of instructional resources use during the lesson (basing on relevancy of resources (R), Quality of resources (Q), State of resources(S) and Utilization (U)
5. Students organisation in the use instructional resources during Geography lesson.

   (i) individuelle ( )
   (ii) in pairs ( )
   (iii) in groups ( )
   (iv) whole class ( )

5. Time support

   (tick the appropriate responses (√))

How long does the teacher take using teaching using a resource.

<table>
<thead>
<tr>
<th>Time support</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 min</td>
</tr>
<tr>
<td>20 min</td>
</tr>
<tr>
<td>30 min</td>
</tr>
<tr>
<td>Whole lesson</td>
</tr>
</tbody>
</table>

5. Technical support

   Tick your best response. The responses are as follows:

   A= always
O = Often

S = Sometimes

R = Rarely

N = Never

How often are teachers’ use instructional resources in their school to learn Geography

<table>
<thead>
<tr>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
<tr>
<td>___</td>
</tr>
</tbody>
</table>

6. Any other relevant observation on utilization of resources.

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________
APPENDIX H: RESEARCH PERMIT

THIS IS TO CERTIFY THAT:

MR. JAPHETH KIPKIRUI NGENO
of KENYATTA UNIVERSITY, 215-2020

has been permitted to conduct
research in Kericho County

on the topic: CHALLENGES FACED IN EFFECTIVE USE OF GEOGRAPHY INSTRUCTIONAL MATERIALS BY TEACHERS IN PUBLIC SECONDARY SCHOOLS, BURETI DISTRICT, KENYA,

for the period ending 12th April, 2014

Applicant's Signature

Serial No. 858

Permit No 1 NACOSTI/P/14/7092/564

Date Of Issue: 17th January, 2014

Fee Received : Kshs. kshs1000.00

National Commission for Science, Technology & Innovation

Republic of Kenya

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND 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.