

**FACTORS THAT LEAD TO GIRL STUDENTS' LEVELS
OF PERFORMANCE IN SECONDARY SCHOOLS
SCIENCE:**

**A CASE STUDY OF MOSHI MUNICIPALITY IN
NORTHERN TANZANIA.**

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DECLARATION

I Festo Mwangalika do hereby declare that, to the best of my knowledge that, this is the original work of my research and has never been presented to any University or institution for an academic award. I also take sole responsibility for errors and inaccuracies that may be contained in this report.

Signed by:

Date:

A handwritten signature in black ink, appearing to read 'Festo Mwangalika', written over a dotted line.

14.05.2008

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APPROVAL

This dissertation has been submitted for examination with the approval of my supervisor:

Signed by:

Date:

Otanga Rusoke 15-05-2008

DR. OTANGA RUSOKE

Supervisor

DEDICATION

This work is a special dedication to my lovely wife Mary Festo and Joshua Manilakiza Festo, and I extend to my entire family for being kind during my studies in Kampala International University (KIU), Kampala Uganda.

“THANKS”

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This research paper would have not been succeeded for my own efforts personally, but there are so many people who supported me morally, financially, and materially to bring this study into existence and much successful.

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Special thanks also should go to my lovely wife *Mary Festo*, and my beloved son *Joshua Manilakiza Festo* ,my Pastor Mr. &Mrs. *David P Mugunya* , my brother in law Mr.& Mrs. *Elias K Mrianga* ,Headmistress *Kiboriloni* Secondary, my colleagues in the Department of Public Administration Kampala International University for their support of every kind in my life and education as well, morally ,financially ,materially which lead me to reach this point.

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LIST OF ABBREVIATIONS

SMT- Science, mathematics, and technology.

DR. - Doctor of Philosophy

MMES- Secondary Education programmes for five years in Tanzania

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Definitions of the key concepts

- **Performance** - is how well or badly something can be done
- **Academic** -connected with education especially studying at school as extra curricula (informal education).
- **Students**- A person who is studying at school formally.
- **MMES**- Secondary school education program in Tanzania (2004-2009).
- **Infrastructure**- Facilities like classes, roads, laboratories, electricity, sanitation, and others.
- **Scholastic materials**- Refers to materials like books and all stationeries.
- **Education policy**- This refers to the tenets/principles/canons in which the measures or evaluation or any course of action that based and adopt a particular tasks especially with regards to foreign countries, wisdom of government of their affairs and public.
- **Science**-is knowledge about the structure and behavior of the natural and physical world based on facts that you can prove i.e. Physics, Chemistry, Biology and Mathematics.

ABSTRACT

This study is set out to assess the image, attitudes, and behavior on parents, teachers, and students on the studying science and mathematics and its performance to girl students. A case of Moshi Municipality. It is the case whereby representatives of three groups that is teachers, parents and students with different age urge.

However, the majority of respondents in the study claimed that, despite the efforts which government has been put to improve girl students from poor performing in SMT, still its implementation are constraints their role to achieve their Ends.

Moreover, this is reflected by 83% of respondents who claimed and agitated that, the initiative of the MMES towards better performance and to have positive impact on, in particular girl students that have been register moderate.

Further, the findings are presented by using tables, graphs, and pictures and by analyzing qualitative and quantitative data.

This research paper is divided into five chapters whereby, **chapter one** consists of background information ,statement of the study, objective of the study ,that is general and specific objectives hypothesis ,scope and purpose of the study ,significance of the study and definitions of the key terms.

Chapter two consists of, literature review, introduction, theoretical literature review, socio-economic factors infrastructural factors, images and attitudes factors, extra curricular factors and conceptual frame work.

Chapter three consists of, study area and research methodology ,which is divided into five sections that is geographical location of the study , soils climate and

vegetation, relief's ,rainfall ,population and socio-economic activities, research design ,sample and sampling, data analysis, anticipated problems to the study ,that is poor response from respondents, financial constraints etc.

Chapter four consists of ,data presentation ,analysis ,and interpretation that is from major findings ,respondents profile .This was basically designed to present what the researcher gathered during field work. This information however, was presented in such a way that, it would be easy for the reader of this work to grasp the intended meaning on the role played by government in improving girl students' performance in mathematics, science and technology.

Chapter five consists of, Summary, conclusion and recommendations.

CHAPTER ONE

INTRODUCTION

Today, the phenomenon of the gender awareness with girl empowerment has been attracted the whole world's attention as one of the tools of economic liberation. However, besides the awareness and measures to curb this problem of performance, little attention has been given to the practical process of capacitate, equipping and empowering girl students to enable them to enjoy pursuing science and mathematics disciplines.

In international debate has been intensified on the role that families, communities, governments, teachers, Non-Governmental Organizations among others should play in sensitizing, advocate, lobby, and encouraging in the programs that will help to raise morale to girl students in performing better as boys.

Girl students come with many long term challenges within themselves and other stakeholders. To this ends there is strong needs for rebuilding broken hearts and to reignite the potential of girls to enjoy their studying of science and mathematics and become the future scientists.

The purpose of this study was to investigate whether or not the girl poor performing in science and mathematics has been exist and factors that underlying its existence and there after proposing some solutions

This study explored the girl student's rights to science education that specifically the study investigates "Factors that lead to girl student's poor performance in science and mathematics.

A case study of Moshi Municipality, northern Tanzania. “This chapter gives the background to the study and the scope of the problem as it relates to some of the challenges as to why they perform poorly, the impact and some of implications, the statement of the problem, research purpose, objectives, research questions, significance and justification for the study undertake.

1.1 BACKGROUND OF THE STUDY

Governments in many parts of Africa are aware of the benefits of females (girl) education. Education of girls has profound effects on National Development as lack of education has been linked to low birth weight, poor health, and high mortality rates in children, high fertility rate, poor family nutrition, low life expectancy, poor sanitation and high illiteracy rate.

The socio-economic importance of girls’ education can thus not be overemphasized as well as science and technology disciplines. Efforts to boost the needs to girls’ performance in SMT have been undertaken by the Governments, International organizations and NGOs because of its critical importance to be balanced.

However, there is still a gender disparity in education, negative public image on girls’ education, low access to SMT, and participation that lead to poor performance in science and mathematics in almost all levels. It has been noted some number of factors that constraints the girls’ performance that is community and school based continued to restrict development in girls’ education. According“*.hakielimu*”.2003:10. In the bridging, the gender gaps in science and mathematics education. The gender gap in access, participation and performance in SMT Education is still wide with female severely under-represented.

Numerous attempts to reduce the gap have been undertaken, but this matter try to attempt to show the depth and extent of the challenges facing the efforts to change the situation and suggest entry points for main streaming gender equity SMT education.

Further, in any increasingly complex and global society, as that of today, every person deserves to be scientifically literate. Scientific literate has been defined as the knowledge and understanding of scientific concepts and process required for participation in civic and cultural affairs, economic productivity and personal decision making.

All citizens require the habit in mind that characterize effective scientific inquiry (curiosity, flexibility and skepticism) and a fundamental community and National development. Numerous studies have established that girls do not access to schooling and participating or performing as boys due of system of male biased, in the education system (Hegelson, 2001; Mabala et al, 1995; Masanja, 1997; Nnko et al 1995; Rajani et al 1999). Girls face great obstacles in developing and utilizing their educational capabilities. If we want equity, then society must bring about attitude change towards girl education.

Moreover, challenges that facing Secondary School Education in particular Moshi Municipal Council that located in Northern Tanzania. Since 1976 to date are far reaching as to include are unqualified teachers (UPE), style of teaching, public image, family sizes, early marriage, cultural practices, religious beliefs, parental education, pregnancy traditional beliefs of some women as wife and mother, prostitution, poverty, distance from the school, time used by girls, parents attitudes, teachers attitudes are some of causes to girls poor performance in SMT.

Poor performance also can be due to poor payment of salaries to the teachers/staff ,de-motivated staff ,socio-cultural behaviors aspirations of the entire community on girl studies .For example public image on SMT is widely claimed in the literature(Henderson,1981,Sewell 1981, Mwetwa and Garofalo 1989 et al),that negative images and myth of science and mathematics.

1.2 STATEMENT OF THE PROBLEM/STUDY

Despite the existence reports in the whole country of the good program of improving secondary education with a gender consideration in Tanzania, like MMES (2005-2009), still girls are handicapped by the hardship in SMT Myth that had been claimed to be one of the contributing factors to the general performance.

Reasons given to the continual lower girl's performance in SMT are associated with ignorance due to cultural silence on the issues concerning attitudes, style of teaching, accessibility of scholastic materials, laboratories ,distance from the school ,rural urban migration, traditional beliefs of a female as wife and mothers, family size, early marriage among other factors. Scholar has been arguing on the external causes of girls' students' performance in SMT which is due to poor education policy on girls, poor governance, and poverty.

Moshi Municipal Council, just like other district found in Tanzania mainland with 256 districts, has tried to encounter that case by adopting (MMES) that is Secondary School Education Program that initiated to improve education performance as well as development. The program aim to mitigate, the socio-economic development crisis, and poverty caused by illiteracy.

Although the importance of assessing what people have in mind on girls performance in SMT because no research that encountered to the problem in an area on 100%.For this regard, the study intends to assess the factors that lead to

poor performance to girl students on that area. Also the study will try to make any possible comparisons between one school to another and the entire community around the area on their attitude towards girl's performance in SMT.

1.3 OBJECTIVES /PURPOSES OF THE STUDY

1.3.1 GENERAL OBJECTIVE

The general objective of the study is to determine the impact of socio-economic, culture and environment enhancement lead to poor performance to girls' student in secondary schools science and mathematics subjects for the case of Moshi Municipal Council in Tanzania.

1.3.2 SPECIFIC OBJECTIVES

In order to achieve the overall/general objective, the following specific objectives will be addressed by the study.

- To identify socio-economic factors, that leads to the academically sciences and mathematics poor performance to girl students.
- To identify political and cultural factors that lead to academic discipline of science and mathematics poor performance in general.
- To find out the environmental factors that encroach science and mathematics performance to girl students in secondary schools.
- To investigate any relation between the range of images of people to science and mathematics with socio-division in terms of gender, age, and occupation groups.
- The research was to find out whether infrastructure, education policies, and accessibility of other incentives were constituted to the factors of ineffective in promoting science and mathematics performance especially to girl students in that area.

1.4 RESEARCH ASSUMPTIONS/HYPOTHESIS

The study were addresses the following questions

1. What are the socio-economic factors that lead to girl student's poor performance in science and mathematics in secondary schools?
2. What are the political and cultural factor, which affects the girl students' performance in science and mathematics in secondary schools?
3. Is infrastructure, government policy on education, accessibility of the school materials encroaching the girl student performance?
4. To what extent do environment, image, attitudes, and distances from schools, and poverty contributing to the existing girl students' performance in science and mathematics in secondary schools?

1.5 SCOPE OF THE STUDY

The research aims to investigate the impact caused by development of poor performance in SMT to girl students in an area. However, the study was based on the encroachment that relate to the school infrastructures, administration, accessibility of scholastic materials and education government policy(curriculum) to see how they contributed in leading to poor performance in SMT to girl students in secondary schools.

The Moshi Municipality is one of the districts found in northern Tanzania around mt. Kilimanjaro. It is among the seven districts constitute the Kilimanjaro Region i.e. Moshi urban, Moshi rural, Rombo, Hai, Mwanga, Siha, and Same. The dominant people of region are Chagga, Pare, and Maasai. Their economic activities among the many are tourism, coffee production, fishing and trading.

1.6 SIGNIFICANCE OF THE STUDY.

The study is significant to the Moshi Municipal administration and any other researchers in the following ways:

- The study is providing the useful inputs to formulation of education policies that will promote strategies focusing on the impact of socio-economic, infrastructure, accessibility of scholastic materials, and administration to poor performance of girl students in secondary schools science and mathematics in an area.
- Its findings are to contribute all useful information to both stakeholders, researchers, policy makers, practitioners, theoreticians and teachers as well.
- The findings is reflecting possible implications for SMT Education and subjects teachers knowing how ex-students perceive science and mathematics especially girl students learning experiences in secondary schools and how this could have influenced their images of SMT .

The study therefore, may benefit a number of stakeholders;

[i] For the government, the research may avail information that would allow them to know the exact extent of the level of which the girl students had been challenged by science and technology disciplines hence, this would allow them to formulate appropriate compensatory strategies and policies.

[ii] Moshi Municipality leadership may use this study's findings in formulating new policies and bye-laws that addresses specific needs of girl students.

[iii]Communities in Moshi Municipality might be sensitized to be able to support school's development programs and provides necessary requirements that will enable girl students to effectively undertake science and technology.

All the stakeholders stand to miss the above enumerated possible benefits if the study was not conducted. There would be ineffective decision-making, policies at national and local level, poor support from funding agencies and NGOs, denial of expansion of knowledge by other scholars and diminished community participation and involvement as supporting the girl students empowerment.

This chapter has discussed the background to the study and has captured issues related to what is perceived to be the challenges of girl students in performing ,what interventions need to be taken, why the study was important and urgent, the scope of the problem, the purpose and the relevant questions for the study.

The subsequent chapter will deal with review of the related literature and conceptual frame work related to the poor performance of girl students.

CHAPTER TWO

LITERATURE REVIEW

INTRODUCTION

This study aims to make a systematic enquiry into the publics' images to girl student's performance in SMT and the casual possible factors that has been influencing on the formation of the existing performance. In this study the term performance is defined as the ability to do good or bad in anything you do. Thus the image of science and mathematics originated from the past experience, it comprises both cognitive and beliefs, attitudes, and conceptions/perceptions, feelings, emotions associated on it.

In this chapter, the researcher reviewed literature in relation to what other scholars had established about the factors that lead to girl students poor performance in science and technology in Africa and else where. The literature is presented in view of the research questions.

2.1 THEORETICAL LITERATURE REVIEW.

According to Larry C (1979), suggests on the poverty, that African population in general is growing very fast and 55% to 60% of the population is a new generation between 20 years old plus. This put burdens to the adults who are support and educate their children. However, in some Africans countries the birth rate is high, hence impacting the society and government in curriculum set-up due to global changes.

2.2 SOCIO-ECONOMIC FACTOR

To Kabbay O (2003), Poverty is created by upheaval in society where girl students are the most vulnerable group in society that hit by any kind of economic decline or social perception, when it comes to make decision that will go to school, boys will be taken to school and left girls at home. Also the home domestic girls are more concerned compared to boys of which contribute to highly poor performance. However, poverty has affected students in extreme forms.

They do not have enough to eat, vulnerable to diseases and in many cases malnutrition in early childhood has affected physical and intervirtual development. Even where children/students are able to go to school, their ability to concentrate is to be diminished by those burdens, thus the Arthur explained poverty at school level in terms of health, low level economy, children condition but he did not show the solution on how to address the pressing.

The majority of the poor ,in particular Africa ,Tanzania inclusively of women i.e accessibility to better jobs are limited to them because they generally have less access to education facilities especially in SMT .To south commission(1990) underline the need to raise educational standards, especially in secondary schools science and mathematics in development matters.

This is because it will be applied to all sectors formal, informal, public and private. Example ,it has been noted the increases education and literacy that have been associated with the lower birth rate ,increased life expectancy ,reduced infant mortality rate and access to general health service ,all aspect which are considered to be among the indicators of development (Wagner,1993).

To former Tanzania minister for science, technology and higher education stated ‘.....there is a dynamic link between the issues of education and poverty, if not casual then certainly reinforcing. Education is perceived as a tool for mastering the environment for production and self-preservation .In many countries the poor are often also the un educated”(Bagachwa,1994).

The majority employed women in Tanzania are in low paying jobs, this is so because the latter do not demand science and mathematics in high level of education. Thus poor performance to girl students in school continues to deny women opportunities for higher education which would give them access to better –paying jobs. The view that “The increase in women education and girl students contribute to greater empowerment of women.....”

2.3 INFRASTRUCTURE CONCERNS.

Classrooms dynamics poor expectations of girl students performance leads to the kind of sciences classroom dynamic, where girls are treated very differently from boys. Class observation revealed that teachers do not encourage girl students to learn SMT lessons and fact, at times, actively discourage them. One way they do this is by directing only simple recall type of questions to them and diverting the more difficult, reasoning type of questions to boys.

There is often misguided effort on the part of teachers to save the girl from potential difficulties with SMT and to save themselves from having to teach girls, who they claim would require enormous effort .This kind of treatment can only reinforce and confirm in the mind of both boys and girls. What literature and society tells/peddles around that science is for boys only. Boys therefore, overtime develop at these subjects which they consider domain. They harass girls and regard them as being incapable of engaging in difficult learning task such as handling science and mathematics.

However, according to the previous researchers on the impact of poor performance of girl students in secondary school SMT, they Based on population effects, socio-economic effects, accessibility of better facilities to schools concerned on better learning of science and mathematics disciplines among of them the curricula, but they did not show exactly what measures to mitigate the impact and causes to poor performance for girl students in secondary schools. Thus the research will try to consider the following:

The school library that is well equipped ,the new images and attitudes of the entire community on SMT ,students discipline, behaviors, evaluating students programs ,rights and responsibilities of parents, the curriculum set-up, moral and emotional education.

2.4 IMAGE AND ATTITUDE FACTOR

According to Basic Skills Agency (1997), the trend is still evident in an international survey on the numeral skills of students as well as adults, parents, teachers, in several countries e.g. France Sweden, Japan, Australia, Denmark, United Kingdom (UK) and as much in Africa. Tanzania in between 1990 and 1995 over 70% of girls who took to school and obtain the certificate of secondary education examination (CSEE) failed in chemistry and physics. The failure rate in science and mathematics was even higher .In 1995, 84% of boys and 96% of girls failed in only mathematics i.e. at aggregate of D or F .in biology in the same year, the failure rate was 77% of boys and 95% of girls.

Further, the possible indications of causes to poor public image on SMT there is propositions and speculations about the factor leading to the claimed and unpopular image of science and mathematics (Sewell, 1981), proposes that “Teachers attitude, the formalities of SMT teaching to every day context, fear of the subject, literacy problem, gaps in schooling, and parental expectations”.

Bell (1989) speculates that most people initially have the capacity to appreciate the beauty of (SMT) as an art but sadly this appreciation “often get suppressed by distasteful school experience” (1970) likewise, Ernest (1996) claims that experience of learning (SMT) in school, especially the negative ones, are possibly the dominant sources leading to the public image and attitude on SMT.

In sum, these proportion seem to suggest that three of the possible factors that influence negative public attitude and image on SMT are parents, teachers, girls themselves and teachers thus this study seeks to find the range of image that are held by public, adult members both in education and outside education sectors it also aimed to uncover/reveal some possible reason underlying the myths and perceived image of SMT.

However there is widely argument that SMT myths are the literature that SMT are the most difficult subject, and are for clever ones, For males domain because of these perception it have been noted that the low performance in SMT especially to girl students in secondary schools is basing on that perception. To Sewell (1981) reported the poor performance with the view that only 20% of the student usually complete their tasks and half of them 47% not complete their tasks that given and the 33% they do not. The report raises concerns for both the government and SMT education society, community.

Moreover, attitude of teacher is there strong all prevailing traditional conservative belief among parents ,teacher and students that SMT are male preserve the attitude of teacher has by far the greatest impact. many teacher including women teacher, despite much lip services to the equality of girls and boys just do not believe that girls have the ability to study SMT they believe that these disciplines all for straggle and determination and they simply do not believe that girls are capable of coping with “difficult” subject among women who succeeded in SMT there is strong belief that teachers activity discourage girls studying these disciplines .the result is that teacher generally have low expectation of girls ability to perform in SMT.

2.5 EDUCATION POLICY/GOVERNMENT POLICY.

It is the target of the government that in an increasingly complex and global society as that today every person deserve to be scientifically literate scientific literacy has been defined as the knowledge and understanding of scientific concept and processes required for participation in civil and cultural affairs, economic productivity and personal decision making .All citizen required the habits of mind that characterize effective scientific enquiry (i.e. curiosity flexibility and skepticism)and a fundamental understanding of science of which are essential for the person community and nations. Community and national development. Thus in Tanzania in many other sub-Saharan countries the gender gap in science and mathematics continues to be wide with girls lagging far behind boys.

The nation cannot afford to leave half of its population behind the gender gap must be closed through reviewing of the curricular and for the meaningful and sustained development in sub-Saharan Africa we cannot afford to deprive over half of the population of the region in virtually essential benefit of SMT we need not enable the ordinary peasant farmer to avail of the many new technology improved merely to increase the number of women engaged in career as professional

scientist mathematicians and technologist and other science based occupation but and husbandry techniques , simple labor saving devices and increased knowledge of environment and soil and water conservation and basic knowledge to provide a healthy home and family .

The government must provide every girl with the basic scientific, mathematical and technological expertise which will enable them to better solve their everyday problems and on rich the n life in the village and on their home base management .Tavernier and bannifield (Times education supplement, September 12, 1997) studied the reasons underpinning the high rate of withdraw. They found that the main reasons are financial and social factors such as low pay, lack of respect to the teachers and indiscipline perspective.

However, there are also other factors such as perceived lack of support from the higher education institutions, and lack of partnership between schools and higher education institutions. Then the image of SMT as a male domain also seems to affect some of the participants, one female mathematics and science radiant comments that “The school department was predominantly man lead seemed to hold the opinion that female teachers shouldn’t be teaching science and mathematics ,thus this study will try to make any credibility justifications and register some solutions.

2.6 EXTRA CURRICULAR

These are concerned with outclass activities but with impact to acquire SMT .The time used by girl students always is inefficiently because they spent at school work as well as at home activities .At home for example time need for home work and studies is used for household chores ,playing ,chatting ,and visiting friends. In school, while boys may spend their hours outside the class time discussing academic problems, also may be found in cluster gossiping.

Teachers ask girls to baby-sit and run errands for them during and out school hours. Girl students sometimes volunteer for these jobs to gain favors from teachers or to enable them get out of participation in some lessons or school activities. Girl students also use their time inefficiently by not participating fully in class discussion .Unfortunately, this attitude is partially based on African traditional practices, where girl students are not supposed to enter into discussions with men but are only listeners.

Since sometimes some teachers do not make effort to pull girl students into discussion when they do not participate, thus girl students loose out on so much and are also not able to share with the rest of the class ideas they may have, thus the study will try to encompassed and recommend on what should be.

Also the traditional beliefs of a women as a wife and mother ,this traditional prevails in to days society ,hence the attitude that it is more beneficial to formally educate a boy than a girl and that girl only need to be educated and trained in house chores to prepare them for marriage still persists.

Further, cultural practices in some societies require girl staying out of school temporary or permanently and interfere with her education, some of these traditions require drastic measures on the girl, for example, mutilation of sexual organs, and occasions to the decision to continue or discontinue school after such a traumatic experiences is made by the girl.

CONCEPTUAL FRAME WORK



CHAPTER THREE

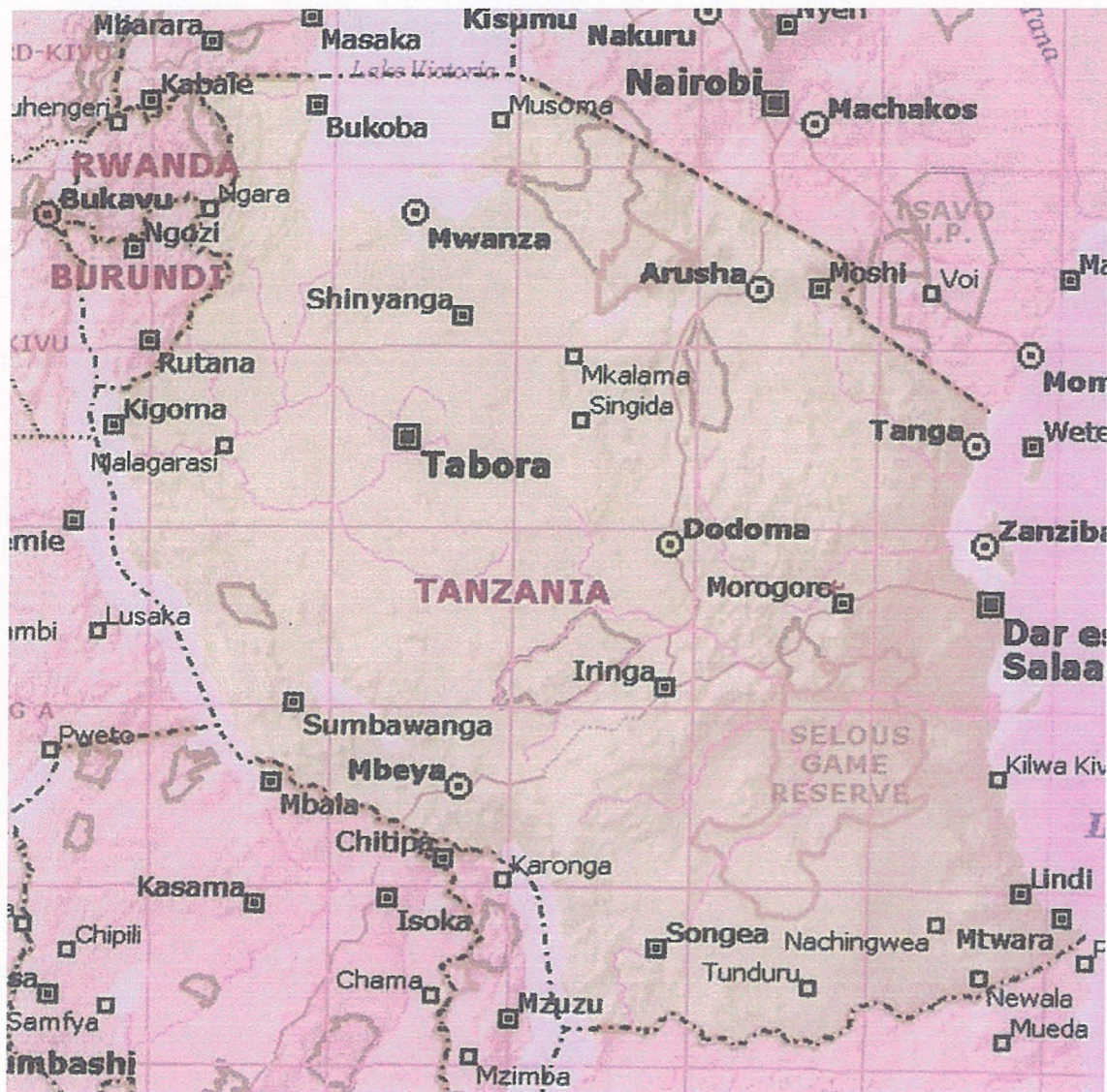
RESEARCH METHODOLOGY

INTRODUCTION

The study employed a number of techniques in the data collection, presentation, and analysis and discussion process. This chapter reveals how the researchers design, that was chosen, and it specifically describes the research design chosen the research population and area, and the methods of data collection, presentation and analysis that were employed.

Indeed, it also describes the researcher's approach in dealing with ethical issues that surrounded the study in its entirety. In addition, the chapter underscores the limitations that the researcher encountered in the course of undertaking this study.

3.1 GEOGRAPHICAL LOCATION OF THE STUDY AREA.



Source: Primary Data

The study has been conducted in Moshi Municipality among the seven Districts that constitute Kilimanjaro Region in Tanzania. Other districts includes; Hai, Siha, Moshi rural, Rombo, Mwanga and Same.

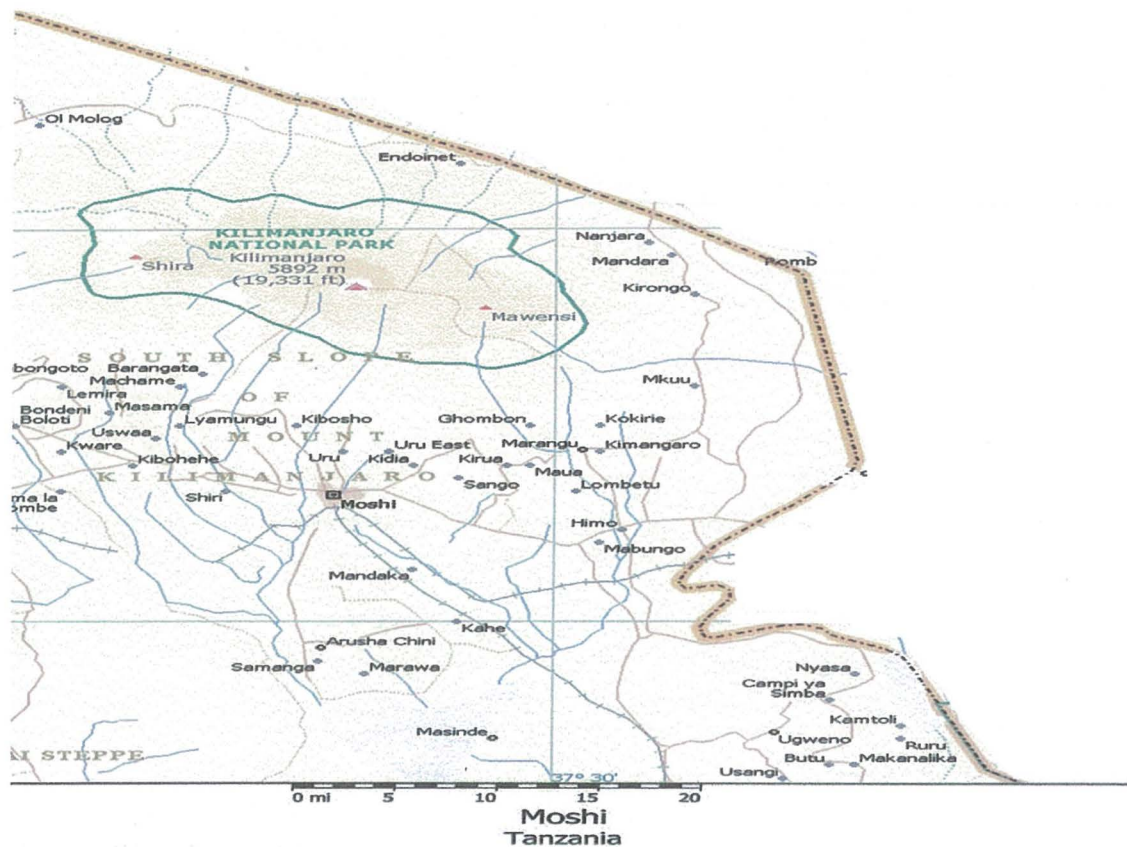
Kilimanjaro Region is located at the North-eastern part of Tanzania. It lies between 1°-5° South and 34°-38° East. The region covers a total area of almost 51000sq.km of which constituted by water bodies, forests, hills, and swamps with other part for agricultural activities.

3.2 CLIMATIC AND VEGETATION RELIEF

3.2.1 TEMPERATURE

The weather of Moshi Municipality is characterized by cold and warm temperature. The cold weather is experienced from mid-April to September, while the rest is warm. The range of temperature is small about 3°-5° centigrade between the coldest months of July at approximately 25°.

3.1.2.3 AREA OF STUDY AND POPULATION



Source: Primary data

The study was carried out in Moshi Municipal Council which is in Northern Tanzania with a population of 144,739 (2002 census). Many residents have banana groves (migombani) and coffee with small holding (Vihamba) on the fertile slopes of Mount Kilimanjaro. They are located in Northern Tanzania, it is among 21 regions of the mainland and 256 districts.

It is a headquarter of Kilimanjaro Region. The area of study as to why the choice was based on the following reasons ;it is the home of the researcher, ,thus it had minimized the costs, time and other inconveniences during the study, feeding, transport, hence it was simplifying the whole study.

3.4 METHODOLOGY/STUDY INSTRUMENTS OF DATA COLLECTION

Methodology/study/research instruments were of the three categories namely; Interview schedule for structured interviews, interview guide for the in-depth or unstructured interview, and observation guide for the observation.

3.4.1 RESEARCH DESIGN

The study/research was using random sampling and descriptive design (Quantitative and Qualitative).Focusing to the impact of socio-economic, environment, poverty, administration, education policy, and extra –curricula activities on how they affect academic performance specifically to girl students in SMT.

Qualitative methods were establishing in detail the environmental problems, economical, social, and political. While Quantitative methods were establishing people's knowledge about socio-economic problems and development as the active study through tables and illustrations figures. It was however involved more than one school.

3.4.2 SAMPLE SIZE AND SAMPLING

Sample is as subset of the whole population to be investigated by the researcher and whole characteristics was generalizing to the whole population, however 10% of the population was considered from more than one secondary school that targeted. Probability or simple random sampling was used in quantitative approach while purposive sampling was used in qualitative approach.

Table 2; Shows sampling and data collection methods

APPROACH	SAMPLE TECHNIQUE	DATA SELLECTION METHODS	SAMPLE SIZE
1.QUANTITATIVE	Simple random sampling	-Questionnaire -Structured interview	Female-25 Male- 25
2.QUALITATIVE	Purposive sampling	-In-depths interview -Observation	Female- 25 Male - 25

Source: primary data

Categories of respondents

	KB-Sec	Ms-Sec	Rm-Sec	Parents	Total
Head of schools	1	1	1	_____	3
Teachers	10	10	10	_____	30
Students	20	20	20	_____	60
Others	_____	_____	_____	7	7
Total	31	31	31	7	100

Source: Primary data

3.5 DATA COLLECTION TOOLS

Personal interviews and observations were the major methods employed to collect the data was supplemented by informal discussion to guide validity of the collected information.

3.5.1 RESEARCH QUESTIONNAIRES:

The researcher used self-administered type of questionnaires to collect qualitative and quantitative data from top management of education officials, education stakeholders as well as Government officials to enable the accuracy and smoothness of the information relating to the study requirements.

3.5.2 INTERVIEW SCHEDULE:

Qualitative data had been collected using the techniques of data collection. Unstructured type of interview was selected and used in the process due to the flexibility that allows sharing views related between the interviewers and interviewee, thus feelings, views and options from interviews would be appropriately drawn out by the researcher.

Also structured interview was used in this study so as to have views and comments concerning the problem and problem and make them reliable for analysis and presentation.

3.5.3 DOCUMENTATION:

Different documents were used as a source of information as was needed by the researcher. The documents used, were including; files, books, manuals and some reports related with information on the topic so as to make the information collected from other methods relate and capture with the objective of the study and

to make them concrete. Documents helped the researcher to get statistical information about population, enable evaluation as well as other measurements conducted.

3.5.4 DATA ANALYSIS

The data analysis was carried out in both two approaches i.e. quantitative and qualitative, where in quantitative approach; it was involving editing, coding, and tabulation to bring up their essential patterns.

However, a qualitative approach of the data analysis was coded under various themes and sub-themes .Hence the tabulation of data to compare the variables of study, then the results from the above findings was used to make interpretation, recommendation and conclusion.

after have filled in their convenient time, thus cost the researcher whereby he was forced to use phone in order to acquire some information.

Encountered challenges.

3.6. CORPORATION/RELUCTANT OF RESPONDENTS TO DELIVER INFORMATION.

During conducting this study, in interviewing respondents there was a lot of reluctance to deliver the required information to the researcher, whereby some feared to give all the information to some questions which they thought were confidential to them for example ,the question of inadequate and competent science and mathematics teachers whether nor, they contribute to lezzy teaching and un-committed has factored .

To this challenge the researcher kept himself in their part and disclosed himself so that it was easy for them to trust and give the reliable information.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND DISCUSSIONS

INTRODUCTION

This chapter presents findings and indicates how data was presented, discussed, interpreted and analyzed. The findings in this chapter are consistent with the research questions and objectives. The discussion utilized the statistical package for social scientists (SPSS), whilst data presentation and analysis was mainly qualitative.

The data is presented as tables and graphs. The presentation is per research questions and opinions were developed from the responses given from field visits and contact with respondents.

4.1 MAJOR FINDINGS

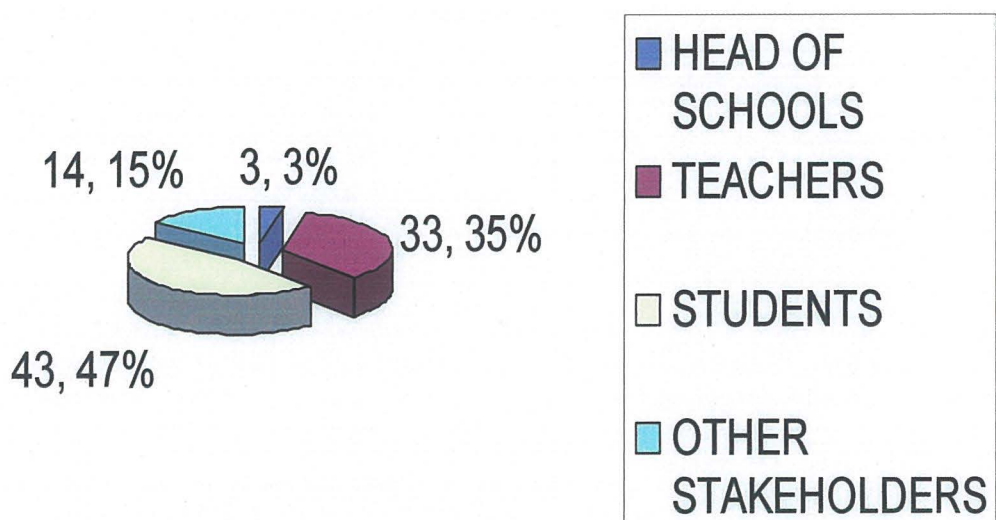
The major four questions were set in this study in order to tackle the research problem. These questions however, were reflected in the questionnaires of the study, and objectives of the study which was the main tools of the study concerned to collect the reliable information that to be analyzed in this chapter.

4.1.1 Table 4: The respondents' profile

RESPONDENTS CATEGORIES	NUMBER	PERCENTAGE DISTRIBUTION
Heads of schools	03	3%
Teachers	33	35%
Students	43	47%
Other stakeholders	14	15%
Total	93	100%

Source: Research findings

THE RESPONDENTS' PROFILE



Source: Primary data

This study was conducted in Moshi Municipality Council which is among, the seven districts that constitutes the Kilimanjaro region found in Northern part of Tanzania. This Municipality has 19 secondary schools, private and government schools, of which the researcher uses three schools among them in collecting data's with 93 respondents.

Among of them ,heads of schools were three ,thirty three teachers forty three students and other stakeholders were fourteen of which makes the total of 93 respondents .

From the table however, it is shown that the researcher interviewed 3% out of 100% of all respondents whom were heads of schools of Kiboriloni ,Msaranga ,and Regnald Mengi Secondary Schools ,36% out of 100% of all respondents were teachers of respectively three secondary schools ,47%out of 100% of all respondents of the same schools ,and 15% out of 100% were other stakeholders.

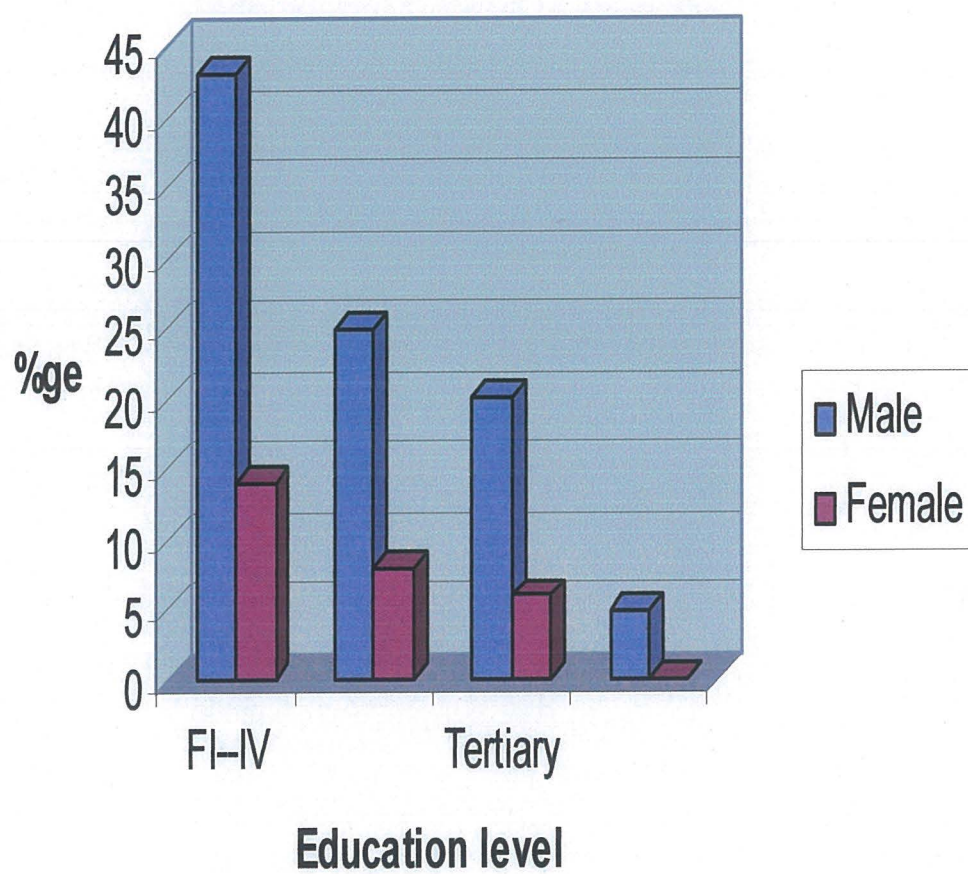
4.1.2 Respondents by education level

Table 3: Respondents by education level

Education level	Male	Female	Total distribution	%sample size
FI--IV	43	14	29	46
Diplomas	25	8	17	27
Tertiary	20	6	14	5
Degree	5	0	5	22
Total	93	28	65	100

Source: Research findings

Plot on education level



Source: Research findings

From the above table, the study observed that, respondents by education level from form one to four were students, and diploma holders were teachers, tertiary students, and those with degrees' level were the heads of schools and administrators. These account percentages, students (46%), Diplomas (27%), Tertiary (22%), Degrees (5%) of which constitutes, the total respondents of 100%.

In this study the research findings proved that most of the respondents said that, they like arts subjects compared to science and mathematics because science has challenged them on their final results of which were not good for continuing with science and mathematics disciplines.

4.2 RESEARCH QUESTION ONE

That was stated the Socio-Economic factors that lead to girl students poor performing in science and mathematics in secondary schools. The researcher found that ,the major possible factors that influencing the results were the existing image, attitudes and beliefs on taking science mathematics and technology. For example, computers.

The socio-economic backgrounds contributes to large extents For example ,the relationship in socio-economics for those who leave far from schools, usually they don't have enough time to make revisions at their home ,also even on the way to schools they used to be tempted to involved in sexual activity of which it takes much of their time .

Further, girl students are most of them having to perform house hold domestic activities that limit them in their sticking to their studies especially in science and mathematics in particular.

Also the study found that in some culture girl have to be prepared for married, thus their parents pay a little attention and less values to their studies of which it discourages them to pursue science and mathematics which need much concentration.

4.3 INFRASTRUCTURE HOW LEAD TO POOR PERFORMANCE TO GIRL STUDENTS.

4.3.1 Figure 1: Students crowded in class with inadequate chairs.



Source: Primary data

The researcher found that , in one class there were crowdedness with few girl students in sciences' class .these were the students who took science that is Form one to Form four in Kiboriloni secondary 2008.However, the class itself lacks vital facilities like chairs ,desks among others with reliability . For that case the class environment had paramount impact posed on the performance especially to those who wishes to undertake science and mathematics, this became worse to girl students.

4.3.2 HOW TRANSPORT IMPACT TO STUDENTS' PERFORMANCE.

The study found that, transport has also an impact posed on students' performance. The research found that, all public schools have no private cars for transport, whereby those students who lives far from school, had been experiencing such problem.

For example, those students who live more than one kilometer distant from school, it is said that on the way for especially girls had been facing the challenge of accessing transport at right time. And some times they had been facing an adequate/insufficient treatment in the public buses.

Poverty engulfment/handicapped to most of parents, to give enough money to their children, to cater for their transport. This to girl students has been realized that, it has created a loopholes to public bus services conductors to take for granted that opportunity to girl students have sexual affairs with them of which has witness many of them end-up getting into pregnant.

This study however, found that, poverty among the society has drug impact to the problem for most of girls involvement in sexual business instead of studies. Also some of them was noted that, they have been engaging in sexuality, not only

because their parents are poor but on their bad behaviors, thus all this has caused most of girl students to poor performance.

4.3.3 Figure 2: Inadequacy and unfilled laboratories with practical materials.



Source: Research findings

4.3.4 THE SITUATION OF LABORATORIES IN SECONDARY SCHOOLS.

The study found that, poor performing to girl students and to less extent boys in science and mathematics disciplines has the close relationship with the accessibility to laboratories. In that case, students who responded to the study

interview 40 out of 43 who were interviewed said that, it is due to unreliable laboratories with no facilities and laboratory chemicals

With three schools that, researcher carried out some interviews, only one school had at least two laboratory rooms of which also was not enough compared to the number of the students in that school and also had not yet accessed due still on construction. Moreover, these also had no chemicals and other incentives that supposed to be filled in.

On this study also, 31 teachers among 33 whom the researcher interviewed, they said that laboratories are the major contributor to the girl students' poor performance as well as boys in many secondary schools in especially science and mathematics disciplines.

Further, to other stakeholders that interviewed they said that, the issue of laboratories has been encroaching mostly students who wishes to do science and mathematics for long in such that, some said it is un cured diseases historically. Thus, performance in these disciplines has been doubted in Moshi, Tanzania, and in Africa. Hence limit the research scientist in the entire Africa.

4.4 RESEARCH QUESTION TWO:

That is concerned with the political and cultural factors on how they affect girl students performance in science and mathematics in secondary schools in Moshi Municipality and Tanzania as whole.

4.4.1ADMINISTRATION

4.4.1.1 TEACHING METHODOLOGIES.

The researcher found that, out of 93 respondents who responded to the interview 81% said that, teaching methodologies on the point view of science and

mathematics disciplines had been inadequate to deliver the better results and the improve performance to the students and girl in particular.

However, with teaching methodologies also out of 33 teachers that interviewed, 69% of them it was found to have discouraging girl students of studying science and mathematics as boys. Thus being told that, most of girl students have been discouraged and found that if it is boys subjects why should they struggle for it?. And other teachers usually discourage students by telling them that, these disciplines are of the few people who are talented.

4.4.1.2 IMAGES AND ATTITUDES ON SCIENCE, MATHEMATICS, AND TECHNOLOGY.

The study found that, the range of image, attitudes and beliefs towards learning science mathematics and technology to especially girl students including those of Kiboriloni, Msaranga, and Regnald Mengi Secondary Schools is negative. This has lead to poor performance especially to girl students.

On the teachers' side, has no motivation for those who teach science and mathematics, thus it has caused them to percept wrongly that lead them to deliver poorly. However, this has influenced even the students in particular girls also to percept wrongly of which has lead to inadequacy of teachers who are qualified and motivated to teach science and mathematics with motive courage to encourage others and students as well, to undertake these disciplines in secondary schools levels.

However, the respondents that, the interview was carried out, said that, the current image, attitude, and beliefs has fueled by the inadequate science and mathematics competent teachers who are well motivated and the stereotyped within the society

that, these subjects are for boys while discouraging girls, lack of foundation with these disciplines, lack of self-confidence, lack of teaching materials, laboratories, conducive environment and favorable learning process, sexual activities, early marriage among others. All these have contributed in poor performance or unsound learning of science and mathematics in these schools.

4.4.1.3. CAPABILITY AND CREDIBILITY.

During this study, among of the 93 respondents, who were interviewed, 90% of them said that, teachers and students as well were less capable either to learn or to teach, while less credibility to science and mathematics disciplines. which have posed much impact to the students performance, in particular girls.

However, this less credibility that it seems to have fueled by the situation of most of society to live in absolute poverty that are surfacing in community as whole. Further, laziness has agitated to be the cause to less performing in respectively subjects, where as they attach on less value on these subjects hence end-up performing poorly.

4.5 RESEARCH QUESTION THREE:

That is concerning with how infrastructure, government policy on education, accessibility of school materials has encroached the girl students' performance

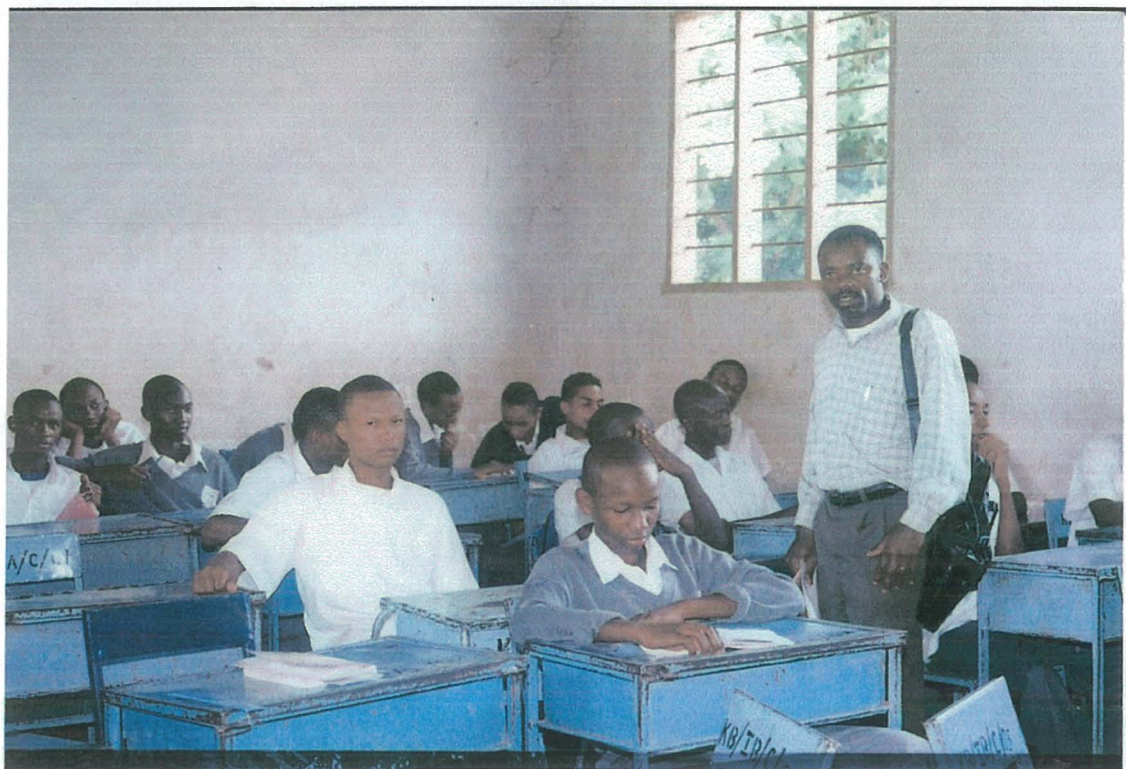
4.5.1 EDUCATION POLICY/CURRICULAR.

Both respondents that interviewed, that are heads of schools, teachers, students, and other stakeholders, Constitutes 93. However, 95% said that, Government policy on education is very good but the problems posed by how should be implemented and the implementers themselves, For instance, the problem of infrastructures i.e. classes, electricity, among others.

It has been argued that, the quality of roads are poor, classes are un sufficient, laboratories, Electricity, water sanitation, among others all these poses an impact on education implementers thus achieve unreliable results in the global challenges of science ,mathematics and technology.

Moreover, for the case of Electricity, Tanzania to date only 20% can access power in the whole country, thus lead to 80% of all secondary schools cant access it .This has despite of the laboratories that are inadequate, then pose the bad situation and the dream of developing through science, mathematics and technology to cease.

4.5.2 Figure 3: Class with scarcity facilities like chairs.



Source: Research findings

4.5.3 HOW POVERTY AFFECTS LEARNING PROCESS IN SECONDARY SCHOOLS.

On the interview, the contention that poverty contributed so much to the girl students poor performance in secondary schools ,in that 91% of 93 respondents they said that, yes poverty is a problem in learning science and mathematics while 9% only who said no ,that poverty is a challenge.

However, in interview it was found that, due to poverty many girl students have been involving in immoral activities, for example, sexual practicing, early marriage among the other of which lead them to un expected pregnancies, and ignorant pose that, also to the parents is the source of the income when they get married, either it can lead them into sexual diseases ending to the dearth.

Rapid global change in science and technology with the attachment of the western culture, for example, Pornography pictures, this however, has stimulated sexuality and drug abuse thus posing some impact on girl students learning science and mathematics. Moreover, due to poverty parents' lack of financial capital to cater for their children needs.

Government either, conduct of some clash programs teachers training has also fuel the problems of learning science and mathematics. .For example, 2005 government employed that program of which it took only three month to prepare a secondary teacher instead of two years.

In the name of poverty also, the little allocation of resources that available to education matters like chemical materials, salaries payments to the teachers, has posed inadequate and inefficient in improving girl students' performance in studying these disciplines.

Due to poverty girl students, some time they fail to continue with their studies, only because of financial crisis in their families and in such circumstances due to less values that attached to sponsor a girl child in the society, thus the family take the boys first to school whereby girls remain at home taking care with the family and other household domestics activities.

Further, this has been fostered by the historical beliefs, attitudes and norms that, girl should learn how to raise how to handle households, and prepare them to be future wives.

Finally due to scarcity of resources, thus most of the parents depending on the values that attached to girl students then they allocate the little resources they have to boys with the concept that, girl will soon be married and hence not to their merits. Thus poverty still poses an impact on learning science and mathematics.

4.5.4 TEACHING MATERIALS HOW CAN AFFECT PERFORMANCE.

The researcher found that, teaching materials fuel the learning of science and mathematics disciplines. However, the respondents said that, inadequacy to the teaching material has contributed to girl students to poor performance particularly in science and mathematics in secondary schools.

Most of respondents they suggested that, government has to provide with education tours to the teachers as well as students, to employ participatory teaching methods that motivate learning, also they said that there is less chemical materials for the available laboratories, Electricity, water sanitation, books, computers among other of which has made less motivation to the students to undertake science and mathematics subjects.

4.6.0 Research question four:

It was to investigate the extent on which environment, image, attitude, distance from school and poverty has contributed to the existing of girls' performance in science and mathematics in secondary schools.

4.6.1 EXTRA CURRICULAR ACTIVITIES.

The study found that, extra curricular has poses also a threat to girl students on their learning.93% of the people that was interviewed in this study, said that, domestic work on the house hold in their families that fueled by the stereotype that still existing in the society, in that girl has an impact in learn these disciplines rather on how to care family. However, traditional and cultural practices like women circumusitions it has political, economical, cultural and social impact.

4.6.2 TIME USED BY GIRL STUDENTS IN HOUSE HOLD ACTIVITIES.

The study found that, time used by girl students in household causes their poor performance for their studies. In particular for the science and mathematics disciplines.

Among 93 respondents that interviewed 985 of them said that, girls spent much time in performing domestic activities like cooking, baby sitting, take care of the old parents, sick people, among others compared to boys. Who do not evolve in due to stereotype surfaced the community. Thus they become tied hence decide to percept wrongly that, science and mathematics subjects are fit to only boys.

However, in some society they encourage to learn manual works because of their beliefs that, girls are outgoing, means that, soon they will get married and some they took them into “Jando na Unyago”. Where have to learn how to care their future husbands and children as well.

Moreover, they circumcised them despite of the school time of which draws them from commitment on pursuing science and mathematics disciplines. Also girls being involved in sexual business have drawn many of them from science and mathematics learning.

4.6.3 TRADITIONAL, BELIEFS AND NORMS PRACTICES

The researcher found that, out of 93 respondents, 79% of them said that there is relationship between performance to girl students and the practices of traditional, beliefs and norms within a society.

For example, the tradition surfaces the girl in African societies is that, domestic work is for them and not boys. Thus had been posing on them, the possibility of not taking science and mathematics subjects. However, the practices on genital maturations have been posing an impact on them considering with boys.

Also the less values that has been attaching on girls education all these has no balance on that of boys due to stereotype that existing among the community .For example, a parent with four children of one boy and three daughters, he would say I cant manage to take all four children and pay all tuition fees rather he will say my son because you girls you will get married soon.

This however, build-up girls mentality of just seek, to be married rather than to stick on studies. Either, in this study most of the respondents that interviewed, comments that, learning science mathematics and technology is not hard but the problem of poor performance especially to girl students emanates from the assimilation of the beliefs, attitude, image and less values attached to and negative response to them. This however, fueled by the some of the incompetent teachers, lack of learning materials, distance from schools, stereotype of some parents and other stakeholders that had not favored them to work hard.

4.6.4 LEARNING ENVIRONMENT HOW ENCROACH GIRL STUDENTS IN SCIENCE AND MATHEMATICS.

Through the interview that conducted during data collection to 93 respondents, 81% of them said that, learning environment has been encroaching girl students in respectively secondary schools particularly in science and mathematics subjects:

One would say “Environment is a vital part for everything, it provides a ground for research work, identification of samples which cause difficulties in these sciences disciplines, physical manipulation on the sample identified for effective performances in science perspectives and poor environment can lead to disappear of samples for effective accelerate of poor performance”.

However, they said that, girl students learning environment has posed with many challenges like households activities, baby sitting, stereotype, immoral activities like sexual because of poverty and behaviors, less values that has been attached to by parents on girl students education, lack of motivation to those that wishes to undertake science and mathematics, mistreatment to them which makes leads them less concentration, the environment with inadequate teaching materials, like better

laboratories, books, electricity, some environment that encourage girl students to be married only.

Moreover, most of them at their adolescent age they are highly active in sexuality; environment that, if they would study science and mathematics without touching/performing practical because of incompetent teachers and inadequate chemical materials, all this constitutes the de-motivation to girl students learning thus has lead to poor performance.

4.7.0 Table 4: Relationship between boys and girl students' performance in science, mathematics and technology in four years (1992 to 1995) in Tanzania.

Years	Chemistry		Physics		Biology		Mathematics	
	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys
1992								
candidates	6582	11479	4057	8708	12939	16164	13331	17563
Grade(A-D)	27.97	53.03	29.11	56.66	22.36	39.06	10.66	28.43
Fail	70.36	51.23	76.61	53.27	77.64	60.94	89.34	71.57
1993								
candidates	7788	13321	5007	100010	14385	17635	14997	19738
Grade(A-D)	29.64	48.77	23.39	46.73	21.42	23.40	10.36	29.67
Fail	70.36	51.23	76.61	53.27	78.58	76.60	89.64	70.33
1994								
candidates		13610	5014	10094	16094	18675	16924	21059
Grade(A-D)	29.08	50.63	26.77	49.03	23.48	42.61	10.93	27.81
Fail	70.92	49.37	73.23	50.97	76.52	57.37	89.07	72.19
1995								
candidates	7864	13487	4955	10333	15808	18587	16614	20647
Grade(A-D)	39.11	60.61	42.24	65.59	22.54	39.91	17.03	39.13
Fail	60.89	39.39	57.76	34.41	77.46	60.81	82.97	60.85

Source: Education report

The above results are very distributed for all students but more so for girl students who fail at such alarming rates. It is surprising that even in Biology which girls tend to favor, the failure rates for girls are just as high as it was for the other subjects.

CHAPTER FIVE

SUMMARY, CONCLUSION, RECOMMENDATIONS

INTRODACTION

This chapter summaries and makes conclusions based on the result presented in chapter four. Recommendations are also made relating to the views of the researcher and also the indications of other scholars who are familiar with the subject. The researcher's personal views are carried out in this chapter as a supplement, confirmation and dispute of views. The chapter summaries the researcher's conclusions, and offers recommendations on possible ways, to facilitate girl students enjoying of undertaking science and technology.

5.1. SUMMARY

The main objective of this study was to investigate the factors that, lead to girl students poor performance in secondary schools' science and mathematics subjects. The case study of Moshi municipality, in northern Tanzania.

However, the study found the following challenges: That is negative attitudes towards girl students on learning science and mathematics, behavior and beliefs also posed on them, thus to mitigate that handicap it needs the entire society will on dealing with .thus to capture the justification, the study were observed four themes of desired outcomes and role of the community.

5.1.1 INFRASTRUCTURE

There is no proper implementation of the initiatives on the availability infrastructures, these including: classes, electricity, laboratories, roads, communication net works, among others for the better fostering of performance to girl students in science and mathematics subjects in secondary schools, however the improved infrastructures as named before, has an impact to learning these disciplines positively.

5.1.2 IMAGE AND ATTITUDES

The study found that, the image and attitudes in teachers, students, heads of schools, and other stakeholders, is that, science and mathematics disciplines are hard for girl students and suit for boys. Thus, boys have been encouraged to carry out these subjects while discouraging girls.

Moreover, Government has been trying to employ all the efforts in order to mitigate the existing attitudes and images that is within the society on saying that, girl are not suppose to pursue science and mathematics subjects instead they insist them to carry out domestic activities.

5.1.3 EDUCATION POLICY

The study found that, the role played by education policy in poor performance to girl students, has been to some extent improving slightly and the entire society are now benefiting through participatory approach in the program of improving the girl students performance in secondary schools that has been initiated by the government. That is to involve the community through the MMES program.

However, through education policy, government has tried to reduce the early marriage whereby in some society, through religion and traditional/norms they were used to dictate that, girls has to be married rather to go to school even when they are still schooling.

Moreover, the research found that, some men's poses a threat to girls on their future marriage in that, in their marriage they don't want those ladies who are highly educated, thus because of fear of not getting married most ladies they become lezzy on their studies. For example, a rich man if wanted to marry any girl, their parents they will be ready to pull her from school for the sake of getting money.

Furthermore, the education policy has imposed the law in trying, to work on it. To any body who will pregnant a girl student as how study found.

5.1.4 EXTRA CURRICULAR

The study found that, some of the factors that affect girl students in performing science and mathematics are extra curricular activities like time that used by them at house holds activities. To girls time most of the time is ineffectively used by many girls at schools and at home as well. At home for instance, time needed by them for home work and studies is used for house hold chores, playing chatting and visiting friends. In schools while boys may spend the hours outside the class time discussing academic problems, girl may found in cluster gossiping.

However, researcher found that, there are some teachers who still ask girl students to baby-sit and run errands for them during and outside hours. Also some time volunteer for these jobs to gain favors from teachers or to enable them get out of participation in some lessons or school activities, further, they use their time inefficiently by not participating fully in class discussions.

5.1.5 BACK ON THE STEREOTYPE ATTITUDES

The study found that, in the society there is still a strong, all pervading tradition, conservatism life, among parents, teachers, and students that, mathematics and science subjects are male preserve. The attitudes of some teachers have by far the greatest impact on girl performance in these disciplines.

However, these including women teachers despite much up services to the equality of girls and boys just do not believe that, girls have the ability to study mathematics and science; they believe that, these disciplines call for struggle and determination and they simply do not believe that, girls are capable of coping with difficult subjects. This discovered that, among of women there is a strong believes that, teachers actively discouraging girls from studying these subjects.

CONCLUSION

Basing on the discussion of research findings of this study, the researcher had drawn the following;

5.2.1 GIRL STUDENTS DENIED RIGHTS TO PURSUE SCIENCE AND TECHNOLOGY:

In Moshi Municipality, girl students' rights to undertake science and technology have been denied by the socio-economic and culture, despite all the attempts that are in place to facilitate them to high performance through equipments, capacitating, and empowerment endeavors as advanced by the ministry of education with collaboration to the ministry of Gender and children affairs, accessibility to science and technology is yet to be achieved where such factors as poverty, mobility, inadequate institutional and motivational and scholastic materials persists among many. The Northern community still has negative impact on girl student's development

5.2.2 CHALLENGES THAT HINDERING GIRL STUDENTS IN UNDERTAKING SCIENCE AND TECHNOLOGY:

Are as such; socio-economic, attitudinal, and administrative challenges, that negatively affected their involvement in their school routine. The administration of schools and prevailing environment and other related factors that undermines their involvement should be improved.

5.2.3 COMMUNICATION:

Communication as a pillar, in schools involvement. Community was identified as one of the significant pillars in bargaining of image, attitudes, motivation and, moral support to the girl students on their pursuing and perform in science and technology. And enhancing their involvements, in school experiences.

The serious challenges that undermine their involvement at various schools need to be addressed with the inclusion of all the stakeholders by bottom-up planning. Ultimately, the researcher concluded that, the social order in northern Tanzania can not be meaningful unless the issue of promoting girls to undertake science and technology has got solved.

5.2.4 RESEARCHER'S VIEWS

Either, the researcher hoped that, this study will lead to some reflection on the part of science and mathematics teachers, on examination of the approaches is bring to creating a learning environment to girls, a willingness to make these disciplines accessible to all students and the girls most consistent cry is why can't they help us to understand?, and through any other more thorough understanding of the problems that help to alleviate girls difficulties.

RECOMMENDATIONS

From the conclusions that reached, the researcher feels that, certain interventions should be put in place by the various stakeholders in order to address the plight of girl students in their performance, believes, norms, culture, among others. It was concluded that, it would only be better when the people, and community, who are the victim of the situation to turn to their normal attitudes and start enjoying pursuing these disciplines as boys

5.3.1 GOVERNMENT AND ACCOUNTABILITY

There should be fair will of the government that, adhere to the principles on follow-up of education policies posed on education and to make continuous(formative) evaluation, summative and continuously evaluation based on the sound implementation.

However, government also should enforces democracy, participation of different peoples in education fields and imposes on it the motivator to those girls who will be performing well and justifies the negative attitudes on mathematics and science subjects at the Ends.

Furthermore, government has to do with close follow-up and capacitate, equip and empower teachers with high skills and incentives attached with motives through good salaries and other fringing benefits like houses, transport among others. Moreover, in decision making government should involve all stakeholders with decentralized unit in implementing their policies.

5.3.2 THE COMMUNITY AND SOCIAL WELLBEING

There should be a sound link that involves the community to participate in design, planning, implementation and monitoring of improving the projects that intended to improve and motivate girl students' morale and materially in improving their performance in science and mathematics with fundamentally bases in primary, secondary and in tertiary institutions as well as vocation trainings.

There should be social will to all stakeholders to strictly put emphases on science and mathematics studies for the sake of scientific research hence of the country development through science and research outputs. Also in struggle with poverty alleviation, there should be science that can accommodate more people from poverty crisis and this however, should be the encouragement of both girl and boys who will mitigating it hence liberate the entire counter.

Furthermore, the community should move away from the current attitudes, behaviors, beliefs, norms and stereotype that has been imposing on girls of which had been favoring boys than girls hence fail to exploit their un exploited talents in social, economic, political and cultural perspectives.

Further, community should straggle towards making quality infrastructures, adjust education policy and its implementation, initiatives to poverty, environmental issues to the economic development of the entire country through all stakeholders with appropriate allocation of human resources as the machinery to foster the moral of promoting science and mathematics learning.

5.3.3. TO THE PARENTS, TEACHERS AND STUDENTS.

The notion that has existed among girls that, science and mathematics are for boys and not for girls should be discouraged and the emphasis however, should be put on all mentioned groups to change their attitudes, behaviors and beliefs that

assimilated among the community on girl students and looked at them. As baled people who can undertake these disciplines hence to promote equity in development through the projected scientists contributions.

There should be also, a created of good awareness to both, parents, teachers, and students on the benefits of pursuing SMT, since regarding these girls as incapable in engaging in difficult learning tasks such as handling SMT subjects thus the sense of male domain in SMT and other sort of discouraging of girls should be taken as unfair and should be left out instead all actors has to act contrary to promote girls in contributing to the entire community development.

Students(girls) however, feel shy to participate in SMT lessons for fear of letting themselves down in front of their peer, but more for fear of being taunted by their male classmates, this intimidate girls to an extent that they never volunteer to answer any question in class. This should be left in the global world it has no room for such matters.

The researcher however, would like to advice teachers/educators to give serious attention to think what may constitute the core ingredients of a girl friendly teaching/learning methodologies, that could be introduced into normal classrooms practices and both in-service and pre-services training of SMT teachers, and to sensitize their students to a realization of the constraints and difficulties forcing girls in their learning of SMT of which are brought by attitudes and stereotyped of some teachers.

5.3.4 AREA FOR FURTHER RESEARCH

The conclusion that girl students are unable to enjoy pursuing science and technology is consistent with the findings of other scholars as indicated in the background and literature review. The research findings of this study are open to

debate and further exploitation. They are subject for scrutiny, revision, criticism or if found good, can be replicated on other areas where the issues of girl students' poor performance is involved. It may thus be necessary that more researches are conducted in the following angles;

- The socio-economic impact on girl students if is left out in undertaking science and technology.
- The need to understand how education specifically science and technology is a contributing factors in the liberation socially, economically, politically, and culturally to girls as well as nation.
- The impact to community of let not girl students involved in science and technology in future.

BIBLIOGRAPHY

Anderson, MB (1988),

Improving access to schooling in third world; An overview. Basic research and implementation in developing Education Systems (Bridges): Harvard University.

Arnold JS quoted in Burde D(ed) (2004),

Education in Emergencies and post-conflict situations; Problems, Responses and possibilities, Vol.2 spring 2005. New York; Columbia University.

Bendera, NS, Swanson, Gordon, R & Kadzamira, E (!998),

"Education in Africa: The design and implementation of policy interventions." Education Research, Department for the international co-operation (DFID) Series no 25.

Bbaye, JR, & Olat, CF (1997),

Comparative Education .Makerere University-Kampala (p.46-47)

Cannel, RW (1993),

Schools and Social justice. Temple Press; Philadelphia.

Cooksey, B, Malakela, G & Lugalla, J (1993),
"Parents Attitudes towards Education in Rural Tanzania."
TADREG Research Report Number 5, TADREG: Dar-es-salaam.

C.F Olat,JR Bbaye(1997, P46-47),***Comparative Education.***
MakerereUniversity, Kampala.

Free Encyclopedia-Wikipedia.

Hall, T (1986),
"Education, Schooling and Participation" in Midgley, et al
(eds). Community participation, Social Development and State.
Methuen London.

Hangoke, H & Mhina , L (1998),
"Budgeting in Education Sector". Report Prepared for UNICEF,
Dar-es-salaam.

Hickey VJ & Thompson, EW (1999),
Society in Focus; An introduction to sociology: Third Ed,
Texas-USA.

Ingvild, H & Margarita Facas Licht, (2002),
Lessona: **Basic Education in rural Africa**, Save the Children
Report, Oslo.

Kibride, P & Kibride, J (1990),
**Changing family life in East Africa: Women and Children at
Risk** : Pennyslavia State University.

Krishnaswani , OR (1998),
Methodology of research in social sciences: Himalaya
Publishing House: Mumbai

Lewis ,AC (1977),
Master of Sociological Thought: ideas in historical and social
context, Fort worth; Harcourt Brace Jovanovich.

Malyamkono, TL & Ogbu , O (Eds) (1999),
Cost sharing in Education and hearth,; Tema Publishers Co
Ltd: Dar es Salaam.

Michael Agnes (2000), **College Dictionary**, USA.(p.453)

Mabala, Richard & S.R Kamazima,(1995),
“The Girl Child in Tanzania: Today’s Girl Tomorrow’s Women” A
research Report of UNICEF.

Mchomvu, AST (2000),
“**Approach/programmes currently existing to mitigate the
challenges of girl empowerment in Tanzania**”. Paper
presented to the consultative meeting of key Actors with girls
Empowerment: Ministry of Education and Culture in collaboration
with UNESCO. Dar es salaam, Tanzania: 27-28 March 2000.

Ministry of Community Development, Women Affairs and Children
(1996), **Children Development Policy**. MCDWAC: Dar es
salaam.

Ministry of Education and Culture (1995),
Education and Training Policy, Adult Education Press: Dar es
salaam.

Poverty Education Action Plan Document available at :
<<http://www.dip.go.ug/english/peap/>>

Ross, RJ (Ed) (1994),

School and students at Risk Teachers' college Press: New York.

Richard T Schaefer (2000),

Secondary School Administration. New Age International, Ltd Publishers.

Rajani Rakesh & Gilte Robinson,(1999),

The state of Education in Tanzania: Crisis and opportunity.
Kuleana, Tanzania.

Swamson, N.S.Bendera, R.Gordon & E.Kadzamira,(1998),

Promoting Girls' Education in Africa: The design and implementation of policy interventions. Education Research, Department for international co-operation(DFID) Series no 25.

United Nations (1989),

"Convention on the Rights of the Child". United Nations: New York.

United Nations Children's Funds (1992),
The state of the world's Children Report 1993. UNICEF:
New York.

United Nations Children's Funds (1995),
The state of World's Children Report 1996: UNICEF: New
York.

Vigil, JD (1999),
**"Street and School: How Educators can help chicano
Marginalized youth Gangs"**. Harvard Education Review. 69
(3): 270-288.

Visano, L (1990),
**"The socialization of street children Development &
Transformation of identities"**. Sociological studies of children
Development, 3:192.

World development Report of the World Bank, (2007),
Development and the next Generation: Available at URL
:<[LHP://www.world %20deve % 20 report.htm](http://www.world%20deve%20report.htm)>

Weiss, MS (1994),

"Marginality, cultural Brokerage and school Aids: A success
Story in Education. Anthropology and Education
Quarterly,25:336-346.

World Bank, (1990),

"World Conference on Education for all. Jomtien", Thailand :

ACRONYMS

DEFINITIONS OF THE KEY CONCEPTS

- Performance - is how well or badly something can be done
- Academic - connected with education espec. ally studying at school as extra curricula (informal education).
- Students- A person who is studying at school formally.
- MMES- Secondary school education program in Tanzania (2004-2009).
- Infrastructure- Facilities like classes, roads, laboratories, electricity, sanitation, and others.
- Scholastic materials- Refers to materials like books and all stationeries.
- Education policy- This refers to the tenets/principles/canons in which the measures or evaluation or any course of action that based and adopt a particular tasks especially with regards to foreign countries, wisdom of government of their affairs and public.

QUESTIONNAIRE TO RESPONDENTS AND OTHER STAKEHOLDERS

Dear Sir/Madam;

Please participate in this questionnaire to enable researcher to collect data on his research topic titled "Factors that lead to girl students' poor performance in secondary schools' science, mathematics and technology". A case study of Moshi Municipality Secondary Schools.

The information given would be treated with utmost confidentiality and be used for purpose of the research only.

Instructions

- 1 The questionnaire consists of closed and open ended questions.
- 2 Tick the most appropriate option.
- 3 Where necessary, briefly elaborate and give your personal view on certain matters.

1. Age: 11-20 ☐ , 21-30 ☐ , 31-abov ☐

2. Male: Male ☐ , Fem ☐ .

3. Marital status: Single ☐ , Married ☐

4. For how long have you been in this school.....

.....

5. What subjects do you prefer? Name

.....

6. Have you ever heard about science, mathematics, and technology?

.....

7. Do you think learning science, mathematics and technology is hard?

Why.....
.....

8. What is a range of image, attitude, and beliefs towards learning science, mathematics and technology in this school? Give short notes.....

.....
.....

9. If there is any like or dislike, what are the possible reasons for disliking of science, mathematics and technology for especially girl students in this school?

Explain.....
.....
.....
.....

10. What are the possible factors you think have been influencing the results of the existing image, attitude, and beliefs on taking science, mathematics and technology?.....

.....
.....
.....

11. Are any relationships between the range of image on mathematics and science with socio-division in terms of gender, age, and occupation groupings? Explain.

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.....

12. Show how environment can encroach girl students in science, mathematics, and technology learning, hence poor performance.

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13. is political-cultural among of the factors that lead to girl students poor performing in above subjects? Elaborate.

.....

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.....

14. "...It has been noted that socio-economic is the major factor that lead to girl students poor performance in most secondary school...".How this statement reveal the truth?.....

.....

.....

.....

15. Do you think that government policy, poverty, poor methods of teaching also can be the constraints? How

.....

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16. Name any other limitations that faced by girl students on their way learning science, mathematics and technology in this school.

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.....

QUESTIONNAIRES TO STUDENTS

Dear Sir/Madam,

Please participate in this questionnaire to enable researcher to collect data on his research topic called, "Factors that lead to girl students' poor performance in secondary schools' Science and Mathematics subjects": The case study of Moshi Municipality Secondary schools.

However, the information given would be treated with utmost confidentiality and be used for research purpose only.

INSTRUCTION:

- (i) Tick or choose the most appropriate option/answer.
- (ii) Where necessary briefly explain.

1. Sex _____ [a] male [b] female [].
2. Marital status _____ [a] single [b] married []
3. Level of education in class ____ [a] F1 [b] F2 [c] F3 [d] F4 []
4. What subject do you prefer? ----- [a] arts [b] science []
5. If arts why not science? [a] science is hard, [b] advised by others, []
6. Do you think attitude and bad image on science and mathematics limits girl students to perform? _____

7. Is the distance from to schools cause poor performing to girl students in science and mathematics _____ [a] yes [b] no []
8. Does teaching methods affect girl students' performance in mathematics and science? _____ [a] yes [b] no []

9. Lack of laboratories and teaching materials can have any impact to girl students' performance? _____[a] yes [b] no []

10. Does government policy on education have any impact to girl students' performance in science and mathematics [a] yes [b] no []

11. Is it true that, poverty of our country contributed to girl students poor performance in secondary schools? __[a] yes [b] no []

12. Do you like science? _____[a] yes [b] no []

If yes why _____

.....

.....

If no why _____

.....

.....

13. On your own view, what do you think are the main factors that, contributing to girl students to perform poorly in mathematics and science?

[i] _____

[ii] _____

[iii] _____

[iv] _____

[v] _____

“GOD BLESS YOU ALL”