

**DETERMINANTS OF GENDER MAINSTREAMING  
IN TECHNICAL, INDUSTRIAL, VOCATIONAL AND  
EDUCATIONAL TRAINING (TIVET) INSTITUTIONS  
IN NYANZA PROVINCE – KENYA**

**BY**

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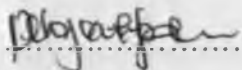
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**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULLFILMENT OF THE  
REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS  
IN PROJECT PLANNING AND MANAGEMENT OF THE UNIVERSITY OF  
NAIROBI.**

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## DECLARATION

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

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## DEDICATION

I dedicate this work to my beloved parents Mama Mary and Mzee Fredrick Onyango Nyamwaya for showing great love and support for my education. I also dedicate this work to my brother Joseph Obiero and Sister Keziah Adhiambo and to my husband Patrick Otieno for being supportive financially, morally and for giving me the freedom to further my study. Lastly, I dedicate this work to my beloved children Barnabas, Winnie and Scholastica and other family members who are patient, understanding and emotionally supportive to my education.

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## ABBREVIATION AND ACRONYMS

<b>AIDS</b>	- Acquired Immune Deficiency Syndrome
<b>ASAL</b>	- Arid and Semi Arid lands
<b>CBO</b>	- Community Based Organization
<b>CEDAW</b>	- Convention on Elimination of all forms of Discrimination against Women
<b>CFCI</b>	- Child Friendly Initiative
<b>CO</b>	- Country Office
<b>DCS</b>	- Department of Census and Statistics
<b>ECDE</b>	- Early Childhood Care and Development Education
<b>EFA</b>	- Education For All
<b>ESARO</b>	- Eastern and Southern Africa Region Office
<b>EU</b>	- European Union
<b>FGM</b>	- Female Genital Mutilation
<b>GEM</b>	- Gender Empowerment Measure
<b>GER</b>	- Gross Enrolment Rate
<b>GM</b>	- Gender Mainstreaming
<b>GOK</b>	- Government of Kenya
<b>HIV</b>	- Human Immuno Deficiency Virus
<b>MDG</b>	- Millennium Development Goals
<b>MOEST</b>	- Ministry of Education Science and Technology
<b>MSE</b>	- Micro and Small Enterprises
<b>NARC</b>	- National Rainbow Coalition
<b>NER</b>	- Net Enrolment Rate
<b>NGO</b>	- Non Governmental Organizations
<b>SEDP</b>	- Secondary Development Programme
<b>SMT</b>	- Science Mathematics and Technical Subjects
<b>TIVET</b>	- Technical Industrial, Vocational, Educational Training
<b>TTIs</b>	- Technical Training Institutes
<b>UNDP</b>	- United Nations Development Programme
<b>UNESCO</b>	- United Nations Educational Scientific and Cultural Organization
<b>UNICEF</b>	- United Nations International Children Fund

## ABSTRACT

The gender dimension has become one of the most important and debated issues worldwide. This study was gender responsive focusing on the status of equity and equality in Technical, Industrial, Vocational and Educational Training (TIVET) Institutions in Nyanza Province in Kenya. Gender mainstreaming in TIVET institutions has become a challenge and teething problem. Over history of Education and development in Kenya, participation of girls had been problematic and this has been due to lack of gender mainstreaming in relation to the in and out of school factors. There had been issues related to inequalities, insufficiencies and disparities in the access of girls/women education, training and labour market. Enrolment of girls has been consistently low as compared to boys. The girls who had been retained in schools face a lot of challenges where some of them drop out of school or perform dismally as compared to boys. This reduces their transition rate to higher Institutions of learning such as in TIVET. Gender mainstreaming was one of the strategies embraced by schools to address gender parity in terms of schools to achieve much. Girls' enrolment and participation in TIVET Institutions is still low. The purpose of the study was to investigate Determinants of Gender Mainstreaming in Public TIVET institutions in Nyanza Province in Kenya such as staffing related factors, facilities and equipment, curriculum instruction that influence gender mainstreaming and teachers attitudes towards gender mainstreaming. The study employed descriptive survey design. The study population was to comprise of 7 public TIVET institutions in Nyanza Province with a target population of 10,185. A total of 370 respondents were to be sampled. However, the study population comprised of 6 public TIVET institutions in Nyanza province with a target population of 8,631. A total of 364 respondents were sampled using simple random sampling technique. One principal from each institution was selected purposively. Questionnaires, interview and observation schedules were used to collect both qualitative and quantitative data that were analysed. After data collection the researcher organized it by assigning a questionnaire number 1 to Yes and 0 to No for closed ended items. Quantitative data analysis commenced at the field editing stage to minimize errors. Coding the open ended data entry, data cleaning information analysis and interpretation followed. Descriptive statistics was used to analyze and describe the information. Qualitative data analysis was done concurrently with data collection. Open and written question was used to create meaningful interpretations. The data was summarized on a daily basis where interim report was produced, analyzed and interpreted. The study confirmed that gender mainstreaming; strategies were used to set opportunity for gender equity and equality in public TIVET institutions. The study confirmed that the college or school is a social agent and therefore gender disparity was not encouraged. The study found out gender mainstreaming was available to some extent in these institutions in Nyanza province however recommendation was that the Ministry of Higher Education science and technology should take drastic measures to ensure that there were adequate lecturers to cater for the large number of students. All stakeholders in education should act to provide equality in education so that implementation is taken seriously to bring gender equality and opportunity in education.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

Gender mainstreaming is a global accepted strategy for promoting gender equality. The world wide adoption of gender mainstreaming strategy can be traced back to the United Nations (UN) conference in Beijing and is connected to early international agreements such as Discrimination against Women (CEDAW).

Since Beijing, the EU has been among the major pioneers in developing gender mainstreaming. The United Nations International Children's Fund (UNICEF) made progression on gender mainstreaming as a key cooperate strategy to achieve gender equality. It adopted an official policy on the advancement of women and girls rights. Gender mainstreaming was therefore identified as a strategy for gender equality and women's right in 1994. Since Beijing 1995, gender mainstreaming has heralded the beginning of a renewed effort to address what is seen as the roots of gender inequality, the centeredness of systems and procedures; and organizations. Gender mainstreaming was identified for achieving gender equality in the forth world conference on women in 1995. In the definition of the council of Europe, gender mainstreaming is the re(organization),improvement ,development and evaluation of policy processes so that a gender equality perspective is incorporated in all policies at all levels and all stages by the actors normally involved in policy making (Verloo,2001). European Union (EU) looks at gender mainstreaming as the promotion of gender equality, gender justice and making mainstreaming policies more effective by the inclusion of gender analysis.

All member states and some candidate states of the European Union have started to implement gender mainstreaming. The 1997 Treaty of Amsterdam places equality between women and men among the explicit tasks of the EU and obliges the EU to promote gender equality in all tasks and activities. The gender mainstreaming approach that has been legitimated by this treaty is backed by legislation and by positive action in favor of women or the under represented sex. Gender equality policies have been part and parcel of the modernizing action in the EU and can also be expected to continue to be so (Rossili, 2000).

In USA, gender mainstreaming is a tool used for advancing gender equality. Gender mainstreaming has brought some benefits such as the mythical average woman, white woman and women of colour who have benefited from gender mainstreaming institutions including governmental and academic settings. It assesses women's economic disparities and assess reduction rate of sexual violence against women (Wikipedia, 2010).

The World Bank has identified empowerment as one of the key constituent elements of poverty reduction and as a primary development assistance goal. Gender mainstreaming has been made a priority in development assistance. The promotion of women's empowerment is based on Social Justice and Aspect of Human Welfare. A Recent Policy Research Report by the World Bank, 2001, identifies gender equality to promote growth, reduce poverty and promote better governance. A Similar dual rationale for supporting women's empowerment has been articulated in the policy statements put forth at several high level international conference such as; the Beijing platform for Action; the Beijing +5 declaration and resolution; the Cairo programmed of Action; the

Millennium Declaration and the Convention on The Elimination of all forms of Discrimination Against Women (CEDAW) (Malhotra et al; 2002).

In Malaysia, girls have equal opportunities and choices in education as compared to boys. This is due to the Malaysian government commitment to education and their investment in "Education for All" programme since 1990s. By 2005, Malaysia had already achieved gender parity by fulfilling the target set in the Millennium Development Goals (MDG) of the United Nations (UNICEF, 2005) According to the Human Development Programme (UNDP) Malaysia ranked 65 out of 93 countries in the gender Empowerment measure (GEM).

Indonesia located at South East Asia consists of distinct ethnic, linguistic and religious group. Alongside secular laws, Islamic principles and traditional customs affect the lives of Indonesian women and their situation varies between different regions and ethnic groups. Much of Indonesian legislation emphasizes on the importance of equal opportunities for men and women including education, but stereotypes and sex roles prevail in rural Indonesia where the man is seen as the breadwinner and the woman as the mother and wife. The government has paid much concern on gender equality and the involvement of women in science and technology. It has led to policies of gender mainstreaming at all levels including the establishment of gender mainstreaming mechanism and obligations (Report on Gender Science and Technology, 2006).

In Canada, the government has a long standing commitment to analyzing the impacts of women in the policy and decision-making process. Steps for implementing Gender Based Analysis facilitate implementation that include a clear legal foundation for the development of the policies supporting gender equality, the existence of institutional



infrastructures, the increased availability of analytical inputs for policy decision-making that support gender equality (Wikipedia, 2010).

In Sri-lanka, the introduction of primary, secondary and tertiary education including university education in 1945 and the change of medium of instruction from English to the local languages, Sinhala and Tamil brought a rapid expansion of educational opportunities. Similarly women achieving a degree of high level of education qualification is increasing gradually. Equal opportunities for female and male citizens are recognized by the Sri-lanka government and in its constitution; there is no direct discrimination in recruitment for careers or selection for training, education and employment (National Research and Development Survey, 2006).

In South Africa, there is stark imbalance in gender and racial representation. There has been marked increase in women's entry into the higher education system; however within Science, Engineering and Technology (SET), sectors, women are still largely under represented. The bottleneck in the education system gets even smaller at post graduate degree levels particularly in engineering. Smaller number ends up being retained and moving up the promoting ranks within the sector (moletsane, 2008). South African women on engineering is committed to supporting UN Millennium Development Goal to promote gender equality and women empowerment.

Egypt is a country predominated by Muslims and it faces strong culture and social barriers towards women's rights. It encompasses child rights, girls education, HIV/AIDS immunization, water, environment and sanitation. It also has the highest Female Genital Mutilation (FGM) rates (UNICEF, 2004). The government focuses on culture promotion and respect for women by strengthening a positive social attitudes and natural capacities

to reduce gender inequality. It has also partnered with academic and research institutions to promote studies of FGM with the goal of eliminating the practice (UNICEF, 2007).

In Tanzania, women are generally under represented in education leading to high illiteracy rate of women and making of unwise choices and decisions about the use of resources. Smith and Haddad (2000), shows that increase in female secondary school enrolment was the highest explainer of the reduction of malnutrition rates in pre-schools children, food availability, healthy enrolment and increased women status. In all ethnic groups in Tanzania, the culture dictates that girls should be brought up in the preparation for motherhood and the male spouse takes all other domains in a household .This limits girls access to education as they are considered a liability to the family if they do not get married. Limited access to higher education for girls adversely affects their access to employment, their abilities, capabilities and health of their families. In Tanzania, fewer females than males enroll especially in secondary schools and higher learning institutions. This has created a gender gap in employment. The government has taken a number of measures to improve the Education System such as: the Introduction of Education Ordinance Of 1961, Arusha Declaration of 1968, The Musoma resolution and Universal primary education in 1973 and the Education Act No.25 of 1978 that emphasized the right to every citizen to get education to the best of his/her ability. The educational and training policy itself is also gender sensitive .More policy itself is also gender sensitive. More recently a 5 year primary education Development Programme (PEDP) since 2001 and Secondary Development Programme (SEDP) since 2004 to establish high Quality Education For All And Preparing Future National Workforce And Leaders (Ministry Of Education and culture, 2003).

In Kenya, the provision of education and training to all Kenyans is fundamental to the government overall development. Education is acknowledged as a means of transforming and empowering communities. The youth especially gain skills, knowledge and attitudes to enable them become productive members of the society because Kenyans human resource is central to the country attaining its goal of industrial development and technological advancement. Universal access to basic education and training ensures equality and equity for all children to enroll in schools including the disadvantaged and vulnerable groups. Education is also key in the protection of human rights and democratic institutions through well informed citizens (Economic survey,2003). Technical, Industrial and Vocational Education (TIVET) is mainly provided to lead participants to acquire practical skills, know how and understanding and necessary for employment in a particular occupation, trade or group of occupations.

Kenya houses the Kenyan country office and eastern and Southern Africa Regional office (ESARO).Kenya is low-income country that encompasses both developing and emergency programmes that focuses on; child protection, education, youth and HIV/AIDs; health and water and sanitation. The country is also religiously, ethically and cultural diverse and has wide income disparities (Wikipedia, 2010).ESARO encompasses 21 countries in the region of which 13 are under emergency situations. This is due to different cultures, ethnicity, and economic and political instability 'ESARO'S participation allowed for a regional perspective on gender mainstreaming that enhanced country office level information (UNICEF, 2007).

The enrolment at various levels of education in Kenya are still characterized by regional and gender disparities and glaring Gross Enrolment Rate (GER) ( Republic of

Kenya ,2005) Since January 2003, when NARC government came to power major reforms to revamp the education sector are implemented. The reforms cut across the major sub-sectors in education that is early childhood education, primary education, secondary education, TIVET and tertiary Education (Economic Survey, 2003).

Over the past decade, the number of students enrolled at various levels of education has substantially increased. The total enrolment in TIVET institutions has increased and stood at 79,000 in 2003. Female student enrolment constitutes 44 per cent of the total but there exists serious gender disparities in terms of overall enrolments and registration in science and technical areas. The bulk of female students (52.4 per cent) are enrolled in business studies compared to less than 5 percent registered in engineering courses. The Kenya polytechnic at recorded the highest enrolment of women students at 4,562 out of 10,472 students in 2003 (Economic survey, 2003). The overall enrolment in TIVET institutions for the years 2006 to 2010 declined by 6.9 per cent from 89,023 in 2009 to 82,843 in 2010. Youth polytechnics accounted for 40.0 per cent of the total TIVET enrolment followed by Technical Training Institutes at 27.6 per cent. The enrolment in Kisumu and Eldoret polytechnics increased by 23.9 per cent (Economic survey, 2011) as in (Appendix A).

## **1.2 Statement of the Problem**

For education inequalities are viewed in relation to access, performance, retention and transition. Access to education is determined by a number of factors such as education facilities and availability of appropriate physical amenities such as adequate instructional material, infrastructure, human resource and attitude and the cost.

Inequalities in relation to access to quality education are apparent in Kenyan educational landscape.

Inequality is a visible and significant phenomenon and is also apparent in assessing higher education (Government of Kenya, 2004). The transition and retention of boys surpasses that of girls although measures have been put in place to continuously improve gender parity in access, retention, performance and transition (Economic survey, 2003). Gender disparities still remain high even with the higher number of girls recorded after the introduction of Free Primary Education where the enrolment rate was recorded at 101.6 percent for girls and gross enrolment rate recorded for boys was 108.0 percent (Ministry of Education, 2004-2005).

In 2007, the enrolment in TIVET institutions, increased by 75 percent from 71,167(2006) to 76,516 (2007).Kenya polytechnic with a student population of 9,222 continued to have the highest enrolment among the national polytechnics. Male student enrolment is higher in TIVET Institutions except the youth polytechnics (GOK, 2007). The highest female enrolment in technical training institutes was 45.7 per cent in 2004. However, female enrolment in science, Mechanical and technological related courses in TIVET Institutions is extremely low (GOK, 2007).There still exist serious gender disparities in terms of overall enrolment in science and technological related profession.

In Nyanza province, the overall enrolment of male in TIVET institutions is higher as compared to female. Although tremendous gains have been made in expanding opportunities in Education for both boys and girls since independence in 1963, participation level of girls still remain lower than those of boys (Bunyi, 2004). Many Non-governmental organizations (NGOS) Internationals bodies as well as government

have made efforts to address issues affecting the girl child (MOEST,2003) as evidenced in (appendix B).

The transition and retention rate of boys surpasses that of girls hence a call for the study. There are legal policies concerning education although gender disparity in education still continues to prevail with regard to enrolment of girls, their retention as well as their performance (Republic of Kenya, 2007) as evidenced in (appendix B).

If this trend is left to continue or prevail the retention and transition of either gender will be affected. The recurrent trend will cause serious effects on the labour market and the country will suffer a great loss on human resource and hence overall development. The economic growth, poverty alleviation, empowerment and social inclusion will be reduced and hence the need to inquire the cause.

### **1.3 The Purpose of the Study**

The purpose of this study was to investigate the determinants of gender mainstreaming in Technical, Industrial, Vocational and Educational Training (TIVET) Institutes in Nyanza Province, Kenya.

### **1.4 Objectives of the Study**

The study was guided by the following objectives.

1. To examine the extent at which staffing related factors influence gender mainstreaming in TIVET institutions in Nyanza Province-Kenya.
2. To establish the level at which facilities and equipment influencing gender mainstreaming in TIVET institutions in Nyanza Province –Kenya.

3. To examine the extent at which curriculum instruction influence gender mainstreaming in TIVET Institutions in Nyanza province Kenya.
4. To assess how the attitude of teachers influence gender mainstreaming in TIVET institutions in Nyanza Province-Kenya.

### **1.5 Research Questions**

The study was guided by the following research questions.

1. Does the extent of staffing related factors influence gender mainstreaming in TIVET Institutions in Nyanza Province in Kenya?
2. What level do facilities and equipment influence gender mainstreaming in TIVET Institutions in Nyanza province in Kenya?
3. To what extent does curriculum instruction influence gender mainstreaming in TIVET institutions in Nyanza province in Kenya?
4. How does the attitude of teachers influence gender mainstreaming in TIVET institutions in Nyanza province in Kenya?

### **1.6 Significance of the Study**

The study was to investigate the determinants of gender mainstreaming in Technical, Industrial, Vocational, Educational and Training Institutions in Nyanza Province in Kenya. It is hoped that the findings will provide synopsis of status of gender equality and equity in TIVET Institutions. It was also hoped that the findings would act as a source of data and abased for other findings or reference for future studies and general reading.

The study also needed to assert the extent the government of Kenya and its partners have invested in education for the youth, community based organizations (NGOs), Non Governmental institutions development partners and the private sector had undertaken and implemented policies, frameworks and strategies to address challenges facing TIVET education capacity building, sensitization and training.

It was also of great importance to revisit some important reforms that gave challenges to mainstreaming gender issues across the entire education sector in order to establish a professional and accountable management structure that could deliver better quality education services to all Kenyans laying special attention to the needs of girls and boys and the poor.

### **1.7 Basic Assumptions of the Study**

The research was carried out on the basis of the following assumptions; that an institution is a socializing agent and gender disparity issues are not encouraged. The study assumed that gender mainstreaming was undertaken by all TIVET institutions as it helped to furnish skills required to improve productivity, raise income levels and improve access to employment opportunities. Views of teachers and students about gender mainstreaming represented a true picture of what was on the ground and that gender policy in education had been implemented in all institutions in Kenya. And that institution programmes, facilities and equipment were major strategies for gender mainstreaming. The study also therefore assumed that all the respondents would cooperate and provide reliable and uninfluenced response.



### **1.8 Limitations of the Study**

Timing was the main limitation of the research in sampled institutions. In some occasion, the research would not take off as planned because the institutions were involved in other programmes that could not be interfered with. The researcher had to schedule her timing and confirmed by making calls to administer questionnaire. The research was conducted during rainy season that interfered with the infrastructure. The researcher hired a motor bike to reach the sampled institutions in time.

### **1.9 Delimitations of the study**

Delimitations of the study are those purposeful and conscious actions and processes of reducing the study population and area to be surveyed to manageable size. The study was delimited to Nyanza Province in Kenya. Nyanza Province is found to the eastern part. It neighbours Somali to the East and Ethiopia to the North. It borders eastern province to the east and coast province to the south. Nyanza province borders Uganda via Lake Victoria. Nyanza province records a poverty rate of 65% (CBS: 2007). Most parts of Nyanza had a well developed infrastructure owing to the fact that it had ports and was the centre of fishing industry in Kenya.

### **1.10 Definition of Significant terms as applied to the study**

**Attitudes** –these are feelings of teachers, students and other stakeholders in education on gender mainstreaming in TIVET institutions.

**Challenges**-these are other gender related factors that hinder teaching expected gender mainstreaming goals i.e. poverty HIV/AIDs. They are constraints, obstacles, problems to the success of gender mainstreaming against the target group or a certain activity.

**Curriculum**-refers to activities that those in school engage, plan, implement an evaluate in the course of education process.

**Determinants** –these are contributory factors that influence educational programme in institutions to bring about gender parity.

**Education For all (EFA)**-refer to education availed on equal basis without discrimination of any kind.

**Facilities and Equipment**-these are curricular and extra curricular materials used for instruction to empower learners with knowledge and skills.

**Gender** –refers to being male or female

**Gender discrimination**-This means to give differential treatment to individuals on gender grounds.

**Gender disparities**-refers to differences and inequalities.

**Gender equity** -means fairness and justice in the distribution of benefits and responsibilities.

**Gender mainstreaming** –The consistence integration of gender concerns.

**Institution**-refers to an organization that does a particular type of research or educational work

**School programme**-these are strategies used to empower the learners to acquire knowledge and skills in education system.

**School related factors**-these are main cancers which affect human resource in public TIVET institutions in relation to knowledge, ratio deployment and management.

**Technical**-involves science or industry relating skills and ability that are needed to perform a particular activity.

**Training** -refers to the process of teaching or learning a particular job or activity

**Vocational**-refers to the skills that are needs for a particular job

### **1.11 Organization of the Study**

The study was organized into five chapters. Chapter one introduces the study under the following sub-topics; background of the study, the statements of the problem, the purpose of the study, the objectives of the study, the research questions, the significance of the study, basic assumptions of the study, the limitations of the study, delimitation of the study, definition of significant terms and the organization of the study.

Chapter two covers the literature review related to the study which consist of sub-topics such as introduction, staffing related factors influencing gender mainstreaming, facilities and equipment influencing gender mainstreaming, teacher's attitudes towards gender mainstreaming, theoretical and conceptual framework and conclusion.

Chapter three contains research methodology with the following sub-topics; introduction, research design, area of study ,target population, sample size and sample selection, research instruments, instruments validity, reliability of the instruments, data collection procedures and data analysis techniques and ethical considerations.

Chapter four presents the study findings which will be analyzed, presented, interpreted and discussed in line with the study objectives which will be presented in tables and discussed.

Chapter five contains a summary of findings, conclusions and recommendations. It also contains recommended topics for further research.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter discusses the review of literature on the determinants of gender mainstreaming in TIVET institutions in Nyanza Province in Kenya. These include; staffing related factors that influence gender mainstreaming, facilities and equipment that influence gender mainstreaming, curriculum instruction that influence gender mainstreaming and teachers attitudes towards gender mainstreaming.

#### 2.2 Staffing Related Factors that Influence Gender Mainstreaming

Gender mainstreaming involves the development and implementation of processes, capacities and techniques as well as shifts in structural and normative dimensions such as beliefs, norms and power (Rao and Kelleher,2002).Kenya is committed to achieving gender parity by 2015 as articulated in national policies and plans. The government policy priority is in ensuring that equality is at the core of ll education programmes. Since January 2003, when the National Rainbow coalition (NARC) Government came to power, major reforms to revamp the education sector are being implemented The reforms cut across the sub sectors in Education that is Early Childhood Education, primary education (both formal and non-formal), secondary Education, TIVET and tertiary Education (MOEST, 2004).The right education will be achieved through the provision of inclusive and quality education that is accessible and relevant to all Kenyans. In Kenya the current existing policies for gender mainstreaming and Integration are contained in the following documents; Plan of Action (2008-2012) on

the implementation on the National policy on Gender and development; National Gender and Development policy (2000); Sessional paper No. 1 and 2 of May, 2006 on gender Equality and Development; Economic Recovery Equality strategy (2003-2007); National poverty Eradication plan (NPEP) of 2015; Poverty Reduction Strategy Paper (PRSP) of 2001-2004 and the millennium Development Goal (2000-2015).

According to the plan of Action (2008-2012) on implementation of gender and Development policy existing structures and frameworks are; National commission on gender and social Development; Gender officers in all Ministries; parastatals and institutions for higher learning; District Facilitation and participation and civil society organizations (Ministry of Gender, Culture and Social Development, 2008).

Female Education in particular with its multiplier effects have been shown to be crucial for the advancement of nations (Beijing Declaration in September 1995). Education empowers women to bring about necessary changes such as smaller, health families. Education is a key target for gender equality which influences equal participation in political, Education and Public life (Walby, 2004).

Wamuhui (1995) argues that multiplicity of interrelated factors contributes to the under participation of girls in formal and non-formal education in Kenya. A complex of inter play of macro and micro level policy practices, beliefs and attitudes determine whether households and communities feel it is profitable to educate their daughters. Providing Educational opportunities to all Kenyans is Central to the government poverty Reduction Strategy and the plan for Economic Recovery (Republic of Kenya, 2005).

Education and training facilitate the attainment of overall social, economic advancement of the people, improvement in their literacy levels and enhancement of their

earning capacity and lower their incidence of poverty. One of the involvements in employment is therefore the acquisition of the necessary skills required in the labour market. While males have few problems in access to Education, females experience many problems in pursuit of education leading to inequalities in opportunities.

The Children's Act (2001) was passed by parliament to recognize Education as a basic human right that every child should enjoy and also provide equal educational opportunities for both boys and girls. The Act takes into account the fact that at the early stages of their educational careers, girls have been dropping out of schools at a faster rate than boys thus limiting their opportunities to the successive training programme at tertiary and university levels. The early drop-out normally limits the number of females at professional and managerial job levels (Republic of Kenya, 2004).

Gross inequalities between women and men still prevail. The incidence of poverty among women is still higher than that of men due to various discriminatory practices; inequalities in opportunities in access to education, wage employment and the right to own property.

The financial and material resources available to education sector in Kenya are still adequate. Currently, teaching staff at both lower and higher level of education sector in Kenya is still inadequate. Currently teaching staff at both lower and higher levels of education is not adequately remunerated. Both public and private sector are expected to give assistance of the objective of providing education at all, at various levels is to be realized (Republic of Kenya, 2004).

A widespread understanding that limits gender mainstreaming is that all staff should be responsible for its success. Evidence from experience shows that most staff do

not assume and fulfill gender mainstreaming responsibilities. In most cases the task falls upon key individuals who are willing or appointed to take on responsibilities. Staff may be reluctant to take on additional work or they may feel they lack knowledge and skills for it. They may lack motivation because they may not see connection between incorporation gender considerations and their own work goals and plans (UNDP, 2006)

International report For Example, The EFA Global Monitoring Report (UNESCO, 2003) indicates that at the national level, Kenya has virtually attained gender parity in enrolment at the primary education level. However close scrutiny reveals that serious gender disparities in enrollment exists between regions in favor of males with regards to access, retention completion, performance and transition.

The gender gap widens as one goes higher up the education ladder. Gender disparities are also particularly large in access to perform in science, mathematics and technical subjects (SMT) and in higher education (Republic of Kenya, 2007).The Kenyan education system is yet to adapt to global requirements that require scientifically and technical trained manpower. The syllabus continues to be art and commerce based and where technical institutions that specialize in providing these technical courses, the expansion of institutions of higher education threaten the provision of this expertise.

Teacher resource is one of the most importance input into the education system and therefore efficient management and utilization of teachers is critical to the quality of leaning outcomes. The exodus of teaching personnel both at primary and secondary and tertiary level education has also been attributed to the decline in the quality of education provided. At tertiary level, shortage of lectures has been cited in mid- level colleges



offering science and technology courses (Ministry of Gender, Culture & Social Development, 2008).

For men and women to participate as equal partners in the social, economic and political development opportunities should be accessible to them on an equal basis then on an equal basis. Gender disparities undermine this and the casualties are mainly girls who are susceptible to traditional practices that relegate their roles in society. Girls are more susceptible for gender related violations and are more likely to drop out of school due to pregnancy. Few female proceed to institution of higher learning and at this level, biases can be observed in disciplines they undertake. Education has failed in promoting equity and well being of individuals through access to opportunities, bridging the gap between male and female participation in the socio political and economic arena positioning the country as a strategic global player through the creation of scientifically and technically informed labor force and creating a sense of nationalism among its citizenry (Social Policy Development and Governance in Kenya , 2009).

Skills refer to technical know –how. These skills range from human resource management and behavior Skills Improvement is the core performance oriented training. It is where performance indicators are pegged at the training need assessment time, development of curriculum. monitoring of training lack necessary industry based technological skills updated through industrial attachment.

Kenya Technical Training College has shifted from its original mandate as a producer of trainers and is now competing to offer programmes similar to national polytechnics. This led to a great extent compromises quality of education especially when resources are lacking. It has been observed that teachers in the technical institutions

rarely go for refresher courses which put them at mercy of their students who are more exposed (Gichira, 2002).

The expansion of higher institutions threatens learning and the nature of qualifications offered by those institutions. Upgrading of technical institution exacerbates inequality in access to learning opportunities (Ministry of Gender, Culture and Social Development, 2008). Due to global economic changes workers need retraining for new occupations. The impact of HIV/AIDS has necessitated emphasis on skills development to replace skills lost across a wide range of occupations. AIDS depletes scarce human resources. HIV/AIDS also reduces the capacities of TIVET systems to deliver their functions since it decreases the supply of highly trained personnel and causes deterioration in the equality and quality of the system.

### **2.3 Facilities and Equipment Influencing Gender Mainstreaming**

The National Rainbow Coalition (NARC) government resolved to improve service provision and provides a clear education policy and program. The Ministry Of Education Science and Technology (higher Education) is committed to implementing the proposed education reforms while counting on the support of the domestic stakeholder and development partners. Girls participation at all levels should improve through such policies (GOK, 2009).

Kenyan Education system has put emphasis on formal academic education which has been the main set back for TIVET sectors. Innovation in the current education and training organization have been proposed on the sessional paper of 2005. This is intended

to offer learners equal opportunities to advance to the highest level of learning through the academic or TIVET channel.

The Government of Kenya has formulated various policies backed by strategies that revolve around; provision of incentives to promote creativity and innovations, capacity building of staff, equity in access and linkages and promotion of relevant skills development that meet the needs of the market. Past experience has however shown that the government has come up with well designed strategies for development but lack of political good will and viable implementation roadmaps has been the main setback (GOK, 2007).

Equity in relation to education for men and women remains a thorny issue in the provision and access to education in Kenya. According to studies, countries with high literacy levels among men and women have lower levels of fertility, lower infant mortality, lower maternal mortality and lower expectancy and access to gender issues in development (Abagi, 1998, Colcouch, 1986, Cochrane, 1979). For Kenya, gender disparities still remain high in relation to access to education.

Inadequate instructor training, obsolete Training equipment and lack of instructional materials are some of the factors that reduce effectiveness of training in meeting the required knowledge and skills objective. High quality skills training requires qualified instructors, appropriate workshop equipment, adequate supply of training materials and practice by learners (Mehra and Gupta, 2006).

On the other hand more affluent institutions of learning have well equipped laboratories, classrooms, latrines and instructional materials. However low income public, private institutions are often characterized by lack of infrastructural and learning

equipment and facilities (Social Policy Development & Governance in Kenya, 2008) .In most developing countries including Kenya, TIVET is an insignificant sub-sector in education system that generates little attention or budget provision resulting in poor infrastructure and facilities and a low status. To enhance transition from primary to TIVET the government to set objectives of enhancing access to TIVET programmes through improved infrastructure and training.

Available courses book and supplementary reading materials depicting girls negatively and in many cases in a lower position compared to that of boys. Birckhill (1991) in his research on effects of education materials and girl's performance observed that the males portrayed as liberators, inventors rescues adventuresome and proactive as opposed to girls. In addition stereotypes in textbooks and other educational materials that may discourage the girl child from active participation is considerably lower and unattractive than those males in the textbooks.

The curriculum materials socializes learners as they interact with the materials, professionals, doctors, pilot's engineers, bishops and world class lawyers. In textbooks, journals and magazines illustrations are male while nurses, nuns, house helps, tea girls, nursery teachers, matrons and typists are female. This does not encourage girls to work hard to be leaders, liberators proactive as they do not interact with such characters in textbooks (Birckhill, 1991).

Several criticisms have been leveled against the Kenya education system in relation to inefficiency to utilize resources to meet educational needs and water. Other criticism includes poor administration structures, quality and relevance of curriculum and cost of providing education. The Education system has been criticized in its inability to

develop socially, politically, economically and well informed citizens. Republic of Kenya (2005) notes that there are four critical issues related to WASH as evidenced by Ministry of Education and Development partners.

There are lack of adequate infrastructure and shortage of classrooms, poor state of investment, poor construction standards and inadequate number of spaces available, limited number of TIVET institutions, population in isolated rural areas, those living in low income and other areas and huge discrepancies in needs depending on local conditions.

The most worrying issues is shortage of and poor state of WASH facilities. Good toilets are in towns with permanent construction, However, sometimes do not have water and standard of cleanliness in most of rural areas due to a large population using and sharing them (Economic Survey of Kenya).

Republic of Kenya (2003) survey shows that whenever a kindergartens or school, the construction was done without considering gender and accessibility when it comes to assessing them. It is common to find one block structure for both boys and girls without a urinal space/pit while girls may have latrines for their disposal of sanitary pads which has led to blockage. Toilets are a health hazard and both male and female are exposed to disease. With the kind of facilities described, girls find it very difficult to use these facilities especially when they are menstruating. To save themselves some may choose to drop out of schools completely or discontinue during their periods end (Were, 2003).

## 2.4 Curriculum Influencing Gender Mainstreaming

At the higher levels of education, transition rates from secondary schools are even lower. Due to the competitive nature of the education system, students that access public institutions of higher learning remains very low less than 40 percent of students that sit for the Kenya Certificate of Secondary Education (KCSE) national examination. TIVET programmes in Kenya target to absorb the large proportions of students who cannot progress to the secondary and higher levels of education. Out of the approximate 600,000 graduates of primary education, only 55 percent (350,000) proceed to secondary school. At the end of the secondary cycle only 20,000 proceed for Universities and the rest 200,000 are expected to be catered for by the middle level colleges and TIVET institutions whose existing capacity is inadequate, (GOK, 2006).

Due to the limited spaces available in TIVET institutions only a small proportion of eligible school leavers are absorbed. Every year 55 percent of those graduating from the primary school level join technical institutions while the balance joins the labor force directly (Economic Survey, 2004). Equal treatment in legislation is focused on providing equal access and connecting existing inequalities in legislation so that individual citizens are formally equal (Nelen and Hondeghem, 2000).

The government recognizes that without coherent and comprehensive framework for guiding mainstreaming within the different sectors and ministries involved in development, the goal of gender equality and equity will not be achieved. The overall objective of the policy is to facilitate mainstreaming if the needs and concerns of women/girls, men/boys in all sectors of development initiatives and ensure that they participate and benefit from the process. The policy framework emphasizes the need to

focus on empowerment strategies and demonstrates the essential linkages with different sectors (Ministry of Gender, Culture & Social Development, 2008).

Curriculum instruction in Kenya has undergone several changes since independence, 1963. Until present days, the education reforms made aimed at improving education system in the country of late through the education circular of 19<sup>th</sup> November 2008. The curriculums has been reviewed for primary, secondary education and teacher training colleges to make it more manageable and less expensive. Primary and secondary education curriculum saw several changes that was implemented from January 2009. However, this is yet to be done for TIVET and Diploma teacher training colleges (Economic Survey, 2004).

The current TIVET Curriculum is weak and not flexible enough to meet the technological changes and diverse needs o different clients. Furthermore the quality of TIVET graduates has declined in the recent years due to poor instructional methods, outmoded/inadequate equipment and lack of meaningful work experience and supervision attachment. The graduates of TIVET have experienced technological shock when they finally enters the job market (Nyerere, 2009).

One of the important features of TIVET, its orientation towards the world of work and the emphasis of the curriculum on the acquisition of employable skills. TIVET delivery systems are therefore well placed to train the skilled and entrepreneurial workforce that Kenya needs to create wealth and emerge out of poverty. A skilled workforce is a basic requirement for driving the engine of industrial and economic growth (UNESCO, 1997) and the quality of training is low with undue emphasis on theory and certification rather than on skills acquisition and proficiency testing.

Current training programmes in Kenya are supply driven. TIVET programmes are often not designed to meet observed or projected labour demands. The emphasis appears to be on helping the unemployed to find jobs it without any critical attempt to match training to available jobs (Mehra and Gupta, 2006). Unit cost are necessarily expected to be higher in TIVET institutions than in primary and secondary schools because of smaller student to teacher ratios, expensive training equipment and costly training materials that are wasted during practical lessons.

There is need to carry out frequent needs assessment and tailoring of TIVET curriculum to meet the changing technological needs. It is critical therefore to make sure that what TIVET institutions are teaching and training coincides with the needs and opportunities in the labour market since education or training do not create jobs on their own.

## **2.5 Teachers Attitudes towards Gender mainstreaming**

Attitude refers to change of view, perceptions and opinions on a given topic. In relation to input, a number of factors continue to frustrate the provision of quality education for the majority of Kenyan students. However poverty and inequality remain the biggest contributory factors in ensuring access to relevant information and content within the Kenyan educational system. Inequalities continue to be apparent features in the provision of quality education. The education system issues are about schooling than education. It has failed to instill values aesthetics, beliefs, attitudes that are unique to the people's orientation (Ntrangawi, 2003).



Gender issue in and out of classroom involves sexual harassment, abuse by teachers and boys and gender bias perception by students demotivating factors. Institutions are seen to be ripe with more intangible social relations of sex role stereotyping by teachers, student and the institution practices in general. It is common to find separate playing grounds for males and female (Republic of Kenya, 2004). Were 2003, argues that boys abuse girls and sometimes beat them in school.

Abagi (2002) states that the issues of sexual harassment and teachers having affairs with girls in school appeared to be very sensitive issues for both teachers and students though the students are shy to talk about it. It was clear that when the problem exists, some teachers sexually harass girls by touching them in approximately and intimidating to have sex with them.

The change of attitudes should be positive to enhance learning. Attitudes can also be referred to as change or enhancement of characteristics. The attitude will enable the participants to deal with the influencing factors and become gender sensitive and gender responsive. Knowledge acquired during training will enable participants to adopt positive attitudes (Ministry of Gender, Culture & Social Development, 2008).

Students always perceive that boys participate in school than girls and they recognize that there are both out of school and in school factors that contribute to this disparity. Bunyi (2004) believes that boys work harder than girls in school that is why they perform better than girls.(Economic survey, 2004) showed that other factors mentioned are; boys are provided with enough materials in comparison with the girls; boys are generally brighter; they are not affected by pregnancies like the girls and that the boys share knowledge with others.

Appointments of different responsibilities have contributed to dismissal performance of girls. Girls self esteem are always lower than that of boys due to biasness in the appointment of these positions.(Wamuhui,1995) in his study on characteristics that influence participation in education found that school and their peers, their teacher and the administration may influence girls child performance and continued schooling (Republic of Kenya, 2007).

For many years technical and vocational education in Africa has been considered a career path for the less academically endowed. This perception has been fuelled by the low academic requirements for admission into TIVET programmes and limited prospects for further education and professional development. Worse still, the impression is sometimes created by governments and that the primary objective of the vocational education track is to keep dropouts and lockouts from the basic and secondary school system off the streets rather than project this type of training as an effective strategy to obtain skilled workers for the employment market (Mehra and Gupta,2006).

According to Action Aid/Arid lands Resource management (2003) sexuality issues are also advanced by both boys and girls as inhibiting active participation in schools. This makes girls not to concentrate on their studies because they tend to be conscious of their looks and bodies. However Bunyi (2004) highlighted that teachers are sometimes the perpetrators of harassment and exploitation of girls .On the other hand some girls are to blame for that they be friend boys and thus spend their time in school thinking a bout boys. Early marriages were reported from nearly all districts in Kenya including Bomet, Meru, Kisii, Kajiado and Islands in lake Victoria such as many parents

refuse girls to go school because they get married and bring in dowry (UN,2001) ,this is said to curtail educational opportunities among girls among girls in zones.

Sex and Gender Based Violence (SGBV) is also another factor that influence disparity .It is any form of action directed against someone on the basis of his /her gender of sex roles such actions may be physical, sexual or psychological violence .SGBV violates universal human rights protected by international instruments and convention in Kenya. SGBV has greater impact on women and girls compared to men and boys while its nature and extent varies a cross cultures Enhancing the status and attractiveness of TIVET will involve changing perceptions and attitudes of the public about technical and vocational education. For this to happen the use of role models in TIVET and the involvement of successful entrepreneurs in motivating campaigns especially in schools will be necessary. An embarrassing shortage of role models is one of the banes of TIVET .Technical and vocational educations should be seen as valid passport to a good job and not as second best choice or the only educational route for the academically less endowed (Mehra and Gupta, 2006).

## **2.6 Ongoing initiatives to address Gender mainstreaming in education**

In recognition of the importance of gender equity and equality in Education both the government and its partners have developed strategies and implemented variety of initiatives to address gender in Education. Legal issues are being addressed through harmonized framework and gender issues are addressed in all programmes. The National plan of action on EFA 2003-2015, the Ministry of Education Strategic Plan (2006-2011) and the service charter, sessional paper No.1 of 2005 and the Kenya Education Sector

Support Programme (KESSEP, 2005-2010) have all paid attention to gender and education. The government has also ratified number of protocols and conventions with a bearing on gender equality. These include the CEDAW and CRC among others. The government has also set up a ministry of Gender, sports, culture and social services and Gender Commission. The ministry of Education has established a National task force for Gender and Education and a gender desk (Republic of Kenya, 2007). The implementation of free primary education from January 2003 brought on board many boys and girls formally coked out of education. Other initiatives aimed at improving access include; Engendering of the curriculum; gender responsive deployment of teachers trainees; readmission of girls who become pregnant while in school, gender parity based recruitment and deployment of teachers and managers, expansion of TIVET institutions; mainstreaming HIV/AIDs in the curriculum; appointment of qualified female education managers; gender sensitization and advocacy; capacity building for TIVET managers, teachers and quality assurance officers on gender issues; affirmative action in bursary allocation for secondary schools and university admission: Introduction mobile schools and establishment of feeder schools for children in standard one to four in the ASAL, and gender (Republic of Kenya, 2007).

Government partners in education include United Nations (UN) agencies, development partners, other government ministries, local authorities, international and local communities, parents, boys and girls. Development partners have played an important role by establishing centre of excellence in girls' educations, improving schools and classroom environment, school sponsorship, promotion of gender responsive pedagogy, monitoring and evaluation among others (Republic of Kenya, 2007).

However there are still glaring disparities that pose challenges to the attainment of gender equity and equality in education and other spheres of the Kenya society. These include; improving the quality and relevance of education; cultural/ traditional practices detrimental to creating environment that are conducive to education for all children, especially girls and continuous review, evaluation, adoption and adaptation of strategies that work in a given situation (GNC, 2004).

## **2.7 Theoretical Framework**

According to Willis & Davis (2008) a theory is a set of properly argued ideas intended to explain a phenomenon by a specifying variables and the laws that relate the variables to each other.

This study was modelled on systems theory as advanced by Hodge and Anthony (1988). In their study they looked at a system as an organized or complete whole or complex whole or combination of parts performing as a complete unitary whole.

The principles in their study were; interdependence parts that make up a system are interdependent. If changes occur in one part or set of parts it affects all other parts. The second principle is of holism. The system should be considered as a functioning whole. Changes in parts of the system should be considered from the systems overall performance. Synergism as a principle states that each part of the system performance of the system performs its role and enhances the performance of other parts and hence total performance of the system. The system therefore is capable of growth the receiving input and producing outputs.

This study sought to look at an institution as an open system that interacts with its environment. It must continuously change and adapt to the environment changes. The principals therefore need to automatically adopt an approach widely accepted in an institution to deal with gender disparity in its environment. The institution should plan curricular, co-curricular, extra curricular, discipline programmes and rules to coalesce for effectiveness. The discipline system and its roles have to closely link with the wider Judicial system and the child's rights to effectively deal with any difficult challenges. In this case, gender disparity has to be dealt with and managed by the institution, ministry of higher education and the judicial system. In the past this integrating and was left to the parents to decide and the institution administration stayed away from brawls. Effective management of gender parity in education calls for the entire education stakeholder to be inclusive (GOK, 2007).

The key principle in this theory was that individuals depend on systems in their immediate social environment for satisfactory life and therefore students of TIVET would depend on their internal systems to boost their learning capacities.

Any human being in an institution such as principals, teachers, students/learners, parents may have faced challenges to overcome challenges facing gender parity in learning institutions. Premise of this theory was that learners failed to achieve their desire goals because of difficulties in gender mainstreaming in learning institutions. The trauma and other psychiatric is equally caused by staffing related factors, facilities and equipment, curriculum instruction, teachers attitude and challenges encountered in gender mainstreaming In schools. The existence of negligence to responsive legal policy in an institution and community also leads to easiness in children's inequality in attending a

higher learning institution. This therefore calls for the need to remove these factors which interferes with gender mainstreaming of children and a reinstatement of the measures that will restore the equilibrium. There is therefore need to relook at policy implementation that will instill equity and equality of TIVET education.

## 2.8 The Conceptual framework

This research was based on the conceptualization of the problem or relationship between variables as shown below and how they affect one another.

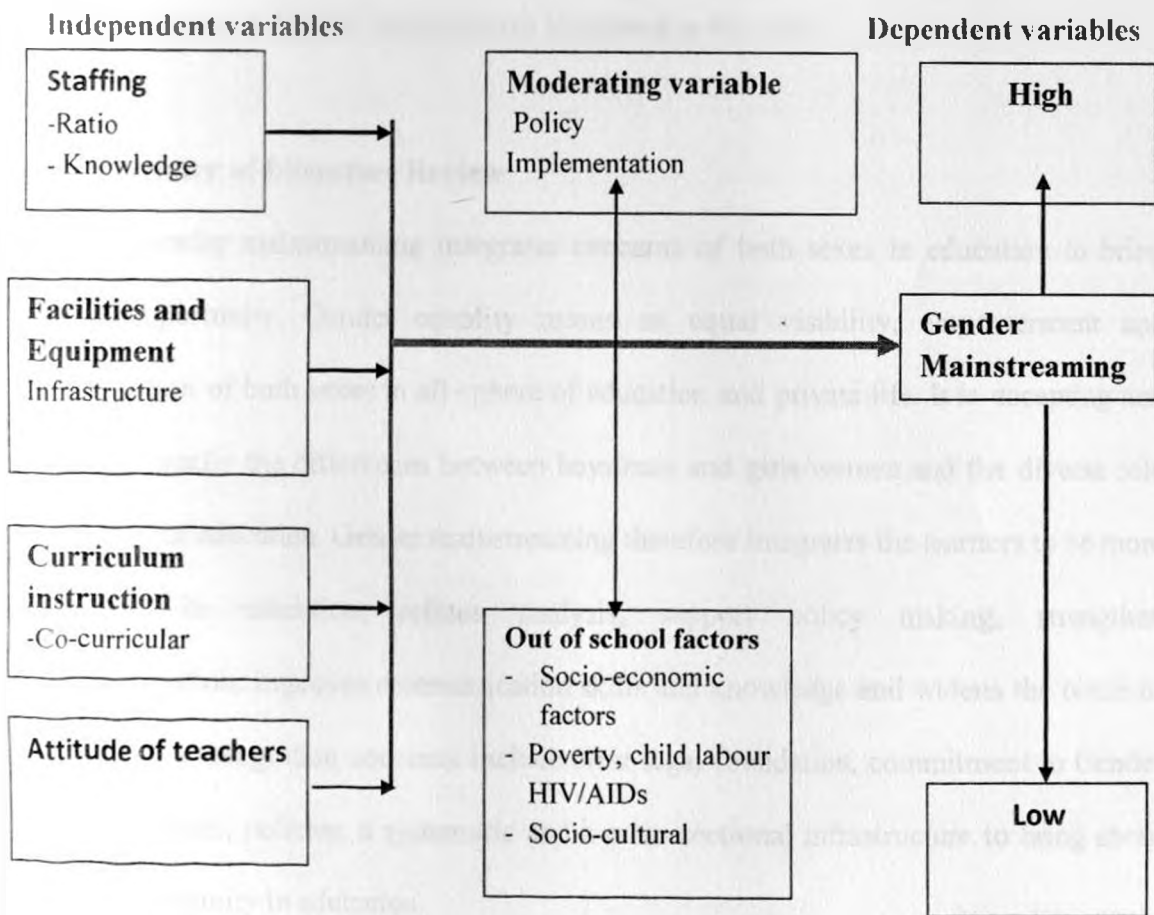


Figure 2.1 A figure showing the variables in Conceptual framework

The conceptual framework developed in this study indicates the factors that militate against education of students. Gender mainstreaming in TIVET institutions is the dependent variable and is influenced by staffing related factors, facilities and equipment, curriculum instruction and attitudes of teachers. These factors are further influenced (moderated) by ongoing initiated gender policies and out of school factors like socio-economic factors which include poverty, HIV/AIDs, socio-cultural influenced and child labour. All the factors are related and play diversified role which can hinder or facilitate gender participation in TIVET institutions Education. They are factors that affect gender mainstreaming in TIVET institutions as illustrated in the study.

## 2.9 Summary of Literature Review

Gender mainstreaming integrates concerns of both sexes in education to bring equal opportunity. Gender equality means an equal visibility, empowerment and participation of both sexes in all sphere of education and private life. It is accepting and valuing equally the differences between boys/men and girls/women and the diverse role they play in education. Gender mainstreaming therefore integrates the learners to be more effective in education, refines analysis, support policy making, strengthen implementation, improves communication skills and knowledge and widens the circle of contact. The integration concerns include clear legal foundation, commitment to Gender Based analysis, policies, a systematic and a cross-sectional infrastructure to bring about equal opportunity in education.



## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

This chapter describes the methodology that was used in the study. It covers the research design, target population, sample selection and sample size, research instruments, validity of the instruments, reliability of the instruments, data collection procedures and data analysis techniques.

#### 3.2 Research Design

This study adopted descriptive survey design with both qualitative and quantitative approaches of data generation. Descriptive survey is a method of collecting information by interviewing or administering a questionnaire to a sample of individual (Orodho, 2003). It enables the researcher to assess the situation within the study area at that time (Kothari, 2003). It can be used when collecting information about people's attitudes, opinions, habits or any of the variety of education and social issues (Orodho and Kombo, 2002). The descriptive design was relevant to this study due to its ability to identify factors influencing gender equity and equality in Technical, Industrial vocational, educational Training Institutions. The descriptive survey design was selected for this study because it was based on methods of investigation of population through selecting of samples to analyze (Oso and Onen, 2009).

The research generated quantitative and numeric descriptions of some parts of the population. The methods of data collection included questionnaire administration and analysis of secondary data.

Qualitatively, the study employed interviews and observations to obtain information on the attitudes of learners, teachers and members of the institution. This also helped in generating verbal information on sensitive issues like gender preference.

### **3.3 Target Population**

The study targeted 8,101 students, 519 teachers 6 principals and 1 officer in charge of TIVET institutions. The total target population was 8,631 respondents.

### **3.4 Sample size and Sample Selection**

This section presents sample size and sampling technique.

#### **3.4.1 Sample size**

The study targeted a sample size of 364 respondents that were drawn from all six TIVET institutions in Nyanza Province. This sample was deemed appropriate for a target population of 8,631 as recommended by (Krejcie and Morgan, 1990).

#### **3.4.2 Sample Selection**

The study targeted all the six TIVET institutions which were to be surveyed. However, the study sought to target 6 principals, 24 teachers, 336 students and 1 TIVET officer, Nyanza province. When the appropriate method of selecting samples from a given target population was engaged, the distribution of the respondents was as follows: subtracting 6 principals from the sample size, 364 respondents, the remaining were 358 respondents. From 358 respondents again subtract 1 TIVET officer, the remaining sample size was 357 respondents which was then distributed among teachers and students as follows: the number of teachers was got by dividing the total number of teachers, 519 by

the total target population, 8,631 and multiplying the quotient by the remaining sample size 357. The result was 24 teachers. This was distributed among the six institutions by dividing the number of teachers by six. The result was 4 teachers from each institution. The number of students targeted was got by dividing the total number of students, 8101 by the total target population, 8,631 and then multiplying the quotient by the sample size, 364. The result was 336 students. This was distributed among the 6 institutions by dividing the number of students, 336 by six. The result was 56 students from each institution. The total number of respondents targeted therefore were 364. The 6 principals were selected purposively. The study also used simple random sampling technique to sample teachers and students. This sampling technique is deemed appropriate as it gives teachers and students in those institutions equal chance of being sampled for the study. According to Krejcie and Morgan (1990), a sample size of 364 respondents is appropriate for a target population of 8,631 respondents (appendix C). The researcher applied the proportionate method of selecting samples from a given target population. The correct sample size was obtained by dividing the target category of respondents by the total population size and then multiplying the result by the total sample size.

### **3.5 Research Instruments**

The study used student's questionnaire, principals and teacher's questionnaire. Three sets of questionnaire were administered. Both structured (open-ended) and unstructured (closed-ended) questionnaire were used. The questionnaires for students, principals and teachers were in three parts. Part A contained the personal data; part B had objective questions and part C were structured.

Questionnaire for principals were divided in three parts, A, B and C. Part A contained demographic characteristics and the Institution details. Part B contained questions based on the objectives of the study and part C had two structured questions that sought opinions and suggestions from them. Questionnaire for teachers was also divided into three parts. Part A contained institution details and demographic characteristics of teachers, part B had questions based on the objectives of the study and part C had two structured questions that sought opinions for teachers. Lastly questionnaire for students was also divided in three parts; part A contained the institution details and demographic characteristics of the students, part B contained eight questions that had yes and No responses, Part C contained five questions that sought opinions and suggestions of students. The lesson observation schedule had seven key areas that was looked at while facilities observation check list had four main areas to be looked at. The interview schedule had six questions used to interview the officer of higher education. It also had a section of demographic characteristics of the officer.

### **3.5.1 Pilot –testing**

Pilot testing was carried out in three technical institutions in Rift valley province. A total of 18 questionnaires were used. Each institution had 6 questionnaires, 3 for students, 2 for teachers and another for the principal. This number was selected purposively that it had the same characteristics as the target population.

### 3.5.2 Validity of the Instruments

According to the Borg and Gall (1989), validity is the degree to which a test measures what it purports to measure. Validity of a test is a measure of how a test measures what it is supposed to measure (Kombo, 2006).

Validity of the instruments is crucial in all forms of researches and acceptable level is largely dependant upon logical reasoning, experiences and professionalism of the research (UNESCO, 2004). In order to assess validity, the following approaches were used to ensure truthfulness. They included face validity, content validity, predictive validity, criteria validity and construct validity. In this case the researcher used all the approaches to assess and measure attitudes, acknowledge and logic and make judgment. In the study, validity is through the selection of the design and care taken to conduct measurements and decisions concerning what is and what will not be measured an the extent to which to study accounts possible alternative explanations for any casual relationship. The instruments were designed using simple languages at all levels. Side notes were put to guide the respondents. The instruments were designed and were given to the two supervisors for discussion after which it was taken for pilot testing and the answers of the results were analyzed. The items that appeared ambiguous were discarded or adjusted. It was then given the peer for review and to the experts to analyze it. This provided standard measure to ensure that the response measured obtained from the same population represented the total population. The results obtained represented activities, thoughts, views, opinions beliefs and knowledge of the real population in the real world.

### 3.5.3 Reliability of the Instruments

Reliability is the measure of the degree to which a research instrument yields consistent results on data after repeated trials (Mugenda and Mugenda, 1999). This is in agreement with Kombo and Tromps (2006) who assert that it is the ability of the instrument to measure what it is supposed to measure consistently. A reliable instrument is one that produces consistent result when used more than once to collect data from samples randomly drawn from the same population.

To test the reliability of the instruments, the research used split-half technique. This involves splitting the statement into halves (odd and even) calculating the Pearson's correlation coefficient ( $r$ ) between the scores of the two halves of the test. By using this method, the researcher aimed at determining the coefficient of internal consistency and the reliability coefficient whose value vary between 0.00 (indicating no reliability), and 1.00 (indicating perfect reliability) and -1.00 (indicating perfect negative reliability).

The coefficient was obtained by correlating the scores of odd statements with the scores of even statements in the questionnaires for all items that are uniform. Pearson's product moment correlation coefficient and spearman Brown formula was used to test the reliability of the questionnaire. To obtain ( $r$ ), the formula used was;

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

Where  $x$  = odd scores  $y$  = even scores

$\sum X$  = sum  $x$  of scores

$\sum Y$  = sum of  $y$  scores

$\sum X^2$  = sum of squares of  $x$  scores

$\sum Y^2$  = sum of squares of  $y$  scores

$\sum xy$  =sum of product of x and y scores

$N$  =sum of paired scores

$Y$  = correlation coefficient of halves

The correlation coefficient (r) of halves is correlation by spearman Brown prophecy (Re) formula.

$$\frac{2 \times \text{Corr Between the halves}}{1 + \text{corr Between the Halves}}$$

Or

$$Re = \frac{2r}{1 + r}$$

Where **Re** =reliability of the original test

$r$ = reliability of the coefficient resulting from correlation the scores for the odd item with the scores of even item.

A Correlation coefficient (r) of 0.700 was considered adequate but a coefficient 0.80 was good according to Gay (2003). However the researcher found out that the correlation coefficient was -1 after correlating the two sets of data (odd and even) halves. This was an indication that the instrument was reliable. This calculation was based on part B of the questionnaire. Section A and C could not be included in the computation as they contained demographic characteristics of the research participants and open ended questions on issues that could elicit diverse responses. For the sections A and C, the researcher identified from the pilot study the items that were ambiguous, incorrectly worded or unnecessary revised or drop those items.

### **3.6 Data collection procedure**

The researcher personally administered the questionnaire for both the pilot (pre-test) and the main research. A permit was obtained from the Ministry of Higher Education and the District Commissioners in Nyanza Province. The researcher booked appointment with the principals of the research institutions in Nyanza province and arranged for data collection. The researcher visited the institutions and administered the questionnaire to the respondents. The questionnaire was collected after seven days. This gave the respondents reasonable time to answer the instruments well by giving appropriate information required for the study. The respondents were assured of strict confidentiality in handling their response.

### **3.7 Data Analysis Techniques**

After data collection, the researcher checked the completeness, accuracy and uniformity of the instruments. Once the questionnaires had been administered, the mass of raw data were collected systematically and organized in a manner that facilitated analysis. The questionnaire was assigned the number 1 to Yes and 0 to No. This was to be in closed ended items used for the purpose of the study.

Quantitative data analysis commenced at the field editing stage to minimize errors. This was followed by coding the open ended data entry, data cleaning, transformation, analysis and interpretation. Descriptive statistics were used to analyze and describe the information for ease of interpretation. The use of likert scale and distribution table was micro-operated.



Qualitative analysis was done concurrently with data collection. The oral and written questions were used to create meaningful interpretations. This assisted the researcher to utilize verbal data that was potentially available through words when compared to numbers (Taylor, 2005). This reduced the amount of information, identify significant patterns and construct a framework for communicating the existence of what the data revealed (Best and Khan, 2004). The data was summarized on a daily basis and an interim report produced, analyzed and interpreted to be integrated with the qualitative data in the main report.

### **3.8 Ethical Considerations**

Ng'ang'a et al (2004) assert that the anticipated ethical problems in most studies include research process, conduct of individual research and the nature of research subject. Throughout the study the research followed the procedure and format that was recommended by School of Continuing and Distance Education (SCDE) of the University of Nairobi. Informed consent and confidentiality of personal information of the respondent was controlled and kept secret as far as possible without passing it to the third party. The questionnaires did not have names written on them. Once the respondents were identified their informed consent were sought before administering questionnaire and interview schedule. Consent to conduct the research was sought from the University of Nairobi, Ministry of Higher Education through the National council science and Technology, Provincial Administration, District Commissioner Offices and Institutions where research was carried out.

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

#### 4.1 Introduction

This chapter presents the research finding of the study. The thematic areas include; questionnaire return rate, demographic characteristics of the respondents, staffing related factors that influence gender mainstreaming, facilities and equipment that influence gender mainstreaming, curriculum influence in gender mainstreaming and teachers attitude towards gender mainstreaming.

#### 4.2 Questionnaire Return Rate

The questionnaire return rate was 100%. This was achieved because the researcher ensured that the questionnaires for the students were administered and collected immediately after completion. The questionnaire for the principals and teachers were also administered and a follow up made after one week for collection after completion.

#### 4.3 Demographic characteristics of Respondents

The study intended to establish the demographic characteristics of principals, teachers/lecturers, and students according to gender, age, level of education and teaching experience.

##### 4.3.1 Gender of Respondents

The table 4.1 shows the demographic characteristics for principals, teachers/lecturers and students according to gender.

**Table 4.1: Demographic characteristics of respondents according to gender**

Gender	Principal		Teachers/lecturers		Students	
	F	%	F	%	F	%
Male	5	83	16	67	168	50
Female	1	17	8	33	168	50
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>336</b>	<b>100</b>

Table 4.1 shows that the majority 5(83%) of the principals were of male gender while 1(17%) were female. It also shows that 16(67%) of the teachers /lecturers were male and 8(33%) were female. This provided a negative gender mainstreaming for the female student since they lacked role models.

#### 4.3.2 Distribution of Respondents by Age

The study sought to establish the age distribution of the respondents in relation to gender mainstreaming.

**Table 4.2: Age Distribution**

Gender	Principal		Teachers/lecturers		Students	
	F	%	F	%	F	%
13 years and below	-	-	-	-	-	-
14-17 years	-	-	-	-	-	-
18 years and above	-	-	-	-	336	100
24 years and below	-	-	-	-	-	-
25 -30 years	-	-	4	17	-	-
31-40 years	-	-	13	54	-	-
41-50 years	3	50	7	29	-	-
51 Years and above	3	50	-	-	-	-
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>336</b>	<b>100</b>

From table 4.2 it was noted that all students were represented by the age bracket 18 years and above which was 336 (100%). The students could understand gender issues quite well because they were considered as adults. It also meant that gender mainstreaming could be imparted with ease in public TIVET institutions.

The large number of teachers were in the age bracket 31-40 years with a representation of 13(54%), 7(29%) were in the age bracket of 41-50 years and 4(17%) were in the age bracket of 25-30 years. From the statistics it was clear that the majority of teachers/lecturers were mature enough in age of above 30 years. This was a good sign of gender mainstreaming. Three (50%) of the principals were in the age bracket of 41-50 years and 3 (50%) were in the age bracket of 51 years and above. This was a good sign of gender mainstreaming as they had the knowledge on gender issues.

#### 4.3.3 Level of Education

The level of education of the respondents was found to be crucial issue in gender mainstreaming. Due to this, the respondents stated their level of education as per their academic and their responses were indicated in Table 4.3.

**Table 4.3: Distribution of Respondents by level of Education**

Level of Education	Principals		Teachers/Lecturers	
	F	%	F	%
Secondary	-	-	-	-
Diploma	-	-	11	46
Higher Diploma	1	17	3	13
Degree	3	50	8	33
Post Graduate	2	33	2	8
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>

Table 4.3 shows that majority of the principals were represented by 3(50%) had degrees, 2(33%) had post graduate education and 1(17%) had higher diploma education. It clearly shows that the principals had aspired for further education which could be a success in achieving high levels of gender mainstreaming.

The majority of teachers were represented by 11(46%) having Diploma Education, 3(13%) with a higher diploma education, 8(33%) had degree education and 2(8%) had post graduate education. This shows that though teachers/lecturers had diploma level of education, most of them 13(54%) had struggled to acquire higher education which was a good sign of gender mainstreaming in setting up equal opportunities for both male and female.

#### 4.3.4 Teachers Experience

The respondents were asked to state their teaching experience and the results were statistically recorded in table 4.4.

**Table 4.4: Distribution of teachers by their experience**

Teaching experience	Principals		Teachers/Lecturers	
	F	%	F	%
Less than 1 year	-	-	-	-
1-5 years	-	-	6	25
6-10 years	-	-	12	50
11-15 years	-	-	2	8
16 years and above	6	100	24	100

Table 4.4 shows that all the principals 6(100%) had more than 16 years teaching experience. The study found out that the principals had had along experience in the education system which equipped them with gender mainstreaming issues.

The majority of teachers/lectures 12(50%) had 6-10 years of teaching experience. Four (17%) had a teaching experience of 16 years and above and 2(8%) had 11-15 years of teaching experience. None of the teachers had a teaching experience of less than 1 year. Minority of teachers 6(25%) had a teaching experience of 1-5 years while the majority 18(75%) had a teaching experience of more than 6 years. This shows that they had more experience in education system to offer capacity building to bring about the enforcement of children's Act 2001 which provides for the rights of Education to every Kenyan child as a way to induct the teacher to comprehend and apply the same (Republic of Kenya, 2007).

#### **4.4 Staffing related factors that influence Gender Mainstreaming**

The study was to examine the extent at which staffing related factors influence gender mainstreaming in TIVET institutions in Nyanza province Kenya. The in-school factors that influence Gender mainstreaming were quite vast ranging from students enrolment ratio, teachers ratio and knowledge. The results were statistically represented in table 4.5.

**Table 4.5: Population of teaching staff and students**

population	Teachers/lecturers		Students	
	F	%	F	%
Male	334	74	4479	57
Female	115	26	3373	43
<b>Total</b>	<b>449</b>	<b>100</b>	<b>7852</b>	<b>100</b>

In table 4.5 it was established that there were a total of 449 TSC teachers/lecturers in the six public TIVET institutions in Nyanza Province - Kenya. Out of this, the majority 334(74%) were male teachers while the minority 115(26%) were female teachers/lecturers. The male teacher to female teacher's ratio was 1:3. This statistics show that there was lack of responsive deployment/balance of teachers in these institutions in Nyanza province. The male to female teacher ratio created a glaring gap in gender mainstreaming thus lack of role models to the female in integrating gender concerns. However, it was noted that there were few female teacher/lecturers who train and qualify for technical courses such as in electrical and mechanical engineering, applied sciences, building and construction and technology related courses.

The population of the students in all the six TIVET institutions in Nyanza province -Kenya was established to be 7852. It was compared generally to the teaching staff establishment and it was noted that the teachers to student ratio was 1:17. The study found out that in some courses offered in these institutions, there were more students as compared to other courses. There was therefore a shortage of teaching staff in business, Information and Communication Technology (ICT), social work and community development and institutional management related courses. This shows that there was heavy workload and overburdening of the available workforce, inadequate teaching

offered to student due to inefficiency, under enrolment of students in some departments hence fewer students compared to staff, female students drop out is high and high dominance of female and male courses. The teachers are sometimes forced to combine classes in order to achieve their objectives and goals but this leads to misunderstanding among some students. Getting teachers in specialized areas is also very hard e.g. in survey, guidance and counseling and ICT. This is in agreement with the Ministry of Gender Culture and Social Development (2008) where shortage of lecturers have been cited in mid level colleges offering science and technology courses.

The female teacher ratio to the female students was established to be 1:29 and the male teacher and male student ratio was 1:13. This showed that the Ministry of Higher Education Science and Technology (MOHEST) had not achieved much in the balance recruitment of females and males. This creates a greater challenge towards gender mainstreaming in the province in that the female students lack role models hence negative perception in integrating gender concerns.

**Table 4.6: Ratio of teachers/lecturers to students**

Ration of teachers and students	Principals		Teachers		Students	
	F	%	F	%	F	%
Yes	1	17	-	-	49	15
No	5	83	24	100	287	85

In Table 4.6 it was noted that majority of the students respondents 287(85%) confirmed that the ratio of teachers and students was not proportional while 49(15%) agreed that



it was proportional. Majority of the teachers 24(100%) confirmed that the ratio was not proportional while 5(83%) of the principals agreed but 1(17%) of the same disagreed.

#### 4.5 Facilities and Equipments that Influence Gender mainstreaming

The respondents were asked to establish the level at which facilities and equipments influence gender mainstreaming in TIVET institutions in Nyanza province in Kenya. The respondents were asked to state whether the institutions had available enough or adequate or sufficient infrastructure such as staffroom, office, staff houses, toilets and knowledge on gender issues, learning and teaching facilities including instructional materials classes, water facilities, sanitation and playing needs, accommodation facilities such as dormitories or hostels. The instructional materials reflected gender sensitivity that enhanced participation and transition for gender, girl child and boy child education.

##### 4.5.1 Sharing of the same staffroom by male and female teachers/lecturers/staff

The study was intended to establish whether the teaching staff shared the same staffroom.

The response was recorded in table 4.7.

**Table 4.7: Sharing of the same Staffroom**

Sharing of the same staffroom	Principals		Teachers/lecturers	
	F	%	F	%
Yes	6	100	24	100
No	-	-	-	-
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>

From the Table 4.7 it is noted that all the principals 6(100%) and all teachers 24(100%) confirmed that the staff shared the same staffroom. All the respondents agreed that it was positive as there is good interaction and mutual relationship among the teaching colleagues and also teachers embrace each other. However, it was noted that some staffrooms were too small and there were few facilities available such as less seats and tables. This brought discomfort to the teachers.

#### 4.5.2 Sharing of the same Office by the Principal and Staff

The question intended to establish whether the teaching staff shared the same office with the principal. The results were statistically represented in table 4.8.

**Table 4.8: Sharing of the same Office by the Principal and staff**

Sharing of the same staffroom	Principals		Teachers/Lecturers	
	F	%	F	%
Yes	-	-	-	-
No	6	100	24	100
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>

From the analysis made in table 4.8 it was seen that neither the principals 6(100%) nor the teachers (6(100%)) shared the same office. This was quite positive as teachers were free to chat, air views and discuss issues and matters affecting them without fear and discrimination from the administration. This promotes gender mainstreaming.

#### 4.5.3 Staff houses and gender mainstreaming

The study intended to establish whether the teachers/lecturers shared the same staff houses. The findings were recorded in table 4.9.

**Table 4.9: Sharing of the same staff houses**

Sharing of the same Staff houses	Principals		Teachers/Lecturers	
	F	%	F	%
Yes	-	-	-	-
No	6	100	24	100
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>

Table 4.9 shows that none of the teachers 24(100%) and principals 6(100%) shared the same staff houses. It was noted that most of the staff opted to live in nearby centres and they commute when going for work. Accommodation facilities were not adequate in some institutions. There is therefore need to provide for these facilities.

#### 4.5.4 Toilets and gender mainstreaming

The respondents were asked to state whether both the male and female teachers and students share the same toilets facilities. The findings were indicated in table 4.10.

**Table 4.10: Sharing of same toilets by both male and female teachers and students**

Sharing of toilets	Principal		Teachers		Students	
	F	%	F	%	F	%
Yes	-	-	-	-	110	33
No	6	100	24	100	226	67
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>336</b>	<b>100</b>

From table 4.10, it was noted that 226(67%) of both female and male students do not share the same toilets while 110(33%) of the respondents shared the same toilets. The teachers who responded 24(100%) confirmed that there were no sharing of toilets by both gender while 6(100%) of the principals also confirmed the same. Although the majority of the respondents do not share toilets, the students had problems due to acute shortage of these facilities. This is negative towards gender mainstreaming. More flushable toilets should be constructed and more pit latrines should be dug to accommodate the increasing population of students. This does not ensure retention of students who may be shy due to inadequacy. It had been noted that there is shortage and poor state of toilets and sanitary facilities with no water and standard of cleanliness due to large population using and sharing them (Economic Survey, 2004).

#### 4.5.5 Knowledge of respondents on gender issues

The question sought to establish whether the staff had the knowledge on gender issues or not. The response was statistically recorded in Table 4.11.

**Table 4.11: Respondents knowledge on gender issues**

Knowledge	Principals		Teachers	
	F	%	F	%
Yes	6	100	24	100
No	-	-	-	-
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>

Table 4.11 shows that both the principals 6(100%) and teachers 24(100%) had the knowledge on gender issues. There were still some difficulties in achieving gender mainstreaming and that is why the government is promoting affirmative policies in

favour of females by 30% and there is also a call by the government through the Ministry of Education for the provision of on-going initiatives aimed at improving access to education (Republic of Kenya, 2007). Gender mainstreaming should therefore be improved through training, seminars, sensitization workshops, creation of awareness and integrating of gender education in the curriculum.

#### 4.5.6.1 Learning and Teaching facilities and gender mainstreaming

The research was intended to establish the level of availability, adequacy and sufficiency of learning and teaching facilities and how it influenced gender mainstreaming. The findings are summarized in table 4.12.

**Table 4.12: Learning and Teaching facilities**

Facilities and equipments	Principal		Teachers		Students	
	F	%	F	%	F	%
Yes	-	-	-	-	111	33
No	6	100	24	100	225	67
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>336</b>	<b>100</b>

From Table 4.12, it was noted that there was insufficient and inadequate learning and teaching facilities as represented by 225(67%) students, 111(33%) agreed that there were sufficient learning facilities. Inadequate instructor training, obsolete training equipment and lack of instructional materials are some of the factors that reduce effectiveness of training in meeting the required knowledge and skills objective (Mehra and Gupta, 2006). It was observed that learning was difficult for students because there were few lecturers, the libraries were small and had inadequate materials for all courses

and for research. There were old materials used and borrowing books or notes from other institutions was difficult. There were also shortage practical equipment, reading materials, shortage of textbooks, chairs and lockers, tables, laboratory facilities, workshops, laboratory computers, ICT centres, motor vehicle machines. This therefore leads to poor performance and failure of students in examinations. The students also waste a lot of time because they move up and down as they go to library in shifts. There is need to improve and increase these facilities to reduce commotions during lessons because some students learn through the window, practical lessons are not well attended to leading to production of half baked students. This shows a drawback in gender mainstreaming.

It was also confirmed by the principals 6(100%) and 24(100%) teachers/lecturers that the learning and teaching facilities were inadequate. There was high need of more facilities although more are being developed. The Ministry of Higher Education Science and Technology (MOHEST) should fund equipment and facility procurement.

#### 4.5.6.2 Enough Classrooms and gender mainstreaming

The study was intended to confirm whether there were enough classrooms for the learners or not. The responses were recorded in table 4.13.

**Table 4.13: Adequate classrooms /lecture halls**

Enough classrooms	Principals		Teachers/ lectures		Students	
	F	%	F	%	F	%
Yes	-	-	2	8	77	23
No	6	100	22	92	259	77
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>336</b>	<b>100</b>

From Table 4.13, majority of the students respondents 259(77%) conceded that the classrooms were inadequate while 77(23%) ascertained that the classes were enough. This shows that the minority 77(23%) of the students were undertaking technical courses such as applied science, building and construction, electrical and civil engineering, automotive engineering and other related courses where the enrolment is low while the majority 259(77%) of the students undertake business related courses where there is high enrolment rate.

The majority of teachers 22(92%) conceded that there were inadequate classrooms while 2(8%) agreed that the classrooms were adequate. All the principals 6(100%) confirmed that there were inadequate classrooms/lecture halls for students.

The students confirmed that classes were arranged in rotation or shifts while some used the classes/halls. Others would wait under tree sheds and graduation squares or use dining halls when the rain was raining or study in "mabati" rooms which are hot during the day. Most students are not attentive due to bad weather. This interferes with concentration and retention of knowledge. Other students also shared classes /lecture halls with others from other departments. There are high chances of missing classes by the students. The students also move with chairs from class to class there is need to construct more classes to support the student population and make leaning environment conducive. The mabati rooms need to be demolished and replaced with decent ones. The floors of the lecture halls were also peeling off. The institutions can use tents tentatively as they wait for the construction to be completed.

#### 4.5.6.3 Seating arrangement and gender mainstreaming

The study sought to find out whether the students seating arrangement was separate or mixed. The responses were recorded in table 4.14.

**Table 4.14: Seating arrangement**

Seating arrangement	Teachers/lecturers		Students	
	F	%	F	%
Separate	11	46	3	1
Mixed	13	54	333	99
<b>Total</b>	<b>24</b>	<b>100</b>	<b>336</b>	<b>100</b>

Table 4.14 shows that majority of the students 333(99%) noted that the seating arrangement was mixed while 3(1%) noted that the seating arrangement was separate. It was realized that students socialize more, involve in discussion, exchange of ideas and limiting of laziness. This is positive for promoting gender mainstreaming although when students seating arrangement is mixed they face some challenges such as increase in relationship, noise from others sitting next, disturbance from other students under the influence of alcohol and higher chances of cheating in exams.

Majority of the teachers respondents 13(54%) noted that the seating arrangement was mixed while 11(46%) noted that the arrangement was separate. This could be due to the fact that in some courses the male students dominate while in others both male and female students.

#### 4.6 Sufficient water facilities and gender mainstreaming

The study was to establish whether there was sufficient water facilities or not. The report recorded in table 4.15.



**Table 4.15: Sufficient water facilities**

Water facilities	Principal		Teachers/lecturers		Students	
	F	%	F	%	F	%
Yes	3	50	10	42	112	33
No	3	50	14	58	224	67
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>336</b>	<b>100</b>

Table 4.15 shows that the majority of the students 224(67%) were in disagreement that there was sufficient water facilities in the institutional /colleges while 112(33%) agreed that the facilities was sufficient. 14(58%) of the teachers stated that there was insufficient water facilities while 10(42%) accepted that the facility was sufficient. Fifty percent of the principals said that there was sufficient facilities while the other remaining fifty percent 3(50%) disagreed.

Most of the respondents agreed that water is an essential want which should be available at all the times. It was noted that most institutions lack enough, clean water for domestic purposes due to persistent power blackouts, frequent water cuts due to unpaid water bills, few reservoir tanks, breakdown of these tanks, poor connection of water pipes, few water points, frequent breakdown of boreholes. The unavailability and unreliability of water could be caused due to low water table for institutions located in hilly areas. The unavailability and insufficiency of water leads to poor time management especially late classes due to late meals, poor sanitation as flushable toilets lack of water for cleaning. Water rationing is rampant as students flock, que and waste a lot of class time to look for water. The toilets smell as the classes and hostels are not washed. There

is high chances of sewage blockage and drainage systems. The students therefore may stay for a whole day or more than that without bathing and washing of clothes and sometimes they are forced to draw water from nearby rivers during dry season. This water is not treated and is not good for human consumption. In other institutions, there are no streams nearby. It therefore leads to frequent outbreak of waterborne diseases such as cholera, typhoid and dysentery which are rapid and emergent. Breakage of boreholes leads students to overcrowd while drawing water leading to contamination by use of drawers from different points. The female students are sometimes forced to draw water from men's hostels which is very unkind. More water should be supplied to bathrooms, kitchen and hostels. More boreholes should be drilled and more water tanks should be added. The rain water should be harvested to supplement and faulty water pumps should be harvested to supplement and faulty water pumps should be repaired. There should be more funding for the facilities and improvement in bill payment so that water is not cut frequently.

The institutions were not in agreement with the Republic of Kenya (2009), National Health policy which states that adequate safe drinking water points should be availed in each school. However, water facilities were only placed near classrooms and administration blocks and sometimes next to the toilets for washing of hands after visiting the toilets. There is need to supply enough water in consideration with the required health and sanitation regulations.

#### 4.7 Adequate Toilets for both Teachers and Students and gender mainstreaming

The study sought to establish whether there were adequate toilet facilities for both teachers/lecturers and students. The results were indicated in table 4.16.

**Table 4.16: Adequate toilets for both teachers/lecturers and students**

Toilet facilities	Principal		Teachers/lecturers		Students	
	F	%	F	%	F	%
Yes	2	33	6	25	132	39
No	4	67	18	75	204	61
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>336</b>	<b>100</b>

In Table 4.16, it was noted that the majority of the respondents 204(61%) responded with no that there were inadequate facilities for both teachers and students while 132(39%) confirmed with yes that there were adequate toilets for both teachers and students. 18(75%) of the teachers confirmed that there were no adequate toilet facilities for both teachers and students while 6(25%) conceded that they had enough toilet facilities. Four (67%) of the principals agreed that the toilet facilities for teachers and students were inadequate while 2(33%) of the principals agreed that the toilet facilities for both teachers and students were adequate.

The respondents who responded with no challenged the institution to ensure that they build or dig more pit latrines and construct more flushable toilets to accommodate the increasing population. This is negative towards gender mainstreaming as some of the respondents claimed that they were sharing the toilets. Most of the toilets were in pathetic condition as some were full, dirty with peeling floors. Others had broken shutters and were unlockable. There was little or no water for flashable toilets although in some

institutions water was placed near in jerricans for use. The respondents suggested that the hygienic standards of the toilets should be improved through cleaning and use of disinfectants so as to avoid contamination of diseases. They also suggested that the tissue papers should be availed if possible to avoid blockage as some used carbon papers. They also suggested that the mirrors be placed if possible; the sewerage system of the institutions should be improved.

The principals agreed that construction was still underway and there was a plan to construct more of such facilities.

#### 4.8 Adequate games facilities and gender mainstreaming

The study sought to establish the adequacy of games facilities and gender mainstreaming in TIVET institutions in Nyanza province. The result was recorded in table 4.17

**Table 4.17: Adequate games facilities**

Games facilities	Principal		Teachers/lecturers		Students	
	F	%	F	%	F	%
Yes	1	17	-	-	82	24
No	5	83	24	100	254	76
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>336</b>	<b>100</b>

Table 4.17 shows that the majority of the students 245(76%) ascertained that the games facilities were inadequate while 82(24%) ascertained that the games facilities were adequate. All the teachers 24(100%) confirmed that the games facilities were

inadequate. One (17%) of the principal respondents agreed that the games facilities were adequate while 5(83%) confirmed that they were inadequate.

It was realized that there were need for more athletics and sporting facilities such as kits for first aid and for rugby, balls, shoes, boots if not, they sew their own, hockey, basketball and handball materials. These facilities should be of high quality and there was need to improve on existing ones. There should be necessary extra funding towards sports as these activities have mostly been overlooked. These facilities should be mostly engendered for both as it was claimed that they were masculine engendered.

#### 4.9 Enough Playing fields/grounds and gender mainstreaming

The study intended to establish the availability of playing fields /grounds in TIVET institutions. The result was recorded in Table 4.18.

**Table 4.18: Adequate playing fields/grounds**

Playing fields	Principal		Teachers/lecturers		Students	
	F	%	F	%	F	%
Yes	3	50	6	25	112	33
No	3	50	18	75	224	67
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>336</b>	<b>100</b>

From Table 4.18, it was realized that the majority of the students respondents 224(67%) responded with no while 112(33%) responded with yes. Majority of the teachers 18(75%) responded with no while 6(25%) responded with yes. Fifty percent of

the principals 3(50%) responded with no while fifty percent 3(50%) of them responded with yes.

There was need to create more playing fields for all games for all students to participate to help realize and improve their talents and abilities. Where these facilities were unavailable, the students normally used nearby stadium fields and other fields from nearby schools for practice and play. This normally makes students to lose interest and hence poor realization of their talents. There was need to levelize playing fields in hilly areas where some of the institutions are situated. They should also be marked appropriately. Grass should be planted in football pitch for the participants. There was also need to introduce indoor games such as table tennis and cricket. There was also need to create other recreational activities such as swimming pools. Badminton should be introduced and in places where they exist, the court should be accessible. The sewerage system should be cleared out in some fields. The fallow land should be used for expansion of the fields and where the land is scarce, there is need to look for extra to create room for expansion.

#### **4.10 Accommodation facilities and gender mainstreaming**

The researcher wanted to establish whether the students had adequate hostels or dormitories. The findings were recorded in table 4.19.

**Table 4.19: Accommodation facilities**

Adequate hostels	Principal		Teachers/lecturers		Students	
	F	%	F	%	F	%
Yes	1	17	-	-	92	27
No	5	83	24	100	244	73
<b>Total</b>	<b>6</b>	<b>100</b>	<b>24</b>	<b>100</b>	<b>336</b>	<b>100</b>

Table 4.19 indicates that the majority of the students respondents 244(73%) confirmed that the hostels/dormitories were inadequate while 92(27%) of them confirmed with yes. All the teachers 24(100%) conceded that there were no adequate hostels /dormitories for students. Majority of the principals respondents 5(83%) responded that there were no adequate hostels/dormitories while 1(17%) accepted that there were adequate such facilities.

However, it was noted that most of the students got accommodation outside the institution because of the increasing population. This exposes them to insecurity. The existing hostels/dormitories in the institutions were overcrowded. Some of these were mabati structures which were cold at night and hot during the day with poor ventilation. Most of the hostels/dormitories were like halls which were not conducive for students. There were high chances of theft. There was therefore urgent need to construct permanent storey building hostels/dorms which are well partitioned and with closed cubes. The mabati structures should be demolished, enlarge the available structures and modify them to curb the situation and reduce commuting by students. It was realized that some institutions are in interior part where the locals cannot be encouraged to build houses for

accommodation. There is also need to improve the sewer systems so as to improve hygienic conditions. The hostels/dorms should be well labeled for easy allocations and identification. Tentatively the colleges should admit the students they can be able to sustain. However, it was also noted that the construction of most of the institutions was going on and hostels were also being built. It was suggested by some respondents that the institutions should build the hostels by use of the required manpower that is students taking building and construction under the supervision of their lecturers. The colleges should also provide cost shared transport for commuters. There was serious need for funding towards infrastructural development to accommodate high enrolment of students. There was also acute shortage of female hostels. This does not promote gender equality in terms of access of the resources hindering enrolment transition and retention of female students.

#### **4.11 Engendering of Learning and Teaching facilities and infrastructure**

The study sought to establish how learning and teaching facilities and infrastructure were engendered in TIVET institutions in Nyanza province. The report was summarized in table 4.20.



**Table 4.20: Engendering of the learning facilities**

Strategies in Gender mainstreaming	SA	%	A	%	N	%	D	%	SD	%
Engendering of the learning facilities	8	27	18	60	3	10	1	3	-	-
Games facilities and equipment are masculine engendered	2	7	9	30	8	27	7	23	4	13
Games facilities are for both	10	33	14	47	2	7	3	10	1	3

**Key**

SA – Strongly Agree    A- Agree    N – Neutral    D – Disagree

SD – Strongly disagree

Table 4.20 shows that majority of the respondents 18(60%) agreed that learning facilities were engendered, 8(27%) strongly agreed, 3(10%) were in doubt and 1(3%) disagreed. Whether Games facilities and equipment were masculine engendered, the respondents responses were 9(30%) agreed, 8(27%) were not sure, 2(7%) strongly agreed while 7(23%) disagreed and 4(13%) strongly disagreed.

On whether the games facilities were both the majority of the respondents 14(47%) agreed, 10(33%) strongly agreed, 3(10%) disagreed, 2(7%) were not sure while 1(3%) strongly disagreed.

From the observation it was noted that the majority of the research participants 26(87%) agreed that the learning facilities were engendered while the minority 1(3%) disagreed. The remaining 3(10%) were in doubt.

#### 4.11.1 Engendering of the textbooks

The study was intended to find out the extent at which the textbooks were engendered.

The report was summarized in table 4.21.

**Table 4.21: Engendering of textbooks**

Strategies in gender mainstreaming	SA	%	A	%	N	%	D	%	SD	%
The textbooks are masculine engendered	2	7	4	13	2	7	13	43	9	30
The textbooks are feminine engendered	-	-	-	-	3	10	13	43	14	47
The textbooks are engendered for both	10	33	14	47	-	-	1	3	5	17

SA – Strongly Agree A- Agree N – Neutral D – Disagree

SD – Strongly disagree

From Table 4.21, it shows that the majority of the respondents 13(43%) disagreed that the textbooks were masculine engendered, 9(30%) strongly disagreed while 4(13%) agreed, 2(7%) strongly agreed and 2(7%) were not sure. This shows that the textbooks were not masculine engendered.

As to whether the textbooks were feminine engendered, a majority of the research participants 14(47%) strongly disagreed, 13(43%) disagreed while 3(10%) were in doubt. However, 14(47%) acknowledged that the textbooks were engendered for both, 10(33%) strongly agreed while 5(17%) strongly disagreed and 1(3%) were not sure. This indicates that the textbooks were engendered for both males and female hence achievement in gender mainstreaming.

Efforts should be made to ensure that the facilities attracted both gender in education which is a way of ensuring effectiveness for gender in mainstreaming. It also

agrees with Brickhill (1991) that curriculum materials socialize learners to mainstream them to have equal opportunity in education.

#### 4.11.2 Engendering of hostels/dormitories

The study wanted to confirm whether the hostels/dormitories were feminine, masculine engendered or they were for both. The report findings were summarized in table 4.22.

**Table 4.22: Engendering of hostels/dormitories**

Strategies in gender mainstreaming	SA	%	A	%	N	%	D	%	SD	%
The hostels/dormitories are masculine engendered	2	7	3	10	2	7	10	33	13	43
The hostels are feminine engendered	-	-	5	17	-	-	10	33	15	50
The hostels are for both	13	43	10	33	2	7	3	10	2	7

SA – Strongly Agree A- Agree N – Neutral D – Disagree

SD – Strongly disagree

Table 4.22 shows that the majority of the respondents 13(43%) strongly disagreed that the hostels were masculine engendered, 10(33%) disagreed while 3(10%) agreed, 2(7%) strongly agreed and 2(7%) were not sure.

As per whether the hostels were feminine engendered 15(50%) of the research participants strongly disagreed. 10(33%) disagreed while 5(17%) agreed.

As per whether the hostels were for both 13(43%) strongly agreed, 10(33%) agreed, 2(7%) were not sure while 3(10%) disagreed and 2(7%) strongly disagreed. The hostels were engendered for both male and female which is a good sign of gender mainstreaming.

#### 4.11.3 Engendering of the toilets

The researcher wanted to establish whether the toilets were either feminine or masculine engendered or they were for both. The results were summarized in table 4.23.

**Table 4.23: Engendering of the toilets**

Strategies in gender mainstreaming	SA	%	A	%	N	%	D	%	SD	%
The hostels/dormitories are masculine engendered	1	3	6	20	5	17	8	27	10	33
The hostels are feminine engendered	-	-	-	-	5	17	13	43	12	40
The hostels are for both	10	33	8	27	1	3	8	27	3	10

SA – Strongly Agree A- Agree N – Neutral D – Disagree

SD – Strongly disagree

From Table 4.23 it was noticed that 10(33%) of the research respondents strongly disagreed that the toilets were masculine engendered, 8(27%) disagreed while 6(20%) agreed, 1(3%) agreed and 5(17%) were in doubt.

As per whether the toilets were feminine engendered 13(43%) disagreed, 12(40%) strongly disagreed while 5(17%) were not sure. However, 10(33%) strongly agreed that the toilets were for both 8(27%) agreed, while 8(27%) disagreed, 3(10%) strongly

disagreed and 1(3%) were not sure. It therefore shows that the toilets were engendered for both which is a good sign of improvement in gender mainstreaming.

#### 4.11.4 Engendering of the water facilities

The study sought to establish whether the water facilities were masculine or feminine engendered or engendered for both. The report findings were recorded in table 4.24.

**Table 4.24: Engendering of water facilities**

Strategies in gender mainstreaming	SA	%	A	%	N	%	D	%	SD	%
The hostels/dormitories are masculine engendered	-	-	-	-	-	-	17	57	13	43
The hostels are feminine engendered	-	-	-	-	2	7	16	53	12	40
The hostels are for both	12	40	18	60	-	-	-	-	-	-

SA – Strongly Agree    A- Agree    N – Neutral    D – Disagree  
SD – Strongly disagree

Table 4.24 shows that majority of the research participants 17(53%) disagreed that the water facilities were not masculine engendered while 13(43%) strongly disagreed. As to whether the water facilities were feminine engendered, the research respondents 16(53%) disagreed while 12(40%) strongly disagreed. However, 18(60%) of the participants agreed that the water facilities were engendered for both while 12(40%) strongly agreed with this. This is quite positive towards gender mainstreaming.

#### 4.12 Students Responsibilities and gender mainstreaming

Delegation of responsibilities to students was seen as a means of empowering the students to have position of power, leadership and influence which is the goal of gender

equality and access to resources. The questions kindly indicate how you distribute students responsibility in your institution sought to establish how the institution and management distributed the responsibilities to the student body. The findings were tabled in table 4.25.

**Table 4.25: Student Responsibility**

Responsibility	Female		Male		Both	
	f	%	f	%	f	%
Head student/official	1	17	2	33	3	50
Asst. deputy head student	2	33	1	17	3	50
Games captain	1	17	3	50	2	33
Asst. games captain	3	50	1	13	2	33
Class official rep	-	-	-	-	6	100
Asst. class official rep	3	50	1	17	2	33
Librarian	-	-	4	67	2	33
Student welfare official	-	-	4	67	2	33
Asst. student welfare official rep	2	33	1	17	3	50

SA – Strongly Agree A- Agree N – Neutral D – Disagree

SD – Strongly disagree

In Table 4.25, 3(50%) of the research participants responded that both females and males were elected as head student where 2(33%) were males and 1(17%) were females. In table 4.24, 3(50%) of the respondents indicated that both gender students were elected as assistant head official/representative where 2(33%) were females and 1(17%) were males.

For games captain 3(50%) of the respondents acknowledged that males were elected, 2(33%) were of both male and female and 1(17%) were females. It was realized that males were elected for the post of games captain as they were mostly interested in these activities as compared to females. There was need to encourage more females to participate and develop interest in these activities. However 3(50%) of the respondents responded that females were elected as assistant games captain as 2(33%) were for both and 1(13%) were for males.

All the respondents indicated that 6(100%) of the students elected their class officials /representatives from both gender but for assistant class official, it was noted that 3(50%) females were elected, 2(17%) were for both males and females and 1(13%) were for males.

For the librarian post, 4(67%) of the respondents indicated that male students were elected and 2(33%) of the respondents indicated that the post was for both male and female students elects.

As per the student welfare official/representative, 4(67%) of the respondents conceded that male students were elected and 2(33%) of both male and female students were elected. For the post of assistant students welfare official/representative 3(50%) of the respondents indicated that the post was for both male and female elects, 2(33%) indicated that it was for females and 1(17%) indicated that it was for male students.

#### 4.13 Infrastructure and gender mainstreaming

The question to what extent are sanitation and playing needs catered for in the institution was to help the researcher to establish the extent of these facilities in relation to gender mainstreaming. The results were recorded in table 4.26.

**Table 4.26: Extent of sanitation and playing needs in the institution**

Responsibility	Large extent		Moderate extent		Small extent		Not Applicable	
	F	%	f	%	f	%	F	%
Playing field	7	23	18	60	5	17	-	-
Toilet	5	17	13	43	12	40	-	-
Water facilities	4	13	17	57	9	30	-	-

Table 4.26 shows that majority of the research participants 18(60%) agreed that playing fields were catered for to a moderate extent, 7(23%) conceded that the playing fields were catered for to a large extent and 5(17%) confirmed that it was to a small extent. None responded on not applicable.

Thirteen (43%) of the respondents indicated that the toilets were catered for to a moderate extent, 12(40%) to a small extent and 5(17%) indicated that it was to a large extent.

As per the water facilities the response was that 17(57%) of the participants noted that the water facilities were catered for to a moderate extent, 9(30%) indicated that it was to a small extent and 4(13%) indicated that it was to a large extent.



#### 4.14.1 Curriculum Implementation and gender mainstreaming

The study sought to examine the extent at which curriculum instruction influence gender mainstreaming in TIVET institutions in Nyanza province Kenya. The findings were statistically tabled in table 4.27.

**Table 4.27: Curriculum instruction for teachers**

Curriculum instruction	Large extent		Moderate extent		Small extent		Not Applicable	
	f	%	F	%	F	%	f	%
Curriculum /learning and teaching	21	70	7	23	2	7	-	-
Guidance and counseling	5	17	16	53	9	30	-	-
Co-curricular (athletics, ball games)	9	30	16	53	5	17	-	-
Clubs/music/drama/debate	4	13	12	40	14	47	-	-

In the curriculum instruction it was noted by the respondents 21(70%) that curriculum programmes was available to a large extent, 7(23%) agreed that curriculum instruction was available to a moderate extent and 2(7%) agreed that the instruction was available to a small extent. It was noted that curriculum instruction was the main strategy in influencing gender mainstreaming for without it, it would have been difficult in education. Curriculum programme should there be emphasized because it is the main programme that equip the students with knowledge and skills that benefit an individual and the society (Republic of Kenya, 1999).

Guidance and counseling was available to a moderate extent as indicated by 16(53%) of the research respondents. Nine (30%) indicated that guidance and counseling was available to a small extent and 5(17%) of the available to a small extent and 5(17%) of the respondents noted that guidance and counseling was available to a large extent.

Majority of the respondents 16(53%) noted that co-curricular programme was available to a moderate extent, 9(30%) also noted that it was available to a large extent and 5(17%) noted that the extent was small.

The data collected and analyzed on institution program on clubs, music, drama and debate showed that 14(47%) of the respondents ascertained that it was available to a small extent, 12(40%) indicated that it was available to a moderate extent while 4(13%) agreed that the extent was large.

#### 4.14.2 Involvement of Students in Curriculum

The question sought to examine the extent at which students were involved in institutional activities. The findings were recorded in table 4.28.

**Table 4.28: Curriculum instruction for students**

Curriculum instruction	Large extent		Moderate extent		Small extent		Not Applicable	
	f	%	F	%	f	%	f	%
Curriculum /learning and teaching	23	85	49	15	-	-	-	-
Manual work	83	24	151	45	43	12	59	18
Debate/drama/music club	58	17	143	43	64	19	71	21
Guidance and counseling	77	23	146	43	63	19	50	15

In curriculum instruction for students it was noted that majority of the students 281(85%) were involved in curriculum instruction to a large extent while 49(15%) were involved to moderate extent.

As per games activities, majority of the respondents 151(45%) were involved to a moderate extent, 83(24%) were involved to a large extent, 59(18%) were not involved and 42(12%) were involved to a small extent. The physical fitness of the body makes learners to be active and attentive during learning sessions. Flexible institution programmes allow males and females to attend schools beside learning and household chores (UNICEF, 2007).

As per manual household work, all the respondents 336(100%) agreed that they were not involved in manual work and so they had ample time for their studies. In the data collection and analysis of debates, drama, music, clubs it was realized that the majority of the respondents 143% (43%) were involved to a moderate extent, 71(21%) were not involved, 64(19%) were involved to a small extent and 58(17%) were involved to a large extent. It shows that drama, debate, music and clubs were used as a means of imparting communication skills but not had not been implemented fully. The republic of Kenya (2009) argues that children are entitled to freedom to express opinion and have a say in matters affecting their social, economic, religious, cultural and political life. They are therefore entitled to participation rights to express opinions and be heard, the rights to information to association. This can only be achieved by improving their communication skills.

The respondents conceded that guidance and counseling was available to some extent as 146(43%) were involved to a moderate extent, 77(23%) were involved to a

large extent, 63 (19%) were involved to a small extent and 50(15%) were not involved. It was noted that there were shortage of guidance and counseling lectures which made it not availed to a large extent. To avail guidance and counseling to the students, more lecturers should be trained on how to handle students (Wangai, 2001). Peer counseling programmes and provision of guidance and counseling services was encouraged by the republic of Kenya (2009) which inculcate counseling knowledge and skills as a protection rights to the child.

#### 4.15 Preference of male or female teachers by students

The study was intended to find out the respondents favourite teacher. This was represented in table 4.29.

**Table 4.29: Favourite teacher**

Favourite teacher	Frequency	Percentage
	F	%
Male	189	56
Female	108	32
Both	39	12

Table 4.29 indicates that gender of teachers raise a great challenge to the students to some extent since the majority of the respondents 189(56%) acknowledged male teachers as their favourite teacher, 108(32%) also acknowledged that female as their favourite teacher while 39(12%) acknowledged both sexes as their favourite teacher. Although the majority of the students acknowledged male gender as their favourite teacher, the respondents had their reasons to support whether it was either male, female

or both. They noted that the teachers were approachable, responsible and gave advice, principled, co-operative and knowledgeable, understanding, confidential and concerned, counselor and role models who did not discriminate either gender and had good public reputation. This shows a good sign of gender mainstreaming.

#### 4.16 Favoring of students by male or female teachers

The study sought to establish the teachers who favoured the students. The result was represented in table 4.30.

**Table 4.30: Favours of students by teachers**

<b>Students favoured by teachers</b>	<b>Frequency</b>	<b>Percentage</b>
	<b>F</b>	<b>%</b>
Male students	75	22
Female students	208	62
Both students	53	16

Table 4.30 shows that majority of the participants 208(62%) noted that female students were favoured by teachers, 75(22%) confirmed that male students were favoured and 53(16%) conceded that both male and female students were favoured by teachers. It was noted that girl child was still more embraced. Female students were also considered delicate and weaker sex as they were vulnerable because they face many challenges in life. It was believed that most male teachers favoured female students for sexual interest. Most of them were involved in love affair to male teachers. Some male teachers therefore make the lives of females miserable by either impregnating them or failing them in exams if they turned them down. This is quite negative towards gender mainstreaming. The boy

child education should also be embraced as they also face many challenges so as to promote gender equality. Sex and gender based violence is a factor that influence disparity. It should be discouraged as it violates human rights protected by international instruments and convention in Kenya. The attitudes and perceptions should be changed in technical and vocational education (Mehra and Gupta, 2006).

#### 4.17 Gender and Student advice

The question “from which teachers do you receive advice? was intended to examine from which teachers the students received advice. This was captured in table 4.31.

**Table 4.31: Favourite teachers advice**

Teachers who provide advice	Frequency	Percentage
Guidance and counseling	92	27
Games teachers	-	-
Principals	11	3
All teachers	214	64
Others specify	13	4
None	6	2

Table 4.31 shows that majority of the respondents 214(64%) acknowledged that all the teachers gave advice to students, 92(27%) sought advice from guidance and counseling teachers, 13(4%) sought advice from other teachers such as the head of departments. 11(3%) sought advice from principles and 6(2%) sought advice from none of the teachers. From observation, the challenge was great in seeking guidance and counseling from guidance and counseling teachers although the students were advised by

all teachers. It was noted that there was serious shortage of guidance and counseling teachers. There was therefore need for teachers to be deployed. The ministry of education had recommended peer programme and training and equipping teachers with guidance and counseling knowledge and skills to integrate learners in the education system appropriately (Republic of Kenya, 2007 and 2009).

#### 4.18 Challenges faced by students in gender mainstreaming

The study intended to examine whether there were other challenges encountered by both students in gender mainstreaming. The report findings was represented in table 4.32.

**Table 4.32: Other challenges faced by students**

Challenge	Yes		No	
	F	%	F	%
Is the college interesting	195	58	141	42
Is the course difficult	114	34	222	66
Are you happy with the location of the toilets	159	47	177	53

Table 4.32 shows the challenges faced by students in gender mainstreaming. Majority of the respondents 195(58%) noted that they were interested in college while 141(42%) indicated that they were not interested in college. Those who were not interested claimed that there were limited facilities for learning, few lecturers and low lesson attendance by the lecturers. Some of the institutions were situated in remote areas where life was difficult, tough rules of the institutions and rendering of services when demanded, no

entertainment, congestion in classes and hostels and difficulty in changing course subjects. All these need to be improved so as to enhance gender mainstreaming.

As per whether the course was difficult, the majority 222(66%) of the respondents responded with no while 114(34%) responded with yes. The students believed that difficulty of the course depended on one's ability determination and dedication to work. The few who agreed that the course was difficult claimed that there were shortage of learning and revision materials, textbooks for study, few lecturers who sometimes attend lessons irregularly. Some claimed that more subjects are undertaken a part from the core ones, lack of college fees, lack of practical facilities and few accommodation facilities.

The question whether the respondents were happy with the location of the toilets, the majority of the students 177(53%) responded with no while 159(47%) responded with yes. Those who responded with no challenged the institutions to ensure enough toilets facilities to promote gender mainstreaming. Some toilets were located too near classrooms, hostels and kitchen which is not hygienic. It was observed that some toilets were located far from hostels and this led to time wastage, difficulty in reach in times when one is sick, insecurity at night. The toilets were also dirty with no water and poor disinfection. The sewerage system needed to be improved as it interferes with water points and boreholes. This may lead to water contamination which is a health hazard to human beings. Some of the toilets were not well located to the direction of wind flow. Some were also too full and not well regularly drained. The toilet doors for some institutions were located where one was seen entering the toilets. The shutters were not lockable and were broken. The female gender were shy to use these facilities frequently.



There was therefore need to relocate the location of the toilets, dig more, repair and maintain them and ensuring that the standard of cleanliness was adequate.

#### 4.19.1 Teachers attitude towards gender mainstreaming

The study sought to assess how the attitude of teachers influences gender mainstreaming in TIVET institutions in Nyanza province in Kenya. The findings were tabled in table 4.33

**Table 4.33: Teachers Attitude**

Teachers attitude	SA	%	A	%	N	%	D	%	SD	%
Gender mainstreaming is important	18	60	11	37	-	-	-	-	-	-
Gender mainstreaming is not important	-	-	-	-	1	3	8	30	15	67
Gender mainstreaming is a waste of time	-	-	-	-	1	3	3	10	26	87
Gender mainstreaming is not waste of time	17	77	6	20	1	3	-	-	-	-
Gender mainstreaming gives equal opportunity to females and males	22	73	6	20	2	7	-	-	-	-
Gender mainstreaming does not give equal opportunity to females and males	3	10	3	10	1	3	3	10	20	67
Gender responsive deployment/balance of teachers is important	18	60	10	33	2	7	-	-	-	-
Gender responsive deployment/balance of teachers is not important	-	-	-	-	1	3	8	27	21	70
Engendering of the institution infrastructure should be improved	17	57	9	30	3	10	1	3	-	-
Engendering of the institution infrastructure should not be improved	-	-	-	-	3	10	5	17	22	73

SA – Strongly Agree    A – Agree    N - Neutral    D – Disagree  
SD – Strongly Disagree

From Table 4.33 it can be noted that majority of the respondents 18(60%) strongly agreed that gender mainstreaming was important, 11(37%) agreed that gender mainstreaming was important while 1(3%) were not sure. However, 15(67%) of the research participants strongly disagreed that gender mainstreaming was not important 8(30%) disagreed while 1(3%) of the respondents were not sure.

As per whether gender mainstreaming was a waste of time, majority of the respondents 26(87%) strongly disagreed, 3(10%) disagreed while 1(3%) were in doubt. However, 17(77%) of the respondents strongly agreed that gender mainstreaming was not a waste of time, 6(20%) agreed while 1(3%) were not sure.

In table 4.32, majority of the respondents 22(73%) strongly agreed that gender mainstreaming gives equal opportunities to females and males while 6(20%) agreed but 2(7%) were in doubt as to whether gender mainstreaming did not give equal opportunities to females and males, majority of the respondents 20(67%) strongly disagreed, 3(10%) disagreed while 3(10%) agreed, 3(10%) strongly agreed and 1(3%) were not sure.

Table 4.32 also shows that 18(60%) of the research participants strongly agreed that gender responsive deployment balance of teachers was important, 10(33%) agreed while 2(7%) were in doubt. However, 21(70%) of the respondents strongly disagreed that gender responsive deployment/balance of teachers was not important 8(27%) disagreed while 1(3%) were not sure.

Majority of the respondents 17(57%) strongly agreed that engendering of the institution infrastructure should be improved, 9(30%) agreed, 3(10%) were not sure while 1(3%) of respondents disagreed. As per whether engendering of the institution

infrastructure should not be improved, 22(73%) strongly disagreed, 5(17%) disagreed while 3(10%) of the respondents were in doubt.

#### 4.19.2 Teachers Attitude towards gender mainstreaming

The study was intended to assess the attitude of teachers on gender mainstreaming.

The findings were summarized in table 4.33.

**Table 4.33: Teachers attitude**

Teachers attitude	SA	%	A	%	N	%	D	%	SD	%
Engendering of learning facilities is a waste of time	-	-	-	-	1	3	5	17	24	80
Engendering of learning facilities is not a waste of time	20	67	9	30	1	3	-	-	-	-
Engendering of curriculum materials and teaching methods is a waste of time	-	-	-	-	1	3	6	20	23	77
Engendering of curriculum materials and teaching methods is not a waste of time	25	83	3	10	2	7	-	-	-	-
Gender sensitization and advocacy should be encouraged	21	70	9	30	-	-	-	-	-	-
Gender sensitization and advocacy should not be encouraged	-	-	-	-	-	-	5	17	25	83
Capacity building for managers, teachers, parents so important	25	83	5	17	-	-	-	-	-	-
Capacity building for managers, teachers, parents not so important	-	-	-	-	-	-	3	10	27	90
Gender issues should be addressed in all institution programmes	26	87	3	10	1	3	-	-	-	-
Gender issues should not be addressed in all institution programmes	-	-	-	-	-	-	3	10	27	90
SA – Strongly Agree	A – Agree	N – Neutral	D – Disagree	SD	-	Strongly Disagree				

Table 4.33 shows that majority of the research respondents 24(80%) strongly disagreed that engendering of learning facilities was a waste of time, 5(17%) of the respondents disagreed while 1(3%) were not sure. However, 20(67%) of the respondents strongly agreed that engendering of learning facilities was not a waste of time, 9(30%) agreed while 1(3%) were not sure.

Majority of the respondents 23(77%) in table 4.33 strongly disagreed that engendering of curriculum materials and teaching methods was a waste of time, 6(20%) disagreed and 1(3%) were in doubt. On whether engendering of the curriculum materials and teaching methods is not a waste of time, 25(83%) of the research participants strongly agreed, 3(10%) agreed and 2(7%) were in doubt.

As per whether gender sensitization and advocacy should be encouraged, 21(70%) of the respondents strongly agreed while 9(30%) were in agreement. However, 25(83%) strongly disagreed that gender sensitization and advocacy should not be encouraged while 5(17%) were also in disagreement.

Majority of the research respondents 25(83%) strongly agreed that capacity building for managers, teachers and parents was so important while 5(17%) agreed. As to whether capacity building for managers, teachers and parents was not so important, 27(90%) strongly disagreed and 3(10%) were in disagreement.

In table 4.33, the respondents 26(87%) strongly agreed that gender issues should be addressed in all institution programmes, 3(10%) were in agreement while 1(3%) were in doubt. As per whether gender issues should not be addressed in all institution programmes, 27(90%) of the respondents strongly disagreed and 3(10%) were in disagreement.

The teachers attitude was noted as a catalyst in gender mainstreaming. It was seen as the instrument of achieving equal opportunity to both males and females in education. In short it is a way of celebration and occasion evaluation to both gender agenda to access leadership and power in society.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents the summary of findings, conclusions and recommendations, contribution to the body of knowledge as per research questions and suggestions for further research.

#### 5.2 Summary of Findings

Presented below is a summary of the major findings of the study based on each of the four research questions guiding the study.

It was noted in the study that staffing of adequate teachers was a major influence of gender mainstreaming in providing equal participation of males and females in TIVET institutions as institutions of higher learning. It was established that the ratio of teachers did not correspond to the ratio of students. All the principals 6(100%) and teachers confirmed this. However, majority of the students 287(85%) agreed that the ratio of teachers and students did not correspond while 49(15%) did not concede with the issue.

It was established that responsive deployment of teachers was a teething problem in public TIVET institutions in Nyanza Province in Kenya. It was established that majority of the principals and teachers as represented by 6(100%) and 13(54%) respectively had higher diploma, degree and post graduate level of education while 11(46%) of the teachers/lecturers had diploma level of education. This would enable them link policy and practice for better promotion and achievement of females and males.

It was noted that the male teaching staff population was not proportional to the female teaching staff. This was confirmed because the male teaching staff population was 334(74%) and the female teaching staff was 155(26%). The ratio was 1:3 and this shows that balancing of teacher's deployment was not responsive. Gender responsive deployment of teachers was therefore noted to be important by 28(93%) of the respondents while 2(7%) were not sure.

It was also noted in the research that there was gender imbalance in enrolment of both male and female students. Both male and female students were enrolled in business related courses while there was imbalance of gender enrolment of students in science, mathematics, engineering and technological related courses.

Majority of the research participants 21(70%) strongly agreed that gender sensitization and advocacy should be encouraged while 9(30%) also agreed that it should be encouraged. However, 25(83%) of the respondents strongly disagreed that gender sensitization and advocacy should not be encouraged while 5(17%) disagreed.

Eighty three percent 25(83%) of the research participants strongly agreed that capacity building for managers, teachers and parents was so important while 27(90%) of the respondents also disagreed that capacity building for managers, teachers and parents was not so important while 3(10%) were also in disagreement.

It was also established that there was serious shortage of learning and teaching facilities as represented by 30(100%) of the teachers and 225 (67%)students who confirmed with yes while only 111(33%) of the students confirmed with no.

However, majority of the respondents 18(60%) agreed that the learning facilities were engendered, 9(27%) strongly agreed while 1(3%) disagreed but 3(10%) were not

sure. Majority of the respondents 24(80%) strongly disagreed that engendering of the learning facilities was a waste of time, 5(17%) disagreed on the same while 1(3%) were not sure. However, on whether engendering of learning facilities was not a waste of time, 20(67%) of the respondents strongly agreed, 9(30%) agreed on the same and 1(3%) were not sure.

From statistics it was confirmed that there were inadequate toilets for both teachers and students. Most of the teachers respondents 22(73%) and 204(61%) of the students confirmed with no that there were no adequate toilets while 8(27%) of the teachers and 132 (39%) of the students agreed that the toilets were adequate. However, 13(43%) of the respondents acknowledged that the toilets were catered for to a moderate extent, 12(40%) indicated that the toilets were catered for to a small extent while only 5(17%) confirmed that the toilets were catered for to a large extent. It was also noted that the toilets were engendered for both males and females by 18(60%) of the respondents while 11(37%) disagreed on the same and 1(3%) of the respondents were not sure.

The study established that there were inadequate classrooms /lecture halls for students in TIVET institutions in Nyanza Province. This was confirmed by 28(92%) of the teachers and 259(77%) of the students who agreed that the facilities were enough. However, it was noted by 10(33%) of the respondents who strongly agreed that the toilets were engendered for both males and females, 8(27%) agreed while 8(27%) disagreed, 3(10%) strongly disagreed but 1(3%) of the respondents were not sure.

From statistics, it was noted that water facilities were not sufficient. This was confirmed by majority of the teachers 17(57%) and 224(67%) of the students respondents while 13(43%) of the teachers and 112(33%) of the students disagreed that the water



facilities were not sufficient. The study also confirmed that water facilities were catered for in the colleges by 17(57%) of the respondents who indicated that it was to a moderate extent. 9(30%) agreed that it was to a small extent while 4(13%) indicated that the extent was large. However, 18(60%) of the research participants agreed that the water facilities were engendered for both male and female while 12(40%) agreed strongly on the same.

Games facilities were noted to be inadequate by 29(97%) of the teachers and 254(76%) of the students while 1(3%) of the teachers and 82(24%) noted that the facilities were adequate. As per playing grounds/fields, 21(70%) of the teachers and 224(77%) of the students acknowledged that the playing grounds were not adequate while 9(30%) of the teachers and 112(33%) of the students conceded that the playing grounds/fields were adequate. Majority of the respondents 18(60%) agreed that the playing field were catered for to a large extent, 7(23%) conceded that the playing fields were catered for to a large extent while 5(17%) of the respondents acknowledged that the extent was small. However, 24(80%) of the respondents agreed that the games facilities were engendered for both sexes while 4(13%) disagree on the same but 2(7%) were in doubt.

It was represented by 29(97%) of the teachers and 244(73%) of the students that there were inadequate hostels/dormitories while 1(3%) of the teachers and 92(27%) of the students noted that the hostels/dormitories were adequate. However, 23(76%) of the respondents agreed that hostels were engendered for both male and female while 5(17%) disagreed on the same and 2(7%) of the respondents were not sure.

Majority of the respondents 17(57%) strongly agreed that the engendering of the institution infrastructure should be improved, 9(30%) agreed on the same while 3(10%)

were not sure but 1(3%) disagreed. On whether the engendering of the institution infrastructure should not be improved, the respondents 22(73%) strongly disagreed, 5(17%) disagreed and 3(10%) of the respondents were not sure .

The study established that curriculum ensured that all education supported interventions created opportunities for gender empowerment and facilitate gender equality. A large number of respondents of teachers 21(70%) and 281(85%) of the students were in agreement that curriculum programme was available to a large extent, 7(23%) of the teaches and 49(15%) of the students noted that it was available to a moderate extent while 2(7%) of the teachers noted that curriculum was available to a small extent. However, majority of the respondents 23(77%) strongly disagreed that engendering of curriculum materials and teaching methods is a waste of time, 6(20%) disagreed on the same while 1(3%) were not sure. As per whether engendering of curriculum materials and teaching methods was not a waste of time, 25(83%) of the respondents strongly agreed, 3(10%) agreed while 2(7%) were not sure.

Guidance and counseling was available to a moderate extent as represented by 16(33%) of the teachers and 146(43%) of the students respondents although 9(30%) of the respondents of teachers and 64(19%) of the students noted that the extent was small. However, 5(17%) of the teachers and 77(23%) of the students indicated that guidance and counseling was available to a large extent while 50(15%) of the students also noted that it was not applicable.

In gender mainstreaming, co-curricular activities (athletics, ball games) it was noted that 16(53%) of the teachers and 151(45%) of the student agreed that the extent was large and 5(17%) of the teachers and 43(12%) of the students noted that it was o a

small extent. However, 59(18%) of the students respondents indicated that it was not applicable. All the students respondents 336(100%) noted that they were not involved in manual work.

In gender mainstreaming, developing information, educational, music and clubs were used to inculcate the importance of play and leisure for confirmed holistic growth and development of the person. The teachers 14(47%) and 64(19%) of the students responded that the extent of debate, drama, music and clubs was small, 12(40%) of the teachers and 146(43%) of the students noted on the same that the extent was moderate, 4(13%) of teachers and 77(23%) of the students confirmed that it was to a large extent while 50(15%) of the students conceded that they were not involved in those activities.

One eighty nine (56%) of the students acknowledged that male teachers were their favourite teachers while 108(32%) also confirmed that female teachers were their favourite teachers but 39(12%) of the same noted that both male and female teachers were their favourite teachers.

As per favouring of students by teachers 208(62%) of the respondents agreed that female students were favoured, 75(22%) also noted that the male students were favoured while 53(16%) indicated that both the male and female students were favoured.

Most of the students 214(64%) agreed that they sought advice from all teachers, 92(27%) confirmed that they sought advice from guidance and counseling teachers, 13(4%) sought advice from others while 11(3%) sought advice from principals and 6(2%) sought advice from none of the teachers.

From statistics, it was noted that 195(58%) of the respondents agreed that the college was interesting but 141(42%) noted that the college was not interesting.

As per whether the course was difficult, majority of the respondents 222(66%) conceded that it was not difficult while 14(34%) indicated that it was difficult.

On whether the students were happy with the location of the toilets, 177(53%) of the respondents noted that they were not happy while 159(47%) noted that they were happy. The study assessed the teachers attitude towards gender mainstreaming and it was noted that majority of the respondents 18(60%) strongly agreed that gender mainstreaming was important while 11(37%) agreed on the same. However, 15(67%) of the respondents strongly disagreed that gender mainstreaming was not important, 8(30%) were in disagreement and 1(3%) were not sure.

Twenty six (87%) of the respondents strongly disagreed that gender mainstreaming was a waste of time, 3(10%) disagreed on the same while 1(3%) agreed that gender mainstreaming was not a waste of time as 6(20%) also were in agreement and 1(3%) of the respondents were not sure.

As per whether gender mainstreaming gave equal opportunities to females and males, the respondents 22(73%) strongly agreed, 6(20%) agreed while 2(7%) were not sure. 20(67%) of the respondents also disagreed strongly that gender mainstreaming did not give equal opportunities to females and males, 3(10%) were in disagreement, 1(3%) were not sure while 3(10%) strongly agreed and 3(10%) agreed on the same.

### **5.3 Conclusion**

Gender mainstreaming is an integration concern incorporated in all policies at all levels at all stages by the actors normally involved in policy making to bring about education improvement, development and evaluation of policy process. It is generally an

integration concerns that bring about gender and equality to develop effectiveness in education, social and economic growth and to reduce poverty and enhance the well being of males and females.

The findings from the study on staffing related factors that influence gender mainstreaming established that teachers/lecturers handle large number of students and sometimes others handle few number of students. This depends on the courses undertaken. The ratio of female to male teachers is not proportional and the same applies to the ratio of female teacher to female student, male teacher to male students hence the students lack role models to the girl and boy child. The teachers knowledge should be improved to handle emerging gender issues and other contemporary issues in education.

Learning facilities, games facilities and equipment and other infrastructural facilities were not adequate. They were engendered to a greater extent and a few had not been engendered to a greater extent and a few had not been engendered to the expected level. Facilities and equipment and infrastructure were a key component on gender mainstreaming that ensured effectiveness in improving and developing equal opportunities among the students. It was however established that toilet and water facilities were found to be unavailable to some extent. The provision of these facilities had not satisfied the user's needs adequately.

Curriculum instruction aimed at ensuring that all education supported interventions created opportunities for gender empowerment to facilitate gender equality. The study indicated that curriculum programme was available to some extent with only a few were unavailable in large extent. With debate, drama, music, clubs it was available

to some extent and sometimes to a small extent. Co-curricular programme was available to a moderate and small extent while few was unavailable to a large extent.

The study also established that there was a great change towards the allocation of responsibilities and its distribution to the student's body. The responsibility allocation was competitive and not gender biased as the student were allowed and free to elect their leaders of their own choice.

#### **5.4 Recommendations**

Based on the findings of the study the following recommendations were made.

The Ministry of Higher Education Science and Technology (MOHEST) should handle the teachers shortage by employing more the responsive deployment of teachers should be balanced to both male and female. The government and its partners, College Board of governors, NGOs, CBOs, church organizations and well wishers should also come to assist the public TIVET institutions.

Ministry of Higher Education Science and Technology should improve capacity building for managers, teachers and parents of TIVET institutions to fill the gap of capacity building in these institutions. Gender sensitization and advocacy should be encouraged and enhanced and if possible gender issues should be incorporated into the curriculum to create more awareness.

The government board of governors of TIVET institutions should increase its budget and allocate more funds on learning facilities and equipment, infrastructure development, water facilities and toilets and supply sanitary towels to the students so that they access some essential basic needs.

The institution should ensure that various disciplines are taken care of by creating and marking the field per the activities because most of the colleges had no playing fields while others had but were not marked appropriately. The games teachers should also act appropriately.

The colleges should encourage students to participate in debate, music, drama and other creative avenues to enable them develop their talents in communication and life skills. The students forums should be organized to enable them participate and share values.

The colleges should organize peer counseling and training to both students and teachers in the TIVET institutions so as to enable peer counselors to have skills of counseling fellow peers. They would also equip themselves to deal with contemporary challenges.

## **5.5 Contributions to the Body of Knowledge as per research questions**

The table 5.1 outlines the knowledge gaps that were identified before the commencement of the study which have been fulfilled by the study.

**Table 5.1: Contribution to Knowledge**

<b>Objective</b>	<b>Contribution</b>
To examine the extent at which staffing related factors influence gender mainstreaming in TIVET institutions in Nyanza Province Kenya	The government through TSC has been carrying out teacher deployment exercise to enhance efficiency in teacher utilization although the balancing has not been adequate as they face a lot of challenges
To establish the level at which facilities and equipment influence gender mainstreaming in TIVET institutions in Nyanza province – Kenya	Allocation of resource through the government and its partners enables institutions to get access to infrastructural facilities and equipment
To examine the extent at which curriculum instruction influence gender mainstreaming in TIVET institutions in Nyanza province Kenya	Curriculum instruction programmes are key strategies used for creating gender equality in education
To assess how the attitudes of teachers influence gender mainstreaming in TIVET institutions in Nyanza province – Kenya	Attitude of teachers was identified to provide space and opportunities for learning, growth and contributing to educational goals



## 5.6 Suggestions for Further Research

The research proposes that further research be carried out in the following areas.

- The study should be carried out to establish staffing related factors that influence gender mainstreaming in different departmental courses of TIVET institutions in Nyanza province.
- A study should be carried out to find out high drop out rates among females students who enroll and are sponsored to undertake science and technology related courses in TIVET institutions in the republic.
- Another study should be carried out to examine the extent at which gender issues have been addressed in all the TIEVT institution programmes in Kenya.
- A study should be carried out to assess the other factors that influence gender mainstreaming in TIVET institutions in Kenya such as the cost, insecurity, religion and ethnicity.

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## APPENDIX A

**Table 1.1 Student Enrolments by Sex in Technical Institution, 2006-2010**

Institution	2006		2007		2008		
	Male	Female	Male	Female	Male	Female	
<b>National polytechnics</b>							
	6,405	3,329	6,521	3,401	6,602	3,542	2,64
Kenya polytechnic University college	3,265	2,710	3,285	3,012	3,456	3,543	3,51
Mombasa polytechnic University college	1,410	710	1,489	824	1,768	1,022	2,27
Kisumu polytechnic	1,834	832	1,894	858	1,996	987	1,94
Eldoret polytechnic							
<b>Sub total</b>	<b>12,914</b>	<b>7,581</b>	<b>13,189</b>	<b>8,095</b>	<b>13,822</b>	<b>9,098</b>	<b>4,22</b>
<b>Other TIVET Institutions</b>							
Technical Training Institute	9,925	8,731	10,818	9,517	12,132	9,876	12,5
Institutes of Technology	4,961	4,104	5,407	4,473	5,807	4,768	5,92
	14,886	12,835	16,226	13,990	17,939	14,644	18,4
<b>Sub total</b>	<b>8,741</b>	<b>14,210</b>	<b>9,528</b>	<b>15,489</b>	<b>12,154</b>	<b>17,543</b>	<b>13,2</b>
Youth polytechnics	36,541	34,626	38,942	37,574	43,915	41,285	35,8
<b>TOTAL</b>							
		71,167		76,516	85,200		89,0
<b>GRAND TOTAL</b>							

Source: Ministry of Higher Education, Science & Technology and Ministry of State for

**APPENDIX B****STUDENT ENROLMENT AND STAFFING OF TIVET INSTITUTIONS IN  
NYANZA PROVINCE (2011)**

	<b>MALE</b>	<b>FEMALE</b>	<b>TOTAL</b>	<b>STAFF</b>
<b>KISUMU POLY</b>	2001	948	2949	168
<b>RAMOGI I.T</b>	399	336	735	106
<b>MAWEGO TTI</b>	412	392	804	49
<b>SIAYA I.T</b>	454	665	1119	59
<b>GUSII I.T</b>	1125	1036	2161	106
<b>MOI I.T</b>	834	642	1476	82
<b>KEROKA TTI</b>	181	152	333	31
<b>TOTAL</b>	5406	4171	9577	601

Source: Provincial Technical Training Institute – Kisumu



## APPENDIX C

**Table for determining sample size from a given population**

Population size	Sample size
10	10
20	19
30	28
40	35
50	44
60	52
70	59
80	66
90	73
100	80
150	108
200	132
250	162
300	169
400	196
1500	306
2000	322
3000	341
4000	351
5000	357
6000	361
7000	364
<b>10000</b>	<b>370</b>
20000	377
50000	381
100000	384

**Source: R.V Krejcie and Morgan 1990, determining sample size for research activities educational and psychological measurement**

**APPENDIX D**

**LETTER OF TRANSMITTAL**

**Date** .....

**Respondents Name** .....

**Respondent Address** .....

Dear Respondent,

In partial fulfillment of the requirement for the award of the Degree of Master of Arts in Project Planning and Management, the University of Nairobi instructed me to collect data as part of the research project and complete a report for onward submission to the board of panels for examination.

The research is on determinants of Gender mainstreaming in Technical Industrial, Vocational and Educational Training (TIVET) institutions in Nyanza province Kenya an effort to improve gender equality and equity in education.

Your prompt response will hasten the data analysis and compilation of the report. The information provided to me will be treated with utmost confidentiality and will only be used for the purpose of this study. For further information and clarification, please feel free and contact me through the cell-phone number 0710 – 952656.

Thank you very much for your cooperation.

Akeyo Pheobe Onyango

**M.A Student Researcher**

**University of Nairobi**

## APPENDIX E

### QUESTIONNAIRE FOR PRINCIPALS

Dear Sir/Madam.

This questionnaire is designed to help the researcher get the information on determinants of gender mainstreaming in public Technical, Industrial Vocational and Educational Training institutions in Nyanza Province- Kenya. The information will be used for research purposes only. Please read the questionnaire carefully before answering the questions.

(Please tick (√) inside the box where necessary or fill in the blank spaces provided.

#### Part A:

1. Please enter the following information

Gender: Male ( ) Female ( )

2. Population of students in the institution

Male ( ) female ( ) total ( )

3. Population of teaching staff in the institution

Male ( ) female ( ) total ( )

4. Age: 24 years and below ( ) 25-30 years ( ) 31 -40 years ( )

41 -50 years ( ) 50 years and above ( )

5. Type of institution Day ( ) Boarding ( ) Day and Boarding ( )

6. Level of Education

Secondary ( ) Diploma ( ) Degree ( ) Post graduate ( )

7. Teaching experience

Less than 1 year ( ) 1-5 years ( ) 6-10 years ( ) 11-15 years ( )

16 years and above ( )

8. Types of courses offered: Part time ( ) Evening classes ( ) Full time ( )

School based ( )

#### Part B:

Please kindly indicate the extent of gender mainstreaming in your institution.

i) Does the teaching staff of males proportional to that of females?

Yes ( ) No ( )

If no, what do you suggest? -----  
-----  
-----

ii) Does the ratio of teachers correspond to the ratio of students?

Yes ( ) No ( )

If no, what are the challenges? -----  
-----

iii) Does your staff share the same staffroom?

Yes ( ) No ( )

If yes, what is their attitude?  
-----  
-----

iv) Does your staff share the same toilet facilities?

Yes ( ) No ( )

If yes, what is the impact on either gender?-----  
-----

v) Does your institution share the same office for the principal and staff?

Yes ( ) No ( )

If yes, what are their feelings? -----  
-----

vi) Does the staff share the same staff houses?

Yes ( ) No ( )

If yes, what are their reactions?  
-----  
-----

vii) Do your staff members have the knowledge on gender issues?

Yes ( ) No ( )

If no, what are the challenges?  
-----  
-----

**2 a) Adequacy of facilities and equipment**

**Please enter the following information**

i) Does your institution has adequate learning facilities and equipment?

Yes ( )                      No ( )

If no, what should be done?

-----

ii) Does the institution has enough games facilities?

Yes ( )    No ( )

If no, what do you suggest? -----

-----

iii) Does the institution has sufficient water facilities?

Yes ( )    No ( )

If no, what are the challenges? -----

-----

iv) Does the institution have adequate toilet facilities for both teachers and students

Yes ( )                      No ( )

If no, what are solutions?-----

-----

-----

v) Do the students have adequate hostels or dormitories?

Yes ( )                      No ( )

If no, what do you recommend -----

-----

-----

**2 b) Engendering of the learning facilities and infrastructure.**

Please show whether the learning facilities and infrastructure are masculine or feminine engendered in your institution

SA= Strongly Agree    A= Agree            N= Neutral                      D= Disagree

SD= Strongly Disagree

Strategies in gender mainstreaming	SA	A	N	D	SD
Engendering of the learning facilities					
Games facilitates and equipments are masculine engendered					
Games facilities are for both					
The textbooks are masculine engendered					
Textbooks are feminine engendered					
The textbooks are engendered for both					
The hostels or dorms are masculine engendered					
The hostels/dormitories are feminine engendered					
The toilets are masculine engendered					
The toilets are feminine engendered					
The toilets are for both					
The seating arrangement is separate					
The seating arrangement is mixed					
Water facilities are masculine engendered					
The water facilities are feminine engendered					
The water facilities are for both					

## 2c) Students Responsibilities

Kindly indicate how you distribute student's responsibility in your institution

Responsibility	Female	Male	Both
Head/student/official			
Asst Deputy head student/official			
Games captain			
Assistant games captain			
Class official			
Asst. class official			
Librarian			
Student welfare official			
Asst. student welfare official			

### 3 Infrastructures

Please tick appropriately per what is available.

To what extent are sanitation and playing needs catered for in the institution?

Infrastructure	Large extent	Moderate extent	Small extent	Not applicable
Playing field				
Toilet				
Water facilities				

### 4. Curriculum

Please give details of programmes that take place in your institution

Institution programme	Large extent	Moderate extent	Small extent	Not applicable
Curriculum (teaching & learning				
Guidance & counseling				
Co- curricular (athletics , ball games				
Clubs /musical/drama, debates				

### 5. Teachers Attitude

Do you agree with the following statements?

SA= Strongly Agree A= Agree N= Neutral D= Disagree

SD= Strongly Disagree

Teachers attitude	SA	A	N	D	SD
Gender mainstreaming is important					
Gender mainstreaming is not important					
Gender mainstreaming is a waste of time					
Gender mainstreaming is not waste of time					
Gender mainstreaming gives equal opportunity to females and males					
Gender mainstreaming does not give equal opportunity to					

females and males					
Gender responsive deployment/balance of teachers is important					
Gender responsive deployment/balance of teachers is not important					
Engendering of the institution infrastructure should be improved					
Engendering of the institution infrastructure should not be improved					
Engendering of learning facilities is a waste of time					
Engendering of learning facilities is not a waste of time					
Engendering of curriculum materials and teaching methods is a waste of time					
Engendering of curriculum materials and teaching methods is not a waste of time					
Gender sensitization and advocacy should be encouraged					
Gender sensitization and advocacy should not be encouraged					
Gender sensitization and advocacy should be encouraged					
Capacity building for managers, teachers, parents is important					
Capacity building for managers, teachers, parents is not important					
Gender issues should be addressed in all institution programmes					
Gender issues should not be addressed in all institution programmes					



**Part C:**

1. In your opinion what are some of the strategies the institution can use in gender mainstreaming?

-----

-----

-----

-----

2. What efforts does the efforts of institution make on teaching materials, committee , staffing and institution infrastructure?

-----

-----

## APPENDIX F

### QUESTIONNAIRE FOR TEACHERS

This questionnaire is designed to help the researcher get information on determinants of gender mainstreaming in public TIVET institutions in Nyanza Province - Kenya. The information will be used for the purposes of the study only.

Please read the questionnaire carefully before answering the questions. Please tick inside the box where necessary or fill in the blank spaces provided.

#### Part A:

1. Please enter the following information

Gender: Male ( ) Female ( )

2. Age: 24 years and below ( ) 25-30 years ( ) 31 -40 years ( )

41 -50 years ( ) 51 years and above ( )

3. Type of institution Day ( ) Boarding ( ) Day and Boarding ( )

4. Level of education

Secondary ( ) higher Diploma ( ) Degree ( ) Post graduate ( )

5. Teaching experience

Less than 1 year ( ) 1-5 years ( ) 6-10 years ( ) 11-15 years ( )

16 years and above ( )

6. Types of courses offered: Part time ( ) Evening classes ( ) Full time ( )

School based ( ) All ( )

#### Part B:

Please kindly indicate the extent of gender mainstreaming in your institution.

i) Does the teaching staff /lecturers of males proportional to that of females?

Yes ( ) No ( )

If no, what do you suggest? -----  
-----

ii) Does the ratio of teachers correspond to the ratio of students?

Yes ( )

No ( )

If no, what are the challenges? -----  
-----

iii) Do male and female staff share the same staffroom?

Yes ( )                      No ( )

If yes, what is their attitude?

-----  
-----

iv) Do male and female staff share the same toilet facilities?

Yes ( )                      No ( )

If yes, what is the impact on either gender?-----

-----

v) Do the staff share the same office for the principal and staff?

Yes ( )                      No ( )

If yes, what are their feelings? -----

-----

vi) Do the staff share the same staff houses?

Yes ( )                      No ( )

If yes, what are their reactions?

-----

vii) Do you have the knowledge on gender issues?

Yes ( )                      No ( )

If no, what are the challenges?

-----

-----

## 2 a) Adequacy of facilities and equipment

Please enter the following information

i) Does the institution have adequate learning facilities and equipment?

Yes ( )    No ( )

If no what do you suggest for the institution to do-----

-----

ii) Does the institution have enough games facilities?

Yes ( ) No ( )

If no, what do you suggest? -----  
-----

iii) Does the institution have sufficient water facilities?

Yes ( ) No ( )

If no, what are the challenges? -----  
-----

iv) Does the institution have adequate toilet facilities for both teachers and students

Yes ( ) No ( )

If no, what are solutions?-----  
-----  
-----

v) Do the students have adequate hostels or dormitories?

Yes ( ) No ( )

If no, what do you recommend -----  
-----  
-----

**b) Engendering of the learning and teaching facilities and infrastructure. Please show if the following facilities in the institution are masculine or feminine engendered.**

SA= Strongly Agree

A= Agree

N= Neutral

D= Disagree

SD= Strongly Disagree

Strategies in gender mainstreaming	SA	A	N	D	SD
Engendering of the learning facilities					
Games facilitates and equipments are masculine engendered					
Games facilities are for both					
The textbooks are masculine engendered					
Textbooks are feminine engendered					
The textbooks are engendered for both					
The hostels or dorms are masculine engendered					

The hostels/dormitories are feminine engendered					
The toilets are masculine engendered					
The toilets are feminine engendered					
The toilets are for both					
The seating arrangement is separate					
The seating arrangement is mixed					
Water facilities are masculine engendered					
The water facilities are feminine engendered					
The water facilities are for both					

### 3. Curriculum

Please give details of programmes that take place in the institution

	Large extent	Moderate extent	Small extent	Not applicable
Curriculum (teaching & learning)				
Guidance & counseling				
Co- curricular (athletics , ball games)				
Clubs/music/drama/debates				

### 4. Teachers Attitude

Do you agree with the following statements?

SA – Strongly Agree      A- Agree      N- Neutral      D- Disagree

SD- Strongly Disagree

Teachers attitude	SA	A	N	D	SD
Gender mainstreaming is important					
Gender mainstreaming is not important					
Gender mainstreaming is a waste of time					
Gender mainstreaming is not waste of time					

Gender mainstreaming gives equal opportunity to females and males					
Gender mainstreaming does not give equal opportunity to females and males					
Gender responsive deployment/balance of teachers is important					
Gender responsive deployment/balance of teachers is not important					
Engendering of the institution infrastructure should be improved					
Engendering of the institution infrastructure should not be improved					
Engendering of learning facilities is a waste of time					
Engendering of learning facilities is not a waste of time					
Engendering of curriculum materials and teaching methods is a waste of time					
Engendering of curriculum materials and teaching methods is not a waste of time					
Gender sensitization and advocacy should be encouraged					
Gender sensitization and advocacy should not be encouraged					
Capacity building for managers, teachers, parents so important					
Capacity building for managers, teachers, parents not so important					
Gender issues should be addressed in all institution programmes					
Gender issues should not be addressed in all institution programmes					

**Part C**

1. In your own opinion how can gender mainstreaming be improved in TIVET institutions/Colleges?

-----  
-----

2. What challenges do male and female teachers face when they are not given equal opportunities?

-----  
-----

## APPENDIX G

### QUESTIONNAIRE FOR STUDENTS

This questionnaire is designed to help the researcher get information on determinants of gender mainstreaming in Public TIVET institutions in Nyanza Province Kenya. Please read the instructions for each questions carefully before giving the responses required. It is important to give correct and accurate responses to this questionnaire. The information given would be strictly confidential and used for research purpose only.

#### Part A:

*Please tick where necessary*

Name of the institution-----

Name of course undertaken-----

Gender? Male ( )                      female ( )

Age Below 11-13years ( )              14-18 years ( )              above 18 years ( )

#### Part B:

1. Does the ratio of teachers/ lecturers correspond to the ratio of students?

Yes ( )              No ( )

If no, what should be done?-----

-----

2. Do you have available and adequate games facilities?

Yes ( )              No ( )

If no, what do you suggest for the institution to do? -----

-----

3. Do you have available and sufficient water facilities?

Yes ( )              No ( )

If no, what are the challenges?

-----

-----

4. Do both male and female students share the same toilets?

Yes ( )              No ( )



If yes, what needs to be done? -----  
-----

5. Do the student have enough classrooms?

Yes ( )            No ( )

If no, what do you suggest for the institution to do?

-----  
-----  
-----

6. Does the institution have enough playing fields/grounds?

Yes ( )            No ( )

If no, what are the strategies?

-----  
-----

7. Does the institution have sufficient learning facilities?

Yes ( )            No ( )

If no, what are the challenges?

-----  
-----

8. Does the institution has adequate toilets for both students and teachers?

Yes ( )            No ( )

If no, what are the solutions?

-----  
-----

9. Do the students have adequate hostels or dormitories?

Yes ( )            No ( )

If no, what are the solutions?

-----  
-----

10. Is the students seating arrangement separate or mixed?

Separate ( )            mixed ( )

If separate , what are the challenges?

-----  
 -----

11. Who is your favourite teacher? Male ( )                      female ( )    Both ( )

Why

-----  
 -----

12. According to your opinion whom do you think are favoured by your teachers?

Male ( )      female ( )    None ( )                      All( )

Why?

-----  
 -----

13. From which teachers do you receive advice?

Guidance and counseling teachers ( )

Games teachers ( )

Principal ( )

All teachers ( ) None ( )

Others specify

-----  
 -----

## 2. Curriculum

To what extent are you involved in institutional activities?

Activities	Large extent	Moderate extent	Small extent	Not involved
Curriculum				
Games				
Manual work				
Debates, drama, music/club				
Guidance and counseling				

**Part C:**

1. In your opinion how can gender mainstreaming be improved in TIVET institutions/colleges?

-----  
-----

2. What challenges can you face when girls and boys are given equal opportunities?

-----  
-----

3. Is the college interesting? Yes ( ) No( )

If no, why is it not interesting?-----

-----

4. Is the course difficult? Yes ( ) No( )

If yes, give reasons-----

-----

5. In your own opinion are you happy with the location of the toilets in the institution/ Yes ( ) No( )

If no, give reason why you are not happy with the location of the toilets

-----  
-----  
-----  
-----  
-----

**APPENDIX H**  
**LESSON OBSERVATION SCHEDULE**

**Introduction**

- Geared towards arousing learners
- Biased towards arousing girls only
- Biased towards arousing boys only
- Teacher centered

**Participation**

- Encourage students to mix
- Encourage girls to group themselves
- Encourage boys to group themselves
- Encourage students to work individually

**Question distribution**

- Well balanced to both boys and girls
- Biased towards girls only
- Biased towards boys only
- Lack of distribution of questions

**Motivation of students**

- Motivation of both boys and girls
- Motivation of girls only
- Motivation of boys only
- Lack of motivation for both

**Engendering materials**

- Engendering materials for all learners
- Engendering materials for boys only
- Engendering materials for girls only
- Lack of engendering materials

### **Marking of students work in class**

- Well balanced
- Biasness towards girls
- Biasness towards boys
- Biasness to both

### **Lesson develop examples**

Use of balanced gender examples

Examples biasness towards boys

Lack of gender example usage

**APPENDIX I**  
**FACILITIES OBSERVATION CHECKLIST**

**Female toilets**

- Availability of girls' toilets
- The direction of the doors of the toilets
- The location of the toilets
- Adequacy of the girls' toilets
- Availability of saniatry towels

**Male toilets**

- Availability of boys' toilets
- The direction of the doors of the toilets
- The location of the toilets
- Adequacy of the boy's toilets

**Water facility**

- Availability of water facility
- Adequacy of water facility
- Location of water facility

**Playing field**

- Availability of playing field
- Marking of playing field for boys
- Marking of playing field for girls
- Marking of playing field for all games activities

**APPENDIX J**

**INTERVIEW GUIDE FOR THE OFFICER OF HIGHER EDUCATION –  
NYANZA PROVINCE KENYA**

Kindly give the relevant information to the best of your knowledge. Your response will be treated with the highest strict confidentiality and will be used positively.

Position in the Ministry of Higher Education Science and Technology-----

Experience in the office-----

Gender----- Age-----

Education level-----

**Questions**

1. What is the student enrolment in public TIVET institutions and staffing in the province-----
2. How does your office handle the problem of understaffing of gender?  
-----  
-----
3. How do you handle issues of poverty as it affects transition of students in institutions?  
-----  
-----
4. What is the Ministry of Higher Education policy on gender?  
-----  
-----
5. What measures do you have in place to ensure that all students who enroll for TIVET courses complete their education? -----  
-----  
-----
6. What is the main current challenge facing you on gender mainstreaming as the officer for higher education? -----  
-----  
-----

REPUBLIC OF KENYA



## NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Phone: 254-020-2213471, 2241349  
310571, 2213123, 2219420  
020-318245, 318249  
Fax: 254-020-2213471  
Email: [ncst@ncst.go.ke](mailto:ncst@ncst.go.ke)

P.O. Box 30623-00100  
NAIROBI-KENYA  
Website: [www.ncst.go.ke](http://www.ncst.go.ke)

NCST/RCD/14/012/1032

19<sup>th</sup> July 2012

Date:

Phoebe Onyango Akeyo  
University of Nairobi  
P.O.Box 30197-00100  
Nairobi.

### RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Determinants of gender mainstreaming in Technical, Industrial, Vocational and Educational Training (TIVET) Institutions in Nyanza Province, Kenya,*" I am pleased to inform you that you have been authorized to undertake research in Nyanza Province for a period ending 31<sup>st</sup> August, 2012.

You are advised to report to the Provincial Commissioner, the Provincial Director of Education and the Provincial Director of Technical Training, Nyanza Province before embarking on the research project.

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

**DR. M. K. RUGUTT, PhD, HSC.**  
**DEPUTY COUNCIL SECRETARY**

Copy to:

The Provincial Commissioner  
The Provincial Director of Education  
The Provincial Director of Technical Training  
Nyanza Province.

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**APPENDIX L  
RESEARCH PERMIT**

PAGE 2

**THIS IS TO CERTIFY THAT:**  
**Prof./Dr./Mr./Mrs./Miss/Institution**  
**Phoebe Onyango Akeyo**  
**of (Address) University of Nairobi**  
**P.O.Box 30197-00100, Nairobi.**  
**has been permitted to conduct research in**

	<b>Location</b>
	<b>District</b>
<b>Nyanza</b>	<b>Province</b>

**on the topic: Determinants of gender  
mainstreaming in TIVET Institutions in Nyanza  
Province, Kenya.**

**for a period ending: 31<sup>st</sup> August, 2012.**

PAGE 3

**Research Permit No. NCST/RCD/14/012/1032**  
**Date of issue 19<sup>th</sup> July, 2012**  
**Fee received KSH 1,000**



<b>Applicant's Signature</b>	<b>Secretary National Council for Science &amp; Technology</b>

**CONDITIONS**

1. **You must report to the District Commissioner and the District Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit**
2. **Government Officers will not be interviewed without prior appointment.**
3. **No questionnaire will be used unless it has been approved.**
4. **Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.**
5. **You are required to submit at least two(2)/four(4) bound copies of your final report for Kenyans and non-Kenyans respectively.**
6. **The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice**



**REPUBLIC OF KENYA**

**RESEARCH CLEARANCE  
PERMIT**

GPk6055t3mtf0/2011

(CONDITIONS—see back page)