FACTORS AFFECTING THE IMPLEMENTATION OF GEOGRAPHY CURRICULUM IN SECONDARY SCHOOLS: A CASE OF SUBA DISTRICT

BY

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DECLARATION

This project is my original work and has not been presented for a degree in any other university.

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The research project has been submitted for examination with my approval as University Supervisor.

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DEDICATION

To my dear wife Judith Atieno Achola and my children Clinton, Martha, Stessie and Cheril for their support, encouragement and sacrifice all the way to the completion of this research a project.
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First of all, I do express my heartfelt gratitude to God. I would never have made it without His sufficient Grace and strength.

I wish to thank my family for their support and help. I especially thank my wife whose invaluable assistance made this project a reality.

I do thank my supervisor Professor Okech J.G. for his immense contribution in the preparation of this work. His contribution and sacrifice made the project what it is.

I also wish to thank my friends, relatives and colleagues for their invaluable support, encouragement and assistance. Thank you for standing by me.

Special thanks goes to Kibegi for typing the work. Mr. A.D. Bojana deserves special gratitude for editing and proofreading the work.

Lastly but not least, I wish to thank all the respondents in Suba District (secondary schools) who volunteered information that was necessary for the success of the research.
The primary purpose of study is to identify factors which are currently affecting implementation of geography in selected secondary schools in Suba District in Kenya.

Generally it has been noted that there is poor performance in Geography in KCSE for the last three years compared to other humanities such as Christian Religious Education, History and Government and social Education and Ethics. This has therefore prompted such a study to be carried out so as to establish the major factors that affect the low performance.

The major areas of investigation will focus on the available physical facilities, teaching learning resources, qualification of Geography teachers, methods of teaching, methods of evaluation, preparation of lesson plans and schemes of work by Geography teachers, the preparation of teachers through pre-service and in service and the assistance the school heads offer to Geography teachers.

The study will be conducted in seven out of eleven schools in the district from which the study sample would be drawn. From each school at least 40 form four students will form sample, at least two geography teachers from each school will be used in the study and at least each head teacher will be included in the study sample.
The researcher will collect the information by use of questionnaire, lesson observation schedule direct observation of the physical facilities. The data collected from these information will help in the analysis, interpretation, conclusions and recommendations to the readers.
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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Generally it has been observed by Kenya National Examinations Council that geography is among the poorly performed subjects for the last three years, for instance, in 1999 the mean score for geography was 5.733, 2000 it was 4.611 while 2001 it was 4.360. (source KNEC newsletters 1999, 2000, 2001).

In 2001, the result analysis by the provincial inspector of schools (Nyanza Province) indicated that geography became among the humanities (social sciences) to score the lowest mean of 5.021 in comparison to history, Christian religious education, and social education and ethics with a mean score of 7.039, 8.385 and 9.133 respectively.

In 2001 mock analysis for the district, geography recorded the lowest mean score of 3.666 while other humanities such as history, Christian religious education and social education and ethics had a mean score of 7.081, 8.720 and 9.104 respectively. This means that geography had been on the lower end in terms of mean score, this raises concern.
In 1998, the chief inspector of schools in collaboration with Nyanza Provincial Inspector of schools noted through circular INS/ME/B/21/2/VOL./11/194 dated 27th October 1998, sent to all secondary schools in the country, that certain topics and parts of topics were not being covered by Geography teachers at various levels from form 1 to form IV.

The omission of these topics suggests that teachers seem not to be prepared fully to handle certain topics or they lack certain materials. The Kamunge's Education Commission Report (1988) recommended that the government adopt cost-sharing policy in an effort to finance education. The government therefore stopped the grant in aid to schools as well as school equipment scheme supplies. The change in financing of education through cost-sharing had these implications included:

- Parents were expected to contribute towards the supplies of chalks, exercise books, textbooks, and other teaching learning resources while the government was left with ensuring that teachers are posted to schools.
- Parents are expected to contribute money through PTA / harambees for the construction of physical facilities such as classrooms, laboratories, libraries, dormitories, kitchen, dining halls and equipping them.
• In some cases the school administration faced shortage of manpower and had therefore to hire teachers through BoGs to compensate for the shortfall. The school administration had therefore to ask parents to contribute for the employment of extra teachers.

• Schools administration had difficulties in provision of required facilities for learning and this often led to confrontation between the students and administration leading to strikes.

These issues had great impact on the general administration of curriculum. Suba District is one of the lake region districts recently declared by the parliament as arid and semi-arid region (8th parliament, motion sponsored by Dr. Oburu Odinga). Suba District has impassable roads, with hills and valleys interpassing thus creating a rugged topography. Crops do not do well due to harsh weather conditions, so people who depend on crops for their livelihood cannot manage. This makes parents in Suba District, who depend on crops unable to pay school fees. The failure of parents to pay fees constraint the school ability to purchase some of the required materials for teaching.

The current geography curriculum for secondary schools was initiated in 1981 at the advent of 8-4-4 system of education and in 1985 the new syllabus was initiated in secondary schools in Kenya.
There has not been major changes in geography curriculum content with exception of the examination structure or evaluation of the subject at national level. The KNEC short changed what used to be multiple choice questions with structured and short answers in section A in both paper one and two. Since it was a rather new curriculum to be implemented, it was bound to experience certain problems during various stages of implementation.

Oluoch, (1982), noted some of the problems that usually come with implementation of new curriculum in schools as:

Implementation can hardly take place uniformly across the country or geographical area concerned. Some schools will be ready while others will not.

He also noted that delay in the supply of new curriculum materials such as teaching and learning aids from curriculum development centre to recipient institutions hinders the curriculum implementation.

In-servicing of teachers is a pre-requisite for curriculum implementation. Beauchamp (1975) asserted that;

a necessary pre-requisite for curriculum implementation is the commitment by teachers to use the curriculum as a point of departure for development of instructional strategies.
The strength of the commitment may be enhanced by an implementation directive being part of the curriculum, teacher participation in the curriculum planning and administrative leadership. There has not been any study conducted on geography curriculum implementation. The studies that were conducted were on the other subjects and were focusing on primary level. Mbugua (1987) conducted a study on problems affecting implementation of GHC (a combined course) on social studies at primary schools. Midega Samson (1990) conducted a study on the problems in teaching social studies as viewed by subject teachers in Nyakach Division of Kisumu District. Masingule Joseph (1985) conducted a study on problems affecting implementation of the new CRE curriculum in selected primary schools in Nairobi.

Mse G S, (1986) conducted a study on factors that affect the training and learning of primary school Arts and Craft and Agriculture as pre-vocational subjects in Hamisi division of Kakamega District. This study will focus on one subject (geography), and the main factors affecting the implementation of geography curriculum in secondary schools in Suba District.

1.2 Statement of the Problem

From the above background to the study, it has been observed that geography is among the poorly performed subjects for the last three
years. For instance, in 1999 the mean score for geography was 5,733; 2000 it was 4611 and in 2001, it was 4,360 (KNEC Newsletters 1999, 2000, 2001).

Given this scenario, this study will specifically investigate those factors that affect effective implementation of geography curriculum in secondary schools in Suba District of Nyanza Province. The factors relate to availability of teachers' guides, teaching methods, professional commitments, attitudes of students and teachers towards geography teachers' qualifications, physical facilities and equipment, evaluation methods, in-service and pre-service of teachers.

Ananda (1990) when highlighting factors affecting the implementation of school curriculum admitted that:

Curriculum implementation is a gradual process and it is true that uneven variations will occur depending on the curriculum strategy adopted and style of curriculum use.

Parents and the community at large have lamented over the poor performance in geography in KSCE at parents-teachers meetings in Suba District. In view of the foregoing, there is need for a research to determine the causes of poor performance in the subject.

Fullan as quoted by Ananda (1990) considers the following as factors affecting the successful adoption of a curriculum:

- Access to information
In Kenya, the above factors have adversely affected the implementation of any new curriculum. The current 8-4-4 system is no exception. Good performance in any subject can only be realized when funds, physical facilities and teaching/learning resources are available to enhance learning. This study will try to investigate those factors and suggest solutions on how performance in geography can be improved in Suba secondary schools.

1.3 Research Questions

The following questions were formulated for the study:

1. Are there qualified geography teachers?
2. Is geography syllabus adequately prepared for implementation?
3. Were geography teachers well prepared/trained as to participate in the implementation?
4. Do schools have adequate teaching/learning resources for use by the geography teachers?
5. Which methods of teaching are used by geography teachers in secondary schools?
6. Are there any attitudes towards geography teachers and students?

7. Which methods of evaluation are used by teachers and how frequent?

8. What are the effects of pre-service and in-service on geography teachers in secondary schools.

1.4 Purpose of the Study

The main purpose of this study is to investigate factors affecting the implementation of geography curriculum in secondary schools in Suba District.

Specifically, this study investigated the following issues:

1. The professional and academic qualification of geography teachers.

2. The teaching experience of geography teachers.

3. Time allocated (lessons) to teaching geography.

4. Use of the teaching learning resources in teaching geography.

5. Teaching methods used by geography teachers in secondary schools.

6. Role of in-service and pre-service on teachers’ performance.

7. The attitudes of teachers and students towards geography

8. Effects of in-service and pre-service of geography teachers performance.


11. Quantity and quality of physical facilities for use in school.

12. Assistance headteachers give to geography teachers in curriculum implementation process.

1.5 Objectives of the Study

1. To find out the academic and professional qualifications of secondary geography teachers.

2. To find out the teaching experience of the teachers.

3. To find out whether teachers use the teaching/learning resources in classrooms.

4. To identify teaching methods used by geography teachers in secondary schools.

5. To determine whether teachers are able to use geography syllabus without problems.

6. To find out whether in-service and pre-service of geography teachers affect students’ performance.

7. To find out whether students are able to understand curriculum with ease.

8. To evaluate the students and teachers’ attitudes towards geography curriculum.
9. To find out the evaluation methods used by teachers in evaluating students' performance.

10. To find out whether secondary schools have enough physical facilities for use in schools.

11. To find out if headteachers assist geography teachers in curriculum implementation.

1.6 Significance of the Study

The researcher hopes that the finding of this study will help in the following ways: Geography teachers will be able to improve upon methods of instruction for effective implementation of geography curriculum. The implementers such as education officials, headteachers and teachers will modify or change the resources used in teaching geography to make them more relevant to the curriculum.

The ministry officials and the curriculum developers would be able to allocate enough time for teaching – learning geography in secondary schools. The KNEC will be able to adjust their methods in geography for further improvement of implementation in secondary schools. Teachers will be able to modify their assessment methods in geography for further improvement of implementation in secondary schools. The findings will also add the efforts being made in Kenya since there is no adequate research done in this area of Geography in secondary schools.
1.7 Assumptions of the Study

This study will be based on the following assumptions that:

- Geography teachers use learning resources in their classrooms.
- Teachers are competent and follow the syllabus.
- Teachers are inserviced.
- Secondary schools have physical facilities.

1.8 Limitation and Delimitation

The following are limitations of the study:

Limitations

The use of form four students and ignoring other forms may give false impression students face in learning geography. This is because form four students are busy and the syllabus also start from four 1 – 4.

The time frame within which the study is to be conducted is short. Lack of finance, inadequate time and distances between schools will not allow the researcher to cover all the schools in Suba District.

1.9 Theoretical Framework

The systems approach Garlach (1975) is found in everyday vocabulary of a person working in the field where some kind of technological knowledge is applied. In industry, business or implementation of an
innovation, starting a new large-scale project or changing any existing strategy, a systems approach is recommended. It is important to note that all systems have something in common the basis of which they all fall into one category; a system.

A system has the following characteristics:

a) A well-defined goal (known as purpose of its movement or function).

b) More than one element (or parts).

c) All elements work in harmony. (Each element has its own function which itself contributes in achieving the goal of the system).

d) Provision for a feedback (knowledge of performance)

Important of a systems Approach:

It has an in-built feedback provision which takes care of the system's progress in the right direction e.g. in refrigerator, the thermostat controls or maintains the temperature. Whenever there is a deviation from the required level in either direction, the thermostat will either keep the motor running or put it off. The deviation or say the knowledge of error is utilized in maintaining progress. So, by following the same principle in training, it is possible to have such a feedback which will constantly provide the learner with knowledge of his progress and further help him to continue until he has learned what he was supposed to learn during the specific learning session.
which will constantly provide the learner with knowledge of his progress and further help him to continue until he has learned what he was supposed to learn during the specific learning session.

1.10 Conceptual Framework

![Diagram](image)

The above model has elements which are incorporated in teaching learning approach. This model is applicable to the education system as a whole or to teaching of a unit or even to a single bit of information. The first step should be the desired output as it is in any activity, we should know what we want to achieve by the activities, that is, in a school or teaching system, the teacher should decide what his learners...
should become after they have undergone his teaching process or what type of change to expect in his learners owing to his teaching.

Procedure, to be followed consists of the teacher’s actual participation in shaping his pupils to meet the expected standard of change. To do this, he will have to apply tools and techniques suitable to the discipline of the expected ability. The tools and techniques selected must be helpful to carry out a teaching procedure.

Feedback is an essential element of the systems approach. It carries a wider concept than our normal psychological concept (feedback, reinforcement-incentive-motivation) does. Feedback used here implies the knowledge of performance. Any diversion from the path is accurately measured and the information passed immediately to the elements responsible for movement where it is utilized in rectifying the error. Thus it becomes possible for systems to maintain their expected progress in right direction.

Application of the Systems Approach to Classroom Teaching Programme

In classroom teaching programme, after deciding, the expected behavioural change, evaluation criteria are developed. Also at the same time, content material, is chosen. This content is not just exposed to the learner in one whole. It is itself made of so many small bits of information, understandings and skills.
The content should be analysed into a number of learning bits, at all the six levels and for all the whole topic into, facts procedures, concepts, rules, reproductive skills and productive skills (content analysis).

When this has been done, the teacher uses methods appropriate to the levels and age of learners, then organizes activities and resources for instruction and both are believed to lead to learning outcomes.

Through evaluation the objectives are evaluated and if the objectives are not met, then the process goes back to the content analysis and the whole process is repeated until the desired behaviour is realized from the learner.

1.11 Definition of Significant Terms

Curriculum implementation: - taking specific steps to ensure that the curriculum developed reaches and is used in school.

Curriculum: - all the experiences and activities students undertake under the guidance and direction of the school.
Secondary school: is a level of education or grade from form one to form IV in Kenya.

Headteacher: refers to either a man or a woman in charge of a secondary school; he/she is the school chief executive with administrative, supervisory financial and management and others roles.

Teaching/learning resources: the money, material and people necessary for pursuit of educational goals.

BoG: Means board of governors, a body charged with responsibility of managing school by the Ministry of Education.

PTA: Means parents teachers association. It is a body made of teachers, parents to assess the running of schools. Ominde report of 1964 was the first education commission to recommend that schools should have parent teachers association.
System, is a system of education that was recommended in 1981 by presidential working party on second university under chairmanship of Mackay. It proposed the structuring education system from 7-4-2-3 to 8-4-4. This meant that there should be eight-year primary level, four year secondary level and four-year university level.

Physical facilities – refers to physical structures which are used in the implementation of the curriculum. They include classrooms, chairs, locker, desks, administrative block, library, laboratories, staff rooms, geography preparation rooms etc.

KIE Kenya Institute of Education. This is an institution that oversees the general administration of curriculum matters for instance, it develops and publishes curriculum materials at a low-cost to be sent to schools. These are like syllabuses, textbooks, maps etc. It also carries out researches on education regularly.

C.R.E: Christian Religious Education.
S1/Diploma: refers to trained teachers who had qualified for Kenya Advance Certificate of Education (KACE) and had undergone professional training for two years in the diploma colleges.

ATS: - Approved teacher status. Primary or secondary teachers with S1 qualifications who have been promoted to graduate status on merit.

Untrained graduate teacher: - one who had undergone university education but never had any professional training as a teacher and is currently employed as a teacher in secondary school.

Trained graduate: one who trained at the university and took a professional course. Now they are holders of bachelor of education degree.
2.1 Literature Related to Problem of Implementation

Ananda D.A (1990) when highlighting factors affecting the implementation of a school curriculum admitted that:

Curriculum implementation is a gradual process and it is true that uneven variations will occur depending on the curriculum strategy adopted and the style of curriculum use.

Giacquint (1981) identified in the study entitled implementing organizational changes in urban schools, the following as strongly correlated with successful implementation;

- willingness to adopt
- availability of resources
- organizational compatibility

Hawes H. observes that:

Even if people are ready, willing and able to implement new policies, they cannot do so unless certain administrative, financial and material criteria are met.

Fullan as is quoted by Ananda D A (1990) considers the following as the factors affecting the adoption of a curriculum;

- access to information
- advocacy from central administration
- teacher pressure or support
• community pressure, support, apathy, opposition
• availability of funds
• bureaucratic incentives for adoption

He also identifies implementation factors under three categories. These include:

• Characteristics of change.
  
  The need and relevance of change, clarity, complexity and quality and practicability of the programme.

• Characteristics at the school level. These are adoption process; administration support and involvement, staff development (in-service) and participation, timeline and information system (evaluation), board and community characteristics, teacher characteristics and orientations, teacher-teacher and teacher-pupil relations.

• Characteristics external to the local systems, thus, the role of government and external assistance. All the above mentioned authors have similar factors which they view as affecting or influencing curriculum implementation.

These factors can be summed up as follows:

• Administrative machinery needs to ensure that adequate communication takes place and that provided they are reasonable, the demands for manpower and its development
made by a curriculum can be satisfied. Communication of one of the strong factors affecting African system of education. All too often headteachers, teachers and parents are ill-informed about intended changes in school programme. Communication has therefore to be effective if curriculum implementation has to take place successfully.

- A policy for school buildings and adequate furnishing which is constant with reasonable demands made by the curriculum is yet another factor.

In most African countries, this is often lacking. In Kenya, to some extent, this shortcoming has been addressed. The parents have and still through voluntary means provide some of the physical facilities such as classrooms, workshops and home science rooms at the primary level. This is not to say that the provision of these facilities is not a factor influencing the implementation of a school curriculum at the secondary school level. In some cases, especially in the rural areas, some of these facilities may not be adequate and appropriate.

- facilities for the production of suitable materials at suitable costs and inadequate number is a factor to be much considered. With regard to the 8-4-4 school curriculum, additional textbooks have had to be produced and purchased for use by learners in all schools and in all subjects since 1985 when the change was
initiated. Teachers have equally needed textbooks and reference books for every subject. There has been a need to purchase teaching aids, stationery and equipment for teaching especially the newly introduced practical subjects- home science, art and craft, agriculture, physical education and business education. The cost of these materials and equipment was estimated at £1 per child to be provided by the government. However, this estimation is far from adequate and parents have had to augment that which cannot be provided by the government.

- How effective is this provision being met? There is therefore a need for an efficient system of ordering, distribution and even storage of such materials so that they actually get to and remain in schools.

The implementers and users of the curriculum are therefore greatly handicapped with regard to relevant information, needs and skills to be acquired (Daily Nation Jan 16 1984, pg. 14 col. 4).

Kyalo and Omwadho expressed the same fear. Materials and physical facilities are vital for both teachers and pupils in the teaching learning situations. Any trace of inadequacy leads to frustration and the motivating factor in terms of comfort diminishes.
Financial control must be efficient and at the same time flexible enough to allow for necessary regional and local variations if curriculum implementation has to be effective. The sources of funds have to be clearly identified if this factor is not to be a major setback to curriculum implementation.

For any effective implementation there is need to consider the quality and quantity of the implementers charged with the responsibility of interpreting the new curriculum into practical terms.

With regard to the 8-4-4 school curriculum, the orientation of teachers and field administrators to handle the new primary school curriculum is a very important factor. Other than the orientation element, the availability of teachers and field administrators in adequate numbers for purposes of maintaining the educational standards is also crucial for the effective implementation of the 8-4-4 school curriculum at the primary school level.

Kenya lacks in quality of staff. For instance by 1979, 35000 untrained teachers (UT) had only primary or junior secondary education. According to Republic of Kenya, The National Committee on Educational Objectives and Policies.

About 11,500 untrained teachers were recruited for the 8-4-4 programme and this has continued to grow at the rate of 3% per

Other notable factors in curriculum implementation include the need to change the organization setup at school and classroom levels between the schools and community, staff increment, training and retraining of all concerned, provision of resource facilities for teachers and other workers in the field, a change in pattern of examination and assessment, and the need to venture into an explanation of the changes to parents and the community and their improvement in implementation.

The problem of any curriculum implementation are within the school, around the teacher, in the community and within the administration.

Beck R.H. (1960) asserts that;

The personality of the teacher must be included in the curriculum. In fact, the whole community and beyond that, the total culture affects the children and to the extent that they too are part of the curriculum and constitute problems of curriculum implementation.

Because of these and many other factors, any curriculum change must demonstrate superior benefits to the existing one. The curriculum has to continuously reflect the constantly changing society.
In curriculum, there was the important question of maintaining and strengthening a sense of national unity which had implications for language and the content of subjects like history and geography. The pressing need for production of manpower meant that demands from higher levels of education system had to begin downwards at the primary school level and more particularly, the curriculum.

All these discussed issues pertaining to education in Kenya revealed the increase and rise in government expenditure on education due to the rapid population growth that saw Kenya have about 1.2 million children starting primary school in 1981.

The first step in curriculum reform therefore, was the review of the primary school syllabus with the aim of reorganizing its content. There was intensive teaching of English and Mathematics from class one and the localization of geography, history and civics syllabuses was also started.

Commissions were therefore appointed to review the nature and structure of curriculum and prescribe means and strategies of implementation. These include; The Ominde Commission (1964), the Kericho Conference, The Ndegwa Commission, the Bessey Commission, the Gachathi Commission (1976) and the Mackay's Presidential Working Party (1981).
These commissions, all called for the modification, diversification, localization and Africanization of the curriculum. They advocated for a curriculum that would cater for the needs and aspirations of all the children who entered school, the dropouts inclusive. The commissions called for the education for self-reliance at all levels of school, especially the primary school level.

The commissions further urged the need for more highly trained and qualified manpower. This saw the need for the development of teachers advisory centres, resource centres and curriculum panels all vital in curriculum implementation. They advocated for the training of curriculum developers by KIE and the enlargement of the inspectorate for efficient supervision of curriculum implementation.

They also recommended a eight-year primary school education in which the following were to be components of curriculum:-

- Development of literacy and communication skills through the learning of language (mother tongue, Kiswahili and English).
- Development of numeracy through the learning of maths.
- Development of scientific outlook through the study of general science.
- Development and acquisition of social and cultural knowledge, skills and attitudes through the teaching of history, geography.
and civics, religious education, music, art and craft and physical education.

- The acquisition of work oriented knowledge and skills, through the teaching of vocational subjects such as agriculture, business education, home science, art and craft and community development.

Supporting the views advanced by Kyalo and Omwadho concerning curriculum innovation, Hawes 1979 and Oluoch (1982) among other curriculum writers have emphasized that for implementation of a curriculum or innovation to succeed, the right conditions should prevail in the institution.

Oluoch (1982), observed that these conditions include in-servicing of teachers, availability of adequate materials, availability of teaching and learning aids and equipment and provision of the necessary physical facilities.

Warwick (1976) suggested several rules to be adhered to in curriculum change. They are:-

- Planning for change should take place at least six months in advance.

- The planning of curriculum change should never be rushed.
• The implementers of change must be involved at all levels of curriculum innovation.

• There should be monitoring of events throughout the process.

The preparation of curriculum implementers is indeed an essential element in bringing about success and in promoting educational programmes. Presence of in service programmes workshops and seminars help to prepare all those involved in the implementation process. They help to acquaint the implementers with the new curriculum since they become familiar with how new curriculum has been initiated and how it can be implemented.

In support of the importance of in-service programmes, Hawes (1979) notes that:

The implementation of a new programme does not only depend on the retraining of teachers, but also on the attitudes, knowledge and skills fostered during initial training.

It is important that programme materials are sent to implements in time so that the programme is run as scheduled. The distribution of school equipment is fairly a common problem in Kenya in that school equipment do not reach some schools at the same time they are required.
2.2 Roles of Implementers of Curriculum

The implementers in question are headteachers, teachers and parents. Curriculum innovation requires great efforts from implementers. This is because a curriculum cannot be interpreted and effectively put into practice without the actual and active participation of implementers at all levels.

The job of educational leadership is so immense that it cannot be accomplished by individuals working independently. The headteacher is the chief executive for school. The success of any depends on how effective the headteacher is as an administrator with regard to curriculum implementation. The headteacher’s major task is to make the purpose of curriculum clear to everyone. The headteacher also ensures that necessary educational facilities and financial resources are available. He also motivates his staff, pupils and parents to ensure excellence in performance of work.

Mbiti, (1974), observed that

A teacher must endeavor to be the best and most effective teacher on the school staff to the end that those who serve under him may follow his good examples.

Headteachers should be able to assist the teachers in their work. This can be done by providing them with all necessary teaching and learning materials which are required. However, this does not assure the headteacher that the teachers are doing as required. Hence there
is need to see teachers' schemes of work, daily lesson plan and students' performance record book.

In order for headteacher to ensure that the teachers in his or her school are teaching effectively, he or she has to visit the classroom to see how the teachers put what they have stated in their books into practice. In support of this view Gallan (1971) points out that;

Watching a teacher present a lesson plan which he is proud of will give the headteacher a good estimate of the teacher's potential, for it is only through classroom visits that a school headteacher can know the potential of his teachers and the problems teachers encounter during classroom instruction.

Implementation also involves the preparation of teachers' programme materials where there is a need for follow-up and evaluation. These teachers should participate in all these areas of curriculum processes.

Hawes (1979) identifies two main types of processes in curriculum change. He observed that:

In the simplest analysis the task of curriculum implementation can be said to involve two main processes: first, changing the attitudes of policy maker, administrator, teacher, parents and ultimately learners. Second, providing the material and administrative means to make this possible.

Towards the stated processes the teacher is at the centre of production of material for learning and teaching. Thus at the stage of implementation of curriculum process there are a number of
techniques that must be applied in order to keep the teachers well informed of the programme.

According to Adewole and Sachsenmeir (1979) (eds), the major techniques are:

Pre-service training: This simply suggests the preparation of the beginners to participate in the implementation of the new programme.

- In service programme: This programme accommodates all teachers who have not passed through the formal teacher training programme who for one reason or another are resistant to change in educational system. This will acquaint the teacher with the curriculum changes in terms of scope, method, materials and evaluation procedures adopted.

- Workshops: These would be for those teachers already in the field trained or untrained. Workshops should be organized by the subject specialists to acquaint the teachers with application of the new programme in each subject.

- Radio, Television and Newspapers: These are essential media in affecting curriculum change. These would assist the teacher adopt the new curriculum within their own working environment without undue inconvenience to them and their students. Programme through these media will involve what is expected of them and the teacher.
2.3 Resources for implementation

It is very important that teachers get the required materials in good time and with ease. Although transportation can be a major setback, this can be organized at the very local level to avoid delay. To alleviate the above problem, the development of the research centres, will help considerably in developing programme users. There is need to use the above techniques to prepare teachers for effective implementation of 8-4-4 curriculum.

The report of the presidential working party on education and manpower training for the next decade and beyond (Kamunge Report, 1985) recommended that the cost of financing education and training be shared between the government, the communities and parents. So it requires the parents and the community to assist in financing education of their children.

Kimathi (1998), is of the opinion that parents are expected to provide the schools with the required teaching, learning materials. They are also required to raise funds for the construction of physical facilities and equipping these buildings.

The availability of relevant and adequate material for teaching and learning is very crucial for effective implementation of geography curriculum. Since the introduction of 8-4-4 system of education in
1985, it has been necessary to produce new teaching and learning materials to be used by teachers and students in all secondary schools. For instance, materials such as wall maps, world globes, atlases, manila papers and many others for map work and statistics topics in geography.

In her study Ananda (1990) found that most of the sampled schools in Emuhaya Division lacked adequate teaching - learning materials. These included textbooks, teachers' guides, reference materials, games facilities and stationery. The students brought to school the teaching learning materials they could get from their homes.

The implementation of a school curriculum will be affected by lack of adequate physical facilities. The study of Ananda (1990) revealed that most of the schools in Emuhaya Division in Vihiga District lacked adequate physical facilities such as classrooms, laboratories and home science classes.

The parents have and are still continuing to provide some of these vital facilities such as classroom, workshops and home science classes but due to financial and material limitations, they are not able to provide the school with the adequate physical facilities.
For any effective curriculum implementation there is need to have adequate and qualified curriculum implementers who are charged with the responsibility of interpreting the new curriculum into practice. With regard to 8-4-4 system in 1985, more teachers were employed since more classes were added in primary schools.

Another problem that faced the new system was that there was lack of adequate teachers to teach technical subjects, so there was need to train teachers for these subjects. The new system also faced problem of lack of adequate in-service courses to equip the teachers with required skills and knowledge to manage the new curriculum effectively. So most teachers were incompetent in handling the new curriculum. These teachers were expected to deal with subjects they had not been trained to teach.

D'Lima (1985) observed that because of lack of trained teachers in technical skills, teachers were assigned to teach subjects that they were not competent in. This hindered the implementation of technical and vocational education.

Kenya lacks qualified personnel for effective implementation of 8-4-4 school curriculum. Tugee (1987) stated that Kenya lacks qualified personal for effective implementation of 8.4.4 school curriculum. He cited that there are 35,000 untrained teachers in primary schools. In
view of the above, this study will investigate the factors affecting the implementation of geography curriculum in secondary schools in Suba District.
CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter deals with the strategies and procedures used in this study. Specifically, it focuses on the population description, sample and sampling techniques, description of instruments, procedures for data collection.

Since the study was to investigate the instructional strategies used by geography teachers, resources available, role of implementers, attitudes of geography teachers and students, available physical facilities, quality and quantity of geography teachers in secondary schools, the descriptive field study survey was adopted.

3.2 Description of the Subjects

The study was conducted in Suba District with a total of twelve secondary schools which are spread in five divisions of Gwassi, Lambwe, Mfangano, Mbita and Central Suba as follows: Gwassi division had Tonga Boys, Godbura Mixed and St. Gabriel Girls.

Mbita division had Mbita High Suba Academy and Kakriga girls.

Central Division had Sindo girls and Bishop Mugendi Boys.
Mfangano Division had Kakiimba Mixed and Tom Mboya Boys
Lamwe Division had Lambwe Mixed, Osodo Mixed and Waondo Mixed. From the twelve schools, seven schools were sampled. These schools were stratified by division.

Random sampling was used to determine the number of schools from each division to be included in the study.

From each sampled school, headteachers, geography teachers and form four geography candidates were included in the study. All the seven (7) headteachers from the seven schools were used in this study, all (10) geography teachers in the selected schools were included and all the geography form four candidates whose total was 139 were used.

Headteachers were all used since their number was manageable and they are the executives of their schools who provide all the resources, physical facilities and manage teachers and students. Geography teachers were also used since they are the implementers of curriculum but since their number was small all had to be taken. The form four candidates were included in the study because, they were mature and had a lot of experience in the way teachers had been handling lessons thus were capable of responding to the questions accurately.
3.3 Research Instruments

The researcher used three types of questionnaires as follows: Questionnaires for headteachers, for geography teachers and form four students. To complement data elicited by questionnaires, two observation schedules were developed to observe physical facilities and lessons in progress.

3.4 Piloting

Before the actual study was conducted, piloting was done in two secondary schools namely Osodo and St. Gabriel. These schools never participated in the actual study since through random sampling they were never selected for the study. Twenty form four geography students, two geography teachers and one headteacher were used in the pilot study. This was necessary because of the following.

i) It was used to ascertain reliability of the instruments.

ii) It was to help determine the validity of the instruments.

Reliability is the measure of the degree to which a research instrument yields a consistent result or data after repeated trials, while validity is the accuracy and meaningfulness of inferences, which are based on research results. In other words, validity is the degree to which results obtained from the analysis of the data actually represents the phenomenon under study. Validity, therefore, has to do with how accurately the data obtained in the study represent the variables of the
study. Mugenda O. and Mugenda A., 1999 after testing instruments, the data obtained were used to refine the instruments so that some items were modified accordingly. One of the difficulties noted from students' questionnaires was item no. 4 which asked "Do you take geography?" Instead of do you like geography? This had to be changed since the researcher used the form four geography students, so the question was obvious. When it was changed then some students answered and gave reasons appropriately which couldn't be obtained from the former question.

3.5 Procedure for Data Collection

The permission to carry out research was sought from the Office of President and Divisional Education Officers (DEDs), introductory letter was sent to the seven headteachers of the selected schools informing them about the intended study and requesting them to offer the necessary assistance that was required.

The researcher followed this by personal visits to individual schools during which the purpose of the study was explained to the headteachers, geography teachers, and students. At the same time questionnaires were delivered to schools. Geography teachers were given time to fill in questionnaires and were also asked to assist in administering and collecting the completed questionnaires. Questionnaires for headteachers were distributed when the researcher
visited individual schools. They were left with headteacher and collected after two weeks.

As for the student questionnaires the filling was done in class. The researcher explained to them what to do with the questionnaires. The exercise took about forty (40) minutes. The questionnaires were then collected by the researcher with the help of geography teacher(s).

The total number of questionnaires given out was 199 and distributed as follows: headteachers seven (7), geography teachers (12) and form four student (180). There were only ten (10) (83.3%) response from geography teachers, 139 (77.2%) responses from students and all the seven (7) (100%) headteachers responded. Two geography teachers never responded because they had been transferred, while a total of 41 (22.7%) form four students who never responded had been out of schools due to fees problems. So a total of 156 (78.39%) questionnaires were used.

To carry out lesson observation, the researcher and the assistant liaised with geography teachers to know when the teachers had lessons during their regular teaching hours. To complement the data obtained from the other instruments, the researcher physically observed and filled in the observation schedules to establish the available physical facilities, their number, adequacy and relevance.
3.6 Data Analysis

The data collected were subjected to both quantitative and qualitative analysis. They were analysed using descriptive statistics, frequency distribution tables and percentages. Tables and percentages were used because they were easier to read and interpret. From the tabulation of the results, then I was able to interpret the data, make conclusions and recommendations.
CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

The data collected were subjected to both qualitative and quantitative analysis. They were analysed using descriptive statistics frequency distribution tables and percentages were used because they were easier to read and interpret. From the tabulation of the results, I was able to interpret the data, make conclusions and recommendations.

The data analysis deals with the following areas:

i. The academic and professional qualifications of geography teachers and headteachers

ii. Preparation of geography teachers in terms of in-service or pre-service.

iii. Teaching methods used by geography teachers in secondary schools.

iv. Problems geography teachers encounter

v. Physical facilities available in secondary schools in Suba District.

vi. Evaluation methods used by geography teachers in assessing students.
4.2 The Academic and Professional Qualification of Geography Teachers and Headteachers.

From the response of seven secondary school principals selected, it was found that the academic qualifications were as follows. Six (6) had university education and only one had KACE level of education. This means that six out of seven headteachers had higher academic education (85.7%) and 14.3% had advanced level of education. The professional qualification of headteachers who responded revealed that six were trained graduate teachers and one had an approved teachers status (ATS). Trained graduate teachers formed 85.7% while A.T.S. was 14.3%.

As far as academic qualifications of geography teachers are concerned, their responses revealed that two out of ten had advanced level of education (KACE) while eight had university education (degree). Thus 20% of the teachers had advanced level of education while 80% of the geography teachers had university education. On the professional qualification of geography teachers, the study revealed that three (3) were Approved Teacher Status (ATS), (30%) while seven (7) (70%) were trained graduate teachers.
Table below shows the academic qualifications of geography teachers and headteachers while table II shows their professional qualifications.

Table IV.1 Academic Qualifications

<table>
<thead>
<tr>
<th>Headteachers</th>
<th>KCSE/KCE</th>
<th>KACE/EAACE</th>
<th>University</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geography Teacher</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>3</td>
<td>14</td>
<td>17</td>
</tr>
</tbody>
</table>

Table IV.2 Professional Qualifications

<table>
<thead>
<tr>
<th></th>
<th>Diploma</th>
<th>ATS</th>
<th>UT GAT</th>
<th>Trained GAT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headteacher</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Geography teacher</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>7</td>
<td>10</td>
</tr>
</tbody>
</table>

From table 1, only one headteacher has KACE academic qualification (14.28%) while the rest (85.71%) have the university as the highest academic qualification. The low percentage of academic qualification of headteacher could not wholesomely affect the learning of Geography. However, two geography teachers with KACE as the highest qualification (20%) could easily affect the implementation of the geography curriculum.

The professional qualification of headteachers shows that only 1 headteacher has ATS (14.28%), which could affect the curriculum administration. On the other side, three geography teachers with A.T.S. as their professional qualification makes (30%). This proportion,
is large enough to affect the learning of geography given that A.T.S. teachers were those who were promoted on merit from primary schools and some Diploma holders. They do not have the right professionalism in handling students and the subject matter thus could affect the implementation of geography syllabus.

4.3 Preparation of Geography Teachers.
Most geography teachers had undergone a pre-service training course either at the university or at diploma colleges. This has been revealed by their professional qualification which indicated that out of 10 teachers, three (30%) were trained as diploma and were promoted to A.T.S. while seven (70%) trained at various universities, however a negligible number has attended in-service course or seminar/workshop since graduation. Most geography teachers have not attended any in-service course, nine (9) out of 10. This forms 90% while only 1 (10%) had attended the in-service course.

Despite changes in geography curriculum, few geography teachers have been updated over the current trends in evaluation and setting format by the KNEC. One geography teacher who attended the in-service course rated the course as very effective in helping teachers to learn more on curriculum implementation.
Most heads agreed that they normally and routinely check geography teachers' lessons preparation which includes schemes of work, lesson plan and lesson notes. They rated the schemes, lesson plan and lesson notes by writing good or poor. The table below shows how they responded.

Table IV.3: Headteachers’ Rating of Teachers’ Preparation.

<table>
<thead>
<tr>
<th>Scheme of work</th>
<th>Good</th>
<th>Poor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheme of work</td>
<td>4 (57.24%)</td>
<td>3 (42.85%)</td>
<td>7</td>
</tr>
<tr>
<td>Lesson plan</td>
<td>2 (28.57%)</td>
<td>5 (71.42%)</td>
<td>7</td>
</tr>
<tr>
<td>Lesson notes</td>
<td>2 (28.57%)</td>
<td>5 (71.42%)</td>
<td>7</td>
</tr>
</tbody>
</table>

All headteachers said that they assist geography teachers in covering the syllabus. This is done in various ways; buying relevant textbooks and teaching/revision materials, maps, globes, marking schemes, financing fieldwork and inter-school symposium for students, approving their budgets and importing external teachers to assist in of syllabus coverage.

Headteachers' response on whether teachers report problems they experience in implementing geography curriculum revealed that geography teachers usually report their problem. Five headteachers (71.43%) agreed that their geography teachers report the problems while two teachers (57%) did not agree that the problem is reported.
When headteachers were asked whether they offer solutions to the problems reported to them by teachers, all except one agreed that they offer solutions, that is six (85.7%) agreed and one (14.28%) said he has not offered any solution. According to geography teachers in their response whether they report to headteachers for assistance when they encounter problems of implementation, nine (9) agreed that they do report to headteachers (90%) while one (1) said he does not report to headteacher (10%).

The headteachers have a task to perform as the chief executive for schools as far as curriculum implementation is concerned. He has to organize physical facilities, finance, human resources, and create the school environment in readiness for curriculum implementation. For the same reason, it is right for the geography teachers to ensure that the headteachers are informed of impending or existing problems.

4.4 Teaching/Learning Resources Available in Secondary Schools.

Eight (8) geography teachers (80%) said they did not have adequate teaching and learning resources while 2 (20%) responded that they have enough resources for teaching and learning geography. These materials and equipment include past papers, reference books, teachers guides, atlas, diorama, manilla papers, among many others. Geography teachers were asked to choose some of the learning
resources they use in school. This response is as shown in the table below.

Table IV.4: Learning Resources used by Geography Teachers.

<table>
<thead>
<tr>
<th>Past papers</th>
<th>Learning aid</th>
<th>Teachers guide</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference books</td>
<td>Reference books</td>
<td>Learning aid Reference book</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>30%</td>
<td>60%</td>
<td>10%</td>
<td>100%</td>
</tr>
</tbody>
</table>

From the table above it can be witnessed that 30% of the headteachers said that they use past papers, reference books and teachers guide and not learning aids. 60% said that they have learning aid reference books and past papers but lack teachers guide, while 10% had teachers guide, learning aid and reference book but lacked past papers.

Out of the seven (97%) headteachers responses it was revealed that 5 (71.42%) had sufficient teaching learning resources. Those who said yes listed the following as teaching learning resources available in their schools: textbooks, charts, wall maps, globes, map extracts, photographs and exercise books.

Geography teachers were also asked to rate the availability of the teaching aids that were available in school for teaching and learning geography. They were to respond by ticking one out of the tree options; very useful, useful and not useful. Four teachers (40%
choose very useful, six (60%) chose useful and none chose not useful. It was tabulated as shown in the table below.

Table IV.5: Availability of Teaching Aids.

<table>
<thead>
<tr>
<th>Very Useful</th>
<th>Useful</th>
<th>Not useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 (40%)</td>
<td>6 (60%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

From the table, it may be true that these teaching/learning resources are available but they are either not used, outdated or irrelevant. Therefore to confirm the use of teaching learning aids, students were also asked whether their teachers use teaching aids during the lesson; 126 students said yes (90.62%) and 12 students (8.63%) said no. Students were asked to list some difficulties they experience in geography. They mentioned the follow difficulties: shortage of textbooks, lack of revision materials and lack of equipment for studying weather topic on the side of resources.

On the acquisition of the geography textbooks by the students, the students were to state whether they had textbooks. Out of 139 students, 125 (89.99%) had a textbook which was relevant to the course and 14 (10.07%) had no textbooks. These textbooks were either for form one, two, three or four, but very few per class. These they stated they acquired through various ways as tabulated below.
Table IV.6: Acquisition of Geography Textbooks

<table>
<thead>
<tr>
<th>Source of Textbooks</th>
<th>Total Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>63</td>
<td>45.65%</td>
</tr>
<tr>
<td>Friends</td>
<td>12</td>
<td>8.69%</td>
</tr>
<tr>
<td>Parents</td>
<td>15</td>
<td>10.96%</td>
</tr>
<tr>
<td>Community</td>
<td>48</td>
<td>34.80%</td>
</tr>
<tr>
<td>Total</td>
<td>138</td>
<td>100%</td>
</tr>
</tbody>
</table>

From the table above, it is visible that students acquire 45.65% of the books from school, followed by 34.8% from community, 10.86% from parents and friends contribute 8.69%. Although the school leads in the provision of textbooks, this seems to be too low from the expectation. The schools still need to adjust their textbook purchase and circulation upward to reduce rationing.

In order to reinforce this point, the observation schedule for the available teaching/learning resources was also used to establish the actual number of various resources. The table below shows the types of teaching/learning resources in the selected schools and the number of students enrolled in each school.

Table IV.7: Types of Resources and Enrolment

<table>
<thead>
<tr>
<th>Schools Selected</th>
<th>Waondo</th>
<th>Tonga</th>
<th>Kakiimba</th>
<th>Moisindo</th>
<th>Lambwe</th>
<th>Mbita</th>
<th>God Bura</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Globe</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Maps</td>
<td>6</td>
<td>0</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Charts</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Atlases</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>15</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Textbooks</td>
<td>100</td>
<td>4</td>
<td>4</td>
<td>73</td>
<td>50</td>
<td>150</td>
<td>10</td>
</tr>
<tr>
<td>Students Enrolment</td>
<td>178</td>
<td>415</td>
<td>180</td>
<td>180</td>
<td>340</td>
<td>550</td>
<td>170</td>
</tr>
</tbody>
</table>
From the table, it is evident that the schools lack variety of teaching and learning aids. This seems to be too low compared to the number of students enrolled in each school. There is great imbalance between the textbooks, atlases, charts, maps, globe and the students enrolment. For effective teaching and learning to take place, there is a need for balancing between teaching/learning resources and students enrolment.

4.5 Teaching Methods Used by Geography Teachers in Secondary Schools

Teachers were asked to list the methods of teaching geography during the lessons. Their responses were tabulated on the basis of methods used frequently. The table below shows variety of methods used and the number of teachers using each method.

Table IV: Methods of Teaching Geography

<table>
<thead>
<tr>
<th>Method</th>
<th>Number of Teachers Using the Method</th>
<th>Total Number of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question-Answer</td>
<td>7 (70%)</td>
<td>10</td>
</tr>
<tr>
<td>Lecturer</td>
<td>5 (50%)</td>
<td>10</td>
</tr>
<tr>
<td>Small group discussion</td>
<td>2 (20%)</td>
<td>10</td>
</tr>
<tr>
<td>Individual assignments</td>
<td>2 (20%)</td>
<td>10</td>
</tr>
<tr>
<td>Observation</td>
<td>1 (10%)</td>
<td>10</td>
</tr>
<tr>
<td>Discovery</td>
<td>1 (10%)</td>
<td>10</td>
</tr>
<tr>
<td>Demonstration</td>
<td>1 (10%)</td>
<td>10</td>
</tr>
<tr>
<td>Talk and chalk</td>
<td>1 (10%)</td>
<td>10</td>
</tr>
</tbody>
</table>
Following this establishment, it was revealed that majority of teachers use question-answer method more than any other. Lecture is the second popular method of teaching, and other methods such as small group discussions, individual assignments, observation, discovery, demonstration talk and chalk are rarely used.

According to the table only seven (7) teachers out of ten (70%) use the question – answer method in their teaching, five teachers out of 10 teachers (50%) use lecture method, two out of ten teachers use small group discussions. This represents 20% of those who use this method.

Class-discussion method is used by two (2) teachers representing 20% while individual assignments, observation, demonstration and talk and chalk each used by one teacher thus each represents 10%.

Teachers did not give use of fieldwork as a method for teaching geography though it is recommended in the curriculum. Teachers were asked whether they take the students for fieldwork by ticking YES or no. Out of ten (10) teachers who participated in this question, 5 said No. Both cases thus had a 50% Yes, and a 50% no.

Besides taking students for fieldwork, teachers were asked to state by ticking the number of times they take students for fieldwork in a term.
The following responses were arrived at and tabulated in the table that follows.

Table IV.9: Frequency of Fieldwork

<table>
<thead>
<tr>
<th>Number of Times Per Term</th>
<th>Number of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>4 (80%)</td>
</tr>
<tr>
<td>Twice</td>
<td>1 (20%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Four</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Total</td>
<td>5 (100%)</td>
</tr>
</tbody>
</table>

The table shows that for the five teachers who said they take their students to fieldwork, four (80%) take their students for fieldwork once and only one (1) teacher said that he takes students for fieldwork twice (20%). It was also revealed that no teacher takes students for fieldwork either thrice or four times.

Where teachers responded that they do not take students for fieldwork, reasons were sought from them and the following were their responses. Most teachers mentioned lack of funds, insensitivity of the headteachers, lack of transport to enable travelling to far places, shorter time allocated in the curriculum/timetable, and poor planning by the heads of humanities department.

Students were asked to state whether they attended fieldwork since they joined schools. Out of 139 students 76 said yes (54.6%) and 63 said no (45.4%). Most of the fieldwork was organized in form two and form four as tabulated in the table that follows.
Table IV:10 Forms in which Field study was Conducted.

<table>
<thead>
<tr>
<th>Form</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Students</td>
<td>02</td>
<td>24</td>
<td>10</td>
<td>58</td>
<td>94</td>
</tr>
<tr>
<td>Percentage</td>
<td>2.12%</td>
<td>25.53%</td>
<td>10.63%</td>
<td>61.7%</td>
<td>100%</td>
</tr>
</tbody>
</table>

From the table, 94 students accepted that they have attended fieldwork. Out of this number who had attended the field study, 58 (61.7%) said they had it in form four, 24 students who constituted 25.58% had it in form two, 10 students (10.67%) had it in form three and 2 students (2.13%) had it in form one.

4.6 Problems Geography Teachers Encounter.

Teachers interviewed were asked whether they encounter any problem in their geography curriculum implementation efforts. All geography teachers said that they have been experiencing problems. Nine (9) geography students said that they encounter problems (90%) and one teacher did not respond (10%). Of the ones who accepted that they experience problems listed some of their problems as follows:

Lack of teaching aids or resources which are appropriate for the current geography curriculum, the syllabus is very wide and is short of balance between classes, terminologies used in geography are difficult and varied.

On the side of students, they highlighted the difficulties that they face in learning geography. Among these are shortage of textbooks,
incomplete coverage of syllabus, irregular attendance of lesson by teachers, inadequate number of geography teachers lack of commitment among geography teachers, frequent transfer of teachers limited time allocated for examinations and negative attitude among students about the subject.

Students were asked to state whether they find all topics easy to understand. Out of 138 students, 16 said yes 11.51% and 123 students (98.49%) said they have never found topics easy. The table below shows the topic and frequency of occurrence.

Table IV:11: Difficult Topic and Frequency of Occurrence

<table>
<thead>
<tr>
<th>Name of Topics</th>
<th>Frequency of Occurrence</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rocks</td>
<td>48</td>
<td>27.12%</td>
</tr>
<tr>
<td>Climate</td>
<td>29</td>
<td>16.38%</td>
</tr>
<tr>
<td>River Systems</td>
<td>23</td>
<td>12.99%</td>
</tr>
<tr>
<td>Map work</td>
<td>17</td>
<td>9.6%</td>
</tr>
<tr>
<td>Internal Land Forming processes</td>
<td>14</td>
<td>7.91%</td>
</tr>
<tr>
<td>Coastal features</td>
<td>14</td>
<td>7.91%</td>
</tr>
<tr>
<td>Glaciations</td>
<td>12</td>
<td>6.78%</td>
</tr>
<tr>
<td>Mass-wasting</td>
<td>11</td>
<td>6.21%</td>
</tr>
<tr>
<td>Statistics</td>
<td>09</td>
<td>5.08%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>177</td>
<td>100%</td>
</tr>
</tbody>
</table>

The table shows the topics which are listed by students as being difficult. Rocks had 48 occurrences (27.1%), climate 29 occurrences
River system 23 which is (12.99%), map work had 14 which is (7.90%), coastal features was 14 (7.90%). Glaciations had 12 (6.77%), mass- wasting had 11 (6.21%) and statistics had 09 (5.08%).

Teachers were also asked to name the topics they consider difficult for students' understanding. The following topics were given; map and map work, rocks, internal land forming processes, coastal land forms, glaciations, karst scenery, statistics, photographic interpretation and climatology. The topics teachers gave conforms to the ones given by students except karst scenery and photographic interpretation.

4.7 Physical Facilities Available in Secondary Schools in Suba District.

In terms of physical facilities in the schools, teachers were expected to indicate whether they encounter problems arising from lack of physical facilities by ticking yes or no. 10 teachers (100%) stated that they experience problems arising from lack of physical facilities.

The headteachers were asked whether they had the necessary physical facilities in readiness for the implementation of geography curriculum. They were expected to respond by either ticking yes or no. Out of the seven (7) headteachers, three (3) said they have (42.85%) and four (4) said they do not have i.e. (57.14%) headteachers were also asked to name some of the physical facilities which have been
constructed in the school for effective implementation of geography curriculum.

Table IV:12: Availability of Physical Facilities

<table>
<thead>
<tr>
<th>Physical Facilities</th>
<th>Number of Heads</th>
<th>Percentage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers' houses</td>
<td>3</td>
<td>42.85%</td>
<td>7</td>
</tr>
<tr>
<td>Classrooms</td>
<td>6</td>
<td>85.71%</td>
<td>7</td>
</tr>
<tr>
<td>Sanitary facilities</td>
<td>5</td>
<td>71.42%</td>
<td>7</td>
</tr>
<tr>
<td>Generator/lighting</td>
<td>4</td>
<td>57.14%</td>
<td>7</td>
</tr>
<tr>
<td>Administration block</td>
<td>5</td>
<td>71.42%</td>
<td>7</td>
</tr>
<tr>
<td>Geography room</td>
<td>0</td>
<td>0%</td>
<td>7</td>
</tr>
</tbody>
</table>

The table shows some of the physical facilities that were constructed in various schools to help facilitate implementation of the geography curriculum. Three headteachers said they had constructed teachers' houses (42.85%), 6 had constructed classrooms (85.7%), 5 had put up sanitary facilities (71.4%), 4 had installed generator or provided the lamps (57.14%) and 5 had built administrative block (71.4%).

None of the headteachers had constructed geography rooms for students assembling of learning aids and other resources. Students were also asked to give some of the problems they face as far as learning geography is concerned. They listed among others lack of geography laboratory/room, and lack of weather station or equipment for studying weather.
For further verification on the available physical facilities in schools, students were asked to state where they learn geography. The table below shows how they responded.

Table IV:13 Where Learning Takes Place

<table>
<thead>
<tr>
<th>Classroom</th>
<th>Library</th>
<th>Under tree</th>
<th>No. Response</th>
<th>Geography Room</th>
<th>Total No. of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>05</td>
<td>5</td>
<td>4</td>
<td>03</td>
<td>137</td>
</tr>
<tr>
<td>(87.5%)</td>
<td>(3.6%)</td>
<td>(3.6%)</td>
<td>(2.92%)</td>
<td>(2.18%)</td>
<td></td>
</tr>
</tbody>
</table>

Majority of students indicated that they learn in classrooms (87.5%), library (3.6%) under a tree (3.6%), Geography room (2.18%) and no response (2.92).

According to the varied responses among students, it is evidenced that most of geography lessons were done in class thus giving students low experience in practical geography like fieldwork and land forming processes. Some of these can effectively be learnt when students are taken out of the classroom for fieldwork.

Apart from classrooms used for learning, library and under tree become other areas of learning. This shows lack of adequate classrooms where effective teaching can take place. Students were also asked whether they have geography room where geography is learnt. 18 out of 138 (13.04%), said they have geography room, while 120 out 138 said their schools do not have (86.96%). Table IV.14 below shows the physical facilities observed.
Table IV.14: Schools and Available Number of Physical Facilities

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Waondo</th>
<th>Kakiimba</th>
<th>Tonga</th>
<th>Sindo</th>
<th>Lambwe</th>
<th>Mbita</th>
<th>God Bura</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Library</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Geography room</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The available physical facilities are inadequate compared to the number of students that are enrolled in each school as is given by the headteachers of the individual schools. The table below shows enrolments of students as compared to available classrooms.

Table IV.15: Enrolments of Students

<table>
<thead>
<tr>
<th></th>
<th>Waondo</th>
<th>Kakiimba</th>
<th>Tonga</th>
<th>Sindo</th>
<th>Lambwe</th>
<th>Mbita</th>
<th>God Bura</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of classrooms</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Number of students</td>
<td>176</td>
<td>280</td>
<td>415</td>
<td>180</td>
<td>340</td>
<td>550</td>
<td>175</td>
</tr>
<tr>
<td>Average per classroom</td>
<td>29</td>
<td>46</td>
<td>51</td>
<td>22</td>
<td>43</td>
<td>45</td>
<td>43</td>
</tr>
</tbody>
</table>

When average enrolments per class is calculated, it shows that Waondo Secondary has 29 students, Kakiimba 46 students, Tonga 51 students, Sindo 22 students, Lambwe 43 students, Mbita 45 students and God Bura 43 students. The classrooms are very small and thus leading to congestion. The recommended average carrying capacity of
each classroom is 40 students and 35 at least. Due to this, there are problems in handling large classes by teachers.

Lack of geography rooms in schools is another hindrance to learning geography. Geography room is where recommended blackboards for teaching mapwork, and statistics are installed. Such rooms when used minimize the waste of time by the teacher during graph drawing.

Staffrooms in the secondary schools were observed and it was established that though they had been built, only two schools (28.5%) were spacious enough to cater for teachers. It is in the staffroom where most teachers make lesson preparation, mark the students' books and preparing the teaching aids and other materials. In all cases staffroom in the secondary schools are important.

Through observation of physical facilities, it was also established that two secondary schools (28.5%) had inadequate lighting facilities. They comprise pressure lamps which sometimes break down thus not able to be utilized throughout without interruptions. The other five (5) schools had generator lighting system. (71.43%).

It was also observed that schools have inadequate water storage facilities. One school had a well (14.3%) and 6 schools had water tanks from which water is drawn (85.71%). The water tank in each
school had only one tap for drawing water. Given the high number of students in schools, there was delay in resuming classes since after lunches they flocked for water.

All schools had one duplicating machine which serves the students and teachers especially during evaluations. The number is very small thus causing delay in arranging for the examinations. Kitchen facilities and the space in most secondary schools were very limited and could contain only very little cookers. The cooks were also few owing to the fact that they are paid by the B.O.G.

4.8 Evaluation Methods used by Geography Teachers in Assessing Students.

Form four geography students were asked to state whether their teachers assess them or not. Those who chose 'Yes' were 136 and 2 chose "No". while one (1) never responded to the question.

Those who accepted formed 98.5% while the ones who said that no assessment form 1.45% of the total students. The students were asked to state the frequency of assessment in a term and they responded as shown in the table.
Table IV.16: Frequency of Assessments

<table>
<thead>
<tr>
<th>No. of Students</th>
<th>Percentage</th>
<th>Frequency of Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>7.40%</td>
<td>Once</td>
</tr>
<tr>
<td>68</td>
<td>50.37%</td>
<td>Twice</td>
</tr>
<tr>
<td>32</td>
<td>23.7%</td>
<td>Thrice</td>
</tr>
<tr>
<td>25</td>
<td>18.5%</td>
<td>Four</td>
</tr>
<tr>
<td>TOTAL</td>
<td>135</td>
<td>100%</td>
</tr>
</tbody>
</table>

Out of 139 students, four did not answer the question on the frequency of assessment in a term. The remaining 135 students (97.12%) responded to the question. 10 students (7.40%) stated that they are assessed twice, 32 students (23.7%) are assessed thrice while 25 students (18.5%) were assessed four times.

Students were asked to choose the format their teachers use during evaluation. They were asked to choose from varied evaluation formats. The following table gives the responses recorded.

Table IV.17: Evaluation Format

<table>
<thead>
<tr>
<th>Evaluation Format</th>
<th>Number of Students</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple choice and essay</td>
<td>01</td>
<td>0.73</td>
</tr>
<tr>
<td>Simple structure only</td>
<td>26</td>
<td>18.97</td>
</tr>
<tr>
<td>Essay only</td>
<td>47</td>
<td>34.31</td>
</tr>
<tr>
<td>Filling in only</td>
<td>06</td>
<td>4.38</td>
</tr>
<tr>
<td>Multiple choice only</td>
<td>01</td>
<td>0.73</td>
</tr>
<tr>
<td>Simple structure and essay</td>
<td>16</td>
<td>11.68</td>
</tr>
<tr>
<td>Simple structure, essay &amp; filling in</td>
<td>01</td>
<td>0.73</td>
</tr>
<tr>
<td>All forms of format</td>
<td>38</td>
<td>27.74</td>
</tr>
<tr>
<td>Total</td>
<td>137</td>
<td>100%</td>
</tr>
</tbody>
</table>
From the table, it shows that the mostly used evaluation format being essay only (34.31%), followed by all forms (27.74%) and simple structure only (18.97%). This indicates that the best format for the evaluation which is appropriate is combination of both formats.

Those who chose all formats indicated only (27.74%) which seems too low. Higher percentages are distributed on formats like simple structure, filling in, and multiple choice put together accounts for 26.97%. This is almost the best format for assessing students especially form four.

Through use of lesson observation schedule, it was found that 3 teachers used oral question (42.85%), 2 teachers used written exercise (28.57%) and 2 teachers used other evaluation formats (methods) (28.85%).

Headteachers in their schools were asked to state their school mean score in Geography for the last three years; 2000, 20001 and 2002. Their responses were recorded in the table below.

Table IV.18: School's Geography mean score during last three years.

<table>
<thead>
<tr>
<th></th>
<th>Mbita</th>
<th>Sindo</th>
<th>Waondo</th>
<th>Kakimba</th>
<th>Lambwe</th>
<th>Tonga</th>
<th>Godbura</th>
</tr>
</thead>
</table>
From the table, it is clearly indicated that the performance in geography has been on the dwindling trend. This is so with all the schools.

Out of seven schools, two schools recorded increase in their mean score in geography, however their means were still too low. The increase of 2 schools represents a mere 28.57% while five (5) schools (71.43% showed a decline in performance in geography. The heads whose schools had a drop in the means blamed it on the following reasons.

i. National decline in performance in geography

ii. Changes in settling patterns which make teachers and students to be caught in unfamiliar situations.

iii. Geography paper 312/1 (paper one) is feared by the students.

iv. Geography teachers are never aggressive enough in preparing candidates.

v. Lack of syllabus coverage

vi. Laxity among geography teachers

vii. Lack of content mastery while teaching the subject.

viii. Teachers have difficulty arising from other areas such as students' negativity, lack of adequate resources etc.
Headteachers were also expected to give the student enrolments for the last three years so as to confirm whether many preferred other humanity subjects to geography. The table below shows each school's geography enrolment.

Table IV.19: Geography enrolment by schools

<table>
<thead>
<tr>
<th>Year</th>
<th>Mbita</th>
<th>Sindo</th>
<th>Waondo</th>
<th>Kakimba</th>
<th>Lambwe</th>
<th>Tonga</th>
<th>Godbura</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>50</td>
<td>29</td>
<td>41</td>
<td>28</td>
<td>30</td>
<td>23</td>
<td>32</td>
</tr>
<tr>
<td>2001</td>
<td>48</td>
<td>25</td>
<td>40</td>
<td>34</td>
<td>42</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>2002</td>
<td>22</td>
<td>15</td>
<td>38</td>
<td>16</td>
<td>23</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>TOTAL</td>
<td>120</td>
<td>69</td>
<td>119</td>
<td>78</td>
<td>95</td>
<td>58</td>
<td>66</td>
</tr>
</tbody>
</table>

The table shows drop in enrolment in geography. The drop in enrolment indicates that students tend to migrate from geography in favour of other humanities.

Headteachers were asked to list a humanity subject which enrolled the highest number of students and they named History and CRE (Christian Religious Education). The table shows the Headteachers' responses.

Table IV.20: Subject with highest number of enrolment

<table>
<thead>
<tr>
<th>Subject</th>
<th>Number of Headteachers' Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>6 (85.7%)</td>
</tr>
<tr>
<td>CRE</td>
<td>1 (14.28%)</td>
</tr>
</tbody>
</table>
From the response given in the table, 85.71% of the headteachers indicated that history had the highest number of enrolment in KCSE in the year 2002 while only one headteacher indicated that CRE had the highest number of students, enrolment in KCSE. From this, it is revealed that majority of students opted for History as opposed to CRE, Geography and Social Education and Ethics (SEE).

Headteachers were consequently asked to account for the variation in enrolment among humanities. They advanced some of the following reasons.

i. Geography syllabus is too wide compared to history

ii. History questions in the examinations are direct compared to geography

iii. Increased performance in history over the previous years caused excitement in enrolment in history last year KCSE.

iv. History teachers are committed and stable in handling the subject hence create confidence in the students.

4.9 Number of Geography Teachers in Secondary Schools in Suba District.

To establish the number of geography teachers in schools, headteachers were asked to state whether they had adequate personnel to help them carry out their responsibilities as headteachers and for effective implementation of secondary geography curriculum.
The number of geography teachers per school are tabulated in the table below and students enrolment per school also included for easy comparison.

Table IV.21: Number of geography teachers and students

<table>
<thead>
<tr>
<th></th>
<th>Mbita</th>
<th>Waondo</th>
<th>Tonga</th>
<th>Godbura</th>
<th>Lambwe</th>
<th>Kakiimba</th>
<th>Sindo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Students</td>
<td>550</td>
<td>178</td>
<td>415</td>
<td>175</td>
<td>340</td>
<td>260</td>
<td>180</td>
</tr>
<tr>
<td>Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ratio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

One headteacher accepted that he has enough personnel for implementation of geography curriculum (14.28% while six 96%) headteachers said they do not have enough personnel of (5.71%).

From the table, teacher-student ratio calculated shows that, Mbita has a ratio of 1:183, Waondo 1:69, Tonga 1:415, Godbura 1:175, Lambwe 1:340, Kakiimba 1:260 and Sindo 1:180.

The teacher-student ratio is very low and thus can easily affect the implementation of geography curriculum in secondary schools in Suba District.

4.10 Source of Funding to Schools

Participation of parents and the community in providing material or financial support in curriculum implementation is therefore required. In order to come up with relevant information, headteachers
were asked to state the sources of funds in school. Table IV.22 shows sources of funding.

Table IV.22: Sources of funding

<table>
<thead>
<tr>
<th>Sources</th>
<th>Number of Headteachers</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundraising</td>
<td>3</td>
<td>23%</td>
</tr>
<tr>
<td>Grants from government</td>
<td>3</td>
<td>23%</td>
</tr>
<tr>
<td>Schools fees</td>
<td>6</td>
<td>45.15%</td>
</tr>
<tr>
<td>Donors</td>
<td>1</td>
<td>7.69%</td>
</tr>
<tr>
<td>School farm</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>100%</td>
</tr>
</tbody>
</table>

From the table, it is revealed that school fees form the basis and the largest income for schools in Suba District (46.15%), followed by fundraising and grants both with percentages of 23% and donor funding forming 7.69%.

The headteachers who indicated that the other sources of funding for schools come from school income generating projects especially from the motor boat which operates in Lake Victoria between the mainland Mbita, Rusinga and Mfangano islands. The other school gets donations from the Danish Government to supplement their other sources of income.

It is worth noting that for most schools, fees remains the main source of funds for school. The parents through the P.T.A. and through their individual efforts finance school through fees paid within the year. This
does not seem to be adequate amount required to finance all school programmes and even leave school with enough amount to purchase resources for implementation of Geography curriculum.
5.1 Summary and Conclusion

The main purpose of this study was to find out factors that affect implementation of geography curriculum in secondary schools in Suba District. Seven schools were randomly selected from each of the five divisions of Gwassi, Lambwe, Central Suba, Mbita and Mfangano.

Seven headteachers, ten geography teachers and one hundred and thirty nine form four students were used in the sample. The research focused on areas pertaining to available physical facilities, availability of teaching learning resources, qualification of geography teachers and headteachers, methods of teaching, methods of evaluation, lesson plan preparation as well as schemes of work, preparation of geography teachers through pre-service and in-service. All these formed part and parcel of items included in questionnaires for students, geography teachers and headteachers and also in the observation schedule for physical facilities as well as lesson observation schedule.

The variables that were concerned with the study were selected, analyzed and the following conclusions were made.
There was low teacher-student ratio in geography since the number of students was very large compared to the number of geography teachers in the district. This affected the performance in geography as geography teachers were over loaded thus could not perform their duties well.

Secondary schools in Suba District lack sufficient teaching and learning resources. 71 percent of the schools in the district did not have enough teaching and learning resources. This shortage readily affected teaching and learning of geography in secondary schools.

Most geography teachers in secondary schools did not prepare good lesson plans and notes for effective teaching and learning of the subject. However, it was found that 85.7 percent made schemes of work.

Performance in geography in secondary schools in Suba District was found to be on the declining trend with 57 percent of the schools showing lower performance for three years consecutively while 42.8 percent recorded a marginal increase in performance in the last three years.
The commonly used methods of teaching geography by teachers were lecture and questions-answer method. Other methods were not used frequently.

Evaluation methods which were used were not adequate since some teachers used multiple choice format, filling in and short structured formats. There was very little use of assignments, groupwork and field study. The evaluation system seemed to hinder the implementation of geography curriculum.

Recommendations

Another area which tended to contribute to poor performance by students in geography was inability of the geography teachers to attend the in-service courses, workshop or seminars for updating them on the new approach to teaching and evaluation in geography.

The study showed that 80 percent of schools had syllabuses but geography teachers failed to prepare their schemes, lesson plans and use them to teach geography.

The study also revealed lack of physical facilities in readiness for implementation of geography curriculum. In some schools geography lessons were taught in un-recommended rooms like library, under trees, while some in classes. This means that geography rooms were lacking in all the schools in which the study was conducted.
It was also established through this study that funds were insufficient since 85 percent of the schools relied on the fee payments for the purchase of the required teaching resources and construction of the needed physical facilities.

The attitude of students towards geography was noted to be affecting students' choice of the subject at form three and the final performance in national examinations.

5.2 Recommendations.

Introduction.

Recommendations made were meant to help the readers find solutions to the existing problems in secondary schools in Suba District. The main concern for the researcher was to help in the implementation of geography curriculum, assist developers of the curriculum, headteachers and the parents to solve some of the problems facing the department of geography in schools.

Basing on conclusions made, the following recommendations were arrived at;

(i) Geography teachers should be allowed to attend in-service courses, workshops or symposiums organized within the district or inter-schools organization to enable them acquire new and current skills that touches on new methods, approach and
evaluation techniques that conform to the Kenya National Examinations Council standard.

(ii) Headteachers should allocate funds for geography department while involving the geography teachers in the making of departmental budget for purchasing of geography teaching/learning resources required.

(iii) Headteachers need to mobilize the community through PTA to organize for harambee and donations to assist in the provision of the learning aids. This would supplement fees which was noted to be inadequate in schools in Suba District.

(iv) Headteachers and inspectors of secondary schools from the district should regularly check the lesson notes, lesson plans and schemes of work to ensure that they conform to the current syllabus.

(v) Fieldwork approach in learning geography should be given more attention by geography teachers. It needs to be organized at least twice a term.

(vi) Geography syllabus should be reviewed with a view to reducing overload. Certain topics such as agriculture should be trimmed and specific areas be adopted. This would ensure complete coverage of syllabus as in other subjects.

(vii) Geography teachers need to use evaluation methods which are very current and used by KNEC. For instance, they should avoid use of multiple choices as was noted in some schools.
(viii) Geography teachers need to change their attitudes towards the subject since this too affects students' attitudes towards geography.

(ix) Schools with high number of students should be given priority when balancing teachers or during posting of teacher by the Teachers Service Commission. This arises from the fact that there was serious understaffing of geography teachers in 71 percent of schools in Suba District.

(x) There is a need for constructing more relevant and adequate physical facilities in schools in Suba District for effective implementation of geography curriculum. This was from the view that some schools lacked physical facilities to an extent that certain lessons were either conducted under tree or in the library.

5.3 Recommendation for Further Research

It would be necessary for more and elaborate research to be done in other districts in Kenya on factors affecting implementation of geography curriculum in secondary schools in Kenya.

More specifically such a research should be based on, physical geography, statistics, fieldwork, photographic interpretation and map work.
BIBLIOGRAPHY.


Midega, S.M (1990), A Study of the Problem in Teaching Social Studies as reviewed by teachers of
subject in Nyakach Division of Kisumu District.


Mse, G.S, (1986), *A Study of Factors that the training and Learning of Primary School in Arts and Craft and Agriculture as Pre-vocational subject in Hamisi Division of Kakamega District*


APPENDIX A
GENERAL OBSERVATION SCHEDULE

Name of school ____________________________

Date ____________________________

1. Facilities in the school

<table>
<thead>
<tr>
<th>FACILITY</th>
<th>TOTAL NO. OR SIZE</th>
<th>BRIEF COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NUMBER AVAILABLE</td>
<td>SHORTAGE</td>
</tr>
<tr>
<td>1. Classrooms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. staffrooms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. administrative office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. teachers' houses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. geography preparation room</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. lighting facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. boarding facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. duplicating machine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. kitchen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. textbooks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. teaching materials e.g maps, globe, charts and atlases etc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Furniture (tables, chairs, desks)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 cupboard (s)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. chalk board (s)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. library</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX B
GEOGRAPHY

LESSON OBSERVATION INSTRUMENT

Part I Observation schedule

Teacher ______________________ school ______________________

Date ______________________ class ______________________

1 preparation:
(a) schemes of work

i. Is there scheme of work

   YES    NO

   If yes, answers question ii- xi below.

ii. Are the themes clearly defined?

   YES    NO

iii. Are the aims / objectives clearly spelt out?

   YES    NO

iv. Is the time allocated to different skills / topics enough?

   YES    NO

v. Are the suggested resources suitable for the topic chosen?

   YES    NO

vi. Are there enough resources given?

   YES    NO

vii. Are there suggestions for different assessment procedures
     for each topic / skills.

80
(b) If the teacher does not have schemes of work does / he / she use to guide his / her teaching activities.

Lesson plan

1. Does the teacher have a lesson plan?
   - YES
   - NO

2. Is there evidence that the teacher is using
   i. only lesson plan?
      - YES
      - NO

Specify the other materials

Estimate the length of time spent by the teacher / student on each of the following

<table>
<thead>
<tr>
<th>ACTIVITY / METHOD</th>
<th>APPROXIMATE TIME SPENT IN MINUTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>Whole class discussion</td>
<td></td>
</tr>
<tr>
<td>Group work</td>
<td></td>
</tr>
<tr>
<td>Individual activity</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
</tr>
</tbody>
</table>

Quality of teaching

Make a tally mark in the appropriate row each time you observe any of the following:
<table>
<thead>
<tr>
<th>Quality of teaching</th>
<th>TALLIES</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher ask questions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>requiring only YES or NO</td>
<td>///</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>TALLIES</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. teachers asks questions requiring only YES Or NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii. Teacher asks questions requiring explanation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How does the teacher deal with in correct answers?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Modifies the question</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii. Accept the answers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii. Probe the student to try and find out whether he / she can give correct answer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher gives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Clear explanation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii. Vague explanation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher relates subjects content and also gives examples that are related to students experiences / environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher uses teaching aids to give explanation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students participate in the use of teaching aid.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher uses the blackboard</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
EVALUATION

(a) DOES the teacher find out whether student have learnt what he wanted them learn?

YES \hspace{2cm} NO

(b) HE does this through

i. Asking oral question

ii. Giving written exercises

iii. Others (specify)

(c) How does the teacher deal / handle the very active and the quiet students during his teaching?

(d) Does the teacher follow the assessment procedures indicated in the schemes of work for each topic.

YES \hspace{2cm} NO
A QUESTIONNAIRE FOR FORM IV STUDENTS

Part I: DEMOGRAPHIC INFORMATION SHEET

Instruction

Below you are provided with statements. You are kindly requested to give the appropriate information either by ticking (✓) and / or by giving further information in the space provided.

1. Name of school ____________________________________________

   Your sex (a) female

   (b) male

2. Your age is

   12-15 yrs ( )

   16-20 yrs ( )

   21-25 ( )

   OVER 25 yrs ( )

3. When did you join this school

   ____________________________________________

4. Do you like geography

   YES ( )

   NO ( )

   If no give reasons

   ____________________________________________

   If yes give reasons

   ____________________________________________
5. Were you learning geography in forms I, II?

YES ( )

NO ( )

6. What difficulties do you experience in Geography in your school


7. (a) Do you have textbook for geography that you are using?

YES ( )

NO ( )

(b) How did you acquire the textbooks for geography?

8. Are the textbooks relevant for the course you are doing.

YES ( )

NO ( )

9. Do you find all geography topics easy to understand?

YES ( )

NO ( )

If no, give the topics, which are difficult to understand


10. (a) Do you discuss in-groups during the lessons?

YES ( )

NO ( )

(b) Do you find the lessons enjoyable?

Yes ( )

No ( )

If no why?
11. does your geography teacher use teaching/learning aids during the lesson? (diagrams, maps, charts etc)

   YES ( )
   NO ( )

12. Do you take time to also draw the map, charts, diagrams etc after the teacher has explained?

   YES ( )
   NO ( )

13. Have you attended any field study since you joined the school?

   Yes ( )
   NO ( )

   If yes in which form?
   Form 1 ( )
   Form 2 ( )
   Form 3 ( )
   Form 4 ( )

Part II EVALUATIONS

Does the geography teacher give you assessment test?

   YES ( )
   NO ( )

   If yes, how many times in a term
   Once ( )
   Twice ( )
   Thrice ( )
   Four times ( )

How is the format of the questions that the geography teacher gives

(a) Simple structure ( )
Part III Physical facilities

Does your school have a geography room?

YES

NO

Where do you take your geography lessons (state)?
APPENDIX D

A QUESTIONNAIRE PREPARED FOR SECONDARY GEOGRAPHY TEACHERS

Part I: Demographic information sheet

INSTRUCTIONS:
Below you are provided with statements. You are kindly requested to give the appropriate information either by ticking ( ) and / or by giving further information in the space provided:

1. name of school ________________________________

2. your sex is; (a) male ( )
   (b) Female ( )

3. your age is;
   (a) below 25 years ( )
   (b) 26-30 yrs ( )
   (c) 31-40 yrs ( )
   (d) 41-50 yrs ( )
   (e) 51 and above ( )

4. your academic qualification in
   (a) KCE ( )
   (b) KACE/HSC/E AACE ( )
   (c) Degree ( )
   (d) any other (specify please) ________________________________

5. your professional qualification is
   (a) Diploma/S1 ( )
   (b) ATS ( )
   (c) Untrained graduate ( )
   (d) Trained graduate ( )
Part II

instructions

Put a tick in the spaced provided (✓)

Against the appropriate answer(s) on the following items

1. do you have adequate physical facilities in classrooms,
   workshop, geography room, library etc. for the effective
   implementation of secondary geography curriculum?
   (a) YES ( )
   (b) NO ( )

2. Do you have enough chairs/lockers and other furnitures for use
   in the school?
   (a) YES ( )
   (b) NO ( )

3. Do you have sufficient learning materials and equipment for use
   in the school?
   (a) YES ( )
   (b) NO ( )

4. Who supplies or buys the learning materials and equipment for
   use in the school?
   (a) government
   (b) local community (P T A)
   (c) teacher
   (d) parents

5. what resource materials are available in your school for
   teaching/learning geography
6 How many do you rate the qualities and quality of the teaching learning resources listed above.
   (a) very useful
   (b) useful
   (c) not useful

7 Are you effectively co-ordinating your activities with those of other curriculum implementer for the effective implementation of secondary geography curricular in your school.
   (a) YES [ ]
   (b) NO [ ]

8 Do you think you are performing your responsibilities as a school implementer satisfactorily?
   (a) YES [ ]
   (b) NO [ ]

9 Do you encounter any problem from the lack of physical facilities and teaching/learning materials?
   (a) YES [ ]
   (b) NO [ ]

10 Do you take students for field study?
    □ YES □ NO
    If yes, how many times in a term

   |   |   |
   |   |   |
11 Do you successfully cover the geography syllabus every year?

(a) YES [ ]
(b) NO [ ]

If no, give reasons why:

If yes, state:

12 Do you ever report to your headteacher for assistance?

(a) YES [ ]
(b) NO [ ]
13 have you attended any in-service course or seminar/workshop for geography implementation

YES ( )
NO ( )

If yes, rate its effectiveness in curriculum implementation

(a) very effective
(b) effective
(c) not effective

15. (a) which teaching/learning methods do you usually employ in class during the lesson.

(b) (I) do you enjoy teaching geography
(a) YES
(b) NO
(II) give reasons for the response given

16 (a) give the evaluation procedures that you use in assessing your students.

(c) how frequent do you give the tests
(a) weekly
(b) fortnightly
(c) monthly
(d) termly
APPENDIX E

A QUESTIONNAIRE PREPARED FOR SECONDARY HEAD TEACHERS

Part I: DEMOGRAPHIC INFORMATION SHEET INSTRUCTION

Below you are provided with statements. You are kindly requested to give the appropriate information either by ticking (✓) and/or giving further information in the space provided.

1. Name of school ________________________________

2. status of the school ________________________________
   (a) national ( )
   (b) provincial day ( )
   (c) provincial boarding ( )
   (d) provincial day and boarding ( )
   (e) private ( )
   (f) any other (please specify ( )

3. Number of streams ________________________________

4. Total enrolment ________________________________

5. total number of teachers ________________________________

6. Your sex is; (a) male ( )
   (b) Female ( )

7. Your age is;
   (a) Below 30 years ( )
   (b) 31 – 40 years ( )
   (c) 41 – 50 years ( )
8. Your academic qualification is:
   (a) K C E
   (b) K A C E
   (c) University (degree)
   (d) education
   Any other (specify please)

9. Your professional qualification is:
   (a) A T S
   (b) Diploma
   (c) Graduate
   (d) Untrained graduate
   (e) any other , (specify please)

Part II

instruction

Put a tick (√) in the space provided against the appropriate answers(s) on the following items.

1. Do you have adequate personnel to help you carry out your responsibilities as a headteacher in general, and in particular, the effective implementation of secondary geography curriculum?

   (a) YES
   (b) NO
2. Does your school have the necessary physical facilities?
   (a) YES
   (b) NO

3. What physical facilities have you constructed in readiness for the effective implementation of the secondary geography curriculum?
   (a) Teachers houses ( )
   (b) Classroom ( )
   (c) Sanitary facilities ( )
   (d) Lighting/generator ( )
   (e) Administration block ( )
   (f) Geography room ( )
   (g) any other (please specify)

4. What are the sources of schools funds?
   (a) School farm ( )
   (b) Fundraising/harambees ( )
   (c) Grants from government ( )
   (d) School fee ( )
   (e) donors (specify please)

   (h) specify other, (please specify)
5. does your school have sufficient teaching /learning resources?
   (A) YES
   (B) NO
   If yes, name some of them used in geography syllabus implementation.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

6. Do you check your geography teachers lesson preparation
   YES [ ] NO [ ]
   if yes, how well do they prepare the following, select and fill in; good, poor.
   (a) schemes of work
   (b) lesson plan
   (c) lesson notes

7. (a) do you assist geography teachers in any way in covering the syllabus YES ( ) NO ( )
   if yes, state areas of assistance
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

8. (a) how many geography teachers do you have?
   One ( )
   Two ( )
   Three ( )
   Four ( )
(c) how many are trained?
(d) How many are untrained?

9. (a) give your school geography mean score for the last three years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td></td>
</tr>
</tbody>
</table>

(c) Is this an improvement or drop compared to the years (state) __________________________________________________________________________________________

Give reasons for this __________________________________________________________________________________________

10. (a) how many students do you enroll for geography in form four for the given years (2000, 2001, 2002)

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>(      )</td>
</tr>
<tr>
<td>2001</td>
<td>(      )</td>
</tr>
<tr>
<td>2002</td>
<td>(      )</td>
</tr>
</tbody>
</table>

12. The year you are performing your teaching curriculum, and teachers satisfaction ____________________________________________________________________________

98
(b) How many students enrolled for the last years K. C. S. E.
(c) Which subjects among humanities had the highest student enrolment in form four.

(d) why do you think they chose that subject (give reasons)

11 Are you aware of the changes in the school curriculum (geography)?
(a) YES ( )
(b) NO ( )
If 'yes' do you have problems understanding these changes?
(a) YES ( )
(b) NO ( )

12. Do you think you are performing your responsibilities as a curriculum implementers satisfactorily?
(a) YES ( )
13. have the teachers reported to you; if any, whatever problems they are experiencing in implementing the geography curriculum?

(a) YES 
(b) NO

if yes have you been able to offer any solution?

(a) YES 
(b) NO
APPENDIX F

SUBA DISTRICTS SCHOOLS SELECTED FOR STUDY

1. Mbita High School
2. Tonga Secondary School
4. Lambwe Mixed Secondary School
5. Moi Girls' Sindo Girls Secondary School
6. Waondo Mixed Secondary School
KENYATTA UNIVERSITY
OFFICE OF THE DIRECTOR
INSTITUTE FOR CONTINUING EDUCATION (ICE)

Our Ref: ........................................

Your Ref: ................................. Date: 30/12/2002

To

Dear Sir/Madam,

SUBJECT: INFORMATION FOR THE PROJECT

ACHOLA BEN CAROLY Reg No. E574/054/2080
is a bonafide student of the Institute for Continuing Education, doing his/her M.Ed. in CURRICULUM DEV. For her Project (Mini Research) he/she will need some data from your office. Please help her/him to get some of it if possible. Data will be strictly used for research work only.

Thank you.

PROF. M. M. PATEL
DEPUTY DIRECTOR, INSTITUTE FOR CONTINUING EDUCATION
### Suba District Schools Order of Performance in Humanities

#### Geography

<table>
<thead>
<tr>
<th>Position</th>
<th>Name of School</th>
<th>Entry</th>
<th>M.S.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mbita Boys’ High School</td>
<td>36</td>
<td>8.3333</td>
</tr>
<tr>
<td>2</td>
<td>Lambwe Secondary School</td>
<td>37</td>
<td>7.7297</td>
</tr>
<tr>
<td>3</td>
<td>Tonga Secondary School</td>
<td>20</td>
<td>6.7000</td>
</tr>
<tr>
<td>4</td>
<td>Kakiimba Secondary School</td>
<td>33</td>
<td>6.0909</td>
</tr>
<tr>
<td>5</td>
<td>Tom Mboya Secondary School</td>
<td>30</td>
<td>5.7333</td>
</tr>
<tr>
<td>6</td>
<td>St. Joseph’s Sec. School</td>
<td>3</td>
<td>4.6667</td>
</tr>
<tr>
<td>7</td>
<td>Bishop Mugendi Sec. School</td>
<td>18</td>
<td>4.6111</td>
</tr>
<tr>
<td>8</td>
<td>God Bura Secondary School</td>
<td>13</td>
<td>4.5385</td>
</tr>
<tr>
<td>9</td>
<td>Suba Academy Sec. School</td>
<td>11</td>
<td>4.4545</td>
</tr>
<tr>
<td>10</td>
<td>Waondo Secondary School</td>
<td>25</td>
<td>4.3600</td>
</tr>
<tr>
<td>11</td>
<td>Moi Girls’ Sindo Sec. School</td>
<td>48</td>
<td>3.6667</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>274</strong></td>
<td><strong>5.7777</strong></td>
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</tbody>
</table>

#### Christian Religious Education (C.R.E.)

<table>
<thead>
<tr>
<th>Position</th>
<th>Name of School</th>
<th>Entry</th>
<th>M.S.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>God Bura Secondary School</td>
<td>1</td>
<td>10.0000</td>
</tr>
<tr>
<td>2</td>
<td>Mbita Boys’ High School</td>
<td>4</td>
<td>9.7500</td>
</tr>
<tr>
<td>3</td>
<td>Lambwe Secondary School</td>
<td>17</td>
<td>9.5294</td>
</tr>
<tr>
<td>4</td>
<td>Tom Mboya Secondary School</td>
<td>2</td>
<td>9.5000</td>
</tr>
<tr>
<td>5</td>
<td>Kakiimba Secondary School</td>
<td>19</td>
<td>9.0000</td>
</tr>
<tr>
<td>6</td>
<td>Bishop Mugendi Sec. School</td>
<td>25</td>
<td>8.6000</td>
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<td>7</td>
<td>Tonga Secondary School</td>
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<td>8</td>
<td>Moi Girls’ Sindo Sec. School</td>
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<td>9</td>
<td>St. Joseph’s Sec. School</td>
<td>22</td>
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<tr>
<td>10</td>
<td>Waondo Secondary School</td>
<td>9</td>
<td>6.4440</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>127</strong></td>
<td><strong>8.3858</strong></td>
</tr>
</tbody>
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#### Social Education and Ethics (S.E.E.)

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### History

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Dear Sir/Madam,

RE: THE STUDY PROJECT

I have chosen you as a representative of the district sample of teachers to take part in a very important study project in the area of curriculum implementation.

This study is an attempt to find out the factors affecting the effective implementation of curriculum reform with specific reference to Geography curriculum at secondary school level. The study also attempts to find out the roles of the actual curriculum implementers in the real situation. The area of the study is Suba District. It is a timely issue because the recently introduced changes in 8.4.4 school curriculum and Geography in particular calls for your greater participation as implementers in its implementation and operationalization of the goals, content, methods and evaluation.

I therefore kindly request you to take a little of your time to complete the questionnaire today. Your co-operation will be most appreciated.

You are all assured that the answers to the question will be treated with utmost confidentiality and used only for the purpose of this study. Your anonymity is guaranteed. Kindly answer all questions.

Thank you very much for your assistance.

Yours faithfully,

BEN CAROLY ACHOLA
E54/0054/2000
The Principal,
........................ Sec. School,
P.O. Box .........................

Dear Sir/Madam,

RE: THE STUDY PROJECT
I'm a postgraduate student taking a masters in Education Degree course in Curriculum Development at Kenyatta University. I have chosen your school as a representative of a district sample of schools and teachers, students, to participate in a study project.

The study is an attempt to find out the factors affecting the effective implementation of curriculum change with specific reference to Geography curriculum at secondary level. The study also attempts to find out the roles of the actual implementers in the real situation. The area of study is Suba District. It is therefore an important study considering the challenges and demands placed upon curriculum implementers and the school's.

All the responses will be treated with utmost confidentiality and will only be used for the purpose of the study. A copy of the clearance letter from the office of President will be sent to you as soon as it is available.

I am therefore kindly requesting you to make available for me, a list of all Geography Teachers and form four students of your school.

The list of all Geography teachers will enable me to select a representative number of two teachers from your school to participate in the study. I would like to visit your school on ___________ 2003 in order to administer questionnaire to you as Principal, Geography teachers and form four students.

Thank you very much for your co-operation and help.

Yours faithfully,

BEN CAROLY ACHOLA
E54/0054/2000
TO: ALL GEOGRAPHY TEACHERS
THRO'
HEADTEACHERS OF SECONDARY SCHOOLS

RE: SECONDARY GEOGRAPHY SYLLABUS:

It has come to the notice of Secondary Geography Panel that there have been cases of under-teaching in some topics. Below is a comprehensive guideline on the required coverage and approaches of selected topics.

1.0 UNIT 7.0 - Statistical Methods

Various methods to be integrated into the topic to make it more relevant should include the following:

(i) Line graphs.
(ii) Bar graphs.
(iii) Combined Bar and Line graphs.
(iv) Comparative/group bars.
(v) Compound/Cumulative Bars.
(vi) Divided Bars/Rectangles.
(vii) Proportional circles.
(viii) Pie charts.
(ix) Wind Rose.
(x) Dot Maps.
(xi) Choropleth/Density/Shading Maps.

In each case discuss the geographical procedure of calculation and graphical representation, merits and demerits.

2.0 UNIT 10.0 - Internal land-forming processes.

The topic should be handled in the following sequence.
2.1. Introduction:  
(a) Meaning and causes of Horizontal and Vertical Earth Movements.  
(b) The Theories of Continental Drift and Plate Tectonics.

2.2. Sub-Unit 10.11 - Folding (as outlined in the syllabus).
2.3. Sub-Unit 10.12 - Faulting (as outlined in the syllabus).
2.4. Sub-Unit 10.13 - Vulcanicity (as outlined in the syllabus).
2.5. Unit 18.0 - Earthquakes (as outlined in the syllabus).

3.0. UNIT 19.0 - External Land-forming Processes

Add the following content which were covered in the specific objectives but missing in the content.

3.1. Oceans and Seas

(i) Meaning
(ii) Physical features of the Ocean Floor.
(iii) Nature of Ocean Water.
(iv) Movement of ocean waters  
: Vertical and Horizontal Movements.  
: Causes of the Movements.
(v) Tides  
: Meaning  
: Causes  
: Significance

The rest of the topics are then taught in the sequence provided (i.e. 19.11 upto 19.18).

3. UNIT 22.00 - Soils

Add the following content to the relevant Sub-Units as stipulated below:
Sub-Unit 22.11 - add composition of soil.
Sub-Unit 22.14 - add  
(i) Soil classification.  
(ii) Zonal, Intrazonal and Azonal.  
(iii) Texture, Age, Colour.
Sub-Unit 22.16 - add significance of soil.
Sub-Unit 22.17 - add meaning and types of soil Degeneration.

Note that the topics provided in the syllabus are guidelines to the coverage of the syllabus. The topics can therefore be re-organised during the preparations of schemes of work. However, such re-organisation must be