

**THE EFFECTS OF CO-EDUCATION ON THE
PERFORMANCE OF GIRLS AND BOYS IN KCSE IN
TAITA TAVETA DISTRICT OF COAST PROVINCE IN
KENYA**



CHRISTINE MURENGA WASIKE

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Wasike, Christine
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DECLARATION

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

Signature:  Date 15/2/2011

CHRISTINE M. WASIKE

- C50/ CE/ 11915/07

This proposal has been submitted for the review with our approval as University supervisors.

1.  Date 15/2/2011

DR. GEOFFREY WANGO

DEPARTMENT OF GENDER AND DEVELOPMENT STUDIES

2.  Date 16/2/2011

DR. LEAH WANJAMA

DEPARTMENT OF GENDER AND DEVELOPMENT STUDIES

DEDICATION

This work is dedicated to two most important women in my life; my mother Bilha Nekesa Wafula and my daughter Sellah Naswa Kombo.

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ABSTRACT

An analysis of academic performance in reports at Kenya Certificate of Secondary Education (KCSE) has often indicated that performance in single sex secondary schools tends to be better than in mixed secondary schools. This study investigated the environmental factors in co-education at public secondary schools that affect learners' performance. The environmental factors include gender ascribed roles that inhibited learners' achievements. The study also assessed the effects of coeducation on girls and boys learning behaviors in coeducation secondary schools. Both qualitative and quantitative data were adopted by use of Albert Bandura's Social Cognitive Theory of Gender Development and Differentiation Findings indicate that single sex schools perform better than the co-educational schools. This reveals the need to enhance overall performance and general achievement of both boys and girls and particularly in mixed schools. It is recommended that more single sex schools should be established if performance in KCSE has to improve, and this may be the case nationally as well. The already existing coeducation schools should as an intervention create single sex classrooms to avoid distractions caused by the presence of the different sexes in the same class. This separation could enable teachers to reasonably address the gender differences that are associated with either sex during the teaching and learning process.

DEFINITION OF TERMS

- Coeducation:** Is the integrated education where boys and girls learn together in the same institution and in the same classroom. These institutions are commonly referred to as mixed schools.
- Efficacy:** It is the power or capacity to produce a desired effect in performance and being effective in what is being done in school.
- Gender roles:** These are socially and culturally ascribed roles which are assigned by virtue of one being male or female even within a school learning environment.
- Guidance:** The process of helping an individual to gain self-understanding and self direction so that one can adjust maximally to the school and environment.
- Performance:** This refers to the score of a mean grade at KCSE exam. The result is dichotomized into good performance and poor performance. Good performance refers to a mean grade of between 'A'- 'C+' based on minimum qualification entry to university, while poor performance refers to a mean grade of between 'C'- 'E'.
- School type:** This refers to the sex composition of the school, whether boys' only, girls' only or mixed boys and girls school. This is further extended to refer to day schools or boarding schools, or both day and boarding schools.
- Single sex education:** This is learning where boys learn in their own schools (boys only) and girls learn on their own (girls only), also known as single sex schools.

ABBREVIATIONS AND ACRONYMS

ACER	Australian Council for Educational Research
AIDS	Acquired Immunodeficiency Syndrome
ASAL	Arid and Semi Arid Lands
CHE	Commission of Higher Education
DEO	District Education Officer
DFID	Department of International Development
DI	Differential Instructions
EFA	Education for All
FCA	Florida Comprehensive Assessment Test
FDSE	Free Day Secondary Education
GER	Gross Enrollment Rates
HIV	Human Immunodeficiency Virus
KCSE	Kenya Certificate of Secondary Education
KESSP	Kenya Education Sector Support Programme
KNEC	Kenya National Examination Council
MDG	Millennium Development Goals
MoE	Ministry of Education
MoEST	Ministry of Education Science & Technology
NASSPE	National Association for Single Sex Public Education
NFER	National Foundation for Educational Research
NGOs	Non-Governmental Organizations
SEIA	Secondary Education in Africa
SSA	Sub-Saharan Africa
TARDA	Tana and Athi River Development Authority
TSC	Teachers Service Commission
UNESCO	United Nations Educational, Scientific and Cultural Organization

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CHAPTER ONE

BACKGROUND TO THE STUDY

1.0. Introduction

According to Mulford (2002), poor results at secondary school level have two consequences; Firstly, those who do not proceed to tertiary education tend to be less productive and contribute little to the development of the economy and social life. Secondly, those who may proceed to tertiary education have not gained the relevant skills as appropriate to the contemporary world. Studies in Europe and America have indicated that single sex schools tend to perform better than co-education schools (London Financial Times, 2007). In the United States of America, a recent proposal to offer a single sex environment alongside an equivalent co-educational option has intensified debate and a total of 241 public schools now offer some single-sex classrooms up from 3 in 1995 according to the National Association for Single Sex Public Education (NASSPE, 2007). Of these schools, 53 are now completely single sex schools. It is from such a background that many countries are reverting to single sex schools.

After ten years of studying sexism in classrooms, Myra and David (2001) concluded that girls stay confident and learn more in single sex schools because they are players and not the audience. The study revealed that boys at the lowest academic end tend to improve most in single sex schools, and that all the top fifty elementary schools and top twenty high schools in Britain are single sex schools. Mushaq (2007) in a '*case for single – Sex Education*' based on scientific research and empirical studies supports the claim that single sex education system is ideal since boys and girls require separate training to suit their different rates of physical, intellectual and emotional growth. Research has also shown that this gap in education tends to

extend from primary, secondary and to undergraduate levels at university. However, it becomes more intense when boys and girls reach their adolescent age, which in Kenya happens to be the secondary school age as in most other education systems. This difference though psychologically made-up results in huge differences in the way the two sexes learn in class and in the way members of the two genders influence the learning of one another in the same class (Kennedy, 2001).

The government of Kenya has taken several steps towards enhancing the education of boys and girls including the development of a Gender Policy in Education (Republic of Kenya, 2007). The policy provides the framework for planning and implementation of gender responsive education sector programmes. The policy highlights key gender concerns in education such as disparities in enrolment, retention, transition rates, negative socio-cultural practices, stereotyping in learning materials and in class teaching. The Gender Policy in Education recognizes gender equality as critical to the achievement of Education for All (EFA) and the MDGs and proposes a number of strategies to address gender concerns in education within the Kenya Education Sector Support Programme (KESSP) 2005 - 2010, (Republic of Kenya, 2005). These include making the learning environment conducive to both boys and girls, promoting gender sensitive curricula, strengthening the capacity of both parents and education personnel at all levels to address gender issues and making monitoring and evaluation systems more sensitive to gender issues especially at the level of the school.

The academic performance of boys and girls in Taita District has continued to be of concern amongst the Taita community. Taita district is situated in the south-west part of Kenya's Coast Province. It is a rural district whose population earns a living from farming and rearing

livestock. The district has hardly any large industries. According to estimates from the economic survey 2005 (Poverty Estimates by constituency, 1999 / 2000), 59% of the district's estimated population lives in abject poverty (below the poverty line). The Tana and Athi River Development Authority (TARDA) report and its projections depicted the district as one that consumes more than it produces in spite of its capacity to be least sufficient and at most a surplus producer of agricultural food products. The infrastructural networks in the district are in a pathetic state. Many roads within the district are underutilized mainly because they are inadequately maintained. As a result their bad conditions hamper their very use. This is an impediment on the transport of produce, supply of farm inputs and delivery of services to the public. The government support to sectoral development with respect to availability to such amenities such as water, electricity, and telephone are weak and in some cases evidently absent. This phenomenon explains the subsequent food scarcity and the escalating levels of poverty in the general district population. As a result, this myriad of interlocking problems at play is the cause of the mounting discontent by the indigenous people of the academic performances in the district.

The World Bank (2008) states that secondary education is the gateway to the opportunities and benefits of economic and social development. Furthermore, globalization and the increasing demand for a more sophisticated labour force combined with the growth of knowledge based economies gives a sense of urgent heightened demand for a quality secondary education. Taita District has thirty-five (35) public secondary schools, eight (8) of which are single sex while twenty-seven (27) are mixed. Of the top performing schools in K.C.S.E. in the district, the top positions are usually taken by all the eight (8) single sex schools, which account for only 29% of the total number of secondary schools in the district (Taita DEO reports). Mixed schools

form the bulk of secondary schools in Taita and therefore, continued poor performance will impact negatively on the district's economic development.

Despite several initiatives by government to improve access to, and quality of education including secondary education, there are various challenges, particularly low transition from primary to secondary, low participation rates especially for girls at all levels, low transition from secondary to tertiary (particularly to university), as well as gender regional disparities. The quality of secondary education also remains largely low. The immediate challenge of secondary education in Kenya is how to expand access at relatively low cost, while improving the quality of education at the same time (Republic of Kenya, 2005; 2007). This is the concern of this study.

1.1. Statement of the Problem

The academic results of co-education on the performance of girls and boys in Kenya Certificate of Secondary Examinations in Taita district have been dismal. Co-education secondary schools in the District have continued to perform poorly at KCSE as compared to single sex schools. Annual academic statistics from gender disaggregated data point to this fact, yet the system has continued to establish and sustain many co-education secondary schools in the district. The top eight performing schools in KCSE in the district are usually the single sex schools. This in turn brings down the overall performance in the district. This performance also reveals a great disparity in academic performance between boys and girls in the mixed schools. This study investigated the effects of co-education on the performance of boys and girls.

1.2. Objectives of the Study

The overall objective of the study was to investigate the effects of co-education on the performance of the girls and boys in Kenya Certificate of Secondary Examination.

The specific objectives of the study were:

- i) To investigate environmental factors, such as school infrastructure, text books and availability of teachers in co-education secondary schools affecting learners' performance.
- ii) To establish whether gender ascribed roles inhibit learners' achievements in co-education secondary schools.
- iii) To assess the effects of co-education on girls and boys learning behaviour in co-education secondary schools.
- iv) To find out ways of enhancing the performance of boys and girls in co-education secondary schools.

1.3. Research Questions

- i) How do the environmental factors in co-educational schools affect the academic performance of boys and girls?
- ii) Do gender ascribed roles of boys and girls inhibit learners' achievements in co-education secondary schools?
- iii) How does co-education affect girls and boys learning behaviour in secondary schools?
- iv) How can the performance of boys and girls in co-education secondary schools be enhanced?

1.4. Research Assumptions

The study was based on the assumption that there are certain pertinent factors that affect boys and girls in co-education schools that in turn negatively affect their performance, as compared to single sex schools. In that case, the presence of both boys and girls in the same class and / or school may lead to poor academic performance at Kenya Certificate of Secondary Examination. This study aimed to investigate such factors and make recommendations.

1.5. Significance of the Study

This study makes empirical evidence on factors that affect the performance of boys and girls in co-education secondary schools. This information serves as a case for the establishment of more single sex secondary schools. This in turn should enhance learning and the general achievements of both boys and girls. This study therefore provides information to policy makers in education, that is the Ministry of Education and the Teachers Service Commission (TSC), as well as other education stakeholders to make gender responsive decisions in learning and education especially in the establishment of schools. This may enhance the government's commitment to pursuing gender equality in all spheres of development, and in establishing mechanisms to address the existing inequalities. The information also informs Non Governmental Organizations (NGOs) in dealing with gender issues in education. The study also provides data that may be used in formulating policies that will enhance performance and transition in secondary schools. Recommendations generated from the study findings may provide useful information and interventions to the Ministry of Education on gender disparities observed in attendance, performance, transition, and achievements in secondary schools in Arid and Semi Arid Lands (ASAL) regions, rural areas and low potential areas.

Finally, the study forms the basis for future research on gender and education. This will generate of ideas and new knowledge that can be used in the development of better and more practical policies in the education sector, especially to enhance gender equity.

1.6. Scope and Limitations of the Study

The study was conducted in Taita District of Coast Province of Kenya and was confined to students in secondary schools. The study involved two (2) out of the eight (8) single sex schools and one (1) out of the twenty seven (27) co-education schools in Taita District. However, the schools were spread in the district. Although there may be several other factors that affect the general performance of K.C.S.E. in the district, the study limited itself more to the academic performance in co-education secondary schools.

CHAPTER TWO

LITERATURE REVIEW

2.0. Introduction

This chapter evaluates relevant literature on effects of mixed schools on performance of boys and girls in secondary schools. The literature review is informed by the objectives of the study.

2.1. Secondary Education in Sub-Saharan Africa

Participation rates for secondary education in Sub-Saharan Africa are lower than any region of the world with access biased in favour of the wealthier populations (SEIA, 2001). The inadequate of access to secondary education is increasingly seen to constrain the countries' abilities to pursue effective economic growth and development strategies. This leads governments and the funding community to place increased emphasis on the expansion of secondary education (UNESCO, 2001; World Bank, 2005). The development of secondary education in Africa and other low – income countries has tended to receive renewed interest (Wango, 2006). In addition, Governments and the donor community alike have expressed concern over the need to expand access to relevant and good quality secondary education, particularly in Sub-Saharan Africa (SSA). For instance, Kenya introduced free secondary education in 2008.

Governments in SSA and their financial partners are increasingly looking to make secondary education widely accessible, more relevant and of higher quality. Secondary participation rates in SSA have increased from 19 percent in 1999 to 30 percent in 2004 (SEIA, 2007). However, the region faces many challenges in meeting the goal of further expansion of secondary

education. Only a handful of countries in the region – Botswana, Cape Verde, Mauritius and South Africa have achieved secondary education access rates as high as 80 per cent for junior secondary. Some countries such as Burundi, Burkina Faso and Rwanda have not even achieved 49 per cent Gross Enrolment Rate (GER). Secondary education, long neglected is now the fastest growing segment of the education sector (Mulkeen, 2005; World Bank, 2007). In many countries, movement away from seeing primary education as the terminal level of education towards policies that envision widespread completion of Junior secondary and upper secondary as the goals of education system development is well underway, but has only recently begun in Sub-Saharan Africa (De Ferranti, 2003; World Bank, 2005). Wango (2010) has argued that secondary education should be part of basic education in Kenya under the new constitution.

According to Kaziputa (2006) and Wango (2010), the renewed commitment for education has in general terms come as a result of three confluent factors. These are:

- (i) The expansion of primary education as propelled by Education for All (EFA) initiatives and the Millennium Development Goals (MDGs). The commitment to the attainment of EFA and MDG goals have moved towards high gross enrolment rates (GER) in primary schools thus increased pressure on secondary education;
- (ii) Secondary expansion appears necessary because the secondary education curriculum has lost some of its relevance. The need for a more sophisticated labour force equipped with appropriate competencies, knowledge and workplace skills is increasing in many economies, coupled with the need for such labour to be available globally; and,
- (iii) The demand for a renewed commitment has also come because of the critical role a well-educated young generation can play in enhancing democracy, human rights, and rule of law. Good citizenship is a key outcome of a good relevant education.

The twenty first century has seen a renewed interest in redefining the aims of secondary education in SSA. This interest comes against the background of attempting to attain universal primary enrolment. A report on the status of education in SSA released by United Nations Educational, Scientific and Cultural organization (UNESCO) summarizes three key aims of secondary education:

- 1) Enhance young adolescents basic knowledge to raise their general education level;
- 2) Prepare students for their harmonious integration into working, professional and social life; and,
- 3) Prepare students for higher education or technical and vocational institutions.

A good national secondary education system should be able to provide educational services to a country's citizens regardless of their geographical location, gender, learning abilities, or socio-economic status. Once students are enrolled, they should also be able to complete all grades and the secondary level overall (Kaziputa, 2006; Wango, 2010).

UNESCO (2008) reports that in 2005, some 512 million students were enrolled in secondary schools world wide, an increase of more than 73 million (17%) since 1999. The growth was driven by increased enrolment in SSA (55%) among other developing countries. According to Wood and Mayer (1999), investing in post - primary education enables countries to compete in an era of globalization and knowledge. This investment is associated with greater export - led growth. In addition, it creates a pool of qualified people with knowledge and skills to contribute significantly to economic development, to be entrepreneurial, develop science and technology, deliver basic services, and to be enlightened leaders. None of the MDGs can be

achieved satisfactorily without educating and training enough qualified people through all levels of education.

The Department of International Development's (DFID) strategy on *Girls' education; towards a better future for all* (2005) states that meeting MDGs requires equal numbers of boys and girls, men and women at all levels of education. It emphasizes that this target will be missed without more focus on secondary and higher education. Secondary education has also proved to be the single biggest factor in reducing the threat of HIV and AIDS for girls. Lewin (2004) argues that secondary education influences and pushes for better choices in terms of sexual behaviour, reduction to infection rates and increased tolerance and support for people living with AIDS. Bregman and Bryner (2003) too observe that although relevance is an elusive indicator of quality, the secondary school curriculum should nevertheless meet the social and economic requirements of individual countries and in the context of regional and global developments. Countries need educated citizens who are able to understand difficult issues, make informed decisions and be accountable for their actions. Attaining high levels of scientific literacy is also crucial for participating in the new global knowledge economy.

Secondary education as a middle ground between primary and tertiary levels, has been identified as the weakest link in education development. According to Mulford (2002) poor results at that level have two consequences. Firstly, those who do not proceed to tertiary education tend to be unproductive and contribute little to the development of the economy and of social life. Secondly, those who do proceed to tertiary education have not gained the relevant skills that the contemporary world needs. Governments that want to expand access to secondary education will have to re-shape how schools are organized, by whom they are

governed, where they are located and how they operate in order to make it easier for rural, poor children and especially girls to have viable opportunities to learn (USAID, 2008). Wango (2009) has argued for improved school administration and management especially at this level.

In Sub Saharan Africa as well as other developing countries, the projected demand for teachers exceeds the projected supply required for expanding secondary education (World Bank, 2006).

Yet teacher management is one of the most critical factors to ensure students have access to schooling especially secondary education. Lewin, (2001); Mulkeen, (2005); World Bank, (2005); SEIA, (2007); World Bank, (2007) highlight some of the challenges facing teacher recruitment and retention in secondary education across developing countries as follows:

- (i) High attrition, low salary and poor living conditions especially in rural areas.
- (ii) Difficulties in attracting teachers in difficult to reach areas: The challenges arise because of low professional development opportunities; lack of incentive systems to stimulate and motivate teachers. (De Stefano, 2006; Terway, 2007).
- (iii) Bottlenecks in teacher preparation systems: High rates of attrition throughout the education system, thus reducing the pool of potential teacher candidates for secondary education.
- (iv) Lack of teachers in specific subject areas like mathematics and science.

The imperative of reform in secondary education can no longer be ignored particularly in sub Saharan Africa. The transformation of a traditional elite system that prepares a few privileged students into one that provides opportunities to further learning to a rapidly increasing proportion of adolescents is one that is taking place throughout the region (SEIA, 2007). But the challenge is not one of expansion only; it is one of quality improvement, relevance and

equity at the same time. Linear expansion of existing systems, more of the same, is not an easier option (SEIA, 2007). Instead, articulating the purpose and basic outlines of a quality secondary education is a precondition for assessing whether these goals are being achieved by a given system. The simple framework analysis outlined in Table.2.1 below was used by Bregman and Bryner, (2003) in their study of the performance of secondary education in Africa.

Table 2.1 Attributes of Quality Secondary Education

Angles of Analysis	Attributes
Is the system accessible to all?	<ul style="list-style-type: none"> ➤ Do all adolescents have equitable access to secondary education? ➤ Are transition mechanisms in place for smooth progression?
Is the secondary education curriculum well structured, relevant, and balanced?	<ul style="list-style-type: none"> ➤ Does the curriculum provide content that prepares students for further studies? ➤ Does the curriculum provide competencies to participate in the world of work and democratic societies? ➤ Is the curriculum gender and poverty balanced? ➤ Do secondary education graduate profiles exist, and are they updated regularly? ➤ Does the curriculum include sufficient information on healthy lifestyle, ecology and civic and community life?
Do the inputs (teachers, learning materials, school environment) generate maximum student learning at secondary education level?	<ul style="list-style-type: none"> ➤ Do secondary teachers and trainers have sufficient knowledge and training of the subject they are teaching? ➤ Do the teaching and pedagogical practices stimulate student understanding and creativity? ➤ Do evaluation and feedback mechanisms appropriately assess student knowledge and guide further instruction? ➤ Are sufficient and updated learning and teaching materials available in all the regions of the country at all schools? ➤ Does the school environment enhance the learning process?
Do policies and institutional governance allow efficient organization, implementation, monitoring and allocation of resources?	<ul style="list-style-type: none"> ➤ Are adequate strategies and operational plans in place and agreed by all major stakeholders? ➤ Are funds equitable disseminated and allocated? ➤ Do administrative structures allow for accountability mechanisms? ➤ Is the structure of the system set up to allow students smooth transition between levels as well as within levels?

2.2. Secondary Education in Kenya

The long-term objective of the Kenya government is to provide every Kenyan with basic quality education and training. This will include pre-school, primary and secondary education (Wango, 2010). This lays the basis for further tertiary education. Education also aims at enhancing the ability of Kenyans to preserve and utilize the environment for productive gain and sustain livelihoods (Republic of Kenya, 2005). The government is committed to the provision of quality education and training as a human right for all Kenyans in accordance with the Kenyan law and other international conventions. This is also in line with EFA and MDG goals. The realization of universal access to basic education and training ensures equitable access to education and training for all children including disadvantaged and vulnerable groups in line with Kenya Vision, 2030.

According to the Millennium Development Goals; Status Report for Kenya (UN, 2008), the Free Primary Education that commenced in 2003 has been exerting pressure on the enrolment in secondary schools. This has led to an increase in transition rate from 46.5% in 2003 to 60% in 2007. Gross Enrolment at secondary was targeted to reach 70% in 2008, a target that is likely to be achieved following the introduction of Free Secondary Education (FSE) by the Kenya government in 2008. This will further enhance access, equity and quality in all public secondary schools in Kenya. Enrolment at secondary education has grown by 18.3 % from 882,390 students in 2003 to 1,043,407 in 2006. The number of secondary schools has increased from 4,071 in 2003 to 4,506 KCSE examination centres in 2006 (MoE, 2007).

Even though there is no significant difference in the national GER at the secondary level, regional differences still exist. The national GER for girls varies from as low as 2.6 percent in 2003 in North Eastern Province to a high of 45.1 % in 2004 in Central Province. The GER for

boys varied from 14.1 % in 2003 in North Eastern Province to 44.7% in 2004 in Central Province. The GER for North Eastern is very low. There are also wide gender disparities in various regions. In addition, completion rate nationally in 2004 was 91.5% for boys compared with 87.5 % for girls, registering a gap of 4% in favour of boys. The quality of secondary education remains low. Policy documents including the Sessional Paper Number 1 of 2005, indicates a target transition rate from primary school of 70%. This requires increased partnership between government, private sector, communities, NGOs and parents.

Performance at Kenya Certificate of Secondary Examination (KCSE) has been improving steadily. For example, 1,265 (0.48%) of candidates obtained grade 'A' in 2006 as compared to 611 (0.24%) in 2005 (MoE, 2007). Boys often tend to perform generally better than girls in several subjects such as English, Mathematics, Biology, Physics and Chemistry. Although girls are generally regarded as more adept than boys in languages, this perception was debunked by performance in KCSE English between 2000 and 2005 when boys' performance in the subject was superior to that of girls (MoE, 2007).

Despite the rise in enrolments, the transition rate from secondary level to university for both boys and girls still remains very low, at 3.8 percent (CHE, 2004). In addition, gender disparities in transition from secondary to public universities have been wide. Enrolment in universities increased from 82,757 students in 2003/04 to 118,239 students (47,464 girls and 70,775 boys) in 2007/08 out of which 21,132 (10,861 girls and 10,271 boys) are in private universities. The relatively lower admission of female students into universities reflect the cumulative factors that hinder girls' participation, good performance and progress at lower levels. (MDG Status Report for Kenya, 2007). The low transition rates of girls from secondary to university

according to EFA Global Monitoring Report (2003 / 2004) has to do with how school systems take girls' specific needs into account through curricula, teaching methods and the learning environment. The report notes that girls are disproportionately the victims of sexual harassment and violence in school leading to under – achievement and high drop-out rates. The report concludes that achieving parity does not end with equal numbers, rather equal opportunities, treatment and outcomes in education and in society are the crucial yardsticks of progress (EFA, 2003 / 2004).

The removal of gender gaps should have first priority in all programmes of school expansion and quality improvements (EFA, 2006). The state has a fundamental role in making good-quality basic education a right and a reality for every citizen. It must create an enabling environment for promoting gender equality, invest in redistribution strategies and mitigate the burden of conflict, economic crisis and HIV and AIDS. The international community must boldly accompany this process using a gender lens as a focus for all aid to education programmes (EFA, 2003/4). Strategies for expanding secondary education according to Ngware et al., (2006) include: expansion of infrastructure through strong partnerships, enhancing efficiency in use of human and financial resources, developing sustainable poverty reduction and resource targeting mechanisms, increasing household awareness on the importance of secondary school education and addressing gender disparities. According to Sessional Paper No. 1 of 2005, the government will employ various strategies to implement education policies on secondary education. These include ensuring the learning environment is gender and special needs responsive and improved capacity of all those involved in quality assurances in secondary schools.

The Ministry of Education in partnership with other stakeholders have put in place various targeted intervention measures, aimed to create conducive and gender responsive environment in Arid and Semi-Arid Lands (ASAL) under KESSP (Republic of Kenya, 2005). These included construction of schools for girls, equipping laboratories to improve girl's performance in science and use of school cluster approaches for in-service training for teachers and school managers in child centred and gender responsive teaching. Equal access of girls and boys to secondary education has been identified by the international community as a key measure of progress towards gender equality. The Kenya government is a signatory to major international conventions and agreements on human rights and gender equality development. Kenya has therefore committed itself to pursuing gender equality in all spheres of development and putting in place measures to redress the existing imbalances (MoE, 2005). The country's development blue print; the Kenya Vision 2030 states that Kenya will provide a globally competitive quality education, training and research for development. The overall goal for 2012 is to reduce illiteracy by increasing the transition rates from primary to secondary,

2.3. Single Sex Education versus Co-Education

Single Sex Education (SSE) is the practice of conducting education where male and female students attend separate classes or in separate buildings or schools. The practice was predominant before the mid-twentieth century, particularly in secondary education and higher education. SSE is often advocated on the basis of tradition, as well as religions or cultural values. Co-education refers to the instruction and training of boys and girls or of young people of both sexes, in the same school or institution, in the same classes and through the same courses of study. This too has been in existence over the years. Plato was apparently the first significant advocate of the equality of sexes, and admitted women to the inner circle of his

academy on equal terms with men. Plato believed that co-education helped in the development of personality of both men and women, and developed comradeship among them (Rowland, 1987).

The co-educational movement is also connected with a strong view of sex equality. Those who advocate co-education for boys and girls in secondary schools base their argument mainly on the ground of its naturalness and closer conformity to the conditions of healthy, unselfconscious home life. It is conceived to be a protection against uncleanness of talk and school immorality, as well as its convenience and economy. Co-education is said to bring with it a healthy radicalism in regard to older tradition of studies in boys' secondary schools. They approve it as leading to mixed staff of men and women teachers, and as the most effectual way of putting girls in a position of reasonable equality with boys in respect of intellectual and civic opportunity. According to Johann Pestalozzi, a Swiss Pedagogue (1746 - 1827), all educational institutions should as far as possible be modelled upon the analogy of the family and home.

Those opposed to co-education in secondary schools rest their case upon the danger of the intellectual or physical overstrain of girls during adolescence and upon the unequal rate of development of boys and girls during the secondary school period, the girls being more forward than the boys at first, but as a rule less able to work as hard at a somewhat later stage. The critics further complain that co-education is generally so organized such that the girls' course of study is more or less assimilated to that of the boys, with the result that it cannot have the artistic and domestic character which is suitable for the majority of girls.

In England, the National Foundation for Educational Research (NFER, 2002) was commissioned to study the effect of school size and school type (Single sex versus. Coeducation) on academic performance. The foundation studied 2,954 high schools throughout England, where single-sex public high schools are widely available. They found that even after controlling for students' academic ability and other background factors, both girls and boys did significantly better in single sex schools than in coeducation schools. The Australian Council for Educational Research (ACER 2000) too conducted a large Australian study where they compared performance of students in single-sex and co-educational schools. The analysis, based on six years of study of over 270,000 students in 53 academic subjects, demonstrated that both boys and girls who were educated in single sex classrooms scored on average 15 to 22 percentile ranks higher than did girls and boys in co-educational settings. The report also documented that boys and girls in single-sex schools were more likely to be better behaved and to find learning more relevant. The two reports concludes that evidence highly suggests that co-educational settings are limited by their capacity to accommodate the large differences in cognitive, social and development growth rates of boys and girls.

Researchers at Stetson University in Florida have completed a three-year pilot project comparing single-sex classrooms with coeducation classrooms at Woodward Avenue Elementary school, a public school. Every grade was assigned either a single sex or co-ed classroom. All relevant parameters were matched: the class sizes were all the same, the demographics were the same, and all teachers had the same training. The Florida Comprehensive Assessment Test revealed found that boys in co-ed classes scored 37% proficient as compared to boys in single-sex classes who scored much higher (86%). Girls in

co-ed classes scored 59% as compared to girls in single-sex classes who scored higher (75%) but lower than boys. These students were learning the same curriculum in the same school.

Myra and David (2001) have held that girls stay confident and learn more in single sex schools where 'Girls Are the Players, Not the Audience'. The 2001 British study concluded that nearly every girl regardless of her ability or socioeconomic status performed better in single sex classrooms than co-ed ones. The study of 2,954 high schools and 979 primary schools showed that while boys at the lowest end academically improved the most in single sex schools, single sex education was particularly beneficial to girls. Every one of the top fifty elementary schools and top twenty high schools in Britain are single sex schools.

Kitetu, (1998) in a research aimed at examining gendered identities in the science classroom in Kenya had similar outcomes to those of Swann and Graddol (1988) and French and French (1984) on teacher differential talks to boys and girls. Kitetu documented cultural specific and historically located gendered classroom behaviour and practices. The findings revealed that girls and boys engage in different activities within the same lesson with girls showing minimal involvement in activities requiring physical exertion. There was also teachers' differential treatment of boys and girls where teachers were harsh on boys and very gentle with girls. This might have emancipated from a Kenyan masculine cultural belief that boys should not be softened. Males are expected to be tough, active and brave, while girls are often treated as 'soft'. As such, teachers' treatment of boys and girls in these co-education classrooms reaffirmed gender in accordance with cultural norms which define masculinity and femininity (Kitetu, 1998), and further tends to uplift boys while submerging girls.

Further research has noted these tendencies that in effect have adverse effects on girls' education. Sadker (2000) in a research puts it thus; teachers praise boys, punish them more, and help them more. Although girls continued to get better report card grades (partially suspected as a reward for their more docile, less threatening behaviour), boys received a more intense educational experience, as well as better scores on high stakes tests. Thuo (1983) in a comparative study of the relationship between attitudes towards mathematics and mathematical attainment in co-education and single sex schools in Kiambu district found a significant difference in mathematical attainment between sex and school type. The difference was in favour of girls and single sex schools. The study found single sex schools being generally superior to co-education schools in terms of performance. Mushtaq (2007) says that the production of the male hormone testosterone is increased to 20 times than normal in male adolescents and as consequence they suffer from mental and sexual agitation. Similarly the female hormone estrogen production increases in adolescent girls and as a consequence, they suffer from lethargy and depression. At puberty according to Mushtaq, the limbic system (area of brain) is stimulated by the surge of those sex hormones, which affects the behaviour of both sexes. In such conditions, most of the boys and girls think perpetually about the opposite sex. Thus, in learning institutions where there is co-education, love affairs and courtships are common and interfere with the performance. Whether this is a stereotype or part of empirical evidence is an area that should be further investigated (Wango, In Process).

That girls perform poorly in mixed secondary schools is a concern for education in Kenya. Wango (In Process) argues that the psychology of gender is intertwined with the education offered to the child according to their gender. In that case, mixed secondary schools and education carry a gender, and this in effect will not benefit girls' education. This in turn will

lead to lack of girls and women taking part in social economic advancement since education and schools is significant in the development process. In addition, mixed schools form the bulk of secondary schools in Taita District and this may also apply in manor other regions in Kenya. Most of the studies comparing single – sex education with co-education today look at several variables apart from grades and test scores as the parameters of interest. For instance, girls in all girls' schools are more likely to study subjects such as advanced mathematics, computer science and physics, while boys in all boys' schools are more than twice likely to study subjects such as languages, art, music and home science. According to Olafsdottir (1989) gender roles can be subverted in a single sex environment; boys will be more likely to pursue the arts and girls more likely to pursue mathematics and science. According to Olafsdottir, both sexes seek tasks they are most conversant and they select behaviour they are more acquainted with and consider appropriate for their sex. In co-education schools, each sex monopolises the stereotyped tasks and behaviour and so the sex that really needs to practice new things never has the opportunity.

Kennedy (2001) on the advantages of single sex education says that girls in single sex schools relax enough to feel comfortable exploring non – traditional subjects such as mathematics, applied sciences and so on. Boys on the other hand participate in choirs and orchestras, and learn language in single sex settings. In many developing countries, modern education should be built on the foundations of traditional schooling, where content was sex differentiated. For example in traditional African education, boys and girls were taught different things and guided and counselled because their adult roles were slightly different (Kaabwe, 2000; Wango, 2006; Wango and Mungai, 2007). Kabwe for instance argues that single-sex school attendance was

found to benefit girls in mathematics in Nigeria, eliminating the stereotypical view that girls cannot succeed at mathematics.

Mondoh (2009) on learning differentials between girls and boys says that girls learn and perceive information concretely and process it reflectively. They learn best by personal involvement, listening, and sharing ideas. Their favourite question is 'why'. Teachers therefore need to provide them with reasons for learning certain concepts. Girls are also observers and thinkers who are best taught using experimental methods, which are practical. This implies that in lessons, which are teacher centred and individualized, girls are likely to lag behind boys, (FAWE, 1997). Boys on the other hand perceive information abstractly and process it actively. They like trying things out for themselves. Mondoh (2001) says their favourite question is 'how'. They prefer real and relevant "hands on activities" that relate to real life, especially those within the context of their own lives and environment. Boys according to Mondoh can apply concepts to new situations and cope with lots of home-work individually. Boys are also dynamic and risk takers. They are inclined to work on their own, or left on their own to teach themselves and others. Self-discovery might be the best method for teaching boys.

A most recent release from the University of Utago, Australia on 20th August 2009, via scoop search, said that single sex schooling reduces gender gap in educational achievement. This study showed that there can be clear differences between the two school types in both the size and direction of the gender gap. The effects of single – sex schooling on the gender gap are evident not only in the attainment of secondary school qualifications but also attendance at university and in the attainment of Bachelors degrees.

According to Dr. Leonard Sax (2005), the advantages of single sex education for girls fall into three categories:

- (i) *Expanded educational opportunities.* This is an opportunity for girls to explore non – traditional subjects such as mathematics, the sciences and woodwork. Single –sex school encourages girls to be daring, to try things that they might otherwise not try. This is because every top performer in their environment is a girl; the computer wizard is a girl, the school captain is a girl, the best mathematician is a girl, the best athlete is a girl. This experience sends a strong message to the younger girls that they too can excel in those fields.
- (ii) *Custom – tailored learning and instruction.* Pairing girls with boys does not help the boys, but it does hurt the girls (Inzlicht & Ben Zear, 2003). Differentiated Instructions (DI) are much easier to implement in a single sex environment. Teachers customize what they do to the needs of either girls or boys alone. The focus is on what works in girls / boys classrooms for each subject area, at each age level. In single sex schools, teachers are free to choose materials fit for the interests of their students. In coeducation schools, the girls are often held back, or their abilities and interests held down by the boys.
- (i) *Greater autonomy, especially in heterosexual relationships.* According to Pellegrini (2002), girls at single – sex schools have just as many heterosexual relationships as girls at coeducation schools. But girls in single sex schools are more in control, have more autonomy in those relationships and much less likely to experience an unwanted pregnancy. The social network for girls and boys in single – sex environment is likely to separate them from their boyfriends / girlfriends groups of friends. So it is easier for the girls to say no and contemplate life without the boyfriend.

Graham Able, the current school master of Dulwich College near London studied the performance of girls and boys in 30 single sex and co-educational schools throughout England. Able found that while both girls and boys did better in single sex schools than they did in co-educational schools, the single sex advantage was greater for boys than it was for the girls. Sax (2005) in a similar study pointed out that single sex format creates opportunities that don't exist in the coeducation classroom. Teachers can employ strategies in the all boys classroom and in the all girls classroom which don't work as well (or don't work at all) in the coeducation classroom. Teachers would therefore require to apply practical gender specific classroom strategies and practices for the gender- separate classrooms.

In a conference in Sydney, Australia (1999) heard several speakers' present evidence that boys who attend single sex schools may exhibit the following:

- (i) Do better in terms of maturity and social adjustment
- (ii) End up being more confident around girls since they don't tend to adopt a 'masculine' attitude compared to those in coeducation schools
- (iii) Become more sensitive men and they are more polite.
- (iv) May explore their own potential without worrying about looking foolish in front of the girls. The boys feel free to be themselves, to follow their interest and talents in what might be regarded as non – macho pursuits.

These and other studies continue to uphold the case for single sex schools.

Studies on the effect of school type on girls' self – esteem suggest that the sources of self – esteem for girls may differ in single-sex and co-educational schools. Studies found that girls in

single sex schools have a higher self-esteem compared to those in a co-education environment. Though the multidimensional measures used were composed of subcategories such as academic, athletic and social esteem but not their general self-concept or global self – esteem that may not differ between single sex and co-education environment. Girls at the single-sex school were less critical of their own behavioural conduct than girls in the co-education school. This lack of criticism was the best predictor of global self – worth in the all – girls’ schools. In the co-education schools physical appearance was the single best predictor of degree of global self-worth (Granleese and Joseph, 2002).

Robert (2001) says that boys tend to soften their competitive edge and become more collaborative in a single sex setting. They can just be boys and not worry about what the girls might think. Girls drop their shyness and begin to take risks in a single sex setting. They become more competitive. In addition, they also embrace sports like field hockey and soccer with gusto without worrying about appearing like tomboys. Robert continues to say that boys have always felt a need to impress girls in the classroom while girls usually feel as though the boys are always teasing them. Research from Uganda suggests that girls’ only schools are perceived to be more suitable for the development of female leaders than co-educational schools. The same is true of boys’ leadership skills in boy’s only schools. When girls are elected to student bodies in co-educational schools, they struggle to prove their capability and their actions are subjected to intense scrutiny (Male, 2000).

A report published by the Montreal Gazette (October 1999), the most widely circulated newspaper in Montreal, Canada, titled: ‘Let’s separate Boys, Girls in Classes’ based on a research conducted by the Superior Educational Council of Quebec recommended an end to co-

education. This is because the report argued that boys and girls learn differently and education should be separate – gender based, otherwise boys and girls will keep on getting weaker in their studies. In a conference of educational experts held in Sydney, Australia (July 2003), several speakers presented evidence that boys educated in single-sex schools may do far better in terms of maturity and social adjustment than boys who attend co-education schools. Various speakers narrated their experiences and observations, namely that boys educated in single sex schools may even prove to be better husbands in future because, due to absence of girls around them in schools and colleges, and therefore may not have to adopt a masculine attitude. Hence, boys in single – sex schools may be more sensitive men.

In Kenya, single sex versus mixed schools has been related to student discipline. Oyier, the Eastern Provincial Commissioner while presenting a paper to the Presidential Committee on unrest and indiscipline in Kenyan schools (The Daily Nation, August 13, 1999) suggested that all co-education schools in the country be scrapped and replaced by separate schools for boys and girls. Oyier argued that co-education schools served no purpose and instead promoted indiscipline leading to riots, and suggested that it was pointless to have young students living in the same compound at secondary school level as the move encouraged immorality. The separation of boys and girls could avert tragedies like the St. Kizito Secondary in 1991 where 71 girls were raped and 19 killed after supposedly declining to participate in a strike organized by the boys. Kigotho, (The East African Standard, November, 2009) in a recent exposure that teachers sexually abused almost 13,000 girls is an eye opener as to the reason many students fail to perform in their studies. Kigotho added that the number of girls who are sexually harassed by their male counterparts in co-education schools is likely to be several times higher than reported. KNEC (2008), had allegations that girls shy off from activities such as

answering questions, participating in practical and leaving these to their counterparts, the boys. This could explain the gender disparity in performance by girls in co-education schools. Thus, it can be deduced that pure girls' schools tend to compete favourably with the boys' schools, a reason why some schools have opted to separate the boys' girls' schools as well as classes.

Concrete policy options for countries in Sub-Saharan Africa and particularly in Kenya is to improve access, retention and quality of girls' and boys' schooling at all levels, especially the secondary level (Wango, 2009; 2010). The policies may lie in their ability and willingness to establish single sex schools and other gender friendly institutions. Evidence indicates that single sex schools improve girls' achievement in science and mathematics. Girls in single-sex classrooms are engaged in learning more of the time, show more cooperative behaviour and identify better with their female classmates than when they are in co-educational classes, (UNESCO, 2006). But whereas research in classroom dynamics indicates there are no differences in what boys and girls can learn, experts say there are different ways to engage and teach girls as compared to boys. Gender differences are crucial in learning (UNESCO, 2006).

According to Mondoh (2001), girls are reflective, surrealists, field dependants, divergent in thinking and cautious in the process of dealing with matters. These different cognitive attributes affect girls and boys differently, especially with regard to confidence levels, attitudes, ability to take risks, interactions and intellectual dexterity. Some of the attributes favour boys more as compared to girls with respect to learning and understanding (FAWE, 2000). Another issue is that the culture in co-education schools discriminate female students. Studies carried out in Kenya and Zimbabwe indicates bright girls are intimidated by boys and male teachers and often become victims of bullying and sexual harassment. At high risk are orphans and

other girls from low income groups who enjoy limited familial relations and security. According to Kigotho (2009) schoolgirls' safety, social and cultural identity is critical factors that are in favour of policies that would increase single sex schools for girls in Sub-Saharan Africa. Recent studies in Nigeria show girls in single sex schools appeared to have confidence and had diminished views of mathematics and science as male domains.

Studies in Kenya have not as yet established evidence in differences in performance in all subjects between girls and boys in national and provincial secondary schools that are basically single sex schools. However, academic achievement is radically different in co-education day secondary schools as girls perform dismally in mathematics and science (Kigotho, 2009).

According to Dr Tamo Chattopadhyay, an educational researcher at New York University and a leading expert on single-sex education, adolescent boys and girls are very sensitive to 'looking foolish' in front of their opposite classmates. "Single sex learning can help students to focus and improve their academic achievement". Subsequently, in single sex settings, girls are given the opportunity to learn new or traditionally male skills without teasing and competition of boys. Physical sciences, mathematics and computers are examples where girls can improve in single sex schools.

It can also be argued that teachers are to blame for peddling gender stereotypes in education. In Zimbabwe, researchers have observed teachers giving girls less time to think through their answers. "This aspect sends a message that they are less capable than boys," says Dr Vera Leach, a leading researcher on girls' barriers to education in Africa. Worse still school textbooks, art and other teaching in Sub-Saharan Africa focus primarily on men as being the leaders, thinkers and creative minds. In the long run, girls are conditioned to set learning and

career goals that are lower than their potential. But in girl-only learning environments, girls are exposed to more successful female role models. Beatrice Obwocha (The Standard February. 29, 2008) in an article 'Split Helps Nakuru High', stated that the split of Nakuru high had paid dividends – performance of the two schools had improved. Nakuru Boys High School mean score in KCSE rose from 8.1(B-) in 2006 to 8.9 (B) in 2007. The best students in Rift Valley came from the two schools. The second best boy and best girl in Rift Valley came from the two Nakuru schools. The school was split in 2006 due to poor academic performance as a co-education school.

According to gender expert Subrahmanian (2007), the question of co-educational versus single-sex schools continues to demand policy and research attention. Single sex learning environments are considered particularly important for post primary school learners, where co-educational education may be considered a risky proposition and a disincentive to continued girl schooling particularly, in the context of adolescence and the onset of sexual maturation. Single-sex classrooms may be attractive to parents and educators as a way of minimizing distractions for girls and boys, especially as they grow up.

2.4. Performance in KCSE in Taita District

K.C.S.E. analyses nationally and in Taita District over the years reveals great disparity in performance between boys and girls in mixed public schools over the years. This was compared to single sex public schools. The results are depicted as shown below in Table 2.2 below.

Table 2.2: Taita District KCSE Analysis

School Type	2004	2005	2006	2007	2008
Boys schools only	6.75	6.53	7.16	7.67	6.87
Girls schools only	5.89	6.32	6.54	6.81	6.05
Co-education schools only	4.29	4.32	4.27	4.02	3.59
DISTRICT TOTALS	5.64	5.72	6.14	6.16	5.50

From the above data, boys only schools consistently perform better than girls, though the performance in mixed schools is much lower. This appears to be replicated in national performance in KCSE as eighteen (18) out of the top twenty (200 schools in 2007 were single sex schools. In 2006 the top nine (9) schools nationally were single sex schools, and among the top fifty (50) girls schools nationally, only two (20 were mixed schools. Compared to the boys, only five (5) of the top fifty schools nationally were mixed boys and girls in 2008 at KCSE. The better performance by single sex schools possibly explains why there are no co-education national public schools in Kenya today. Nakuru High School was the only public co-education national school until 2006 when stakeholders suggested that it be split into two separate schools; one for boys and the other for girls. The main objective was to increase adequate and educational opportunities for girls and boys in order to enhance educational outcomes. It is notable that the mean school at Nakuru Boys High School rose from 8.1 in 2006 to 8.95 in 2007.

2.5. Theoretical Framework

This study made use of the Social Cognitive Theory of Gender Development and Differentiation by Albert Bandura. The theory argues that human differentiation on the basis of gender is a fundamental phenomenon that affects virtually every aspect of people's daily lives.

According to Bandura (1986) people learn by observing others, the environment, behaviour and cognition all combined as the chief factors influencing development. These three factors are not static or independent; rather, they are all reciprocal. For example, each behaviour witnessed can change a person's way of thinking (cognition). Similarly, the environment influences behaviour.

This theory also pegs performance on observation of models. The models can be those of an interpersonal imitation. Effective modelling teaches general rules and strategies for dealing with different situations in learning. In co-education schools, girls rarely have models to emulate since boys tend to always be in the advantageous position. The student leader and head prefect is usually male, the best mathematician is likely to be a boy, and the sports person of the year is almost obvious that it will be a boy. In such a scenario, girls cannot be sure as to whether they have the kind of potential boys possess. As a result of the observations, the endorsement explains that the observer anticipates similar outcomes to his / her imitated behaviours and allows for these effects to work. This portion of the theory relies heavily on outcome expectancies. These expectancies are heavily influenced by the environment and the perceptions of the observer. From what the social cognitive theory posits, there is need to study keenly the kind of learning environments that exist especially in mixed schools.

A major question then would be: is the learning environment so obvious that it can be observed and influence the learners positively? The learning environments from the socio cognitive view should be those that create and strengthen self efficacy in learners by social modelling. Models transmit knowledge, skills and strategies for managing environmental demands. Seeing people similar to one succeed by sustained effort raises observers' beliefs in their own capabilities.

The failures of others will in turn instil self-doubts about ones own ability to master similar activities. Students in co-education sex schools could possibly be lacking performing models from whom to learn, where as the single sex schools produce many top performers and those who lag behind, they are challenged to work harder. This in gender psychology is true of an environment where girls are psychologically made to feel they are low achievers (Wango, In Process). These could explain why single sex schools remain top in performance as the co-education schools remain at the bottom.

The social cognitive theory integrates psychological and social structural determinates within a unified conceptual structure. In this theoretical perspective, gender conceptions and roles are the products of a broad network of social influences operating interdependently in a variety of societal subsystems including the school (Wango, In Process). As students become aware of the social significance attached to their gender, they increasingly attend to this aspect of their behaviour (Serbin & Sprafkin, 1986). In co-education sex groups, students are more likely to monitor behaviour according to the gender linkages. Compared to girls, boys monitor their behaviour on the gender dimension more closely because they are more likely to be reproached for conduct that deviates from their gender (Martin 1993; Wango, In Process). This is because girls and women are often made more conscious of their behaviour, and urged to conform to 'conventional' stereotypes. In co-education schools, according to Olafsdottir (1989), each sex monopolizes its stereotyped tasks and behaviour and so the sex that really needs to practice new things never gets the opportunity to do so. Thus, co-education sex schools support and perpetuate the old traditional gender roles. This is even so when society attempts to uplift the welfare of the disadvantaged such as girls in schools (Wango, In Process). These stereotyped tasks and behaviour in co-education schools lead to stereotypic gender occupational

orientations which are closely linked to the structure of efficacy beliefs. Girls perceive occupational efficacy centres on service, clerical, caretaking and teaching pursuits, whereas boys judge themselves more efficacious for careers in science, technology, computer systems and physically active pursuits.

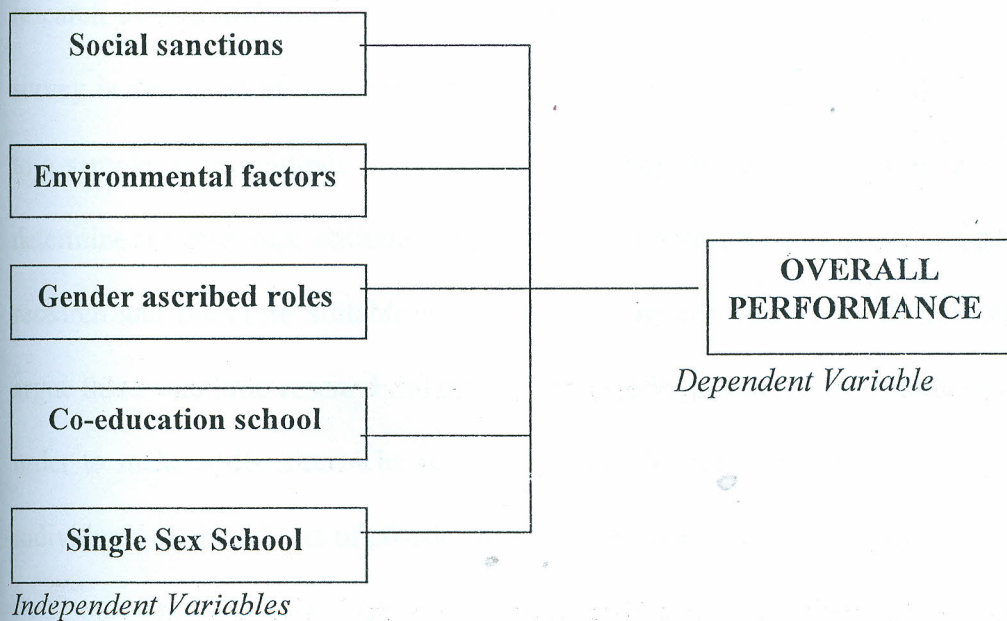
This study has emphasized that secondary education is a critical transitional stage from a young child to an adolescent. Secondary school students are usually at the adolescent age. According to adolescent psychology which is an aspect of social cognitive theory, adolescents experience various strong cognitive and physical changes for the first time in their lives. Due to peer pressure, they may sometimes indulge in activities deemed socially unacceptable; like the need to have sex, consume alcoholic beverages, use drugs, defy their parental figures or commit any activity in which the person who is subjected to may not deem appropriate among other things. This in turn explains why there is such a drastic wastage of girls at the secondary school level.

Students in co-education schools are adversely affected by the sexual developments brought in by puberty. The girls have to deal with sexual advances from boys in addition to having earlier sexual encounters and more unwanted pregnancies. This is because maturation can sometimes lead to increased self consciousness and a feeling of insecurity among girls (Bandura & Mead 1997). On the other hand, the maturing boys tend to capture the attention of girls which makes them more confident, secure and more independent. Both boys and girls who have had the above experiences in a mixed school environment tend to perform less well than their peers in single sex environment who are free and safe from being distracted by the opposite sex.

Factors affecting academic performance in both mixed and single sex schools were key aspects investigated in the study. The dependent variable was the overall performance, while the independent variables ranged from environmental factors, gender ascribed roles, cognition and social sanctions that in turn affected performance. The theory enabled an investigation on differentiatinal factors based on gender and how they in turn affect the general performance of learners to account for the disparity in performance in single sex schools and co-education schools nationwide.

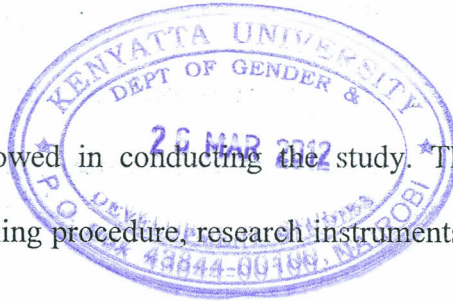
This is illustrated in Fig. 2.1. below:

Figure 2.1 . Conceptual Framework



CHAPTER THREE

RESEARCH METHODOLOGY



3.0. Introduction

This chapter presents the procedure followed in conducting the study. This includes the population, location of the study, the sampling procedure, research instruments and the sample size.

3.1. Research Design

The study employed a descriptive, evaluation and a survey study research design. A descriptive research determines and reports in a natural setting. According to Orodho (2003), descriptive survey is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals. In a descriptive survey, research questionnaires are often used to determine the opinions, attitudes, preferences and perceptions of groups of people of interest in research and therefore suitable to the study. Mugenda and Mugenda (1999) and Gay (1992) argue that evaluation research involves a systematic process of collecting and analyzing data in order to make a decision. The research design therefore enabled the collection of data from individuals on the effects of co-education on the performance of boys and girls.

3.2. Research Site

The study was conducted in Taita District. Taita district is situated in the South-Western part of Kenya's Coast Province. It is one of thirteen districts in Coast Province. Taita District lies approximately 200km northwest of Mombasa and 360km southeast of Nairobi city. The district

covers an area of about 16,975 km². By 2002, the population in the district was estimated at 250,000 people, 59% of who live below the poverty line (Republic of Kenya 2002).

3.3. Study Population

Taita district has thirty-five (35) public secondary schools, eight (8) of which are single sex schools while twenty-seven (27) are mixed secondary schools. Top performing schools in K.C.S.E. in the district are often the eight (8) single sex schools, which account for only 29% of the total number of secondary schools in the district. The target population for this study consisted of a boys' only, a girls' only and a mixed school, while respondents were the principals, teachers and students in the schools.

3.4. Sample Population and Sampling Procedure

The schools were selected using purposive sampling. The power of purposive sampling lies in selecting information for in-depth analysis related to the central issues being studied (Kisilu and Delno, 2006). The three purposely selected schools were the top performing schools in each category. They also had a few common characteristics among them such as similar facilities. From each of the three sampled schools, the researcher selected the school principal, some class teachers and students to take part in the study. In each school four class teachers were randomly selected from forms 1 to 4. Students were selected using stratified random sampling to ensure that each stratum had an equal chance of being represented in the study. This stratum was based on different class levels in the school. The reason for stratifying the student population was to achieve a desired representation from various subgroups in the population.

covers an area of about 16,975 km². By 2002, the population in the district was estimated at 250,000 people, 59% of who live below the poverty line (Republic of Kenya 2002).

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Table 3.1. The Sampling Grid

School category	Number of Respondents			
	Principal	Teachers	Students	Total
Mixed school	1	4	30	35
Boys school	1	4	30	35
Girls school	1	4	30	35
Totals	3	12	90	105

3.5. Research Instruments

The study used three sets of research instruments to capture the requisite information, namely self administered questionnaire for students (Appendix I), teacher questionnaire (Appendix II) and an interview schedule (Appendix III) for principals of schools.

3.5.1. The Survey Questionnaire

Self-administered questionnaires were administered to both teachers and students. The various sections were used to source information from students and teachers. The first section gathered the bio-data, including gender, class, academic performance and level of education for teachers where applicable. The second section of the questionnaire contained both quantitative and qualitative items which corresponded to the research objectives.

3.5.2. Interview Schedule

Appointments were made with the principals of the three secondary so as to conduct an in-depth interview. The subject on academic performance among boys and girls was introduced to the principals and the significance to the study was explained. The interviews enabled further investigation on several aspects such as school facilities, entry behaviour of students, how boys and girls relate with each other in the learning process, and the challenges they meet as they work towards achieving good results. The interview schedule mainly comprised of open-ended

questions that provided the researcher with an opportunity to probe for clarifications; hence the questions yielded more data than the closed-ended type (Nachmias and Nachmias, 1996).

3.6. Validity of Research Instruments

The data collection instruments were pre-tested and piloted before the main study was conducted. The collected data was processed, analysed and interpreted. From the results, it was noted that some questions did not yield what was expected as per the objectives. Based on this, the instruments were reviewed by re-phrasing the questions that were not well-understood; while irrelevant questions were removed. The pilot study also enabled the researcher to familiarize with administration of the instruments, and reveal whether the anticipated analytical techniques were appropriate. In addition the researcher also sought assistance from the supervisors in order to help improve content validity of the instruments.

3.7. Reliability of Research Instruments

In this study, a high level of reliability was achieved using a number of ways. First, the researcher ensured that questions were designed and put across in the simplest way. This was improved further after piloting the instruments. Secondly, during pilot-testing, the questionnaire was further improved to two sections, one with structured questions and the other section with open-ended items.

3.8. Data Collection Procedure

The researcher obtained a letter of introduction from Kenyatta University. The District Commissioner was also contacted to allow the researcher proceed to the schools in the District for the data collection exercise. After this, the researcher booked an appointment with the

school principal in the sample schools and visited to collect data. The respondents were given instructions and assured of confidentiality, after which they were given enough time to fill in the questionnaires. Once filled, the questionnaires were collected processed and analyzed. Face to face interviews were conducted by the researcher with the three school principals.

3.9. Data Analysis and Presentation

The first phase of data analysis in this descriptive study was scoring the questionnaire responses. A result of surveys is described using simple descriptive statistics, which includes means and frequency distribution tables as used by Monsen (1992). Descriptive statistics such as frequency distribution tables, percentages, means and standard deviations were calculated in form of tables, graphs and charts to be able to obtain the sum total of weight of views expressed by the respondents in the closed-ended items. From the frequencies calculated, the researcher was able to draw conclusions and make recommendations on factors that affect performance of boys and girls.

CHAPTER FOUR

EFFECTS OF CO - EDUCATION ON PERFORMANCE OF GIRLS AND BOYS

4.0. Introduction

This chapter presents the findings of the study outlined under four thematic sub-sections in line with the study objectives. These are: environmental factors that influence performance; effects of school type on performance; gender roles and performance; and, ways of enhancing performance.

4.1. Respondents and Schools

There was full response (100%) amongst the teachers and headteachers while the response rate of the students was overwhelming (93%). The three public secondary schools surveyed included boys only, girls only and one mixed school. The sampling of the schools was based on the following common characteristics among them:

- (i) They were well established Public Provincial Secondary Schools;
- (ii) They were performing schools in each school type among the public secondary schools in the district;
- (iii) They all had similar school curriculum; and,
- (iv) They were full boarding schools.

By holding background attributes of the schools constant, variation in the indicators of performance were then attributed to the school type.

The study covered 90 students, 12 teachers, and 3 Principals. The sample size was 5% of the entire student's population which comprised 37 girls (44%) and 47 boys (56%) of the total respondents with equal numbers of 28 students from each of the three schools. The teachers had an equal gender representation while the head teachers were two males and one female. The presence of both men and women on the teaching staff served to provide a complete social set up where students had a choice of who to approach for various issues (Wango, 2006).

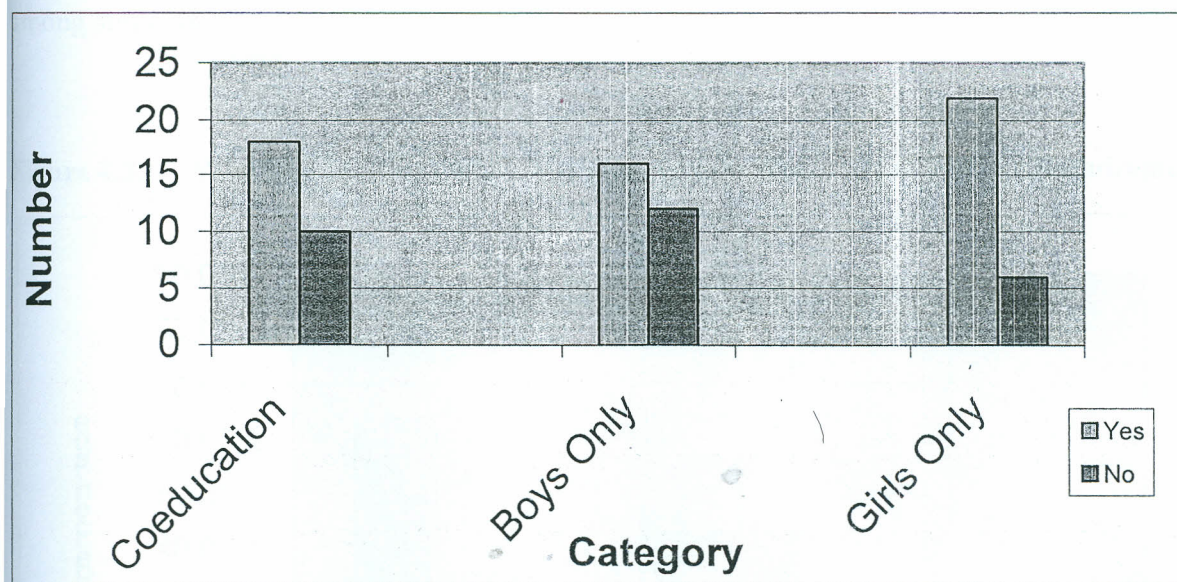
1.2. School Characteristics that Influence Performance

School Infrastructure is critical to achieving good academic performance. In addition to the school infrastructure, other aspects such as maintenance of school facilities; school type (single sex or co-education school), provision of textbooks and adequate teachers all play a critical role in enhancing performance in a school setting. One of the components for a conducive learning environment is good school infrastructure. Some of the aspects that were investigated included the existing physical facilities such as libraries, laboratories, playing fields, classrooms, dormitories and resources like books and laboratory equipments. Other non-physical environmental factors like proper time management as indicated in the schools' daily programmes were also examined. Based on this, the head teachers of the three schools reported that the schools had fairly adequate facilities except for congestion in classrooms and dormitories as a result of the influx caused by the Free Secondary Education. They also highlighted the presence of old building and poorly equipped libraries. All the schools had Computer Studies as a subject and they had well equipped computer laboratories.

Adequate learning resources especially textbooks help to boost the student's academic achievements. The study sought to establish the textbook ratio among students. All the

respondents in the boys' only schools and the mixed school indicated that they had adequate textbooks. A few (12%) respondents in the girl's only school stated that they did not have adequate textbooks. This would pose a problem to the girls' only school in terms of learning achievements. However, the principal insisted that the school had adequate textbooks but students kept losing them. Books have a significant correlation with performance and it becomes quite a challenge as students who are not well equipped may not perform as expected. In addition to curriculum materials such as textbooks, there are other critical items that form part of the teaching learning process. These include personal effects such as sanitary pads for girls, school uniform; and pocket money. These were also considered in this study.

Figure 4.1. Ability of Parents / Guardians to Provide all School Requirements

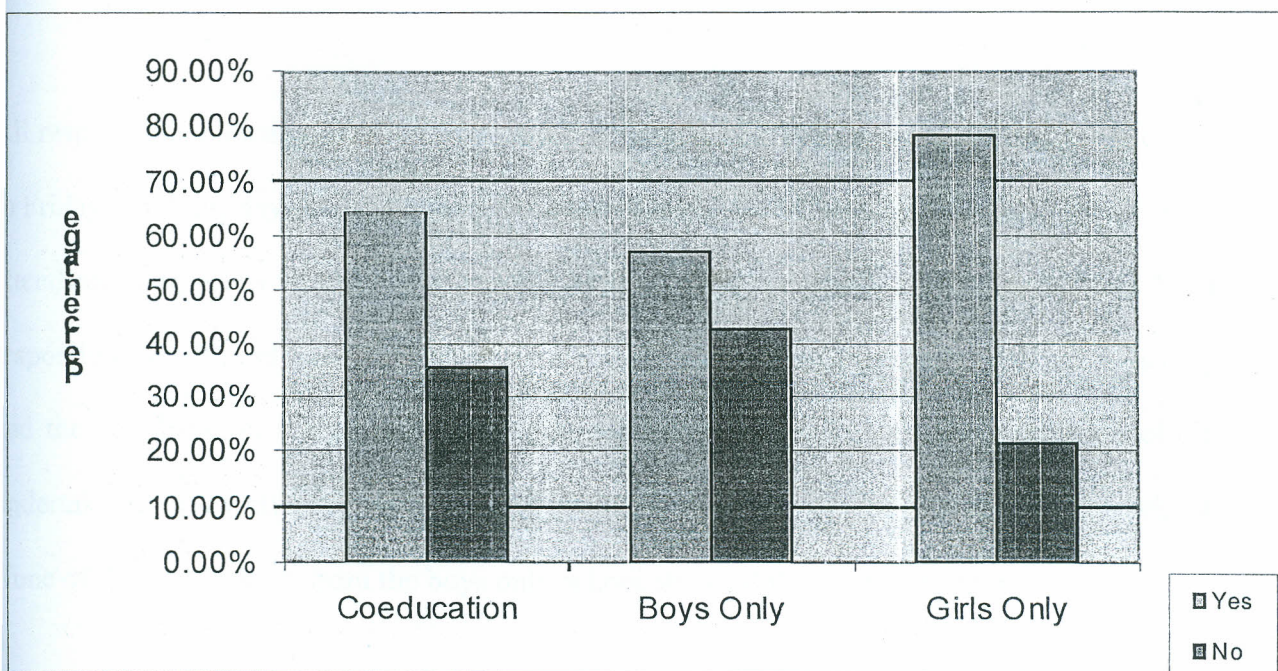


Findings revealed that all the schools had a fair share of students who were either adequately supplied with basic necessities, or those inadequately supplied with certain items. More than two-thirds (67%) of the respondents stated that their parents or guardians were able to purchase all school requirements. However the findings showed that the respondents from the girls' only

school had the highest (26%) provision followed by the mixed school and the least (16%) were respondents from boys only school. About a third (33%) of the students did not get pocket money followed by about a quarter (22%) who did not get personal effects and stationery. The government provision of Free Secondary Education must have assisted ease the fee burden on parents and guardians, which is probably why school fees did not feature as the most burdensome item. School uniform though mandatory is still an issue amongst a few (9%) students who lacked this item. The lack of these school items would significantly affect learning achievements among students.

in-depth interviews with the school principals revealed that there were several needy students in all the three schools. Figure 4.2 below illustrates the degree of providence or neediness among students.

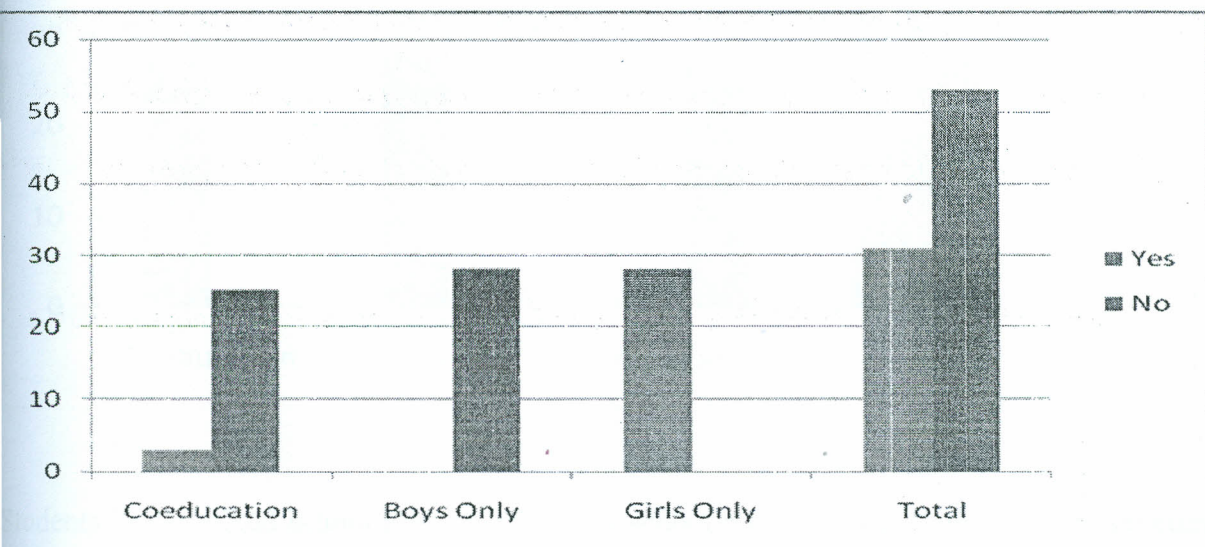
Figure 4.2. Whether Students were Adequately provided with all School Requirements



4.3. Academic Performance

Indicators of a conducive learning environment included private study or 'preps' that provide an opportunity for students to study on their own. Private study or preps was a common practise in all the three schools. Attendance to Saturday preps is captured in Figure 4.3 below.

Figure 4.3. Attendance of Afternoon Preps on Saturdays

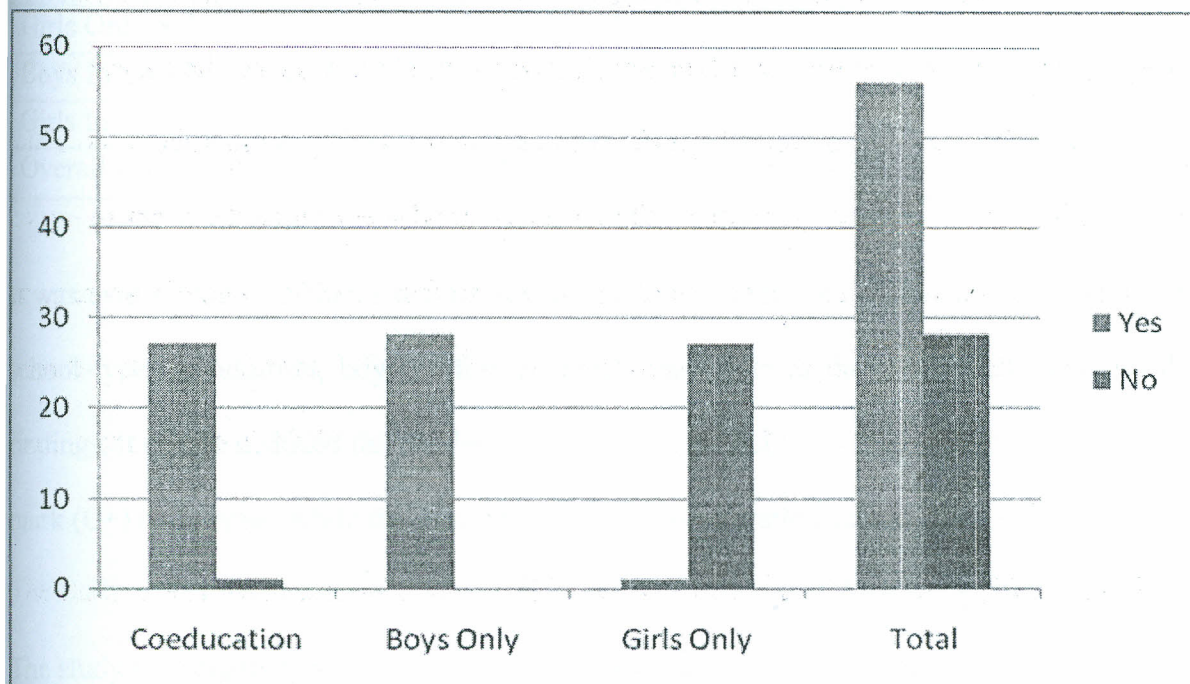


All respondents indicated that they attend morning, afternoon and evening preps from Monday to Friday. On Saturday all respondents from boys only and coeducation schools stated that they attend morning preps while only a few (10%) from the girls school attend this session. Most respondents (63%) did not attend Saturday afternoon preps especially those from the boys only and the co-education school types. However all the respondents in the girls only school did undertake Saturday afternoon preps with a few (4%) respondents from the coeducation school. None of the respondents from the boys only school attended this particular prep time.

The study sought to investigate whether all respondent undertake Saturday night preps.

The findings are captured in Figure 4.4 below.

Figure 4.4. Attendance of Night Preps on Saturdays



Students in the mixed school and the boys only school attended to private study on Saturday, while respondents from the girls only school type did not attend. On Sunday morning, only respondents from the boys only school attended while very few (7%) in coeducation and girls school types had any private study. Almost all the students were in class on Sunday afternoon while on Sunday nights private study was compulsory. Private study was compulsory over the course of the week as all the schools were boarding secondary schools with an almost similar programme (Wango, 2009). Additionally all the three schools had a guidance and counselling department that addressed the social, personal and other needs of students (Wango, 2006; Wango and Mungai, 2007).

The study investigated performance in KCSE between 2004 and 2008 in the three schools.

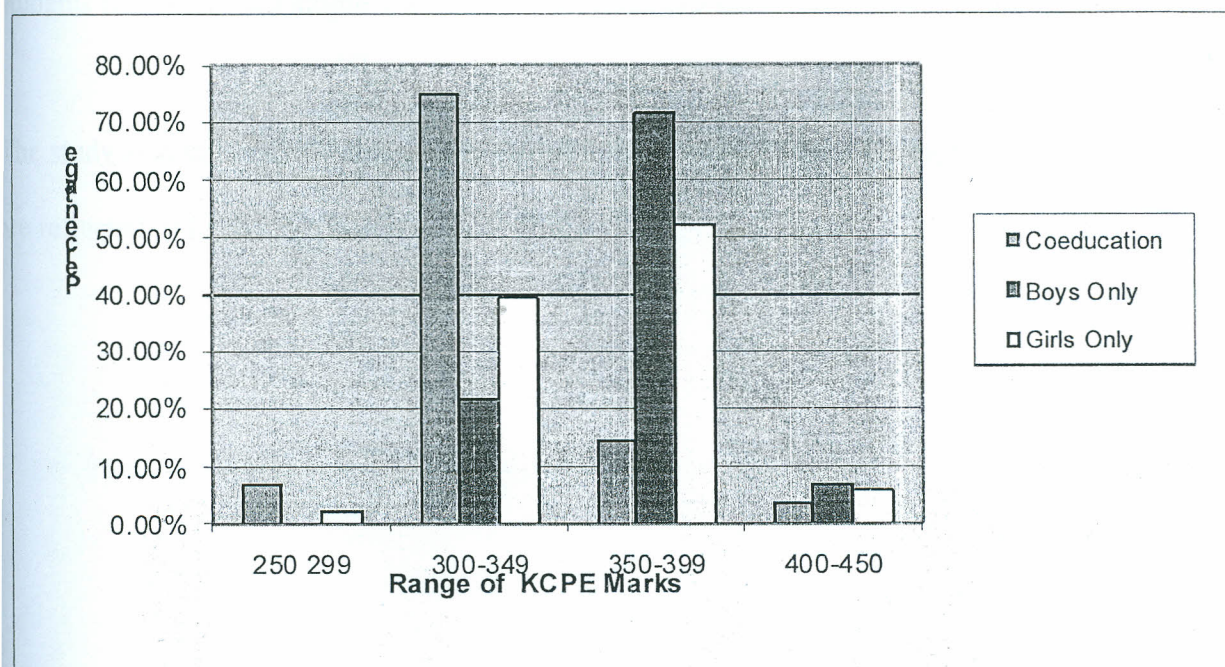
Table 4.1. KCSE Results 2004 - 2008

SCHOOL TYPE	2004	2005	2006	2007	2008	Average
Boys Only School	7.48	6.69	8.41	7.84	7.57	7.598
Girls Only School	6.86	7.58	9.04	9.14	6.77	7.878
Boys In Co-education school	5.90	5.60	6.03	5.33	6.77	5.926
Girls In Co-education school	4.04	5.00	6.36	4.37	5.00	4.954
Overall Co-education school	4.97	5.30	6.19	5.25	5.87	5.516

It was evident that the single sex schools consistently performed better than the co-education school type. In addition, boys performed better than girls in the mixed school. From these findings, it can be deduced that students in single sex school types easily attain University entry mark (C+) on average while this is not the case for co-education school type.

The study investigated the students KCPE marks by school type as shown in Figure 4.5 below.

Figure 4.5. KCPE Marks by School Type

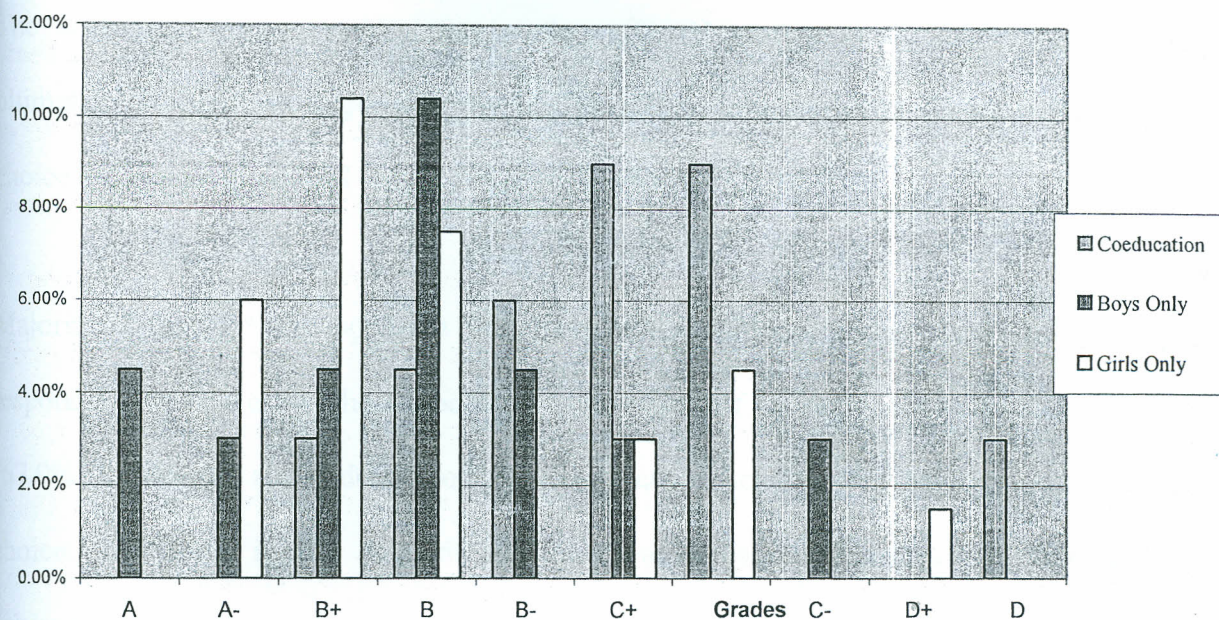


Findings demonstrate that in boys only and girls only school types none of the student had scored below 300 marks at KCPE: while a few (2.4%) respondents had a score of less than 300 marks were in co-education secondary school. Also majority (75%) of respondents who had scored a range of 300-349 were in co-education school type. In addition, majority (75%) of respondents in both boys only and girls only had scored above 350 marks at KCPE. This disparity is an indicator that students who perform well get placed in single sex school type. The popularity of single sex school type emanates from their constant good performance and socialization. However, the almost similar entry marks at KCPE did not translate to academic performance at KCSE.

The Australian Council for Educational Research (ACER 2000) on school type and performance concludes that co-educational settings are limited by their capacity to accommodate the large differences in cognitive, social and development growth rates of boys and girls aged between 12 and 16. During the survey, all the teachers, head teachers, and most students recommended single sex schools for secondary education.

The study also examined the grades obtained by the respondents the previous term. The results are reflected in Figure 4.6 below.

Figure 4.6. Comparison of Student Performance the Previous Term



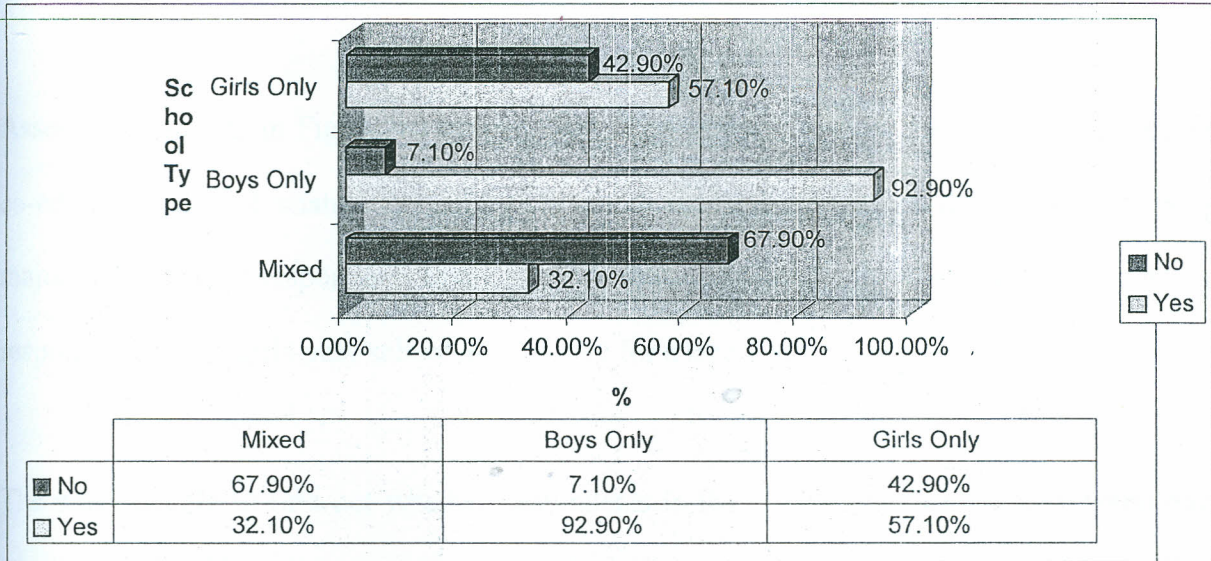
The current University marks is C+ and above. Findings (Figure 4.7) show that respondents from single sex schools had better results with boys only school recording about a third (30%) of the respondents scoring a C+ and above, while respondents in the girls only school and the coeducation school had 27% and 22.5% respectively with similar grades. However on closer scrutiny it's the respondents from the boys only school who had registered a grade A (4.5%) and the girls only school started at A- (6%) while no (0%) respondents from the coeducation school registered a Grade A- and above. Respondents who scored a B+ were mostly (10.4%) from the girls only school followed by the boys only (4.5%) and while the coeducation school had a B+ at the best grade, and even these were very few (3%). Interestingly, grades from the boys only school respondents stopped at C-, while the respondents from girls only school stopped at D+ and the coeducation school recorded a D (3%). This is an indicator that there tends to be underperformance at the coeducation school. These finding demonstrate that the type of school has a significant impact on academic performance in secondary education.

4.4. Factors Influencing Student Performance

The study investigated various factors that affected student performance in school and ultimately at KCSE. A major concern was whether respondents were in the school of their choice, especially the mixed versus single sex category.

Majority of the (92%) respondents from boys only school and slightly over half (57.1%) of respondents in girls only school type were in the school of their choice. However, a significant (67.9%) number of respondents from the co-education school were not in a school of their choice. This could impact on their attitude towards the school and affect their academic achievement.

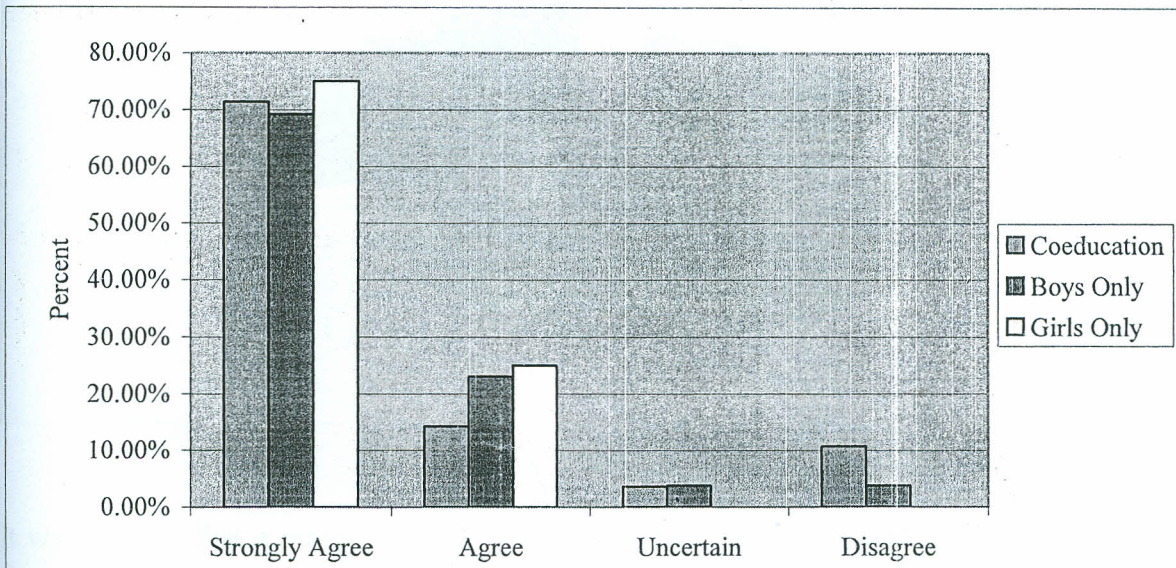
Figure 4.7. Whether Students are in the School of their Choice



In the question that required the students to mention the schools they would have wished to join, all the students from the co-education school had chosen other top performing Provincial and National single sex schools only. Three in every four (72%) of the respondents in all the three school types tended to prefer learning in a single sex school. Further, the study revealed

that given a chance most of the respondents would have liked to learn in single sex schools as shown in Figure 4.8.

Figure 4.8: Student Desire to Study in a Single Sex School

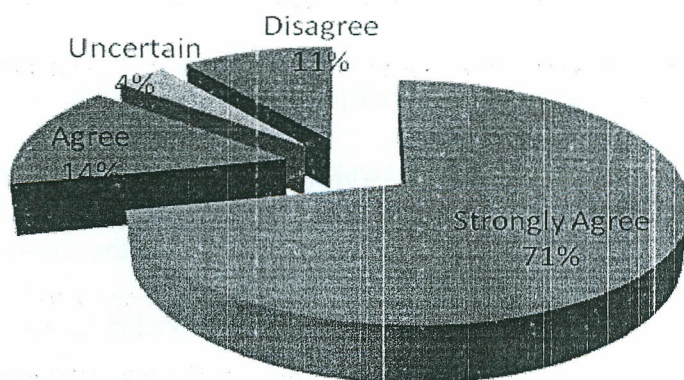


Assessment of data in Figure 4.8 reveals that a majority (85.7%) of the respondents from the co-education school wished to learn in a single sex school, and so did an overwhelming majority (92.3%) of respondents in the boy's school still wished for a single sex school. All the respondents in the girls only school also wished for a single sex school.

The study sought to find out whether respondents in the coeducation school type would have wished to study in single sex school. Their responses are indicated in Figure 4.9

Figure 4.9: Student in Mixed School Wish To Learn In a Single Sex School

What is your opinion regarding the statement that given a chance, you would always wish to learn in a single sex school?



It was evident that a majority (85%) of the respondents in the co-education school preferred single sex schools and given a chance, the majority would like to learn in single sex schools.

Respondents in girls' only school too always wished to learn in a single sex school.

From the findings it may be deduced that respondents in co-education school type were discontented with the school, and this negative attitude may have affected their performance.

Students and teachers cited several reasons for their preference of single sex school as listed below:

- Better academic performance;
- A higher level of concentration on studies;
- No distractions/attraction from opposite sex;
- No irresponsible sexual behaviour;
- Fewer cases of school girl pregnancy and school drop outs;

- Free self expression since there is absence of other sex;
- More students joining universities from single sex school;
- Healthy competition among students which improves performance;
- Equal treatment of students;
- No incidences of unhealthy relationships among students;
- No emotional attractions and feelings towards the opposite sex;
- Single sex schools are easy to manage and organize;
- Minimal anti-social behaviour;
- Good interaction and cooperation among students; and,
- Discipline is better.

Respondents were further required to explain why they thought that co-education schools were not their preference. The respondents gave various reasons as listed below:

- Co-education schools tend to perform poorly in KCSE;
- Co-education schools encourage students to engage in unhealthy relationships among themselves;
- A lot of time is spent by the students trying to look attractive for each other instead of concentrating on their studies;
- The presence of opposite sex distracts students since they get attracted to each other;
- Students engage in irresponsible sexual behaviour;
- There are higher rates of early pregnancies;
- There are more cases of indiscipline in co-education schools;
- Students fear expressing themselves freely, especially the girls and this affects performance;

- There is favouritism with boys being favoured most;
- To help control the girls and boys, the rules are usually too tight;
- Girls are constantly teased and intimidated by boys

4.5. Future Career Aspirations and Choices

The study sought to find out the career choices of students after school. In a number of cases students tended to focus on their studies with the aim of achieving high grades for their dream careers. Some of the popular career choices included: medicine; law, engineering, accounting, piloting, architecture and mass communication. The least popular courses were: Agro-Business Management, Criminal Investigation Department (CID); Information Technology (IT); Military; Business Management; Hotel Management; Air-Hostess; Bachelor of Commerce; Textile and Fashion Design; Bachelor of Arts and Veterinary Medicine.

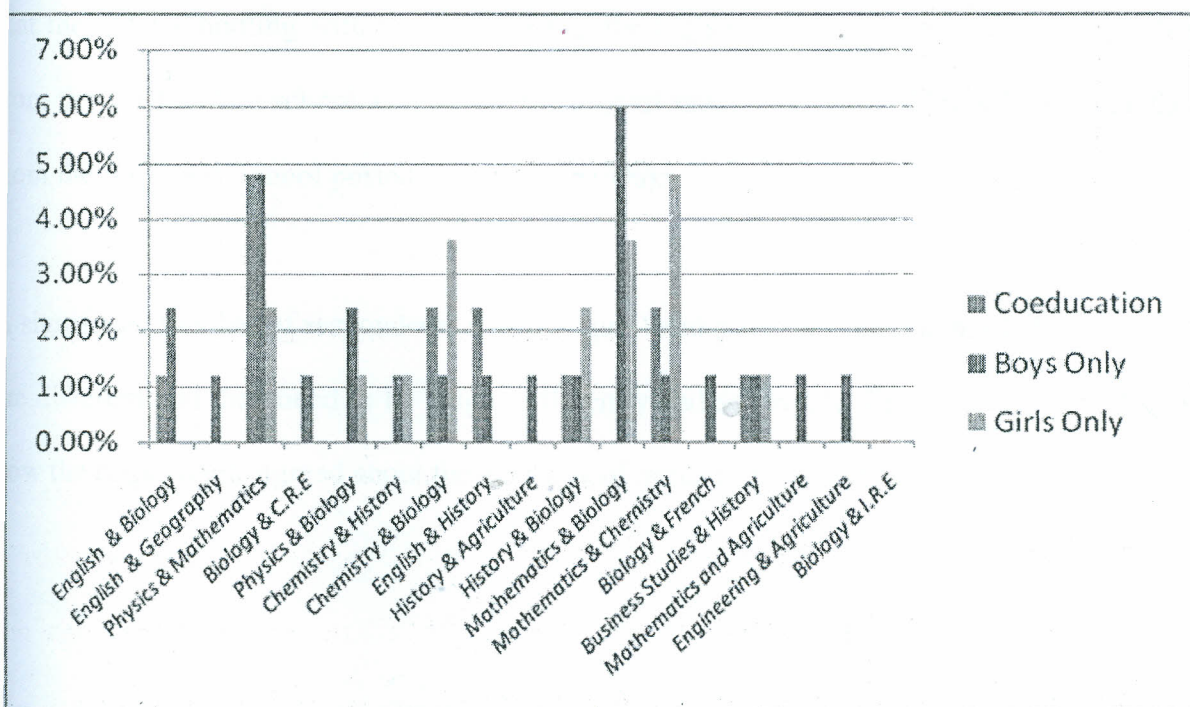
Medicine was the most popular choice (31%) as a career among the respondents out of whom the girls only school type posted 12% response, the boys only school type had 11% and the coeducation school type had the least (8%) response rate. Law was the second popular choice amongst the respondents where the coeducation school indicated a high interest (8%) while both boys only and girls only schools registered equal interest (7%). Engineering was the third popular choice (18%) with the boys only school respondents indicating an 8% while the girls only and the coeducation school respondents each indicated 5% response.

Respondents from the girls only school seemed in addition to prefer courses such as textiles and fashion design; business administration; hotel management; air hostess; and, Bachelor of Commerce; which the other two school types completely shunned. Surprisingly, this category

f respondents did not pick career choices such as agro-business management; Bachelor of Arts, CID, veterinary medicine, Information Communication and Technology, which were chosen by respondents from the boys only school. Students in mixed schools indicated accounting, veterinary medicine and Bachelor of Arts as additional courses. The boys only school respondents in addition to the favourite choices also indicated agro-business management, CID, IT and Military Officers. Popular careers were those that seemed prestigious and most lucrative in the society.

The study also sought to find out what were the two most favourite subjects. The findings are reflected in Figure 4.10 below.

Figure 4.10. Student Most Favourite Subjects



Physics and Mathematics (12%); Mathematics and Biology (10%); Mathematics and Chemistry (8%); and, Chemistry and Biology (7%); were the two most favourite subjects in that order.

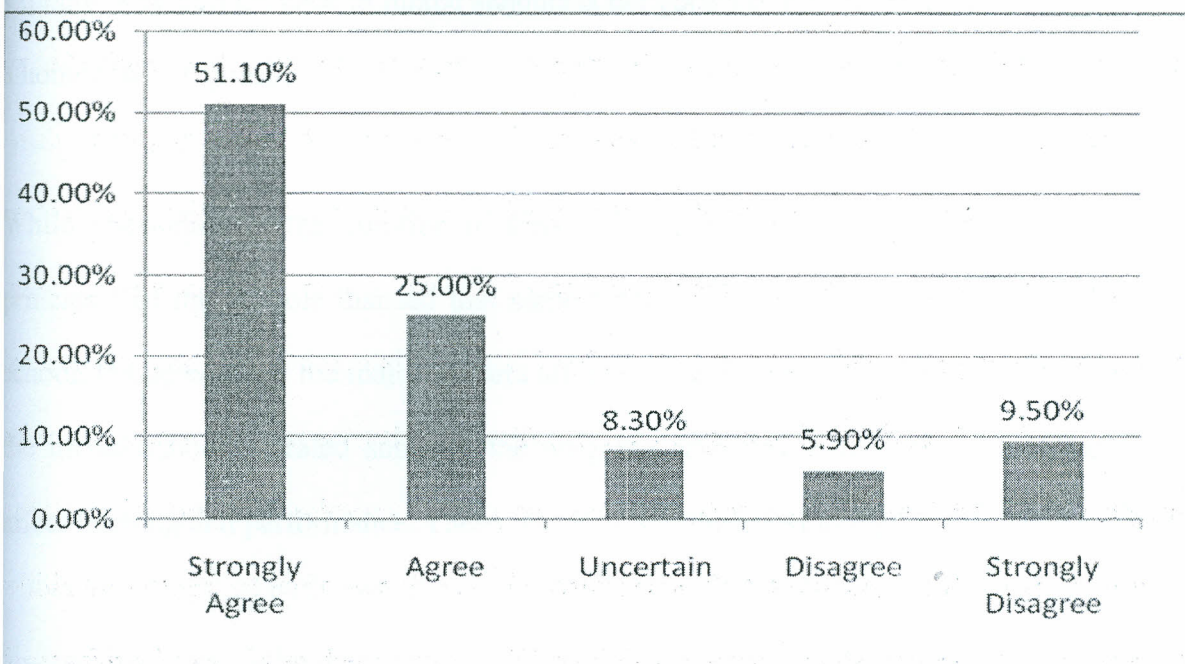
respondents in the boys only and coeducation schools posted a higher (5%) liking for Physics and Mathematics compared to the girls only school (2%). These two subjects give a greater average in a number of career choices especially medicine where the girls only respondents posted a preferred choice. This finding also lends credence to choice of career courses such as engineering, piloting and accounting where the boys only school and coeducation respondents recorded a higher rate. This could be attributed to the presence of boys in the coeducation school. Surprisingly respondents in the girls only school type did not pick a choice with English yet according to the KCSE results the performance of girls tends to be better.

4.6. Attitude towards Schooling and Gender Differentials in Learning

The study investigated whether the respondents like schooling. This is an important aspect that affects academic performance. An overwhelming majority (83%) of the respondents indicated that they like schooling with the boys posting the highest (30%) response rate. Respondents from the coeducation school also posted the highest rate (7%) of not liking school while those from the boys only school posted the least rate (4%).

A significant number of respondents said that girls' and boys' educational needs in a classroom are different and they need to be taught differently and separately. Figure 4.11 below displays how the respondents agreed about the educational needs of boys and girls.

Figure 4.11 Whether Educational Needs of Boys and Girls in Classroom Differ



A majority (86%) of respondents agreed that the educational needs of boys and girls differed. Mondoh (2001) says that girls perceive information concretely and process it reflectively. They learn best by personal involvement, listening and sharing ideas. Teachers therefore need to provide them with reasons for learning a particular concept. It is recommended that they be taught using group work approach. This implies that in situations where lessons are teacher centred and individualized, girls are likely to lag behind boys. Girls are also observers and thinkers who are best taught using experimental methods, which are practical and require laboratories and instructional aids (FAWE 1997). Boys on the other hand perceive information abstractly and process it actively. They like trying things out themselves. Mondoh (2001) says, boys' prefer real and relevant 'hands on' activities that relate to real life, especially those within the context of their own lives and environment. Self discovery would be the best method for teaching boys. With these gender differentials it becomes quite apparent that a mixed class

can be difficult to teach if a teacher is to consider these learner differences. This possibly explains why performance in mixed schools is not good because teacher handle the students as a homogeneous group.

While responding to the question of girls and boys affecting each other academically, the principals of the schools insisted that some students were not affected at all by the type of school, but agreed that the majority were affected. The in-depth interview with the principal of the mixed school revealed some of the on-going activities in the co-education school, that affect learning and performance. These activities are illustrated in Figure 4.12.

Figure 4.12: Co-Curricular Activities in Co-education Schools

- Girl/boy relationships which are sometimes very difficult to stop;
- Girls are affected most by this relationships since they tend to be too trusting and stop studying seriously;
- Boys constantly make advances at the girls, and enjoy teasing them;
- Boys and girls enjoy spending a lot of time together in private places chatting under the guise of academic discussions;
- Girls tend to dress seductively in either very short and tight skirts or heavily made up faces especially during week-ends;
- Boys enjoy buying their girlfriends tokens whenever possible;
- They privately exchange love notes and photos; and
- Rivalry quarrels for boys between girls occasionally occur.

According to Olafsdottir (1989), gender roles can be subverted in a single sex environment since both sexes seek tasks they understand. They select behaviour they know and consider appropriate for their sex. In co-education schools, each sex monopolises the stereotyped tasks

and behaviour, and therefore, the sex that really needs to practice new things never gets the opportunity.

The study revealed that students in the single sex schools do almost all the tasks existing in their schools on their own without enlisting help from elsewhere. Tasks in co-education schools are divided into two based on traditional gender roles. All the teacher respondents from the co-education school responded to the affirmative on the question of whether their school ascribes traditional gender roles to the girls and boys. Some of the specific boys' and girls' roles in the co-education school are listed in Figure 4.13 below.

Figure 4.13: Specific Gender Roles in Co-education Schools

The specific boys' roles were:

- i. Raising the national flag during parade days;
- ii. Constructing shades for visitors whenever there is a function in school;
- iii. Arranging tables and chairs when necessary;
- iv. Help carry food when in large containers from one point to another;
- v. Slash grass and clean the larger compound; and,
- vi. Fixing the school's public address system and operating the school television.

The specific girls' roles were:

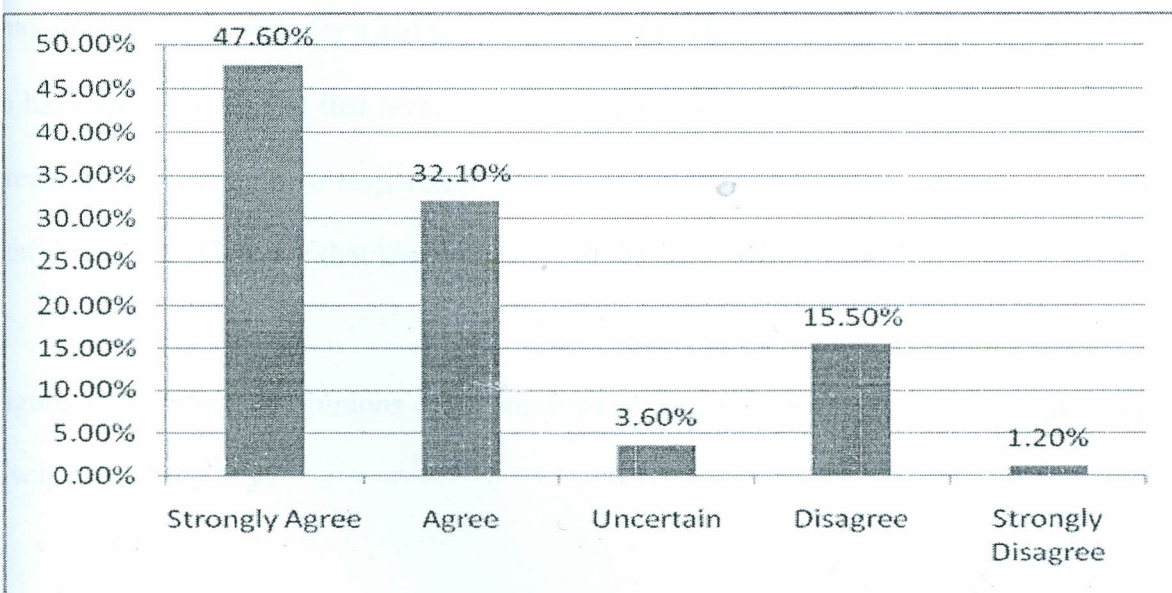
- i. Cleaning, dusting, and washing all the administrative offices in the school;
- ii. Helping with the preparation of food especially peeling potatoes and sorting rice during school functions;
- iii. Serving teachers with food and clearing the utensils;
- iv. Washing all the school linen like office curtains and table clothes;
- v. Present gifts and flowers to main guests during school functions; and,
- vi. Weeding the flower gardens.

The principals of the schools while responding on specific gender roles of boys and girls reported that boys are usually tasked with jobs that require physical strength as girls are given softer duties. For instance, girls are assigned to clean the administrative offices and tend the school flowers because they are trustworthy and more careful than the boys. Figure 4.7 shows the opinion of the respondents on girls' minimal involvement in activities that require strength in mixed schools.

4.6.1. Activities Undertaken By Boys and Girls

The respondents' opinion was sought regarding whether girls show minimal involvement in activities that require physical strength in coeducation schools. Majority (70%) of the respondents agreed that girls in co-education school type are minimally involved in activities that require physical strength.

Figure 4.14: Opinion on Girls Involvement in Activities that Require Physical Strength in Co-education Schools



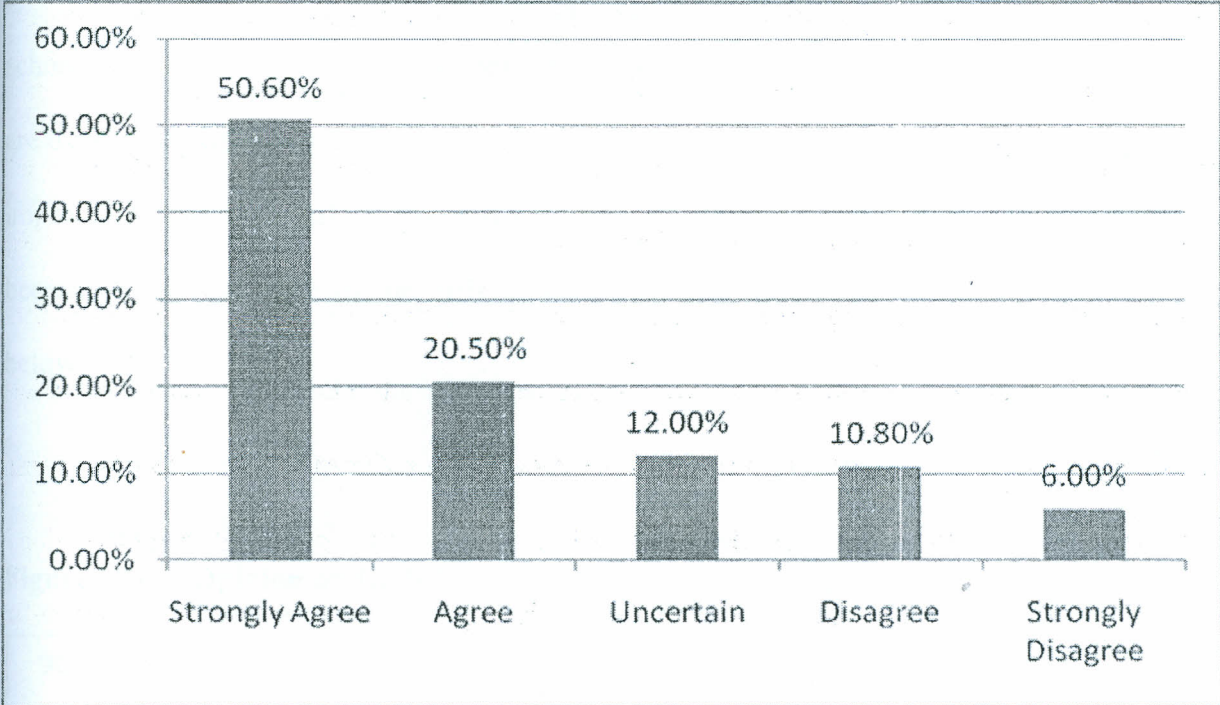
girls' minimal involvement in activities requiring physical strength makes them feel less capable in achieving what boys accomplish even in academics. Some of the activities girls in co-education schools avoid are comfortably undertaken by those in single sex schools such as loading luggage on the school bus. Likewise, tasks avoided by boys in mixed schools such as cleaning are conducted very comfortably by boys in single sex schools, including serving guests during school functions. Mixed schools perpetuated gender stereotype, and deny both boys and girls the opportunity to learn new things and become adventurous even with seeking knowledge.

4.6.2. Leadership Roles in School

Leadership roles in the mixed schools were not fairly distributed, and have tended to take to social stereotypes. The study revealed that since the mixed school was started 43 years ago, it had never had a girl as the most senior prefect. Some of the reasons given for this by the teachers were: it is not easy for girls to command respect from boys; girls low academic performance disqualifies them from such high positions of responsibility; boys who are the majority would not vote for a girl school captain; the school has never found a girl who appears to have ability to lead at that level; girls lack confidence; girls do not seem to have ever been prepared for such a major responsibility; and, it is the school culture. But one respondent said that time was not ripe for that kind of radical change.

Figure 4.15 shows the opinions of respondents on school captains in co-education schools as always favouring boys.

Figure 4.15. Opinion on Whether Student Leader in Mixed School is Male

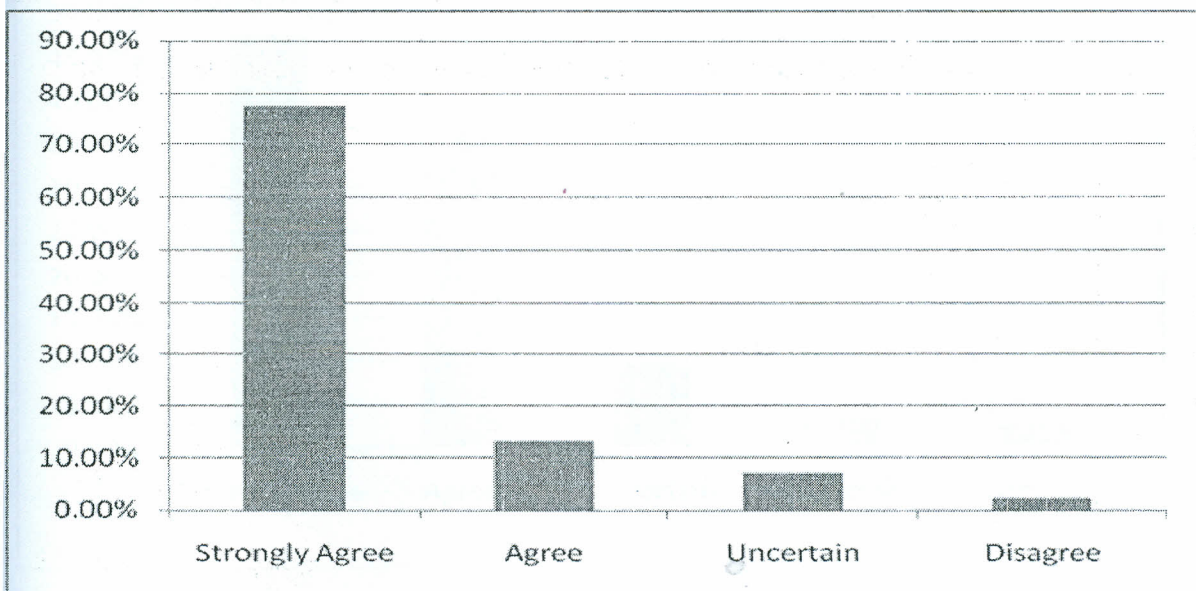


Majority (70%) respondents agreed that school captain in mixed schools were usually boys though a few (6.0%) disagreed with this statement. This reiterates what the teachers had earlier pointed out; that it will take time before girls take leadership positions in such schools. With the above leadership scenario in mixed schools, girls are highly disadvantaged. In addition, it creates the impression that girls and women cannot lead, which is certified by other social inequalities in society. Education on its part is supposed to prepare all the students for future leadership roles to enhance the social economic statues of males and females. Nonetheless, girls in mixed schools are often disadvantaged, and being prepared for lesser responsibilities. Their counterparts in single sex schools hold all the positions of responsibilities and work with diligence, and are therefore more appropriately prepared for future roles.

4.6.3. Conduct of Girls and Boys

The study also sought the opinion of the respondents on the conduct of girls and boys in mixed schools in relation to social stereotypes. This includes the tendency that girls in mixed schools are overly concerned about their appearance, and spend a lot of time trying to be smart so as to impress the boys than girls in single sex schools. Boys' on their part adopt masculine attitudes because of the presence of the girls. The responses are indicated in Figures 4.16 and 4.17 below.

Figure 4.16. Opinion on Girls Consciousness of Personal Appearance in Mixed Schools

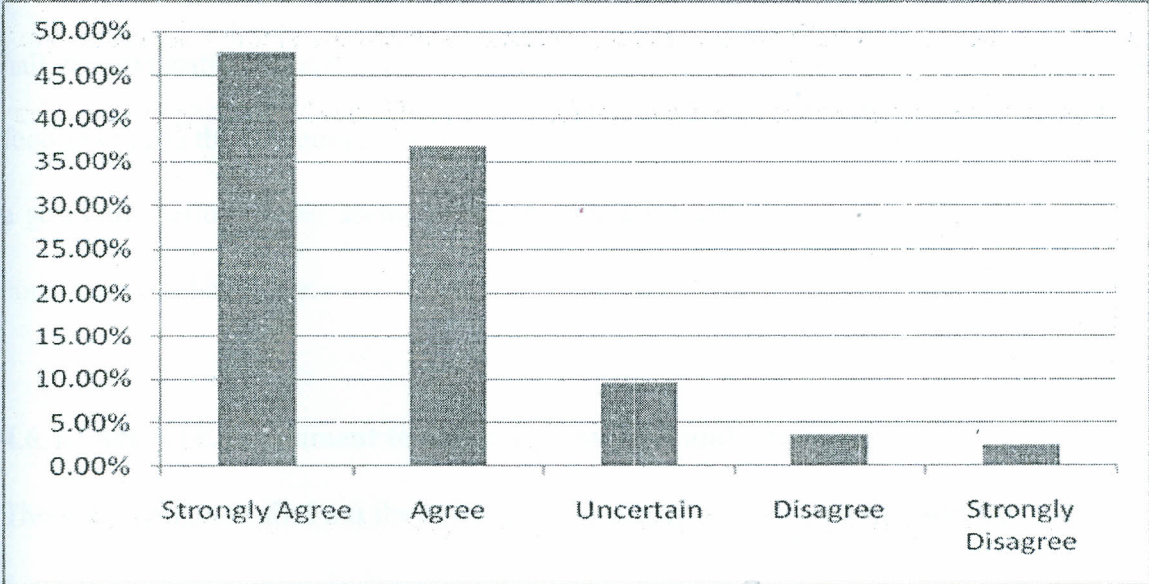


An overwhelming majority (77.4%) of respondents tended to strongly suggest that girls in co-education schools are conscious of their appearance and spend a lot of their time trying to be smart. A key informant explained at length how girls are very concerned with their appearance and that they spent a lot of time grooming themselves in the morning and at 4pm in the evening, getting ready for the night preps. They love dressing seductively especially tight

fitting clothes. This great concern for their appearance is not an indication of concern for good grooming but concern for how they will be perceived by the opposite sex. This takes up a better part of a girl's time and concern for school work. This also leads to low concentration in class as the girl is busy thinking of how she can create an impression on the boys, or a particular boy.

Respondents tended to be convinced that boys in co-education schools developed a masculine attitude due to the presence of girls.

Figure 4.17. Opinion on Boys Consciousness to Develop Masculinity in Mixed Schools



A majority (83%) of respondents agreed that boys in coeducation school type tended to display their masculine attitude.

Boys in mixed schools are inclined to accentuate their masculinity for the sake of the girls who are there to appreciate them. This equally affects the boys' concentration in their studies as they

spend a lot of time on activities that enhance their masculinity like trying to make themselves popular with as many girls as possible. They also do this by playing the providence role of extending all sorts of favours to the girls. They buy them goodies from the school canteen, escort them around the compound especially during weekends and after night preps. They also keep other interested parties at bay. All this are time wasting activities.

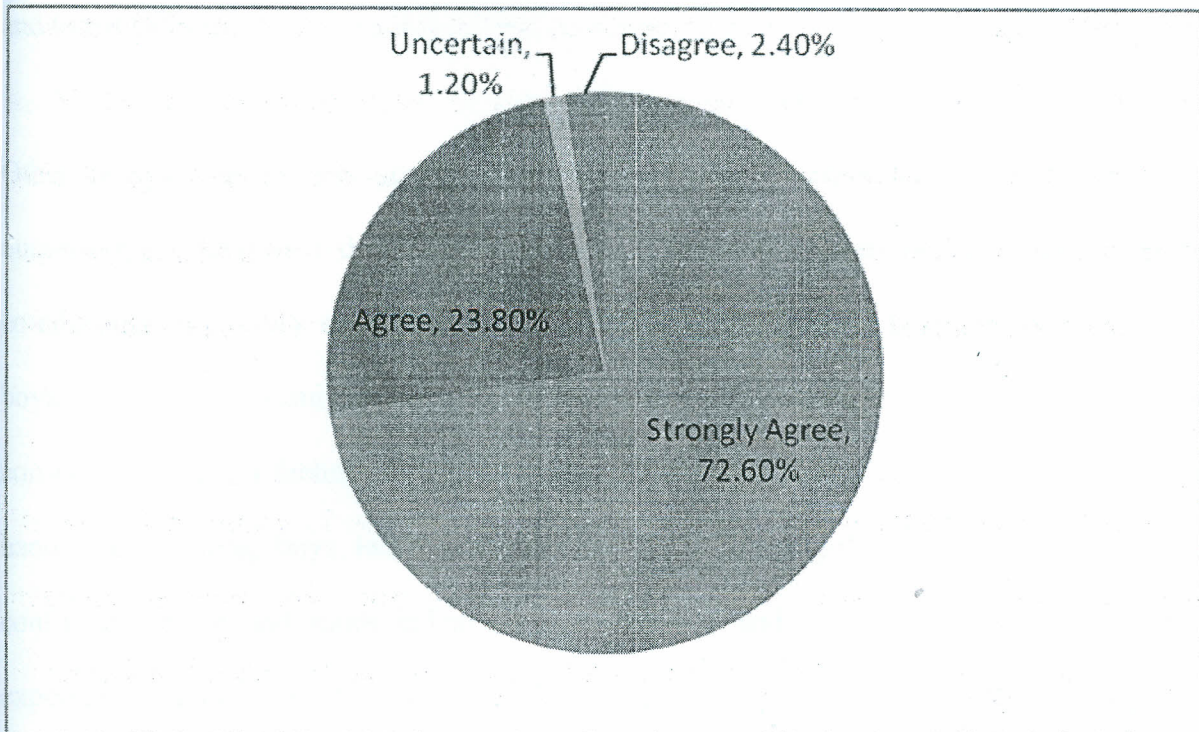
The study also realized that a significant proportion (38.1%) of the respondents were uncertain on whether boys are usually served first in the dining hall at coeducation school type. This could be attributed to the fact that respondents in the single sex schools are not exposed to this situation. However a good number (37%) agreed that boys are usually served first in the dining hall at coeducation school type. Similarly on the issue whether boys are usually given more food than girls the respondents also posted a significant proportion (34%) of uncertainty though a good proportion (41%) seemed to agree that boys are usually given more food than girls in coeducation school type.

4.6.4. School Environment to Enhance Teaching and Learning

The study sought to find out the opinion of the respondents on whether students learn more freely in single sex schools compared to co-education school type.

The findings on opinions as to whether students learn freely in single sex schools are reflected in Figure 4.18 below.

Figure 4.18: Opinion on Whether Students Learn Freely in Single Sex Schools



As shown in Figure 4.18 the respondents further gave their opinions on whether students learn more freely in single sex schools than in co-education schools. 96% of the respondents agreed to this fact that confirms earlier opinions of masculinity among boys and femininity among girls in co-education schools. About two thirds of the respondents agreed that girls in coeducation school type seemed passive and were shy to contribute freely in class. A majority (96%) indicated that both boys and girls tended to learn more freely in single sex schools

Based on the opinion of whether students are less free in co-education schools, the in-depth interview revealed that most girls are very passive and shy in class and fear making contributions because of the boys. Some boys are also affected in the same way. The worst affected are those in relationships. This fear for each other has affected their active

participation in other activities in the school like games, drama, choir, debates, symposiums and talent shows.

Other factors that express gender relations in school as responded to include: the boys outperforming the girls in the co-education school. Respondents were of the strong opinion that co-education secondary schools encourage unhealthy relationships between the girls and the boys as this is a result of the maturation that could sometimes lead to increased self consciousness and a feeling of insecurity among girls (Bandura & Mead, 1997). On the other hand, the maturing boys tend to capture the attention of girls which makes them more confident, secure and more independent. Both boys and girls who have had the above experiences in a co-education school environment tend to perform less well than their peers in single sex environments who are free and safe from being destructed by the opposite sex.

4.6.5. Student Support Services : Guidance and Counselling in School

There is a strong need for guidance and counselling services in schools in Kenya. The study established that all (100%) the school types had guidance and counselling units that work towards helping the students develop their full educational potential.

Rao (1992) states that student's needs must be adequately addressed through counselling, failure to which they result in problems of indecision, uncertainty, ambiguity, conflict, instability, unpredictability that may lead to strikes, drug taking, unwanted sexual behaviour, truancy among others. One of the teacher respondents in the mixed school was a professional counsellor with a Higher Diploma in Guidance and Counselling. Since mixed schools have more social challenges, they need very established guidance and counselling departments to

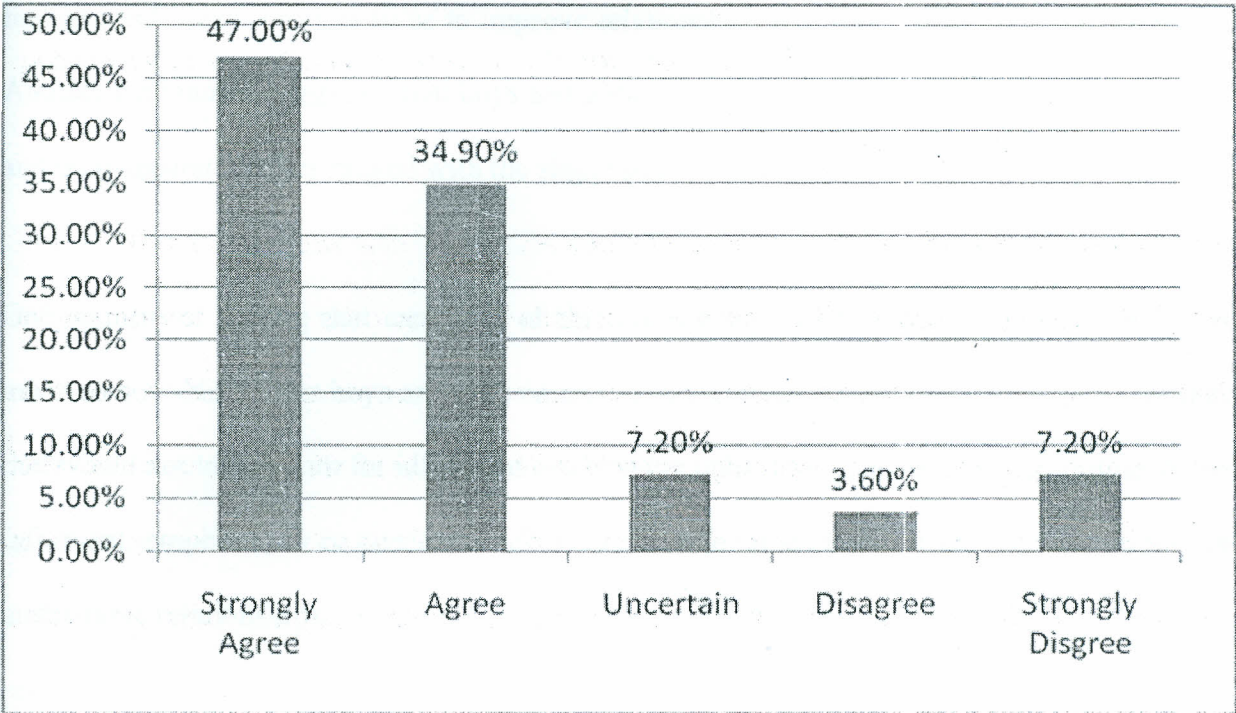
deal with all sorts of adjustment problems in the school. A number of researchers agree that guidance and counselling services offered in schools have a significant effect on academic performance of students. There is a positive correlation between self-concept and academic performance of students. According to Rao (1992) teachers should put more effort in moulding students' positive self concept. The researcher alluded to the fact that schools could enhance self confidence of students by providing conducive learning environment.

4.7. Ways of Enhancing Performance in Co-education Schools

The last specific objective of this study was to find out ways of enhancing the performance of boys and girls in mixed schools. The question that sought to have this objective met was asked to teachers and head teachers to suggest ways of improving performance in mixed secondary schools.

There was almost complete unanimity by the respondents that one major solution to poor performance in mixed schools is to separate the boys from the girls. A majority suggested that two separate schools be established by splitting the mixed school, while the rest were of the opinion that separate classes for boys alone and girls alone be established within the same mixed school. The head teacher of the mixed school told the researcher during the interview that plans were already underway to have the school split into two for the sake of performance. The parents of the school were ready to help facilitate the process. The student respondents gave their opinion on whether mixed schools should be turned into single sex schools and their views are represented in Figure 4.19.

Figure 4.19: Whether Mixed Schools Should be Converted to Single Sex Schools



Majority (81%) of the respondents indicated that coeducation schools should be converted single sex schools. A few respondents (10%) however disagreed with the statement that coeducation schools should be converted to sex single schools.

Several other suggestions were given that could be used to improve the mixed schools. Strict enforcement of school rules on the students in the mixed schools was suggested. To further corroborate the improvement of performance in mixed schools, some key informants interviewed suggested the need to establish elaborate guidance and counselling units in mixed schools (Wango and Mungai, 2007). They need professional counsellors who would seek to address and resolve student problems, help them in decision making while also assisting them

cope with crises. Counselling according to one teacher respondent who happened to have been a professional counsellor too, would be concerned with helping students work through their feelings and inner conflicts so as to improve relationships with members of the opposite sex. Another respondent suggested that boys and girls in mixed schools should be ranked separately and their separate grades ranked with the single sex schools in the district.

One significant finding that came out of this discussion is that mixed schools should try as much as possible to treat boys and girls equally, and create an environment of diverse activities that would not leave room for idling and establishing unhealthy relationships. According to one informant, emphasis on co-curricular activities can take up student energy and time to prevent undesirable relationships.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0. Introduction

This chapter contains the summary of the study findings and conclusions. It also presents recommendations and suggestions of studies that could be carried out with regard to performance of girls and boys especially in mixed schools in Kenya.

5.1. Study Findings

The study established that mixed schools are not doing well in K.C.S.E. examinations as compared to the single sex schools even when the schools are in the same locality and have similar facilities. The three schools studied were all established public provincial schools, with full boarding facilities, had very similar entry behaviour for student admissions and were well endowed with facilities. Further analysis revealed that performance of both male and female students in the mixed school was lagging behind compared to the single sex schools despite similar entry behaviour. The result of data analysis shows that two-thirds (67.9%) of students in the mixed school had not been admitted in a school of their choice. In addition, they would have wished to be in other schools, especially top performing Provincial schools and National schools of the single sex type. The boys' only school had 92.9% of students saying they were contented and proud of their school, while 57.1% of the girls from the girls only school were also happy in their current school.

The study established that students from all the three schools had similar school life experiences. For instance, there were needy students in all the three schools, just as the well as

there were students who were well provided for by parents and guardians. The boy's only school had 42.9% of students lacking personal effects, school uniform, stationery or pocket money. lack of school fees was critical. A third, 35.7% of students in the mixed schools lacked similar requirements. It was encouraging that the girl's only school had only one in five students, 21% needy cases. The available data also shows that the three schools surveyed had similar learning environment such as physical facilities, qualified teachers, similar school programmes, similar text book situations and a similar school curriculum. The students had also very similar high career ambitions including careers in medicine, law, accounts, airline as pilots, engineering and university lecturers since their favourite subjects did not differ much between the schools.

The study reveals that in despite the overall low performance in the mixed school, boys performed much better than the girls in both internal and national examinations. The study demonstrates that the poor performance is brought about by the presence of boys and girls in the learning environment that creates distractions. These findings were in agreement with students' responses, who overwhelmingly (88%) agreed that in mixed schools, boys usually tend to perform better than girls. The reasons that made girls perform worse than the boys included: boy - girl relationships that tended to affect the girls more; girls were categorised as generally lazy; girls were said to be more preoccupied about their appearance than academic studies; girls were said to be great noise makers; girls were said to expect the boys to perform better than them and therefore did not make any effort to study hard; and, girls attitude towards most of the subjects especially mathematics and science was very negative. Most of these stereotypes can be worked out through empowering the girls and through guidance and counselling (Wango and Mungai, 2007; Wango, 2009).

Teachers in the mixed school were sceptical that gender roles ascribed to girls and boys weighed heavily on them. For example, boys tended to excel in most areas since they were enabled to do so by giving them responsible positions of leadership in the school and undertaking challenging tasks within the school, while girls were still left to attend to domestic roles of catering and cleaning. This coexistence made the boys to develop masculine attitudes and pay attention to gender linked behaviour. All the teachers and head teachers were in consensus that boys and girls needed a different environment for education because of learning differentials between them. This is in agreement with Sax (2007) who says that teachers can employ strategies in the all-girls classrooms, and in the all-boys classroom, which do not work as well (or don't work at all) in the co-education classroom.

Investigation into the effects of co-education on girls' and boys' learning behaviour revealed very strong opinions that co-education schools environment encourages unhealthy relationships between girls and boys. These unhealthy relationships were directly linked to the poor performance of co-education schools in KCSE. It was almost unanimously agreed by 96.4% of the respondents that girls and boys learn more freely in single sex environment than in co-education schools. The respondents (94%) agreed that girls and boys in co-education schools are usually distracted by the opposite sex's behaviour. In addition, the three group of respondents, that is principals, teachers and students appeared convinced that schools should embrace single sex education because: there are no distractions, there is freedom of expression, relationship and sexual behaviour are less rampant and students, both boys and girls, are known to perform better and they re treated equally well.

5.2 Conclusions

Human capital theory suggests that education and training are significant determinants of employment and earnings. Therefore, it is desirable that boys and girls acquire the necessary knowledge and skills that would enhance their employment and earning capacity in the labour market as well as improve their status within the household. To achieve this, governments have had to come up with programmes to enable both girls and boys gain access to quality education with proper outcomes. Access to education in Kenya has been improved through the provision of Free Primary Education in 2003 and Free Tuition in Secondary Education in 2008. But access alone is not enough if the quality of education is not improved, or if students fail to remain in school and achieve in that education. There is need therefore to seek out solutions and working strategies to retain girls and boys in school and enable them achieve their potential.

This study has established that co-education schools have several inhibitions that are counterproductive for a good academic performance even when the school is reasonably endowed with facilities and the entry behaviour of the students is equally good. There are a number of reasons for poor performance by girls and boys in mixed schools. Firstly, girls' and boys' educational needs in a classroom are different, yet the co-education schools do not take gender specific needs of boys and girls into account through curricula, teaching methods and learning environment. Secondly, the attitude of boys and girls in co-education schools towards their school contributes strongly to performance. This is especially significant when a student is in a different school from theta of their choice. Thirdly, when boys and girls learn in one environment, they tend to engage in other deviant behaviour like intimate relationships that distract them from their studies. Fourthly, in a co-education school environment, girls are more

disadvantaged than the boys because of the gender linked attitudes and behaviour that are manifested like when boys develop masculine attitudes by being given more challenging tasks while girls become more docile and domesticated by being viewed as weaker beings. Finally, achieving parity does not end with equal numbers. Equal opportunities, treatment and outcomes in education and in society are, and must be the crucial yardsticks of progress.

5.3. Recommendations

The study makes the following recommendations:

1. Co-education schools should be split into two independent schools, or allow girls and boys to learn in their own classrooms within the same school so as to avoid distractions caused by the presence of the opposite gender. The split could also enable teachers to comfortably address the gender differences that are associated with either gender during the teaching learning process.
2. Guidance and counselling should be enhanced in schools with a professional counsellor teachers in charge of guidance and counselling department and assigned a lighter teaching load to enable them be more effective as counsellors. This is in line with other studies (Wango, 2006) and publications on counselling in schools (Wango and Mungai, 2007). Rukaria (1996) too pointed out that probably no stage in life is characterized by stronger and more rapid manifestation of emotions than in the period of adolescence. Purposeful, effective and programmed guidance and counselling service would intervene on behalf of any student whose immediate personal concerns or problems put the student's continued educational, career, personal or social development at risk.
3. The Ministry of Education should put in place proper monitoring tools to ensure progress towards achieving the goals of gender equality not only in access, retention but also in

performance. This should be done through the Quality Assurance and Standards units that are found in all districts in Kenya (Wango, 2009).

4. Teacher interventions like in-service programmes should be improved to modify teacher behaviour and improve their teaching skills to become more learner friendly and gender responsive during their interactions with both boys and girls in school.
5. School administrators have the task of creating a school friendly teaching and learning environment in which students develop a sense of positive identification with their school and commitment to their academic goals (Wango, 2009). In this respect, particular attention to various forms of undesirable behaviour and biases of any form identified in this study are very important as they could provide bedrock upon which flexible and quality attitudes towards achievement can be built.
6. Parent and guardians should support boys and girls' basic needs to further enhance their academic achievement.

5.4. Suggestions for Further Research

The evidence from the literature reviewed in this study, and the findings indicate that there is need for further research to be undertaken in the following areas;

- To explore in depth why boys perform better than girls in co-education school environments.
- To establish a correlation between genders related behaviour and academic performance.
- To determine the effect of gender differentiation on learning and performance.
- To investigate in detail the impact of social economic status on the academic performance of boys and girls.

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APPENDICES

APPENDIX I: STUDENT QUESTIONNAIRE

INSTRUCTIONS

This questionnaire is designed to gather information from you for use in a study on performance of boys and girls in Secondary Schools in Taita District of Coast Province. Be very honest in your response and note that all your responses will be treated with utmost **confidentiality** and for the purposes of this study only. Do not write your name on the questionnaire.

You are kindly asked to respond to all items as instructed.

Please indicate the correct option by putting a tick [\checkmark] on one of the options and write your response in the space provided. You can also ask a question where it is not clear.

PART A: General Information

1. Gender Female Male

2. School Type

 Mixed Boarding Day Day & Boarding
 Boys Only Boarding Day Day & Boarding
 Girls Only Boarding Day Day & Boarding

3. Class: Form 1 Form 2
 Form 3 Form 4

4. K.C.P.E. Marks _____

5. Indicate the grade you obtained last term _____

6. (i) Are you currently in the schools of your choice? Yes No

(ii) If "No", which school did you want to join? _____

7. If you would go as far as you wanted in education, how far would you go?
 Form Four Level
 Certificate Level
 Diploma Level
 Degree Level

8. What would you like to do for a career after schooling? _____

9. How much do you like schooling?

Very much

Not much

Not at all

Any other _____

10. Which are your two favourite subjects? _____

PART B: School Environmental Characteristics

1. (i) Do you have enough textbooks, that is, one subject book shared between two students? Yes No

(ii) If No, how many students share a book on average? _____

2. (a) Are your parents/guardians able to buy you all school requirements, that is, personal effects, school uniform, stationery, pocket money. Yes No

(b) If No, please list the items that you lack.

(c) To what extent does lack of the items listed above affect your learning?

To a very great extent To a great extent

To a small extent To a very small extent

Do not affect at all

3. (i) Indicate by ticking, whether you have preps at the indicated times.

	Morning Preps	Afternoon Preps	Night Preps
Monday –Friday			
Saturdays			
Sundays			

(ii) Are the above preps

Compulsory

Optional

Some optional and some compulsory

4. Do you have a guidance and counselling department in your school?

Yes

No

5. (i) Are there boys / girls in your school who perform well and join the university every year? Yes No

(ii) If Yes, how many _____ -

(iii) If No, why do you think they don't perform well?

PART C: Gender Roles and Performance

Each of the following statements expresses an opinion, towards gender roles and what can be done to improve the performance of students in schools. You are given alternative responses depending on the extent of agreement with the filling of each statement. The alternatives are:

Strongly Agree (SA) Agree (A) Uncertain (U) Disagree (D) Strongly Disagree (SD)

Put a tick against the alternative that best describes your opinion.

	STATEMENT	SA	A	U	D	SD
1	School Captains in mixed schools are usually boys.					
2	Serving of food to teachers and visitors is usually done by girls.					
3	In mixed schools, girls show minimal involvement in activities requiring physical strength.					
4	Girls and boys educational needs in a classroom are different and they need to be taught differently.					
5	Girls and boys in single-sex schools perform better than those in mixed schools.					
6	There are more role models joining university in single sex schools than in mixed schools.					
7	Given a chance I can always wish to learn in a single sex school					
8	Given a chance I can always wish to learn in a mixed sex school					
9	Mixed schools encourage unhealthy relationships between boys and girls.					
10	Girls in mixed schools are quite passive and shy to contribute freely in class.					
11	Girls and boys learn more freely in single sex schools than in mixed schools.					
12	Girls in mixed schools are very conscious of their appearance and spend a lot of time trying to be smart than girls in single sex schools.					
13	Boys in mixed schools develop a masculine attitude because girls are around.					
14	In mixed schools, boys usually outperform the girls in class.					
15	In mixed schools, boys are usually served first in the dining hall.					
16	In mixed schools, boys are usually served more food than girls.					
17	Mixed schools should be turned into two single sex schools.					
18	Girls and boys in mixed schools are usually distracted by the opposite sex's behaviour.					

19. Do you think a school type, that is, mixed or single sex can have an effect on your Performance? Yes No

If Yes, please explain. _____

If No, please explain. _____

20. (i) What do you think are the advantages of a mixed school _____

(ii) What do you think are the disadvantages of a mixed school _____

21. (i) What do you think are the advantages of a single sex school _____

(ii) What do you think are the disadvantages of a single sex school _____

Thank-You

APPENDIX II: TEACHERS' QUESTIONNAIRE

This questionnaire gives you a chance to express your views on the performance of boys and girls in mixed secondary schools and single sex schools in Taita District of Coast Province. Be very honest in your response and note that all your responses will be treated with utmost **confidentiality** and for the purpose of this study only. Do not write your name on the questionnaire.

PART A- General Information

1. Gender Female Male
2. What is your highest level of educational / professional qualification?
 Certificate
 Diploma
 Degree
 Masters
 Others. Please specify _____
3. (i) What are your teaching subjects? _____
(ii) What is your teaching load? _____
4. What type of school are you teaching in currently?
 Mixed Boarding Day Boarding and day
 Boys only Boarding Day Boarding and day
 Girls only Boarding Day Boarding and day
5. Generally, how do you rate the performance of your school within the district?
 Top performing
 Average performing
 Low performing
6. In your opinion does a school type, that is, Mixed or Single sex school have an effect on the performance of students? Yes No

If Yes, explain _____

If No, explain _____

7. (i) As a professional, which school type would you recommend for a student?
 Mixed School Single Sex School

(ii) Give your reasons for making the above choice

SECTION B

This section is to be filled selectively. If the question doesn't apply to your school type please indicate (N/A)

1. What is the attitude and performance of the girls and boys in the subject(s) you teach?
 - (i) Girls _____

 - (ii) Boys _____

2. What could be the reasons attributed to the answers above?

3. Comment briefly on the general performance of girls and boys in your school.
Boys _____
Girls _____
4. (i) Do you think the presence of girls affects the performance of boys in any way?
[] Yes [] No
(ii) Please explain _____

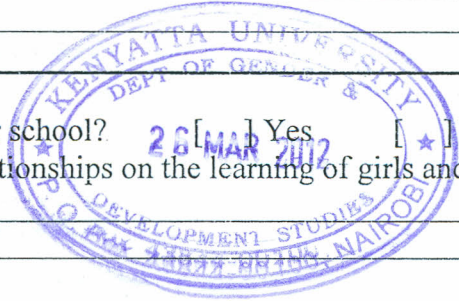
5. (i) Does the presence of boys affect the performance of the girls in any way?
[] Yes [] No
(ii) Please explain _____

6. (i) Are responsibilities of leadership in your school fairly distributed between the girls and boys? [] Yes [] No
(ii) How many times has your school had a girl for a school captain (overall head prefect) in the past 5 years? _____
(iii) If none, please explain why _____

7. (i) Does your school ascribe traditional gender roles to girls and boys e.g. girls help with the serving of teachers and guests food during functions while boys prepare the tent/shades for the visitors.
 Yes No

(ii) Which duties, in your school are usually assigned to:
 Boys _____
 Girls _____

8. (i) Do girl - boy relationships exist in your school? Yes No
 (ii) If yes, what are the effects of these relationships on the learning of girls and boys?



SECTION C

Each of the following statements expresses an opinion on mixed and single sex schools. Please tick the answer below the number that corresponds to your choice where applicable.

1= Strongly Agree 2= Agree 3= Uncertain 4= Disagree 5= Strongly Disagree

	STATEMENTS	1	2	3	4	5
1	Girls in mixed secondary schools are more passive than those in single sex schools					
2	Learners in mixed secondary schools pay attention to gender linked behaviour than their counterparts in single sex schools.					
3	Boy/ girl relationships in mixed schools affect learners' achievements.					
4	Teachers in mixed schools tend to pay more attention to boys than girls and interact with them more extensively.					
5	Boys receive more praise in co-education schools for academic successes than the girls.					
6	Girls are reprimanded for negative behaviour more than boys.					
7	Teachers in mixed schools often convey in many subtle ways that they expect less of girls academically.					
8	Boys and girls need different environments to get a good education because they are different.					
9	Institutions should embrace single sex learning.					
10	Girls stay confident and learn more in single sex schools.					
11	There is less peer role modelling in performance in mixed schools.					
12	Students in mixed schools are usually disturbed by the opposite sex behaviour.					
13	There is more gender bias in mixed schools than in single sex schools.					

14. Suggest ways in which mixed schools can be made to improve their performance.

Thank-you

APPENDIX III: INTERVIEW SCHEDULE FOR HEAD TEACHERS

1. Name of School _____
2. School Type _____
3. Gender _____
4. How many years have you been a head in this school? _____
5. How do you rate the facilities that you have in the school i.e. Laboratories, library, book-ratio, classrooms, dormitories, playing fields etc?

6. Comment on the entry behaviour of girls and boys when they join school in form one?

7. Are the boys and girls competing equally and having similar outcomes in performance?

8. On average, how many students does your school send to university annually in terms of gender?

9. How do you rate your school in terms of performance within the district?

10. What strengths or challenges are you facing as a school in terms of performance?

11. Do you think a school type i.e. mixed or single sex school can have an effect on students' performance?

12. How does the presence of the opposite sex affect the learning of the other sex?

13. Do you think girls and boys learn differently and therefore need to learn separately?

14. Do you think single sex schools have any advantages over co-education schools in terms of their learning environments?

15. What in your opinion would be a solution to the disparities in performance between co-education schools and single sex schools in this district?

THANK YOU