RELATIONSHIP BETWEEN FIELD WORK AND PERFORMANCE IN THE TEACHING AND LEARNING OF GEOGRAPHY IN KIMININI DIVISION TRANS-NZOIA COUNTY, KENYA

BY

WAFULA JUMA KENNEDY

REG. NO: E55/CE/15617/2008

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AUGUST 2015
DECLARATION

I confirm that this thesis is my original work and has not been presented in any other university for certification. The thesis has been complemented by referenced works duly acknowledged. Where text, data, graphics, pictures or tables have been borrowed from other works-including the internet, the sources are specifically accredited through referencing in accordance with anti-plagiarism regulations.

Signature……………………….…….       Date………………………………………

Wafula Juma Kennedy
Registration Number: E55/CE/15617/2008
Department: Educational Communication and Technology.

We confirm that the work reported in this thesis was carried out by the candidate under our supervision as University supervisors.

Signature……………………….…….       Date………………………………………

Dr. Samson Rosana Ondigi
Department: Educational Communication and Technology
Kenyatta University

Signature……………………….…….       Date………………………………………

Dr. Mary Were Nasibi
Department: Educational Communication and Technology
Kenyatta University
DEDICATION

To my wonderful mother Bibiana Nasimiyu Masinde. You brought out the best in me.
ACKNOWLEDGEMENT

I am highly indebted to the Almighty God for His sufficient grace, unmerited favors and grand mercies in writing this work.

I owe a special debt of gratitude to my supervisors Dr. Samson Ondigi and Dr. Mary Nasibi of Kenyatta University who devoted their energy, time and patience while guiding me throughout the study. To the entire staff of the Department of Educational Communication and Technology, I say a big thank you for your great solid and candid input.

With gratitude I acknowledge my brother Joseph Seli Waswa and sisters Karen, Martha, Sussy, Pauline and Mourine [the Seli’s] for their constant support. Besides, my children Clarence, Collins, Claudia, Gaius and Miriam for your unique motivation. Not forgetting Madam Miriam Omuyonga for her consistent encouragement and my loving wife Chebet Martha for her endurance. Mr Simon Koross and Humphrey Maina for their unmeasured love and assistance. I owe each one of you an unfailing measure of appreciation because you lifted my spirit and supported me in general. To all, I say, may God richly bless you always.
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ABBREVIATIONS AND ACRONYMS

CRE : Christian Religious Education
D.E.O : District Education Officer
DQASO: Directorate of Quality Assurance and Standards Officer
EXAM : Examination
GIS : Geographical Information System
HOD : Head of Department
JAB : Joint Admission Board
KCSE : Kenya Certificate of Secondary Education
K.I.C.D : Kenya Institute of Curriculum Development
KNEC : Kenya National Examination Council
MOEST : Ministry of Education Science and Technology
SPSS : Statistical Package for Social Sciences
TAC : Teacher Advisory Centre
TSC : Teachers Service Commission
TSST : Traditional Sensory Stimulation Theory
UNESCO: United Nations Educational, Scientific and Cultural Organization
ABSTRACT

The purpose of the study was to investigate the relationship between field work and performance in the teaching and learning of geography in Kiminini Division, Trans-Nzoia County. The performance of geography in the National Examination within the Division has persistently been declining over the years yet a national school in the division that has judiciously used field work as noted from the survey did post positive deviation in the last three KCSE results. It is worth noting that this is contrary to when the very school used field work sparingly as revealed from the data collected. The study focused on the following objectives; firstly, to establish the use of field work in the teaching and learning of geography in the selected schools. Secondly, to find out the perception of teachers views on the use of field work in the teaching and learning of geography in schools. Thirdly, establish the position of field work to other methods. Fourthly, to investigate the factors hindering both teachers and learners from utilizing field work. The underlying theory in the study was based on the pragmatist Kneller (1971). The study used descriptive research design whose locale had 40% of the secondary schools selected from Kiminini. This translated to schools from the strata of National, Extra County and County schools. The sampled size was 56 of which a total of 24 teachers representing 100% whereas 32 students representing 15% were involved in the study. However, only 23 students representing 11% of the students’ responses were randomly selected and used. In each school, a questionnaire for school principals, HODs, geography teachers, students and an observation schedule were used to collect data. Purposive, stratified and random sampling methods were used to select schools and form three respondents respectively. The data was analyzed by using Statistical Package for Social Science (SPSS) which involved mean, standard deviation, frequency and percentages. The findings on utilization of field work showed that 83% of geography teachers did not utilize field study as 74% of learners had no exposure to field study. Ironically, the findings on exploring teachers’ views on the use of field work showed that 100% and 67% of HODs and teachers respectively observed that field work motivated learners. Another, 100% and 50% of HODs and teachers respectively agreed that the use of field work resulted into improved performance in the subject. A frequency test revealed that 60% of geography teachers used other teaching methods in the place of field work. The findings on the position of field work to other approaches in place indicated 8/9 with a 4% and 3% frequency use by geography teachers and HODs respectively. In conclusion, the geography teachers hardly utilized field study which affects performance. Teachers preferred other teaching methods to field work making it difficult for learners to conceptualize what the teacher covered in class. From the study, it was recommended that teachers should embrace utilizing field work. Lastly, more Geography lessons should be allocated to the discipline specifically for field work.
CHAPTER ONE

INTRODUCTION AND BACKGROUND OF THE STUDY

1.1. Introduction

The chapter provides highlights to the following sections of the study: background of the study, statement of the problem, purpose of the study, objectives of the study and research questions. It also describes the assumptions of the study, limitation and delimitation, significance of the study, theoretical and conceptual framework used in the study. Lastly, operational definitions of terms as used in the study are given.

1.2. Background to the study

Worldwide, environment offers diversity and variety that are stimulating and exciting places in which to live and learn. Such environments, as Bruce (2011, P.4) says, were significant as they helped learners to develop sensitivity to their immediate locality and by this understanding strengthened their own sense of identity. He adds that they also helped them keep to their own reality as an important element in their schooling. He continues to say that it provided relevant experience to the learners hence helps to develop the enquiry skills of learning. Lastly, he asserts that, it provides plenty of situations for real communication through field work. “Real situations for caring and sharing between teacher and learner.”

The terms ‘field work’, ‘field trip’ or ‘project’ and ‘field study’ for the purpose of this research are inter-related in their application. The terms are considered as one of the three avenues through which the environment is better made familiar to the learner, besides, formal classroom teaching and practical work. Although a considerable amount of time and money is consumed by learners taking part in field work, one
could take the economic rationalist perspective and ask: Are field studies at all worthwhile? Are stakeholders getting value for their money?

Michine (1998) offers a solution to the above queries when he accentuates it as;

Geography teachers in general are willing to use field work as part of their pedagogy because they feel that their learners need hands on, real life experiences or to examine applications of Geography concepts which augment their classroom studies.

Arising from this, in Kenya, one of the National Goals of Education that captures vividly the understanding of the environment is to promote positive attitudes towards good health and environmental protection as the K.C.S.E Examinations Regulations and Syllabuses (2012-2013) categorically states in its general objective number 8. Of course, this is envisaged through utilization of field work.

Commenting on the importance of environment as a learning resource, Bruce (2011) notes;

It’s the teacher’s role to reveal the unknown in the familiar and to help the learner to discover the unnoticed wealth within the environment. Most school grounds and areas adjacent offer scope for the development.

Kiminini Division which is found in Trans-Nzoia County, North Rift part of Kenya, is a place that spawns a learner’s experiences and interests. It covers a wide field of knowledge based on facts and fantasies. Judging from the environmental description of this area, the performance of students in geography in the national exam was expected to be at a maximum of grade - A which translated to -12 points yet most schools in the area were only able to score a mean grade of - D+ to C- which translated to -4.0 to 4.5 points as noted in the years (2007-2012) in table 1.3. In view of this area,
the researcher observed that the better performance of geography entailed utilizing field work activities. However, the minimum exposure of learners to field work activities was factored in as reason enough to explain the ever fluctuating and indeed dismal performance within geography in the division which was tantamount to affecting enrolment in the said subject.

On the contrary, one school that takes field work activity in the Division more often than not has been posting subsequent positive deviations in the subject mean score at the National examination. Hence, the researcher analyzed the performance of three secondary schools within the Division that fall in different categories. Basically, these schools belonged to the category of National, Extra County and County. Their K.C.S.E geography results were analyzed by the researcher and table 1.1 shows the geography results of the three schools for the past five years.

**Table1.1: KCSE Mean score of three schools for the past 5 years.**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NATIONAL</th>
<th>EXTRACOUNTY</th>
<th>COUNTY</th>
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<tr>
<td>2007</td>
<td>7.8</td>
<td>4.98</td>
<td>3.7</td>
</tr>
<tr>
<td>2008</td>
<td>8.6</td>
<td>5.70</td>
<td>4.78</td>
</tr>
<tr>
<td>2009</td>
<td>7.4</td>
<td>4.55</td>
<td>5.26</td>
</tr>
<tr>
<td>2010</td>
<td>6.2</td>
<td>5.95</td>
<td>4.74</td>
</tr>
<tr>
<td>2011</td>
<td>9.10</td>
<td>7.50</td>
<td>4.17</td>
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**Source:** District Education Office (DEO) Trans Nzoia 2014.
Table 1.1, shows that in the year 2011 a girls’ national school in the division, recorded its highest mean score in geography at 9.10 whereas the lowest mean score in the stated period was in the year 2010 at 6.2. The researcher observes a fluctuation of sorts in the performance of the subject within the stated time. The researcher established that this disparity was a case of the school using fieldwork sparingly as confirmed from the data collected.

Table 1.1, also reveals a boys’ school in the category of Extra County that recorded its highest mean score in geography in the year 2011 at 7.50 as opposed to the year 2009 when it recorded its lowest mean score of 4.55. The researcher noted that the irregular performance of geography in this school was attributed to lack of constant use of fieldwork as the data collected from the school indicated.

Lastly, table1.1, shows a mixed school from the cadre of County whose highest mean score in geography was in the year 2009 at 5.26 whereas its least mean score during the specified time was in year 2011 at 4.17. The researcher observed that the negative deviation in the mean score was related to the geography teachers who rushed their learners through in content coverage in order to finish the geography syllabus without giving due consideration to fieldwork activities as the data collected from the said school revealed.

The researcher observes that the performance of geography within the stated time in the above schools found in the division as being predicable at a glance if everything remains constant. Thus, one year, the school either raises or lowers their previously attained mean score. Therefore, this none academic cycle of inconsistence in
geography exam results for the above schools gives a broader picture of the subject as it is performed in the entire Kiminini Division.

It also became necessary for the researcher to examine the most recent performance in the National Exam of the earlier on stated schools in view of the fact that the very National school adopted utilizing field work activities in its teaching and learning process on a more regular basis as opposed to the Extra county school that uses it irregularly while the County school hardly utilizes fieldwork activities as the data collected from the very schools shows. Table 1.2 indicates their performance in the years 2012-2014.

**Table 1.2: KCSE mean score of three schools investigated earlier on from 2012-2014.**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NATIONAL</th>
<th>EXTRA COUNTY</th>
<th>COUNTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>8.3</td>
<td>6.89</td>
<td>4.27</td>
</tr>
<tr>
<td>2013</td>
<td>9.7</td>
<td>7.38</td>
<td>6.00</td>
</tr>
<tr>
<td>2014</td>
<td>10.42</td>
<td>6.96</td>
<td>5.27</td>
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**Source:** District Education Office (DEO) (2015)

Table 1.2 shows a school that falls in the category of National that has actively been engaging its learners in utilizing field work in the teaching and learning of geography. Noticeably, it recorded a positive deviation in the subject between the years 2012-2014. Its highest mean score over the years was 10.42. The researcher observes this performance to have steadily been rising from 2012-2014 after fieldwork was
embarked on both effectively and efficaciously in the teaching and learning process as revealed from the survey.

Table 1.2 shows a school in the order of Extra County as having had a positive deviation in the year 2013 but it nose-dived to a negative deviation in 2014. Arguably, the researcher attributes this, to inconsistency in fieldwork utilization as the data collected from the said school indicated.

Lastly, a school in the category of the County recorded a positive deviation in 2013. However, in 2014 it recorded a negative deviation. The researcher relates this drop to absolute failure by teachers to utilize field work as the data collected from the school reveals. This inborn quest by teachers to rush and cover the syllabus at the expense of the comprehensibility of the learner is to blame.

From the above performance, the researcher notes that the tremendous change in performance of the above National school is attributed to the regular and indeed consistent use of field work as the data collected from the school shows. If this was the direction pursued by all the schools within the Division, the performance of geography is likely to be on the upward trend.

Contrary to the fact, most schools within the Division hardly utilized field work activities provided for at the end of some topics as the syllabus demanded. Interestingly, the above scenario happened behind a background where the Ministry of Education Science and Technology (MOEST) had provided funds for purchase of textbooks and other learning resources. Notwithstanding, the Teachers Service
Commission (TSC) had employed qualified teachers of geography to most public schools within the division. In the same vein, the area offered environmental learning resources such as houses, bridges, streets, farms, streams, hills, valleys, swamps, bushes, ponds, weeds, animals, vehicles, shopping centers, forests, human activities - to name but a few. Such a locality, as Bruce (2011) in his work pointed out, in which children lived, affected their attitudes and influenced the quality and quantity of their learning. He reckoned that school was therefore a base from which learners explored their environment.

Field work is not a new concept in the teaching and learning process. The term according to Heinemann Macmillan Dictionary Advanced (2006), refers to;

“Work that involves going outside your classroom or laboratory to study something in a real environment.” P.517

Hornby (2010), in Oxford Advanced learner’s Dictionary defines the term field work as; “Research or study that is done in the real world rather than in a library or laboratory.” Pg549

Longman Dictionary of contemporary English the Living Dictionary (2006) elucidates the term field work as; “The study of scientific or social subjects, done outside the class or laboratory.” Pg588

This study found it fit to operate with Krepel and Durall (1981) definition as it is reflected in their research;

In America teachers tend to use the term field trip rather than excursion. This is a trip arranged by the school and undertaken for educational purposes, in which the students go to places where the materials of instruction may be observed and studied directly in their functional setting: for example, a trip to a factory, a city, water works, a library, a museum etc. Pg7
Recognizing on the importance of Field work, Sarah (1996) notes;

Field work gives a learner chance to have fun. Through it knowledge is put on practice. Learners are able to learn by doing. Again, it introduces them to new experiences through project approach.

Making similar observation, Tracy and Glaser (1999), underscored the importance of project method by noting that it links the learners to the community. At the same time, the learner is able to utilize the resources available.

Many secondary Geography topics as cited from books recommended by Kenya Institute of Curriculum Development (KICD) were viable to be taught by using project method. Authors such as Kimei (2008), Karuggah (2003), Mandila and Jakanyakwaka (2004), give topics that cut across the board in the actual utilization of field work and projects from Form One to Four in their respective text books. For instance, topics such as Weather, Agriculture, Soils, Industry, Management and Conservation of Environment to cite a few could be better taught by exposing the learner to the field.

Field work is facilitated to the learners through project method. This approach as Tracy and Glaser (1999), put it, made students feel engaged in real scientific inquiry and in essence became the decision makers directing the project. According to them, the project was authentic and meaningful learning took place.

While acknowledging the value of the project method Lieberman and Hoody (1998) say;

.... When a teacher presents a lesson aimed towards the average students in class, the instruction is usually too easy for 1/3 of the students; too hard for another 1/3 of the class and thus ineffective for
the majority of the students. Therefore, teachers should tailor their instructions to the unique needs and strength of individual students.

From the foregoing, Geography students in Kenya and to be more precise, those in Kiminini Division, should be involved and engaged in activities and products that were directly linked or connected to investigating the real (natural) surrounding of their school which had an impact on their thinking and interest through project approach. Such opportunities for students to explore real world events become part of their school experience for teachers and students by learning to seek out and utilize field work through inspiring learning and students investigations.

Armstrong (1989) explicitly say;

The more learners are able to observe and interpret the physical and human patterns and processes in the environment around them both locally and globally; the more chance they have of growing into citizens who can recognize and in some measure influence the changes which will take place in that environment.

In view of the above, quality teaching and learning of Geography took place where learners were able to learn through field work, the use of visual materials, both photographic and videoed and the use of maps, in addition to written resources. The best use of these materials for learning Geography occurred when learners had to use such resources to pose and answer questions. In other words, they were active learners using resources to assist them to engage in the process of Geographical enquiry.

At the outset, it was important to state that this study had also been prompted by the work of Were (2011), entitled “Factors influencing academic performance of students in Geography in KCSE in public schools in Kenya: A case study of Kakamega North
District, Kakamega County.” It identified failure of students to go for field trip despite it being important. Simultaneously, Kimayu (2012), in his work “Factors influencing performance in Geography in KCSE in Enzau District, Makueni County,” noted unavailability of field work which in either case was to blame.

It is against this background that the study had been conceived to investigate the relationship between field work and performance in the teaching and learning of Geography in selected secondary schools in Kiminini Division, Trans-Nzoia County.

1.3. Statement of the problem

Field work is an important teaching and learning strategy which entails learners augmenting on knowledge learned within the classroom setting. In Kenya, it is through both formative and summative tests that academic progress made by students in their studies can be gauged. Incidentally, many geography questions that are set in the National exam have an inclination to this area. However, in Kiminini Division, the performance of geography, which is an elective subject in Group III, in the Kenya Certificate of Secondary Education National Examination (KCSE) versus its other Arts subjects; Christian Religious Education (CRE) and History and Government was alarming yet both geography teachers and the teaching and learning materials were available, geography teachers have undergone training and that most of the topics in the geography course book were related to the environment unlike in the other humanity subjects: Hence, need for the students to perform much better in geography because of it being an environment friendly subject. Notably, geography is an important subject offered in the Kenyan curriculum that touched on the environment.
It therefore called upon the learner to be somewhat conversant with his/her environment and knew what was happening in it through field work.

To this extent, Kiminini Division is endowed with innumerable learning resources such as large plantation farms, plenty of physical features and human activities. It was a considered view that if students of this region were thoroughly exposed to field work, their examination results would not be as dismal as indicated in table 1.3.

Table 1.3: Subject mean score of geography in contrast with its other arts subjects in the national examination for the last six years.

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>YEAR OF EXAM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>Geography</td>
<td>4.5786</td>
</tr>
</tbody>
</table>

Source: District Education Office (DEO) Trans-Nzoia. (2013)

Table 1.3 indicates the performance of geography as registering a negative deviation in its mean score over the years as compared to other Humanities. For instance, in 2007 KCSE results, geography as a discipline posted its highest mean score of 4.5786. Thereafter, the subject has had a steady decline over the years in its performance as
revealed above whereas History and CRE recorded a steady upward trend with their best means scores at 6.757 and 7.121 respectively in 2012.

Following the above development, it was important to find out the relationship between field work and performance in geography which is an environment oriented subject in the Division. At this point in time, the questions that could very well be asked included: Could it be because the teachers were not making use of the environment? Could it be because students could not relate what they were taught with their environment? Or could it be because there was absolute lack of utilization of field work?

It is on this basis that the study had been conceived to investigate the relationship between field work and performance in the teaching and learning of Geography in Kiminini Division Trans-Nzoia County.

1.4. Purpose of the study

The purpose of this research was to investigate the relationship between field work and performance in the teaching and learning of geography in Kiminini Division; Trans-Nzoia County, Kenya.

1.5. Objectives of the study

The study addressed itself to the following objectives:

a) To establish the use of field work in the teaching and learning of geography in the selected schools.
b) To investigate the perception of teachers on the use of field work in the teaching and learning of geography in schools.

c) To establish the position of field work to other teaching methods in place.

d) To investigate the factors hindering both

   (i) Teachers and

   (ii) Learners from utilizing field work.

1.6. Research questions

The following made up the research questions of the study

   (a) Are teaching and learning resources around their schools?

   (i) To what extent do teachers utilize field work around their schools?

   (b) Does use of field work motivate learners?

   (i) Does utilization of field work result into improved performance?

   (ii) Do teachers use other approaches instead of field work in teaching and learning geography?

   (c) What position in the order of ranking is field work to other teaching methods?

   (d) What factors hindered the effective use of field work?

1.7. Assumptions of the study

The following assumptions formed the foundation of the study, that;

   a) The schools readily provided field work to their students.

   b) The teachers were aware of the rich environment their schools were endowed within and often used it in their teaching and learning process.

   c) The relationship between the school and the community was friendly.
d) Geography teachers used some teaching methods such as project and field work which was related to learning within the environment.

1.8. Limitations of the study

The study involved secondary schools drawn from Kiminini Division. Out of 20 schools, 8 were purposively covered. Form 3 geography students made up the respondents which may give a biased view of field work participation against other classes. Since the schools were stratified, the results of the study were limited to Kiminini Division and would not be generalized to all parts of the Country. The researcher did not get and observe the same response since the schools were not covering topic(s) that demanded application of field work at the time of the research.

1.9. Delimitation of the study

The study was conducted in Trans-Nzoia County Kiminini Division. It was undertaken in schools offering geography as their subject combination. It involved form three geography students because these were the learners who had opted to take the subject from the cluster of Arts subjects. Geography teachers, heads of department and school principals in 8 purposively selected public and private secondary schools within Kiminini Division were respondents.

1.10. Significance of the study

The results of the study might expose teachers on the importance and need to use field work in teaching the subject so that their students could easily understand the theoretical concepts got in books. The study may bring to fore, resources vital for field study that could be tapped into use by the teachers in Kiminini Division thus
enable them teach from concrete to abstract henceforth improve on the student’s retention ability and subsequently on their performance. The study may give an actual picture of the level or lack of the utilization of field work to the MOEST. The study may also give a feedback to policy makers such as Directorate of Quality Assurance and Standards (DQASO) and the school Teacher Advisory Centre (TAC) tutors with knowledge on the use of field work and hence may use it to decide whether to offer in-service course to teachers. Little then was known about the extent to which schools in Kiminini strived to use field work when teaching as such the study might unearth the truth and help fill the gap in literature on the available resources.

1.11. Theoretical framework

Different Philosophers and psychologists have advanced several theories of learning with the knowledge of the environment. For instance, Kneller (1971), an advocate of pragmatist theory, echoed that we could only know what our senses experienced: That is by, seeing, hearing, smelling, feeling and tasting. The pragmatists insisted that true knowledge was that which was created by a person’s interaction with the environment (as per this study, through geography curriculum).

For this reason, they stressed that when teaching in schools formal subject matter, should be linked, wherever possible to the immediate problems that the child faced and which the society was concerned to solve (hence, teacher characteristics). Teachers were therefore urged by pragmatists to construct learning situations around problems whose solution should lead pupils to a better understanding of the social and physical environments. (This is achieved by teachers employing suitable teaching methods as per this study, apparently, giving reference to the use of field work.)
Psychologist, Skinner (1978), as cited by Barbara (1999) believed “behavior is primarily determined by external environmental influences.” Pg72. Skinner advanced, in this case, that behavior was a function of its consequences. While Watson (1952), again as cited by Barbara (1999), singles out an equivalent of a learning environment as this study epitomizes when he said:

Give me a dozen infants, well formed, and my own specific world to bring them up in and I’ll guarantee to take any one at random and train him to become any type of specialist. Pg124.

Whereas Wheeler (1975), as cited by Liebert and Liebert (1998) said “man cannot be separated from his environment; not only the environment of his natural world but also the environment of his cultural background.” Pg200.

It is on this premise that a teacher worth his/her salt should know the value of the environment towards the learner (come assessment time) and its presupposed influence in the teaching and learning process as the above psychologists postulated in their argument.

The cited philosophers and psychologists advocated for the use of field study in the teaching and learning process that boosted learners’ comprehension and sequentially improved performance. As a matter of fact, their school of thought was suitable to be applied in this study. Therefore, based on their ideology, a geography teacher should utilize project method or field work considering that other variables exist such as learner characteristic, instructional materials and learning environment at his/her disposal.
1.12. Conceptual framework

As per this study, utilization of field work and Geographical resources are the independent variable whose extraneous variable are teacher characteristics, geography curriculum, time available, administration, social economic status, government policy and assessment, whereas, improved performance in geography is a dependable variable which is dependent on the extraneous variable highlighted below.

Fig 1.1. Conceptual Framework

Extraneous variables

Source: Researcher’s

Figure 1.1 shows the relationship that was hypothesized to exist among variables influencing teaching and learning of Geography. The head of the arrows symbolizes the directions of the effect and the reverse is also true.
The model indicates that utilization of fieldwork and geographical resources are directly influenced by the extraneous variables such as teacher characteristics which embodies experience to partake fieldwork, time to plan for field work, teamwork in the eventual handling of fieldwork, qualification and age which can either be a supportive or an impediment tool. Teachers commitment in the regular execution of fieldwork is important too.

Geography curriculum which entails the syllabus in its breath and width is significant as the syllabus gives and offers room for field work coverage at the successive end of the topic. Time available is also an important component as the school timetable experiences a rigid flow in itself to allow fieldwork expedition.

School administration can either be supportive or a hindrance in itself to the actual practicality of taking out learners for field work participation particularly when the principal is ignorant of its significance.

The socio economic status of the school can either facilitate field work participation or not. This may happen where finances are hard to come by or certain schools have no means (transport) to the actual place of study. Government policy can induce fieldwork participation if it puts up a directive to facilitate its implementation or bar off learners from accessing certain phenomenon where learning can take place.

Assessment is typically an important component that facilitates fieldwork participation because the National Examination has questions which originates from its practical aspect. It, therefore, encourages its close participation.
The above variables would both influence and affect performance either for the better or the worst. For the better if the extraneous variables are supporting but for the worst if the extraneous variables are impeding as discussed above.
1.13. Operational definition of terms

**Assessment**
Refers to evaluation system as a mode of measurement.

**Business enterprise**
Forms of transaction that involves a buyer and seller.

**Computerized system**
This is a service delivery device of recording, storing and transmitting data.

**Constructing**
It refers to human activities of bringing up new structures or road networks.

**County school**
Are former district secondary school.

**Environment**
The general learning surrounding in which the learner is poised to learn from.

**Extra county school**
Are former provincial high school.

**Field work**
A learning activity that takes place outside the classroom to superimpose a learnt class activity.

**Geospatial**
Relates to physical or geographical space covered.

**Geography curriculum**
Refers to the content in its breadth and depth.

**Learning environment**
Refers to the support from the school administration, class size and students’ relationship with the teachers.
<table>
<thead>
<tr>
<th><strong>Media</strong></th>
<th>Channels of communication, for example, television, radio and internet.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Memorabilia</strong></td>
<td>refers to practice of the past which is no longer in use.</td>
</tr>
<tr>
<td><strong>Mining</strong></td>
<td>This refers to extracting minerals from the earth’s surface.</td>
</tr>
<tr>
<td><strong>Physical features</strong></td>
<td>Refers to the landscape such as mountains, valleys, plains and swamps.</td>
</tr>
<tr>
<td><strong>Student characteristics</strong></td>
<td>Refers to the learner’s background hence his/her entry behavior in entirety.</td>
</tr>
<tr>
<td><strong>Teacher characteristics</strong></td>
<td>Refers to the teacher’s experience, commitment, time to plan, mark and teamwork.</td>
</tr>
<tr>
<td><strong>Teaching method</strong></td>
<td>Refers to the technique of delivery that teachers use.</td>
</tr>
<tr>
<td><strong>Topography</strong></td>
<td>This is the shape of the land.</td>
</tr>
<tr>
<td><strong>Vegetation</strong></td>
<td>This refers to growth of plants depending on the climatic patterns.</td>
</tr>
</tbody>
</table>
CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1. Introduction

In order for the researcher to enrich the study, the following existing literature was consulted relevantly and respectively under the following subtopics: nature of geography as a discipline, role of field work orientation in geography, resources of teaching and learning geography, teaching strategies, field work enhances performance, importance of utilizing field work and finally conclusion.

2.2. Nature of geography as a discipline

Geography, according to Armstrong (1989);

Is the study of earth and people who live in it. People who practice the science of geography are known as geographers. Geographers study earth and its people for three major reasons. Firstly, they want to describe earth. Secondly, they want to explain it. Thirdly, they want to make predictions or forecasts about the earth’s future. In studying earth, Geographers have learnt that its features are always changing. Pg4.

For example, the effects of heavy rainfall can cause a hill side to change over time; other changes however are due to human activities, such as the building of roads and cities or clearing of forests for farming. Geography in Kenya secondary schools is generally divided into two parts namely; Physical Geography and Human Geography. As a fact, there is need for geography teachers to familiarize learners with field study because of the ever changing environmental phenomena.

Geography according to Armstrong (1989) as a discipline; “Is important as it helps people to learn more about the place where they live and appreciate living in a smaller world through global interdependence.” Pg7.
This means not only the people’s own village, town or city but also the whole community to which they belong. Such knowledge could be of great value both today and in the future. Geography helps to satisfy curiosity. Thus, it answers many questions about faraway places in regard to the weather, and the physical features—which according to, Mandila and Jakanyakwaka (2004), is the shape of the land, and the people of the area.

Armstrong (1989), adds that earth is one of the nine known planets in the solar system. He states that it is the fifth largest planet which revolves around the sun in 365.25 days. This revolution around the sun accounts for the change in seasons of the year. He says that the earth rotates on its axis. He continues to explain that it takes 24 hours or one day to complete one rotation which brings about day or night. In effect, only one half receives sunlight at one time. The other half is in darkness. More importantly he adds, the earth is the only planet in the solar system that has life and is the home of humanity. Subsequently, there is need to engage learners through use of field work in their learning process to know their home.

2.3. Role of field work orientation in geography

The role of field work is expansive as illustrated by Smith (2011) who comments on its applicability as;

… there remain important questions about local knowledge, including how such knowledge is constituted by relationships and networks that go beyond the local, how such knowledge is learnt and (re)produced in time and space, and how the knowledge of still marginalized areas is used. Pg21.

According to the UNESCO (2001), through field work geographers were taught wide ranging combination of skills drawing in ideas from many resources. This
ability to view issues from a wider perspective was appropriate for working in many different areas.

The role of field work as Kimayu (2012), said was observed as it enlightened learners about the physical world and the environment. He substantiates by stating that it provided them with exact and recognized knowledge of the distribution of phenomena on the earth surface; resulted in the explanation of the interaction of man with his environment as it was seen in terms of arithmetic skills for use at home, in the office or workshop.

The Joint Admission Board (JAB) (2002), gave the following point about the connection between geography course and the type of people employers wanted. Employers wanted people with good communication skills, people who could work in a team and were able to collect data and analyze their work. This in essence was perfectly got by exposing learners to field work. Technically, geography courses include a wide range of written, oral skills and writing essays, projects, oral presentation and field work in which students work in groups. This aspect of teamwork develops social fabrics and attitudes among the learners which is the wholesome aim of field work.

Armstrong (1989), argued that field work helped learners to develop their career skills. Hence, to him, it helped people to learn skills needed to find important information on their own such as locating places, following directions, describing regions and using sources to find geographic facts which could be used in their training to help them in one of the jobs for example Cartographers and Surveyors,
City planners, Computer Specialists, Traffic Supervisors, Aerial Photographers, Meteorologists, Real Estate Managers and Park Rangers. Therefore, the skills that one got in field work studies make an individual of potential interest to a wide range of employers. For example, working with aid agencies, environmental work using Geographical Information system [GIS], working for the census office and in information and recreation.

2.4. Resources of teaching and learning geography

Resources of teaching geography are varied. According to Derick (1969), there are a variety of teaching and learning resources for example audio, visual and audio-visual which included; radio, pictures, video, television, films and computer. Alongside the above, he added are graphic materials such as diagrams, charts, maps and globes. Besides, he pinpointed, models; print; realia; boards; and use of diorama among others.

Kimayu (2012), elucidated that geography teachers as they teach should keep in mind both how and what they taught with. Learning would be passive and boring if learning resources were not incorporated, effectively organized and exploited in the learning process. It is the proper organization of learning resources and use of appropriate teaching and learning strategies which enhance the acquisition of the subject matter of the content.

Songole (1999), pointed out that the most important teaching resource that distinguished schools was the provision of textbooks. He added that good performance demanded every school to be equipped with relevant textbooks. Taking a
cue from his assertion, most current books of geography expressly provide field work tasks at the end of each successive topic.

Nkosena (1998), gave a broad hint that if teachers felt that the subject was not important to the extent that they did not emphasize teaching it; students might not be able to be blamed for having the same perception. This observation was significant to Kiminini schools which offered geography subject to the meaningful extent that if the learners were not exposed to fieldwork, the resultant effect was the dismal performance in the subject as witnessed in the dwindling mean score of geography in the said area.

Kimayu (2012), explored the matter more by saying that instructional resources played an important role in explaining wide variation in academic performance among students enrolled in different types of secondary schools. He observed that, it was good to note that schools with abundant resources might not always utilize them efficiently and consequently failed to raise student’s level of performance. He added that, on the other hand, schools with limited resources might utilize what they have efficiently and this boosted learning and students performances despite the deficiencies in material provision. He summed up by saying that availability of teaching and learning resources in geography made a difference in the achievements of students.

Tracy and Glaser (1999), observed project method as a strategy of using field work by explaining that if you approached a project saying we were going to go out and plant a tree, then it was the teacher’s project. On the other hand, they argued that if the
students were engaged in real scientific inquiry and they were the decision makers directing the project, then it was authentic; they were engaged in meaningful learning. From the two scholars’ point of view, the implementation of project-based learning spawned creative student’s products, which is the hallmark of the utilization of fieldwork.

In view of the above, effective teaching and learning of geography depended on the availability of resources such as books, visual and audio-visual teaching aids which ultimately include exposing learners to fieldwork activities.

2.5. Teaching strategies

There are two major strategies of learning, evidently, expository and heuristic in nature. Expository strategies assume learners as passive recipients of information while the teacher is considered as the overall authority as Ayako (2006) observes. On the other hand, she pointed out that heuristic strategies advocated for learning through experiment doing in a real situation. Expository strategies include: lecture, narration, demonstration and recitation whereas heuristic strategies involve problem solving, discovery and inquiry methods such as discussion, question / answer, project method, role play and dramatization. Joubert (2001) advocates for the latter, as it enables learners to ask questions, define problems, take charge of conversation when appropriate, participate in seeking goals, standards, benchmark and assessments. Certainly, this is where field work comes into play.
2.5.1 Field work enhances performance

The learning experiences and interactions between the learner and external conditions to the environment to which the learner reacts to constitutes using fieldwork. Hence the need for geography teachers to employ field work in their teaching and learning process to affect performance because of the learners different levels of understanding as elucidated by Lieberman and Hoody (1998) who have this to say:

When a teacher presents a lesson aimed towards the average student in class, the instruction is usually too easy for ⅓ of the students; too hard for another ⅓ of the class and thus ineffective for the majority of the students. Therefore, teachers should tailor their instructions to the unique needs and strength of individual students.Pg14.

Kimayu (2012), observed that much of the content which included concepts and diagrams that were too abstract for learners to easily comprehend demanded a teacher to use appropriate local examples to foster an understanding and arouse interest in the subject which at times is limited. That would definitely impact on performance. Hence, need for geography teachers to expose their learners through field work in order for them to be at home with the subject matter taught in class.

In the same vein, Traditional Sensory Stimulation Theory (TSST) has as its basic premise on the fact that effective learning occurred when the senses were stimulated (Laird, 1985). Laird quoted research that found out that the vast majority of knowledge held by adults (75%) was learned through seeing. Hearing was the next most effective (about 13%) and other senses-touch, smell and taste accounted for (12%) of what we knew. According to Laird, by stimulating the senses, especially the visual sense, learning could be enhanced, subsequently, advocating for use of field work. This undoubtedly impacts on performance.
Field work cannot be assumed in the teaching and learning of geography as a scholar by the name Burns (1995,) conceived of the learning process;

A relatively permanent change in behavior with behavior including both observable activity and internal processes such as thinking, attitudes and emotions.Pg99.

Here, Burns considered that learning might not manifest itself in observable behavior until sometime after the educational program has taken place. He essentially argued for the utilization of field work which constructively impacts on performance.

Atignon (1978) argued;
Instead of limiting learning activities to mere reading and listening, educational excursions made for the purpose of making direct contact with the actual phenomena could present rewarding opportunities for learning.Pg27.

Here, Atignon simulates on positive performance after the actual visit. Nevertheless, geography teachers, time and again cited frustration in their effort to expedite fieldwork as had been inspired above while singling out heads of schools as their main roadblocks.

Odhiambo (2005), on his part, pointed out a calibre of teachers in many school systems that formed impartial educational resources on school outcomes. Where educational resources were limited, the teacher is required to carry extra responsibilities of supplementing the difficulties of the school system. This teacher has the double task of providing what home background and school system did not offer.
From this point of view, a geography teacher has to create a bridge between the environment and learners through fieldwork with a clear objective of incorporating them for a sustainable positive index in the exams.

2.6. Importance of utilizing field work.

The significance of a geography teacher in utilizing field work whose value addition to geography lessons cannot be disputed spelt out goodness for the learner.

Sarah (1996), highlights that fieldwork offers learning in a new environment as the boredom of the classroom led some learners to lose interest in a particular lesson. According to her, during the field study the learners have a chance to go the extra step and acquired as much information as they want and can. She explains that field work provides challenges that allows for more individual learning, while classroom teaching is often generalized and many a times neglect the slowest learners in the group. She adds that, it gives learners a chance to get to know each other and interact in a more relaxed environment, without the pressure of grades or the constraints of classrooms. Further, she says that geographical facts can be experienced first-hand during fieldwork. In her work, she observes that experts believe that there are different methods of learning, including visual, auditory and tactile. She sums up by saying that students better learn through tact (known as kinesthetic learning) which greatly benefits from use of field study, where the senses come into play a lot more than they would ever do in a classroom.

Jansen (2007), pinpointed out on the use of fieldwork as that which advanced empirical knowledge and theoretical insight. He added that it was a facility for easy
and economic variations of environmental features, the active, self determined exploration and the reliable registration of the navigation behavior.

According to Ishikawa and Kanstens (2005), fieldwork offered research findings that illuminated the mental processes underlying such geospatial tasks. He further postulated that map reading tasks were made known which involved three constituent understanding: representational correspondence, configuration correspondence and directional correspondence.

Uttal (2000), mentioned that fieldwork provided a perspective on spatial information that differed in important ways from the perspective gained from direct experience navigating in the world.

Swenson and Kanstens (2011), said that when learners usually see by themselves, it enabled these students to examine the evidence used to build scientific arguments and test theories, even when the underlying data set was large or complicated. More often data visualization brought to the learners is not collected by them; therefore, teachers and instructional designers need to understand how students perceive and interpret such visualization. Moving to the field would help the teachers examine the nature of students’ interpretation about a colored, shaded-relief, global digital elevation map useful for reasoning about a wide range of earth processes.

Liben and Yekel (1996), observed that even though learners worked with maps or pictures of a familiar referent space, they evidenced difficult while an oblique vantage
point did not enhance performance, using the oblique map first aided subsequent performance on the plan map. Hence need for field studies to get them oriented.

From the above context, the teacher, could expediently use field work adequately well depending on the environment, goal, the objective of the lesson, the availability of the very resources and the learner’s characteristics, notably the learner’s background and their entry behavior.

2.7. Conclusion

From the literature review, it is evident that there is concerted effort by various scholars in quest to address the use of field work in general but there is no research done in Geography to be specific. This explains why the researcher undertook a study in Kiminini Division Trans-Nzoia County to fact find on the relationship between field work and performance in the teaching and learning of Geography. The study ultimately enabled the researcher to add knowledge to the field.
CHAPTER THREE
RESEARCH DESIGN AND METHODOLOGY

3.1. Introduction

This section covers research methodology which was organized under the following subheadings: Research design and locale, population, sampling techniques and sample size determination. Finally, it covers research instruments, pilot study, validity and reliability, data collection procedures, data analysis techniques.

3.2. Research design and locale

The researcher used descriptive survey research design which described the state of affairs, as they existed. This approach was appropriate because the study involved fact findings and inquiries of the relationship between field work and performance in the teaching and learning of Geography in the area under study. It aimed at obtaining, information from a representative selection of the population from which the investigator presented the findings as being representative of the population as a whole. According to Orodho (2005), descriptive survey studies were designed to obtain pertinent and precise information concerning the current phenomena and where possible draw valid general conclusions from facts discovered. The techniques that were used in the field were both qualitative and quantitative.

Qualitative paradigm was through open-ended questions while quantitative paradigm was through close-ended questions. Quantitative analysis involved assigning numerical values to the responses; the process in which empirical observations were made and recorded. Measurement of the items was done using rank order scale. On the other hand in qualitative analysis, the information gathered was structured along
themes or categories as they occurred in the questions. These allowed for coding of the data for easy analysis.

The study was conducted in Kiminini Division Trans-Nzoia County in Kenya. Singletor (1993), notes that, the ideal setting for any study should be accessible to the researcher and that which permitted instant rapport with the informants. Kiminini Division was accessible. Quite outstandingly, a national school within the division that has used fieldwork on a relatively frequent basis in its teaching and learning process has consistently posted a positive deviation in its geography mean score.

3.3 Population

Orodho (2005), defined target population as members of a real hypothetic set of people, events or objects the researcher wished to generalize the result of the research on. The target population was 20 secondary schools of which eighteen were public and two were private. These constituted one national school, two extra county schools and seventeen that were county ones in the target area. In a nutshell, the study respondents were from eight secondary schools. The respondents were 56 in total comprising of form three geography students, geography teachers, heads of department (HOD) and school principals.

3.4. Sampling techniques and sample size determination

According to Orodho (2005), sampling is defined as a means of selecting a given number of subjects from a defined population as a representation of that population. The population was stratified into categories of schools according to admission of students in Form one, that is, National, Extra-county and County schools. From these
strata, a representative sample was drawn. Sampling was used to identify two pilot schools among the 20 secondary schools from the five locations in Kiminini Division. Simple random sampling was used on the Form Three geography students to get the 11% respondents to fill the questionnaires. The criteria for selecting geography teachers was purposive where there was more than one stream, professional experience was needed as a criterion for selection of the teachers. The estimated sample size was 237. From the sample size, the researcher used 56 respondents of which 32 represented the students that were randomly sampled. This translated to 15% of the respondents from the selected schools. While the difference in the above figure which is stated as 24 represented teachers. This figure constituted 100% of the teachers from the selected schools that were purposively sampled. Analysis was however based on only 11% and 100% of the students and teachers who participated respectively. The figure translated into 23 randomly sampled students as subjects of the study. This was done to enhance reliability. In mixed schools, the researcher ensured gender balance by selecting equal number of boys and girls per class through random sampling that adapted the lottery style of selection. Table No. 3.1 shows a summary of the schools sampled.

Table 3.1: Sample size grid

<table>
<thead>
<tr>
<th>School type</th>
<th>National</th>
<th>Extra County</th>
<th>County</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Girls</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Mixed</td>
<td>-</td>
<td>-</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Proportional allocations</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>8</td>
</tr>
</tbody>
</table>
Table 3.1 shows one boys’ school (Extra County), two girls’ school (one National and the other Extra County) and seventeen County mixed secondary schools. The purposeful sampling slot is represented in the proportional allocation column. Table 3.2 that juxtapose the above indicates the randomly selected student respondents.

Table 3.2: Sample size grid of student population

<table>
<thead>
<tr>
<th>School type</th>
<th>No. of schools sampled</th>
<th>Sampled sex</th>
<th>Sampled size</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>1</td>
<td>12</td>
<td>6</td>
<td>55</td>
</tr>
<tr>
<td>Girls</td>
<td>2</td>
<td>11</td>
<td>6</td>
<td>64</td>
</tr>
<tr>
<td>Mixed</td>
<td>5</td>
<td>-</td>
<td>11</td>
<td>94</td>
</tr>
<tr>
<td>Totals</td>
<td>8</td>
<td>23</td>
<td>23</td>
<td>213</td>
</tr>
</tbody>
</table>

Table 3.2 shows the randomly sampled 11% student respondents from the given population. The respondents are from the 8 selected schools that cut across the board within the division which offer geography as an examinable subject. The table also reveals the gender responsiveness in the data collection.

3.5 Research instruments

The research instrument used in this study was basically questionnaire. There were four questionnaires for the following respondents namely student, teacher, head of department and principal. In addition, an observation checklist was used to complement the questionnaire and bridge the gap in case there was any inadequacy on either research tool. These two instruments were both personally designed and developed by the investigator.
3.5.1 Questionnaires

Questionnaires were the main instruments for data collection in the study. Four different questionnaires were used to collect information from students, teachers, heads of department and principals. According to Orodho (2005), questionnaires offered considerable advantage in the administration; again they presented an even stimulus potentially to large number of people simultaneously and provided the investigation with an easy accumulation of data. Some of the merits of questionnaires were low cost, freedom from interviewer’s bias as answers were in respondent’s own words and that gave respondents adequate time to give well thought out answers. The items generated for the study were both open and close ended types. The open ended items give the respondents greater freedom of expressing their own ideas and opinions, and gave suggestions where necessary. Semi structured (open ended) questions elicited a lot of good qualitative data. The close ended items enabled the investigator to obtain specific responses from the respondents. Questionnaires were used to collect information that was not directly observable as they inquired about feelings, motivation, attitudes, accomplishments as well as experiences of individuals.

3.5.1.1 Student’s questionnaire

The student’s questionnaire had four sections namely part A (Background), part B (Access to Field work), part C (Use of Field work) and part D (Field work strength and weaknesses). (A copy of this appears in Appendix A).
3.5.1.2 Teacher’s questionnaire

The teacher’s questionnaire had four sections namely part A (Background), part B (Access to Field work), part C (Use of Field work) and part D (Field work strength and weaknesses). (A copy of this appears in Appendix B).

3.5.1.3 Head’s of department questionnaire

The head’s of department questionnaire had four sections namely part A (Background), part B (Access to Field work), part C (Use of Field work) and part D (Field work strength and weaknesses). Their questionnaire focused on the position of the department towards the utilization of field work. (A copy of this appears in Appendix C).

3.5.1.4 Principal’s questionnaire

The Principal’s questionnaire had four sections namely part A (Background), part B (Access to Field work), part C (Use of Field work) and part D (Field work strength and weaknesses). The questionnaire aimed at establishing the supportive nature of the heads of targeted secondary schools towards the utilization of field work. (A copy of this appears in Appendix D).

3.5.2 Observation checklist

The observation checklist contained possible features identifiable in a field study that could be used for teaching and learning geography at secondary level across the board that is, Form One to Four. There was one observation checklist that was applied to all schools. The investigator indicated by ticking appropriately, the features available around each school. Through observation, the researcher collected more information.
and counter checked information acquired from questionnaires in the selected schools. There were six items on the observation schedule which were designed to measure specific objectives and were related to the items in the questionnaire. (A copy of this appears in Appendix E).

3.5.3. Pilot study

According to Orodho (2005), it was necessary that research instruments were piloted as a way of determining validity and reliability of the very tools. The researcher conducted a pilot study in two schools; one boys’ and the other girls’ only. Questionnaires were administered to teachers and learners in these schools. The observation schedule was applied as well. The purpose of piloting was to pre-test the research instruments and also familiarize the researcher with the data collection procedures. From the data collected, the instruments were corrected and prepared for the final study.

3.5.4 Validity

Mugenda and Mugenda (2003), defined the term validity as the degree to which results that were obtained from the analysis of the data actually represented the phenomena under study. Piloting was done to check the questionnaires’ content, structure, sequence, meaning and ambiguity of questions. Content validity was to some great measure ascertained by giving out instruments to professionals such as the researcher’s supervisors and colleagues to determine whether the instruments did measure what they purported to measure.
3.5.5. Reliability

Mugenda and Mugenda (2003), defines this term as a measure of the degree to which a research instrument yields consistent results or data after making repeated trials. Reliability refers to consistency of measurement. The more reliable an instrument was, the more consistent the measure. The researcher purposefully selected two pilot schools to test the reliability of the questionnaires through test-retest techniques. In case of misunderstandings or failure to generate results towards the purpose of the study, the affected questionnaire was revised.

3.6. Data collection procedures

3.6.1. Logistical and ethical consideration

Mugenda and Mugenda (2003), in their book stated some considerations worth put into practice by the researcher and the respondents during the research process. For instance, during the research process, the researcher did not ignore pertinent issues. He had also to express design in his study as well as value the use of his tests. The researcher avoided misusing the privileges accorded to him. He shunned away from plagiarism and fraud in the course of the study. On the other hand, care was taken not to use a special population amongst the respondents and those who appeared to offer voluntary consent. Also, care was taken by the researcher to guard respondents against physical and psychological harm. Again, cases of anonymity and financial issues were exclusively not allowed to be the preserve of the respondents. Finally, dissemination of findings and any academic freedom whatsoever was fundamentally with the researcher and not shared anyhow with the respondents.
3.6.2. Actual data collection procedures

An introduction letter from Kenyatta University was obtained to enable the researcher to administer questionnaires to students, teachers and the school administrators in the selected schools. Subsequently, a research permit was obtained from the Ministry of Education Science and Technology (MOEST). The researcher then personally visited the schools to have a rapport with the respondents. He also undertook to understand the environment. The researcher again sensitized respondents on what he was doing. As for the teachers’, heads’ of department and principals’ questionnaires, the researcher gave them out and collected them after one week; whereas the students’ questionnaires; the respondents were chosen through simple random sampling to fill the questionnaires. The researcher personally administered the students’ questionnaire whose details were filled in within a seating as provided for by each independent school visited by the researcher. The observation schedule was also administered on the sampled schools prior to actual data collection to provide first-hand information to the researcher on the resources within the environment of the schools identified for study.

3.7. Data analysis techniques

The data was gathered, validated, edited and then coded; which consisted of qualitative and quantitative data. The analysis was calculated by use of the statistical package for social sciences (SPSS) and included frequencies, standard deviation, means and percentages. To establish relationship between field work and performance, the frequencies were derived from students’ and teachers’ responses. For instance, utilization of fieldwork was considered commonly used if half (50%) or more of respondents, responded to it as occurring “very often” or “strongly agree”. If
50% or more of respondents, responded to it as “rarely” or “never” or elsewhere “strongly disagree” or “disagree”, it constituted commonly not being applicable. From this measurement a four point Likert scale was used respectively. Coding for Likert scale was very often / strongly agree – 4 points, often / agree – 3 points, sometimes / unsure – 2 points, rarely / disagree 1 point and never / strongly disagree – 0 point. Another scale used was a rank order scale, where respondents (teachers) ranked methods they used in teaching geography according to their preference from highest to lowest. Lastly, the percentage was calculated by establishing the number of respondents per method (frequency) and dividing them by the total number of responses and then multiplying by 100%. Analysis was done as per the objectives of the study and this was in terms of discussions or tabulations using descriptive statistics and tables. From the data analyzed, the researcher was able to come up with findings, conclusions and recommendations.
CHAPTER FOUR
PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

4.1 Introduction

This chapter presents the data, its analysis and interpretation with regard to the objectives of the study which were to:

a) Establish the use of field work in the teaching and learning of geography in the selected schools.
b) Find out the perception of teachers’ on the use of field work in the teaching and learning of geography in schools.
c) Establish the position of field work to other teaching methods in place.
d) Investigate the factors hindering both i) teachers and ii) learners in the utilization of field work.

4.2 General and demographic information

This section sought to consider the background information related to school, teachers, learners, geography syllabus and geography questions as mentioned in this study.

4.2.1 Nature of schools

Kiminini Division has one National school, two Extra County (formerly Provincial) schools, fifteen County Schools (formerly District) Schools and two Private Secondary Schools. Each of this school is diverse in terms of resource endowment, performance and socio-economic set up within their environment. Most of these schools are two streamed and above as depicted by 88% of the school principals, 86% of the HODs and 83% of teachers. The average class size for most schools is 40
students as responded to by 75% HODs. Considering that learners in form three handled optional subjects, the geography class is both sizeable and manageable.

A majority of these schools are found in rural setting as confirmed by 62% of principals, 86% of HODs and 83% of teachers. This in itself is an ideal resourceful geographical background. In this study area, 40% of the secondary schools were systematically selected. This translated to schools from all the 3 strata. In each school, three questionnaires for teachers were used to collect data.

4.2.2 Information on teachers

The experience respondents had either as school principal or HOD was considered as it could offer valuable, academic and administrative information on the utilization of field work. Table 4.1 shows the duration served as principal.

<table>
<thead>
<tr>
<th>Length of time</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Below 3 years</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td>(b) 3 - 10 years</td>
<td>3</td>
<td>37.5</td>
</tr>
<tr>
<td>(c) Above 10 years</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>100</td>
</tr>
</tbody>
</table>

The above table shows half of school principals as having served in that capacity for more than 10 years. This can be stated as principals having muzzled up enough experience to advise accordingly and administratively on the use of field study and even grant permission in case of need to execute one. The study had 75% of male
principals as opposed to 25% female ones as confirmed from the data collected in appendix D. This means either gender is represented on the leadership slot.

As a follow up to the above, the findings also revealed the experience of HODs. Table 4.1.1: shows the duration served as HOD.

**Table 4.1.1: Duration served as HOD**

<table>
<thead>
<tr>
<th>Length of time</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Below 2 years</td>
<td>3</td>
<td>37.5</td>
</tr>
<tr>
<td>(b) 2-5 years</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>(c) Above 5 years</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8</td>
<td>100</td>
</tr>
</tbody>
</table>

The table shows that half of the HODs had served for 2-5 years. This minimal experience they had served could be inferred to mean that they had not acquainted themselves to the administrative skills of field work utilization. To some substantive level, this could explain as to why over three quarters of the learners in Kiminini Division as the data indicated were barely exposed to field work. As a matter of fact, they are supposed to expedite what the syllabus recommends. The study had 63% of HODs as male whereas 37% were female which means either sex as being fairly represented.

Classroom experience was considered as important too. The school principals’ teaching experience is presented in table 4.2.
### Table 4.2: Principals’ teaching experience

<table>
<thead>
<tr>
<th>Length of time</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Below 10 years</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>(b) 11-30 years</td>
<td>6</td>
<td>75</td>
</tr>
<tr>
<td>(c) Above 30 years</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8</td>
<td>100</td>
</tr>
</tbody>
</table>

The above table shows that over three quarters of the school principals had a teaching experience of 11-30 years. This figure implies that they had galvanized enough teaching experience to give suitable direction to teachers in case of a field study.

Next is the HODs’ teaching experience which was considered as well. Table 4.2.1 shows the findings.

### Table 4.2.1: HODs’ teaching experience

<table>
<thead>
<tr>
<th>Length of time</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Below 5 years</td>
<td>1</td>
<td>12.5</td>
</tr>
<tr>
<td>(b) 6-10 years</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>(c) Above 10 years</td>
<td>5</td>
<td>62.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8</td>
<td>100</td>
</tr>
</tbody>
</table>

From table 4.2.1, it is stated that over half of HODs’ had above 10 years teaching experience. This can be interpreted to mean that HODs were capable to offer, handle and accord the necessary technical advice on the execution of field study.
Lastly, the teaching experience of teachers was important because the duration of service as a geography teacher exposed him/her to various aspects of teaching methods of which field work belonged to. Table 4.2.2 shows the teachers’ experience.

**Table 4.2.2: Teachers’ teaching experience**

<table>
<thead>
<tr>
<th>Length of time</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Below 2 years</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(b) 2-5 years</td>
<td>2</td>
<td>25</td>
</tr>
<tr>
<td>(d) Above 5 years</td>
<td>6</td>
<td>75</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 4.2.2, indicated that over three quarters of geography teachers had above 5 years of teaching experience. The period of time stated is adequate enough for him/her to orientate learners to field work which is a heuristic strategy. The study had a gender representation of 50% on either sex. This means that there was a balanced representation on this cadre. The total numbers of teachers involved were 24 representing 100% of the teachers from the sampled schools.

**4.2.3: Nature of learners**

Students from form three classes were considered by the researcher to have encountered a variety of topics that allowed for diverse use of field work approaches in teaching and learning of geography. Topics as postulated by Williams and Mumo (2009) in their form three course book such as vegetation, where learners can be taken out for fieldwork to identify different types of vegetation and their uses within the local environment as demanded for by the syllabus; other topics include, hydrological...
cycle where learners can discuss its significance to the environment, action of rivers, significance of external land forming processes within the local environment, sampling of soils in their environment among others can best be taught by engaging the learners into the actual self discovering approaches by utilizing field work. The researcher chose form three class because learners who study geography at this level do it by choice and this reflects preference of the subject over others. Hence, the class was termed to be ideal for the study. A total of 32 students were used in the study. However, only 23 students were randomly selected and used in the data analysis.

4.2.4: Geography syllabus.

A close observation of the geography syllabus of which the Kenya National Examination Council (KNEC) issues examination regulations for every syllabus approved by the Kenya Institute of Curriculum Development (KICD), has among its general objective no. 8, the significance of fieldwork. It states that by the end of the course the learner should be able to apply fieldwork techniques in studying geography. In essence, the syllabus acknowledges the importance of fieldwork activities.

As a rejoinder, the syllabus has got 25 topics which cut across the board from Form 1 to 4. Of the said topics, ten of them have got fieldwork activities designed for them by the syllabus. The very topics include Fieldwork, Minerals and Rocks, External Land-forming Processes, Weather and climate, Soils, Vegetation, Agriculture, Energy, Industry and lastly Management and Conservation of the Environment. The above topics represent 40% of the total coverage.
However, the researcher observes that there are topics that enjoy fieldwork related activities which could enhance on the learner’s understanding but the syllabus has not given emphasis on their actual fieldwork usage. These topics are 12 in number. For instance, Statistical Methods, the Earth and the Solar System, Internal Land-Forming processes, Forestry, Mining, Land Reclamation and Rehabilitation, Fishing, Wildlife and Tourism, Transport and Communication, Trade, Population and lastly, Settlement. This represents 48 percent of the total coverage.

Finally, there are three topics that would barely utilize fieldwork activity. These topics are Introduction to geography, Maps and Map Work and lastly Photography Work. This represents 12% of the total coverage. Henceforth, the researcher observes that 88% of the topics covered in geography could well be taught by utilizing fieldwork to enhance the learners’ retention and comprehension skills. This would positively impact on the performance in the said subject.

4.2.5: Geography Questions.

Geography has two papers set for in the National Examination namely paper 312/1 which is entirely on Physical geography and paper 321/2 which covers Human geography. Each of this paper carries a maximum of ten questions. A close analysis of exam question set on either paper reveals a wider concentration of questions whose basis is derived from fieldwork activities.

For instance, 312/1 being basically a Physical Geography paper has some diverse areas where questions from different topics and subtopics were set between the years 2008-2014. These included Rocks, Volcanicity, Hydrological cycle, Rivers, Wind,
Soil, Solar System, Internal Land-forming process, Weather, Climate, Coastal Features, Structure of the Atmosphere, Weathering, Glaciation, Vegetation, Deserts, Fieldwork, Earth, External Land Forming Process, Erosion, Minerals, Clouds, Mountains, Oceans, and Lakes. Incidentally, some of these topics have fieldwork activities at the successful end of each topic. Table 4.3 shows questions set over the years and indicate whether its field work related or not in paper 312/1.

Table 4.3: Paper 312/1 KCSE exam question set from 2008-2014.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>2008</td>
<td>FWR</td>
</tr>
<tr>
<td>2009</td>
<td>FWR</td>
</tr>
<tr>
<td>2010</td>
<td>FWR</td>
</tr>
<tr>
<td>2011</td>
<td>FWR</td>
</tr>
<tr>
<td>2012</td>
<td>FWR</td>
</tr>
<tr>
<td>2013</td>
<td>FWR</td>
</tr>
<tr>
<td>2014</td>
<td>FWR</td>
</tr>
</tbody>
</table>

**KEY**

FWR-Field Work Related

FWU-Field Work Unrelated

Table 4.3 shows that Field Work related questions dominated the papers. Following the researchers argument, the percentage rating for Field Work Related questions is 90% whereas Field Work Unrelated questions bear 10% of the total questions set per every other year.
On the other hand, Paper 312/2 is fundamentally a Human Geography paper. In the range of the years 2008-2014, the topics and subtopics that have featured prominently in the KCSE examination included; Forestry, Minerals, Wildlife, Energy, Trade, Settlement, Agriculture, Land Reclamation, Irrigation, Fishing, Environmental Management, Field work, Population, Industries, Mining, Transport and Communication, Tourism, Winds, Urbanization and Ocean. As a matter of fact, some of these topics offer field work activities at the successful end of each topic. Table 4.3.1 shows questions set over the years and indicate whether its field work related or not in paper 312/2.

Table 4.3.1: Paper 312/2 KCSE exam question set from 2008-2014.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>2008</td>
<td>FWR</td>
</tr>
<tr>
<td>2009</td>
<td>FWR</td>
</tr>
<tr>
<td>2010</td>
<td>FWR</td>
</tr>
<tr>
<td>2011</td>
<td>FWR</td>
</tr>
<tr>
<td>2012</td>
<td>FWR</td>
</tr>
<tr>
<td>2013</td>
<td>FWR</td>
</tr>
<tr>
<td>2014</td>
<td>FWR</td>
</tr>
</tbody>
</table>

Key
FWR- Field Work Related

Table 4.3.1, illustrates that Field Work Related questions are quite prevalent on this paper over the years. According to the researcher, all the questions (100%) are related to fieldwork activities. Having studied the above background information, it now becomes clear to introduce the first objective.
4.3: Objective one: Use of fieldwork in the teaching and learning of geography.

The first research question under this objective sought to establish whether geographical features were around schools to accentuate and facilitate field study in the area. Fig. 4.1 denotes students’ response on geographical features around the school.

Fig. 4.1 Geographical features around school

![Bar chart showing responses with 61% Yes and 39% No]

The study revealed that 61% of the students responded to the fact that geographical features were present. As a follow up to the above, the heads of department also responded to the same item. Fig. 4.2 shows their response.

Figure 4.2: Geographical features around school.

![Bar chart showing responses with 71% Yes and 29% No]

The findings revealed that 71% of HODs confirmed presence of geographical features around the school. Lastly, to find out more on the availability of geographical features
around school, the school principals were asked to ascertain as well. The item was also used to check on the previous responses. Fig 4.3 presents the findings.

**Fig 4.3: Response on geographical features around school.**

The findings revealed that 88% of the school principals concurred with the answers given by the students and the heads of department. The above data can be interpreted as corroborative findings on the presence of geographical features around schools by all the respondents. The observation checklist was awash with examples of both natural and human activities as featured in Appendix E. Thus, presence of mountains, road constructions, practice of agriculture, cyber cafes, population of varied age groups, cottage industries and many learning institutions.

Having established presence of geographical features around the learning institutions, it then became imperative to establish the major economic activity practiced in the community around the school. This item was also considered important as it could facilitate field study in the school’s immediate environment. Thus, the findings revealed that 88%, 100% and 86% of school principals, HODs and students respectively indicated agriculture as commonly practiced. Another, 12% and 10% of school principals and students respectively indicated trade whereas 4% of students
indicated bee keeping. This information tallies with the observation checklist findings that confirmed agriculture as the economic mainstay of the community. This can be interpreted to mean that it is possible to carry out field study.

Wamutitu (1991) points out that field work should be conducted from within the school’s immediate environment. He further adds that the study of the school’s immediate environment is expected to reduce the costs involved in terms of time and financial requirements. Smith (2011) addresses the importance of acquiring local knowledge and Kimayu (2012) says the physical world and the environment enlightens learners. Judging from the observations well registered by the above scholars, schools within Kiminini Division should carry out fieldwork activities around because in as much as learners’ local knowledge is broadened, less expense is incurred in the study.

Basing on the fact that the school’s environment can facilitate field study, it is important; therefore, to establish whether teachers utilized fieldwork in the teaching and learning of geography. Fig 4.4 shows the findings on the teachers’ use of field work around school.

**Fig. 4.4 Field study around school.**
It became apparent that 83% of the geography teachers indicated that they did not carry out field study around the school whereas 17% did. This can be interpreted to mean that field study is not adequately used as to engage learners fully. Hence, practically it means that geographical concepts and phenomena are not easily clarified, understood and assimilated by learners thus bringing inaccuracy in the teaching and learning process as could be the case in Kiminini Division. As a result, reflecting badly on performance as noted in table 1.3.

Research works by Kimayu (2012) have shown that where fieldwork is used, learners recognize knowledge of the distribution of phenomena on the earth surface; resulting in the explanation of man with his environment. The researcher observes that from the scholar’s remarks there could be inherent improvement in performance.

The researcher also sought from the learners whether field study was made around their school. Fig 4.5 reveals their reaction.

**Fig. 4.5 Field study around school**

![Bar chart showing 74% No and 26% Yes]

From figure 4.5, it can be seen that 74% of the learners denied having made a field study around the school while 26% agreed to have made. The total percentage of
those who negated is above 50%, as a result, denoting infrequent use of field study. This can be interpreted to mean learners’ ability to recall information is challenged because of minimal exposure of the very learners to hands on approach (field work) in teaching. The observation made here is that teachers do not seem to teach from concrete to abstract. Consequently, impacting negatively on performance as table 1.3 reveals.

Researchers have supported the use of field work, for instance, Kimayu (2012), says that the use of fieldwork makes concepts too abstract for learners to be easily comprehended. He adds that such concepts demand a teacher to use appropriate local examples to foster an understanding and arouse interest in the subject.

This finding is important because it shows that the mode of instructions used does not facilitate learners’ retention ability due to lack of practical exposure. As a matter of fact, it became important as well for the researcher to find out whether teachers frequently utilized field study as a class activity. Fig. 4.6 indicates the frequency of utilizing field study as a class activity.

**Fig. 4.6 Frequency of utilization of field work by teachers**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>50%</td>
</tr>
<tr>
<td>Weekly</td>
<td>33%</td>
</tr>
<tr>
<td>Monthly</td>
<td>17%</td>
</tr>
<tr>
<td>Anually</td>
<td>0%</td>
</tr>
</tbody>
</table>
The findings denoted that half (50%) of the teachers never prioritized to utilize field study as a class activity whereas 33% made use of it weekly as 17% used it on monthly basis. This can be interpreted to mean many geography teachers do not utilize field study on a relatively frequent basis. Use of field study makes learning much more concrete as it is likened to real-life experiences; hence making teachers effective in their teaching. It reinforces the fact that most teachers used expository strategies which left learners as dominant passive recipient of knowledge. This mode of delivery spells doom to the performance of learners in the National exam as earlier on stated.

Research done by Ishikawa and Kanstens (2005), reveals that fieldwork illuminated the mental process of learners on the geospatial areas studied. Uttal (2000), shares similar observations, when he mentions that fieldwork provides a perspective on spatial information.

The researcher delved further, to find out from students whether local features were given as examples during class lessons. The findings revealed that 91% of the students agreed giving local features as examples in class whereas 96% and 100% of learners and teachers respectively acknowledged learning and teaching human activities around school in class. On the other hand, 83% and 100% of students and teachers accepted learning and teaching infrastructure respectively around school in the class while 87% and 100% students and teachers were in agreement learning and teaching the shape of the land (physical features around the school) respectively in class.
The above development showed efforts by teachers to theoretically relate what they teach to real life event orally but fell short of utilizing field study to integrate what he or she covered in class with the outside world. An inclined effort by the geography teacher to practically take the learners out to the exact geographical feature would give them an added comprehension skill and ease in memory recollection. To this end, performance would ultimately be boosted.

Incidentally, the researcher examines learners as accessing limited knowledge acquisition as a member of a group since the mode of instructions by the very teachers in the area of study is still very controlled. This inadequate utilization of field work as depicted impacts negatively on performance as the academic results of geography in the Division shows yet the observation checklist confirms presence of the following geographical features in the neighborhood of the schools; Mt Elgon, Business Firms, Rivers and Streams, Forest, Road Construction Network, National Park, small and large scale farming, Cyber Cafes, availability of Population representing all age groups in a cosmopolitan area, Cottage Industries (Milk Units) and presence of public and private institutions. The above examples cut across the topical matters covered in the syllabus as taught from Form one to Form three. If field studies were used adequately, it was expected that the performance of geography in the National examination would drastically change towards a positive deviation.

At this juncture, it is important to note that the success of field study at school depended largely on geography teachers. Ayako (2006) remarks of such teachers who fail to utilize field work as either not being innovative or are lazy since they could not utilize resources locally and yet they were all trained. On the other hand, Odhiambo
(2005), comments highly on such teachers who utilized local resources around their schools as carrying extra responsibilities of supplementing the difficulties of the school system. Pursuing this earmarked academic activity ambitiously would definitely improve on the performance index in the subject. The point of divergence in this study exists where geographical features around the schools in the area of study are available and indeed plenty but the geography teachers were not taking any serious initiative of exposing their learners to them through field work.

In a nutshell, an alarming distinctive feature of the findings drawn from the above objective showed that teachers minimally allowed students to learn through field work which offered learners experience in their environment. Thus, failing to bring reality into the classroom, in the sense that, those geographical concepts learnt are not integrated with what is in the field. In the next section, the findings of the second objective and research questions are discussed.

4.4 Objective two: Perception of teachers on the use of field work in the teaching and learning of geography.

The study sought to investigate teachers’ views on the use of field work in the teaching and learning of geography. The views were collected from both the HODs and the geography teachers. Their views were sought through specific items in the teachers’ and heads’ of department questionnaires. The coding was “strongly agree” or ‘agree’ which constituted liking the activity in question while “strongly disagree” or “disagree” which constituted a dislike of the intended use of the activity. The first item here sought to know from teachers whether field work motivated learners. Figure
4.7 below shows the heads’ of department response on use of field work to motivate learner

**Figure 4.7 Responses on use of field work to motivate learners.**

![Bar chart showing responses](chart.png)

The results from figure 4.7 shows that 100% of heads of department strongly agreed on use of field work to motivate learners.

To find out more on the use of field work to motivate learners, geography teachers’ response was sought. This was necessary to cross check the heads’ of department response. Figure 4.8 represents geography teachers’ response on the use of field work to motivate learners.

**Figure 4.8 Use of field work to motivate learners**

![Bar chart showing responses](chart.png)

The finding from figure 4.8 indicated that more than a half of teachers and a third of geography teachers strongly agreed and agreed respectively to the use of field work as
motivating learners. These two figures combined, represent 100% which means geography teachers viewed use of field work as a way of motivating learners. As such, this can be interpreted to mean that both the head of departments and geography teachers are in total agreement that field work motivated learners. Thus, field study can make the learners to work with more interest and zeal.

According to research carried out by Ayako (2006), it clarified collaborative learning as being interactive and generative in nature. Interactive instructions actively engage the learners with the resources and learning context to construct new knowledge and skills whereas generative instructions exposes learners to different perspectives together to produce shared understandings. This in essence motivates learners.

Regrettably, the findings from this study show that the teachers were not extensively utilizing field study as a motivational tool to the learners.

Teachers’ responses on another item, designed to find out more views of field work use on the teaching and learning of geography was obtained from heads of department response in the use of field work as resulting into improved performance. Figure 4.9 shows heads of department responses in the use of field work as resulting into improved performance.
Figure 4.9: Heads of department response on the use of field work as resulting into improved performance.

From figure 4.9, it can be seen that heads’ of department response on the use of field work as resulting into improved performance is stated by 100% of the respondents who strongly agreed. The irony of the matter is that geography teachers do not overwhelmingly use field work as a teaching strategy to improve on the performance in the subject. This observation points out to the fact that learning is theory oriented as learners are denied a hands-on or experiential learning. Hence, the findings can be interpreted to mean utilization of field work is overlooked as a process of disseminating knowledge.

To find out more on field work as resulting into improved performance, geography teachers’ response were sought. This was necessary to check on the Heads of department response. Figure 4.10 below represents teachers’ responses on field work as resulting into improved performance.
From the above responses, 50% of geography teachers strongly agreed and another 50% agreed respectively that field work resulted into improved performance. If the two responses are combined, they represent 100% which means geography teachers supported use of field work as resulting into improved performance. Notwithstanding, the failure by the geography teachers to implement what they knew too well was beneficial to the learner certainly baffled the researcher.

Joubert (2001) says “some strategies can help promote creative thinking……”. Ayako (2006) observes that experience has shown that creative teachers constantly reinvent themselves and adopt their teaching strategies to different situations. Interestingly, and to a lesser extent, HODs used field work to improve on the subject performance. This depicts a deficiency of sorts in the utilization of field work as a teaching and learning strategy. Apparently, field work helps to capture and sustain the attention and interest of the learners, thus offering them active participation and thereby encouraging healthy interaction for effective realization of teaching and learning objectives. . In the next sub-section, the researcher provides information on the third objective and the research question
4.5 Objective three: Position of field work to other teaching methods in place

The study sought to establish commonly used strategies in teaching geography. Subsequently, an item was used to establish whether other teaching methods, approaches or strategies were used with the exception of field work. This item was designed on the Heads of department, teachers and students questionnaires. In determining its worthiness, the researcher analyzed using mean, frequency, standard deviation and percentages. Table 4.4 shows the frequency of how often students conceptualized teachers using other teaching methods to explain geographical concepts.

Table 4.4 Frequency score of teachers using other approaches (teaching methods) to fieldwork.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rarely</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Sometimes</td>
<td>7</td>
<td>30</td>
</tr>
<tr>
<td>Often</td>
<td>10</td>
<td>43</td>
</tr>
<tr>
<td>Very often</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>23</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The above data shows 91% of the students’ responses indicated that other approaches, as a way of example, discussion, demonstration, question and answer, explanation, role play, group work, lecture among others, were used to teach geography other than field work. Thus, the total sum of responses on ‘sometimes,’ ‘often’ and ‘very often’ were over three quarters. This signaled the fact that other methods were used to teach
geography other than fieldwork. From the outset, teachers according to the researcher did not prioritize the utilization of fieldwork and in effect left learners with little practical knowledge. This undoing left learners but as passive recipients of knowledge. Further calculations were made to determine the ‘mean’ of the above data.

Table 4.4.1 Students’ frequency score of how other teaching methods were being used by teachers rather than field work.

<table>
<thead>
<tr>
<th>$X$</th>
<th>$F$</th>
<th>$Fx$</th>
<th>$D$</th>
<th>$Fd$</th>
<th>$fd^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-2.7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>2</td>
<td>-1.7</td>
<td>-3.4</td>
<td>5.78</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>14</td>
<td>-0.7</td>
<td>-4.9</td>
<td>3.43</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>30</td>
<td>-0.3</td>
<td>3.0</td>
<td>0.9</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>16</td>
<td>1.3</td>
<td>5.2</td>
<td>6.76</td>
</tr>
</tbody>
</table>

Whose ‘mean’ was arrived at as:

\[
\overline{X} = \frac{fx}{f} = \frac{62}{23} = 2.7
\]

From the above table, the ‘mean’ was calculated to be 2.7 and later placed on the Likert scale which pointed at 3 which meant “often.” This, ‘mean’, was interpreted to mean students viewed geography teachers often preferring using other teaching methods to explain geographical concepts to them rather than field study.
Further, geography teachers’ response towards favoring other teaching methods against utilizing field study was determined. Table 4.5 summarizes geography teachers’ responses on their preference to other teaching methods.

Table 4.5: Frequency of geography teachers using other teaching methods instead of field work.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rarely</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sometimes</td>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td>Often</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>Very often</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

From table 4.5, it was noted that 60% and 40% of geography teachers “sometimes” or “often” used other teaching methods to explain concepts respectively. This can be interpreted to mean there was minimal utilization of field work beyond the four walls of the classroom to embrace a wider spectrum of teaching and learning, which could be gotten in this case, by utilizing field work.

To find out more on the frequency of other teaching methods used other than field study, heads of department responded to this item. Table 4.6 contains information on heads of department responses.
Table 4.6: Heads’ of department using other teaching methods instead of field work to explain concepts.

<table>
<thead>
<tr>
<th>$X$</th>
<th>$F$</th>
<th>$Fx$</th>
<th>$d = x - \mu$</th>
<th>$Fd$</th>
<th>$fd^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-3.0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>-2.0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>6</td>
<td>-1.0</td>
<td>-3</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>12</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>12</td>
<td>0</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Whose ‘mean’ was arrived as;

$$\bar{X} = \frac{\sum fx}{f} = \frac{21}{7} = 3$$

This was important to determine what it represented using the Likert scale. The coding was “often” hence other teaching methods were often used to explain concepts in exception of field study. To determine the strength of the “mean”, there was need to calculate the standard deviation.

The standard deviation was determined as follows:

$$\sigma^2 = \frac{\sum fd^2}{f} - \left[\frac{\sum fd}{f}\right]^2$$

$$= \frac{9}{7} - \left[\frac{0}{7}\right]^2$$

$$= 1.29 - 0$$

$$= 1.29$$
To get the strength of the “mean” it was a function of $3 \pm 1.134$ which equaled 4.134 or 1.866.

Hence, to measure the strength of the “mean”, it was a function of $3 \pm 1.134$ which equaled 4.134 or 1.866. These final products were interpreted on the Likert scale to mean “very often” and “sometimes”. Therefore, other teaching methods were ‘very often’ or ‘sometimes’ used to explain concepts without taking out learners for field visits. This can be interpreted to mean field work was infrequently used to compliment class learning. As a result, it reinforces the previous findings that learners are passive recipients of knowledge, as the use of field work, which is meant to provide them with stimulus variation, is thus lacking.

The above findings confirm research done in other subjects, for example in Mathematics, Miheso (2002), reveals that teachers were controlling, restricting and used little learner centered teaching approaches. Further Kiruja(2000), studied teaching methods in biology, points out that teacher-talk compromised most of the total class time. Ayako (2006), on her part mentions that the teaching strategies used in geography are mainly expository.

The findings from the three groups of respondents (students, teachers and heads of department) above, point out towards one thing that other approaches were “sometimes” or “often” used to explain concepts in exception of field work amongst
schools in Kiminini Division. According to the researcher, it could be explained that teachers were not so keen on the idea of field work. Thus, teachers viewed utilization of field work which is a heuristic strategy as of minimal importance.

To find out more from teachers on the position of field work, an item on strategies commonly used in teaching geography was designed. This investigation was based on nine teaching methods. Hence, teachers were required to rank the given methods depending on their frequent usage from the highest preferred to the least one using numerical numbers (1-9). The methods in question were as follows:

a) Lecture  
b) Demonstration  
c) Guest speaker  
d) Using visual aids  
e) Dramatizing  
f) Using real objects collected from the school neighborhood  
g) Carrying out experiments  
h) Field trips to the local community or far places  
i) Others specify

Below the researcher has attempted to highlight geography topics adopted from K.I.C.D that are covered right from Form one to three against possible teaching approaches provided. However, the researcher acknowledges that any one given topic is not limited to the approach outlined against it as it depended on the teachers’ innovativeness and ingenuity in the manipulation of the said strategies among others. Table 4.7 below shows a teaching approach against a topic preferred.
Table 4.7: Approach against a topic

<table>
<thead>
<tr>
<th>No.</th>
<th>Method</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Lecture</td>
<td>- Introduction to geography F1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Forestry F2</td>
</tr>
<tr>
<td>2.</td>
<td>Demonstration</td>
<td>- Weather F1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Direction and bearing F2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Agriculture F3</td>
</tr>
<tr>
<td>3.</td>
<td>Guest speaker</td>
<td>- Weather F1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Statistical methods F2</td>
</tr>
<tr>
<td>4.</td>
<td>Using visual aids</td>
<td>- Mineral and rocks F1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Internal land forming processes F2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- External land forming processes F3</td>
</tr>
<tr>
<td>5.</td>
<td>Dramatizing</td>
<td>- Mining F1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Photography F2</td>
</tr>
<tr>
<td>6.</td>
<td>Using real objects</td>
<td>- Statistical methods F1</td>
</tr>
<tr>
<td></td>
<td>collected from schools’ neighborhood</td>
<td>- Map work F3</td>
</tr>
<tr>
<td>7.</td>
<td>Carrying out experiments</td>
<td>- Weather F1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Statistical methods F3</td>
</tr>
<tr>
<td>8.</td>
<td>Field trip to the local community or far</td>
<td>- Field work F1</td>
</tr>
<tr>
<td></td>
<td>places</td>
<td>- Internal land forming process F2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Forestry F3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Vegetation F3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Agriculture F3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- External land forming processes F3</td>
</tr>
<tr>
<td>9.</td>
<td>Others (specify)</td>
<td>- The solar system and the earth F1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Internal land forming processes F2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- External land forming processes F3</td>
</tr>
</tbody>
</table>

**Source:** Researcher’s.

The geography teachers and HODs in the sampled schools were able to rank the methods as shown in table 4.8
Table 4.8: Geography teachers and HODs rank order of their preference

<table>
<thead>
<tr>
<th>No.</th>
<th>Method</th>
<th>Teachers %</th>
<th>HODs %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lecture</td>
<td>26%</td>
<td>20%</td>
</tr>
<tr>
<td>2</td>
<td>Using visual aids</td>
<td>19%</td>
<td>16%</td>
</tr>
<tr>
<td>3</td>
<td>Using real objects collected from the schools neighborhood</td>
<td>14%</td>
<td>7%</td>
</tr>
<tr>
<td>4</td>
<td>Dramatization</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>5</td>
<td>Demonstration</td>
<td>9%</td>
<td>26%</td>
</tr>
<tr>
<td>6</td>
<td>Using invited speaker</td>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>7</td>
<td>Carrying out experiments</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>8</td>
<td>Field trips to the local community</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>9</td>
<td>Others</td>
<td>3%</td>
<td>2%</td>
</tr>
</tbody>
</table>

From table 4.8, the percentage was arrived at by dividing the total responses on preferred method (frequency) against the total numbers of respondents on all the methods multiplied by 100. The findings show stark contrast between methods as preferred by the teachers and HODs. For instance, the geography teachers had high preference for lecture (26%) unlike field trip to the local community (4%). On the other hand, it can be seen that HODs preferred demonstration stated at (26%) which was commonly preferred to field trips stated at (3%) which is second to the last in terms of usage. This can be interpreted to mean that both teachers and HODs paid minimal attention to the utilization of field work. The researcher examines this trend
as being dangerous because it exhibited the fact that both teachers and heads of
department as having resorted to didactic teaching strategies as opposed to heuristic
ones in the division.

The above development narrows down to what Nkosena (1998) observed when he
stated that if teachers did not emphasize on teaching the subject, (sic-using field
work), students might not be blamed for having the same perception (sic-performing
dismally). Joubert (2001), remarks of teachers stuck on some strategies as those who
have become entrenched in a mental rut of a specific way of doing things that is
inherently uncreative. On the contrary, Tracy and Glaser (1999), argued that if the
students were engaged in real scientific inquiry and that they were the decision
makers directing the project, then it was authentic, they were engaged in meaningful
learning.

The findings of the pedagogies adopted, could not enhance geographical
understanding as learners gained solely from books and teachers. It is no surprise that
the pedagogies tended to be tailor-made for exams whereby the said teachers focused
on teaching approaches that were short term in nature, making their tasks easier in a
short time. As a result, the very strategies led to different and superficial
conceptualization of topics covered. Such students resorted to rote learning strategy
to secure a pass in the discipline. As the above scholars have categorically stated,
fieldwork becomes a shift from teacher centered approach to a more interactive and
learner centered approach. The researcher observes failure to adequately utilize field
work making the discipline perform dismally over the years in Kiminini division.
In the next section, the findings of the forth objective and research questions are discussed.

4.6 Objective four: Factors hindering both Teachers and Learners in the Utilization of fieldwork

The study sought to investigate the factors hindering effective use of field work. Consequently, an item was asked on the strength of field work as a teaching and learning strategy and another one on factors hindering utilization of field work. The response to the findings was based on how significantly stated a certain idea was. They have been discussed under the following sub headings;

4.6.1: Learners’ highlights on the strength of field work

(a) Enables them to acquire knowledge and skills. (Stated at 65%)
(b) Sharpens the learner’s observation skills. (Stated at 13%)
(c) Makes lessons interesting as field work breaks the monotony of being in class. (Stated at 4%)
(d) Makes the topic covered better understood. (Stated at 9%)
(e) Enhances group work. (Stated at 9%)

4.6.2: Teachers’ highlights on the strength of field work

(a) Breaks monotony as learners are active and enthusiastic in the field. (Stated at 12.5%)
(b) Enables learners to acquire knowledge and skills hence it provides answers to geographical problems. (Stated at 50%)
(c) Acts as an avenue where learners can socialize and get motivated. (Stated at 25%)
(d) Presence of features within reach facilitates better and more learning. (Stated at 12.5%)

From the above findings, a majority of both learners and teachers appreciated the use of field work as a source of acquiring knowledge and skills. This can be interpreted to mean that either group knows too well the importance of field study that they should not hesitate to use it at any one given time. Teachers have pointed out a supportive environment in terms of reachable features but there is no sustainable attempt by them to utilize it.

This goes a long way to reaffirm what Jansen (2007) said that field work advanced empirical knowledge and theoretical insight. Sarah (1996) observes that learners had a chance to go the extra step and took on as much information as they wanted and could. Swenson and Kanstens (2011) argued that when learners see by themselves, it enabled them to build scientific arguments and test theories. Ayako (2006) regards fieldwork approach as discovery learning or problem solving strategies that produces knowledge and transfers it to new situations.

The unthinkable part of it all is that field study is more theoretical than practical in the schools sampled. This mode of transmission adopted advocates for minimal learning by doing or experiencing which reflects badly on the performance of the learner as indicted in table 1.3. Next, the challenges posed by field work to both learners and teachers in the area are presented below.
4.6.3: Learners’ highlights on the factors hindering use of field work

(a) Teachers have a negative attitude towards the school environment. (Stated at 25%)
(b) Lack of time. (Stated at 50%)
(c) Topics are not handled systematically as field work related topics are shelved. (Stated at 10%)
(d) Teachers struggle to cover the syllabus occasioned by the ever changing geography teachers. (Stated at 15%)

4.6.4: Teachers’ highlights on the factors hindering use of field work

(a) School programs are too tight. (Stated at 20%)
(b) Insufficient time to conduct field work. (Stated at 60%)
(c) Permission not readily made available. (Stated at 15%)
(d) Uncooperative learners. (Stated at 5%)

From the above findings three quarters of teachers and half of learners cited dominantly lack of time as the main obstacle to allowing them to handle field study. A tight school program stated at 20% and negative attitude from teachers was stated at 25% by teachers and learners respectively as second dominant factors hindering utilization of field work. This can be interpreted to mean classroom learning has taken precedence over out of class learning because of failure to create time from the three lessons allocated to geography subject per week for field study. This can be considered as a high degree of irresponsibility and lack of planning on the part of the teacher. Negative attitude poised by teachers towards the environment is setting a
wrong precedence to the utilization of field work because the environment is the best learning ground.

Kimayu (2012) notes that schools with limited resources may utilize what they have efficiently and this may boost learning and students’ performance despite the deficiency in material provision. Nonetheless, he laments that the use of appropriate local examples by teachers to help foster an understanding and arouse interest in the subject as being limited. Scholars such as Were (2011), Wamutitu (1991) and Ayako (2006) have decried minimal exposure and non participation of learners to field study.

In summation, field study is an approach we cannot choose to avoid as its both problem solving, discovering and inquiring method whose exposure to learners would automatically generate the learners’ interest. It is a teaching method that offers tremendous learning potential since learning is made more meaningful if it is connected to the curriculum content taught in class. Field work in this area of study is not a common practice. Regrettably, geography teachers minimally used real life examples and issues from daily life to teach some geographical concepts and knowledge around their schools. If it were, it would help to take care of the learners’ individual differences and help improve the performance index in the subject. In the next chapter of this study, summary, conclusion, recommendations and suggestions for further research are presented.
CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In the last chapters, the following areas of the study were covered; the introduction, the review of literature, the methodology as well as the data analysis and interpretation of the study. This chapter covers; summary, implications of the findings, conclusion, recommendations and suggestions for further research.

5.2 Summary of the research findings

In this section, summaries of the findings of the study are presented in accordance with the objectives of the study.

5.2.1 Utilization of field work in the teaching and learning of geography

The research objective sought to establish if teachers utilized field work in the teaching and learning of geography. The data collected on this objective revealed that 83% of the geography teachers did not make use of field study around their schools as opposed to 17% who used the teaching method. The former figure compared to the latter is above 50% which gives an impression that a majority of geography teachers do not use field study methods. The survey also revealed that 50% of geography teachers did not utilize field work as a class activity. On the same note, 74% of the learners confirmed not to have made any field study while 26% agreed to have made. The former figure compared to the latter is above 50% indicating that a majority of learners were not exposed to field study. All this happens ironically in a background where schools are beset in a rich geographical environment as confirmed to by 61% of students, 71% of heads of department and 88% of school principals. The observation
checklist further added evidence to this. This denoted the fact that fieldwork was less used as a method to integrate what was learnt in class with what existed in the field.

5.2.2 Perception of teachers on the use of field work

Having established the utilization of field work in teaching and learning geography, the researcher also sought to explore the perception of teachers on the use of field work in the teaching and learning of geography. Analysis of data from the study revealed that 100% and 67% of heads of department and teachers respectively were of the view that field work motivated learners. In another development, 100% of heads of department agreed that the use of field work resulted into improved performance in the subject mean score whereas 50% of geography teachers had the same notion. The data depicts teachers viewing use of field work from a positive perception as they indicate that it is indeed an academically profitable endeavor. Despite the fact, field work was not used expectantly.

5.2.3 Position of field work to other teaching methods in place

After establishing the teachers’ views; the researcher intended to find out commonly used approaches by teachers in handling geography. The findings revealed that teachers used other approaches more often to pass knowledge and skills to the learners than field work. To confirm this, a “mean” was calculated from the students’ views on the use of other approaches instead of field work. The results were interpreted on the Likert scale as “often” used. On the other hand, a frequency test was undertaken to determine whether geography teachers used other teaching methods in place of field work and 60% of them indicated that they favored other teaching methods. Again, a standard deviation measure was used to test the strength
of the “mean” on whether other approaches were used in favor of field work. The results as interpreted from Likert scale revealed “very often” and “sometimes” which meant other approaches were used in favor of field work. This depicted the fact that field study was not prioritized in the teaching and learning of geography in the sampled schools.

Similarly, a rank order scale of placement was also used to position the strategies from the highest preferred to the least depending on their frequent usage in class. Geography teachers ranked the use of field work position 8 out of 9 with a 4% frequency use. On the other hand, the heads of department positioned it the same as 8 out of 9 with a 3% frequency use. This in itself shows how low opinionated field study was compared to other teaching methods in the sampled schools. Thus, other teaching methods were used to disseminate knowledge.

5.2.4 The factors hindering both teachers and learners from utilizing field work.

Having investigated how teachers utilized fieldwork in teaching geography, the researcher delved into establishing the factors hindering both teachers and learners from utilizing field work. The findings revealed that over three quarters of teachers and learners cited insufficient time as a main obstacle for failure to facilitate field work around schools. Quite significantly as well, negative attitude by geography teachers towards the school environment and a tight school program were to blame. This shows a state of unpreparedness and lack of prior planning by the geography teachers. The researcher views it as a deliberate effort by teachers not to utilize field work in the teaching and learning process. It is a considered view that learning the environment around school should not be pegged on time.
5.3 Implications of the Findings

The findings showed minimal exposure of learners to fieldwork as 74% of learners had not gone out for field study whereas 26% had gone out for field study. This certainly is an unfortunate scenario as it made it impossible for learners to relate what they covered in class to the outside world. At the same time, it left learners with abstract information and basically impracticable to solve field work related problems hence the deterioration in performance.

Sadly, an impression is given by both the HODs and geography teachers that utilization of field work leads to motivating learners and on the other hand improved performance in the subject with a 50% or above percentage response but little is done to take out learners for field work studies thus impacting negatively on performance.

In another development, the teachers were seen to use teaching strategies that were majorly didactic in nature as revealed for instance from the rank order scale of heads of department where demonstration 26%, lecture 20%, using visual aids 16%, dramatization 15% among others. These direct transmission methods according to the researcher were tailored effectively to enable students pass geography exams. Despite the approach, the learners performed dismally as seen in Table 1.3.

The findings revealed minimum interest by geography teachers in most schools to take learners out for fieldwork. Thus, 83% of teachers did not utilize field study while 17% had, as a result of that, denying learners the practical aspects whereby they were to learn and get local experiences from their school environment, consequently,
failing to bring reality into the classroom. This substantially affected performance as earlier on noted from this study.

Geography teachers were seen not to be planning for their work in order to accommodate field study in their teaching and learning process despite the fact that they knew the subject as having three periods per week.

Teachers were seen to have negative attitude towards utilizing field work. It is important that geography teachers see the subject to be bearing environmental content and thus any fears in studying the school’s immediate environment is illogical as it impacted negatively on performance as the divisional results reveal.

Incidentally, in Kiminini Division schools, the study has established that fieldwork is almost a thing of the past. It is no surprise therefore to categorically state that fieldwork in this area of study has been relegated to memorabilia.

5.4 Conclusions of the findings

Objective one aimed at establishing whether teachers utilized field work in the teaching and learning of geography whose findings showed that more than three quarters of geography teachers did not make use of field study around their schools. A half of the geography teachers did not utilize field work as a class activity whereas more than a half of the learners had not gone out for field study around their school. This, unequivocally, means that geography is taught as an abstract subject making it difficult for learners to comprehend. That is why learners perform dismally in their exams as the results of the division show.
Objective two sought teachers’ views on the use of field work. As to whether field work motivated learners, a majority of both heads of department and teachers agreed to it. The findings also indicated that all heads of department and a half of the geography teachers viewed field work as resulting into improved performance. This meant that the teachers knew considerably well the importance of using field work but were not quick enough to use it. Ultimately, it showed lack of commitment on the part of the teachers.

Objective three sought to investigate the position of field work to other strategies used. The findings revealed a frequency test of 60% of geography teachers as using other teaching methods as opposed to field work. The findings also revealed geography teachers as ranking the use of field work position 8 out of 9 with a 4% frequency use whereas heads of department placed it in the same position thus 8 out of 9 with a 3% frequency use. It showed how teachers preferred other teaching methods to field work, hence, making it difficult for learners to understand. This culminated into poor performance in the said examinations.

Objective four sought to establish factors hindering both teachers and learners in the utilization of field work. The findings revealed that over three quarters of teachers and half of learners cited insufficient time as to blame for not taking field study. This shows a state of unpreparedness on the part of a teacher. Of course, teachers need to scheme, plan and execute their work. The negative attitude teachers had towards their school’s environment is a sad state of affairs as they should not choose to teach what the syllabus stipulates. In geography, the environment is the syllabus and the reverse is true. No wonder as the maxim goes failure to plan is planning to fail.
5.5 **Recommendations**

On the basis of the findings of this study and conclusions drawn, the following are recommendations regarding relationship between fieldwork and performance in the teaching and learning of geography.

- That schools offering geography in the division should make it necessary to raise interest of geography among students and the status of the subject in the school for example by organizing field work studies especially to the immediate surroundings of the school. Still, introducing activities like Geography Day in order to increase the morale of both learners and teachers becomes a welcome idea.

- That schools within the division should embrace change in their teaching and learning process as to intensively involve utilizing field work.

- That the K.I.C.D should design a syllabus where field work in Form 1 and 2 is made compulsory.

- That additional lessons should be incorporated to cater for field work.

- That interdepartmental inspection should be initiated to check on the teachers’ state of preparedness.

5.6 **Further Research**

The researcher recommends further research to be carried out and ascertain whether:

a) Enrolment in geography classes could be influenced by lack of utilization of field study.

b) Enrolment in geography classes could be affected by performance.

c) Teaching experience influences the utilization of field study and performance in the teaching and learning of geography.

d) Teachers’ attitude influences the exposure of learners to field study.
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Jansen, O. (2007) Uses of virtual environments to investigate developments of spatial
behavior and spatial knowledge of school age children: Heinrich Heine Universitat, Dusseldorf, Germany. Volume 100 pg 675-690.


Sarah D (1996). What are the benefits of school field trips. Penn. Fester College, USA.


Swenson, S. & Kanstens, K. (2011). Student interpretations of a global elevation map: What it is, how it was made, and what it is useful for, Columbia University Teachers College, 525 West 120th st. New York, NY,10027, United States; Volume 474 pg 189-211.


Nairobi, Kenya.
APPENDICIES

APPENDIX A: STUDENT’S QUESTIONNAIRE

Part A: Background Information

Please fill in the following details as indicated

A1: Your school…………………………………………………………

A2: Your gender…………………………………………………………

A3: Your age…………………………………………………………

A4: Your form…………………………………………………………

A5: The category of your school, tick (√) appropriately

   National   □
   Regional (Extra County) □
   County     □
   Private    □

Part B: Access to Field Work

Please mark (√) on one answer for each question

B(i): How often are you making geographical visits around your school?

   Monthly  □  Weekly  □  Never □

B(ii): How often does the teacher come to class with any one of the following samples, for instance, rocks, soil, fish, vegetation e.t.c?

   Monthly  □  Weekly  □  Never □

B2: please tick as appropriate

Do you :

(i) Make study visits around the school?
(ii) Visit the market to learn about the items of trade there?

Yes ☐ No ☐

(iii) Give examples of local features around your school?

Yes ☐ No ☐

(iv) Learn human activities around your school (farming, drainage e.t.c)?

Yes ☐ No ☐

(v) Learn infrastructure around your school (road network)?

Yes ☐ No ☐

(vi) Learn the shape of the land (physical features) around the school?

Yes ☐ No ☐

B3: Indicate the extent to which you agree or disagree with the following statements

(i) The use of local features and resources in my school for learning Geography is adequate.

Strongly Disagree Unsure Agree Strongly
Disagree

☐ ☐ ☐ ☐ ☐

(ii) The accessibility of local features and resources for class activity is adequate

Strongly Disagree Unsure Agree Strongly
Agree

☐ ☐ ☐ ☐ ☐

Please tick (✓) as indicated

i) There are many Geographical features around my school for learning

Yes ☐ No ☐
ii) Visiting the Geographical features around my school for learning is possible

Yes ☐ No ☐

B4: What major activities does the community around your school practice…………………………………………………………………………………………

B5: Indicate the number of times your class has been taken out for Geography field trip(s) in a given term…………………………………………………

Part C: Use of Field Work

C1. How often do your teachers explain or demonstrate concepts using:-

i) Field work?

Never Rarely Sometimes Often Very often

[ii) Other approaches?

Never Rarely Sometimes Often Very often

C2. How often do your teachers ask you to access local features and resources to:-

i) Find general geographical information using field data?

Never Rarely Sometimes Often Very often

ii) Make lesson notes from field information gathered?

Never Rarely Sometimes Often Very often

iii) Give class examples or answers to previous assignment?

Never Rarely Sometimes Often Very often
v) Search for specific information in the field?

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
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</table>

C3. How often do you:-

i) Submit a club competition essay on a topical matter in Geography based on the information gathered through fieldwork.

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
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</table>

ii) Make a group presentation based on the information gathered for the field.

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<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
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</table>

iii) Collaboratively work on a Geography project within the school community?

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<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
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</table>

C4. Please indicate the extent to which you agree or disagree with the following statements regarding your experience of using fieldwork features and resources:-

i) Understand better with quick geographical examples from the environment.

<table>
<thead>
<tr>
<th>Strongly</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly</th>
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<tr>
<td>Disagree</td>
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</table>

ii) Examples from the environment make lessons interesting and enjoyable.

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<tr>
<th>Strongly</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly</th>
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<tbody>
<tr>
<td>Disagree</td>
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</table>
iii) Examples from the field help us to relate well with the topic covered.

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<thead>
<tr>
<th>Strongly Agree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
<td>Agree</td>
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</table>

iv) I suggest quick answers to my friends or discussion groups with examples gathered from field work.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
<td>Agree</td>
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</table>

v) There is active flow and exchange of Geographical ideas among students in case of field work.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
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<td>Agree</td>
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C5. Indicate Yes or No if you have participated in any of these activities

i) Participated in field trip to the locality  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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ii) Observed demonstration given by experts e.g. planting maize or any farmers field day  

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
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iii) Carried out field surveys in the community  

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<th>Yes</th>
<th>No</th>
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</table>

iv) Participated in development projects e.g. clearing, drainage, road widening e.t.c.  

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<thead>
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<th>Yes</th>
<th>No</th>
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C6. Identify the Geographical features that can be used in the teaching and learning of Geography during one of the field trip you undertook around your school

(i) 

(ii) 

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Part D: Field work’ Strength and weaknesses

D1 (a). Would you prefer to use a picture of a river, plantation, and mountain or be taken to the sites (very place for a Geographical lesson on the topic being covered)

(b). What are the advantages of going out for fieldwork?
   i) __________________________________________________________
   ii) _______________________________________________________
   iii) _______________________________________________________
   iv) _______________________________________________________

D2. What problems do you encounter during fieldwork?
   i) _________________________________________________________
   ii) _______________________________________________________
   iii) _______________________________________________________
   iv) _______________________________________________________

D3. In your opinion, suggest possible solutions to address the problems identified above in D2?
   i) _________________________________________________________
   ii) _______________________________________________________
   iii) _______________________________________________________
   iv) _______________________________________________________

Thank you for taking your time to complete this questionnaire
APPENDIX B: TEACHER’S QUESTIONNAIRE

Part A: Background Information

Please fill in the following details

A i) Your school ………………………………………………………………………………………………………

ii) Your gender ………………………………………………………………………………………………………

iii) Indicate your age by ticking (√) appropriately

a) Below 25 yrs
b) 26 – 35 yrs
c) 36 – 45 yrs
d) Above 46 yrs

iv) Indicate your teaching experiences by ticking (√) (appropriately)

a) Below 2 yrs
b) 2-5 yrs
c) Above 5 yrs

v) Where is your school situated?
   a. In rural
   b. In urban area

vi) Show by ticking (√) the size of your school.

   i) 1 stream
   ii) 2 streams
   iii) 3 and above streams

vii) What is the average number of students in the classes which you teach?

   a) Below 40 students
   b) 41- 50 students
c) Above 50 students

viii) Indicate the number of Geography lessons you handle in a week

Part B: Access to Field Work

Unless indicated otherwise, please mark one number for each question

B1. i) How often do you relate field work to your teaching?

<table>
<thead>
<tr>
<th>Never</th>
<th>Monthly</th>
<th>Weekly</th>
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ii) How often do you utilize field work as a class activity?

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<th>Never</th>
<th>Monthly</th>
<th>Weekly</th>
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iii) How often do you get permission to make academic visits with the students?

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<th>Never</th>
<th>Monthly</th>
<th>Weekly</th>
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B2. (Please tick as appropriate),

Do you:

i) Make field study around the school?

Yes [ ] No [ ]

ii) Consider teaching human activities around the school?

Yes [ ] No [ ]

iii) Consider teaching infrastructure around the school?

Yes [ ] No [ ]

iv) Consider teaching the physical features around the school?

Yes [ ] No [ ]

B3. Please indicate the extent to which you agree or disagree with the following
i) The use of fieldwork is adequate for teaching requirements.

<table>
<thead>
<tr>
<th>Strongly</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly</th>
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ii) My school is found in an area whose potential for field work study is high.

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<th>Disagree</th>
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<th>Agree</th>
<th>Strongly</th>
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iii) There is active exchange of geography ideas among learners after field work between the school and the surrounding community.

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<th>Strongly</th>
<th>Disagree</th>
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<th>Agree</th>
<th>Strongly</th>
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iv) The principal is supportive (provides for the trip) when you ask for permission to take students for fieldwork.

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<th>Strongly</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly</th>
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</table>

B4. Indicate the catchment area of your school by ticking (√) appropriately

a) National

b) Regional(Extra County)

c) County

Please tick (√) as indicated
i) There are many Geographical features around my school for learning  

Yes ☐  No ☐

ii) Reaching the Geographical features around my school for learning is possible  

Yes ☐  No ☐

B5. What major economic activity is practiced around your school?_______________________________

B6. Indicate the number of times you take your students out for a Geography excursion in a given term_______________________________

Part C: Use of Field Work

C1. How often do you explain or demonstrate a concept using:

i) Field work?

Never ☐  Rarely ☐  Sometimes ☐  Often ☐  Very often ☐

ii) Other approaches?

Never ☐  Rarely ☐  Sometimes ☐  Often ☐  Very often ☐

C2. How often do you ask students to access Geographical resources using field work to:

i) Find general geographical information using field data?

Never ☐  Rarely ☐  Sometimes ☐  Often ☐  Very often ☐

ii) Make lesson notes from field information gathered?

Never ☐  Rarely ☐  Sometimes ☐  Often ☐  Very often ☐
iii) Find examples or answers to previous assignment using field information gathered?

Never  Rarely  Sometimes  Often  Very often

iv) Search for specific information in the field?

Never  Rarely  Sometimes  Often  Very often

C3. How often do you require your students to:

i) Submit Geography essay on a topical matter based on the information gathered through fieldwork

Never  Rarely  Sometimes  Often  Very often

ii) Organize a class presentation based on the information gathered from the field.

Never  Rarely  Sometimes  Often  Very often

iii) Collaboratively work on a Geography project within the school community?

Never  Rarely  Sometimes  Often  Very often

C4. Please indicate the extent to which you agree or disagree with the following statements regarding your experiences of using fieldwork.
i) The use of field work is likely to result into improved performance.

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<tr>
<th>Strongly</th>
<th>Disagree</th>
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<th>Agree</th>
<th>Strongly</th>
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<tr>
<td>Disagree</td>
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<td>Agree</td>
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</table>

ii) The use of field work is likely to motivate learners.

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<tr>
<th>Strongly</th>
<th>Disagree</th>
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<th>Agree</th>
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<td>Agree</td>
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</table>

iii) The use of field work is likely to improve on relation with the community.

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<tr>
<th>Strongly</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly</th>
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<td>Agree</td>
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</table>

iv) I encourage my colleagues to use field work in their teaching.

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<th>Strongly</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
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<td>Agree</td>
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v) There is active exchange of ideas and activities among learners in case of field work.

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<th>Agree</th>
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<td>Agree</td>
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</table>
C5. Rank the following methods you use in teaching from the highest preferred to the least using numerical numbers (1-9)

a) Lecture
b) Demonstration
c) Using invited speakers
d) Using visual aids
e) Dramatization
f) Using real objects collected from the school neighborhood
g) Carrying out experiments
h) Field trips to the local community or far places
i) Others specify ________________________________

C6. Identify a geographical feature that can be used in the teaching and learning of Geography during one of the field trip you undertook

1………………………………………………………………………….
2………………………………………………………………………….
3………………………………………………………………………….

Part D: Field Work Strength and Weaknesses

D1. What aspects of your experience of using field work for teaching encourage or frustrate you?

<table>
<thead>
<tr>
<th>Things that encourage me</th>
<th>Things that frustrate me</th>
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<tbody>
<tr>
<td>1…………………………..</td>
<td>1…………………………..</td>
</tr>
<tr>
<td>2…………………………..</td>
<td>2…………………………..</td>
</tr>
<tr>
<td>3…………………………..</td>
<td>3…………………………..</td>
</tr>
<tr>
<td>4…………………………..</td>
<td>4…………………………..</td>
</tr>
</tbody>
</table>
D2. What aspects of your access to field work support or hinder your use of local resources for teaching?

Things that support me

1. ....................................................................................................................

2. ....................................................................................................................

3. ....................................................................................................................

Things that hinder me

1. ....................................................................................................................

2. ....................................................................................................................

3. ....................................................................................................................

In your opinion, suggest possible solutions to address the problems identified above

1. ....................................................................................................................

2. ....................................................................................................................

3. ....................................................................................................................

Thank you for taking your time to complete this questionnaire
APPENDIX C: HEAD’S OF DEPARTMENT QUESTIONNAIRE

Part A: Background Information

Please fill in the following details

A. i) Your school………………………………………………………………………………

ii) Your gender………………………………………………………………………………

iii) Indicate your age by ticking (√) appropriately

a) below 25 yrs

b) 26 – 35 yrs

c) 36 – 45 yrs

d) Above 46 yrs

iv) Indicate your teaching experience by ticking (√) appropriately

a) Below 5 yrs

b) 6 – 10 yrs

c) Above 10 yrs

v) Where is your school situated?

a) In rural

b) In urban area

vi) Show by ticking (√) the size of your school

a) 1 stream

b) 2 streams

c) 3 and above streams

vii) Indicate by ticking (√) your school sponsors

a) Church Mission

b) Local community
c) Private individuals

d) Government

viii) Specify the duration you have served as a head of department

a) Below 2 yrs

b) 2 – 5 yrs

c) Above 5 yrs

ix) Show by ticking (✓) the average number of students in your classes

a) Below 40 students

b) 41 – 50 students

c) Above 50 students

**Part B: Access to Field Work**

Unless indicated otherwise please mark one answer for each question

i) How often do you use field work around your school?

<table>
<thead>
<tr>
<th>Never</th>
<th>Monthly</th>
<th>Weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ii) How often do you utilize field work as a class activity?

<table>
<thead>
<tr>
<th>Never</th>
<th>Monthly</th>
<th>Weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

iii) How often is your department asked by Geography teachers to take students for field work?

<table>
<thead>
<tr>
<th>Never</th>
<th>Monthly</th>
<th>Weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B2. Please indicate the extent to which you agree or disagree with the following

i) The use of field work is adequate for my teaching requirements.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ii) Is the principal supportive (provides for the trip) when you ask for permission to take the students out to use field work for teaching and learning?

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B3. Indicate the catchments area of your school by ticking (√) appropriately

a) National
b) Regional(Extra County)
c) County

Please tick (√) as indicated

i) There are many Geographical features around my school for learning

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ii) Reaching the Geographical features around my school for learning is possible

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B4.(a) What major economic activity is practiced in the community your school is situated in__________________________________________

(b) Indicate the number of times your department takes out students for Geography excursions in a given term________________________________

Part C: Use of Field Work

C1. How often do you explain or demonstrate a concept using;

i) Field work?

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ii) Other approaches?

Never    Rarely    Sometimes    Often    Very often

C2. How often do you ask teachers to access field work to:

i) Find information?

Never    Rarely    Sometimes    Often    Very often

ii) Find lesson notes?

Never    Rarely    Sometimes    Often    Very often

iv) Search for specific information in the field?

Never    Rarely    Sometimes    Often    Very often

C3. How often do you:

i) Encourage teachers and students to collaboratively work on a Geography project within the school community?

Never    Rarely    Sometimes    Often    Very often

ii) Hold administrative and consultative meetings where students could go for a field trip?

Never    Rarely    Sometimes    Often    Very often

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C4. Please indicate the extent to which you agree or disagree with the following statements regarding your experience of using field work:

i) The use of field work is likely to result into improved performance.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ii) The use of field work is likely to motivate learners.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

iii) Field work can help me to do administrative duties more efficiently.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

iv) There is active exchange of ideas and activities among learners in case of field work.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

C5. Rank the methods you often use in teaching from the most preferred one to the least

a) Lecture

b) Demonstration
c) Using invited speakers
d) Using visual aids
e) Dramatization
f) Using real objects collected from the school neighborhood
g) Experimentation
h) Field trips
i) Others, (please specify)

C6. Identify a geographical feature that can be used in the teaching and learning of Geography during one of the field trips you undertook.

1……………………………………………………………………
2……………………………………………………………………
3……………………………………………………………………
4……………………………………………………………………

Part D: Field Work Strength and Weakness

D1. What aspects of your experience of using field work for teaching encourage or frustrate

<table>
<thead>
<tr>
<th>Things that encourage</th>
<th>Things that frustrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1……………………………</td>
<td>1……………………………</td>
</tr>
<tr>
<td>2……………………………</td>
<td>2……………………………</td>
</tr>
<tr>
<td>3……………………………</td>
<td>3……………………………</td>
</tr>
<tr>
<td>4……………………………</td>
<td>4……………………………</td>
</tr>
</tbody>
</table>
D2. In the spaces provided, list the strengths and weaknesses of the field work in your school

a) **Strength**

(i) ........................................................................................................

(ii) ........................................................................................................

(iii) ........................................................................................................

(iv) ........................................................................................................

b) **Weaknesses**

(i) ........................................................................................................

(ii) ........................................................................................................

(iii) ........................................................................................................

(iv) ........................................................................................................

D3. In your opinion, suggest possible solutions to address the weaknesses that you have identified above

(i) ........................................................................................................

(ii) ........................................................................................................

(iii) ........................................................................................................

(iv) ........................................................................................................

Thank you for taking time to complete this questionnaire
APPENDIX D : PRINCIPAL’S QUESTIONNAIRE

Part A: Background Information

Please fill in the following details

A. i) Your school…………………………………………………………………………………

ii) Your gender…………………………………………………………………………………

iii) Indicate your age by ticking (✓) appropriately

a) Below 25 yrs

b) 26 – 35 yrs

c) 36 – 45 yrs

d) Above 46 yrs

iv) Indicate your teaching experience by ticking (✓) appropriately

a) Below 10 yrs

b) 11 – 30 yrs

c) Above 30 yrs

v) Where is your school situated?

a) In rural

b) In urban area

vi) Show by ticking (✓) the size of your school

a) 1 stream

b) 2 streams

c) 3 and above streams

vii) Indicate by ticking (✓) your school sponsors

a) Church Mission

b) Local community
c) Private individuals

i) The use of field work for teaching requirements is adequate

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ii) Unless indicated otherwise please mark one number for each question

How often do you give permission to your Geography teachers to take out students on request

<table>
<thead>
<tr>
<th>Never</th>
<th>Monthly</th>
<th>Weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

iii) I support Geography teachers to use field work for teaching and learning Geography?

Yes ☐ No ☐

B2. Indicate the catchment area of your school by ticking (✓) appropriately

a) National ☐

b) Regional(Extra County) ☐
c) County ____________

Please tick (✓) as indicated

i) There are many Geographical features around my school for learning

  Yes ____________  No ____________

ii) Reaching the Geographical features around my school for learning is possible

  Yes ____________  No ____________

B4. What major economic activity is practiced around your school?______________________________________________________

Indicate the number of times your school takes out students for Geography excursions in a given term______________________________________________________

**Part C: Use of Field Work**

C1. What sort of assistance do you give incase there is a Geography trip?

  Financial ____________  Moral ____________  Both ____________

C2. Are parents involved in sponsoring field trips?

  Yes ____________  No ____________

C3 In your opinion, what is your administrative advice on the part of the Geography teacher using field work?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Thank you for taking your time to complete the questionnaire
APPENDIX E: OBSERVATION CHECK LIST

Name of the school_______________

Possible physical features and human activities that can be open to field work approach in the teaching and learning of Geography around the school.

a.

<table>
<thead>
<tr>
<th>Types of Resources</th>
<th>Available</th>
<th>Unavailable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physical set up and nature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minerals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topography</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rivers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rocks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Human Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fishing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mining</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commerce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Peasant farming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Livestock farming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Agriculture</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 3. Transport and Communication

<table>
<thead>
<tr>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
</tr>
<tr>
<td>Air</td>
</tr>
<tr>
<td>Water</td>
</tr>
<tr>
<td>Postal services</td>
</tr>
<tr>
<td>Media (Radio/ Television)</td>
</tr>
<tr>
<td>Phones (mobiles)</td>
</tr>
<tr>
<td>Computerized system</td>
</tr>
</tbody>
</table>

### 4. Population

<table>
<thead>
<tr>
<th>Age Patterns Observable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youths</td>
</tr>
<tr>
<td>Prime age</td>
</tr>
<tr>
<td>Aged</td>
</tr>
</tbody>
</table>

### 5. Industry

<table>
<thead>
<tr>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing industries</td>
</tr>
<tr>
<td>Business enterprises</td>
</tr>
<tr>
<td>Professional firms</td>
</tr>
<tr>
<td>Cottage industries</td>
</tr>
<tr>
<td>Co-operative societies</td>
</tr>
<tr>
<td>Labour union</td>
</tr>
<tr>
<td>Financial institution</td>
</tr>
</tbody>
</table>

### 6. Education Centres

<table>
<thead>
<tr>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public schools</td>
</tr>
<tr>
<td>Category</td>
</tr>
<tr>
<td>----------------------------------</td>
</tr>
<tr>
<td>Private schools</td>
</tr>
<tr>
<td>Adult literacy centre</td>
</tr>
<tr>
<td>Community Libraries</td>
</tr>
<tr>
<td>Art galleries</td>
</tr>
<tr>
<td>Museum</td>
</tr>
<tr>
<td>Zoos</td>
</tr>
<tr>
<td>Animal orphanage</td>
</tr>
<tr>
<td>Professional and academic</td>
</tr>
<tr>
<td>Association</td>
</tr>
<tr>
<td>Ministry of education</td>
</tr>
<tr>
<td>Activities</td>
</tr>
<tr>
<td>a) Workshops</td>
</tr>
<tr>
<td>b) Sports</td>
</tr>
<tr>
<td>c) Athletics</td>
</tr>
<tr>
<td>d) Music festival</td>
</tr>
<tr>
<td>e) Art and home science displays</td>
</tr>
</tbody>
</table>
## APPENDIX F: WORK PLAN

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>YEAR 2012-2013 - 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Research concept</td>
<td>November</td>
</tr>
<tr>
<td>2. Submission of research concept at the department</td>
<td>December</td>
</tr>
<tr>
<td>3. Oral presentation of research at the Department</td>
<td>December</td>
</tr>
<tr>
<td>4. Writing the proposal</td>
<td>January</td>
</tr>
<tr>
<td>5. Defense of proposal at the department</td>
<td>May</td>
</tr>
<tr>
<td>6. Presentation of proposal at the school</td>
<td>May</td>
</tr>
<tr>
<td>7. Presentation of proposal at the Graduate school</td>
<td>September</td>
</tr>
<tr>
<td>8. Application for research permit</td>
<td>February</td>
</tr>
<tr>
<td>9. Commencement of fieldwork</td>
<td>March</td>
</tr>
<tr>
<td>10 Completion of data collection</td>
<td>April</td>
</tr>
<tr>
<td>11. Completion of data analysis</td>
<td>May</td>
</tr>
<tr>
<td>12. Writing of research report (compiling the report)</td>
<td>June</td>
</tr>
<tr>
<td>13 Submission of first progress report to Graduate school</td>
<td>July</td>
</tr>
</tbody>
</table>
APPENDIX G: RESEARCH PERMIT