RELATIONSHIP BETWEEN GEOGRAPHY TEACHERS' ASSESSMENT SKILLS AND STUDENTS' PERFORMANCE IN SECONDARY SCHOOLS IN KISII CENTRAL SUB-COUNTY, KENYA

RICHARD OIRURIA OBONYO

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DECLARATION AND RECOMMENDATION

This thesis is my original work and has not been presented for the award of a degree in this or any other university

Signature ..... Date 17/11/17

Richard Oiruria Obonyo

EM13/1592/05

Recommendation

This thesis has been submitted for examination with our approval as the University Supervisors

Signature ..... Date 17/11/17

Prof. Joseph. M. Wamutitu

Department of Curriculum, Instruction and Educational Management,

Egerton University

Signature ..... Date 17/11/17

Prof. Mark O. Okere

Department of Curriculum, Instruction and Educational Management,

Egerton University

COPTRIGHT

DEDICATION

To my Wife Nancy Oiruria and children; Calvin Oiruria, Faith Oiruria and Maureen Oiruria

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ABSTRACT

Teachers require both assessment skills and content competence for their subject to perform well in examinations. These assessment skills are test preparation skill, test administration skill, test marking skill and test reporting skill which are key in enabling geography teachers to prepare students better for national examinations. These skills may be acquired through training offered by institutions like Kenya National Examinations council (KNEC). Students' performance of geography subject in Kenya certificate of secondary examinations (KCSE) has been poor in Kisii Central Sub-County over the years. The dismal performance in the subject was thought to be due to inadequacies in teachers' assessment skills. The purpose of this study was therefore to examine the relationship between geography teachers' assessment skills and students' performance in secondary schools in Kisii Central Sub-County, Kenya. The research used ex post facto co-relational design. The target population comprised of secondary school principals, teachers, and students while the accessible population comprised of 36 principals of secondary schools, 56 geography teachers' and 1356 form four students. Simple random sampling technique was used to select 302 geography students while Purposive sampling technique was used to select 32 Principals and 52 geography teachers. Data was collected using the geography student Questionnaire (GSQ), Geography Teachers Questionnaire (GTQ) and Principals interview schedule (PIS). Content validity and construct validity were checked by five researchers from the Department of Curriculum, Instruction and Educational Management, Egerton University. The research instruments were piloted and their reliability was estimated using the Cronbach alpha method. The reliability coefficient of the instruments was estimated to be 0.720 for GSQ, 0.742 for GTQ and 0.851 for PIS. These were accepted and used to collect data for this study. The data was analyzed using descriptive statistics such as percentage, frequencies and mean while the hypothesis was tested using t test and was tested for level of significance at .05 confidence. Statistical Package for Social Scientist (SPSS) version 11.5 was also used to assist in data analysis. The findings from the study revealed that teachers' assessment skills were related to geography students' subject performance in Kisii Central Sub-County. The study recommends training of geography teachers' in assessment skills. Further, it recommends that the Kenya Institute of Curriculum Development (KICD), the Kenya National Examination Council (KNEC) and teacher training collages to place emphasis on training geography teachers on assessment skills. It also recommended that the Directorate of Education Standards and Quality Assurance Council (ESQAC) to include in their assessment tools, assessment skills when assisting teachers in the field.

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LIST OF ABBREVIATIONS

8.4.4.:	System of Education used in Kenya where Learners take Eight Years in Primary, four Years in Secondary and four Years in University.
BOM:	Board of Management
CBE:	Curriculum Based Establishment
CRE:	Christian Religious Education
ESQAC:	Education Standards and Quality Assurance Council
GTQ:	Geography Teacher Questionnaire
KCSE:	Kenya Certificate of Secondary Education
KESI:	Kenya Education Staff Institute
KICD:	Kenya Institute for Curriculum Development
KNEC:	Kenya National Examinations Council
MSS:	Mean Standard Score
NMSS:	National Mean Standard Score
NACOSTI:	National Commission for Science Technology and Innovation
PIS:	Principal Interview Schedule
SCDE:	Sub-County Director of Education
SCMSS:	Sub- County Mean Standard Score
SMASSE:	Strengthening of Mathematics and Science in Secondary Education
SPSS:	Statistical Package for Social Science

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Skills are abilities which trained teachers' possess that enable them assessment the extent to which instructional objectives are being achieved. Assessment skills in this study are skills that enable a teacher to prepare a test, administer a test, mark test and report test results. Results of the assessment can be used as feedback as well as to improve future assessments skills. Test preparation, administration, marking and reporting has developed into a skillful art, not only relying on the academic training of the teacher and his knowledge of the subject but also possessing skills in assessment (Aluko, 2007).

Student' performance of geography subject in Kisii Central Sub-County has been dismal over the years. The results at Kenya Certificate of Secondary Education (KCSE) level in 2011 show its M.S.S was 3.1 at Sub-County level compared to the National Mean Standard Score (N.M.S.S) of 8.57, while in 2012 its M.S.S was at 3.048 compared to the N.M.S.S of 8.34. The record in performance of this subject in subsequent year was below average out of the possible 12 points scale used by the Kenya National Examinations Council (KNEC) in grading performance (Kenya Institute of Curriculum Development [KICD], 2014). Assessment skills training is seen to influence performance of the subject and teachers have suggested that learner's achievement would be enhanced if they are augmented in these skills. There is a growing consensus that improving students' performance in geography depends on a teaching force with appropriate assessment skills and content quite distinct from the usual instructional practice in most classrooms (Evans, 2013). Although initial teacher training nurtures these characteristics, it is in-sufficient to prepare the teachers for the greater challenges. In order to uphold a dynamic approach to teachers' professional development, there is therefore need for these teachers to be capacity build in assessment skills as a means of improving the subject performance. According to Moore (2009) there has beed need for teachers to keep up to date in assessment skills as a means of boosting performance in geography subject. Thyne (2010) indicated the need for teachers to acquire assessment skills, and noted that a teacher could not hope to promote his/her students performance in the subject if he/she was not well grounded in assessment skills.

Haggar (2012) noted that geography subject has undergone a period of intensive change. New tools and concepts have led to major shifts in approach to assessing students in the subject.

Farrant (2000) agreed that teachers needed augmentation in assessment skills and noted that in order for teachers to respond to changing circumstances training is important. According to Robert (2010), one notable weakness in teaching was how teachers' assessed student work and recommended teachers to be subjected to training in assessment skills. According to Ngesa (2012) assessment is a systematic process of obtaining information for the purpose of making decisions about the learners and curricula. Teachers' assessment skills are acquired through training in colleges while they would be sharpened through experience and in servicing probably bone through workshops, seminars and training offered by Kenya National Examination Council (KNEC). Assessments skills capacity which geography teachers' possess may not be sufficient to enable them influence geography students' performance (KNEC, 2014).

Effective assessment skill training is the foundation on which the KNEC system works (Boyle, 2010).The examinations administered by KNEC are a reflection of teachers' work, involving the reconciliation of acquired assessment skills and general knowledge of the subject (KNEC, 2013). This poor performance was perhaps due to inadequacy in teacher preparation during the initial teacher training. Wanyama (2010) observes that geography teachers were not adequately trained in assessment skills which are critical in preparing students for national examinations. Whereas in-service teacher education complements initial teacher training, there has been lack of adequate and appropriate opportunities for most practicing teachers to enhance their skills in assessment. Further, Wanyama maintained that adequate assessment skills were lacking among geography teachers due to inadequacy in assessment skills during their initial training.

Geography as a subject enables students to be informed about the physical world and aspects of human relations. The value of geography lies in the fact that it helps people to live as well as to place themselves in the world (KICD, 2012). Nyakundi and Ogonda (2009) observed that the teaching of geography makes students think, which underscores the current emphasis placed of teaching students to develop problem solving skills. The subject is vehicle for cross-curriculum work and is traditionally described as a bridge subject between Arts and sciences subjects (Ashley,2001).The subject helps candidates to expand their course choices at tertiary and university level as it is considered as both a science and an art subject. The subject create in learners the ability to describe and analyse the location of places and the

spatial distribution of phenomena while also enabling students to understand the varied interrelationship of phenomena and their influence on human activities.

Geography is dynamic in content and methodology as it responds to constant environmental changes. The subject has been fashioned to help learners cope with the demands and challenges of modern world and also to realize how to integrate into the world which has evolved into a global village. Geography is grouped under category four of subjects offered at secondary school curriculum in which case students at form three are allowed to select this subject as one of their elective. The subject is examinable at form four levels (KNEC, 2011). It is examined in two papers which test students on their ability to recognize and describe physical features as well as analyze human aspects which are learned in the four year period of secondary school. Despite this allowance where students are allowed to take subjects of their choice and ability, their performance of the subject in KCSE results has been poor. The mean standard score (M.S.S.) for geography at the Sub-County level has been poor gauged from a maximum of twelve point scale (Table 1).

Table 1:

Sub-County and National Mean Standard Score in Geography results in various years

Year	No. of candidates		Sub-County	National
	Sub county	county	M.S.S	M.S.S
2011	2,844	106,812	3.135	8.57
2012	2,633	92,551	3.048	8.34
2013	2,384	97,817	4.892	9.91
2014	2,356	106,865	4.384	8.83
Total	10,217	404,045	3.864	8.91

Source (KNEC report, 2015)

Students' performance in geography at KCSE levels has been below average in the four years under study in Kisii Central Sub-County as given in Table 1. These statistics may not explain why performance of subject is poor despite reduced subject content and enough trained teachers in the subject (Teachers' Service Commission report, 2015). The reduction in the number of subjects students register for examinations to be examined at Kenya Certificate of Secondary Examination (KCSE) level was aimed to reduce the students' work load while giving teachers more time to prepare their candidates adequately for national examinations.

This arrangement of curriculum in secondary schools notably has not given significant improvement in the subject performance in the four years under study. The study focussed on teachers' assessment skills as one of the factors that influenced students' performance in geography. This was supported by the KNEC report (2014).

1.2 Statement of the Problem

All over the world skills are required for any prospective employment in institutions and companies. Skills are competences that enable a person to perform tasks better and efficient. Skills are acquired through training or apprenticeship. Such skills in Education are acquired through training and experience. Teacher assessment skills are acquired in teacher training collages and other accredited examinations offering institutions. These assessment skills are test preparation, test administration, test marking and test reporting. Teacher assessment skills in schools contribute to better subjects' performance and where in some instances teachers have acquired these skills more than others tend to have their subjects having an edge in performance. The ministry of education through the sessional papers emphasized the importance of skills training in teacher education. The teachers' service commission (TSC) employs teachers not only on merit but also on their level of skills and experience as can be seen from the score guard when recruiting teachers. Geography is one of the elective subjects under group five of subject categories that is examined at the end of the four year secondary school course. The Geographical Association underscored the importance of this subject as having a distinctive role to play in the school curriculum. It was noted that its potential and promise could be compromised if it is seen only as knowledge-to- be-delivered instead of being a resource that could enable students to understand the world better and use the competences obtained from this subject for employment. Students' poor performance of the subject in Kisii Central Sub-County had not been explained in any study within the Sub-County. Geography subject is regarded as an art and a science subject which would assist any student who takes it at secondary school level to combine it with any other arts or science subject at higher level of education. However, the performance of this subject has been poor at KCSE level which was perhaps attributed in this study to geography teachers' inadequacy in assessment skills. This study therefore examined the relationship between geography teachers' assessment skills and students' performance in secondary schools in Kisii Central Sub-County, Kenya.

1.3 Purpose of the Study

The purpose of this study was to examine relationship between geography teachers' assessment skills and students' performance in secondary schools in Kisii Central Sub-County, Kenya.

1.4 Objectives of the Study

The study was guided by the following objectives.

i. To establish the level of geography teachers' awareness of assessment skills in public secondary schools in Kisii Central Sub-County.
ii. To find out the level of usage of these assessment skills among geography teachers' in public secondary schools in Kisii Central Sub-County.
iii. To find out the relationship between teachers' assessment skills and geography students' performance in public secondary schools in Kisii Central Sub-County.
iv. To establish the challenges geography teachers' face in preparing students for Examinations

1.5 Research Questions

i. What was the level of geography teachers' awareness of assessment skills in public secondary schools in Kisii Central Sub-County?
ii. What was the level of usage of the assessment skills among geography teachers in public secondary schools in Kisii Central Sub County?
iii. What were the assessment challenges faced by geography teachers' in preparing students for Examinations?

1.6 Research Hypotheses

This study attempted to provide answer to the following research hypotheses.

Ho1: There was no significant relationship between geography teachers' assessment skills and students' performance in secondary schools in Kisii Central Sub-County, Kenya.

1.7 Significance of the Study

The findings of the study may be used by geography teachers to improve their methodology in test planning, test administration, test marking and test reporting. Teacher training colleges and universities which are involved in preparing teachers into the teaching profession should

review their existing curriculum and adopt a course of action geared towards putting emphasis on assessment skills training. School administrators, KNEC and the Ministry of Education officials should make use the findings to develop programs that may enhance the training of geography teachers in assessment skills. This may be done through organizing subject seminars, workshops and clinics.

1.8 Scope of the Study

The study was carried out in Kisii Central Sub-County targeting all public secondary schools. A total of 2,356 geography students were involved in the study, 62 geography teachers and 36 school principals drawn from Sub-County schools. Only trained teaches with two years teaching experience participated in the study.

1.9 Limitations of the Study

Most school did not have adequate and trained geography teachers. There were situations where some schools did not have the right number of geography teachers as given in the schools' curriculum based establishment (CEB). Some schools had hired Board of Management (BOM) teachers whose period of stay in a school was uncertain. Some schools had hired university students who were only available during holidays and left after the holidays were over. The researcher used only those schools which had TSC employed geography teachers with two years teaching experience.

1.10 Assumptions of the Study

The following assumptions were made during the study:

a) All geography teachers in Kisii Central Sub-County were trained and were experienced.

1.11 Definition of Terms

The following are the definitions of the major terms used in this study:

Assessment: It means appraising of work done according to laid down objectives at the beginning of an activity (Bird, 2012). In this study, it refers to assessment done by teachers on geography students' work to determine the extent to which the objects have been realized.

Geography: It is a subject undertaken by students under the 8-4-4- curriculum of education and is grouped under category four of subjects. In this study, it refers to one of the subjects offered in the 8-4-4 curriculum of education (KICD, 2014)

Influence: It is ability to sway or have the power to control a certain undertaking (Ebels, 2008). In this study, it means teachers' assessment skills which cause improved performance in geography subject in secondary schools.

Performance: It is the ability to do a given task to satisfaction (Ebels, 2008). In this study, it means geography teachers' achievement in examinations.

Teacher assessment Skills: These are competence gained by teacher to carry out professional work competently (Makau, 2013). These skills are like test planning, test administering, test marking and test reporting. This term is used in this study, to refer to techniques and abilities gained to assess geography subject.

Test administration Skill: This is management or supervision of a test given to a class such that it is done in near similar condition to all examinees (Makau, 2013). In this study, it means the ability of a geography teacher to provide satisfactory conditions to all his students when taking any written or unwritten test

Test marking Skill: This is awarding of marks to geography students test (Good, 2015). In this study, it refers to scoring of students work and giving meaning to a mark or tick.

Test planning Skill: This refers to preparation or having a sequence of good arrangement of activities (Ngesa, 2015). In this study, it refers to those sequenced activities that a geography teacher must put in place before a test is given out

Test reporting skill: It means providing feedback to an assignment. In this study, it refers to geography teachers' ability to provide feedback to an assessment given to his class so as to create positive change to his students.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents a review related literature on the relationship between geography teachers' assessment skills and students' performance in secondary school in Kisii Central Sub-County, Kenya. The literature stared by examining geography education in Kenya, assessment skills organized under the research objectives as teachers' assessment skills, teachers' awareness of these assessment skills, usage of these assessment skills and relationship of these assessment skills and students' performance in geography examinations. Finally the literature looked at students' performance of geography at the KCSE level. The theoretical, research gaps and conceptual frameworks are also presented in the chapter.

2.2 Geography Education in Kenya

In the contemporary world, human beings collectively are recognizing the importance of our fragile environment for mutual survival and the survival of generations to come. However, there can be few more pressing and critical goals for the future of humankind to ensure a steady improvement in the quality of life in a way that respects our common heritage – the planet we live on (Wamutitu, 2007). The planet is where all 'kind' of activities takes place because it is the geographical location of all business and all other activities. The study of geography describes and analyses the location of places on earth and the spatial distribution of phenomena in their varied interrelationships as they influence human activities. The secondary school geography curriculum in Kenya as such, is a four-year course and is designed to expose the learner to a systematic study of both physical and human aspects of geography with specific local examples drawn from Kenya as well as comparative studies from other parts of the world (Kenya Institute of Education (KIE, 2002) The value of geography lies in the fact that it helps people to place themselves in the world (KICD, 2014). Nyakundi and Ogonda (2009) observes that the subject content in makes students develop thinking abilities, which underscores the current emphasis placed on teaching students to develop problem solving skills. MacCraw (2011) defines geography as the study of spatial variation of how and why things differ from place to place on the surface of the earth. The Greek scientist Erasthens 64 BC and Strabo 486 BC attempted to explain geography as a very old discipline which described the earth. Herodotus in 486 BC found it necessary to write about the lands, people and economics of various part of the earth. These studies later became

to be known as various branches in geography. Geography is the only discipline concerned with understanding why and how both physical and cultural phenomena differ from place to place on the surface of the earth. This subject has been very popular both in primary and secondary school curriculum. The subject was well established in the both O'level and colleges in final examinations (Tim, 2009).

The Education Commissions which have been formed to review Educational objectives and policies laid emphasis on a wide range of subjects to be offered in secondary school curriculum and geography was identified as one of the crucial subject (GOK, 2014). The Ominde Report (1964) recommended for the expansion of secondary curriculum to include the teaching of geography subject, while the sessional paper No 14 of 2012 recommended for quality education and training at all levels. The paper recommended for the establishment of a national assessment system to monitor learning competencies in secondary level to enable teachers carry out school based continuous assessment effectively. If geography subject is to have significance and value to the student the teacher need to understand the nature of dynamic, functional geography. Geography teachers in schools are the people who mould students in proper shape, hence they are being called upon to renew their intimate knowledge of and association and interaction with the field outside the classroom (Bhattacharya & Wamutitu, 2007). Teachers therefore need to know how to develop effectively the skills and abilities involved in reading and interpreting such geographic tools as maps, pictures, the local landscape, graphs, statistics, and reading materials. Only through the mastery of these tools can geography learning proceed easily and effectively. Geography subject is examinable at Kenya certificate of secondary Education (KNEC, 2014). It is examined in two papers, which test on ability to comprehend and analyze Geographical concepts which are learned during the four year period of secondary school.

2.3 Teachers' Assessment Skills

When the Cabinet secretary in charge of Education was releasing the 2015 KCSE results (Nation newspaper, March 2016), pointed out three subjects that had performed poor and asked the Directorate of Quality Assurance and Standards within the ministry to investigate the reason for poor performance. Among the subjects which had performed poor was geography whose M.S.S at national level was 4.38 and Kisii Central Sub-County was among the Sub-Counties that had done dismally poor (The Kenya National Examinations Council report, 2016). The findings from the report indicated lack of adequate assessment skill among

other reasons. The recommendations of the investigative report asked the training institutions to enhance assessment skill training (MOE, 2016 report).

Assessment is a process of gathering information and facts on set out objectives and the extent to which they have been achieved. Assessment system is basically a system of communication. Good (2015) notes that one of the most critical activities that are undertaken by teachers is the marking of course work and exams and maintains that assessment skill has little training. It is simply assumed that teachers will be able to assess successfully. Ngesa (2015) noted that in teacher training collages great attention was given to training in curriculum implementation but assessment skills were neglected. He underscores the importance of giving training to any new tutors who have not been involved in assessing before. Training supports teachers on how to do this essential task of assessment, rather than simply being assigned a class to teach (Mwanzia & Miano, 2015). Assessment, especially in the social sciences and humanities, is far more complex than giving a numerical score (KNEC 2013). Assessment is a vital part of the process of showing students how to improve their work after a series of organized information has been taught. Some teachers spend a long time on each on one set of skill such as marking students' script, correcting every spelling and grammar mistake as well as commenting in detail on content forgetting other skills. While others teachers believe that going into depth does not help the student and that their job is to offer general pointers for improvement but the contrary is true that assessment skills are important in holistic performance in geography subject. It is vital for teachers to see the process of assessment as part of the pedagogical process, rather than as a burden separate from the real joy of teaching. In this regard there are different assessment skills (Good, 2015) and among them are;

(a) Test Planning Skill

Ayot and Patel (1987) define test planning as a dynamic process where a teacher intentionally organizes information for his learners so as to cause learning to take place. Duncan (2005) observes that test planning as unique, rational, human activity in which one creatively and imaginatively uses his skill to promote the learning of others. Enoch (2014), Hydin (2013) and Redford (2013) agree that teachers need to be clear before starting to assess on which strategies will be required to effectively assess his students.. This requires teachers to be clear from the start on what their assessing is intended to achieve.

This stage is resembles that of a surgeon ready for an operation in a theatre (Murgatroyed & Morgan, 2014).Teachers are required to map out the entire process of assessment having in mind his class and students. At this stage a skillful teacher will consider the textbooks the learners have used over a particular period. The cycle time should be considered for any assessment tool, teachers often allocate arbitrarily time for a task in class. Any assessment tool require well taught out time and which must originate from the teacher himself organizing the test. A good assessment tool needs to satisfy the table of specification. Assessment tool need to incorporate the purpose of testing, in which case the teacher will be interested to check on the profitability and effectiveness of his teaching. Organizational context will entail the ability of the tool to reflect orderliness and directed attention to the class. The assessment tool must also underline the overall objectives of the subject and individual topics. The tool will also focus on methodology of benchmarking and be able to provide a self-diagnosis and self-improvement on the part of the learner (Ngesa, 2012).

(b) Test Administering Skill

This stage is crucial for effective test take-off by learners. The teachers are required to observe an understanding of sheared sense of purpose and vision with his learners as to why the test is being taken. The teacher will need to indicate to the learners about the outcome of the assessment (Ngesa, 2012). Open communication and posture of assessment to the learners is critical. The learners require understanding on the consequences of the assessment. The learners at this stage need to develop trust and mutuality with their teacher on the impending assessment. The teacher will be expected to have total control of his class from the beginning when the test is administered to the end. The teacher may also be required to develop a technical skill of regular review and reflection in his class progress (Murgatroyed & Morgan, 2014).

(c) Test Marking Skill

Marking involves the use of a set of specified symbols whose meaning ought to be clearly defined and uniformly understood by the teachers (Robert, 2012). It requires that the meaning of a mark which is used for assessment must be clearly defined. What a mark means is determined not only by how it is actually defined but more importantly the way it is actually used (Robert, 2010). Scoring tests is one of the less popular aspects of teaching. Many teachers indicate that they do not test students' achievement as frequently as they should

because they cannot spend more time in scoring (James, 2012). Simiyu (2012) observes that teachers who are involved in assessing at K.C.S.E level produce better results in geography subject due to skills they have acquired after being trained by KNEC. Being an examiner with KNEC is a form of training, it helps teachers to improve their assessment skills. Such teachers are able to model their assessing skills at classroom level along the examination training and their students stand a chance of performing well in final examination.

One of the reasons that many academics dislike marking is because of the number of scripts they have to mark and the short amount of time they have to do this. Even if they have the best intentions to do every script justice, the workload means that this task is often rushed and not done to the best of the marker's capability. Mostly, students would rather wait an extra few days for their marks than know that the marking of their work was done too hastily (Ngesa, 2015). It is apparent that most geography teachers may not have such requisite skills to enable them assess skillfully students' work (Makau, 2013).

Robert (2012) identifies three types of marking which are considered important for standardized assessment. The first one is called combing which is a practice of combining scores by making addition at the question or paper level. In combing a convex ($\sqrt{}$) function is used to observe the principal of rewarding marks for example steadiness, while the concave function(x) is to reward erratic performance. According to Good (2015) there are four elements which are, conjunctive modal which requires an individual to successfully complete each item in a series of composite steps. For example students are required to explain formation of certain land forms and must explain each step. Disjunctive modal requires success in only one of the components. For example student may be required to explain characteristics of tropical vegetation. Hybrid modal is a mix of the two while Compensatory modal is a combing skill which permits compensating of scores provided that one of the critical steps is done correctly.

Scale marking involves two important types of scales (French, 2015).Rank order conversion and equipercentile. In rank order conversion there is no statistical manipulation. Marks are awarded ordinarily and students ranked based on ability and estimate. Equipercentile scaling is the most technical sound marking ability. This type of scale assumes that a straight line does not exist to describe the relationship between scores. In this scaling two marks on different papers are defined as comparable if they are reached by the same proportion of a

given group of candidates. In order to convert marks on one paper to the scale of another paper, points representing pairs of marks reached by equal percentages of candidates are plotted and a smoothed curve is drawn through (Good & Cresswell, 2014).

Weighting is another assessment type in which case an examiner has to make decision carefully how to allocate a mark equal to the value of the question (Rowntree, 2013).This skill provides for that examiner decree that such and such a question will be worth 25 marks and another 40 marks by expressing directly their estimate of relative importance and value of the respective task. These Assessment skills receive little attention during Professional training of teachers. Barrie (2006), Shiundu and Omulando (1992) have noted that for a teacher to be effective and play an important role in assessment he or she must training activities ranging from test preparation, administration, marking and reporting.

(d) Test Reporting Skill

Enoch (2014) observes that assessing in schools is a traditional response to providing a feedback. Preparing a report after analysis is important because it provides an opportunity for any consumer to understand the details at a glance. A clear report prepared by a teacher enables both the teacher and students to be informed on how the test was taken and probably areas of weakness (Barrier, 2006). The teachers' should to be aware of the different techniques and statistical methods that can be used to present good reports. At the beginning of report preparation the teachers must know that the tools to be used should be simple to read and understand. Timely release of assessments' results is useful to the students as it tends to prepare the learners to correct their mistakes early enough. Discussing results enables students to understand and internalize the concepts well. Improving testing using feedback allows students and teacher to avoid making future mistakes whenever similar tests are administered.

2.4 Teachers' Awareness of Assessment Skills

Assessment skills are acquired at training level in teacher training collages for geography teachers. This is offered as pre-service however more training can be done as in service probably offered by other training institutions like KNEC, Kenya Institute of Curriculum Development (KICD), Kenya Institute of Management (KEMI) among others. In order to establish and maintain high education standards, assessment reliability is important for a

teacher. Students are required to earn nearly the same results in a test no matter who marks them (Makau, 2013).Therefore assessment training is an essential period of orientation of thought and outlook on these skills which are important skills in pedagogical work of teachers (KICD, 2014). The training on assessment skills is considered as an important segment of teacher professionalism. Farrant (2000) Sarita and Tomer (2014) point that traditional one time teacher training is not effective in helping teachers to feel comfortable for successful assessment. This has necessitated a new paradigm which is replacing training with lifelong professional preparedness and development of teachers' assessment skills. Macintosh and Firth (2014) noted that the basic tenets of in-service and on-service training require teachers to have continued renewal of their knowledge and capabilities in order to have appropriate assessment strategies. In most programs, the professional training in college concerns themselves with the subject matter which prospective teachers need in order to teach without laying much emphasis on assessment skills. Hendrik (2009) observes that the successive completion of an initial training in one's teaching course should not be viewed as an end process; instead it should be viewed as initial training which helps to propel the teacher to develop further his career.

Assessment skills receive little attention during professional training of teachers and therefore there is a definite need for teachers today to have a basic knowledge and understanding of assessing skills if only to allow them play effective role in examinations (Makau, 2013). Teacher examiners are selected and trained in assessment skills in Geography subject at National level after they apply to the KNEC. The successful teachers are taken for two weeks training on assessment skills which equip them with assessment skills (Makau, 2013). At the training centres marks are given meaning and value (Barrie, 2006). This training prepares examiners with assessment skills which enable them assess better in Geography examinations (Mclntosh & Walker, 2014).

According to Backhouse (2006) teachers at the marking centers are also trained on how to apply reliability grading. This method entails training on what overall marks mean on the number of grades on a scale and the severity of the consequence of misclassification of candidates' marks. The reliability is arrived at through calculating mean and the expected mode. A grade point is chosen such that for any examination grade awarded will be true within a plus or minus one. Mark re-mark estimate of reliability is concept teacher examiners

are introduced to where a senior examiner remarks the scripts already marked (Murphy, 2012). Random samples of candidates' scripts are selected and remarked. This measure is aimed at obtaining a true variation between marking standards of different examiners. Murphy note that the least reliability marked examinations tends to be those of easy type of questions of which geography subject fall under this category. This manner of exposure geography teachers may be predisposed to can influence performance of geography subject. However it is noted in this study that many teachers have little experience on these assessment skills.

2.5 Teachers' usage of Assessment Skills

There are many factors that may affect the level of usage of these assessment skills by geography teachers. However the use of these assessment skills is important as it tends to influence subject performance. The mastery of learning out comes is done gradually through a careful step by step development of skills and abilities as they are used in the acquisition as well as influence of the subject (Felder, 2014). Through test preparation skill, teachers are able to expose their learners to practical ways with numerous illustrations how to read and interpret maps, pictures, graphs, and the landscape as well as use them as sources of geographical information. Reading of geography materials in textbooks and in references books demands specific reading skills and abilities. The ability to use these tools of learning is developed effectively by teachers who apply them long after specific facts have been forgotten or outdated (Felder, 2014).

Geography subject is like a science whose teaching resources are found in and around where we stay. Teachers need a repertoire of skills to teach effectively students. A teacher is expected not only to have ability to speak effectively, but also to effectively use learning resources like maps, charts and diagrams in order to create excitement in learning. Enoch (2014) explains that students can learn what is desired through the use of field excursions which enable learners to be exposed to realties in the subject. Teachers will do nothing to correct practices that results in students dislike for the subject if they are unaware that their practice of not using learning resources well may contributes to a dislike of the subject. Munguti (2014) noted that most schools had many difficulties in regard to teaching and learning resources. He observed that textbooks support material, teaching aids and stationery are very important and lack of these adversely affect the teaching of geography. Munguti

further maintained that unavailability of enough funds in schools may cause shortage of teaching resources as some of them are expensive. He noted that most schools had difficulties as far as teaching and learning resources are concerned.

Bishop (2000) noted that materials resources are important for curriculum implementation and attainment of syllabus objectives, because they have their unique role that they play towards this effort. Thundhlana (2009) contends that a variety of materials and approaches in teaching are necessary to enable the education system to produce graduates, who are intellectually alert, able to explore and benefit from what their environment offer them. For effective teaching and learning to take place in geography, teaching and learning resources are necessary. Lack of teaching and learning resources may affect the learners' enthusiasm. Lang (2000) agreed that students in a number of countries in Africa had found a strong relationship between training and achievement. The Kenya institute of curriculum development (KICD 2014) cited lack of materials for teachers as one of the problems facing the 8.4.4 curriculum implementation. Indeed, the availability of teaching- learning resources enhances the instructional process of the subject. In view of these reviews it is evident that there is the relationship between the availability, use of resources and the performance of students in geography.

Test administration skill is important for effective and reliable results from a test administered. It has been said that the best motivation is intrinsic where a teacher carries natural tendencies of teaching and their satisfaction is achieved when students perform well in national examinations. Teachers are the most important human resource and remain the backbone of any Educational system and as such training the on assessment skills is key to achieving their professional maturity (Murphy, 2012). Trained teachers represent a significant social investment and their level of motivation and career development is important. Thyne (2010) notes that there is clarity about the traits we should look for in a person which makes him an effective teacher. He emphasizes on the need for unprecedented demand for effective teachers training in assessment so as to improve subject performance. Through improved test administration skill, Thyne notes that teachers are able to lead the multitude of students on the path of enrichment and progress through positive motivation.

Test marking skill is one technical skill in assessment which geography teachers require to place at the center of their activities KICD, 2014).Teacher level of training and educational

achievements are pegged on efficient use of test marking skill as a means of improving student performance. Kamal (2009) agrees that in Educational process effective teacher is one who has learnt to use varying assessment skills. In teaching one needs a good knowledge of the subject he teaches, as well as skill of how to teach it. Iyan and Sangster (2009) note that teachers who have good knowledge base in the subject are more likely to be relaxed when teaching the subject. They teach it skillfully, reinforcing every tendency in a student to act rightly on all occasions. The job of a teacher is not simply to build on existing wants but to present what is worth wanting in such way that it creates new wants and stimulates new talents. Gilbert (2014) note that change in marking skill require close integration of on and off job experience. Farrant (2000) point out that a teacher must win from his students their eagerness to learn. They must remain pupils ever learning more about their work.

Robert (2012) noted that teachers are predisposed to appreciating that use of a assessment skills may require knowledge and understanding. Teachers use different skills to satisfy different stages of learning. According to Robert (2012) marking skill is divided in six thematic areas which are; modelling, coaching, scaffolding, articulation, reflection and exploration. These methods enable students to build cognitive and metacognitive strategies for use in managing, and discovering knowledge.

Modelling is like experts knowledge where a teacher demonstrates a task explicitly. Students build a conceptual model of the task at hand. In such case a teacher writes out explicit steps and work through a problem aloud, demonstrating his heuristics and procedural knowledge. Coaching is another theme where a teacher employs a talent of attentiveness to assist weak or hard concepts to be redone. Scaffolding is the process of supporting students in their learning where Support structures are put into place. In some instances, the teacher may have to help with aspects of the task that the student cannot do by their own (Ngesa, 2012).

According to Collins and Stevens, (2002) articulation is the process of separating component knowledge and skills to learn them more effectively. It involves verbalizing or demonstrating knowledge and thinking processes in order to expose and clarify them. This method enables students to articulate their knowledge, reasoning, or problem-solving process in a domain. This may include inquiry teaching in which teachers ask students a series of questions that allow students to refine and restate their learned knowledge and to form explicit conceptual models. Thinking aloud requires students to articulate their thoughts while solving problems.

Students assume a critical role in monitoring others in cooperative activities and draw conclusions based on the problem-solving activities.

Test reporting skill according to Ngesa (2012) allows teachers to compare their own problem-solving processes with those of others, probably another expert. The goal of reflection is to allow teachers and students cross check on areas of weakness and omissions so that they are able to correct. When test reporting students are able to look back and analyze their performances with a desire for understanding and improvement towards the behaviour of an expert. Through test reporting skill students find room to problem solve on their own. Test reporting allows the student to frame interesting problems within the domain for themselves and then take the initiative to solve these problems. This skill requires a teacher to polish his subject area, think and digest what is to be conveyed to students. This skill incorporates the personality and individual difference of learners (Ngesa, 2012).

In this skill the teacher employs an art and ability to ask questions to his class on a topic under study for purposes of reporting (Kimayu, 2013). However one weakness of this method lies on its difficultness to design questions and is a slower process of dealing with information. Learners have an opportunity to illustrate ideas, principals and concepts for which words are inadequate. Good professionals are engaged on a journey of self-improvement, always ready to reflect on their own practice in light of other approaches. Kamal (2009) indicates that a teacher who wants to be successful in his professional knowledge is always on the lookout for opportunities to add to his professional knowledge and keep himself up to date in respect to new methods of teaching.

2.6 Students' Performance in Geography

The Ministry of Education in its effort to improve performance of students at National examinations reduced the number of examinable subjects from eight to seven (GOK, 2014). The reduction of subjects was aimed to motivate students to perform well including geography subject. Table 2 provides a comparison between Kisii Central Sub-County performances against the national performance in geography over a period of four years. The mean standard score in the four years (2011-2014) in Kisii Central Sub-County was below average (SCDE Kisii Central report, 2015). The table also shows that the Sub-County Mean Standard Score (S.C.M.S) was below average corresponding with decrease in candidature.

Table 2:
Comparison in Geography Performance in Kisii Central Sub-County and National Level at KCSE between 2011 and 2014

Year	No. of KCSE Candidates	Sub-County M.S.S	No. of KCSE Candidates	National M.S.S.
2011	2,844	3.135	106,812	8.57
2012	2,633	3.048	92,551	8.34
2013	2,384	4.892	97,817	9.91
2014	2,356	4.384	106,865	8.83
Totals	10,217	3.864	404,045	8.91

Source: (SCDE Kisii Central Sub-County, 2015)

2.7 Theoretical Framework

The theoretical framework underpinning the study is based on the Human capital theory. The proponents of this theory Becker, (2014) argue that education and training constitute an investment in human capital. Such an investment yields future returns in form of income and earnings from the individual and increased economic growth through enhanced productivity for society. It further argued that individuals, being rational always seek to maximize their utility and productive capacity through the acquisition of skills and knowledge necessary for economic growth. One of the most important ideas in labour economics is to think of a set of marketable skills of workers as a form of capital in which workers make a variety of investments. Human capital corresponds to any stock of knowledge which any worker has either as innate or acquired that contributes to his productivity. The standard approach in labour economics views human capital as a set of skills or characteristics that increase a worker's productivity. The proponents of this theory view human capital as directly useful in the production process. More explicitly human capital increases a worker's productivity in all tasks. Becker (2014) view human capital as the capacity to influence any situation provided that an individual has been capacity build. According to the theorist approach, human capital is useful in dealing with disequilibrium situations in which there is a changing environment and workers have to adapt to it. They observed that human capital has signal of ability than characteristics independently useful in the production process. Training is a component of human capital that workers acquire after schooling, often associated with some set of skills useful for teaching career or with a particular set of technologies. At some level training is very similar to schooling in that the worker to some degree controls how much to invest.

However it is more complex since it is difficult for some workers to make training investments by themselves. Education institutions need to invest in the training of the teachers, which will often ends up bearing a large fraction of anticipated results. The role of certain institutions like KICD and KNEC in the ministry of Education is even greater once we take into account that training has a significant matching component between institutions objectives and overall performance of geography students in National examinations. Training therefore in assessment skills is understood to be an important joint investment approach between the ministry of education and its affiliated bodies to enhance the teachers' competences. Becker (2014) asserts that for proper implementation of a curriculum there must be availability of adequate trained man power in this area. He noted that many schools suffer an acute shortage of trained teaching personnel.

2.8 Research Gap

This study was concerned with examining relationship between teachers' assessment skills and geography students' performance in Kisii Central Sub-County. The study was carried out in 36 secondary schools involving principals of secondary schools, geography teachers and geography students. Reports from KNEC (2011-2014) and the SCDE (2014) indicated that the subject performed poor in Kisii Central Sub-County. The results of 2011 KCSE showed that the subject had a M.S.S of 3.1 at Sub-County level compared to the National Mean Standard Score (N.M.S.S) of 8.57, while in 2012 its M.S.S was at 3.048 compared to the N.M.S.S of 8.34. Records of this subject performance at the Sub-County Education office for successful years showed its' performance as poor (Kenya Institute of Curriculum Development, 2014). This situation invited the researchers' attention to establish the reasons behind this dismal performance over the years. Geography subject is regarded as an arts and science subject which gives students wide alternative to combine it with other subjects at form four and in tertiary institutions for their different career courses. Most students failed to advance in their studies due to lack of cluster combinations of subjects. In cases where a student wished to pursue science course and had not passed the requirements would easily pick geography subject as part of the combination. It was established that there is need for teachers to be capacity builders in assessment skills as a means to address the subject performance as well as giving students a large option of subject choices at tertiary and university levels.

2.9 Conceptual Framework for the Study

This study was guided by the following conceptual framework.

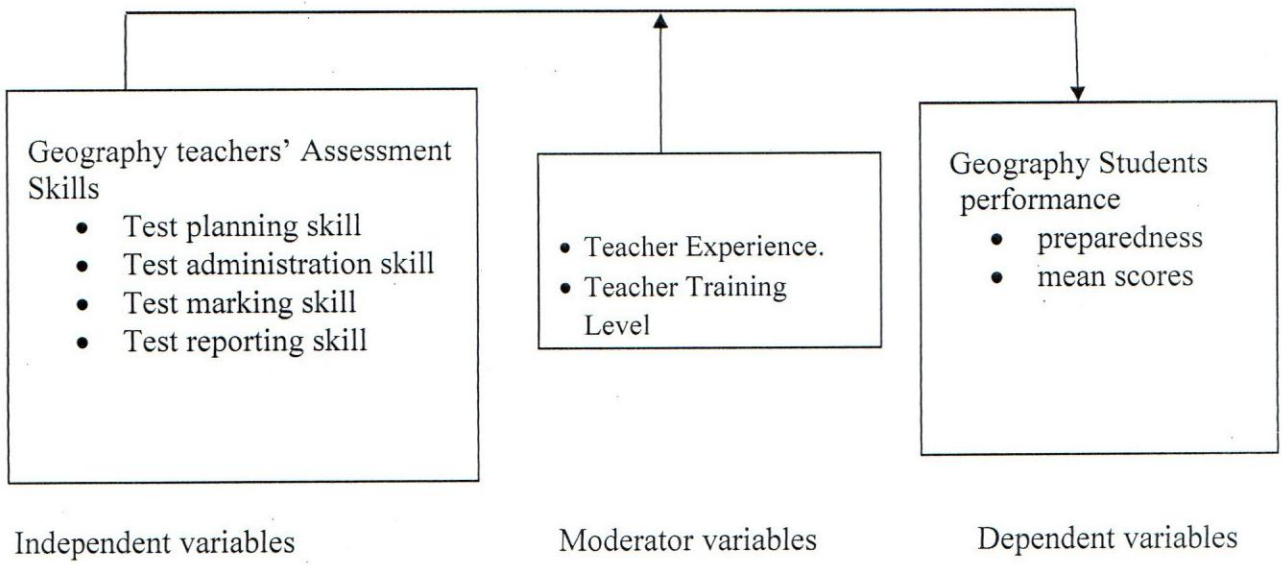

Figure 1: Conceptual framework showing relationship between different variables

In Figure 1, students' performance in geography examinations is the dependent variable and is related to geography teachers' assessment skills which are the independent variable. From Figure 1 teacher's assessment skills which are test planning skill, test administration skill, test marking skill and test reporting skill after manipulation could result to improved geography performance in secondary schools in Kisii Central Sub-County. The independent variable in this study is student preparedness in examinations through elaborate preparation of their geography teachers. Reduced cases of test cheating are enhanced through effective test administration skill. Accurate scores are achieved through teachers' being exposed to marking skills while high mean scores of geography subject would be achieved through teachers' effective reporting skill. The moderator variables in this conceptual framework were teachers' teaching experience and their training level which was controlled by ensuring that all participants in the study were trained teachers and had a teaching experience of more than two years.

CHAPTER THREE
METHODOLOGY

3.1 Introduction

This chapter presents the methodology that was used to carry out the study. It describes the research design, location of the study, population, sampling procedure and sample size. It also gives a description of the instruments, data collection and analysis procedures.

3.2 Research Design

Nkpa (2002) observed that expost facto co-relational research design mainly determines the causes for the current status of the phenomenon and in this study the researcher was interested to examine the relationship between geography teachers' assessment skills and students' performance in secondary schools in Kisii Central Sub-County, Kenya. The study adopted the ex post facto co-relational research design which assisted the researcher to examine the influence of teacher assessment skills on subject performance. Kathuri and Pals (1993) describes this research design as one which studies usually naturally occurring subjects. According to Mugenda and Mugenda (2003) this design is appropriate for exploring a relationship between variables and in this study the variables are teachers' assessment skill as independent variable and geography performance in secondary schools as dependent variable. The design is recommended when collecting information about peoples' relationships (Fraeninel & Wallen, 2007). The design was appropriate for this study because it enabled the researcher to examine the relationship between geography teachers' assessment skills and students' performance in secondary schools in Kisii Central Sub-County, Kenya.

3.3 Location of the Study

The study was carried out in Kisii Central Sub-County. The Sub-County had 36 public secondary schools of which two were in the category of national schools. All the 36 schools offered geography subject in their curriculum and was examined at KCSE level (KNEC, 2013). The choice of my study was prompted by the large number of students who sat for their KCSE at form four but ended up performing poor due to low grades in geography subject. The researchers' attention was drawn to the number of students who were not able to join tertiary institutions or universities due to lack of subject cluster combination or fell short of the points required in each cluster. In some circumstances some of these students missed to qualify to a given course due to poor performance of geography subject. This situation caused

the researcher to undertake to examine the relationship between geography teachers' assessment skills and students' performance in secondary schools in Kisii Central Sub-County, Kenya.

3.4 Population of Study

The target population of the study comprised of 2454 respondents made up of 36 school principals, 62 geography teachers and 2,356 geography students in all public secondary schools. The accessible population comprised of 1356 geography students, 56 geography and 32 secondary schools' principals. Teachers' accessible population was made up of those teachers who had stayed in the same school for a period of more than two (2) years. This choice was critical because the study was intended to establish the relationship between geography teachers' assessment skills and students' performance in secondary schools in Kisii Central Sub-County. Teachers' performance would best be gauged after successfully teaching for more than a year. The study identified 32 principals of secondary schools in the Sub-County as accessible population since the Sub-County had 32 registered secondary schools. The information obtained from the principals was useful as it assisted the researcher to examine their contribution towards enhancing assessment skills training of geography teachers in their schools. The distribution of the target and accessible population and sampled population of students, geography teachers and secondary schools principals is given in Table 3.

Table 3:

Table showing Distribution of Target Population, Accessible Population and sample population

Population	Target population	Accessible population	Sample Population
Geography students	2,356	1,356	302
Geography teachers	62	56	52
Principals	36	32	32
Total	2454	1,444	386

3.5 Sampling Procedures and Sample Size

Sampling procedure

i) **Geography Students**

Simple random sampling technique was used to determine the number of students who participated in the study. The researcher first obtained the number of geography students who participated in the study from statistics in the Sub-County Director of Education office. The target population was made up of total of 2,356 students. All schools in the Sub-County participated in the study where by the researcher assigned ten (10) questionnaires per each school. Each school provided the total number of geography students in their form four classes which enabled the researcher to distribute the questionnaires through picking even numbers to participate in the study. In each school ten (10) questionnaires were randomly distributed to geography students in form four classes. However, it was realized that some schools had few students taking geography than the allocated minimum of 10 geography students per a school. In such instances the researcher increased the number who participated in the next school to compensate for the accessible population.

ii) **Geography Teachers**

A total 56 geography teachers in the Sub- County was obtained from the records held in the Kisii Central Sub- County TSC offices. Purposive sampling procedure was used to obtain the number of geography teachers who participated in the study (Fraenkel &Wallen, 2000). This procedure was used due to the small number of geography teachers per a school who were to participate in the study as was evidenced from the statistics obtained from TSC offices. The researcher used all the teachers in this regard so to reduce the sampling error in the study.

iii) **Secondary Schools Principal**

All the principals of Kisii Central Sub- County schools participated in the study. The number of the schools was obtained from the Sub County Education office.

Sample Size

a) Students

The researcher selected schools which participated in the study by using data available at the Sub-County Kisii Central Education office to obtain information on schools that had registered candidates for respective years in KCSE geography subject. The sample size was arrived at using this formula given as,

$$N = \frac{n}{(1+n)N}$$

Source: Mugenda and Mugenda (2003)

Where N equals to the desired sample size (where the population is less than 10,000), n is equal to the desired sample size (where the population is more than 10,000) and N is equal to the estimate of the population (Mugenda & Mugenda, 2003). The researcher also used the table for determining the sample size of a finite population developed by Kathuri and Pals (1993) as given in appendix 5. The sample size for students was calculated as shown below.

$$N = \frac{10,000}{(1+2,356)1356} = 302$$

From the calculations the desired sample size for the geography students is 302.

b) Sample Size for Geography Teachers

Purposive sampling technique was used to determine the sample size for geography teachers who participated in the study. This method was found suitable to be used to select the number of geography teachers because geography subject at secondary school was elective such that not all students chose it to be examined at KCSE level. It was also established that some schools were offering the subject for the first time for KCSE examinations.

c) **Sample Size for Secondary School Principals**

Purposive sampling technique was used to determine the sample size of the principals who participated in the study. This method was used to determine the sample size of principals because the number of secondary schools in Kisii Central Sub-County was small to be excluded from the study. A total of 32 secondary schools principals were involved in the study.

3.6 Research Instruments

Three instruments namely the Geography Student Questionnaire (GSQ), Geography Teachers Questionnaire (GTQ) and Principal Interview Schedule (PIS) were used to generate the required data.

Geography Student Questionnaire

The GSQ had three sections named as A, B, and C; Section A had four questions which generated information on the students' level of awareness of geography teachers' assessment skills. The students were required to indicate their level of awareness by noting "yes" for being aware and "false" for not agreeing. Section B was concerned with level of use of these assessment skills and geography performance in secondary schools. This section was divided into four areas of teacher skills. The questionnaire had four levels of agreement spread from strongly agree, agree, not sure, disagree and strongly disagree. Section C had open ended question which required the respondents to write their own answers.

Geography Teacher Questionnaire

The GTQ had 6 sections which were named as A, B, C, D, E and F. Section A generated the bio-data of the geography teachers. It was important to obtain this data as part of including the moderator variables in the study. Sections B generated information on teachers' assessment skills. Section C was used to measure the level of awareness of teachers' assessment skills. The respondents were required to rate their level of awareness of assessment skill against a scale running from very poor to very good. Section D collected information on the level of use of assessment skills by geography teachers. Section E collected data on the relationship between assessment skills and geography performance in Kisii Central Sub-County. Section F had open ended item intended to collect information on respondents' comments on assessment skills. The items in section B to E were of the Likert scale type. The data were coded then analyzed to determine the relationship between geography teachers' assessment skills and students' performance in secondary schools in Kisii Central Sub-County.

Principal Interview Schedule

The Principals interview schedule (PIS) had eight questions which were used to elicit data on principals' knowledge in regard to geography teachers' assessment skills and their schools' performance in the subject. The tool also collected information on performance trends in geography at KCSE level in Kisii Central Sub-County. The researcher also was able to collect information on influence of teachers' assessment skills on student performance. Further the questionnaire collected data on principal's views on how geography teachers' assessment skills related to performance in the subject. Four experts from the Department of

Curriculum, Instruction and Educational Management checked the on the content, construct and face validity of the instruments. Their comments and suggestions were used to improve the instruments before the actual data collection.

3.7 Validity of Research Instruments

Before the actual study, GTQ and the PIS were checked for content and construct validity. Content validity ensured that the items in the data collection tool covered the subject area adequately on assessment skills whereas construct validity on the other hand ensured that the instrument actually measured the level of influence of assessment skills on student performance (Fraenkel & Wallen, 2000). Four experts from the Department of Curriculum, Instruction and Educational management checked the on the validity and reliability of the instruments. Their comments and suggestions were used to improve the instruments before the actual data collection.

3.8 Reliability of Research Instruments

Reliability is a measure of degree to which a research instrument yields consistent results or data after repeated trials (Mugenda & Mugenda, 2003). The reliability of the GSQ, GTQ and PIS was ensured through piloting in Gucha Sub-County which was neighbouring Sub County and schools involved were not used in the study. In this study the instrument were piloted using a sample of 40 respondents who did not take part in the actual study. The number of respondents was arrived at by using Kathuri and Pals table for determining sample size of finite population. The Cronbach Alpha (Kunder-Richardson K-R 20) method was used to estimate the tool's reliability given as.

$$KR_{20} = \frac{(K)\,S^2 - \sum S^2}{(S^2)\,(K-1)}$$

Source; Mugenda and Mugenda (2003)

Where KR_{20} is the reliability coefficient of internal consistency, K is the number of items used to measure the concept, S^2 is the variance of all scores, s^2 variance of individual items. The method is recommended as it reduces time for computation of reliability coefficient and also the results are more conservative in terms of estimate of reliability. The tools were accepted after they yielded reliability coefficient of 0.720 for GSQ, 0.742 for GTQ and 0.851 for PIS.

3.9 Data Collection Procedure

Before the commencing of the study the researcher obtained permission from Director Graduate School Egerton University which was granted and later proceeded to make an application to the National Commission for Science, Technology and Innovation (NCOSTI). The permit was granted and the researcher formally informed the supervisors about the development. The researcher paid a visit to the Sub-County Education office and introduced the purpose of seeking permission to conduct research within the Sub- County. The researcher was given a list of school contacts which assisted him in contacting the targeted schools and respondents through their respective Sub-County Directors of Education (SCDE) and Principals and sought their cooperation. Dates, venue and times for administering the questionnaires and conducting interviews were set in consultation with the respondents. On the scheduled dates the researcher explained to the respondents how to fill the questionnaires and there after administered the instruments. The filled questionnaires were collected and organized awaiting analysis.

3.10 Data Analysis

Descriptive data were organized and analyzed by use of mean, frequencies and percentages while the Hypotheses were analyzed using *t* test and computed at.05 level of significance. The researcher used the Statistical Package for Social Sciences (SPSS) to assist analyze inferential statistics. Objective number one which was aimed at establishing the level of geography teachers' awareness of assessment skills in public secondary schools in Kisii Central Sub-County was analyzed through tables, frequencies and percentages. Objective number two sought to find out the level of use of these assessment skills among geography teachers' in public secondary schools in Kisii Central Sub-County and was analyzed with assistance of tables, frequencies and percentages. Objective number three examined the relationship between teachers' assessment skills and geography student performance at KCSE level was analyzed with the help of tables, percentages and frequencies and *t* test. The null hypothesis was tested for level of significance at .05 confidence.

3.11 Ethical Considerations

This study was carried out under strict observance of research ethics. The entire work and data in this thesis is personal collected from the field. The researcher did not at any time acted contrary to the ethics of confidentiality. The researcher ensured that permission was granted

from NACOSTI before the data was collected. Throughout the study the researcher ensured that all information shared with respondents remained confidential including data from the Sub-County Education offices, principals' offices, teachers and students. It is expected that the findings of this study shall be shared with other relevant institutions through publications.

CHAPTURE FOUR
RESULTS AND DISCUSSION

4.1 Introduction

The study sought to examine the relationship between geography teachers' assessment skills and students' performance in secondary schools in Kisii Central Sub-County, Kenya. The data were collected from students, teachers and principals in Kisii Central Sub-County public secondary schools. The data was analyzed and findings presented under themes derived from study objectives. The themes are:

a) Demographic characteristics of respondents
b) Level of geography teachers' awareness of assessment skills in public secondary schools in Kisii Central Sub-County
c) Level of usage of these assessment skills among geography teachers' in public secondary schools in Kisii Central Sub-County
d) Relationship between teachers' assessment skills and geography students' performance in secondary schools in Kisii Central Sub-County.

The findings were analyzed using appropriate statistics and then presented using tables, frequencies, percentages, graphs starting with the demographic characteristics of the respondents who were geography students, geography teachers and secondary schools principals.

4.2 Return Rate of the Instruments

The researcher was able to receive 87% return of the GSQ, while the GTQ had return rate of 78% and those of the PIS had a rate of 67%. The GSQ and the GTQ was administered physically in most schools while the PIS questionnaire were administered both physically and through telephone calls as some of the principals were not in their stations at the time of interview.

4.3 Demographic Characteristics of Respondents

The study sought information from students and teachers about their personal information relevant to the study.

4.3.1 Demographic Characteristics of Students

The demographic characteristic of students was made up all geography students from 36 secondary schools in Kisii Central Sub- County.

4.3.2 Demographic Characteristics of Teachers

Teachers provided information about their education level, training in assessment skills and length of stayed in their current stations. Table 4 shows the level of teachers' qualification as per training.

Table 4:

Qualification of Geography Teachers in Kisii Central Sub-County as per professional Training

Qualification	No of teachers'	%
Untrained	7	13.6
Diploma/S1	6	11.5
Bachelor's degree	36	69.0
Masters	3	5.7
Total	52	100.0

Table 4 shows that most of the geography teachers had attained a bachelors' degree (69%), followed by those with Diploma/ S1 qualification at 11.5% while the masters' degree had 5.7% and the least was those untrained teachers with 13.6%. From the data in Table 4 most teachers were qualified to teach geography and thus would support students. Despite this basic training geography teachers had attained their performance in the subject which they taught had performed poor in Kisii Central Sub-County. This study therefore informs of the need for more training to be provided to these teachers in order to guarantee improved performance of the subject at Sub-County level KNEC (2016). Table 5 provides information on the geography teachers' teaching experience (duration of stay) in respective secondary schools.

Table 5:

Teaching Experience in Terms of Years

Length of stay	No of teachers	%
1-5 years	25	40
6-10	16	26
11-15	7	11
16-20	6	10
21-30	7	11
Total	62	100

According to Table 5 most teachers (40%) had served for duration of 1-5 years in their respective schools while 16(26%) had served between 6-10 years. It was observed that most of the teachers had fairly enough experience to handle the subject despite variation in the number of years they had worked. Finally, the distribution of teachers in various schools shows that majority of the schools had one to two teachers. It was only one school which had five teachers because of its size. The disparity in the staffing of geography teachers is shown in Table 6.

Table 6:

Distribution of Geography Teacher in Schools within Kisii Central Sub-County

No. of Teachers	Number of Schools	%
1-2 teachers	32	89
3-4 teachers	3	8
5-6 teachers	1	3
Total	36	100

Table 6 show an overwhelming number of schools, being 32(89%) had 1-2 geography teachers followed by 2 schools (8%) with 3-4 teachers and only 1 (3.0%) school had 5-6 teachers. This implied that the schools were fairly staffed and as such there was no school without a geography teacher.

4.4 Level of Teachers' Awareness of Geography Assessment Skills

Objective number one of the study sought to establish the level of geography teachers' awareness about assessment skills. Teachers and principal provided information through

questionnaire and interviews respectively. The findings are presented as follows starting with teachers responses.

4.4.1 Teachers Responses

There were varying responses received from teachers on their level of awareness on assessment skills. Some of the teachers indicated as knowledgeable on assessment skills due to their awareness on pedagogical principles which were obtained through training whereas others indicated the contrarily. However Table 7 provides the results of the responses from the teachers.

Table 7:

Teachers' Level of Awareness of Assessment Skills

Type of skills	Very poor awareness		Poor awareness		Average awareness		Good awareness		Very good awareness	
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**
Test preparation skill	0	0	0	0	13	25	7	13.4	33	**63.4**
Teat administration skill	0	0	0	0	2	3.8	6	4.3	45	**86.5**
Test marking skill	0	0	0	0	32	61.5	13	25	8	**15.3**
Test reporting	0	0	0	0	25	48	15	29	12	**23.0**

Table 7 indicates that teachers were more aware of the test administration as said by 45(86.5%) followed by being aware on test preparation skill said by 33(63.4%) and the least were aware on test marking skills 8 (15.3%). There were only 23 % of teachers who responded as being aware about test reporting as a skill. This implied that teachers had good level of awareness in test preparation and test administration skills. However it was noted that this level of awareness was not translating to improved performance in geography subject at secondary school level. Lack of adequate training of teachers in assessment skills teachers is evidenced by their average awareness particularly on marking skill. This could perhaps be the reason why students' performance of this subject at KCSE level in Kisii Central Sub County is poor. Teachers were further asked about their awareness of items under the assessment skills and their responses are captured in Table 8.

Table 8:

Level of teachers' awareness of Items under the assessment skills

Items in assessment skills	Aware		Not aware		Not sure of awareness	
	F	%	F	%	F	%
Syllabus coverage	173	52.2	108	32.6	50	15
Maintain time schedule	86	26	221	96.9	24	7
Correct mark awarding	275	83	50	15	6	1.8
Inviting resource person	189	57	87	26.2	55	16.6

Referring Table 7 and 8 teachers' test preparation included syllabus coverage as said by 52 % of teachers as being aware while 32.6% were not aware while 15% of them were not sure of their level of awareness and hence were inadequate about test preparation skill. On test administration skill which was represented by maintenance of time item, 96.9% of the respondents were not aware of it. This meant that a good proportion of teachers were ill equipped in maintain discipline in test taking exercise. Test marking involves of a set of items but one item selected was that of correct mark awarding and from Table 8, 83% of the respondents were aware of it. It was only 16.8% who were either not aware or sure of it and hence had poor skill in marking. On test reporting skill covered under item of inviting resource persons 57% of the respondents were aware of it and therefore invites resource persons while 16.7% were not sure of it

4.4.2 Principals' Response on Teachers' awareness of Geography Assessment Skills

Schools Principals were central in providing support to general performance in their schools. The study sought to establish from the principal the level of training of their geography teachers as a means of establishing their level of awareness on assessment skills. Table 9 shows the number of teachers who had been trained on assessment skills by KNEC as given by the principals from 32 sampled secondary schools in the Sub-County. The Kenya National Examination Council was one of the institutions which trained and prepares teachers for summative assessment of students at KCSE level (KNEC 2014).

Table 9:

Assessment Experience with KNEC

Experience with KNEC	**F**	**%**
Number	6	11.5

There were only six (6) KNEC trained teachers on assessment skills representing 11.5% out of 52 sampled geography teachers in Kisii Central Sub-County. Teachers underwent training in marking of student work conducted by KNEC before they could start marking in national examinations. This training provided the teachers with the requisite marking skills which could be used at school level and national level. All the sampled schools' Principals (32) said that those teachers who had attended KNEC training brought significant contribution which improved geography performance. The study established that some of the teachers who had undergone KNEC training assessment skills in geography had their subject perform better. Majority of the principals said that training in assessment skills was useful in improving teachers' competence. Table 10 show that 71.5% of the principals had not facilitated their teachers to train whereas 28% of the principals accepted that they had facilitated their teacher.

Table 10:

Principals Awareness of Assessment Skills through Training Teachers

Response	**No**	**%**
No	25	71.5
Yes	10	28.5
Total	35	100

Whereas ten (10) principals said that they sometimes sponsored their geography teachers to train in assessment skills, a big number of principals (25) representing 71.5% did not support the teachers. This large percentage of none supportive principals may have given contribution to poor performance of geography as a subject. Although some of the teachers (6) had been trained in these assessment skills, the sponsorship was not supported adequately as said by the teachers. The principals agreed that their inability to support the teachers fully sometimes led to school poor performance in national examinations. This was supported by Blaug

(2010) who asserted that the principal is the policy shaper of the school and could influence the performance of any subject in the school. In this regard, the principal played a critical role in determining effective school performance by providing the teachers with opportunity to improve their assessment skills. However, the extent to which the principal would bring the geography teachers on board depended on the attitude they held. If the principal believed that skills development was an integral part in good performance they are remained to put deliberate plans in place to assist the teachers. It was established that most schools had trained teachers on assessment skills at five levels, the lowest being at school level as given in Table 11.

Table 11:

Assessment Training Level of Geography Teachers

	School level	Sub-County	KICD	KNEC	Non
Number trained	20	24	8	6	3
% of training	37.7	45.2	15	11.3	5.6

Source; Sub-County Education Office Kisii, 2014

The principals' response showed that most teachers had received assessment skills training at Sub-County level representing 45.2% followed by 37.7%, at school level with the least being 3 teachers who had not received any training. The principals held the view that training in assessment skills led to better performance of geography subject.

4.5 Level of Usage of Assessment Skills among Geography Teachers

The second object aimed at finding out the level of usage of these assessment skills among geography teachers' in public secondary schools in Kisii Central Sub-County. It was thought that teachers who applied theses assessment skills provided good support to their students.

4.5.1 Level of Teachers' Usage of Assessment Skills as given by students

Students provided information in regard to how their teachers utilized their assessment skills when assessing them. This was intended to establish from students about their understanding of assessment skills and how geography teachers used them (Table 12).

Table 12:

Level of use of Assessment Skills as given by Students

Level of use of assessment skills	Strongly agree		Agree		Not sure		Disagree		Strongly disagree	
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**
Test preparation	188	56.7	122	36.8	16	4.8	13	3.9	1	0.3
Test administration	0	0	0	0	3	0.9	70	21	258	78
Test marking	18	5.4	80	24	26	7.8	7	2.1	215	65
Test reporting	0	0	154	46.5	177	53.4	0	0	0	0

According to Table 12 nearly all the students' response accepted that their geography teachers used the skills to prepare them before any test would be administered. In this regard it showed that 56.7% of the teachers used skilled in test preparation while 78% of the respondents indicated teachers as being poor in test administration. A small number 8% agreed that their teachers used marking skill to assist them and finally 46% of the respondents agreed that geography teachers reported the results of all tests done in class. There were 258 students' respondents representing 78% who said that their geography teachers' did not administer tests well. Equally a big proportion of students' respondents (65%) said their geography teachers did not mark their tests well. It was interesting to note that a big number (177) representing 53% of students were not sure whether their geography teachers were providing a good feedback after a test had been taken.

Students were further asked to comment on how their geography teachers' used assessment skills to influence their performance in geography. Table 13 indicates how Students responded and from it can be observed that geography teachers had exposed their learners to various teaching and learning assessment skills.

Table 13:

Use of Test Preparation Skill, Test Administration Skill, Test Marking Skill and Test Reporting Skill

Assessment skills' elements	Used		Not used		Not sure	
	F	%	F	%	F	%
Syllabus coverage	173	52.2	108	32.6	50	15
Frequent testing	271	81.8	56	17	44	13
Revising exams	193	58.3	78	23.5	60	18
Revising past papers	213	64	33	9.9	85	25.6
Resource persons	73	22	218	65.8	40	12
Exam techniques	74	22	223	67.3	34	10
Explaining terms	86	26	221	96.9	24	7
Illustrations	275	83	50	15	6	1.8
Various textbooks	189	57	87	26.2	55	16.6

According to the students' responses in Table 13, a total of 173 (52.2%) said that their teachers used to cover syllabus on time compared to 155 who indicated that they were not sure whether this method was used to prepare them for examinations. A sizable number at 271(82%) said frequent testing was used as a common method while 56 answered that the method was not used. The students also said that revision of past examinations and revision of past papers was commonly used in schools being rated at 69% and 64% respectively. The use of resource persons was not frequent standing at 66% compared with those who used this method being rated at 22%. Most teachers did not give examination techniques standing at (67%) compared to 74(23%) saying that their teachers used this method. According to students responses most teachers were not keen on use of illustration as 221(67%) said that the method was not used in class. There were 189(57%) respondents who agreed that use of a variety of textbooks was effective among teachers as opposed to 17% who said that this method was not used by teachers (Figure 2).

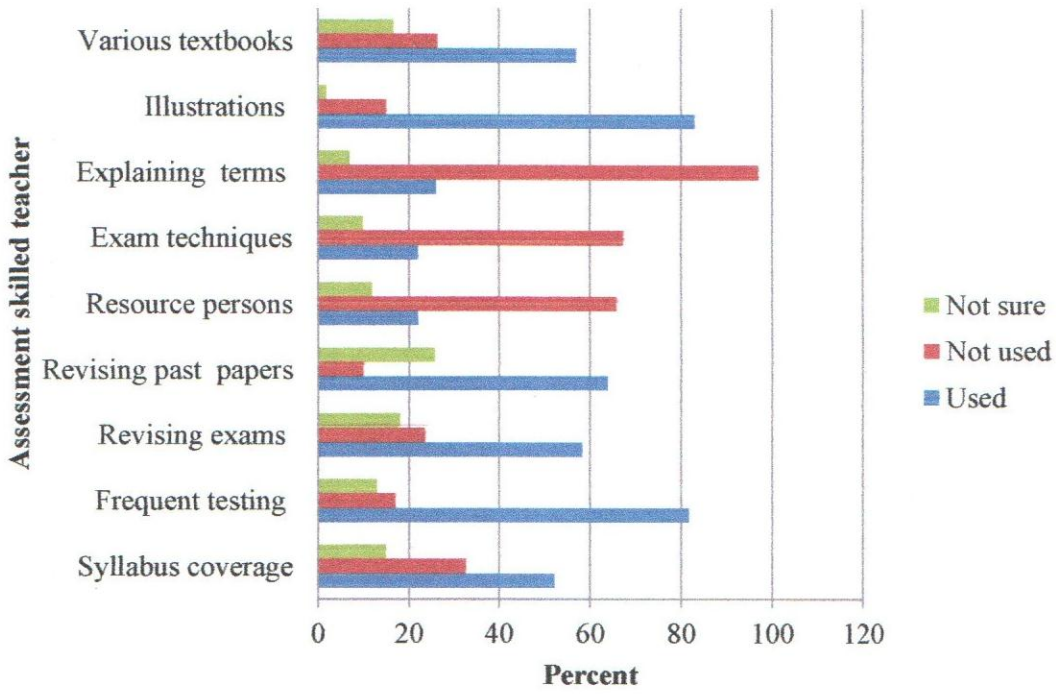

Figure 2: Use of Test Preparation Skill, Test Administration Skill, Test Marking Skill and Test Reporting Skill

It is noted from figure 2 that three methods which are, covering syllabus on time, frequent testing, and revision of past and current examination as well as use of illustrations were common methods used by teachers while use of resource persons and giving examination techniques were the least methods used.

4.5.2 Level of Teachers' Usage of Assessment Skills as given by Geography Teachers

Geography teachers provided information in regard to how they utilized their assessment skills when assessing students in their geography performance. Their responses on the level of usage are presented in Table 14.

Table 14

Level of Usage as given by Geography Teachers

Skills	V. poor		Poor		Average		Good		v. good	
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**
Test Preparation skill	0	0	0	0	47	30	26	16	86	54
Test administration skill	0	0	7	2	223	52	49	12	116	27
Test Marking skill	0	0	9	4	127	60	22	10	35	18
Test Reporting skill	0	0	3	1	127	60	47	22	23	11

Referring to Table 14, most teachers had high level of agreement that these assessment skills influenced student performance in geography subject. In preparing assessment tools 54% agreed that these skills contributed to good performance of geography students. However none of the teachers who responded indicated as very poor in terms of the relationship between assessment skills and geography performance. A fairly large number (30%) were rated as average in regard to the manner of comparison between subject performance and teachers' assessment skills. As for the testing skills, slightly more than half (52%) of the teacher were rated average, 2% of them being poor and 49(12%) were rated as good with 116(27%) being very good. Similarly most teachers (60%) rated as average in terms of in marking skills influencing geography performance with 9(4%) rating it as poor. Though 22(10%) and 35(18%) rated as good these assessment skills and subject performance. This rating was also supported by Gilbert (2014) in his work on using examinations as feedback to student work. Finally, 127(60%) of teachers had recorded as average on relationship between assessment skill of reporting and performance followed by 47(22% with good reporting skills and 23(11%) had very well on reporting skills to influencing geography performance. There were 3(1%) who had rated the relationship as poor. Their rating level of usage is presented in Figure 3.

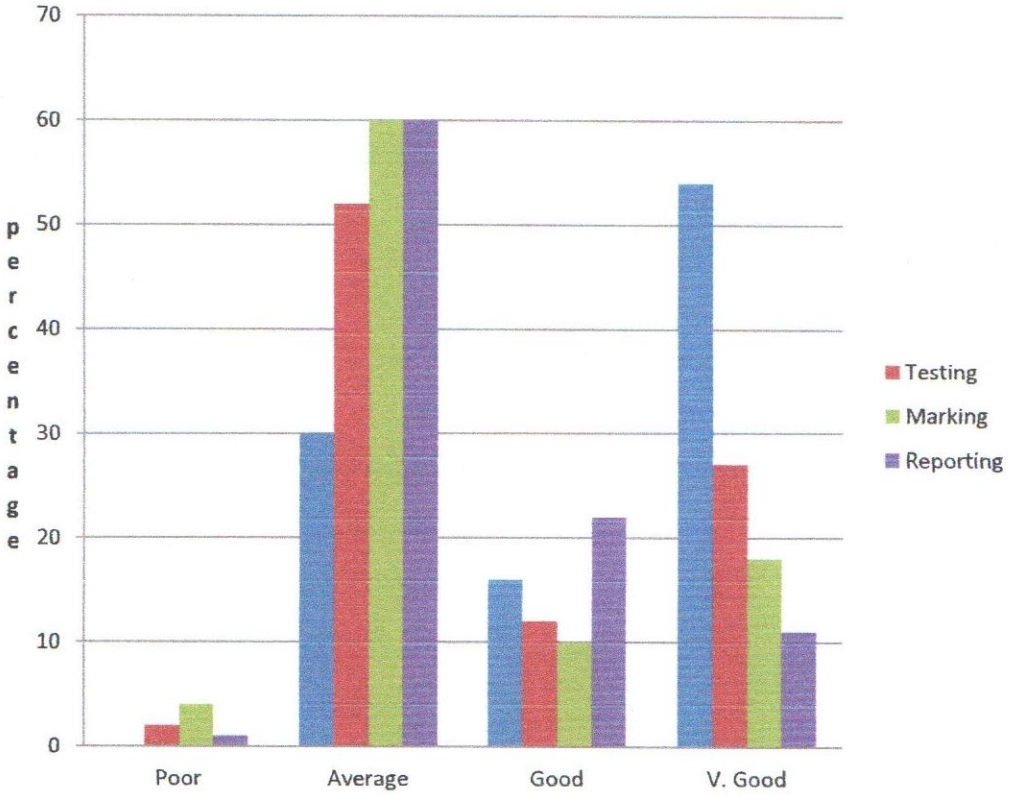

Figure 3: Geography Teacher's usage level of various Assessment Skills

Figure 3 shows that preparation skill was highly scored by teachers in terms of its influence in geography students' performance in the subject compared to other skills. Preparation skill is important skill because it carries the rest of other skills. However reporting skill was noted as least in terms of its influence on geography students' performance. There were notable advantages of having teachers trained in these assessment skills because geography performance improved as indicated by respondents in figure 3. Being able to possess these assessment skills gave teachers the motivation and professional competency required as suggested by Kiboss (2014). Assessment skill among teachers enabled learners to create self-confidence and was particularly visible in schools where geography subject was performed well by the students. Assessment skills training was also noted to have given geography teachers a strong foundation for better performance in subject. This observation is in agreement with Wanyama (2010) who noted that teachers' develop a strong sense of command when equipped with these assessment skills. Thus, teachers saw training in assessment as more motivating in view of its future use and subsequent readiness for competitive job market.

Assessment training exposed teachers to abundant resources including textbooks, audio and visual and other instructional materials. The appropriateness of assessment skill acquisition provided a wider scope of advantage for instruction superiority because of its richness in skills was also cited as a factor for its preference. Some respondents viewed assessment skills as an avenue that accorded them prestige and command that not only made them look professional but also encouraged learners to learn with associated success. Teachers were instrumentally motivated to teach when equipped with these skills because of its economic advantages and they were interactively motivated to teach it because concepts were explicitly dealt with that guaranteed learners a ticket of confidence associated with success.

4.6 Geography Teachers' Assessment Skills and Students' Performance

Objective three sought to examine the relationship between geography teachers' assessment skills and students' performance in secondary schools in Kisii Central Sub-County, Kenya.

4.6.1 Common Assessment Skills

First, the researcher established the various assessment skills used by teachers. This was an important area in the tail-end of teaching where the learner was assessed against what has been learnt. There are many assessment skills which teachers may be exposed to however; the study undertook to look at some of these assessment skills which were commonly found in schools (Table 15, 16 and 17).

Table 15:
Test Preparation Skill

Items	V. poor		Poor		Average		Good		v. good	
	F	%	F	%	F	%	F	%	F	%
Identifying test types	0	0	3	5.7	32	61.5	0	0	17	32.6
Designing tools to test cognitive level	0	0	0	0	20	38.4	7	13.4	26	50
Constructing clear items	0	0	4	7.6	26	50	6	11.5	14	26.9
Test items that are relevant	0	0	0	0	23	44.2	6	11.5	24	46
Moderating the test	0	0	0	0	42	80.7	6	11.5	2	3.8
Proof reading the test	0	0	0	0	33	63.4	4	7.6	5	9.6
Providing test resources	0	0	0	0	13	25	18	34.6	21	40
Observing time during the assessment	0	0	0	0	34	65.3	12	23	7	13.4

Referring to Table 15, majority of the teachers responded as being average in terms of their knowledge on these assessment skills of test preparation. The first area identified as critical for geography teachers was how to identify test types for respective classes. Except for designing testing tools where there were 50% of the respondents who agreed as being knowledgeable 38% ragged behind. Most of the teachers' had average skills (44%) in terms of their response on how to select test items which were relevant to students. The leading skill was moderating of tests at (80.7%) followed by observing time during the test at (65.3%), proof reading the test at (63.4%) and identifying test types (61.5%). This finding imply that although some geography teachers possessed assessment skills in all areas of testing however most of them were not well equipped to handle the testing process as per required standards of teaching profession and therefore more likely to disadvantage students.

Test identification skill among teachers may contribute to improved performance of student in examinations. As such teachers required to be equipped in such skill to enable them select those items for testing that will elicit desired result or cause learning to take place. This therefore means that teachers should be exposed to this skill so as to make learning more meaningful and interesting. Teachers are required to cover adequately the outlined topics before they are to be tested so that students are prepared before taking their exams. Adequate preparation is a skill that teachers require to enable them understand the extent a topic is required to be covered. It was noted that some teacher "under- teach" or others "over- teach" thinking that they have prepared their students well. There are cases when syllabus coverage is done by a teacher and not by students. This is a professional tragedy to which any geography teacher may commit if not skilled on adequate topic coverage (Robert, 2012). However, this was proven wrong by the findings of this study.

Tool designing is the most technical part of teaching profession which requires careful organization of intellect and skill to achieve desirable results. According to Kiboss (2015) a tool will fail in its purpose if it cannot measure what it is intended to measure. Geography teachers are expected to have this exceptional skill to enable them design tools that can elicit desired cognitive results. Test construction is a skill which entails the mechanical organization of an assessment tool. Geography teachers while planning out to construct a test should have clarity on the kind of examinees to be tested. In this regard, test construction

involves the physical outlay of a test as well as illustrations to be included. Test designing is the skill part applied to test tool which include the duration of the test and flow of questions. Geography teachers faces two major problems in test construction, the first being what to measure and the second how to measure it (Good, 2015). Assessing students work involves the use of a set of specified symbols whereby this symbols need to be understood by any teacher who is involved in assessment (Robert, 2012). Table 16 shows these assessment skill items and the rating of geography teachers.

Table 16:

Marking Skill components used by Geography Teachers

Items	V. poor		Poor		Average		Good		v.good	
	F	%	F	%	F	%	F	%	F	%
Using scaling, combing and weighting	0	0	9	0	32	61.5	8	15.3	1	1.9
Preparing marking scheme for the test	0	0	0	0	22	42.3	4	7.6	26	50
Scoring the test items	0	0	0	0	36	69.2	4	7.6	7	13.4
Making correct addition of scores	0	0	0	0	37	71	6	11.5	5	9.6

Combing skill involve the use of a convex (√) function to indicate that the student has scored an item correct and is rewarded while the concave function(x) is used to reward wrong response. Accordingly 61% of the respondents indicated as having average skills in marking while only 2% were registered as being very good in the use of the scaling, combing and weighting skills. Referring to Table 16 again 50% of the teachers responded as being very good in preparing schemes of work while 42% had average know-how. Scoring of test items was another item under this skill in which 69% responded as being average in the use of this item. Making correct addition on marked student work was one of the items which were rated poor among geography teachers. Maintaining high level of marking standards so as to guarantee students is important but some teachers showed lack of this skill. When making entries which are flawed is regarded as a serious professional mistakes which may lead to wrong decision and action made either by a teacher or student. This finding was in agreement with KNEC report (2015). Table 17 shows the rating response of geography teachers on reporting skill.

Table 17:

Reporting Skill items used by Geography Teachers

Skill Items	V. poor		Poor		Average		Good		V.good	
	F	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**
Preparing a report after analysis	0	0	0	0	33	63.4	15	28.8	4	7.6
Timely release of assessment results	0	0	0	0	25	48	30	57.6	5	9.6
Discussing results with students	0	0	1	2	32	61.5	2	3.8	6	11.5
Improving testing using feedback	0	0	2	4	37	71	0	0	8	15.3

It was established that majority of the teachers had average skill in reporting after a test had been done as indicated in Table 17. The best rated skill item was that of improving testing using feedback said by 8 (15.3%) teachers followed by results discussion skill item said by 6(11.5%). One positive development arises when teachers use feedback skill to enable them obtain understanding on how to initiate a discussion intended to improve their future teaching. Only 15% of the sampled population indicated as having had very good skill on feedback utilization. This finding was in agreement with KNEC report (2015).

4.6.2 Relationship between Geography Teachers' Assessment Skills and Students' Performance in Public Secondary Schools

Having established common assessment skills, the researcher sought to examine the relationship between teachers' assessment skills and students' performance in geography subject. This objective also aimed to test the null hypothesis which stated that there was no significant relationship between geography teachers' assessment skills and students' performance in secondary schools in Kisii Central Sub-County. Teachers were required to provide information on whether they had undergone through some form of training to equip them with assessment skills in geography. The data on training was then related with geography KCSE mean grades of their schools to determine whether there existed any relationship. The researcher used the KCSE mean grades to generally demonstrate how the teachers' assessment skills related to students' performance of the subject (Table 18).

Table 18:

Assessment Skills for Trained and Untrained against KCSE Mean Grades

Skills training	KCSE Geography Performance in 2014													
	D		D+		C-		C		C+		B-		Total	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Trained	1	1.9	14	26.9	11	21.2	2	3.8	0	0	0	0	28	53.8
Untrained	1	1.9	7	13.5	7	13.5	2	3.8	3	5.8	1	1.9	21	40.4
No response	0	0	3	5.8	0	0	0	0	0	0	0	0	3	5.8
Total	**2**	**3.8**	**24**	**46.2**	**18**	**34.6**	**4**	**7.7**	**3**	**5.8**	**1**	**1.9**	**52**	**100.0**

Table 18 shows that was one (1) teacher who had received training in assessment skills had a mean grade of D(plain) in geography subject in 2014 results while there were 14 teachers whose subject had a mean grade of D+(plus). There were 11 teachers who had a mean grade of C-(minus) while there was no teacher with trained skills in assessment with a mean grade of B- and above under the selected year of study. The Table also shows that there were 7 untrained teachers whose subject had a mean of D+(plus) while there were also 7 untrained teachers in assessment skills who obtained a mean grade of C-(minus) in their subject. However, there was 1 untrained teacher who scored a mean of B-(minus) in the subject. From the table it can be observed that the total percentage score for trained teachers in assessment skills was 53.8% while that of the untrained teachers was at 40.4%. This table was intended to compare the teachers with assessment skills against those without and was evident that trained teachers in assessment skills tended to influence performance of geography students. Figure 4 demonstrates the disparities by comparing the level of assessment skills training among teacher and its influence on performance in geography subject.

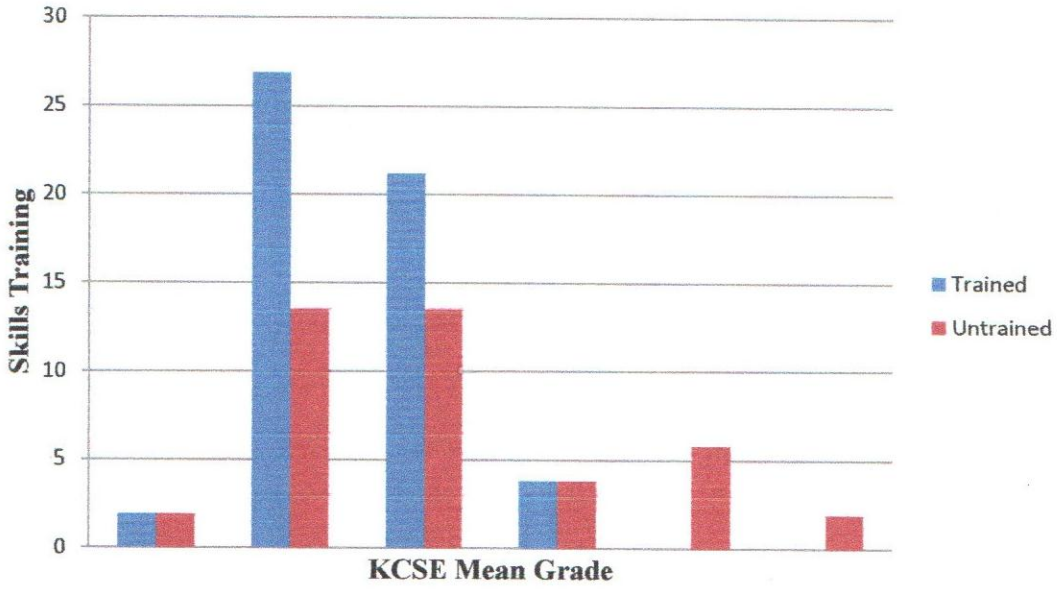

Figure 4: Teachers' Training in Assessment Skills verses KNEC Performance 2014

Referring to figure 4, it can be observed that there exist relationships in mean grades between teachers who are trained in assessment skills then those who are not trained. The bulk of the students who were taught by trained teachers in assessment skills attained mean grades of D+ (plus) and C-(minus), being the leading as compared to those of teachers not trained in assessment skills. Ironically the teachers who were not trained in assessment skills had the highest grades of C+(plus) and B-(minus). However the existing disparities might have been caused by students who were repeating in different schools and may have been taught by trained teachers before. As such, the researcher tested the hypothesis that there was no significant relationship between teachers' assessment skills and geography students' performance in public secondary schools in Kisii Central Sub-County.

t test was conducted at $p<.05$ level of significance to determine the influence of assessment skill training on geography performance. The disparities in KCSE mean grades between teachers with assessment skills and those without assessment skills were also revealed by the mean (.85) and standard deviation (2.191) as shown in Table 19 and 20, but could not show whether the disparities were significant. Hence, the t-test values were calculated given as;

Step 1;

Ho1: there was no significant relationship between teachers' assessment skills and geography students' performance in public secondary schools in Kisii Central Sub-County

Step 2;

Level of significance is equal to .05 and using a two tailed test

Step 3;

Table 19 shows the results of calculation of the variables with the assistance of SPSS package

Table 19:

***t* test calculations**

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	KNEC performance 2014 - teachers' training in assessment skills	.85	2.191	.304	.24	1.46	2.785	51	.007

Table 20:

***t*- test on the relationship between skills training and Geography Performance**

Mean	Std. Deviation	*t*	Df	Sig.
.85	2.191	2.785	51	.007

Step 4;

Referring to Table 20, the *t*- test of the two variables (i.e. training in assessment skills and geography performance at KCSE) with *t* test 2.785, p-value .007<.05, imply that there is a statistically significant relationship between the two variables. Consequently the result led to the rejection of the null hypothesis, Ho1, which states that there is no significant relationship between teachers' assessment skills and geography performance. This led the researcher to accept the alternative hypothesis Ha; which stated that there is a significant relationship between teacher assessment skills and geography performance in secondary schools in Kisii Central Sub-County. Student performance in Kisii Central Sub-County in 2014 had a M.S S of 4.6 according to KNEC report (2013) and (2014) as shown in Table 2 and that geography performance in Kisii Central Sub-County was poor. Training of teachers' is significant

towards addressing this challenge. Whereas there was relative increase in enrolment of students taking geography subject in most schools the situation was not reflecting improved performance of students. This finding about geography performance in Kisii Central Sub-County are in agreement with Kimayu (2013), who noted that the subject performance in KCSE examinations has been declining over the years and concluded that there were inadequate skills training on assessment.

4.7 Challenges in Preparing Students for Examinations

The process of preparing students for national examinations is enormous, but when done in an organized and planned manner will result to desired outcomes. Geography teachers had the following comments to make regarding the challenges they face while preparing students for examinations.

4.7.1 Teachers' Responses

In the study some challenges were noted to exist impeding effective preparation of students in their final examinations. The issue of broad curriculum was cited by 45% of the teachers a challenge leading to poor performance of geography subject. Inadequate skills of assessment by geography teachers were highly rated by 62% of the respondents, while 57.9 of them stated that their principals did not support their skill training needs. This finding supports Fitzsimons and Peters (2005) observations in that skill development derives power to perform better in teaching, although the level of training appears low in most of their sampled cases.

Most of the teachers' views were hinged on the need to augment them in assessment skills which in their consideration was to boost their assessment competence. It was noted in some schools (10%) of the sampled schools that the way the subject is assessed was determined by the value placed on training. This in turn influenced the way the subject performs in national examinations. Evans (2013) in his extended definition of the effective performance discusses three levels of effectiveness whereby premium on value is a key component towards performance. Thus, effectiveness involves placing worth on what is to be done in which case a person takes on the characteristics of attitudes which are internalized. He maintains that values such as that of assessment training could be appreciated by teachers to a point of being willing to be identified with it. The study sought to understand how much value was placed on skills enhancement as a tool to improve subject performance. This was

supported by the findings of the study in which it was revealed that teachers recognized skills training in assessment as a tool that helps in better performance of students in geography. Teachers also viewed assessment skills training as a means of encouraging and enabled them to express competently in class since it was a sign of expertise. They also saw it as a skill that enabled all students to participate in the lesson and a good number raised the view that teaching of geography was made easier for learners who grasped difficult concepts. A few teachers (11%) saw skill training in assessment as contributing to a smooth transition of learners from one theme to another in various classes. Despite the advantages associated with training in assessment skills, some teachers (15%) generally felt that assessment skills would not be attributed to better performance in geography subject.

This concurrence was in line with information obtained from reports and departmental documents in which some teachers appreciated that assessment skill training was one of their strategic resolutions in their Head of departmental meeting to better performance (Manguti, 2014). Despite limited skills in assessment, the dominant item raised was that assessment skill was valued by Kenya National Examination Council when conducting national summative assessment. Among the reasons noted against skills training was the fact that it created discrimination among teachers in staffrooms. These assessment skills were seen as threat and a liability rather than an asset in the educational process by a small section of teachers. The finding were in support of Nyakundi and Oganda, 2009) observations.

Twenty one per cent (21%) of the principals said that there were no measures put into place to enhance the performance of the subject while 23 principal said they had mooted plans together with the schools' Board of management to sponsor teachers for assessment training. The study also indicated that 84.2% of the principals held the view that they could discuss with the teachers concerning teacher training while 10.5 % stated that at times decisions to train on assessment skills was for the individual teacher decision.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of the findings, conclusions and recommendations for further studies.

5.2 Summary of Research Findings

The following is a summary of the findings in this study.

i. On the level of geography teachers' awareness of assessment skills in public secondary schools in Kisii Central Sub-County, it was observed that;

- Some of the teachers indicated as knowledgeable on assessment skills due to their awareness on pedagogical principles which were obtained through training whereas others indicated the contrarily.
- Teachers were more aware of the test administration 86.5% followed by being aware on test preparation skill (63.4%) and the least were on awareness of test marking skills (15.3%). There were only 23 % of teachers who responded as being aware about test reporting as a skill.
- Teachers' level of awareness of the items under the assessment skills was represented by 52.2% of them were aware of Syllabus coverage, 96.9% were not aware of maintenance of time schedule, 83% were aware of correct marks awarding, while 57% of them were aware of the need to invite resource person

ii. On the level of usage of the assessment skills among geography teachers' in public secondary schools in Kisii Central Sub-County, the following was observed;

- Test preparation skill: Assessment skills' training was viewed as relating performance of geography subject and teachers viewed that geography subject performance could be enhanced if they were augmented in these skills. Test preparation Skill enhancements created high prediction for teachers and tended to register improved performance in the subject then when the skill was not provided. Assessment skill training had both integrative and instrumental motivation most of which was seen to be lacking in geography teachers. Lack of educational learning resources was cited by teachers as an impediment in effective assessment of the subject, however many teachers' inability to develop suitable assessment instrument was noted to be as a

result of the shortcomings of the teacher training programs which gave little emphasis on acquisition of assessment skills. There were many teachers in our schools who could not apply the principles of assessment for diagnostic purposes because they were not given sufficient training.

- Test administration skill: Test administration is another skill which geography teachers noted as better used in their schools for day to day test management. Teachers sometimes used written tests for class assessment. However most of the tests developed were not up to the standard in quality as observed by most of the respondents. It was also noted that some of these tests were of low quality in originality, style, clarity of language and abilities tested. For effective test administration it was evident that some teachers placed little emphasis to develop their own tests as they did not see much value. Instead they simply lifted questions from past national examinations or from commercial publications.
- Test marking skill: Marking of secondary examinations provides great opportunity for the examiners, to re-evaluate their teaching methods in their subject areas as agreed by most of the teachers and principals. The effect of the knowledge and skills acquired in this exercise on teacher's work in the classroom added value to the teaching and learning. It was noted that as long as the teacher training programs do not prepare teachers to face classroom assessment challenges that enables them to assess and interpret learners' competencies and performance in geography, then teaching and learning performance cannot be improved. It can therefore be said that the value placed on assessment skill marking training in relation to no training, determines the way geography performance is achieved by students.
- Test reporting skill: Feedback from tests was used to inform teachers' approaches to teaching and the results were always positive. This argument supports the necessity for teacher training in assessment skills in geography subject, although most teachers were found to ill-prepared in this skill.

iii. On the relationship between teachers' assessment skills and geography students' performance in public secondary schools, it was found that;

- Majority of the teachers had average assessment skills.
- There were disparities by comparing the level of assessment skills training among teacher and their relation with performance in geography subject.
- Students' performance in geography registered low grades.

iv. On challenges faced by geography teacher while preparing students for examinations, the study found that;

- Issue of broad curriculum as a challenge leading to poor performance of geography subject was cited by 45% of the teachers.
- Inadequate skills of assessment by geography teachers were highly rated by 62% of the respondents.
- Lack of support by school principals on skill training needs was rated highly by 57.9 of the teachers.

5.3 Conclusions

Based on the findings of the study, the following were concluded:

i. The level of geography teachers' awareness of assessment skills in public secondary schools in Kisii Central Sub-County were found to be moderate with majority of them being knowledgeable on assessment skills due to their pedagogical principles obtained through training by KNEC.

ii. The level of geography teachers' usage of assessment skills in public secondary schools in Kisii Central Sub-County was found to be good, though a minority of them had problems with test preparation and reporting skills.

iii. The null hypothesis was rejected since the study found that there was a significant relationship between teacher assessment skills and geography performance in secondary schools in Kisii Central Sub-County.

iv. In preparing students for geography examination, geography teachers face three main challenges of covering broad curriculum, being inadequate in skills assessment and mixed support by school principals.

5.4 Recommendations

At the end of the study it was established that assessment skill training was a very essential component for geography teachers towards improving student performance. The following were recommendations out of this study.

i. Teacher's assessment skills were important predictors of the quality of performance of students in national examinations. Assessment skills enhanced effective teaching which aroused teachers' ability to set up desired educational outcomes. Therefore the ministry of Education should ensure that teachers are well equipped with these skills

in order to handle assessment well in our schools. To enhance the teachers' ability and learner's performance in geography examinations at KCSE level school administration should sponsor teachers for training as well as create advocacy on the importance of training in assessments skills.

ii. Test marking skill is regarded as an art and skill which must be trained and learnt. Policy tended to disadvantage teachers in newly registered schools. The teachers were not given equal opportunities to train in assessment skills. Schools should come up with favourable policies from their BOM aimed at making assessment an integral component in the school curriculum.

iii. The study also recommends the need to improve the library facilities where schools need to be equipped with adequate books and reference with currents content. This approach would help Geography teacher to have adequate preparation of their students at any level in secondary school.

iv. As part of efforts to improve on test administration in schools the study further recommends change of methodology in teaching hence the syllabus should be made practical and relevant to student's needs. Field work and field visit should be undertaken to enable the students blends practice of the theory. Since incentives give people the impetus to work hard, principals should encourage students of geography to work hard by putting targets and rewards for the best performance.

5.5 Suggestions for Further Studies

Based on the study findings and recommendations of the study, the researcher recommends further research to be conducted in the following areas.

i. Assessing the competency levels of geography teachers in utilization of teaching resources as a means of simplifying its teaching and learning.

ii. An exploration of the panacea to barriers in geography performance among gender distribution in secondary schools.

iii. Assessing the viability and imminent challenges of schools supporting geography teachers to train in assessment skills.

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APPENDIX 1

GEOGRAPHY STUDENTS QUESTIONNAIRE

Instructions

Read the questions carefully and choose the correct answer that truly reflects your honest opinion.

Part A; Students' level of awareness of Geography teachers' assessment Skills

Please put a tick [√] in the response given after each question or as otherwise as directed. There are various reasons why a student may select Geography subject. One of them is the teacher's assessing skills. In the table below choose the skill that your teacher used to influence your performance in Geography subject.

Statements	True	False
I was influenced by the way Geography teachers' prepare me before a test is done.		
I was influenced by the way Geography teachers' administered tests when the test was being done.		
I was influenced by the way Geography teachers' marked my tests.		
I was influenced by the way Geography teachers' report of how our class performed after the results.		

Part B; Level of use of assessment skills and performance of Geography subject

For each of the statements given in the table below indicate the level of your agreement with them by putting a tick [√] in the correct opinion.

No	Statements	Rating				
		Strongly agree	Agree	Not sure	Disagreed	Strongly disagree
(a)	Test preparation skill					
1	Teacher encourages Geography students to have positive attitude for the subject					
2	Teacher covers Geography syllabus on time					
3	Teacher teaches only those topics likely to be tested in national examinations					
4	Geography Cover the syllabus before ay test is given					
5	The teacher uses a variety of textbooks for Geography					

6	teachers Frequently use internal tests and external exams					
8	Teacher revise all past Geography KCSE examinations papers					
9	The teacher uses Couching in answering techniques					
11	The teacher uses illustrations to assist understand the subject					
(b)	Test administration					
1	The teacher announces when a test will be taken					
2	Providing test resources					
3	Observing time during the assessment					
(c)	Test marking skill					
1	Using scaling, combing and weighting					
2	Preparing marking scheme for the test					
3	Scoring the test items					
4	Making correct addition of scores					
(d)	Test reporting skill					
1	Improving testing using feedback					
2	Geography teachers Revise all Geography test exams done					

Are there any other methods used by your teacher to prepare students for national examinations that are not mentioned in the table above? If YES specify the below

1..... .....

2.....

APPENDIX 2

GEOGRAPHY TEACHERS' QUESTIONNAIRE

Instructions

Read the questions carefully and respond by putting a tick [√]in the appropriate cell or provide the answer in the provided space.

Part A; Demographic Data

1. Highest level of education Diploma/S1 ( ) Bachelor ( ) Masters ( ) other (specify) .....
2. Formal assessment training attended None ( ) KNEC ( ) Workshop/Seminar ( ) Other (specify) .....
3. How long in years have you been a teachers in your current station? .....

Section B; Assessment Skills

The items in the table below are types of skills that a teacher requires to effectively assess students' performance in Geography. Rate your abilities in the given areas using the given scale

Scale: Very Poor (VP) Poor (P) Average (A) Good (G) Very Good (VG)

No	Ability	Rating				
		Very Poor	Poor	Average	Good	Very good
(a)	Test preparation skill					
1	Identifying test types					
2	Designing tools to test cognitive level					
3	Constructing clear items					
4	Test items that are relevant					
5	Moderating the test					
6	Proof reading the test					

(b)	Test administration skill					
1	Providing test resources					
2	Observing time during the assessment					
(c)	Test marking skill					
1	Using scaling, combing and weighting					
2	Preparing marking scheme for the test					
3	Scoring the test items					
4	Making correct addition of scores					
(d)	Test reporting skill					
1	Preparing a report after analysis					
2	Timely release of assessment results					
3	Discussing results with students					
4	Improving testing using feedback					

Section C; Teachers' Awareness of Geography Assessment Skills

The table below gives skills used by Geography teachers to effectively influence students' performance in Geography. Rate your level of awareness of these skills using the scale provided.

Scale: Very Poor (VP) Poor (P) Average (A) Good (G) Very Good (VG)

No	Ability	Rating				
		Very Poor	Poor	Average	Good	Very good
1	Test preparation skill					
2	Test administration skill					
3	Test marking skill					
4	Test reporting skill					

Section D; Level of Use of Assessment Skills among Geography Teachers'

The items in the table below are Assessment skills among Geography Teachers. Rate your level of use of these skills using the scale given

Scale: Very Poor (VP) Poor (P) Average (A) Good (G) Very Good (VG)

	Statements	Used	Not used	Not sure
1	Test preparation skill			
2	Test administration skill			
3	Test marking skill			
4	Test reporting skill			

Section E; Relationship between Assessment Skills and Geography Students Performance

The table below gives assessment skills among Geography teachers. Rate these skills against their influence in performance of Geography subject in your school using the given scale

Scale: Very Poor (VP) Poor (P) Average (A) Good (G) Very Good (VG)

No	Ability	Rating				
		Very Poor	Poor	Average	Good	Very good
1	Test preparation skill					
2	Test administration skill					
3	Test Marking skill					
4	Test reporting skill					

Section F challenges in Preparing Geography students for National exams

1. What is your opinion on the assessment skills in your school with respect to:

   Training .....

   Experience .....

   Facilities .....

   Challenges.....

APPENDIX 3

PRINCIPALS' INTERVIEW SCHEDULE

The researcher to briefly explain the purpose of the study and information areas that are of interest to the study

2. What is the name of the school.....

3. The researcher to Seek information from the school principal on:

   - What is the number of Geography teachers in the school
     .....
   - What is the level of teachers' assessment skills training
     .....
   - What is the duration of teacher Assessment skills experience
     .....

4. What was the school mean standard score in KCSE for Geography results for the years 2012,2011, 2010 and 2009
   .....

5. What is your opinion on the assessment skills of the Geography teachers in your school with respect to:
   Training .....
   Experience .....
   Facilities .....

   Challenges.....

6. Do you facilitate Geography teachers to attend assessment skill in-service courses
   .....

7. Do teachers assessment skills affects your schools' performance in KCSE Geography examinations
   .....

8. suggest **one** (major) measure that should be put in place to enhance:

(i) Geography teachers assessment skills .....
(ii) Students performance in Geography .....

APPENDIX 4

TABLE FOR DETERMINING THE SAMPLE SIZE OF A FINITE POPULATION

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367

APPENDIX 5

RESEARCH PERMIT

THIS IS TO CERTIFY THAT:
MR. RICHARD OIRURIA OBONYO
of EGERTON UNIVERSITY , 4186-4200
kisii,has been permitted to conduct
research in *Kisii County*

on the topic: *INFLUENCE OF GEOGRAPHY TEACHERS' ASSESSMENT SKILLS ON SECONDARY SCHOOL STUDENTS' PERFORMANCE IN KCSE EXAMINATIONS IN KISII CENTRAL DISTRICT, KENYA*

for the period ending:
3rd November,2016

.....
Applicant's Signature

Permit No : NACOSTI/P/15/82801/8565
Date Of Issue : 4th November,2015
Fee Recieved :Ksh 1000

.....
Director General
National Commission for Science, Technology & Innovation