UTILIZATION OF INSTRUCTIONAL RESOURCES IN TEACHING PRACTICAL GEOGRAPHY IN SECONDARY SCHOOLS IN KIPKELION SUB-COUNTY, KERicho COUNTY-KENYA

BY

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APRIL, 2016
DECLARATION

I declare that this thesis is my original work and has never been presented for a degree in any other university or any other institution of higher learning for consideration. This research thesis has been complemented by referenced sources duly acknowledged. Where text, data, graphics, pictures or tables have been borrowed from other sources, including the internet, these are specifically accredited and references cited in accordance with anti-plagiarism regulations.

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DEDICATION

I dedicate this thesis to my Dad Mr. Joel Langat and Mum Mrs Rachel Langat. The study is further dedicated to my brothers and sisters as well as my college friends who supported and encouraged me throughout the process of writing this study. Lastly, I dedicate this study to God for His grace and love throughout my studies.
ACKNOWLEDGEMENT

First I would like to express my sincere thanks to my supervisors, Prof. Ondigi. R. Samson, Dr. Nasibi Were and for their commitment towards successful completion of the study.

Secondly my gratitude goes to Dr. Florence Miima who oversaw my work hence ensuring that my thesis was in the correct format and my appreciation extends to all my lecturers who were responsible for my education at the university.

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ABBREVIATION AND ACRONYMS

CCSSO  Council of Chief State School Officers
DEO   Sub-County Education Officer
HOD   Head of department
ICT   Information Communications Technology
KCSE  Kenya Certificate of Secondary Examination
KICD  Kenya Institute of Curriculum Development
KNEC  Kenya National Examination Council
NRC   National Research Council
SPSS  Statistical Package for Social Sciences
UNESCO  United Nations Educational, Scientific and Cultural Organization
8-4-4: Kenyan system of education that involves, primary, secondary and university education.
Abstract

Performance of Geography subject in Kipkelion Sub-County has been poor. Over the years, the results have not been satisfactory to the teachers, parents and other stake holders. This prompted the researcher to investigate whether the educators and learners use instructional materials in practical geography. The following objectives were used in the study, to establish the utilization of instructional resources for Practical Geography, investigate extent the teaching and learning resources are used, establish the views of the teachers and students towards use of instructional resources, and establish the challenges faced by teachers when teaching Practical Geography. The theoretical framework of the study was based on Edgar Dale’s cone of experience. The study design used was descriptive survey. The study population comprised of Geography Heads of Department (HOD’s), teachers and students in secondary schools. Simple and random sampling techniques were used in selecting the research participants. This included a sample of 5 schools, 300 students, 5 Geography HOD’s and 10 Geography teachers. Students and teachers’ questionnaire, interview schedule and checklists were used in data collection. Analysis of data was done using both descriptive and inferential statistics. Descriptive statistics such as include frequencies and percentages. The collected data collected was coded and analyzed using Statistical Package for Social Science. Descriptive and inferential statistics was used in data analysis. The results showed that 70 % of the schools had instructional materials yet only 22.5% of teachers utilize these resources while more than three quarters rarely or never utilize instructional materials. Majority of Geography teachers had poor attitude towards utilization of instructional materials. The study also revealed that Maps were the most utilized resources in classrooms, the least utilized being radios and dioramas. The study recommended that school management and administrators should improve instructional resources for teaching and learning practical geography by availing computers, geography teachers should be enlightened on the importance of utilizing instructional resources in teaching and learning practical geography teachers should be motivated in order to change their negative attitude toward utilization of instructional resources. Learners should be encouraged through field trips around the school and beyond and lastly the geography syllabus ought to be reviewed and also a number of lessons increased from three lessons to four per week and to five lessons in the upper classes.
CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The study of Geography is divided into location, place, human/environment interaction, movement, and region which offer a mode of reasoning about the world. These themes can assist in studying every geographic issue locally, nationally and globally (Boehm, 2000). The National Council for Geographic Education and the Association of American Geographers made significant strides in improving the formulation of the geography curriculum which aid in the selection of objectives and organization of geographic information for elementary learners (Haas, 1989).

In November 1988, the Council of Chief State School Officers (CCSSO) surveyed forty-one states and territories concerning geographic education in the United States of America (Haas, 1989). All states agreed that Geography instruction is needed in primary schools. The study recommended that CCSSO should engage in formulating new Geography curricula. The study further suggested that bringing together geographers, geographic resources and educators in workshops at different levels was the way to improving geographic instruction (Haas, 1989).

According to Butt (2011), teaching and learning resources support teachers in making decisions on what and how to teach. Most educators are not geographers’ and require help in determining the important principles and concepts as well as necessary geography practices to teach use during instruction. Therefore, teaching and learning resources must aim for big ideas to assist learners in understanding geography and continue developing key knowledge across learning experiences (Heffron & Downs, 2012). Within several classes in England’s primary schools,
teaching and learning materials such as atlases, maps were found not to be in use with such materials occasionally introduced. While appropriate teaching was being carried out in some classes, in the most classes essential skills were rarely accorded enough focus (Edelson, 2013). Therefore, Geography education cannot be effective if learners are not taught the important skills of the subject.

Furthermore, instructional resources must highlight geographers thinking process with regards to problems, giving learners models for “thinking geographically” and creating chances for students to exercise this form of thinking. These resources should convey a sense of purpose for learning big ideas and practices. They should at the same time involve strategic sequencing of learning experiences within levels different grades of education (Edelson, 2013). Also, the resources must contain geographically accurate information that honors different perspectives (Edelson, 2013).

Graphics is the most distinctively geographical form of communication and maps constitute the main documents through which the communication of spatial information takes place. Edelson (2013) further points out that children begin to show spatial awareness at an early age and primary school teachers are finding that this awareness can be fostered using simple maps before they learn to use specially prepared maps.

According to Klein (2005), geography syllabus and courses are oriented to stated geographical facts and the development of skills in observation, recording and the use of information collected for the solution of problems. Education quality in Africa is rapidly declining due to an inadequate supply of key instrument material and the decline in their utilization. UNESCO advocates for the revitalization of policies intended to provide learning resources to safeguard and improve education quality in Africa. There is an emphasis on the importance of resource
utilization in Practical Geography since maps and diagrams give a pictorial view of spatial distribution and relationships. They are more precise than verbal accounts; and they are often less formidable than mathematical expressions or models (Klein, 2005).

Many scholars in the education sector have emphasized the need to use learning resources for the teaching of any subject including geography. This implies that learning resources make education successful if employed during teaching in order to attain the academic objectives (Komen, 1991). The most important finding of these studies has been the lack of adequate resources for teaching geography because teachers rely mostly on the use of textbooks. This has a direct impact on national performance as shown in Table 1.1 nationally and Table 1.2 for Kipkelion Sub-County.

Table 1.1 National Performance in Geography over a period of five years

<table>
<thead>
<tr>
<th>YEAR</th>
<th>PAPER</th>
<th>NO. OF CANDIDATES</th>
<th>MAXIMUM SCORE</th>
<th>MEAN SCORE</th>
<th>STANDARD DEVIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>1</td>
<td>97,991</td>
<td>100</td>
<td>46.12</td>
<td>19.23</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>97,991</td>
<td>100</td>
<td>37.37</td>
<td>15.74</td>
</tr>
<tr>
<td>2007</td>
<td>1</td>
<td>103,288</td>
<td>100</td>
<td>45.50</td>
<td>19.82</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>103,288</td>
<td>100</td>
<td>48.14</td>
<td>16.37</td>
</tr>
<tr>
<td>2008</td>
<td>1</td>
<td>109,745</td>
<td>100</td>
<td>35.91</td>
<td>17.10</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>109,745</td>
<td>100</td>
<td>38.05</td>
<td>16.35</td>
</tr>
<tr>
<td>2009</td>
<td>1</td>
<td>112,446</td>
<td>100</td>
<td>33.29</td>
<td>16.54</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>112,446</td>
<td>100</td>
<td>42.56</td>
<td>15.87</td>
</tr>
</tbody>
</table>

(Source: Kenya National Examinations Council report, 2009)
Table 1.2: Kipkelion Sub-County KCSE Geography performance from 2008-2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Means score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>4.2333</td>
</tr>
<tr>
<td>2009</td>
<td>4.4089</td>
</tr>
<tr>
<td>2010</td>
<td>4.1003</td>
</tr>
<tr>
<td>2011</td>
<td>5.0235</td>
</tr>
<tr>
<td>2012</td>
<td>5.2400</td>
</tr>
</tbody>
</table>

(Source: Kenya National Examinations Council report, 2012)

Comparing the mean score of performance in practical Geography nationally as shown in Table 1.1 and the mean score in Kipkelion Sub-County in Table 1.2, there is a very big difference in trend comparatively. This performance differences, therefore, calls for an investigation.

The Kenya Institute of Curriculum Development (2010) builds on the experience gained in primary school in order to prepare the learner for future studies. The curriculum content is derived from basic to more difficult geographical concepts for learners psychological development. The content of KICD (2010) syllabus include several aspects such as photograph, field, and map works as well as statistical methods introduced early and their treatment magnified as the academic level increases. The Geography of Kenya has been spread and integrated into the four-year course. Teachers today are required to provide students with opportunities to understand the implications of life on global society, an age of faster air travel in which man-made satellites whirl around the earth. Flat maps of towns and cities are usually used to locate people, streets or places we plan to visit. Newspapers and magazines contain many different kinds of maps, which people read and understand them to use their information. The
inclusion of Practical Geography in both the Physical and Human Geography is not only done solely for the purpose of passing an examination but also comprise an activity that leaves a lasting value to those who participate in it. The study sought to investigate the utilization of resources in teaching and learning of Practical Geography in secondary schools.

1.2 Statement of the Problem

In a Geography workshop held at Taita Towett High School in Kipkelion Sub-County, Kericho County in September 2010, Geography examiners cited poor performance in Practical Geography questions in both paper 1 and 2. They noted that Map reading is an area where students have a problem, and they always performed poorly (KCSE 2009, report). 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 (1981), 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 the practice of map reading and use of Atlas, drawing of maps and diagrams as an integral part of the teaching and learning Geography. These are not optional activities if one has to master skills 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 teaching the subject and further argues that students
should be helped to ascertain facts and be able to draw up independent conclusions. Ogoma (1987) 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.

Practical geography question have always been done poorly in national examination by learners as the researcher sought to find out if teachers and learners are utilizing instructional resources in teaching and learning geography in secondary schools.

1.3 Purpose of the Study

The purpose of this study was to establish the utilization of resources in teaching and learning Practical Geography in secondary schools in Kipkelion Sub-County, Kericho County. The researcher investigated how teachers and learners use teaching and learning resources to improve the performance of Practical Geography. The researcher also sought to know the challenges teachers faced in utilizing resources.

1.4 Objective of the Study

The objectives of the research were to:-

1. Determine the types of instructional resources used for teaching Practical Geography

2. Investigate the extent to which instructional resources for teaching and learning practical Geography were used in Geography lessons.

3. Determine the teachers’ attitude towards the use of instructional resources in teaching Practical Geography.

4. Establish students’ view towards the use of instructional resources in teaching and learning Practical Geography.
5. Establish the challenges faced by teachers and learners in the use of resources in Practical Geography.

1.5 Research Questions

The study was guided by the following research questions

1. What types of instructional resources exist in secondary schools for teaching and learning Practical Geography?

2. To what extent are the teaching and learning resources used in teaching Practical Geography?

3. What is the view of the teacher towards the available instructional resources in teaching Practical Geography?

4. What do learners think about the use of instructional resources in learning Practical Geography?

5. What are the challenges facing teachers and learners in teaching Practical Geography using instructional resources?

1.6 Significance of the Study

The findings of the study will be useful to lecturers and tutors when training Geography teachers in regards to Practical Geography. The findings will also be 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. It will also draw the attention of resources that are available for use in teaching Practical Geography. The finding will also provoke the Kenya Institute of Curriculum
Development and commercial publishers to come up with relevant instructional resources to be used in Practical Geography teaching.

1.7 Assumptions of the study

These assumptions guided the research:

1. The area to be covered was a representative of the entire Kipkelion Sub-County
2. The researcher will have access to the instructional materials available in the selected schools.
3. There are resources in the schools used in the teaching and learning of Practical Geography.

1.8 Scope of the study

The study involved Geography teachers, Heads of Geography departments and forms three Geography students in secondary schools in Kipkelion Sub-County, Kericho County. The research was carried out during the school term sessions only when respondents could be easily found. The study was carried out in five secondary schools in Kipkelion Sub-County to represent the twenty-eight public secondary schools in Kericho County.

1.9 Limitation

The major limitation was that some teachers were not willing to assist in providing the relevant information. This was covered by giving the selected teachers enough time to fill the questionnaire and was not to indicate their names on the questionnaire.

1.10 Theoretical Framework

The theoretical framework that guided the study was Edgar Dale’s (1946) cone of experience. According to Dale (1969), learners acquire and retain more knowledge by doing and not through
what is “heard”, “read” or even “observed”. The author also argues that a specific matter starts with a wide base of direct experience in action. Then we slowly omit these and compromise as we come to rely on iconic substitutes. The cone classifies several teaching resources according to the level of experimental concreteness that each can provide. Teaching materials at every level of the cone can assist in extending the relationships that the concepts involve. Even the most advanced student, therefore, can deepen his/her understanding of concepts and his/her enjoyment of life by participating in experiences all along our cone. The cone suggests that concepts in practical geography can proceed from experience with any specific instructional material. The more varied resources educators use, the more secure the concept they develop. Appropriately selected instructional resources of different types can offer a experiences that improve the learning of practical geography for any learners at any time.

1.11 Conceptual Framework

The ideas of this study can be conceptualized as shown in Figure 1.1

**Figure 1.1: Conceptual Framework**

**Independent Variables**

- Teaching resources
- Availability of the teaching resources
- Utilization of the resources

**Intervening Variable**

- Attitude of students and teachers

**Dependent Variable**

- Knowledge acquisition
- Skill development by learners
- Good performances in national exams
For the effective learning of practical Geography to take place, learners should be exposed to first-hand experiences and then to more abstract experiences. As learning progresses, there is a need to establish the type of resources required to teach and learn Practical Geography. This need coupled with teachers’ attitude towards teaching and the students view the use of resources in learning practical geography all form the *independent variables* for the study. There are challenges encountered while teaching practical geography by teachers as well as learning by students. The mitigation process to overcome these challenges forms the *intervening variables* for the study. Learners are seen to grasp, internalize and use the same to tackle issues about Practical Geography concepts. Learning is said to be more meaningful when learners are involved for instance use of a model or simulate a real experience or participate in a hands-on workshop. When choosing an instructional method, it is important for teachers to remember that involving students in the process strengthen their knowledge retention.

According to this study geography performance is the *dependent variable*. The availability and the utilization of learning resources determine the performance of the learners. If the instructional materials are available and are being utilized well, then results will be realized. Also, attitude can be a hindrance to effective and efficient teaching and learning of Practical Geography. Learners may develop positive or negative attitudes towards Practical Geography due to the influence of their peers. If they develop positive attitudes from their peers then they will handle Practical Geography with ease, for example, map work questions that have been a challenge to learners will be easily conceptualized, and thus, better performance will be realized in Geography. Furthermore, school administration determines if the resources are to be availed through purchase or failure to do so. This is so because they control the funds to be used in
buying instructional materials. Teachers, on the other hand, play a major role in the utilization of instructional materials. If the materials are there, the teacher has a role of ensuring maximum use of them. In the case of lack of instructional materials teachers can improvise to bring meaning through of the teaching and learning the process.

1.12 Operational Definition of Terms

**Instructional materials:** What the teacher uses to make the lesson more interesting and understandable to learners

**Media:** what the teacher and learner use to teach and learn concepts in Practical Geography i.e. television, radio and computers

**Multi-method approach:** Teaching strategy that makes use of different teaching methods

**Practical Geography:** A branch of Geography that equips learners with skills of interpreting topographical maps, photographs, fieldwork and statistical work.

**Utilization:** Refers to the use of learning resources by the teacher in teaching Geographical Concepts in Practical Geography
CHAPTER TWO
LITERATURE REVIEW AND RELATED LITERATURE

2.0 Introduction.

This chapter reviews the literature related to the concept of the study. The study looked at literature on origin of teaching and learning resources, types of instructional resources for practical geography, geography teaching and learning resources, teachers’ attitude towards the use of instructional resources, students’ views towards the use of resources in teaching and learning and challenges faced by learners in practical geography and summary of literature review.

2.1 The Meaning and Origin of Teaching and Learning Resources.

Teaching and learning resources have been given a variety of names by different scholars and hence have different definitions. Teaching aids are also called instructional media, instructional aids, resource materials or learning materials. Gerlach and Donald (1971) defines instructional media as a wide range of materials that include equipment and techniques; chalkboards, bulletin boards, filmstrips, slides, motion pictures, television, programmed instructions, models, demonstrations, motion time-lapse or stop motion pictures, charts, maps and books. Educational media or teaching aids express the notion of men, machines, and materials working together to improve the relevance of teaching and learning process. Educational technology, therefore, attempts to incorporate the management principles of cost effectiveness and the efficient deployment and use of available resources in men and materials. Educational technology as a concept does not necessarily imply the use of machines and other items of hardware (Gerlach, et al, 1971)
Omwoyo and Kisovi (2005) point out that Geography describes and analyzes the location of places on earth and the spatial distribution of phenomena in their varied interrelationships as they influence human activities. They further note that Geography is dynamic as it responds to constant environmental changes, the process of discovery that enables learners to acquire knowledge and develop positive attitudes of inquiry, critical thinking, and decision-making so as to cope with the demands of modern society. Omwoyo, et al (2005) asserts that Geography is a practical subject requiring that the learners should observe and practice what is learned. He further argues that Geography should begin in the classroom and extend to the area around the school. Despite the varied names given, all scholars agree that instructional resources are used to make teaching and learning process effective and efficient.

2.2 Types of Instructional Resources for Practical Geography

Japanese National Commission for UNESCO, (1972) report notes that the use of various types of educational equipment and instruments enlarges the sphere of learners’ experiences. It further asserts that resources help the learners to grasp the contents of instruction accurately. Collahan and Clark (1982) argue that from the past teachers have depended on diverse teaching tools to make their teachings effective and interesting. Today’s teachers still depend on teaching tools to make things clear, instructions real, spice teaching and learning processes and make learners teach themselves. Mahapatra (2005) was also of the opinion that computers allow every student to succeed in school. He further argues that with computers, individuals learning can never be hindered by the skills or weaknesses of colleagues. Each learner progresses at their own pace without being affected by others pace of learning.
Dale (1969) classifies learning materials under the following categories;

1. Visual materials: These are projected resources; examples are overhead transparencies, slides, motion pictures and micro-films. The non-projected resources are photographs, drawings, charts maps, posters, and boards.

2. Audio-visual resources: These include films, televisons, videos, tapes, and sound films strips, printed materials with recorded sound, demonstrations, and field trips.

3. Audio resources: These are lectures, audio tapes, compressed speech, photograph records, radio, and telephone. Maps are the most valuable equipment that the students of Geography possess.

Dale (1969) further notes that the ability to read maps is necessary or helpful in several school subjects besides Geography. Though a written description or a picture may act upon the imagination of the field or student, the map is necessary to give accuracy to the ideas and impressions that arise (KCSE Syllabus, 2000). According to the Kenya Certificate of Secondary Education regulation and syllabus (2000), map work has been spread across the first three years of secondary education Geography course.

Getis and Fellman (2000) asserts that maps are tersely efficient at indicating the location of things about one another and the information created by their disappearance would have to be filled by volumes of description. Getis, et.al (2000) further notes that the earth can be represented with a reasonable accuracy only on a globe, but globes are not as convenient as a flat map to store or use, and they cannot depict a lot of details as maps while are amongst the oldest basic means of communication. Maps are indispensable to the geographer as words, photographs or qualitative techniques of analysis. The most important tools that can be used for laboratory study
of landforms are topographic maps and air photographs. Teachers should ensure that pupils using the Atlas understand the meanings of the titles of the map and that they can use the index. He further points outs that schools have little money to spend on Geography equipment, and thus schools must spend funds wisely. A school should have essential items of equipment such as a globe, wall maps, and copies of the local topographical map sheet, at least, one town plan if the school is in a town so mapped, pictures and atlases.

The learners are to be left to build up for themselves the geographic pictures of the country they are exploring. Mworia (1991) concurs that Geography is the study of the living world hence students are required to spend some time out of the classroom in the field to have first-hand visual contact with the facts of nature and works of man. Mworia (1991) further notes that Geography books do not stretch the imagination in the same way as coming face to face with the physical landscape and the work of man that has been added to it.

Geography teachers through the teachings of fieldwork activities make Geography as a subject to become alive. Mwangiru and Njue (1985) point out that fieldwork enables contact with materials and features that make life what it is in any given locality. Senses are gateways to acquired knowledge and that the natural way to learn is principally through the employment of all the senses. The sense of sight is the most vivid and provides rich experiences to the individual. This can be employed by teachers through carrying out fieldwork activities. Mworia (1991) notes that Geography education encourages students to study and interpret the phenomena in their environment, and this can be made possible through fieldwork. Geography performance has been dismal despite the authors assertion that fieldwork as a teaching and learning resource makes learners understand the concepts taught in the classroom and it is this that the research was
carried out in secondary schools on the utilization of teaching and learning resources by Geography teachers.

According to the Kenya Institute of Education syllabus (2000), statistical work has been spread out across the four years of the secondary education. Its arrangement is from the basic in form one to the more complex in form four. Pritchard (1984) points out that statistics cannot be used by a class until its knowledge of arithmetic is sufficiently advanced. He further argues that attempts to learn masses of figures by heart is a waste of time and rarely succeeds, yet by the end of a pupil’s school career constant use should have impressed upon his mind a useful set of figures as standards and for purposes of comparison. Statistical work is vital since it enables a learner to gauge the different scenarios of things, use of the graphs and charts that enable a learner to have a clear visual impression of what is happening on the ground or from the statistics hence can draw a conclusion from the same.

2.3 Geography Teaching and Learning Resources

In most schools, geography instruction is part of social studies curriculum. In primary schools, the subject may at times be integrated into reading and writing exercises. In these cases, coordinated education of main ideas and practices such as the use of teaching and learning resources mostly is limited. Further, geography knowledge and teaching approach changes as disciplinary knowledge grows (Davis & Krajcik, 2005). This signifies that content-focused chances for professional growth in geography are necessary even for teachers with enough preparation in geography at the beginning, throughout their teaching careers depending on the extent of using teaching and learning resources.
Ndalo (1991) notes that teaching and learning resources ensure that teachers take a shorter time to develop concepts in professional studies through the use of such gadgets as films, slides, charts, television and video. When children interact with visual materials, they easily comprehend words associated with the learning material. Today’s educator has come to realize that in teaching and learning, more often than not mere talking and listening or writing and reading do not convey their message sufficiently unless accompanied by the sensory presence of the objects and events to which words stand for. Learning that involves use of various learning and teachings resources is preferred by both teachers and students because learning is accomplished in less time using instructional resources and greater learning is achieved when varied instructional resources are used (Ndalo, 1991).

2.4 Teachers’ Attitude towards the Use of Instructional Resources.

Teachers need to be equipped with a diverse repertoire of methods and strategies proven effective in teaching geography to make day-to-day instructional decisions. Instructional resources are very important as they help educators develop productive educational experiences for students needs (Klein, 2005). Developers of learning materials can carefully formulate educational experiences based on contemporary geography, and on possible experiences learners have, to assist teachers in utilizing the best teaching methods (Edelson, Shavelson, & Wertheim, 2012). Better learning outcomes are achieved when media resources are included in traditional learning process and learning is also achieved in less time using educational media. The resources should be used as an integral part of learning activity to achieve the highest level of understanding within the context of their subject matter.
Teachers need to have positive attitude and two fundamental types of knowledge to design and carry out meaningful learning experiences for their students: pedagogical and content knowledge (Brooks, 2011). For educators to effectively teach geography, they must acquire a deep understanding of the subject, and how to teach it, to improve learners learning achievement and understanding of the subject. Conversely, several geography educators fail to join the geography profession with a clear knowledge of the subjects’ concepts and how to execute it (Solem et al., 2012).

Kidman and Palmer (2006) observed that teachers with a positive attitude toward instructional resources use should incorporate geography content to impart teachers with skillful instruction in the discipline. To enhance teachers’ knowledge of teaching approaches and methods proven most efficient in educating students in learning specific geographic ideas and practices, teacher professional development programs must bring out enthusiasm for learning the subject and improve teachers subject knowledge and leave them ready to educate students (Morgan & Lambert, 2005). Resources create a conducive atmosphere for learning since they make the learner discover and use knowledge on his/her own. Digolo (1997), concurs that instructional resources not only enable students to be involved in their learning but also offer a wide variety of channels for dissemination of ideas and knowledge. Resources help to create situations that make learning interesting because they serve to stimulate the learner’s imagination and enhance learners memory of what is learned because learners use more than one sense. They are therefore the best tools to teach students practical Geography.
2.5 Students’ Views Towards the Use of Resources in Teaching and Learning

In their study of geographic information systems, Perkins et al. (2010), revealed that learners are generally curious about the world with regards to physical processes and human experiences. Geography as a discipline excites their curiosity, and can enrich knowledge developed by learners concerning the world. Therefore, learning and teaching resources should build on this by showing learners that the subject is a dynamic and active discipline that is relevant to their daily lives (Heffron & Downs, 2012).

Acknowledging ideas learners come with is an important part in the learning process. This enables them to strengthen their ideas while addressing any doubts they may have about various aspects of the subject. Therefore, teaching materials need to provide classroom exercises that provoke students’ ideas, and give data and tools for education to anticipate and respond to them (Canestrari, 2005). Learners over time acquire more information and experience many phenomenons than in the past. As a result, proper and creative use of resources can provide hitherto unattainable opportunities to individualize and humanize the teaching and learning the process.

Using the rich diversity of students’ previous knowledge and experiences concerning geography, materials must have learning opportunities that exploit their curiosity and interests and include inquisitive questions, discussions, and other exercises to challenge their thinking (NRC, 2010). Wanjeri (1991) notes that teaching resources increase learners’ motivation and make teaching and learning more stimulating and intellectually rewarding. He further says that motivation is increased because of the teaching aids and concreteness and interest, continuity of thought that is fostered when words are coupled with an explanation in pictures and sounds. The American
Association of Schools (1975) observed that through the use of media a student acquires and strengthens skills in reading, observing, listening and communicating ideas. Therefore, teaching and learning resources are essential in a school to be able to make learning effective and efficient since a learner can relate abstract concepts to everyday life experiences, therefore, the researcher will be looking into the utilization of teaching and learning resources in secondary schools in Kipkelion Sub-County

2.6 Challenges faced by Learners in Practical Geography.

Kidman and Palmer (2006) notes in their study that most geography instructional resources employ few modes of conveying content, this encourages direct instruction through lecture, reading, and recitation. However, majority of learners do not learn this way, therefore these modes of instruction do not take advantage of the subject’s greatest assets, that it is a dynamic discipline with a high degree of relevance to students’ lives.

Guskey (2002) argues that educators need to immerse learners in the study of their local geography and connect geography to their lived experiences. Instructions should involve teaching approaches that capitalize on geography tools to create vivid firsthand and vicarious experiences, engage all students using diverse modes of instruction, and attend to the inevitable differences among students in a classroom. Lessons should build disciplinary language and involve learners in the application of geographical content and practices in various levels and contexts (Hanson, 2004).

According to Baerwald (2010), most learning materials are formulated to aid teachers and students in the classroom. Very few of these resources are designed specifically to aid professional development of leaders and designers, teacher educators, instructional materials
developers, researchers, and policy makers. This group of individuals require up to date teaching resources and illustrative examples to aid learners in developing indepth understanding of current practical geography education and to guide them in enhancing the way they support, fund, and develop instructional materials and work with teachers (Davis et al., 2011).

Ogoma (1987) in her study on the teaching of Social Studies in selected primary schools in Kisumu notes that the recommended textbooks for the Social Studies subject were lacking, and supplementary books that were in use were written in an advanced language that pupils cannot easily comprehend. He also argues that some textbooks have some pages missing thus providing inadequate information to the learners. He continues to assert that language barrier hampered the use of resource persons. Ogoma (1987) focused his studies on utilization of instructional resources in teaching social studies in primary schools. Indeed, this research was on utilization of teaching and learning resources in teaching practical Geographical in secondary schools.

Kinyanjui (1997) notes that the Physical Education curriculum is overcrowded hence the lack of time to prepare the resources to be used in the teaching and learning of physical education in secondary schools. His further point out that due to the Physical Education not being an examinable subject, school administration and teachers do not take seriously the issue of availing and using resources in teaching Physical Education. Kinyanjui (1997) focused his studies on acquisition and use of resources in teaching Physical Education while this research sought to establish the use of teaching and learning materials in Practical Geography in secondary schools.

Kimutai (1991) focused his studies on availability, acquisition and utilization of resources in teaching economics. Kakinda (2003) asserts that the use of Information Communication Technology (ICT) in the classroom is hampered by a lack of electricity, computers, and technical
skills by both the teachers and learners. Lumumba (2008), points out that there is limited digital equipment at almost all levels of education. High level of poverty hinders the access to Information Communication Technology facilities by teachers and learners in schools which affects the use of Information Communication Technology in schools. Utilization of Practical Geography is currently very unsatisfactory both in their approaches and treatment of the subject as teachers give very little attention to these measurement and country aspect of map analysis or to the interrelationships that exist between the features in space or to these processes that exist between the features which can be identified on such maps. The researcher not only sought to investigate the use of books but also other teaching and learning resources used in teaching Practical Geography in secondary schools in Kenya.

Onserio (2008) in his study on factors that influence student performance in map work in KCSE in Gucha Sub-County points out that map work resources were inadequate due to inadequate finances thus teachers were given fewer opportunities to use resources in teaching map work in Geography leading to under-utilization of the available teaching and learning resources by teachers. Onserio (2008) studies the factors influencing students’ performance in map work in Gucha Sub-County about this research focused on utilization of teaching Practical Geography in Kipkelion Sub-County.

2.7 Summary

The literature reviewed has revealed that the concept of instructional resources is not new to Africa as the traditional informal education system used resources in teaching and learning process. It has also demonstrated that research has been done in Social Studies, Economics History and Government, Information Communication Technology, and Geography. However,
the research in Geography is limited to map work instead of the whole Practical Geography content. Hence this research sought to fill the gap on the utilization of teaching and learning resources in teaching Practical Geography in secondary schools in Kipkelion Sub-County.
CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter covers the following: research design, the area of study, target population, sample size, sampling procedures, research instruments, pilot study, validity and reliability of instruments, data collection procedures, data analysis and logistical and ethical consideration.

3.1 Research Design

This study was conducted using descriptive survey research design. According to Ogula (1998), a research design is a strategy of planning and conducting a study. The study was based on both quantitative and qualitative research approach. Mugenda and Mugenda (2003) argues that quantitative research includes design, techniques, and measures that produce numerical or quantifiable data whereas qualitative research includes designs, techniques and measures that give continuous numerical data, more often data is in the form of words rather than numbers and these words are often grouped into categories. The researcher used questionnaires and interview in collecting data.

3.2 Location of the Study

The study was conducted in Kipkelion Sub-County, Kericho County in Kenya. Kipkelion Sub-County is a new Sub-County and was curved out of the larger Kericho Sub-County on 10th May 2007 by His Excellency the President, Hon. Mwai Kibaki. The headquarters of the Sub-County is Kipkelion town. The Sub-County covers an area of 1,128 Km². The Sub-County lies between longitude 35°02 and 35°40 east of the equator and latitude 02°35 S. It borders Nandi East, Tinderet, Wareng and Koibatek to the North, Kuresoi to the East, and North-East, Konoin
and Kericho West to the South and Muhoroni to the West. Kipkelion Sub-County has poor transport and communication network and is rugged. According to 2009 census report, the Sub-County had a total population of 209,994 persons. The majority of the people living here rely majorly on Agricultural practices. Those in the southern part rely on tea while those in the Western side value maize and coffee growing. This is due to the topographical terrain and reliability of communication network. Most of the inhabitants are Christians and others believe in African traditional religions. The Sub-County has the following administrative units; five divisions which are Kipkelion, Kamasian, Chepseon, Chilchila and Kunyak. (Appendix F). This research was prompted by the consistently poor performance recorded in Geography over the years in Kipkelion Sub-County.

3.3 Target Population

According Kothari (2003), population is an entire group of individuals, events or objects having common observable characteristics. The target population for the study was secondary schools in Kipkelion Sub-County with a total of one hundred and fifty-two teachers and a total of three thousand and twenty-eight students. These schools are from five administrative divisions in Kipkelion Sub-County.

3.4 Sampling Techniques and Sample Size

According to Trochim (2006) sampling is the means of selecting participants from a large or small population of concern so that by studying the selected sample we can generalize results to the entire population from which they were chosen. The researcher used random sampling technique and selecting the sample size.
3.4.1 Sampling Techniques.

The researcher employed simple random sampling technique in picking one school from each of the following categories; county, Mixed, Boys’ and Girls’ schools. This involved sorting different schools into their various categories where each category of school is kept in a different box. Random sampling allows generalization to a larger population with a margin of error that is statistically determinable (Mugenda and Mugenda, 2003). An assistant that was blindfolded was asked to pick a school from each of the four boxes representing the four categories of schools. Kothari (2003) define purposive sampling as a technique that allows a researcher to use cases that have the required information on the study. Purposive sampling was used in picking a private school because there is only one such school in the Sub-County.

3.4.2 Sample Size

Kothari (2003) defines the size of a sample as the number of items to be selected from the universe to constitute a sample. The sample should be optimum so as to fulfill the requirement of efficiency and representative reliability and flexibility. According to Gay and Airasian (2000), sampling 10% of the population is acceptable for descriptive research. Ten percent of schools from each category were sampled. The researcher also calculated 10% of the total secondary school student in Kipkelion sub-county. On sampling of the students, the researcher wrote twenty “Yes” and others “No” on pieces of papers and folded. Anyone who picked “Yes” was selected to the study in each class from Form I to Three in the sampled schools. Also same procedure was used in selecting one teacher where there was more than one teacher taught geography in the sampled schools.
Table 3.1 Target Population and Sample Size

<table>
<thead>
<tr>
<th>School category</th>
<th>Target population</th>
<th>Sample size</th>
<th>Sample respondents (students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td>1</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Mixed</td>
<td>7</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Boys</td>
<td>12</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Girls</td>
<td>7</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Private</td>
<td>1</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>5</td>
<td>300</td>
</tr>
</tbody>
</table>

Source: Kipkelion Sub-County Education Office

3.5 Research Instruments

The data was collected using four instruments;

(i) Two questionnaires, one for Geography teachers and another for students

(ii) Interview guide for heads of department

(iii) Observation checklist

3.5.1 Questionnaires for Teachers and Students

Kothari (2003), points out that a questionnaire is considered as the heart of survey operation. There were two categories of questions used in the questionnaires closed and open-ended queries. Closed-ended queries gave the participants a list of choices from which to select the
The best response that described the situation while open ended questions gave the respondents complete freedom on how to respond. Both types of questions were used to collect data.

The questionnaires were used to collect information from the teachers on how often they used teaching and learning resources in the classroom and information about their attitude towards the use of the resources when teaching Practical Geography. The students were asked to give information on how often their teachers used instructional materials when teaching Practical Geography and also information on their attitude towards the use of instructional materials by their teachers.

3.5.2 Interview Schedule for Heads of Department

Mugenda and Mugenda (2003), define interview as an oral administration of a questionnaire. The researcher used structured interview schedule to collect data from the heads of the department because it was possible to obtain data required to meet the specific objective of the study. The researcher sought to know from heads of department whether Geography instructional materials were purchased and also if they were being used by the teachers. Where a teacher doubled as the head of the department, the researcher only interviewed him/her as the head of the department.

3.5.3 Observation Checklist

According to Mugenda & Mugenda (2003), a researcher utilizes an observation checklist to record what he or she observes during data collection. The researcher observed that textbook, maps, atlas, books, charts, photographs and globe were used in teachers during their geography lesson.
3.6 Pilot study

The researcher undertook a pilot study to test the reliability of the research instruments before the actual research was conducted. The pilot study was carried out in Kipsegí Secondary School which had all the characteristics the researcher was to test in the research instrument. The piloting also enabled the researcher to familiarize with the instruments and make adjustments where necessary.

3.7 Validity of the Instruments

As Kothari (1992) observed, validity of instruments is very necessary as shows the extent to which research tools measure what it is supposed to measure. The study used content validity. Content validity is the extent to which an instrument yields adequate coverage of the study topic whereas construct validity measures the extent to which data obtained from an instrument accurately represents a theoretical concept.

3.8 Reliability

Kothari (2003), noted that an instrument is considered reliable if it yields similar results. He further argues that a reliable instrument does contribute to validity, but a reliable instrument needs not be a valid instrument while a valid instrument is reliable. Mugenda and Mugenda (2003), define reliability as a measure of the degree to which a research instrument yields consistent results or data after repeated trials. Reliability is influenced by a random error that increases as reliability decreases. The researcher used the split-half technique, where questionnaires were numbered. The questionnaires were administered to students and split
into two, the even numbered and the odd numbered questionnaires. Data from the two halves were computed separately and the two correlated.

3.9 Data Collection Procedure.

The researcher obtained permission from the Ministry of Education to collect data from the sampled schools. A visit to Kipkelion Sub-County Education Office was made so as to seek permission to undertake research in the schools under the Sub-County Education Officer’s jurisdiction. The researcher also visited the sampled schools and sought permission from the head teachers to collect data in their schools and gave his timetable on when to visit the schools for the actual data collection. The researcher set a date and presented the questionnaires to both the teachers and students attached in Appendix B and C. A classroom observation in form three Geography lesson was conducted using a checklist to collect data on resources used in teaching and learning Geography in class. (See Appendix D)

3.10 Data Analysis

Mugenda and Mugenda (2003) states that once the questionnaires or other measuring instruments have been administered, the mass of raw data collected must be systematically organized in a manner that facilitates analysis. The researcher is assigned numbers to the questionnaires he had given out. Using the codes that the he had made, he entered the data by use of Statistical Package for Social Science (SPSS) program. The data was analyzed using the Statistical Package for Social Science (SPSS) program according to the objectives of the study. This enabled the researcher to describe meaningfully distribution of scores using
descriptive and inferential statistics. For descriptive statistics frequency tables, bar graphs and means were used.

3.11 Logistical and Ethical Considerations

Mugenda and Mugenda (2003), define logistics as processes a researcher must carry out to ensure successful completion of a study. The researcher obtained a research permit from the Ministry of Education, Kipkelion Sub-County Education Office and principals to conduct research in the schools. A pilot study was conducted so as to test validity and reliability of the instruments. A visit to the sampled schools was conducted to enable the researcher to acquaint himself with the area and respondents before the actual day of research. The researcher informed the target school principals before the day of. Kothari (2003), define ethics as a branch of philosophy which deals with one’s conduct and serves as a guide to one’s behavior. During data collection, the researcher assured respondents of the confidentiality of information they give. The identities of the respondents were protected by asking them not to indicate their names on the questionnaires. The researcher also sought the consent of the respondents and explained to them why he required the information from them.
CHAPTER FOUR  
DATA ANALYSIS, RESULTS, AND DISCUSSIONS

4.0 Introduction

This study sought to investigate the factors that influence utilization of resources in instruction on Practical Geography in secondary schools in Kipkelion Sub-County, Kericho County in Kenya. The data was analyzed based on the research objectives.

4.1 Demographic Analysis

The collected data was analyzed using quantitative and qualitative techniques. Calculations of a proportion in the form of percentages and drawing of conclusions from the contents of the questionnaires were done. The study sought to establish personal data from three hundred (300) students, ten (10) Geography teachers plus five (5) Heads of Department. However, eight (8) students did not fully complete their questionnaires and were treated as missing data. The number considered for analysis was 292 students and ten (10) Geography teachers plus five Heads of Geography departments (HODs). Table 4.1 presents the results.

Table 4.1: Study Sample

<table>
<thead>
<tr>
<th>Group</th>
<th>Sampled</th>
<th>Responded</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>300</td>
<td>292</td>
<td>97.3</td>
</tr>
<tr>
<td>Teachers</td>
<td>10</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>HOD</td>
<td>5</td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>315</strong></td>
<td><strong>307</strong></td>
<td><strong>97.5</strong></td>
</tr>
</tbody>
</table>
Table 4.1 shows a turnout of all teachers, Heads of Department and 292 students participated in the study.

4.1.1 Respondents Gender

In the questionnaires, students were asked to state their gender. The findings are shown in Figure 4.1:

![Gender of the students](image)

Figure 4.1: Gender of the students Figure

Less than half (40%) of the gender were male and more than half (60%) were female. The above data shows that female students were more than male by almost a quarter. Out of the total number of the students in the sampled schools, only 20 percent of form 3 students took Geography subject while 80% did not. More than three quarters (78%) of respondents who took Geography were males while only twenty-two percent (22%) were females. This implies that Geography is liked by more boys than girls. Many of the female students who
were interviewed argued that Geography was too complex, and thus, they preferred other subjects that were less demanding as compared to Geography.

4.1.2 Academic Qualification of Geography Teachers

Teachers were asked to indicate their academic qualification and figure 4.2 presents the findings.

![Pie chart](image)

**Figure 4.2: Academic Qualification of Geography Teachers**

From Figure 4.2 it can be observed that 20% of the teachers had Masters, 10% Diploma in Education while the majority (70%) had Bachelor in Education.

4.1.3 Year of Experience in Teaching Geography

The Geography teachers were asked to indicate the number of years they had taught Geography in secondary schools. Their responses are as indicated in Figure 4.3;
The findings indicate that majority of teachers had taught between 1-10 years. This implies that retention of Geography teachers is very high. The study also sought to assess the extent to which qualification of teachers in their subjects influenced performance. The majority of teachers (80%) considered themselves highly qualified and effectively trained in the teaching of Geography. The few (20%) teachers who did not consider themselves highly qualified reported that they needed proficiency courses in teaching and more seminars and workshops so as to improve teachers’ teaching of Geography subject.

### 4.1.5 Content on Geography in the Syllabus

The students were asked to indicate the class or form they were first taught Practical Geography topics like map work, photographs, statistics and field work using instructional resources. Table 4.2 presents the findings.
Table 4.2: Nature of Practical Geography Topics

<table>
<thead>
<tr>
<th></th>
<th>Form One</th>
<th>Form Two</th>
<th>Form Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Map Work</td>
<td>80.0%</td>
<td>15.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Photograph Work</td>
<td>7.5%</td>
<td>90.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Statistics</td>
<td>80.0%</td>
<td>15.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Field Work</td>
<td>92.5%</td>
<td>7.5%</td>
<td>-</td>
</tr>
</tbody>
</table>

As presented in Table 4.2, Geography topics like map work, statistics, and field work were taught from Form one level, and only photograph work was taught from Form two using instructional resources. This indicates that students were introduced to Practical Geography early enough, and, therefore, they were able to understand aspects of resources in teaching Practical Geography in secondary schools.

Some instructional resources are best suitable and effective for teaching and learning Practical Geography in secondary schools because at this stage, learners are most curious and want to use their sense of touching, vision and feeling. Thus, materials such as pictures, charts, drawings, maps, physical features, models and posters were utilized by teachers. Teachers who were interviewed informed the researcher that they frequently used printed materials such as photographs, audio-visual materials, globe, chalkboard and many others were appropriate for teaching Geography content.
4.2 Types of Instructional Resources used in Teaching and Learning Practical Geography.

To find out the types of resources used for teaching and learning Practical Geography in secondary schools in Kipkelion Sub-County, as stated in objective one, the respondents were asked to state the Geography instructional resources in their schools and the results Geography is presented in Table 4.3; respondents were allowed to give multiple responses.

Table 4.3: Type of Resources Utilized by students

<table>
<thead>
<tr>
<th>Resources</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maps</td>
<td>292 (All)</td>
<td>100</td>
</tr>
<tr>
<td>Atlas</td>
<td>225</td>
<td>75.0</td>
</tr>
<tr>
<td>Globe</td>
<td>187</td>
<td>63.0</td>
</tr>
<tr>
<td>Photographs</td>
<td>270</td>
<td>90.0</td>
</tr>
<tr>
<td>Pictures</td>
<td>232</td>
<td>77.5</td>
</tr>
<tr>
<td>Models</td>
<td>30</td>
<td>10.0</td>
</tr>
<tr>
<td>Dioramas</td>
<td>7</td>
<td>2.3</td>
</tr>
<tr>
<td>Radios</td>
<td>22</td>
<td>7.3</td>
</tr>
<tr>
<td>Charts</td>
<td>172</td>
<td>57.3</td>
</tr>
<tr>
<td>Others</td>
<td>30</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Table 4.3 shows that the most commodities used by students were maps, atlases, globes, photographs, charts, and pictures. On the other hand dioramas and radios were not commonly used. According to Davis et al. (2012), Geography Education needs new instruction
resources and illustrative examples to support students in developing a deep and shared understanding of contemporary Practical Geography education and to guide them in changing the ways they support, source funds for and develop instructional material and with teachers.

Ndalo (1991) agrees that teaching and learning resources provide the teachers with the advantage of taking a shorter time to develop concepts in teaching and learning through the use of such gadgets as films, slides, charts, television and video. When children interact with visual materials, they easily comprehend words associated with the learning material.

Teachers were also asked to state the type of resources they utilized in their institutions. The results are recorded regarding frequency of utilization of instructional resources. The table below gives a summary of the results.

Table 4.4: Frequency of Utilization of Instructional Resources by Teachers

<table>
<thead>
<tr>
<th>Resources</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maps</td>
<td>10(All)</td>
<td>100.0</td>
</tr>
<tr>
<td>Atlas</td>
<td>6</td>
<td>60.0</td>
</tr>
<tr>
<td>Globe</td>
<td>4</td>
<td>40.0</td>
</tr>
<tr>
<td>Photographs</td>
<td>8</td>
<td>80.0</td>
</tr>
<tr>
<td>Pictures</td>
<td>4</td>
<td>40.0</td>
</tr>
<tr>
<td>Models</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Dioramas</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Radios</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Charts</td>
<td>5</td>
<td>50.0</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
<td>10.0</td>
</tr>
</tbody>
</table>
From the information given in Table 4.4, all teachers preferred utilizing maps as instructional resources followed by Photographs at 80%. The number of teachers who utilized globe and pictures stood at 40% in each case which represents 40% of the teachers sampled. The least utilized materials were Models, Dioramas, and Radios, with 10% utilization. Also, 50% of the teachers utilized Charts in classrooms. In general, the utilization of instructional materials was below average, a clear indication that teachers in these institutions underutilized these resources.

4. 3 Extent of Utilization of Material Resources

4.3.1 Students’ use of Instructional Resources

Objective two sought to determine the extent of students’ utilization of instructional resources. The students were asked to state the extent to which their teachers used teaching and learning materials in teaching and learning Practical Geography other than textbooks. Figure 4.4 presents the findings

![Figure 4.4: Frequency of Material Resources usage for Learning Geography](image)

Figure 4.4: Frequency of Material Resources usage for Learning Geography
Figure 4.4 shows that half of the students informed this study that the teachers sometimes used material resources in teaching Geography, less than a quarter said the teachers always used materials or rarely used them.

The study further revealed that despite the fact that teachers used material resources to teach Practical Geography; only 37.5% of the students were taken for a field study outside school environment by their teachers. For the students who were taken to a field trip, 52% of them stated that they were taken at least once per term, and more than once 48% of them stated that they have been taken to a field trip once.

### 4.3.2 Teacher-Student Ratio per Class

To establish the ratio of teachers to students in Geography classes, data was collected from form one through three and summarized in ratios as presented in Table 4.4.

**Table 4.5: Geography Teachers to Students Ratio**

<table>
<thead>
<tr>
<th>Schools</th>
<th>Geography Teachers</th>
<th>Geography Students</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Form 1 Form 2 Form 3</td>
<td>Form 1 Form 2 Form 3</td>
<td>Form 1 Form 2 Form 3</td>
</tr>
<tr>
<td>A</td>
<td>1 1 1</td>
<td>1 33 27</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:33</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:27</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:10</td>
</tr>
<tr>
<td>B</td>
<td>1 1 1</td>
<td>1 31 22</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:31</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:22</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:11</td>
</tr>
<tr>
<td>C</td>
<td>1 1 1</td>
<td>1 18 14</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:18</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:8</td>
</tr>
<tr>
<td>D</td>
<td>1 1 1</td>
<td>1 40 20</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:10</td>
</tr>
<tr>
<td>E</td>
<td>1 1 1</td>
<td>1 26 18</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:26</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:18</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1:12</td>
</tr>
</tbody>
</table>

As shown in Table 4.5, the teacher - student ratio was very high in form 1 and form 2, but the ratio went low in form 3. This is due to the high number of students who dropped Geography
subject as they proceeded to form 3 where the Geography subject is optional. From the table above, every school has two teachers, and this is why a single Geography teacher attends to more than one class; the high teacher-student ratio could easily affect the utilization of teaching resources for practical Geography curriculum hence performance in Geography. An appropriate teachers-students ratio is important to realize a better performance in Practical Geography in that teacher's knowledge of the subject matter, the teacher - pupil contact, methodology, and techniques of imparting knowledge are great attributes that have a significant effect on the student academic performance. Ng'ethe (2004) concurs that for students to perform well in any examination their teachers must know them and have a profound knowledge of the state of their physical and intellectual capabilities. Therefore, teachers must have a manageable number of students. When the teacher - student ratio is large, it means teacher- student concentration will be reduced, and this will affect the utilization of the available resources. Secondary school pupil-teacher ratio is the number of pupils enrolled in secondary school divided by the number of secondary school teachers. Regarding Pupil-teacher ratio, secondary schools were last measured at 29.68:1 in 2009 according to The World Bank.

The findings of the study revealed that the student teacher ratio was within the recommended level. The unbalanced pupil-teacher ratio is a common factor in most public schools. In these schools, teachers have to deal with a large number of students at one time as there is a shortage of teaching staff. The recommended teacher-pupil ratio is 1:45 and Kenya are aiming to achieve this (Nyambura, 2013). Head of Departments were asked what measures they took to ensure Geography syllabus was covered effectively and on time. All Head of
Departments agreed that they normally and routinely checked Geography teacher’s lesson preparation that included schemes of work, lesson plan and lesson notes.

**4.3.3 Extent to which Geography Instructional Resource Utilization**

Teachers were asked to give information concerning the extent of Geography instructional resource utilization. Most of them indicated that they rarely used the instructional resources in teaching Practical Geography. The study further revealed that three-quarter (75%) of the students performed tasks in Practical Geography and majority used instructional resources regularly. This result revealed that the students were willing to learn using instructional resources, but teachers were reluctant to utilize the resources. According to Ekweme and Igwe (2001), teachers alone can guarantee effective usage of teaching and learning resources that can ensure success in schools. As a result, a teacher uses required teaching resources to supplement his work will help improve learners innovative and creative thinking as well as assist them in becoming enthusiastic. This is supported by Oremeji (2002) who noted that any teacher who effectively uses teaching resources can make significant contribution to students learning.

The finding from the study found out that majority of schools did not fully utilize instructional resources. Such results raised a negative sign that Geography teachers were not aware of the importance of using instructional resources. Success or failure of secondary school depends highly on the proper management and utilization of instructional resources. This finding confirms Wathore (2012) that geography teaching materials at high school level are considered learning facilitators in the Geography teaching. This is because they make geography learning very effective and interesting. Instructional materials are important tools
and techniques in the Geography teaching-learning process. Moreover, the results highlight the regular usage of instructional resources in teaching, where the majority of them did not use instructional resources regularly for Practical Geography. This result reveals that these teachers did not take a keen interest in the role of instructional resources in the teaching process.

4.3.4 Utilization of Instructional Materials during Geography Lessons

To confirm whether teachers used instructional resources during teaching lessons, the researcher moved to each class during Geography lessons and observed the following.

Table 4.6: Percentage usage of Instructional Materials during Geography Lessons

<table>
<thead>
<tr>
<th>Resources</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Form 1</td>
</tr>
<tr>
<td>Maps</td>
<td>100</td>
</tr>
<tr>
<td>Atlas</td>
<td>71</td>
</tr>
<tr>
<td>Globe</td>
<td>58</td>
</tr>
<tr>
<td>Photographs</td>
<td>93</td>
</tr>
<tr>
<td>Pictures</td>
<td>73</td>
</tr>
<tr>
<td>Models</td>
<td>24</td>
</tr>
<tr>
<td>Dioramas</td>
<td>18</td>
</tr>
<tr>
<td>Radios</td>
<td>9</td>
</tr>
<tr>
<td>Charts</td>
<td>73</td>
</tr>
<tr>
<td>Others</td>
<td>14</td>
</tr>
</tbody>
</table>

Maps were the most utilized resources in all classes during Geography lessons as indicated in Table 4.6 above. The utilization of Atlas, Globe, Photographs and Charts was above 50% in all classes. Further, it was observed that very few students and teachers utilized Radios,
Dioramas, and Models during lessons. Also, the percentage utilization of instructional resources declined as the students moved from lower classes to upper classes, i.e. form one, two, three and four respectively. This could be as a result of the negative perception of both the students and teachers towards Geography as a subject.

4.4 Teachers’ Attitude towards Use of Instructional Resources

In an attempt to establish teachers’ attitude on the use of instructional resources in teaching Geography in objective three, they were asked to state how they found the lesson when they used resources. Figure 4.5 presents the findings.

Figure 4.5: Teachers’ Attitude towards Utilization of Instructional Resources

As shown in Figure 4.5, majority of the teachers (60.0%) indicated that use of Geography instructional resources was boring and only very few (10%) noted that it is very interesting. Thirty percent of them stated that instructional resources are interesting. This implies that generally majority of the teachers had a negative attitude towards utilization of instructional
resources. This confirms Brooks (2011) assertion that teachers need to have positive attitude besides fundamental knowledge to design and carry out meaningful learning experiences for their students regarding content knowledge. Kidman and Palmer (2006) also concurs that teachers’ who have positive attitude towards use of relevant instructional resources in teaching Practical Geography should include Geography content to prepare teachers for skillful instruction in engaging students in learning specific geographic big ideas and practices.

Almost three quarter (70%) of the teachers informed this study that they faced several challenges in the course of their work. Some schools (30.0%) lacked some materials used for teaching Geography while other schools lacked Geography teachers, the few who were available felt overloaded with too much work. This made some teachers to develop a negative attitude towards Geography due exhaustion. Klein (2005) argues that teachers need to be equipped with a diverse materials and resources proved and effective to teaching Geography. Instructional materials are potentially the most useful resource for helping teachers craft productive earning experiences that meet the needs of their students.

Interestingly, a quarter (30%) of the schools did not utilize some instructional resources for teaching Geography despite Ministry of Education directive that all public schools must have adequate teaching facilities. The high number of schools that utilized instructional resources was a warning indicator, because this reflected their negative attitudes towards the importance of instructional resources in their life, in the teaching and learning process.
4.4.1: Teachers’ Attitude towards Utilization of Resources based on Gender

Teachers were asked to indicate the extent to which they used instructional resources regarding extent of utilization, frequency and time taken. Figures 4.6-4.8 present the findings. Considering the gender aspect, figure 4.8 summarizes the results.

![Bar Chart: Teachers’ Attitude towards Utilization of Resources based on Gender](chart.png)

Figure 4.6: Teachers’ Attitude Towards Utilization of Resources Based on Gender

From figure 4.6, based on good attitude, males’ attitude towards utilization of instructional resources was 9% higher than that of female teachers, but when it came to poor attitude, male teachers had slightly higher percentage (31%) compared to female teachers (20%). The majority of the teachers in both gender, slightly above average, had a moderately fair attitude towards the utilization of institutional resources. This indicates that gender also contributes to the level of utilization of instructional resources. The result further implies that female teachers’ attitude was relatively poorer than that of male teachers.
Teachers were also asked to state whether they could be willing to order more instructional resources if they ran out of stock in their institutions. The results were presented in figure 4.7

![Bar Chart](image)

**Figure 4.7: If Teachers could order Instructional Resources.**

As shown in Figure 4.7, thirty-one point seven percent of the respondents were not willing to order instructional resources at all, and slightly more than half (53.4 %) of teachers would wish to order occasionally for more. It’s only 15 % of teachers who were always willing to order for instructional resources. This result indicates that majority of the teachers had a negative attitude towards utilization of instructional resources. Most respondents attributed this to lack of enough time to incorporate the use of instructional resources since the time and lessons allocated to Geography are less as compared to science subjects. Others pointed out that the use of instructional resources is cumbersome and that Geography as a subject is wide regarding syllabus content thus they avoided use of instructional resources to save time so as
to complete syllabus on time. The respondents were also asked to indicate the time spent while using instructional material and Figure 4.9 presents the findings.

![Figure 4.8: Time Spent in Usage of Instructional Resources per Week](image)

The results in Figure 4.8 show that the time spent by Geography teachers in using instructional materials was the same as the time spent in not utilizing the resources. The majority of the teachers said they believed proper, and relevant instructional resources can improve the clarity of lessons and enhance the content of instruction. A quarter of the respondents said they were not sure or did not believe the instructional resources could enhance instruction.

4.5 Students’ Attitude Towards the Utilization of Resources

The students were asked to give their perception on resources utilization in learning Practical Geography. Figure 4.5 presents the findings.
Figure 4.9: Students’ Views Towards the Use of Resources based on Gender

From figure 4.9, more than half of the students in both genders (73% male and 80% female) were enthusiastic about the use of instructional materials (73% males and 80% female). Only a very insignificant number (10% male and 5%) of female had a poor attitude towards the use of instructional materials.

4.5.1 Views Regarding the Usefulness of Instructional Resources in Learning Practical Geography

Students were asked to give their views on what they thought about the use of instructional resources in learning Practical Geography. Aspects such as helping one to secure a job, the usefulness of the knowledge gained in one's daily life or the importance of such acknowledge as a foundation for further study were considered. Table 4.7 summarizes the responses to these questions.

Table 4.7: Percentage Distribution of Responses to Skill in Practical Geography
<table>
<thead>
<tr>
<th>Items</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usefulness After School</td>
<td>40.5%</td>
<td>29.9%</td>
<td>13.7%</td>
<td>12.4%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Usefulness in Securing a Job</td>
<td>26.5%</td>
<td>27.8%</td>
<td>27.8%</td>
<td>13.7%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Knowledge of Geography</td>
<td>32.3%</td>
<td>42.7%</td>
<td>13.8%</td>
<td>9.5%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Important for all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of instructional Resources is important</td>
<td>14.4%</td>
<td>13.8%</td>
<td>4.3%</td>
<td>28.0%</td>
<td>40.5%</td>
</tr>
<tr>
<td>Only in the Classroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foundation for further studies</td>
<td>46.5%</td>
<td>25.9%</td>
<td>8.6%</td>
<td>8.2%</td>
<td>10.8%</td>
</tr>
</tbody>
</table>

The results in Table 4.7 reveal that the majority of the students viewed the use of instructional resources in Practical Geography as being useful both regarding the knowledge it disseminated and regarding securing a job. However, there was one deviation that is of interest. That relates to the notion that the use of instructional resources is important in classrooms only. Less than a quarter of the respondents agreed with this. This observation would tend to suggest that the use of instructional resources in learning Practical Geography was viewed as being entirely relevant to the student needs and interests not only in the classroom but to the outside world. The students’ responses imply that the poor attitude exhibited by the teachers has a cascading effect on student’s perception on the subject. This
confirms that indeed the teachers in this study have a poor attitude towards the utilization of instructional materials as reported in figure 4.7. A significant number of teachers according to figure 4.8 spend less than 3 hours a week in employing an instructional method in teaching, which has a negative implication in developing skills of the students.

4.6 Challenges faced in the Teaching and Learning of Practical Geography

Objective four was to establish the Challenges faced in the teaching and learning of Practical Geography by both teachers and learners. Almost all (90%) teachers who were interviewed complained that Geography syllabus, at the secondary level, was very long without adequate time for covering the syllabus adequately. This led to educators skipping practical lessons, even with practical equipment’s being available as it took up too much class time. The unwillingness to engage in Practical work was bolstered by examinations that tested learned knowledge and only 30.0% of Practical skills, or as in the case of Kenyan Geography where there was very small section of only 30.0% Practical Geography examinations at the end of Form 4. This negates Mwangiru and Njue (1986) who pointed out that through fieldwork, the students are in contact with those materials and features that made life what it was in any given locality. Senses are gateways to acquired knowledge and that the natural way to learn is principally through the employment of all the senses.

Practical work requires time to plan, try out, set for the class, remove and clear up after the lesson. Eighty Percent (80.0%) of the teachers, being poorly motivated, found it difficult to spare time for such a process. Mworia (1991) argues that Geography is the study of the living world hence students are required to spend some time out of the classroom in the field to have first-hand visual contact with the facts of nature and works of man. Through qualitative
interviews, the study revealed that most teachers were inadequately trained in Practical Geography and almost never participated in any in-service training. A teacher at one of the schools had this to say:

Most teachers in this school are not well trained to handle the Practical aspect of Geography particularly computer-based instructional media. PowerPoint, for instance, can be used to present geographical issues like weather data electronic (Interview, Geography HOD, School A).

According to Davidson (1996), the use of Computer-based media in Geography lessons is imperative as it makes a valuable contribution to the quality of student learning. Recece & Walker (2001) also pointed out that it is important to use learning aids to enhance student learning experience, and they stress the link between poor learning with the failure to use visual aids and similarly effective. Most teachers lack creativity and initiative and will not improvise where there are no ready-made visual aids. Most are ignorant of girls’ unique problems (Interviews Geography teachers, school D). Some lack competence in the use of equipment available in their schools and so such equipment remains unused. In any case, use of equipment in both Practical Geography and science lessons is viewed by both male and female students as a male domain, so girls as well as boys and even teachers, usually expect the boys to work with the equipment while the girls watch (Interview, Teacher School B).

Sixty percent (60.0%) of the students complained of a lack of more Practical lessons, scarcity of learning materials during the field study. This confirms Kidman and Palmer (2006) results which showed that most Geography teaching resources utilize few approaches for conveying information which promotes direct instruction through lecture, reading and recitation.
However, majority of learners enjoy these learning approaches as the instructional methods do not take full advantage of one of the subjects’ greatest assets as a dynamic discipline with a high degree of relevance to students’ lives. Seventy percent 70.0% of the students also complained that some lack understanding on the content of Geography lesson particularly on map reading and measurement of geographical locations and distances due to lack of enough maps and photographs. Most Practical lessons were time-consuming with information that may not be accurate. According to Getis and Fellman (2000), maps are tersely efficient at indicating the location of things about one another and the information void created by their disappearance would have to be filled by volumes of description. Some students informed this study that some of the chemicals used in Practical lessons were harmful and lacked proper explanation from the teachers.
CHAPTER FIVE
SUMMARY, CONCLUSION, AND RECOMMENDATION

5.0 Introduction
This chapter outlines the summary of the study, the conclusion made and the recommendations. The chapter also gives suggestions for further research.

5.1 Summary of the Study
The aim of this study was to investigate the type of resources utilized in the target population, determine the level of utilization of instructional resources in teaching Geography and assess the teachers’ attitude towards the utilization of instructional materials in secondary schools. The study found out that graphics were the most utilized resources in teaching practical geography. These graphics were maps Atlases, photographs and pictures. Dioramas and radios were the least utilized resources by both teachers and students in the schools.
On the extent of utilization of instructional materials in teaching and learning practical geography, more than half (67.5%) of the students said that their teachers occasionally utilized instructional material with only 22.5% of the student stating that their teachers utilized instructional resources. The teachers on the other hand said they utilized the instructional resources with all teachers saying they used maps and 90% and 60% saying the use photographs atlases respectively. The other objective of the study was to establish geography teachers’ attitude towards utilization of instructional resources. The results showed that only 10% of the teacher had a good attitude while 60% of the teachers had a negative attitude since they indicated that there are lessons are boring and they used
instructional materials in teaching practical geography. The students on the other hand a good attitude with over 75% saying they were willing to perform tasks in practical geography using instructional materials more often. The last objective was on challenges faced by teachers and learners on utilization of instructional resources in teaching and learning geography. Ninety percent of teachers complained of geography syllabus being wide hence little time to use instructional materials in teaching and learning practical geography. The student also stated that they needed practical lessons for learning practical geography just as in the science subjects.

5.2 Conclusion of the Study

The first objective was on the type of resources for teaching and learning practical geography. Printed materials and graphics were the most used instructional materials. All the respondents used maps followed by photographs at 90% and atlas at 75%. Computers were not in use in the sampled yet when news they can effectively and efficiently enable teachers and learners grasp concept within a shorter time.

The second objective was to find out extent to which instructional materials were being utilized in teaching and learning practical geography. The researcher establish the teacher did not always use instructional resources as 50% of the student reported that their teachers sometimes used the instructional material and teaching practical geography. This calls for the sensitization of geography teachers on the importance of using instructional resources to teach practical geography.

The third objective was to find out the attitude of teachers towards utilization of instructional resources. The researcher establish that 60% of the teachers had negative attitude towards use
of resources in teaching practical geography while 40% of the teachers had positive attitude towards use of instructional resources since they found the lesson interesting when they use instructional material. The teachers need to be motivated so they can be encouraged to utilize instructional resources in teaching practical geography since learners tend to retain more information when they see, touch and manipulate than when they just hear.

The fourth objective was on the view of learners on the use of instructional resources in learning practical geography. The researcher found out that over 75% had a positive attitude on utilization of instructional resources in learning practical geography.

The last objective was on the challenges faced by teachers and learners in utilization instructional resources in teaching and learning practical geography the study establish that most teachers complaining of wide geography syllabus with few numbers of lessons per week.

5.3 Recommendations of the Study

The following are suggestions that would be useful in policy making for the improvement of instructional resources in teaching and learning practical Geography.

i. School management and administrators should improve instructional resources used in teaching and learning practical geography for example availing computers to geography teachers to use in geography practical lessons.

ii. Geography teachers should be enlightened on the importance of utilizing instructional resources in teaching practical geography.

iii. Geography teachers should be motivated in order to change the negative attitudes towards utilization of instructional resources.
iv. The learners to be encouraged through field trips around the school and beyond.

v. The geography syllabus ought to be reviewed and also the number of lessons in lower classes be increased from three to four lessons per week and for the upper classes from four to five lessons per week.

5.4 Suggestions for Further Research

The following are suggestions emanating from this study:

i. This study was carried out in Kipkelion Sub-County. Similar studies should be carried out in other Sub-Counties or entire country to find out whether similar results are obtainable.

ii. A study needs to be carried out in private secondary schools to see whether findings are of a similar trend.

iii. There is need to carry out research to find out the specific areas in geography syllabus that are difficult or challenging (or both) to students and the teacher.
REFERENCES


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Kinyanjui, L. (1997) *Availability And Utilization Of Instructional Media In Teaching And Learning Physical Education In Some Selected Primary Teachers Colleges In Kenya*. Nairobi. Kenyatta University


APPENDICES

APPENDIX A: Head of Department Interview Guide

I am a student at Kenyatta University undertaking a Master Degree in Education. The purpose of interviewing you is to find out the types of resources used in your school in teaching practical geography; are these resources being used by the teacher and what is the teacher’s attitude towards the utilization of the resources? In line with the above, what challenged does your department face? Confidentiality will be strictly observed.

SECTION A: BIOGRAPHICAL DATA

1. What is your gender?
2. What is your qualification?
3. How long have you been H.O.D.?

SECTION B: TEACHERS AS RESOURCES

4. How many teachers of Geography are in your school?
5. In case of a transfer of a teacher, do you get a suitable replacement immediately?
6. Do you avail to the teachers the teaching and learning resources they require for teaching practical geography?
7. Do you check if teachers in your department are using teaching and learning resources?
8. Does your department organize field trips for geography students?
If your answer is ‘Yes’ how often?

9. In your own observation, do teachers like to use the teaching and learning resources in teaching practical geography?

SECTION C: TEACHING AND LEARNING RESOURCES

10. Which resources are available in your department?

11. Which ones do you use to teach Practical Geography?

12. Do students have access to the learning resources?

13. What challenges does your department face in the utilization of resources in teaching practical geography?
APPENDIX B: Teacher’s Questionnaire

The questions below will help gather information relating to the utilization of the available resources in the teaching and learning of practical geography. Please answer each question as accurately as possible. All information will be strictly confidential.

Please tick (✓) your chosen responses where appropriate

SECTION A

1. What is your sex? Male [ ]
   Female [ ]

2. Are you a trained geography teacher
   Yes [ ]
   No [ ]

   If ‘yes’ what is your qualification?
   Diploma [ ]
   BA [ ]
   BSC [ ]
   BED [ ]
   MED [ ]

   Any other, specify _________________________________

3. How long have you been teaching geography
Below 1 year □
1-5 years □
5-10 years □
11-15 years □
Over 15 years □

4. Have you attended a seminar/workshop on resource utilization in teaching practical geography in the last 2 years
   Yes □
   No □

SECTION B

1. Which practical Geography resources do you use when teaching the following topics?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Map work</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Photograph</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Statistics</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Fieldwork</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

2. When you use these resources, how do you find the lesson?
   a) Very interesting □
   b) Interesting □
3. How frequent do you use the teaching resource when teaching practical geography?

Very often □

Rarely □

Never □

If your answer is ‘Never’ give a reason why?

Lack of materials □

Not interested in using them □

Too much work load □

Any other specify……………………………………………………………………. .

4. How often do you take geography students for a field study

Once in a term □

Once a year □

Once in 4 years □

Any other specify……………………………………………………………………..

5. Do you face any challenge in the utilization of resources in teaching practical geography?

Yes □

No □

If ‘Yes’ list the challenges
SECTION C

6. Which of the following resources are available in your school for teaching practical geography (Tick the appropriate box)?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atlas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Globe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Models</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diorama</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Televisions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radios</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagrams</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Photographs  □ □
Pictures  □ □
Textbooks  □ □
Charts  □ □
Any other specify…………………………………………………………………….

7. Do the schools provide the resources when you need them?

Yes  □
No  □

If your answer is ‘No’ why?

The school lacks money to buy  □

The school administration is not willing to spend on geography resources  □

The resources are not available in the market  □

8. Is there a practical Geography resource which requires an expert or special training to use

Yes  □
No  □

If Yes, has the school been supportive in providing the resource person/ special training?
9. State the challenges you face when using teaching and learning resources.

10. Suggest ways of improving the teaching, learning resources in enhancing practical geography performance
APPENDIX C: Student’s Questionnaire

The questions below will help gather information relating to the utilization of the available resources in the teaching and learning of practical geography. Please answer each question as accurately as possible. All information will be strictly confidential.

Please tick (√) your chosen responses where appropriate

SECTION A: BIOGRAPHICAL DATA

1. a) Name of your school .................................................................

   Sex
   Male ☐
   Female ☐

b) Indicate your form .................................................................

SECTION B:

1. In which form were you first taught the following topics in Geography.

   Map work .................................................................

   Photograph work ........................................................... 

   Statistics .................................................................

   Fieldwork .................................................................
2. What materials does a teacher use in teaching practical Geography apart from the textbook?

<table>
<thead>
<tr>
<th>Material</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atlas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Globe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photographs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pictures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagrams</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Models</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dioramas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Television</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource person</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Any other specify.................................................................

3. How often does the teacher use teaching and learning resources when teaching practical geography?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sometimes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Does your teacher take you for a field study?

Yes

No

5. If yes, indicate how many in a

Term .................

Year .................

Any other specify ........................................

6. Does your geography teacher give you assignments in Practical Geography?

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Not sure</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Every lesson</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>weekly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>monthly</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7. What problems do you face when using teaching and learning resources in practical geography?
   i) ................................................................................................................
   ii) .............................................................................................................
   iii) .............................................................................................................

8. Suggest the improvements you would like to be made on the utilization of the teaching learning resources.
   i) .............................................................................................................
   ii) .............................................................................................................
   iii) .............................................................................................................

Against each of items that follow, please encircle the appropriate number to indicate your view about each of the statements regarding the need to use instructional resources in Practical Geography. (1) Strongly agree (2) agree (3) Undecided (4) disagree (5) strongly disagree.

9. Use of instructional resources in learning practical Geography will be useful to me after I leave School
   (1) Strongly agree (2) agree (3) Undecided (4) disagree (5) strongly disagree.

10. Use of instructional resources in practical Geography will help me get a job I Like
    (1) Strongly agree (2) agree (3) Undecided (4) disagree (5) strongly disagree.
11 There are many jobs that need a person with knowledge of using Instructional resources in Geography

(1) Strongly agree (2) agree (3) Undecided (4) disagree (5) strongly disagree

12 Use of Instructional resources for Geography is important only in the classroom (1)

Strongly agree (2) agree (3) Undecided (4) disagree (5) strongly disagree

13 Use of instructional resources for practical Geography is important for further studies

(1) Strongly agree (2) agree (3) Undecided (4) disagree (5) strongly disagree
### APPENDIX D: Observation Checklist

School …………………………………………………………………………………………………………

Subject………………………………………………………………………………………………………

<table>
<thead>
<tr>
<th>Types of resources</th>
<th>Available and used</th>
<th>Available and not used</th>
<th>comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Printed materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Textbooks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geographical journals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspapers and magazines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programmed materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Non projected materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graphs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Globes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photographs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atlases</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Models</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diorama</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Diagrams</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boards</td>
<td></td>
<td></td>
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<tr>
<td>-----------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Audio-visual materials</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Televisions</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Radios</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Video tapes</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Films</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cameras</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Other resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geography rooms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource persons</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field trips</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX E: Secondary Schools in Kipkelion Sub-County

**Kipkelion Division**
- Barsiele Secondary School
- Kamarus Secondary School
- Kipchorian Secondary School
- Kipkelion Girls High School
- Lesirwo Secondary School
- Mercy Girls’ Secondary School
- Siret Secondary School
- TaitaTowett High School

**Chilchila Division**
- Tugunon Secondary School
- Chepkechei Secondary School
- Cherara Secondary School
- Chilchila Secondary School
- Kipteris Girls’ Secondary School
- Kokwet Secondary School
- Ndubusat Girls’ Secondary School
- Tunnel Secondary School

**Chepseon Division**
- Chagaik Secondary School
- Chepseon Complex Secondary
- Chepseon Secondary School
- Chepsir Secondary School
- Chesinende Secondary School
- Momoniat Secondary School

**Kunyak Division**
- Kunyak Secondary School

**Kamasian Division**
- AGC Liloch Secondary School
- Kasheen Secondary School
- Kipsegi Secondary School
- Lelu Secondary School
- Morao Secondary School
APPENDIX F: Research Approval Letter

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 57530

Internal Memo

FROM: Dean, Graduate School  DATE: 25th November, 2013
TO: Lang’at Charles  REF: E55/CE/13926/2009
C/o Educational Comm. & Tech

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that Graduate School Board, at its meeting of 14th
November, 2013, approved your Research Proposal for the M.Ed Degree Entitled,
"Utilization of Resources in Instruction on Practical Geography in Secondary
Schools in Kipkelion District, Kericho County- Kenya."

Thank you.

DAVID NJOROGE
FOR: DEAN, GRADUATE SCHOOL

Cc. Chairman, Department of Educational Communication and Technology

Supervisors:

1. Dr. Ondigi Samson Rosana
   C/o Department of Educational Communication &
   Technology
   Kenyatta University

2. Dr. Nasibi Were
   C/o Department of Educational Communication &
   Technology
   Kenyatta University
APPENDIX G: Research Authorization Letter

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: E55/CE/13926/2010

DATE: 25th November, 2013

The Permanent Secretary,
Ministry of Higher Education, Science & Technology,
P.O. Box 30040,
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION LANG’AT CHARLES—REG. NO. E55/CE/13926/2010

I write to introduce Mr. Lang’at Charles who is a Postgraduate Student of this University. He is registered for M.Ed degree programme in the Department of Education Communication and Technology.

Mr. Lang’at intends to conduct research for a M.Ed proposal entitled, “Utilization of Resources in Instruction on Practical Geography in Secondary Schools in Kipkelion District, Kericho County- Kenya.”

Any assistance given will be highly appreciated.

Yours faithfully,

MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL
APPENDIX H: Research Clearance Permit

THIS IS TO CERTIFY THAT:

MR. CHARLES K. LANGAT
of KENYATTA UNIVERSITY, 114-209 Loitokitok, has been permitted to
conduct research in Kericho County on the topic: UTILIZATION OF RESOURCES IN INSTRUCTION ON PRACTICAL GEOGRAPHY IN SECONDARY SCHOOLS IN KIPKELION DISTRICT, KERicho COUNTY-KENYA for the period ending: 30th June, 2014.

Fee Received: Kshs 1000.00

[Signature]

Secretary

National Commission for Science, Technology & Innovation

[Stamp]
APPENDIX I: Research Authorization (NACOSTI) Letter

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471
+241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacost.go.ke
Website: www.nacost.go.ke

Ref: No.

NACOSTI/P/14/5538/510

Charles K. Langat
Kenyatta University
P.O.Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "Utilization of resources in instruction on practical Geography in secondary schools in Kipkelion District, Kericho County - Kenya," I am pleased to inform you that you have been authorized to undertake research in Kericho County for a period ending 30th June, 2014.

You are advised to report to the County Commissioner and the County Director of Education, Kericho County before embarking on the research project.

On completion of the research, you are expected to submit two hard copies and one soft copy in pdf of the research report/thesis to our office.

Dr. M. K. Rugutt, PhD, HSC.
Deputy Commission Secretary
National Commission for Science, Technology & Innovation

Copy to:

The County Commissioner
The County Director of Education
Kericho County.
APPENDIX J: Map of Kipkelion Sub-County