

**A STUDY OF FACTORS THAT LEAD TO LOW ENROLMENT OF FEMALE
STUDENTS IN UNDERGRADUATE COURSES IN THE UNIVERSITY OF
NAIROBI AND KENYATTA UNIVERSITY**

BY:

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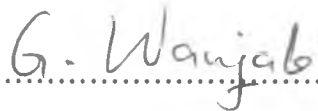
DECLARATION

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



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To all those who made this work a success I say thank you very much.

God bless you all.

DEDICATION

I dedicate this work to my parents
Mrs. Susan Wangeci and my late father Mr. Duncan Waweru,
My husband James, my children Kevin and Collins
and to my brother Allan and my sister Jane.

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ABSTRACT

This study was carried out to investigate the factors that lead to low enrolment of female students in the undergraduate courses in the University of Nairobi and Kenyatta University. Evidence from the ground indicated the existence of gender imbalances in the population of undergraduate students in the two universities. The problem is more evident in Science and Mathematics oriented courses. In order for the stakeholders in the country to respond adequately and effectively to this problem, study of this nature was very necessary.

The study was designed as ex-post facto, hence the researcher did not manipulate any perceived causal factors. The study targetted all female students in the undergraduate courses in the University of Nairobi and Kenyatta University. The sample composed of 20 students from each faculty making a total of 380. However, students in some faculties like Agriculture and Veterinary Medicine in Upper Kabete campus were not in session. The response was good with return rate of 316 out of 380. This represented 83.1% which was adequate for the study.

Data was collected through the use of questionnaires for female undergraduate students. The analysis of the data revealed several factors that contribute to low enrolment and participation of female students in undergraduate courses in the universities. They are: High dropout rate of girls at lower levels of education, poor performance of girls in K.C.S.E, low enrolment of girls at primary and secondary schools, socio-cultural factors, unconducive learning environment in the institutions and financial constraints due to high cost of education.

Finally, the study gives pertinent recommendations that will help curb the problem and critical suggestions for further research that will ensure that gender imbalances in the education system might be appropriately solved. The recommendations are:-

- Enforcement of compulsory education for all especially at the primary level of education since the government has provided free primary education. This will ensure higher enrolment of girls in secondary, tertiary and higher levels of education.
- Expansion of universities' facilities and updating the teaching-learning resources to ease the problem of congestion in halls of residence, lecture rooms and other areas leading to improved standards of living and better learning environment.
- Proper implementation and follow up by the relevant government authorities of the gender responsive policies in education to check the prevailing gender disparities.
- The government should employ the appropriate measures to check the high cost of education especially at secondary and university levels.
- Elimination of all forms of gender stereotyping in education by developing curricula, textbooks and teaching aids and facilitating learning environment free of gender bias.
- The Joint Admission Board (JAB) should lower the minimum requirements for university admission for girls by more than the current one point to give girls more chance in university education.
- The government and non-governmental organisations should embark on awareness campaigns on importance of girls' education to the society especially in communities where girls are underrepresented in university education.

With the above findings, the researcher puts the challenge to all stakeholders in the field of education to act to eradicate the problem of gender imbalances in all levels of education

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LIST OF ABBREVIATIONS

AA	-	Affirmative Action
ASALS	-	Arid and Semi-Arid Lands
FAWE	-	Forum for African Women Educationalists
HELB	-	Higher Education Loans Board
HIV/AIDS	-	Human Immuno Virus / Acquired Immuno Deficiency Syndrome
ILO	-	International Labour Organisation
JAB	-	Joint Admissions Board
JKUAT	-	Jomo Kenyatta University of Agriculture and Technology
KCPE	-	Kenya Certificate of Primary Education
KCSE	-	Kenya Certificate of Secondary Education
KU	-	Kenyatta University
NGO	-	Non-Governmental Organisations
SAPS	-	Structural Adjustment Programmes
SPSS	-	Statistical Package for Social Sciences
UON	-	University of Nairobi

CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND OF THE STUDY

Widening access to education has been a major policy goal in Kenya since independence. This reflects a broad recognition that education is essential to economic and social development. The evidence is overwhelming that education improves health and productivity and that the poorest people gain the most.

When schools open their doors wider to girls and women, as well as to boys and men, the benefits multiply. Indeed failing to invest adequately in educating women can reduce the potential benefits of educating men. This failure exacts a high cost in lost opportunities to raise productivity, to increase income, and to improve the quality of life. Yet, women's education still lags far behind men's in Kenya, with far-reaching adverse consequences for both individual and national well-being. Hill and King (1993) noted that: "Educating females yields far-reaching benefits for girls and women themselves, their families, and the societies in which they live".

According to Kasente (1995), the empowerment of women by their education is potentially one of the most powerful instruments of development in developing countries particularly those of Sub-Saharan Africa, where social welfare and economic progress are hampered by a large population against a poorly developed human resource base. Notwithstanding this however, the interplay between school and classroom practices as well as social and household factors in Africa has more often than not constrained female participation and sustainability in education.

An educated mother faces a higher opportunity cost of time spent caring for the children than educated one. She has greater value outside the home and thus has an entire different set of choices than she would without education. She is married at a later age and able to influence family decisions. She has fewer, healthier children and can insist on the development of all of them, ensuring that her daughters are

given a fair chance. And the education of her daughters makes it much more likely that the next generation of girls, as well as of boys will be educated and healthy as well. The vicious cycle is thus transformed into a virtuous circle.

Educating girls offers the best hope of breaking the cycle of female deprivation. Increased schooling has similar effects on the incomes of males and females, but educating girls generates much larger social benefits. Because of what women do with the extra income they earn, because of the extra leverage it affords them within the family, and because of the direct effects of greater knowledge and awareness, female education has an enormous social impact.

Okwach A. and Wamahiu S. (1995) too note that:

“The education of women enables them to better manage their households, to apply improved hygiene and nutrition practices and to effectively utilise available health services”.

Research has conclusively linked this to reduced fertility, lower child mortality, longer life expectancy and improved child health and education all of which rank high on the agenda of African socio-economic and welfare development. Despite this knowledge however access to and participation in education for women in Kenya still leaves much to be desired. Poor enrolment and high dropout rates of girls in education continue to keep women away at all levels. This is clearly illustrated in Table 1.

TABLE 1: SCHOOL ENROLMENT BY GENDER ('000)

	1963		1970		1980		1985		1990		1992		1995		1998		2000		2001		2002				
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%			
Primary	Boys	586.7	66	836	59	2,065	52.5	2,434.9	52	2,765	51	2,840	51	2,802.3	50.6	2,994.5	50.6	2,978.1	50.6	3,200.1	50.7	3,237.3	50.8		
	Girls	304.9	34	591	41	1,866	42.5	2,265.5	48	2,625.9	49	2,714	49	2,734.1	49.4	2,925.1	49.4	2,904.6	49.4	3,113.9	49.3	3,133.9	49.2		
	Total	891.6	100	1,427	100	3,931.5	100	4,702	100	5,392	100	5,554.9	100	5,536.4	100	5,919.6	100	5,882.1	100	6,314.6	100	6,371.1	100		
Secondary	Boys	NS	NS	89	70	242.6	59	270	62	353.6	57	353	56	341.8	54.0	373.4	53.3	402.5	52.5	425.2	52.9	447.2	52.8		
	Girls	NS	NS	37.5	30	167.9	41	167	38	264.7	43	275.6	44	290.6	46.0	327	46.7	356.5	47.5	379.3	47.1	400.1	47.2		
	Total	31	100	126.8	100	410.5	100	437	100	618	100	629	100	632.4	100	700.5	100	750.9	100	804.5	100	847.287	100		
University	Year	1964/65		1990/71		1979/80		1985/86		1990/91		199/93		1997/98		1998/99		1999/2000		2000/2001		2001/2002		2002/2003	
		No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
	Male	NS	NS	NS	NS	6,219	74	6,325	77	15,031	72	7,418	73	30,883	70.8	28,163	69.5	28,901	69.1	29,033	68.3	35,870	67.8	42,189	67.1
	Female	NS	NS	NS	NS	2,211	26	2,553	29	5,860	28	2,771	27	12,708	29.2	12,360	30.5	12,924	30.9	13,475	31.7	17,036	32.2	20,686	32.9
Total	651	100	2,786	100	8,430	100	8,878	100	20,837	100	10,189	100	43,591	100	40,523	100	41,825	100	42,508	100	52,906	100	62,875	100	

Key:

NS: Number not specified

Source:

1. Ministry of Education
2. Economics Survey 1964 – 2003.

According to Republic of Kenya Economic Survey 1964-2002, on average the girls percentage in various levels of education in the country were;

- a) In the primary level - 46.4% out of the total students enrolment in the country.
- b) In the secondary level of education - 43.0% out of the total students enrolment in the country.
- c) In the university level of education - 29.7% out of the total students enrolment in the 6 public universities in the country.

The data from the table shows that gender imbalances is really an issue in our education system. The situation worsens as one moves from primary level to secondary and then to the university level.

1.1 STATEMENT OF THE PROBLEM

The society today is fairly sensitised on the gender issues in education. There is increased policy dialogue and political recognition of the persistent gender imbalances in the education system. However there is little or no data to go by on the role and the causes of the various factors that influence women enrolment at the university level.

There are alarming gender imbalances in students enrolment in the university education in Kenya. Table 2 shows student enrolment in the six public universities in Kenya with respect to female students and male students.

Table 2: STUDENTS ENROLMENT IN THE SIX PUBLIC UNIVERSITIES BY GENDER, 1998/1999 – 20002/2003

UNIVERSITY		1998 / 1989		1999 / 2000		2000 / 2001		2001 / 2002		2002 / 2003	
		Number	%	Number	%	Number	%	Number	%	Number	%
Nairobi	Male	8,970	72.2	8,422	70.5	8,296	70.2	10,473	69.9	16,656	68.8
	Female	3,454	27.8	3,507	29.5	3,521	29.8	4,510	30.1	7,553	31.2
	Total	12,424	100	11,929	100	11,817	100	14,983	100	24,209	100
Kenyatta	Male	5,446	70.2	4,188	58.2	4,305	57.6	6,400	59.5	6,909	57.3
	Female	2,312	29.8	3,008	41.8	3,169	42.4	4,357	40.5	5,149	42.7
	Total	7,758	100	7,196	100	7,474	100	10,757	100	8,913	100
Moi	Male	3,641	72.1	3,483	60.1	4,753	70.8	5,430	70.4	6,221	69.8
	Female	1,409	27.9	2,312	39.9	1,960	29.2	2,283	29.6	2,692	30.2
	Total	5,050	100	5,795	100	6,713	100	7,713	100	8,913	100
Jomo Kenyatta	Male	2,471	79.1	2,512	80.1	2,999	70	2,545	69.4	2,902	64.0
	Female	621	20.1	625	19.9	1,285	30	1,122	30.6	1,632	36.0
	Total	3,092	100	3,137	100	44,284	100	3,667	100	4,534	100
Egerton	Male	5,658	69.0	7,131	71.5	6,089	75.3	6,631	73.8	6,624	72.7
	Female	2,542	31.0	2,842	28.5	1,997	24.7	2,354	26.2	2,488	27.3
	Total	8,200	100	9,973	100	8,086	100	8,985	100	9,112	100
Maseno	Male	2,687	67.2	2,044	62.8	2,596	62.8	3,071	61.4	3,059	59.8
	Female	1,312	32.8	1,211	37.2	1,538	37.2	1,930	38.6	2,056	40.2
	Total	3,999	100	3,255	100	4,134	100	5,001	100	5,115	100

- Source:
1. Ministry of Education
 2. Economics Survey 1998 – 2003.

This study, therefore seeks to identify the various factors that lead to low enrolment of female students in undergraduate courses in the University of Nairobi and Kenyatta University. Undergraduate students enrolment data in both universities is given below:-

Table 3: Undergraduate Students Enrolment in University of Nairobi

Academic year	Year of study	1 st year		2 nd year		3 rd year		4 th year		5 th year		6 th year	
		No	%	No	%	No	%	No	%	No	%	No	%
1999/2000	Female	747	32	850	32	750	31	663	27	65	15	17	14
	Male	1591	68	1837	68	1656	69	1830	73	363	85	106	86
2000/2001	Female	680	31	760	31	886	32	749	31	59	14	29	20
	Male	1499	69	1664	69	1920	68	1684	69	369	86	113	80
2001/2002	Female	709	32	653	32	796	30	876	31	66	15	26	21
	Male	1507	68	1540	68	1824	70	1940	69	386	85	95	79
2002/2003	Female	924	34	962	34	660	29	802	30	91	19	31	21
	Male	1824	66	1836	66	1600	71	1862	70	390	81	117	79

Source: University of Nairobi, Undergraduate students statistics, 1999/2000 – 2002/2003.

It is observed from the data that female students have been under-represented in all the years of study from 1999/2000 to 2002/2003 academic years. The proportion of female students is on average 31% while men are 69% up to the 4th year of study. Many of the undergraduate courses offered take four years of study hence the large number of students up to 4th year. The proportion of female students is quite low in 5th and 6th year of study, female students are 17% while male students are 83%. This is probably because most of the science oriented courses like Engineering, Veterinary Medicine, Pharmacy and dental science take 5 years of study, while medicine and Architecture courses take 6 years.

Table 4: Undergraduate Students Enrolment in Kenyatta University

Academic year	Year of study	1 st year		2 nd year		3 rd year		4 th year	
		No	%	No	%	No	%	No	%
1999/2000	Female	867	48	692	41	590	43	604	38
	Male	947	52	1002	59	786	57	1001	62
2000/2001	Female	895	48	867	48	692	41	590	43
	Male	979	52	949	52	1002	59	786	57
2001/2002	Female	879	45	911	48	731	46	511	32
	Male	1063	55	1005	52	863	54	1094	68
2002/2003	Female	1270	44	873	46	896	47	541	34
	Male	1596	56	1041	54	997	53	1063	66

*Source: Kenyatta University Undergraduate students' statistics
1999/2000 - 2002 /2003.*

The data shows that the female students in undergraduate courses are under-represented as compared to the male students in all years of study in academic year 1999 / 2000 to 2002/2003. Gender imbalance is especially worse in 4th year which is the final year of study. This is because the female students on average comprise of 36.8% while the male students are 63.2%. All the undergraduate courses offered in Kenyatta University take 4 years of study. Most of the courses offered are Art based with very few science courses. This explains the relatively large proportion of female students as compared to the University of Nairobi.

1.2 PURPOSE OF THE STUDY

The purpose of the study was to determine the factors that lead to low enrolment of female students in undergraduate courses in the University of Nairobi and Kenyatta University. The variables that were investigated included: -

- Low enrolment of girls in lower levels of education (primary and secondary)
- Poor performance of girls in Kenya Certificate of Secondary Education (KCSE) examination
- The University Joint Admissions Board selection criteria
- The cost of University Education
- The nature of courses offered by the universities stated above
- The learning environment in the University of Nairobi and Kenyatta University.
- The Kenyan socio-cultural environment which is the main source of the students.
- Government policies undertaken to improve female student enrolment in the universities.

The study examined the effects of these variables on the enrolment of female students in the university of Nairobi and Kenyatta University in undergraduate courses.

1.3 OBJECTIVES OF THE STUDY

The study aimed at achieving the following objectives:-

- i) To determine whether there was a significant relationship between the university selection criteria and the low enrolment of female students in University of Nairobi and Kenyatta University.
- ii) To determine whether there was a significant relationship between the learning environment in the two universities and the low enrolment of female students.
- iii) To find out whether there was a significant relationship between the socio-cultural environment, that is, out of school factors and the low enrolment of female students in the universities.

- iv) To investigate whether there was a significant relationship between the cost of university education and the low enrolment of female students compared to men in the university of Nairobi and Kenyatta university.
- v) To investigate whether there was a significant relationship between the courses offered in the university of Nairobi and Kenyatta University and the low enrolment of female students compared to men.
- vi) To investigate whether there was a significant relationship between the low enrolment and high drop out rate of girls at lower levels of education and the low enrolment of female students in undergraduate courses in the two universities.
- vii) To investigate whether there was significant relationship between the poor performance of the girls in Kenya Certificate of Secondary Education and the low enrolment of undergraduate female students in the two universities.

1.4 RESEARCH QUESTIONS OF THE STUDY

The study sought to answer the following research questions:-

- i) Does the low enrolment and high drop out rate of girls at lower levels of education influence the number of female students in the public universities?
- ii) Does the low performance of girls in Kenya Certificate of Secondary Education examination influence the number of female students admitted in the public universities in Kenya?
- iii) Does the university selection criteria adopted by the University Joint Admission Board (JAB) influence the number of female students who enroll in the universities?
- iv) Are there factors related to the learning environment in the University of Nairobi and Kenyatta University which have an effect on female students enrolment?
- v) Are there socio-cultural factors in the Kenyan societies which influence female students enrolment in the University of Nairobi and Kenyatta University?

- vi) Does the cost of the University education have any influence on female students' enrolment in the universities?
- vii) What influence does the nature of courses offered in the University of Nairobi and Kenyatta University has on the female students enrolment?
- viii) What steps can the Government and society in general take to encourage increase in female students' enrolment in the public universities?

1.5 SIGNIFICANCE OF THE STUDY

The findings of the study will be useful to university administrators in the University of Nairobi, Kenyatta University and the other public universities in Kenya. The administrators, students and other stakeholders in education will be made aware through the findings of the study of the factors leading to low enrolment of female students compared to male students in the universities and strategies that can be adopted to eradicate the problem. The study is particularly important in the present Kenya where gender imbalances in the education system is an issue.

1.6 LIMITATIONS OF THE STUDY

It was not possible to access the whole university student population because all were not be in session, some were on holiday as outlaid in the university calendar / programmes due to shortage of resources. This was experienced in the Faculty of Agriculture and Veterinary Medicine in Upper Kabete Campus.

1.7 DELIMITATION OF THE STUDY

The study targeted the university of Nairobi and Kenyatta University which are only two out of six public universities in Kenya despite the similarities in gender imbalances in all.

The study only considered the proportion of female students in undergraduate courses.

1.8 BASIC ASSUMPTIONS OF THE STUDY

The study assumed that female students have equal abilities with their male counterparts hence should have equal representation in the Kenyan public universities.

The study also assumed that the respondents were knowledgeable about the causes of gender imbalances in enrolment in the University of Nairobi and Kenyatta University.

That all the public universities in Kenya had similar characteristics of low female students' enrolment.

1.9 DEFINITION OF SIGNIFICANT TERMS

Enrolment: Refers to the act or state of making some one officially a member of a group, society, or institution by registration.

Dropout: Refers to any student who leaves the school / university without completing the requirements for that particular level of education

Gender : Refers to the social categorisation of people based on their sex (female or male).

Opportunity Cost: Refers to the alternatives available to university students which compete for their own attention as opposed to going to school.

Repetition: Refers to the case where a student spends one or more years covering the same educational materials; this is seen as educational wastage.

Educational Institutions:	Refers to an institution or facility used or to be used wholly or partly regularly for the conduct of education and includes what is commonly referred to as schools, a tuition facility, an educational centre, an academy, or a research institution.
Higher Education:	Refers to education offered in any post secondary school institution and includes education offered by technical institutes, polytechnics, colleges and universities.
HIV/AIDS:	Refers to Human Immuno Virus/Acquired Immuno Deficiency Syndrome.
Learner / Student:	Refers to any person receiving or obliged to receive or desirous of receiving education.
National Examination:	Refers to a public or private examination regulated by the Kenya National Examinations Council (KNEC).
Pre-primary Education:	Refers to the first stage of the basic education cycle for the time being prescribed as such by the National Council for Education.
Primary Education:	Refers to the stage in the basic education cycle for the time being prescribed as such by the National Council of Education.
Secondary Education:	Refers to the stage in the basic education cycle for the time being prescribed as such by the National Council for Education.

University:	Refers to a higher educational institution offering post-secondary education. It offers the highest level of formal education and training.
Culture:	Refers to the people's way of life as expressed through their attitudes, virtues, beliefs, value and pedagogic systems that are passed from generation through the community's socialization system.
Performance:	Refers to overt behaviour that demonstrates dexterity, ability or expertise in carrying out a particular task expressed or measured in set ways like examination.
Domestic Labour:	Refers to any activity or work that is performed at home or school which requires one to use skills acquired at home.
Girl-child:	Refers to female person below the age of 15 years.
Factor:	Refers to the parental, socio-cultural, socio-economic and school factors that influence the enrolment of female students in University education.
Undergraduate courses:	Refers to the courses in the University level of education that are undertaken by post-secondary students leading to award of bachelors degree.

1.10 ORGANISATION OF THE STUDY

The study is organised into five chapters. Chapter one consists of the background of the study, statement of the problem, purpose of the study, objectives of the study, research questions of the study, significance of the study, limitations of the study, delimitation of the study, basic assumption of the study and definitions of the significant terms. Chapter two deals with literature review. It includes literature reviewed for the study according to sub-themes, summary and the conceptual framework. Chapter three describes research methodology that was used in the

study. It has the research design, target population, sampling procedures and sample size, research instruments, instrument validity and reliability, data collection procedures and data analysis techniques. Chapter four represents the data analysis and discussion of research findings, while chapter five consists of the summary of the findings, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This chapter contains literature review that is related to students enrolment in the Universities with respect to gender. The chapter is divided into two broad sections. The first section is on the general overview of the University education in Kenya and detailed description of the University of Nairobi (UoN) and Kenyatta University (KU). The second section is literature on some factors that lead to low enrolment of female students in undergraduate courses in the University level of education. These include; low enrolment and high drop out rate of girls at primary and secondary levels of education, poor performance of girls in the Kenya Certificate of Primary Education (KCPE) and Kenya Certificate of Secondary Education (KCSE), cost of University education, the nature of courses offered in the University education, the learning environment in the public universities and the University Admission selection criteria. This is followed the by Government policies undertaken to enhance gender equality in the public Universities. A conceptual framework is also provided.

2.1 UNIVERSITY EDUCATION IN KENYA

University level education is the apex of academic pursuit and a backbone from which all new knowledge radiates. It is expected to play a leading and critical role in national growth and development. The various components of this level of education actively attempt to meet this expectation through:

- a) Initiation and sustenance of appropriate research in all areas relevant to national development.
- b) Production of appropriately trained work-force by developing and mounting relevant academic programmes.
- c) Production, conservation and dissemination of knowledge.

In Kenya, the University level education currently comprises of the six public Universities. These are University of Nairobi, Kenyatta University, Moi University, Egerton University, Jomo Kenyatta University and Maseno University. Each operates under a separate Act of Parliament. This also includes the private universities which operate through a government charter.

2.2 OBJECTIVES OF UNIVERSITY EDUCATION

The aims of University level education as the national “think tank” in shaping and propelling national growth and development are as follows:

- a) To develop in students and scholars the ability to think independently, critically and creatively.
- b) To adapt, develop, advance, preserve and disseminate knowledge and desirable values, and to stimulate intellectual life.
- c) To educate and train the high level human capital needed for accelerated development through industrialization of the economy.
- d) To nurture the internalization of universal knowledge, including key technological advances, with a view to harnessing these for national development.
- e) To provide, through basic and applied research, knowledge, skills and services that help solve the problems facing the society.
- f) To help create a society in which both merit, based on diverse talents, and equity in development are recognized and nurtured.
- g) To inculcate entrepreneurial skills among the graduates, thereby enabling them to create employment for themselves and for others.

2.3 UNIVERSITY OF NAIROBI

Background Information

University of Nairobi was inaugurated as a National University in 1970. Since then it has grown significantly in terms of student enrolment, academic and non-academic staff and in terms of physical facilities. The provision and development of the necessary physical facilities and staff has, however, not kept pace with the student enrolment so that although accelerated growth is a matter of great pride to

the university, the problems it has generated are a great challenge as the university tries to educate high level manpower for the country.

In an attempt to produce qualified human resources required by the various sectors of the Kenyan economy, the university has diversified the courses offered across a host of academic disciplines. The university has established colleges which are located in its various campuses. The University of Nairobi has six colleges which were established under the university of Nairobi 1985 Act of Parliament. These are, the College of Education and External studies, (CEES). The College of Architecture and Engineering (CAE), The College of Biology and Physical Sciences (CBPS), The College of Health Sciences (CHS), The College of Agriculture and Veterinary Sciences (CAVS) and The College of Humanities and Social Sciences (CHSS).

2.3.1 UNIVERSITY CAMPUSES

The following comprises of the various university of Nairobi Campuses:-

- The main Campus: Here are located the college of Architecture and Engineering comprises the Faculty of Architecture, Design and Development and the Faculty of Engineering. The college of Humanities and social sciences is also located here. One of the faculties – Faculty of Arts is located here. The central Administration is located at the main campus as well as the Jomo Kenyatta memorial Library, the Bookshop, school of Journalism, Institute for Development Studies, Institute of Diplomacy and International Studies, Institute of Nuclear Science, offices of common undergraduate courses, the board of Post-Graduate courses and the office of special student Advisor. The majority of the students halls of residence and the central catering unit are also within the main campus. The institute of African Studies is located 1 km from main campus.

- **Chiromo Campus:** It accommodates the college of Biological and Physical Sciences within which fall the faculty of Science, the pre-clinical, medical and Veterinary Departments and the institute of computer science.
- **The upper Kabete campus.** It accommodates the college of Agriculture and Veterinary sciences. The clinical departments of the faculty of veterinary medicine as well as the faculty of Agriculture are also accommodated here.
- **The lower Kabete Campus.** It comprises of the faculty of commerce.
- **The Kikuyu campus** where college of Education and external studies is located.
- **The Kenyatta National Hospital Campus** where the college of Health Sciences is housed within, which fall Faculty of Dental Sciences, Faculty of Pharmacy, Faculty of medicine.
- **The Parklands Campus** where faculty of law is accommodated.

2.3.2 UNDERGRADUATE ENROLMENT

Since the university of Nairobi was established in 1970, there has been a tremendous growth in all areas and more particularly in the enrolment of undergraduate students and in the diversity of courses offered. The main reason being due to the country's demand for qualified high-level manpower and also pressure from the society to find places for qualified young Kenyans who annually compete for limited places at the University.

The table represents total undergraduate students enrolment in various faculties in respect to gender in 2002/2003 academic year in University of Nairobi.

Table 5:

UNIVERSITY OF NAIROBI

UNDERGRADUATE STUDENT'S STATISTICS 2002/2003 ACADEMIC YEAR

YEAR OF STUDY

FACULTY/DEPARTMENT	1 st Year		2 nd Year		3 rd Year		4 th Year		5 th Year		6 th year		Sub-total		Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
AGRICULTURE															
022 BSc. (Agr.)	66	32	92	28	70	21	90	26					318	108	426
034 Food Science	18	8	24	6	22	5	22	9					86	28	114
035 Range Management	22	7	27	3	21	5	17	5					87	20	107
ARCHITECTURE															
002 B. Arch	19	8	23	3	24	2	23	2	25	1	27	3	141	21	162
003 Building Economics	24	6	27	5	29	2	20	9					100	22	122
004 Land Economics	24	5	22	7	26	6	18	11					90	29	119
005 Design	15	11	14	15	19	10	14	8					62	44	106
0065 Planning	13	4											13	4	17
ARTS															
001 B. Arts	399	284	303	269	291	180	377	225					1370	958	2328
COMMERCE															
033 B. Com	203	124	189	101	138	70	169	81					699	376	1075
EDUCATION															
035 B.Ed (Arts)	154	134	201	127	189	120	251	136					795	517	1312
037 B.Ed (Science)	13	4	19	5	9	1							41	10	51
ENGINEERING															
006 Civil	52	4	42	10	61	8	56	7	68	6			279	35	314
007 Electrical	57	11	49	5	43	4	75	5	69	9			293	34	327
008 Mechanical	49	4	52	1	47	3	64	3	51	2			263	13	276
009 Survey	23	5	24	5	24	2	22	3	23	3			116	18	134
011 Agricultural	18	6	28	3	29	2	28	2	38	2			141	15	156
LAW															
004 L.L.B	51	6	82	68	60	49	71	58					264	221	485
MEDICINE															
031 MB. Ch.B	96	34	82	51	64	35	101	51	83	62	90	28	516	261	777
032 BSc. Nursing	16	11	16	22	19	16	17	23					68	72	140
SCIENCE															
007 BSc. Actuarial	7	5	12	5	7	6	8	1					34	17	51
008 Industrial Chemistry	10	1	11	0	3	2	12	1					36	44	40
009 Mathematics	2	1	9	3	11	2	5	1					27	7	34
010 Biology	7	1	7	8	8	2	1	2					23	13	36
010 B.Sc (General)	243	73	246	115	230	67	218	74					937	329	1266
013 Statistics	11	1	17	7	14	3	7	0					49	11	60
VET. MEDICINE															
010 B. V.M	78	18	446	11	38	14	39	5	32	6			233	54	287
SCHOOL OF AFRICAN STUDIES															
006 B.A. Anthropology	76	50	70	51	35	10	49	26					230	137	367
SCHOOL OF COMPUTER SC.															
015 B.Sc. (Computer Sc.)	28	3	48	6	39	1	29	3					144	13	157
PHARMACY															
012 B. Pharmacy	20	7	39	17	19	5	36	17					114	46	160
DENTAL SCIENCE															
013 B.D.S	15	10	14	8	9	7	12	9					50	34	84
TOTAL	1824	924	1836	962	1600	660	1862	802	390	91	117	31	7629	3470	11,099
GRAND TOTAL		2748		2798		2260		2664		481		148		11,099	11,099

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2.4 KENYATTA UNIVERSITY

Background Information

Kenyatta University (KU) is situated about 16 kilometres from Nairobi on the Nairobi-Thika dual carriage way. The University was initially a British Army base until it was handed over to the Kenya Government in 1965. Since then it has developed from senior secondary school and Teacher Education College to a University College and finally to a fully-fledged University. Between 1965 and 1972, the college was the country's largest institution for producing trained non-graduate secondary school teachers. Following an Act of parliament in 1970, Kenyatta College became a constituent college of the University of Nairobi. Consequently, the name changed to Kenyatta University College. In 1972 the college enrolled the first students for the degree of Bachelor of Education of the University of Nairobi. The Bachelor of Education degree programs has been available only at Kenyatta University College since the beginning of the 1978/79 academic year. On August 23, 1985, the Kenyatta University Act received presidential assent making the institution a fully-fledged University. The act became operational on September 1 1985 and the New University was inaugurated on December 17, 1985. Kenyatta University immediately started establishing new faculties and constituent colleges. In this pursuit, Jomo Kenyatta college of Agriculture and Technology (JKUAT) became a constituent college of K.U in 1988 before becoming a fully-fledged university.

The following are the schools/ departments/ institutes and academic units in Kenyatta University.

- **School of Humanities and Social Sciences**

Departments: Economics, English and Linguistic, Fine Art, Foreign languages (French and German), Geography, History, Kiswahili and African Languages, Literature, Music, Performing and creative Arts centre, Philosophy, Religious studies, Sociology, Accounting and Business Administration.

- **School of Education and Human Resources**

Departments: Business studies department, communication skills department, development studies department, Educational Administration planning and Curriculum Development Department, Education Communication and technology Department, Educational foundations Department, Educational psychology Department, Library and information studies unit, physical Education Department, Secretarial studies Department, Teaching practice unit, Basic Education Research Center, Bureau of Educational Research Center, Early childhood Center, Special Education Center.

- **School of Pure and Applied Sciences**

Departments: Environmental foundations, planning and management, Environmental Science, Physical Education, Environmental Social-cultural studies, Center for Environmental Research and extension (CERE).

Food nutrition and Dietetics, Family and consumer studies, Textile, clothing and Design, Hotel and Institutional management. Appropriate technology center, Biochemistry, Botany, Chemistry, Maths, Physics, Zoology, Computer Science, Sports and Games, Leisure and Recreation Management Center for complimentary medicine and Biotechnology.

- **Institutes; Continuing Educational (primary option, secondary option). Distance Education and Kiswahili Research.**

- **Other Academic Units**

African Virtual University (AVU), Bureau of Training and Consultancy, Bureau of Education Research (BER) and International Studies Summer Programme.

The table shows the total undergraduate student enrollment in respect to gender in the current academic year 2002/2003 in various faculties:-

Table 6:

KENYATTA UNIVERSITY

UNDERGRADUATE STUDENTS ENROLMENT 2002/2003 ACADEMIC YEAR

DEGREE COURSE	1 st Year Group 2002		2 nd Year Group 2001		3 rd Year Group 2000		4 th Year Group 1999		TOTAL
	M	F	M	F	M	F	M	F	
B.A	252	168	168	112	163	114	156	48	1181
B.A (F.A)	7	7	4	6	5	4	4	2	39
B. COMM	163	103	130	68	120	73	96	42	795
B.ED (H/E)	2	37	0	38	0	36	0	36	149
B.ED (ARTS)	330	378	230	265	222	259	368	226	2278
B.ED (SC.)	307	124	223	80	148	93	215	63	1253
B.ED (ECE)	14	26	18	32	21	31	2	5	149
B.ED (SP.ED)	96	150	89	68	155	124	26	6	714
B.SC (FND)	4	49	1	39	4	43	1	16	157
B.SC (FCS)	1	27	2	42	2	29	0	21	124
B.SC (TCD)	1	19	0	19	0	15	0	17	71
B.SC.	116	55	128	56	119	40	136	27	677
B.SC (HRMI)	4	16	-	-	-	-	-	-	20
B.SC (COMP. SCI)	60	10	-	-	-	-	-	-	70
B.SC (SP. TECH)	40	27	-	-	-	-	-	-	67
B.SC (TEL. & INF. TE)	63	10	-	-	-	-	-	-	73
B.SC (APP. TECHNIC.)	36	7	-	-	-	-	-	-	43
B.SC (S/SPONSORED)	32	8	-	-	-	-	-	-	40
B.SC (COMP. ENG)	7	1	-	-	-	-	-	-	8
B.SC (SOFT.ENG)	2	0	-	-	-	-	-	-	2
B.ENV. (SCI)	33	17	30	27	26	14	33	22	202
B.ENV. (ARTS)	26	31	18	21	12	21	26	10	165
TOTALS	1596	1270	1041	873	997	896	1063	541	8277

2.5 LOW ENROLMENT AND HIGH DROP-OUT RATES OF GIRLS IN PRIMARY AND SECONDARY LEVELS OF EDUCATION

Low enrolment and high dropout rates of girls at lower levels of education is a major factor that can lead to low enrolment of female students in the university level of education. At the entry point to the university level of education, gender disparities are highly experienced. This is evident that the problem is deeply rooted far from primary level to secondary level and finally to the university level of education. According to FAWE (1995) in the Journal, 'Education of Girls and Women in Africa', in Kenya, of all the girls who enrol in standard one, only 34% complete standard eight as compared to 70% for boys.

Kihumba K. (East African Standard, July 26, 1997) reported that the most critical issue has been the high level of drop out for girls in primary education. Even when the ratio of girls is the same as that of the boys at the time of admission in standard one, by standard four, 20 per cent drop out. The drop out rate is higher in standard 8, where at least 65 per cent do not sit for the national examination. In Arid and Semi-Arid Lands areas (ASALS) such as Northern Eastern province as many as 75 percent of the girls who enrol in standard 1 drop out before they reach standard 8.

The factors that affect female participation at primary and secondary levels of education can be grouped under three headings (Weis, 1981; Eshiwani, 1982). These are:-

i) **Family Influence**

Under family influence the variables can be further sub-divided into:-

a) **Social class**

Girls who come from socio-economically advantaged homes are much more likely to enrol and remain in primary and secondary schools than girls from disadvantaged families. Assie (1983) showed that in the cote d'ivoire, a girl with a university-educated father was more than thirty-five times likely to enter an academic secondary school as well as was the daughter of a man with no education. The educational advantages conferred by high socio-economic status were even more pronounced at the university level. Biraimah (1987) showed that women

students at the tertiary level in Nigeria were disproportionately drawn from more privileged families.

.According to East Africa Standard(July 26, 1997), Vida Y noted that the main obstacle to girls education is poverty. They are in many cases forced to leave school to work to supplement the family's income. Mong'are (1996) in his research observed that there were some families of low socio-economic status which go without food. In such cases, the hungry children failed to attend school and finally dropped out of school. He observed that poverty is a real cause of drop out.

b) Parental Attitudes

Eshiwani (1983) in his study found that the access to primary schools for girls was blocked by the prejudice against girls going to school especially by parents who were worried about their daughters becoming pregnant or coming in contact with boys from other areas outside their clans. In North Eastern and coast province which had the lowest female enrolment in primary and secondary schools in 1982, there was a strong parental concern that discipline within the school was not as tight as was within the home.

c) Selective Education of Children

Children may be kept out of school for reasons that include a need for their labour and a need for them to learn traditional skills. According to Bowrrian and Anderson (1980), sending children to school means they lose valuable time learning traditional skills. Even in an urban setting, the foregone can be so costly as to deter the enrolment of girls in school (Robertson, 1984). Girls and women are overwhelmingly employed in the traditional or informal sectors, and school attendance means that they have less time to learn with their mothers or apprentice with other older women.

Schooling also entails monetary costs-fees, uniforms, books-which may be low relative to modern sector incomes but are high if a family's principal income-generating activities do not take place in the modern sector. At the same time, studies have shown that the earnings from modern-sector employment are much

lower for girls than for boys. Hence, given the costs associated with schooling and the relatively lower monetary return to girls' education, the choice of whom to enrol in school is often made against girls and for boys. Studies on girls and boys in Nigeria by Ombuloye (1987), show that parents both expect to and actually do spend more to feed and educate their sons than their daughters.

Eshiwani (1983) observed that when confronted with constraints of limited opportunities or resources for primary school, parents in Kenya have generally favoured the education of male children. Preference for investment in schooling for boys may relate to the patrilineal descent systems in which inheritance passes through the male line and in which sons retain responsibilities for their parents as they grow older while daughters are incorporated into their husband's families. Zindi (1996) in a study done in Zimbabwe and South Africa, reported that Zimbabwean parents prefer to educate their sons at secondary level rather than their daughters.

d) Child Labour

Abagi O. and Wamahiu S. (1995) in their findings noted that one of the factors leading to low enrolment of girls and high drop out rates at primary school level is the girls withdrawal from school to child labour. Child labour which is used to supplement incomes in poor household was found to comprise more of girls.

According to revised estimate by ILO's (International Labour Organisation) Bureau of statistics 1997, the number of working children between ages 5 and 1 is at least 120 millions, the majority of them being in developing countries, (Africa, Asia and Latin American). Anon-Nikoi (1978), noted that labour force participation rates are highest for women in the 15-25 age group.

Makau R. (1977) gave some causes of child labour as; lack of affordable schools leading to high drop-out rate of children who end up in child labour. The other cause is forced circumstances. This occurs when parents die of HIV/AIDS and other diseases. This force many orphans to drop out of school because there is

nobody to care for them and pay school fees, hence they engage into child labour in an attempt to earn a living.

e) Unsupportive Home Enrolment

Makau R. (1997) reported that some girls drop out of school due to unfriendly home environment. In her research, children reported the following as some of the factors which interfered with their learning at home; Lack of paraffin, too much manual work, persistent quarrels, too much noise, drunken parents, inadequate food and inadequate sleep. Some of the factors also dwelt on broken homes. Some of the children indicated that they would prefer running away from such homes if there was an alternative. The alternative may be child labour.

Female children are more often burdened by after-school duties than male children because most of these duties are largely theirs; culturally role assigned. When there are overriding family chores like looking after young children or cooking for the families, it is usually the girls that are taken out of school to perform these duties (Eshiwani, 1982). This leads to absenteeism in school. Dolphyne (1991) found that after a series of such absence from school, a girl has difficulty catching up with the rest of the class and in due course give up schooling completely.

ii) Societal Factors

a) Nuptiality

Early marriage and initiation rites at puberty can compete with school for older girls' time. The relatively young age marriage in many countries makes marriage a major reason why girls do not enter secondary or tertiary institutions or, having enrolled drop-out before the cycle is completed.

Museka L. (East African Standard, May 24, 2003) reported that, more than half the school girls in Kusumu municipality drop out of schools to get married. And at least 1,300 do so in primary school every year.

According to a Unesco publication on Equality of Educational opportunity for girls and women (1975), some societies are marriage-oriented. This is evident in Ghanaian society where the prime interest of most parents is still to secure husbands for their daughters. They consider that it is a sounder investment to educate sons than daughters. Girls who stay at home represent moreover an economic asset, helping with the farm work and assisting their mothers in caring for the younger children. In a study done in Tanzania, it was found out that a Buruguyu girl means wealth to her parents because the event of marriage would be accompanied by increase in the number of her parents' herds of cattle. Parents are therefore, not prepared to lose this chance. They decide to withdraw their school girls from school before finishing the primary education, hence, making them dropouts.

Until recently then sending a girl to school was more a matter of prestige than of serious interest (an educated wife also brought a higher bride price to the father). Wrzesinska (1980), reported that the higher bride price paid for educated daughters was an important consideration for parents who sent their girls to secondary school in Zaire. And there was the fear that if girls attended school they would think themselves superior to their illiterate parents. Even today, men complain that many educated girls do not make good housewives because they are too proud to do housework. A more modern attitude is that girls are just as intelligent as boys and are also able to make practical use of education even if married.

According to Koech report (1999) one of the constraints facing girls in education is socio-cultural practices such as early and forced marriages and initiation rites. Although the enrolment of married students is not unheard of, pregnancy and childbirth usually end a school career. For older female students, therefore, the competing activity of family formance is an additional deterrent to schooling.

b) Area of Residence

A number of studies (Akande, 1987, Robertson 1986, Bedzi and Burchinal, 1985, Assie, 1983) have suggested that area or residence is predictive of enrolment and attainment at all levels of education. In urban residence, the availability of schools, relatively higher opportunity cost of a rural girls' time, the greater wealth of urban

families, different attitudes toward the education of girls in western schools, and the greater opportunities for girls to obtain modern-sector employment in urban areas may all be relevant factors for high enrolment and sustainability of girls in school.

A recent study on Ethiopia by Abraha et al (1991), observed that urban girls enrolled in school persist at higher rates, both in absolute terms and relative to boys. The measure of grade 4 persistence (that is the ratio of grade 4 to grade 1 enrolment per school) is higher in urban school (0.61) than in rural schools (0.42). Interestingly, the proportion of girls passing the national exam appears lower in urban areas, a result perhaps of the worse selection problems in urban areas.

c) High level of stereotyping

The persistence of the view by both females and males that the woman's place is in the home has led to reduced investment in female education. Most people put a low value to higher education for females and to females themselves by relegating them to a domestic role. This also implies that females will not have the urge for higher education if their role is still perceived as being in the home. Further stereotyping is manifested in considering the females weaker and less brainy than the males, others are subject and employment stereotyping. In this regard jobs that do not need higher education were considered appropriate for women while those that require higher education were suitable for men, as established by earlier studies, boys and girls should construct their own identity and future in line with their perceived opportunities.

d) Other Social Factors

Makau R. (1997) noted that there is no doubt that moral decay is with the society in various forms. Child abuse, divorces, prostitution, teenage pregnancies are a few examples of causes of high dropout rate of girls in primary and secondary schools.

According to a report of a study of school girls pregnancy in Kenya (March, 1998), the overall dropout estimates in numbers because of early pregnancy in 1987 was 8000 girls, 13,000 in 1986 and over 9000 in 1985. The drop out rates were higher

in day schools, mixed secondary schools and schools which have relatively small numbers of girls. The main reasons were given as lack of parental control, discipline, lack of money, breakdown of traditional cultures and values, immaturity and influence of both print and electronic media.

Aduda D. (Daily Nation, March 8, 2002) noted that although the Ministry introduced a re-entry policy in 1994 allowing school-girls who fall pregnant to resume studies after giving birth, little headway has been done for successful implementation. Cases still abound of girls being shut out of school by hostile teachers or lack of support structures at home. More damning is the fact that the middle-level colleges, including those training teachers do not allow pregnancy. A pregnant woman, even if married, has to stay out of college for a year, not only wasting resources but also punishing women for their reproductive role.

The society has changed its values. Some parents are disillusioned with education because of unemployment among graduates who are tarmacking and leading typical lifestyles not dissimilar to theirs. They therefore do not see any point in keeping children in school. Some young girls may then opt for prostitution to make quick money. It is therefore important to educate parents on the importance of being educated. The issue of getting or not getting a job at the end of it is secondary. Parents should also vet what children view on the electronic media and what they read in the media. Children should not be exposed to material meant for adults only (Siele D., 1997).

The socio-economic practices in some communities like the pastrolists have also adversely affected the enrolment and continuity of girls in the education system. The government has introduced boarding schools in the areas to ensure children could learn while the rest of the family moved in search of water and pasture. Mobile schools had been introduced by the government but they had their own limitations hence more research is needed to explore a system that will best deliver education to pastrolists (Miring'uh E., 2002).

Education is required to smooth the path of innovation by breaking down traditional attitudes and so lessening the resistance to change. Education therefore makes the people of one society keep pace with the changing world. Because of the important role which education plays in the socio-cultural and economic development of any society, it is thus believed that everybody should have access to education. The belief leads to the consideration of education as the right of every citizen.

iii) School Factors

a) School Quality

Poor school quality inhibits the education attainment of girls in several ways. Curriculum is a major factor: a continuing disproportion exist in enrolment of girls in science and mathematics related subjects and the humanities as reported by Harding (1985). Apart from the curricular choices that girls may be encouraged to make, the overall quality of the schools they attend has an important effect on their environment.

Eshiwani (1982) and Weis (1981), showed that in Kenya and Ghana, respectively girls were over represented in secondary level institutions of low quality, that is, those institutions that had relatively poor success in preparing their students for examinations. One of the most important disadvantages this conferred was a lack of access to science and mathematics. Associated with this lack of scientific training was the view of physics and chemistry as unfeminine. Eshiwani showed that the majority of girls in secondary schools in Kenya were in schools, few of which offered any science, while those that did lacked the infrastructure to do so effectively.

b) Vocational Training Opportunities

A number of authors have attributed reluctance to send girls to school (especially to the secondary level) in part to a society's response to a perceived lack of fit between the vocations for which schooling is supposed to prepare students and the vocations that are regarded as suitable for girls, these include; domestic work like

cookery, clothing and design. (Sapo, 1981 and Wrzesinka, 1980), explicitly referred to the wife-mother role, the former suggesting that in northern Nigeria this was the only approved role and the latter indicating that it was the major role in which the subjects of her study-secondary school girls appeared to have an interest. It was reported that a girl's expected vocation was to be a wife and mother, and therefore school was deemed unnecessary. These views must be examined in the light of two different issues, the availability of modern-sector employment opportunities for women and the curricular segregation by gender, which often starts in the primary school, continues on to the secondary and higher levels.

Girls are channelled into domestic science, handicrafts and biology, while boys go into chemistry, mathematics and more directly, vocational subjects (Eshiwani, 1982, for Kenya; Harding, 1985). Consequently, neither the belief that women only need to be housewives (refuted by the overwhelming evidence that most women engage directly in economically productive activities in the informal and traditional sector) nor that secondary school students are predominantly interested in becoming wives and mothers (given the kind of training many girls are exposed to in school) is a useful or realistic generalisation about the social or personal expectations, of African girls. Unfortunately, curricular materials within the school too often exaggerate and perpetuate this unrealistic idea of women's role being confined to that of wife and mother. Both of these factors, however, determine the supply of places as well as demand for schools.

c) Lack of Role Models

Tembo (1984) surveyed a number of primary and secondary texts from Zambia as part of a UNESCO project on gender stereotypes in textbooks. The results were instructive. The books contained many more male than female characters and those female characters who appeared did so primarily in domestic roles and were characterised as passive, stupid, and ignorant. Men's activities were admired, women's ignored.

There is also relatively few female teachers in mathematics and science related courses in secondary schools. According to FAWE (1995), in Sub-Saharan Africa women teachers constitute 34% in the primary level, 22% in the secondary level and 12% in the tertiary level. Increasing the number of female teachers is often recommended as a strategy for raising achievement and attainment among female students.

d) Learning Environment in School

Results of a research by Forum for African Women Educationalists (FAWE) revealed that school environment was the major culprit as far as girl-child drop-out in school is concerned (East African Standard, July 26, 1997). The attitudes of teachers and students in schools plus the physical amenities and the society itself have a big influence on the way the girl-child relates to staying in school. Other aspects include measures of gender make up in schools' staff, the treatment of girls and boys by teachers, teachers' attitudes towards boys and girls and students' attitudes.

Makau R. (1997) observed that girls have dropped out of school because of school environment which are not friendly. Cases of harsh teachers who cane their pupils to the extent of causing physical disability or even death have been reported. It has been established that some teachers use girl-students for manual work. According to Marisa W. (1977), a research associate at Kuleana in Tanzania, the use of girls to perform labour for teachers is a widespread problem in Tanzania. Girls are usually asked to help teachers with domestic chores. "Even during their leisure time, girls are withdrawn to make tea, fetch water, and firewood for teachers and clean their offices. Sometimes they are sent to the market or go into the garden to look for vegetables", she lamented. In the same research, it was found out that although the majority of teachers have no preference for teaching boys or girls, majority who have a gender preference would prefer teaching boys.

Kihumba K. (1997) reported that harassment of girls by boys in primary schools is quite high. Researchers have pointed out that most primary schools in Kenya are mixed and that the situation sometimes leaves the girls at the mercy of boys who will pick on them by even taking their writing pencils or even tying their dresses on chairs.

According to Kuleana (1997), sexual harassment is widespread in Tanzania schools and is rarely challenged by teachers, whereas the male peers are the major perpetrators, male teachers are also major culprits. Kihumba K. (East African Standard, July 26, 1997) from various research findings on factors affecting girl-child education in primary and secondary levels in Kenya and Tanzania gave the following summary:-

<u>Problem (Causes)</u>	<u>Percent</u>
Pregnancy	50.0
Sexual harassment by boys	37.1
Lack of information about STD/AIDS	26.2
Lack of money (school fees)	23.9
Sexual harassment by village men	16.7
Problems with boyfriends	12.6
Poor school results	5.9
Sexual harassment by teachers	5.8
Too much work at home	3.9
Lack of information about ways to prevent pregnancy	2.5
Others (e.g. Child labour)	7.8

Source: East African Standard, July 26, 1997.

2.6 POOR PERFORMANCE OF GIRLS AT PRIMARY AND SECONDARY PROMOTION NATIONAL EXAMINATIONS (KCPE AND KCSE)

According to FAWE (1997) most countries in the Sub-Saharan region report lower performance for girls especially in mathematics, science and technical subjects. In Zambia, girls perform lower than boys in all examination subjects at the primary level and in all regions of the country. In Ethiopia, girls' performance in all three examinations in 1989 was reported to have been poorer than that of boys. In Kenya, a recent analysis of students' performance in the primary and secondary promotion national examinations indicates that except in languages, female achievement is lower than that of their male counterparts. Particularly worrisome is the disparities in mathematics and science.

According to Sirigi S. and Waiheng K. (Daily Nation, March, 2003), despite an impressive increase in the number of girls sitting the Kenya Certificate of Secondary Education (KCSE) examination, their performance still fall way below that of boys. In 2001 KCSE performance, girls were weakest in sciences and poorest in mathematics where they scored a mean of 15.83 compared to boys' 21.20. The worst performance was registered in Nyanza province where out of 100 best candidates, only 6 were girls, the best performance was from western which had 45 girls out of top 100 candidates. Others were Nairobi 35, Eastern 34, Coast 29, Central 27, Rift Valley 26 and North Eastern (Sasaka E. and Sittori M. (Daily Nation, March 8, 2002). The performance of students in the K.C.S.E examination in Kenya is very vital since it is the transition examination from the secondary level to the university level. The university admission criteria is usually based on the KCSE examination performance.

The main reasons for the dismal performance according to FAWE are:-

- i) The persistent apprehension, fears, myths and ambivalence, on the part of the parents, teachers, children and society at large, towards female education, its cost effectiveness and the value of keeping girls to school.

- ii) The poor quality of the teaching/learning environment, particularly in the rural areas, under which the majority of the children in the region are expected to gain an education, but from which most children, particularly girls, emerge as repeaters, dropouts and failures.
- iii) The high level of wastage in the education system and the consequent inefficiency discourages parents, teachers and students.
- iv) The low level of girls perception of their status and role in society their academic potential, and the value and significant benefits of remaining in school and attaining the highest level possible.

Eshiwani (1982) noted that, the poor performance of girls at primary level continues to hamper their participation at the secondary level, while that at secondary level hinders their entry into, and effective participation in tertiary and university education. Kosgei (Daily Nation, March 1, 2002) noted that, although girls enter universities at a point lower than the male counter parts, they make up only 30 percent of the total student population.

Although secondary school opportunities for women have improved, girls still constitute only a little over one-third of the enrolment in the best schools. Poor girls most often go to inferior secondary schools where the teaching and learning facilities are insufficient to prepare them for university entrance. Particularly noticeable is girls' limited access to science, mathematics and technical programmes (Kinyanjui, 1988).

However, given equal opportunities to realise their full potential in a friendly school environment, girls can in some cases perform better than boys. This is evident in Musa Gitau primary school, where out of 215 candidates who sat KCPE examination in 2001, 22 joined National schools of whom 12 were girls and 10 boys (Ramani K., East African Standard, February 2, 2002).

2.7 UNIVERSITY ADMISSION SELECTION CRITERIA

Studies have shown that managing the social demand for access to higher education is perhaps the single most difficult task faced by the tertiary sector in Africa today (Saint, 1992). Burgeoning population growth, rapidly rising numbers of secondary graduates and persistent economic stagnation, combine to exert intense pressure on governments to expand university access. The elite nature of university graduates, together with the fact that university education is publicly subsidised, makes university access a contentious political issue (Klitgard, 1991).

The number of school leavers seeking university places has shot up dramatically over the years, with the result that practically every year, only 20 per cent of those seeking admission get it (Ngwiri A. Daily Nation, 1998). While in most countries, Universities admitted more than 50 percent of school leavers, in Kenya only 6 per cent of school leavers are admitted due to lack of places. In America and Britain, 42 percent are admitted (Aduda, D. Daily Nation, February 26, 1997).

The solutions proposed, particularly by donors but also by some local leaders for dealing with the excessive numbers of university students tend to favour the drastic shutting off of this flow (Assie- Lumumba, 1993). In Kenya, the University Joint Admissions Board (JAB) is responsible for selection of students for admission in the public universities. The board was introduced in order to ensure equity, transparency and accountability in university admissions (Koech, 1999). The board was previously using the cut-off points system in selecting the students for admission, which received a lot of criticism from the public. The system was then scrapped and the admission requirements set at mean grade C+ in Kenya Certificate of Secondary Education (KCSE) based on cluster subjects, where the candidates are also allowed to revise their career choices after the results have been released so that they can make an informed selection of courses.

Prof. Chacha (Daily Nation, April 18, 1997) criticised the admission criteria saying that the state universities have failed to implement the 8-4-4 system (8 years primary, 4 years secondary and 4 years university) of education as they do not

consider practical subjects when admitting students. This have created unnecessary bottlenecks in university admission by insisting that all candidates must pass in traditional subjects like mathematics even for courses in which they are not required. The new admission criteria adopted might create stiff competition for the courses deemed 'marketable'. These include law, medicine, pharmacy and discriminate 'unmarketable' courses usually the art-based disciplines. This poses a great problem which can lead to discontinuation of some courses. The net effect will be to blur and diminish the status of universities, which are basically places for academic study not trade (Muli E., Daily Nation, March, 1997).

However, it was observed in Koech report (1999), that rigid admission regulations and practices made it difficult for many qualified persons to have access to this level of education. In relation to gender equality in education the board should consider affirmative action with a view to compensating the disadvantaged female-students for the harm done earlier and, as quickly as possible bringing them to a level where they can compete with others on an equal footing. In Kenya, girls have been admitted with one point lower than that of boys. In Malawi the cut off point is lower for girls than boys. "The issue is how the girls perform after they are admitted. Some have done much better", says Dr. Fabian (1998).

However, it is imperative that efforts to control students flow to the universities must go hand in hand with the creation of a more differentiated higher education system which offers a wider range of satisfactory alternatives at the end of secondary education (Assie-Lumumba, 1993; Saint, 1992).

2.8 LEARNING ENVIRONMENT IN THE UNIVERSITY

According to Koech report (1999), it is a fact that the public universities are underfunded and over-established. Funds allocated to them have been slashed by over 50 percent in the past 10 years, while the population has more than doubled. There has been no infrastructure development in this period, which has inevitably led to congestion in the halls of residence, in lecture halls and everywhere else.

This is noted as one of the contributing factors towards students' unrest and frequent interruption of academic programmes in the universities.

Daily Nation (March 15, 1998), in the article "what ails varsity education", reported that, the university education system is in a turmoil. The students have taken to spending as much time at home or barricading street as they do in their lecture rooms, which means that very little learning is going on. Causes of violence have been the minor confrontations between authorities and the students, ranging from protests over a power blackout at the university to ones that are politically-instigated (Ngwiri Andrew, Daily Nation, March 15, 1998). Some of the students blame these to lack of effective communication channels between them and the administration.

According to research, the situation has grown from bad to worse and it is no longer strange to find university students busy discussing what to cook for supper, a thing previously unheard of, 'sufurias' and 'sukuma wiki' have found their way to students' hostels. In such a situation, it is almost impossible to expect the students to excel in academics on empty stomachs! No wonder the issue of cheating in university examinations is chronic despite the severe punishment that is meted out to the culprits (Wambugu, G. S., Daily Nation, June 18, 1997).

Research has shown that there are incidents of students harassment particularly affecting female students. According to Mudhai F. (East African Standard, March 4, 1998), there is no doubt that lecturers, be they male or female, have in recent years been misusing their powers to decide on the fate of students. Such cases are rampant especially in situations where lecturers of questionable academic and moral credentials have been hired either due to political patronage or as a measure to cope with increasing student population. Such harassment is bound to have serious effects on student academic performance. Noting that some forms of harassment are tantamount to violation of the individuals basic human rights, it has been recommended that universities work out deterrent policies for effective monitoring of cases of students harassment and for ensuring that appropriate

disciplinary measures are taken against proven offenders. Coted' Ivoire Minister for Culture Diabates Harriette (1993) reported that, the Ministry of Education Coted' Ivoire have recently put in place a law against sexual harassment.

The university administration should work in co-operation with the students' organisations especially in developing policies affecting the students welfare, both socially and academically. This is observed as a measure to ease off students unrest in the institutions. The students unrest is one of the challenges faced in delivering good quality education as this has led to frequent interruption of academic programmes.

According to Mbaabu E. (East African Standard, August 25, 1997) parents enrol their children in foreign universities to avoid learning inconveniences at the local public universities. Programme delays at the universities caused by closures prolong the learning period. Universities need to put in place and adopt institutional administration styles that will effectively minimize or eradicate this problem. Students participation is vital in smooth running of universities.

2.9 COST OF UNIVERSITY EDUCATION

The Government has been responsible for all the funding of university education up to 1992. However, since the 1991/1992 financial year, cost-sharing and cost-saving strategies were introduced following the Structural Adjustment Programmes (S.A.Ps). The undergraduate student in public universities pays an annual fee of Kshs.50,000 (Kshs.16,000 for tuition; Kshs.9000 for books; Kshs.18,000 for food and Kshs.7,000 for accommodation). The Government then pays Kshs.120,000 per student per academic year. According to Koech report (1999), the government, in 1995, created the Higher Education Loans Board (HELB) with a view to assisting needy students to obtain university level education following the introduction of cost-sharing in 1992.

Currently the government expects parents to cost share in the education of their children through the Higher Education Loans Board (HELB), by which the government provide loans to university students from poor families to enable them to continue with their education (Wako, Sunday Nation, February 23, 1997).

Koech (1999) reported that though the cost sharing and the loan systems were initiated in order to guarantee availability of funds to the universities, beside alleviating financial difficulties for the students, these goals have not been fully achieved. There is therefore need to review the two systems in order to ensure improved accessibility, academic quality and sustainability in the universities. However Prof. Joseph Kimura, the Higher Education Loans Board (HELB) Chairman (Daily Nation July 22, 2003) reported that, university students will get bigger loans after the Government increased the maximum allocation from Kshs.42,000 to Kshs.52,000 per year.

The Board has a separate bursary scheme which allocates a maximum of Kshs.8,000 to the successful needy students. This means that a student who benefits from the full loan and full bursary should get Kshs.60,000 in one academic year. The move followed a realisation that the living expenses in universities had risen over the year.

With the introduction of cost-sharing, students have to pay for their meals. Among the female students in the universities have reported in various research done that they do not eat regularly at the cafeteria mainly due to insufficient allowance, congestion and poor services. The students indicated that they are not able to buy books and supplies from the university bookshop mainly because the books are either not available or too expensive. They also reported that they miss lectures due to time wasted in fees arrears negotiations. The female students foresee that the financial problems and limited opportunities are likely to negatively affect career ambitions after university due to poor performance. Direct charge is also observed to have an impact in relation to future aspirations, especially with regard to further studies (Alilo P. O. et al, 1993).

According to the Higher Education Bill in Kenya, section 5 (3) of the individual universities states that, the university may refuse to admit into, or discontinue any student from the university on grounds that such a student is unable or has failed or neglected, as the case may be, to pay fees, charges or levy due and owing from him.

However, the bill asks university councils to make provisions that allow students who are discontinued because of inability to raise fees resume when they can pay. Efforts should therefore be made to ensure that available scholarships and other forms of support from government, non-governmental and private sources are expanded and equitably distributed to university students.

2.10 COURSES OFFERED IN THE PUBLIC UNIVERSITIES

Many university graduates expectations are often shattered upon entering the competitive job market when they realise that landing a job of their dream is not easy, despite being armed with a university degree (Ngunjiri J., East African Standard, August 18, 1998). The issue of jobless university graduates inevitably brings to mind the relevance of the kind of training being offered in university today. According to Nduiki (1998), some of the courses being offered are not related to the developmental needs, people have been trained in these fields and yet are floating around without jobs. The unemployed graduate hangs in the balance with a large number turning to odd jobs for a living. Many of them are so desperate that they end up in the Jua Kali sector, hawking, running kiosks, mending shoes, selling vegetables and even work as Matatu touts (Thuku, W., 1998).

The rise in educated unemployment among the university graduates and the rapid technological and economical development in the labour industry have influenced the education sector. This has resulted in market driven education. This is type of education that enables graduates to be self-employed or to fit in the labour market with the prevailing condition of changes in technology.

According to Ndiga (Daily Nation, February 26, 1997), the universities need to liaise with the industry in the formulation of the syllabus so that they could offer relevant training. Mosha, H. of Dares salaam university (1997) stressed the need for employees to be involved in training programmes at the universities by participating in curriculum development and providing opportunities for internship to students.

Aduda D. (Daily Nation, February 15, 1997) reported that the university Joint Admission Board (JAB) have requested the respective senates to examine the possibility of streamlining the capacities of non-competitive courses by introducing innovative and marketable degree programmes in line with development goals and objectives.

The university ought to be given enough leeway to explore new intellectual endeavours to make university education more relevant to the society “universities have always been accused of being good only at heavily-worded theories far removed from country’s economic, political and legal realities” (Waihenya K. Daily Nation, March 7, 2003).

In this respect, some courses are seen to be ‘marketable’. These include law, medicine, pharmacy, engineering and in general the mathematics and science oriented courses. The art-based courses are seen as ‘unmarketable’ courses, examples are history, geography and others.

Generally there is markedly lower proportions of female students in the ‘marketable’ courses, usually the mathematics and science oriented courses as compared to humanities and social sciences. For instance, in the current academic year 2002/2003, there is only 1 female student against 10 male students in first year in industrial chemistry. This also applies to statistics in faculty of science where there is only 1 female student against 11 male students in first year and non in fourth year in the university of Nairobi. In Kenyatta University year 2002/2003, there is only 1 female student in Bachelor of Science (soft ware engineering) in first year students.

In a study conducted by Prof. Florence Lenga, the Dean of faculty of Agriculture at Jomo Kenyatta University of Agriculture and Technology (JKUAT) and Sera Mwanyaky, a researcher, says women tend to shy away from pursuing courses in universities that could open gates to science careers (Ramani Ken, East African Standard, February 16, 2002).

It is noted that though a big number of women have in the recent past joined the labour force, relatively few girls are pursuing courses in science, mathematics and technical fields in institutions of higher learning. Experts blame the low representation of women in these courses on poor attitudes girls have towards the study of mathematics and science subjects at both primary and secondary levels of education. Among the structures and processes that are seen to be limiting women's participation in science and technology, there is first and foremost the tendency of sex stereotyping in child rearing and in school. This influences the attitude of female students towards their roles and expectations in the society. Eshiwani (1983) in his study of women's access to higher education in Kenya with a special reference to mathematics and science education noted the belief among university female students that, "a woman cannot study mathematics and/ or science and be beautiful at the same time". He also observed that female students lack confidence in themselves for laboratory work. Most of them have not developed practical interest of a scientific and technological kind. This is also observed in mathematics. Many girls lack self-confidence in mathematics often termed as mathematics anxiety or mathemaphobia.

The problems hindering success of female students in science and technology should be tackled at a lower level than university. The students should be guided appropriately in choice of subjects for the correct combinations required to qualify for certain courses at the university and various careers in Kenya. For instance, if a candidate wishes to pursue an engineering course at the university, then he/she should be advised to take physics as one of his/her science subjects.

Female students should on the other hand discard the archaic notion that sciences are men's domain. Educated mothers should help their sons and daughters in solving school's problems instead of telling them to ask their fathers. This will give the girl a lot of confidence in life.

Buku, M. (East African Standard, February 15, 1997) noted that with the introduction of 8-4-4 system of education, the large numbers of students admitted to the universities have affected the quality of education. This is because the

lecturer-student ratio more than doubled, sometimes trebled over the internationally accepted one of 1:20. This also reduced the lecture/student contact hours and explains the near-total abandonment of tutorial sessions and the pure adoption of the lecture method as the sole teaching mode. This has raised concern among the potential employers on the quality and standards of the university graduates.

2.11 OTHER FACTORS

These include HIV/AIDS. Studies have shown that HIV/AIDS is posing unprecedented challenge to the world education community with so many orphaned children who are losing a chance to go to school and the teachers dying, or being too sick to teach. The goal of eliminating gender disparities in primary and secondary school education by 2005 poses an even greater challenge, given that the date is fast approaching, as well as the greater likelihood of girls dropping out of school because of HIV/AIDS in their immediate families (Wolfensohn in East African Standard, May 11, 2002). It is estimated that more than 13 million children aged 6 to 12 are out of school in developing countries, two-third of them being girls.

The epidemic have also had an adverse effect on the university lecturers. The public universities have lost quite a number of lecturers leading to a shortage in relation to the very large number of the students population. This have therefore resulted in poor performance of students.

The vice-chancellor, Maseno University Prof. Fredrick Onyango (Daily Nation, May 10, 2003), decried the number of students and lecturers dying from HIV/AIDS related complications at the institution. "We have lost very highly trained staff as well as students with a brilliant future after incurring huge debts due to hospitalisation", he lamented during a HIV sensitisation workshop.

Despite wide spread knowledge about the disease, the attitude and behaviour of students and staff have not changed. According to Koech (1999), problems related to HIV/AIDS are seriously affecting the student population in the universities. There are attempts to avail guidance and counselling services to students in all

universities through the Dean of students office, however it was noted that these were not effective and needed to be strengthened. It was further noted that, lack of role models specifically among the members of staff in the institutions and generally among members of the public, was negatively affecting the morals of the youth today.

2.12 GOVERNMENT POLICIES UNDERTAKEN TO ENHANCE GENDER EQUALITY IN PUBLIC UNIVERSITIES IN KENYA

Since Kenya achieved her independence in 1963, the attainment of equity and individual development through education have been major goals of the education system. By becoming a signatory to the “Convention for the Elimination of Discrimination Against Women” (1985), “Education For All (March, 1990) and “The World Summit for Children” Declarations, Kenya Government reaffirmed its support for the education of women and girls. Kenya’s position is amply summed up by the following quote from the 1985 Nairobi Forward Looking strategies for Advancement of women:-

“Education is the basic for the full promotion and improvement of the status of women. It is the basic tool that should be given to women in order to fulfil their role as full members of society”.

According to Koech report (1999) it is observed that although the situation is much better in the private universities with female students comprising of 50.3 percent of total students population (Economic Survey, 1998), gender imbalances is still a problem within the public universities where the number of female students is much lower than that of male students. On the average, the gender ratio is 30:70 in favour of male students. Similarly, the number of female students in the local universities from the Arid and Semi-Arid Lands (ASAL) is even smaller. There was need, therefore, to initiate some affirmative actions towards improving accessibility of university education for these two groups. A further major problem is that there are markedly lower proportions of women in such highly competitive courses as medicine, engineering and architecture, as compared to humanities and social sciences.

It was recommended therefore that deliberate strategies should be initiated for increasing women's participation in university education with particular emphasis on women from ASAL areas and in faculties where women are very few such as engineering. Such strategies include affirmative action (AA). Crash remedial programmes and outreach to secondary and tertiary institutions.

Affirmative Action (AA), is a development strategy used as a short-term measure for correcting gross disparities. Its use assumes that political will, long-term measures for eliminating all forms of discrimination, and equity indicators for monitoring equitable development are in place. The role of AA programmes is to ensure that past injustices do not continue to haunt the future and that the ground is level for all to participate, and benefit equally from development. The government of Kenya have put some policies in place as a measure to increase female participation in education especially at secondary and higher levels. These include: A policy to all girls who drop out of school due to pregnancy to continue with education. These and other efforts have yielded benefits, with girls' participation rate increasing from 41% in 1988 to 46% in 1995 at the secondary level.

The government has established arid zone boarding schools with a view to ensuring children could learn while the rest of the family moved in search of water and pasture. Mobile schools had been introduced by the Government, but had their own limitations hence more research was needed to explore a system that will deliver education to pastoralists.

Other interventions by the government include the bursary allocation to poor bright students, provision of textbooks, and the school feeding programme. All these efforts have not to some extent succeeded in getting the children from these communities to school (Kiptoon in East African Standard, May 11, 2002). Reasons are poor implementation and lack of good follow up.

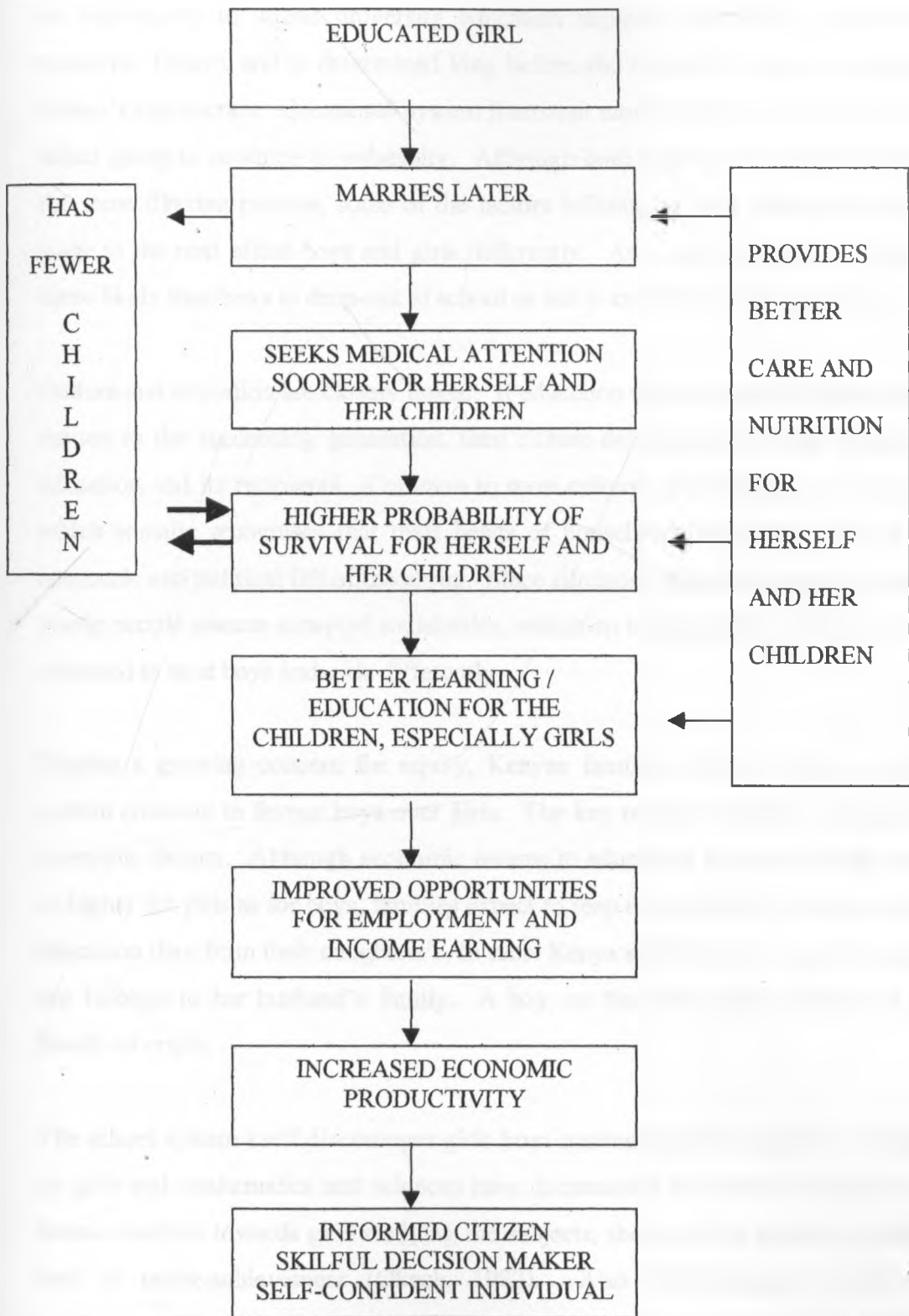
The children Act, enacted in 2001 outlaws discriminative and abusive practices against children. Part II of the Act protects children against harmful cultural rites. It states "No person shall subject a child to female circumcision, early marriages or other cultural rites, customs or traditional practices that are likely to negatively affect the child's health, social welfare, dignity or physical or psychological development". In spite of this provision, some communities still require girls to go through circumcision as a preparation for marriage. This has a great effect on their education as many do not concentrate well on returning back. In countries like United Kingdom, Norway, Canada, Sweden and Southern Australia, Specific Laws have been legislated against the practice (Wafula K. and Suleiman M., East African Standard, December 7, 2001).

Prof. George Saitoti, Minister for Education in Kenya (Daily Nation, January 2003) reported the government intervention of abolishing school fees and all the levies in primary level of education. This was in an attempt to ensure access to primary education for all children regardless of gender. According to the Kisumu municipality Education Officer Mr. Mohammed Ali (East African Standard, May 24, 2003), despite the introduction of free primary education, many girls still opt for marriage and drop out of school as they lack parental guidance. He blamed this on the number of AIDS orphans who are forced into marriage at an early age to avoid frustrations.

The government with the non-governmental organisations (NGOs) together with religious groups have embarked on campaigns to create awareness of the importance of educating girls as well as boys in areas where girls are heavily discriminated along gender-lines. In the world declaration on Education For All (1990), it was pointed out that, "the most urgent priority is to ensure access to, and improve the quality of education for girls and women and to remove every obstacle that hampers their active participation. All gender stereotyping in education should be eliminated" (Jomtien, 1990). It is notable that the Forum for African Women Educationalist (FAWE) has been at the forefront of campaigns to help disadvantaged girls acquire schooling, but the forum depends entirely on donor funds which are irregular and inadequate.

Though there are definite programmes meant to cushion women students from these problems, lack of harmonisation strategies, follow up schemes and adequate funds militate against their success. The social and economic benefits that the nation derives from educating girls include: the inter-generational effects of a mothers' education on that of her children, on infant mortality and morbidity, maternal mortality, family health and nutrition, overall family size and her economic productivity as illustrated in figure 1.

Figure 1: The Impact of Girls' Education



Source : Koech Report (1999)

2.13 SUMMARY

From the literature review it is observed that whether a young woman in Kenya has an opportunity to attend university education depends on cultural, social and economic factors, and is determined long before she completes secondary school. Kenya's meritocratic educational system filters out most students and allows only a select group to continue to university. Although both boys and girls pass through the same filtering process, some of the factors influencing their passage from one stage to the next affect boys and girls differently. As a result, girls in Kenya are more likely than boys to drop-out of school or fail to continue to the next level.

Culture and education are closely linked. If education is the process of transmitting culture to the succeeding generation, then culture determines both the content of education and its recipients. Common to most cultures is patriarchy, a system in which socially recognises that male heads of households effectively control the economic and political life of the group. Since educational systems exist to prepare young people assume accepted social roles, education in patriarchal societies can be expected to treat boys and girls differently.

Despite a growing concern for equity, Kenyan families and the Kenyan school system continue to favour boys over girls. The key reason combines cultural and economic factors. Although economic returns to education are probably the same or higher for girls as for boys, families expect to reap more benefit from their sons' education than from their daughters'. In most Kenya societies, once a girl marries, she belongs to her husband's family. A boy, on the other hand, remains in his family of origin.

The school system itself discourages girls from continuing their education. Studies on girls and mathematics and sciences have documented the attitudes of male and female teachers towards girls studying the subjects, showing that negative attitudes lead to under-achievement (Okech, 1982). Also discouraging to girls are textbooks. Obura (1991) found that the books portrayed women with inferior work, socio-political and psychological images. It is not surprising that girls

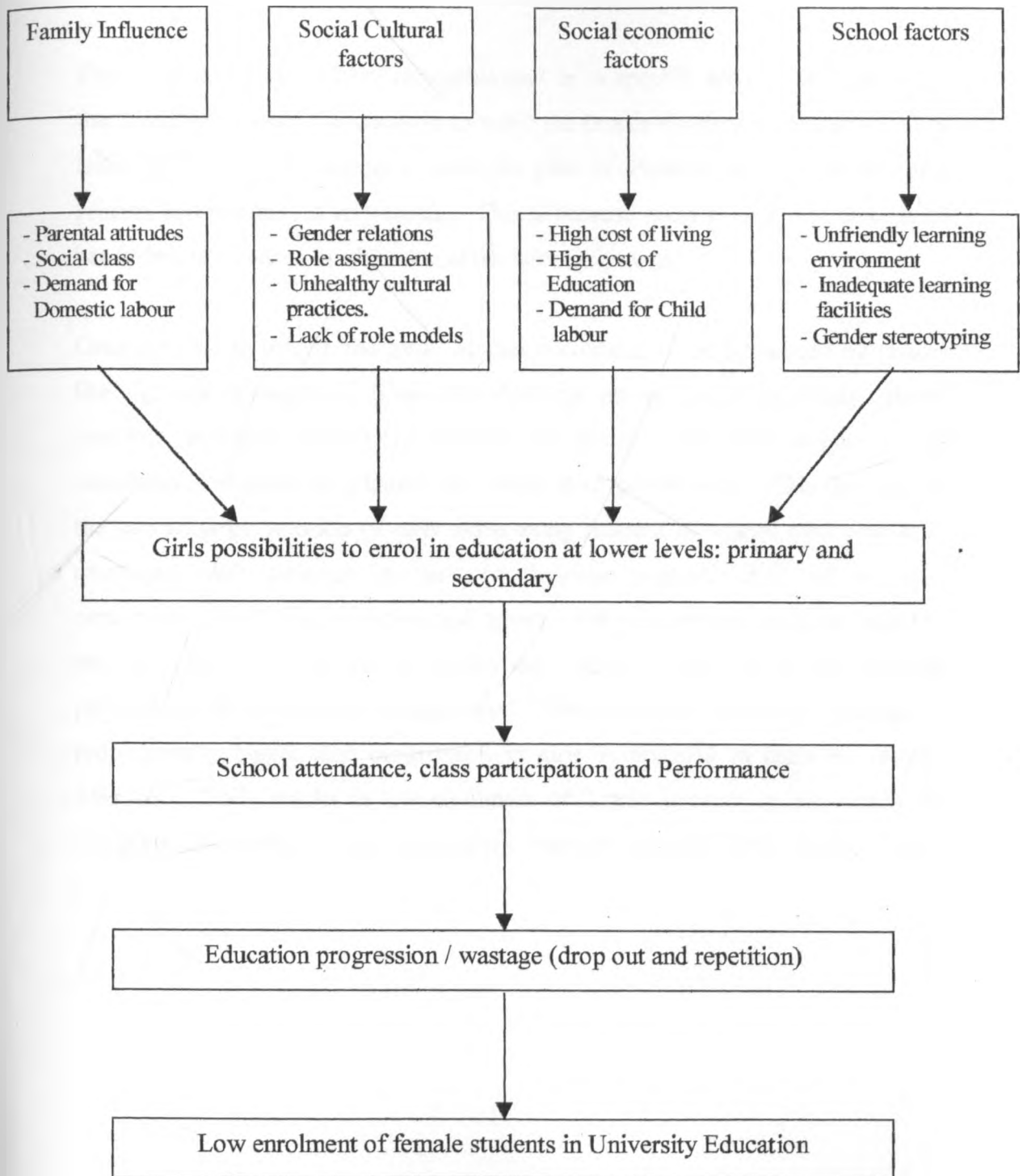
subjected to a constant diet of negative images about themselves underachieve in school and fail to continue to secondary school.

Such difficulties combine to bar girls from university education and to limit the course selection of those admitted. The economic nature of many of the barriers faced by primary and secondary school girls shows that girls from poor families will face an equally difficult time at university.

The government, non-governmental organisations and the society at large have been greatly involved in policy issues and appropriate interventions to eradicate the problem of low enrolment and high drop out rate of girls in the education system. These include building boarding schools, mobile schools, and school feeding programmes in Arid and Semi-Arid lands to attract and sustain girls in schools. The others include public awareness campaigns, removal of school fees and levies in primary education, the quarter system admission criteria in secondary schools, the affirmative action just to mention a few. However despite all these efforts gender disparities still exist in our education system. The problem continues to the university level. From the studies little is done in relation to gender imbalances in the university level of education.

Despite the government attempts to eradicate the problem through some interventions like affirmative action, admitting girls with points lower than boys, provision of loans and bursaries to students and others, the proportion of female students continues to be much lower compared to that of males in university level of education. The study therefore will seek to identify the real causes of the low enrolment of female students in undergraduate courses in the university level of education and come up with the appropriate recommendations which will help to eradicate the problem in the education system.

2.14 CONCEPTUAL FRAMEWORK OF FACTORS THAT LEAD TO LOW ENROLMENT OF FEMALE STUDENTS IN UNIVERSITY



The conceptual framework of the study is based on the fact that female-students enrolment and persistence in education is a function of the key factors; family influence, socio-cultural, socio-economic and the school factors.

These key factors are further conceptualised in to specific activities and elements that directly influence the decision to enrol the female children in education. The initial decision by the parents to enrol the girls in education at lower levels (pre-primary and primary) is very crucial. This is because many girls do not enrol at all hence denied a chance in education at the very early stage.

Once enrolled in school, the girls' education continue to be influenced by factors like high cost of education, demand for domestic labour, gender unfriendly cultural practices, unfriendly school environment and others. This result in poor school attendance, low class participation and hence poor performance. This then affects the education progression of girls since many dropout of school owing to early marriages, early pregnancies, lack of financial support, child labour, poor performance, lack of school fees and others. Many others are made to repeat in particular classes. This results in wastage, while a small proportion of girls progress to the next level of education. Unfortunately, the rate of wastage is proportionally bigger than progression in girls as revealed in literature review. This trend finally results in low enrolment of female students as one climbs the educational hierarchy. This is particularly worse in university level of education.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

For this study, the research methodology is discussed under the following sub-topics; research design, target population, sample size and sampling procedure, research instrument, validity of the instrument, reliability of the instrument, data collection procedures and data analysis.

3.1 RESEARCH DESIGN

The research used an ex-posto facto design. This is a systematic empirical inquiry where the researcher does not have direct control of the independent variables due to the fact that their manifestations have long occurred or they are inherently not manipulatable (Kerlinger, 1973). The design is seen to be appropriate because it is not possible to manipulate such variables as sex, age, academic performance, cultural values and attitudes, extent of child labour, rates of drop out among female students and enrolment in education in the course of study. This is further supported by Charles (1985) who points that the cause, which is the independent variables in ex-post-facto research can not be manipulated because it is genetically fixed (for example, sex) circumstances do not allow manipulation of variables or the cause if culturally ingrained.

3.2 TARGET POPULATION

The target population for this study consisted of all undergraduate female students in the university of Nairobi and Kenyatta University in all the faculties. In the academic year 2002/2003 there was a total of 3,470 female undergraduate students in University of Nairobi and 3,580 female undergraduate students in Kenyatta University making a total of 8,050.

3.3 SAMPLING PROCEDURE AND SAMPLE SIZE

Because this study targeted University of Nairobi and Kenyatta University only stratified sampling method was used to ensure that all faculties in the institutions were represented in the sample. Then the sample size of each faculty was selected by simple random sampling.

The sample sizes of each target population were enlarged so as to increase statistical advantage. This is in accordance with the central limit theorem that states that as the sample size increases, the shape of the sampling distribution of means becomes increasingly like the normal one (Shavelson, 1981). This means that as the sample size increases the standard error of the mean decreases.

Using Krejcie and Morgan's table in Mulusa (1988), the sample size for the target population of 8,050 is 361. For the reason given above, this was increased to 365. University of Nairobi had 12 faculties namely, Commerce, Education, Engineering, Law, Medicine, Science, Veterinary Medicine, Pharmacy, Dental Science, Agriculture, Architecture, Arts and 2 institutes namely; Institute of African studies and Institute of Computer Science. During the time of data collection students in two faculties: Faculty of Agriculture and Veterinary Medicine in Upper Kabete Campus were not in session. Kenyatta University had six faculties with only 5 catering for regular undergraduate courses these are; Faculty of Arts, Science, Education, Environmental Studies and Commerce. A total of 19 strata was formed. In each strata (faculty) the students were picked randomly, chosen using random cluster sampling to obtain a sample size of 20. This brought the number of the total sample to 380 undergraduate female students. Where the total female students' enrolment in a faculty was less than twenty, purposive sampling was used. It was found out that the Faculty of Arts in University of Nairobi had a proportionately larger number of female students hence the sample was increased to 40 which compensated for the faculties where there were no students.

3.4 RESEARCH INSTRUMENT

Data pertaining to the nature and extent of factors that lead to low enrolment of undergraduate students in the University of Nairobi and Kenyatta University was

gathered through the use of a questionnaire. This questionnaire had three sections I, II and III. Section I had 11 items. It sought demographic data and background information like the faculty, courses being pursued, family size and parental economic status, cultural background and area of residence. Section II which uses a modified likert scale, gathered information on female students opinions on the factors leading to low enrolment in University, low enrolment and high dropout rate at primary and secondary levels and the poor performance of girls in KCSE examination. It comprises of 35 items in 3 subsections. Section III had 10 structured questions meant to elicit open-ended responses from female students.

3.4.1 VALIDITY OF THE INSTRUMENT

In accordance to Mulusa (1988), to enhance the validity of the questionnaire a pilot study was conducted on a population similar to the target population. This was geared towards assessing the clarity of the instrument items so that those that fail to measure the variables they are intended to measure, can be modified or discarded completely. This ensured the validity of the instrument. Mulusa further recommends that about 10 cases which represents the target population in all the major aspects should be used in a pre-test. Therefore 10 faculties in both Universities were randomly chosen for the pre-test. Consultation with the supervisor was made to ensure the validity of the instruments beside the pre-test.

3.4.2 RELIABILITY OF THE INSTRUMENT

The split-half method during the pre-test was used to establish the internal consistency of the instrument (Roscoe: 1989). This involved splitting the instruments into two: one half of even numbered items and the other of odd numbered items. This was to obtain the reliability of the instrument. The correlated results value provided the internal consistency of one half of the instrument that is, the degree to which the two halves of the test are equivalent or consistent in terms of items.

The coefficient (r) was obtained through the Pearson Product formula. To obtain the full reliability of the instruments, the Spearman – Brown prophecy was used.

$$\text{Reliability of entire test} = \frac{2(\text{reliability of 0.5 test})}{1 + \text{reliability of 0.5 test}}$$

That is: $\frac{2r}{1+r}$ where $2r$ = correlated reliability
 r = uncorrelated reliability
 n = number of parts.
 $(n=2)$

(Tuckman, 1978).

The reliability was established at 0.82 which was considered adequate for the instruments. Subsequently, the main study was done.

3.5 DATA COLLECTION PROCEDURE

The administration of research instrument was done by the researcher both at the pilot and the main study. A research permit was obtained from the permanent secretary, Ministry of Education Science and Technology, a copy was presented to the commission of higher Education, vice chancellor university of Nairobi and Kenyatta University. The researcher administered and collected the questionnaires the same day from each faculty. This ensured that respondents did not discuss and modify their responses. All the respondents were assured of confidentiality and security. This demanded that before giving out the questionnaires, to the students, the researcher created rapport so as to gain the acceptance and trust of the students.

3.6 DATA ANALYSIS TECHNIQUES

Analysis of data started with editing and inspection of data pieces in order to identify spelling mistakes and any other wrongly answered or unresponded to items. It was then classified according to year of study, faculty and the University.

Descriptive statistics such as frequency distribution and percentage were used mainly to analyse the demographic data. Items ranked on the likert scale were analysed using descriptive statistics while the non-ranked items were arranged to identify frequencies or opinions and views that assisted in explaining and grounding further the findings of the study especially with regard to the research questions. The data was then computed using the Statistical Package for Social Sciences (SPSS).

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.0 INTRODUCTION

This chapter analyses and presents the finding of the study based on the data collected using the students' questionnaires.

4.1 QUESTIONNAIRE RETURN RATE

The total number of students sampled for the study was 380; 316 questionnaires were fully and correctly completed. The questionnaires return rate was 83.2%. This was considered quite adequate for the study.

4.2 BIOGRAPHICAL DATA OF RESPONDENTS

Only female under graduate students were required to fill the questionnaires

Age of respondents

The students were required to indicate their age against given age clusters.

Table 7: Age Distribution of Students

N = 316

Age of years	F	%
Under 20 years	25	7.9
20 – 24 years	284	89.9
25 – 29 years	5	1.6
30 years and above	2	0.6
Total	316	100.0

The data revealed that the majority of students were in their early twenties. Only about 2% were 25 or more years old.

Year of study

Asked to indicate what year they were in, the students' responses were as follows:

Table 8: Students' distribution according to year of study

N = 316

Year of study	F	%
1 st	41	13.0
2 nd	140	44.3
3 rd	84	26.6
4 th	46	14.6
5 th	5	1.6
6 th	-	-
Total	316	100.0

There were very few respondents in their fifth year. The first and fourth year students were just slightly more than the 3rd years who participated (27.6%) and 26.6% respectively. Probably students in their sixth year of study were not in session.

Students representation in faculties

Students were required to indicate the faculty under which the course they were studying fell. The tables 9a and 9b summarises their information.

Table 9a: Distribution of students by faculties in the University of Nairobi

N = 316

Faculty	Frequency (f)	Percentage (g)
Arts	40	12.7
Law	21	6.6
Commerce	20	6.3
Education	20	6.3
Institute of African Studies	20	6.3
Science	20	6.3
Architecture	16	5.1
Medicine	16	5.1
Engineering	15	4.7
Pharmacy	14	4.4
Dental Sciences	8	2.5
Institute of Computer Studies	6	1.8
Veterinary Medicine	3	0.9
Agriculture	-	-
Total	219	69.3

Table 9b: Distribution of students by faculties in Kenvatta University

Faculty	Frequency (f)	Percentage (%)
Education	20	6.3
Science	20	6.3
Commerce	20	6.3
Arts	19	6.0
Environmental studies	18	5.7
Total	97	30.7

The students in the faculty of home economics were included in the faculty of Education and Science.

There were many female students in Faculty of Arts hence the respondents were proportionately more than in other faculties in the University of Nairobi. The faculties related to science oriented courses had very few students and therefore the respondents were relatively few. There were no students in session in the faculty of Agriculture and veterinary medicine. However the researcher managed to get only 3 students in veterinary medicine in the university halls of residence. Kenyatta University had a fair representation in all the faculties as students were in session.

Size of family

The students were required to indicate the number of brother and sisters they had. From this, the number of children in the family was computed as shown below:-

Table 10: Number of Children in the family

N = 316

Number of Children	f	%
1 – 2 children	21	6.6
3 – 4 children	89	28.2
5 – 6 children	103	32.6
7 – 8 children	70	22.2
9 and above	33	10.4
Total	316	100.0

More than half (65.2%) of the families in which the students belonged had five or more children. A few students reported having eleven or twelve siblings. It was also noted that though very few families had no boys, majority of the families were made up of more girls than boys.

The data revealed that the family size may not have an affect on the number of female students in the university. This is because majority of students come from relatively big families.

Parents' level of education

The students also indicated what level of education both their parents had attained:-

Table 11: Distribution of students' parents education level

N = 316

Level of Education	Mother		Father	
	f	%	f	%
Not educated and primary	66	20.9	34	10.8
Secondary / high	96	30.4	56	17.7
College	122	38.6	118	37.4
University	29	9.2	86	27.2
Missing cases	3	0.9	22	7.0
Total	316	100.0	316	100.0

Even though almost all students indicated their mothers' level of education (99.1%) compared to their fathers' (93.0%), the data nevertheless revealed that the fathers had attained a higher level of education than the mothers. The number of mothers and father who were college educated were more or less the same (38.6% and 39.4% respectively). The fathers also led in the category of those who had gone up to university – 27.2% compared to the mothers - 9.2%.

Many of the students were from families where the mother or/and the father is educated up to college level. This shows that the level of parents' education have a positive influence on education of girls in the family.

Occupation of Parents

The students were asked to indicate what their parents did for a living. The table below summarises the data reported.

Table 12: Parents' means of earning a livelihood

N = 316

Occupation	Mother		Father	
	f	%	f	%
Subsistence farming (crops & animals)	93	29.4	64	20.3
Self-employment	87	27.5	82	25.9
Formal employment	107	33.9	135	42.7
Unemployed	16	5.1	6	1.9
Missing cases	13	4.1	29	9.2
Total	316	100.0	316	100.0

Some students did not indicate what their parents did for a living while others reported that the parent(s) were dead. Majority of parents were in formal employment while more mothers (29.4%) than fathers (20.3%) were subsistence farmers- this may have been because more mothers than fathers were uneducated. The data revealed that many students came from families where the mother or/and father have formal employment. Formal employment implies that the family has constant income and hence able to pay for the education of their children including girls with less or no discrimination.

Students' Cultural background

Item 8 of the questionnaire required students to state what their province and ethnic community were. From this, their cultural background was deduced.

Table 13: Distribution of students by province

N = 316

Province of Origin	f	%
Central	75	23.7
Eastern	67	21.2
Western	53	16.8
Nyanza	49	15.5
Rift Valley	41	13.0
Nairobi	15	4.7
Coast	14	4.4
North Eastern	2	0.6
Total	316	100.0

The first three provinces; Central, Eastern and Western were home to more than 60% of all students. North Eastern province recorded a measly 0.6% of students.

The data shows that some provinces are far much behind in relation to the education of girls especially in North Eastern with only 0.6% and coast province with 4.4%. This may be due to harsh climatical conditions making them pastoralists, lack of infrastructure and education facilities.

Ethnic community of students

In addition, the students had to indicate their ethnic community. This revealed:-

Table 14: Distribution of students by ethnic community

N = 316

Ethnic Community	f	%
Kikuyu	94	29.7
Luhya	53	16.8
Kamba	38	12.0
Luo	36	11.4
Meru	24	7.6
Kisii	23	7.3
Kalenjin	21	6.6
Embu	12	3.8
Mijikenda / Taita taveta / Digo	7	2.2
Maasai	4	1.3
Other- Asian, Arab etc	4	1.3
Total	316	100.0

Students from the Bantu-speaking tribes were far more (79.4%) than those of the other two-Cushites and Nilotes. From the Bantu grouping students from the Kikuyu and Luhya ethnic communities made up almost a half of all the respondents.

From the data, some communities like Masaai and the Mijikenda have very low representation of female students in the universities. This is most likely due to gender insensitive cultural practices like early marriages and female genital mutilation.

Areas of Residence

The students were required to state whether they resided in or outside the university. The universities hosted 92.7% of the student while the rest 23 or 7.3% resided outside the universities' hostels. It was observed that there was congestion in the halls of resident where up to four students were forced to share a room. Some students disclosed that this was not conducive to learning and it interfered with their need for privacy hence opted for accommodation outside. Others reported that they had responsibilities like taking care of their children and families hence opted to live outside the university.

Secondary school attended and number that qualified to your university

Students indicated the category of secondary school they had attended and the number of girls that qualified to join the public universities that year. The results were:-

Table 15: Secondary school attended and number of girls that joined Public universities.

Category of school	Students who attended		No that joined university							
			Very many		Many		Few		Very few	
	F	%	f	%	F	%	f	%	f	%
Provincial single sex boarding	194	61.4	37	11.7	74	23.4	55	17.4	28	8.9
National single sex boarding	61	19.3	34	10.8	18	5.7	8	2.5	1	0.3
District single sex boarding	19	6.0	1	0.3	3	0.9	8	2.5	7	2.2
District mixed day	16	5.1	-		2	0.6	2	0.6	12	3.8
Provincial mixed boarding	11	3.5	-		-		3	0.9	8	2.5
District single sex day	8	2.5	-		1	0.3	3	0.9	5	1.6
Provincial single sex day	3	0.9	-		1	0.3	-		2	0.6
Provincial mixed day	2	0.6	-		-		1	0.3	1	0.3
District mixed boarding	2	0.6	-		-		-		2	0.6

Majority of the respondents (61.4%) schooled in provincial girls boarding schools. It is worth noting that most of the respondents had been in single sex boarding secondary schools. As reported, girls who joined the public universities from the

mixed day and boarding schools were usually very few. On the other hand, National girls' boarding schools' graduates indicated that very many of their colleagues had joined the public universities. In a couple of cases, respondents from district mixed day schools admitted that it was just they themselves who had done well enough to qualify for university admission.

The data revealed that most girls who attended single sex secondary schools join university, unlike the small number of those who attended day secondary schools. This is most likely so because peer effects, class participation and leadership opportunities are greater. There is absence of gender stereotyping which encourages girls to excel and choose less feminine courses of study such as mathematics and science.

All girls' schools reduce stereotyping in teacher behaviour because they do not have opportunity to exercise gender favoritism. Matching student-teacher genders, girls are inspired to achieve by role model in daily experience.

Students' opinions about causes of low enrolment of girls in both universities.

- i) Against given factors, the female students were required to indicate whether they agreed or disagreed that a factor contributed to low enrolment of girls. The results are summarised below.

Table 16: Students' opinions on factors related to low enrolment of girls'

N = 316

Factors		Responses									
		SA		A		DA		SD		U	
		f	%	f	%	F	%	f	%	f	%
1	High cost of university education	59	18.7	112	35.4	86	27.2	48	15.2	11	3.5
2	Poor performance of girls in KCSE	105	33.2	174	55.1	25	7.9	12	3.8	-	-
3	University admission criteria	13	4.1	59	18.7	157	49.9	70	22.1	17	5.4
4	Most girls do not have high career aspiration	44	13.9	125	39.6	59	18.7	82	25.9	6	1.9
5	Low attitude of girls towards maths and sciences	63	19.9	196	62.0	46	14.6	11	3.5	-	-
6	Lack of role models in public universities	29	9.2	116	36.7	132	41.8	31	9.8	8	2.5
7	Lack of morale due to unemployment in the country	113	35.8	79	25.0	66	20.9	42	13.3	16	5.1
8	HIV/AIDS related problems	58	18.4	107	33.9	76	24.1	38	12.0	38	12.0
9	Social cultural influences	102	32.3	159	50.3	38	12.0	11	3.5	6	1.9
10	The nature of courses offered in universities	22	7.0	68	21.5	137	43.4	81	25.6	8	2.5
11	Harassment of female students in universities	23	7.3	55	17.4	146	46.2	88	27.8	4	1.3
12	Frequent unrests in universities	49	15.5	131	41.5	58	18.4	67	21.2	11	3.5
13	Low enrolment of girls in primary and secondary	124	39.2	155	49.1	32	10.1	7	2.2	-	-
14	High drop out rate at lower levels	218	69.0	96	30.4	2	0.6	-	-	-	-

The female students were mainly in agreement that the low enrolment of girls at lower levels of education and the high drop out rates at these same levels were major factors leading to fewer girls at universities (88.3% and 99.4% respectively).

Lack of high career aspirations and poor performance of girls in KCSE were also cited as contributory factors by many students. However though, quite a number of students viewed some university related factors as deterrents to enrolment.

ii) Factors leading to poor performance of girls in KCSE

The students' grade in KCSE determines whether they qualify for university or not. Thus, students were asked to give their opinions on why girls perform poorly in this determining exam.

Table 17: Students' opinions on factors causing poor performance of girls in KCSE

N = 316

Factors		Responses									
		SA		A		DA		SD		U	
		f	%	f	%	F	%	f	%	f	%
1	Most girls are generally poor academically	7	2.2	11	3.5	92	29.1	206	65.2	-	-
2	Inadequate facilities and ill equipped science laboratories	76	24.1	177	56.0	41	13.0	22	7.0	-	-
3	Most girls do not have high career aspirations	38	12.0	126	39.9	83	26.3	69	21.8	-	-
4	Generally girls cannot perform as well as boys	10	3.2	9	2.8	66	20.9	230	72.8	-	-
5	Lack of financial support from parents.	57	18.0	169	53.5	48	15.2	23	7.3	19	6.0
6	Unfriendly learning environment in schools	39	12.3	118	37.3	106	33.5	38	12.0	15	4.7
7	Negative attitude of teachers towards girls ability to perform well.	73	23.1	158	50.0	61	19.3	24	7.6	3	0.9
8	Most girls are in school to pass time as they wait for marriage in motherhood hence do not work hard	28	8.9	71	22.5	85	26.9	132	41.8	-	-
9	Girls are discouraged by teachers who refer to them as people who can not make it	81	25.6	143	45.3	59	18.7	24	7.6	9	2.8

Majority of the student were of the opinion that teachers' negative attitude towards girls' ability to perform well (73.1%) made them discourage girls (70.9%) leading to poor performance in KCSE. The students strongly disagreed that most girls are generally poor academically (65.2%) and that generally girls cannot perform better than boys (72.8%). Lack of financial support from parents was decried by many as was girls' lack of high career aspirations as contributory factors to poor performance in KCSE. Worth of mention however was the refuting of popular belief that most girls do not workhand in schools because they are just awaiting marriage and motherhood (68.7%).

iii) Factors attributed to fewer girls in primary and secondary schools

Students gave their opinions on what could possibly be the cause of low enrolment and high drop out rates of girls in both primary and secondary schools. They revealed:-

Table 18: Distribution of students' opinions on factors leading to fewer girls in the primary and secondary schools

N = 316

Factors		Responses					
		T		F		U	
		f	%	f	%	f	%
1	Early pregnancies	316	100	-	-	-	-
2	Lack of school fees	286	90.5	30	9.5	-	-
3	Girls should learn to be wives and mothers hence formal education is not important	27	8.5	289	91.5	-	-
4	Early marriages	309	97.8	7	2.2	-	-
5	HIV/AIDS related problems	215	68.0	76	24.1	25	7.9
6	Poor performance	228	72.2	76	24.1	12	3.8
7	Cultural influences like FGM	218	69.0	72	22.8	26	8.2
8	Low parental attitudes towards girls education	287	90.8	29	9.2	-	-
9	Child labour	269	85.1	34	10.8	13	4.1
10	Unfriendly learning environment	186	58.9	98	31.0	32	10.1
11	High demand for domestic labour	237	75.0	64	20.3	15	4.7
12	Lack of role models in the society	171	54.1	133	42.1	12	3.8

As in earlier responses, students affirmed that lack of school fees (90.5%) low parental attitudes towards girls' education (90.8%) and tendency of girls to get pregnant early- 100% and to get married early 97.8% resulted in fewer girls in the school system HIV/AIDS related problems also posed a big problem to girls' enrolment probably because girls are the care takers therefore they stay home to nurse the sick or toil to provide necessities for the affected family members.

D) Factors affecting Girls performance in universities

i) The students were to list major factors that affected the performance of female students in the universities. Below are their revelations.

- a) Amorous relationships with male students - 80.7%
- b) Marital and family responsibilities - 66.1%
- c) Peer influence to engage in drinking etc - 67.1%
- d) Problems brought by inadequate finances - 46.5%
- e) Laxity, lack of seriousness in academics- "academic arrogance" – 43.7%
- f) Pregnancy and child rearing - 39.6%
- g) Sexual harassment / molestation by male students and lecturers – 28.2%
- h) Low self-esteem and lack of motivation - 14.2%
- i) Inadequately equipped library facilities - 17.1%
- j) Lack of parental support - 13.6%
- k) Poor teaching methods e.g. few tutorials, little follow-up etc - 12.0%
- l) Lack of higher ambitions - 7.0%

Many students expressed that study time was eaten up by relationships with opposite sex, family responsibilities and engagement in detrimental leisure activities. A few stated that female students tended to relax in their academic pursuits consequently, their level of performance dropped.

II) Factors leading to low enrolment of female students in undergraduate courses: students gave several of these as stated below

- a) High drop out and low enrolment rates at lower levels hence fewer girls sitting for KCSE - 93.0%
- b) Poor performance in KCSE - 73.4%
- c) Financial difficulties - 69.9%
- d) Negative attitude towards university education for girls (career women) from parents, relatives, friends, prospective husbands and society in general - 36.1%
- e) Lack of jobs after graduation - 27.2%
- f) Poor choice of career options due to lack of information on careers - 19.6%
- g) Duration of course is too long and frequent unrests served to lengthen it further - 18.4%
- h) Courses offered were unworthy, not diversified and out of line with expectations - 13.3%
- i) A big time gap (i.e. 2years) between completion of secondary school and joining universities made girls opt for alternatives e.g. a job, joining middle level institutes etc - 11.1%

III) Poor enrolment in mathematics and science related courses

The respondents stated factors that contributed to low enrolment of female students in mathematics and science oriented courses like in faculties of Engineering, Medicine and Architecture as:-

- a) Poor performance in mathematics and sciences at KCSE - 84.2%
- b) Stereotype thinking that the courses better suit males by general society served to discourages female students - 70.3%
- c) Females viewed the courses as difficult, demanding and taking too long to complete - 31%
- d) Courses are more expensive (tools, equipment etc), and most girls lack financial support - 19.9%
- e) Discouraging attitudes by course lecturers towards female student - 16.8%

- f) Jobs related to the courses do not favour women and marital life e.g. being a pilot, roads engineer etc and employers believe men are better suited - 15.2%
- g) Lack of role models - 5.1%
- h) Ill-equipped school laboratories - 4.1%

IV) Views on the cost of university education

- a) Many students (57.9%) felt that the cost of university education was way too high and consequently it negatively affected female students enrolment in universities. They further explained that most parents were not well off and when presented with a son and a daughter to take through college, the daughters almost always lost out or were sent to cheaper middle level colleges. Some of the students 27.8% felt that the tuition fee was not high but the costs of living and maintenance were high enough to be a deterrence to enrolment. The remainder 14.3% were of the opinion that university education was affordable especially due to the awarding of HELB loans and bursaries hence cost was no hindrance to enrolment.
- b) Effectiveness of HELB in allocation of loans and bursaries to students: 70.3% of students claimed that HELB was not effective while the rest-39.7% said that it was.
- c) Suggestions on ways of improving loan and bursary allocation by HELB to the university students include:-
 - i) Establish a research office to verify the authenticity of information given by applicants to ensure that only the needy cases are allocated loans and bursaries - 58.5%
 - ii) Increase the minimum amounts given to students - 45.6%
 - iii) Give a flat rate (standardized) amount to all applicants since they will pay back anyway - 30.7%
 - iv) Give due consideration to the expenses of each course when awarding loans - 11.4%
 - v) Award loans and bursaries to self-sponsored students especially girls - 4.7%

V) Solutions to Gender Imbalances in Universities

Probable measures that can be undertaken to solve the problem of gender imbalances in public universities in Kenya:-

- a) Lower cut-off points for admission for girls - 94.3%
- b) Encourage girls to continue with education right from the beginning - 69.0%
- c) Sensitise parents and communities on the importance of girl-child education - 67.4%
- d) Sponsorships / scholarships be awarded to more girls - 17.1%
- e) Considerably reduce the two-year break before joining universities - 14.9%
- f) Offer more 'female' related courses that are also marketable - 20.6%
- g) Shorten the duration of courses - 20.3%
- h) Adequately equip girls' schools to help raise performance levels - 13.6%
- i) Offer career guidance to girls in secondary schools - 9.2%
- j) Legal action against cultural practices hindering girls' education - 6.0%
- k) Make education compulsory at lower levels of education - 3.5%

VI) Guidance and Counselling Services in Universities

- 1) The effectiveness of guidance and counselling services in the universities in dealing with female related problems – very few students (16.1%) declared the services effective. The majority (84.1%) maintained that they were ineffective. Others were not even aware of such services in the university.
- 2) Many suggestions for improving guidance and counselling services were forwarded:-
 - a) Involve students as peer counsellors - 46.5%
 - b) The services be available in every campus - 41.8%
 - c) Publicise them using posters; 'Kamukunjis' - 35.4%
 - d) Use qualified personnel - 27.8%
 - e) Counsellors to interact more with students instead of sitting in their offices - 21.5%

- f) Utilise resource persons - especially women who have 'made it' - 20.6%
- g) Employ female counsellors - 8.9%
- h) Avail a 24 hours /7days -toll free line to access the counsellors - 6.6%

VII) Preference of Educating Boys over Girls

- 1) Asked whether parents in their community preferred educating boys to girls 67.7% said Yes while 32.3% said No. Of significance is that majority of those who said No were from the Kikuyu ethnic community hailing from Nairobi and Central Province and a few from others who resided in Nairobi.

In Yes group were many Kalenjins, Luhyas and all Maasais from the Rift Valley, many Meru, Kamba and Embu people from Eastern Province, over half of all Kisiis and Luos from Nyanza and all communities from the coast.

- 2) Explanation for their responses
 - a) The 67.7% whose communities marginalised girl education said boys were seen as a worthwhile investment since they will look after their parents in old age but girls get married and move away - 93.4%
 - b) Traditional duties of a woman required little or no book-learning - 52.4%
 - c) Woman's position is ranked lower – as the 'led', thus males be educated first to enable them be husbands and leaders - 41.0%
 - d) Women who excel academically are viewed as aggressive and unnatural- 27.4%
 - e) Fear of delaying girls' marriage - 21.2%

Students also mentioned that at college level, parents preferred to educate girls in 'inferior' courses like hairdressing, dressmaking, secretarial and nursing, while boys were urged to take up courses like accountancy and information technology etc.-'superior courses'.

The 32.3% who said No explained that:-

- a) One's ability and hardwork are the only determining factors of who get educated not sex - 80.4%
- b) Communities had realised that educating a woman is educating a whole village - 63.7%
- c) Girls are becoming increasingly more helpful to their parents by giving financial help - 22.5%

VII) Reasons why parents enrol their children especially girls to universities outside Kenya. The students reckoned that parents enrolled their children in outside universities because:-

- a) Belief that they offer a higher quality of education - 81.0%
- b) Lower grades were required for admission than in Kenyan universities - 73.7%
- c) Takes too long to graduate from local universities due to unrests, long holidays - 71%
- d) They offer a wider range of courses that suit girls and one can specialise in exactly what one wants - 39.2%
- e) Poor and rundown facilities in local universities - 28.2%
- f) After graduation they stand a better chance of landing a job both here in Kenya and in those countries - 26.9%
- g) Believe that it is safer due to lower prevalence of HIV/AIDS, sexual harassment, unwanted pregnancy etc - 20.6%
- h) The student can subsidise tuition fee by working - 17.1%
- i) Early admission after KCSE – no wasting two years of waiting - 14.6%

IX) The Performance of Married female students in university

- i) The student were asked to indicate whether the performance of married female undergraduates was affected by the marriage:-
 - a) Yes - 94.6% because of role-conflict, too many other responsibilities thus education usually takes a back seat.

b) No - 5.4% because when the spouse is supportive, they end up performing even better; due to their many responsibilities, they are better managers of time and utilise it wisely in study and if one is determined enough, responsibilities of marital life can be surmounted.

ii) Factors that lead female students to marry while still in university:-

- a) Unplanned-for pregnancies - 67.1%
- b) In search of financial support - 46.8%
- c) Poor setting of priorities coupled with lack of guidance and counselling - 27.5%
- d) Cultural influence in form of pressure from parents, relatives, friends - 23.4%
- e) Influence by peers who are also married - 20.1%
- f) Long duration of the course (4 – 6 years) and fear that they will be too old to land a husband if they wait until they graduate - 16.5%
- g) Marriage presents a means of escape from problems at home - 4.7%

4.3 ANSWERS TO RESEARCH QUESTIONS

The study sought data on the role and causes of the various factors that influence women enrolment at the university level, all the research questions thus have this as the underlying theme.

i) Does the low enrolment and high drop out rate of girls at lower levels of education influence the number of female students in the public universities?

All respondent were of like opinion that these contributed greatly to fewer females in universities since by the time of sitting for KCSE very few girls were in class compared to the number that had enrolled at standard 1 or even Form I. Various factors were given as causes of this twin problem of low enrolment and high drop out rates; early pregnancies – 100%, lack of school fees- 90.5%, early marriages 97.8% and child labour 85.1%. To exacerbate the situation, the society in general looked upon girls' education as a waste of time and scarce resources.

ii) Does the low performance of girls in KCSE influence the number of female students admitted in the public universities in Kenya?

Yes. 88.3% of the students felt that the low performance of girls in KCSE was a major factor influencing the number of female students in the universities. Though 94.3% of respondents disagreed that girls are generally academically poor (as exemplified in 80.7% of respondent that had attended national and provincial secondary schools), their performance in KCSE continued to be dismal, thus few qualified for admission to local public universities. The study found out that this poor performance in KCSE was attributed to girls having low career aspirations, lack of parental and societal support of girl education and few role models for girls to emulate and identify with.

iii) Does the university selection criteria adopted by the Joint Admissions Board (JAB) influence the number of females who enroll in the university?

The majority of students' felt that the criteria used for admission was quite okay. A proportion of 22.8% of the students felt that the admission criteria was not adequate especially along the distribution in various courses according to choice of the applicants. They felt that students should be admitted in courses of their choice other than being placed in any course. This therefore posed as a factor that discouraged female students from joining university to pursue courses which are not in line with their choices, hence seek other alternatives where they feel more placed in tertiary colleges.

It was also reported that JAB should lower the minimum university requirement for girls than the prevailing one to enable more girls to have an opportunity in university education. However, majority of the students felt that it was not a major factor leading to the problem of gender imbalances in education.

iv) Are there factors related to the learning environment in University of Nairobi and Kenyatta University which have an effect on female students enrolment?

The study found out that several factors related to the learning environment discouraged female students; harassment of female students in the university was viewed as a problem affecting students by 24.7%.

Course lecturers' attitudes towards female students especially in male-dominated courses was quite discouraging as was the unwelcome amorous attention by some lecturers. About a quarter of the students decried the poor teaching methods employed, few tutorials and little follow-up. Inadequately equipped libraries and run-down learning facilities were also cited.

The frequent unrests that usually led to closure of the campuses coupled with the compulsory long holidays due to the inadequacy of resources to cope with a big number of students discouraged many parents from enrolling their daughters. In addition the two year break before joining college after completing Form IV was viewed as a waste of valuable time. It made girls to opt for other alternatives like joining universities outside the country, or were lured to marriage.

Unfriendly learning environment in schools, negative attitude of teachers and lecturers towards girls' ability, domestic labour demands were also highlighted as some of the factors leading to low enrolment of female students in the universities.

v) Are there socio-cultural factors of the Kenyan societies which influence female students enrolment in University of Nairobi and Kenyatta University?

Socio-cultural influences were viewed as a major factor leading to low enrolment of female students in the university by 82.6% of the respondents. This influenced more the enrolment and retention rate of girls in primary and secondary levels of education which consequently affects the enrolment in the university.

A large number of students whether living in rural or urban areas or whether their communities were viewed as progressive or not maintained that education of boys was given preference over that of girls. This led to fewer girls in universities. Even in communities that did not consciously favour boys, girls were more often than boys enrolled for 'inferior' courses like secretarial in middle level colleges.

Lack of role models to ape and the large number of women (including many of the students' mothers) in menial low income jobs fed fuel to the belief that women are less endowed academically. Further, practices like FGM and early marriages made many girls who could have joined universities to cut short their studies. Generally an unsupportive social network ensured that fewer girls enrolled and even fewer were retained in the education system.

vi) Does the cost of university education affect female students enrolment in the universities?

About 60 % of the students stated that the cost of university education was high and many parents could not afford it, thus they sometimes opted to take their daughters to cheaper colleges. A further 27.8% said that though the tuition fee was not very high, other costs like catering, accommodation, living and maintenance costs were high enough to discourage some girls from enrolling. Some girls reported that most of the students' marriages while in the university was as a result of search for financial support. Some students are forced to engage in some activities like small businesses where they sell items like stationary and food, while almost all cook in their halls of residence to substitute for the catering expenses. These activities usually consume most of the students' time hence less time to study and consecutively lead to poor performance. Some are therefore discontinued while others repeat in their course of study leading to wastage.

Further, 17.1% of the respondents revealed that parents sent their daughters to universities outside the country because the girls could pay for part of their tuition and living expenses by working part-time. Students questioned were emphatic about the awarding of more scholarships, loans and bursaries as a way of

encouraging girls' enrolment. Others felt that if part-time job schemes for female students were put in place, it could drastically increase their enrolment and retention in the universities.

vii) What influence does the nature of courses offered in Kenyatta University and of University of Nairobi have on enrolment of female students?

From the study, it was revealed by 80.1% of students that parents preferred to enroll their daughters in universities outside the country because they offered a much higher quality of education and a wider array of courses to choose from, than our own universities.

Some courses required very high cut-off points for admission, like, Medicine, Architecture or Engineering that very few girls attained though probably many may have been inclined. The mathematics and science-oriented courses usually took much longer to complete than the arts-based ones thereby deterring some females from enrolling. While others claimed that other courses were much more difficult and demanding- 31.0%. Courses that prepared one for jobs that usually were not in congruence with marital and family life or even societal expectations like being an Architect, were not popular with female students. The courses running from 4-6 years were viewed by some as taking up too much time and in addition 13.3% felt that these same courses were not diversified enough, were unworthy and not in line with their expectations. This was relatively more among the students undertaking courses in faculty of Arts.

viii) What steps can the government and society in general take to encourage increase in female students' enrolment in the public universities?

Students advocated for improvements in HELB so as to make it more effective and efficient. This was observed in 58.5% while bigger loans to students were advocated for by 45.6%. Some 30% of the students felt that HELB should standardize the loans by giving a flat rate to all applicants. Others advocated for more scholarships and bursaries to girls.

Single sex boarding secondary schools were responsible for more girls joining the university than mixed schools either day or boarding, since over 80.0% of the respondents had come from such schools. More and better-equipped girls schools could probably increase the number of girls joining universities. The government together with the society should support the girls' schools by providing adequate facilities and enough qualified staff.

The community should be sensitized about the importance of girl education 67.4% while laws against practices that hinder girl education should be more stringently enforced. Girls should be given more information and guidance as relates to careers while the universities should advertise more on the courses on offer. In addition 20.6% of students advocated for more 'female-friendly' courses that are marketable, and to make them more attractive their duration should be shortened. Almost all students were in agreement that the cut-off points for admission of girls should be slightly lowered.

4.4 SUMMARY OF THE STUDY FINDINGS

The study realised its objectives in terms of unearthing the factors leading to low enrolment of female students in the universities and how this gender imbalance can be corrected. The factors responsible for gender disparity in access to university education were found to be the result of a process that involved all the factors rather than a status of those factors. This interplay even involved factors like poor teaching- learning facilities in the institution, household factors, lack of financial support, unsupportive socio-cultural factors and long delays before joining university. It was found out that the society in general needed to get more involved in improving the education of girls and especially in eradicating biases that girls' academic abilities are somewhat wanting. The high cost of university education and the inadequacy both in the content and variety of courses offered in universities were found to be major deterrents to girls' enrolment. To increase enrolment, the study advocated for more relevant courses to the labour market and more sponsorship for female student among others.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.0 SUMMARY

The relatively small numbers of female students in the universities despite their high enrolment at the start of schooling was the main motivation in finding out what possible factors could have caused such high attribution rates. The study therefore sought to determine the factors causing low enrolment and high drop out rates at the primary and secondary levels and their effects on university enrolment. It also sought to find out what effects the socio-cultural environment had on the enrolment of females. The study endeavoured to determine whether the learning environment at the two universities and the nature of the courses on offer deterred female enrolment. Under investigation too was the JAB criteria on admission and the cost of university education as probable effects on female enrolment. Finally, the study had as its objective the determination of ways of encouraging increase in female enrolment.

Adequate literature was reviewed to show that girls' enrolment in universities was considerably low and that girls represent about 30% only of the total student population in the universities. Literature specific to the two universities under study was also reviewed. A conceptual framework was used to help relate the various variables identified in the review.

A questionnaire issued to female students was used as the data collection instrument. The validity of the questionnaire was established during the pilot study. The reliability was calculated using Spearman's Brown Prophecy formula. Advice emanating from frequent consultations with the supervisor was also incorporated for the purposes of ensuring the highest validity and reliability of the questionnaire before the actual fieldwork.

The questionnaire return rate of 83.2% was deemed as quite adequate. Frequencies and percentages were used to analyse data. The questions posed by the researcher were then answered:-

i) Does the low enrolment and high dropout rate of girls at lower levels of education influence the number of females in the public universities?

The study confirmed that they did for the number of girls who sat for KCPE and KCSE was considerably low. Possible factors leading to this low enrolment and high drop out rates were also forwarded.

ii) Does the low performance of girls in KCSE influence the number of female students admitted in the public universities in Kenya?

Girls did poorly in KCSE thereby affecting the number that qualified to join the public universities. However, respondents categorically stated that this poor performance was not as a result of girls being academically poor or less academically endowed than boys.

iii) Does the university administration criteria adopted by the Joint Admissions Board (JAB) influence the number of females who enrol in the university?

Few students cited poor university admission criteria as a contributing factor to low enrolment of girls. However, majority of the students felt that it was not a major factor leading to the problem of gender imbalances to education. Though JAB's admission criteria does not appear to present a big problem currently, it is an area that need to be further studied.

iv) Are there factors related to the learning environment in University of Nairobi and Kenyatta University which have an effect on female students' enrolment?

Frequent unrests, poor living standards due to congestion in halls of residence, lecture theatres, catering halls and others, sexual harassment and intimidation by male colleagues and teaching staff, poor and inadequate learning resources were cited as some of the factors that had a negative effect on the enrolment of female students.

- v) **Are there socio-cultural factors of the Kenyan societies which influence female students enrolment in University of Nairobi and Kenyatta University?**

The parents' preference of educating boys to girls and the generally negative attitudes toward the female's ability to excel in academia served to lower girls' self-esteem and morale leading to poor performance in school and inability to secure many places in the universities.

- vi) **Does the cost of university education affect female students enrolment in the universities?**

The high cost of tuition and maintenance was seen as an important factor contributing to low female enrolment, however the subsidies by the government and HELB were commended by many.

- vii) **What influence does the nature of courses offered in Kenyatta University and University of Nairobi have on enrolment of female students?**

The content of courses was viewed as below average while minimum admission requirement to certain courses was deemed as too high thus discouraging enrolment. Lack of variety in courses offered was also cited as a problem. Females complained that employers preferred males in certain fields thus this discouraged females enrolling in those courses despite their high marketability.

- viii) **What steps can the government and society in general take to encourage increase in female students' enrolment in the public universities?**

Sponsorship of more girls to university was advocated while girls' secondary schools were singled out as requiring more and better facilities. Courses that met the needs and abilities of females needed to be designed, while affirmative action on admission cut off points and on marginalised regions could be more firmly enforced.

5.1 CONCLUSIONS

Emaciating from the study finding several conclusions were arrived at:-

- i) Negative attitudes towards girls' education was more prevalent among parents who had little or no formal education and as these abound in all communities, education of girls was viewed as a waste of resources by many.
- ii) Girls were no less academically endowed than boys and their poor representation in higher institutions of learning was a consequence of other non-academic factors that used up time and energies that could otherwise have been directed at book learning.
- iii) Right from primary to the higher levels of education system, the female students faced the same problems that lowered their level of performance and reined in their career ambitions; very confining societal expectations, marriage and responsibilities and lack of support from relevant quarters.
- iv) The citadels of education needed to spearhead campaigns that would improve the performance and therefore the enrolment of girls at all levels of the education system. This would also help to demythify universities and the going-ons therein thereby encouraging communities to enrol their female children.
- v) Guidance and Counselling services in the universities are seriously underutilised. Since the social support structures for females students outside the universities were very inadequate, the services should seize this opportunity and step in to support and aid girls in surmounting obstacles that otherwise led to their poor performance and drop out.
- vi) The universities should expand their learning capacities and improve on their courses to make them more relevant and valid so as to attract more female students. Other physical facilities like accommodation, catering and recreational should be expanded to cater for the large number of students.

5.2 RECOMMENDATIONS

In view of the findings of the study, the following recommendations were made:-

- i) The enforcement of compulsory education for all especially at the primary level of the education system. This will ensure higher enrolment of girls in secondary, tertiary and higher levels of education.
- ii) To ease the problem of lack of finance to pay for tuition and living expenses, the universities, government and private sector should draw up and implement a programme that would enable students, especially females, to work part-time and learn. The current module II maybe too expensive thus many cannot afford.
- iii) Expansion of the university facilities and updating the teaching-learning resources. This would reduce the duration of holidays between years of study and improve the quality of education offered. To curb the flow of students to other countries, the courses on offer should be more varied.
- iv) High gear campaigns to champion girl-child education be taken to the remote and far flung regions of the country. All means of information and communication should be used to educate parents and the community at large on the importance of girls' education and the support they should provide on an ongoing basis, including the elimination of discrimination against girls, female genital mutilation, early marriage, child labour and sexual harassment.
- v) The problems hindering success of female students in science and technology should be tackled at a lower level than university. The students should be guided appropriately in choice of subjects and the correct combinations required to qualify for certain courses at the university and various careers in the labour market. For instance, if a candidate wishes to pursue an engineering course at the university, then they should be advised to take physics as one of their science subjects. Female students should on the other hand be encouraged to discard the archaic notion that sciences are men's domain.

- vi) Encouragement and incentives as well as counselling services, should be provided for girls to study scientific, technical and managerial subjects at all levels in order to curb the problem of female under representation in these fields.
- vii) Develop curricula, textbooks and teaching aids free of gender-biased stereotypes at all education levels, including teacher training, in association with all concerned; parents, publishers, teachers and authorities.
- viii) The Higher Education Loans Board (HELB) should give more consideration to female applicants when awarding loans and bursaries as an incentive to ensure high enrolment and retention rates.
- ix) The government, through the Ministry of Education should ensure proper implementation and follow up of gender responsive policies such as re-entry of pregnant girls into the education system after delivery.
- x) Institute flexible schedules, incentives, scholarships and other means to minimize the costs of girls education to their families especially at secondary and university levels so as to facilitate parents' ability to choose education for their girl-child.
- xi) The educational policy makers should shorten the two-year waiting period before the secondary school leavers join university. Some who qualify get engaged in other activities which eventually deter them from joining universities.
- xii) The Joint Admissions Board should still lower the cut-off points or the minimum requirements for university admission for girls with more than the one point currently, to ensure more girls get an opportunity to join university education. Affirmative action should be applied especially for areas with very low girls representation in the university like in North Eastern province and among the societies where girls education is not highly valued. Research have shown according to Dr. Fabian (1988) that, girls have performed much better despite being admitted with lower points.

5.3 SUGGESTIONS FOR FURTHER RESEARCH

The following areas that need to be studied in order to generate information that might increase the enrolment of girls in universities.

- i) Ways of improving the performance of girls in the lower levels of education and especially in mathematics and sciences such that more can take up related courses in universities and hence serve as role models to others.
- ii) Possibilities of reducing the time taken to complete the courses with little or no additional costs to the students.
- iii) Need to investigate the relevance of traditionally offered courses in the job market and future labour demands. In relation the possibility of modifying course content and varying them so as to be in line with global trends should be studied.
- iv) Investigations on the impact of role modelling on performance of girls at all levels of education are needed such that more information can be used to inform, for example, the authors of educational books and materials on the effects of specific types of role models on the educational aspirations of female students.
- v) Finally, there is need for a comparative study or replication of this study in other universities such that generalisations arrived at can inform policy formulation and sustain further academic interest.

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APPENDICES

APPENDIX A

LETTER TO VICE CHANCELLOR

Catherine Njambi Muya
University Of Nairobi
Department Of Educational
Administration and Planning.
P. O Box 92
Kikuyu

5th August, 2003.

The Vice-Chancellor
.....

Dear Sir/Madam,

**RE: A STUDY OF FACTORS THAT LEAD TO LOW ENROLMENT OF
UNDERGRADUATES FEMALE STUDENTS IN UNIVERSITY OF NAIROBI
AND KENYATTA UNIVERSITIES**

I am a post graduate student in the University of Nairobi, pursuing a Master of Education Degree in Educational Administration and Planning. I am conducting a study on the factor that lead to low enrolment of undergraduate female students in the University of Nairobi and Kenyatta University. I am hereby seeking your permission to interview your students through questionnaires.

The questionnaires are designed for this research purpose only, therefore the responses shall be absolutely confidential and anonymously given. NO NAME SHALL BE REQUIRED FROM ANY PERSON OR INSTITUTION.

Thank you.

Yours sincerely,

CATHERINE N. MUYA

APPENDIX B

LETTER TO RESPONDENTS

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Department Of Educational
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P. O Box 92
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5th August, 2003.

Dear Respondent,

**RE: A STUDY OF FACTORS THAT LEAD TO LOW ENROLMENT OF
UNDERGRADUATE FEMALE STUDENTS IN THE UNIVERSITY OF
NAIROBI AND KENYATA UNIVERSITY**

I am a postgraduate student in the University of Nairobi pursuing a Master of Education Degree in Educational Administration and Planning. I am conducting a study on the factors that lead to low enrolment of undergraduate female students in the University of Nairobi and Kenyatta University.

The questionnaire attached here-in is meant to gather information for this study from you. I hereby request your contribution by responding as honestly as possible and to the best of your knowledge. All responses will be absolutely confidential and are just for purpose of this study. Do not write your name or institution.

Thank you.

Yours sincerely,

CATHERINE N. MUYA

APPENDIX C

THE STUDENT'S QUESTIONNAIRE

This questionnaire is for the purpose of the research only as explained in the introductory letter. Please answer all the questions in the questionnaire as honestly as possible and to the best of your knowledge. Do not write your name anywhere.

SECTION I

1. Indicate your gender (tick one). Male () Female ()
2. Indicate your age bracket (tick one)
 - a) Under 20 years ()
 - b) 20 – 24 years ()
 - c) 25 – 29 years ()
 - d) 30 years and above ()
3. Indicate your year of study (tick one)
 - a) First year ()
 - b) Second year ()
 - c) Third year ()
 - d) Fourth year ()
 - e) Fifth year ()
 - f) Sixth year ()
4. Indicate your faculty and the course that you are pursuing in the University.
Faculty _____
Course _____
5. How many brothers and sisters do you have? (write the number in brackets)
Sisters () Brothers ()
6. What is your parents level of Education? (Tick one for each)

	Mother	Father
Not educated / Primary	()	()
Secondary/High School	()	()
College	()	()
University	()	()

7. What do your parents do for a living? (tick one appropriate choice)

	Mother	Father
Subsistence farming (crops and animals)	()	()
Self employment	()	()
Formal employment	()	()
Others (indicate) _____		

8. Indicate your cultural background

Province _____
Ethnic Community _____

9. Indicate your areas of residence in the course of your study time in the University.
(Tick one).

University halls of residence	()
Outside the University	()

10. Indicate the category of secondary school that you attended (tick one) in each category.

A	i) National Secondary School	()
	ii) Provincial Secondary School	()
	iii) District Secondary School	()
B	i) Mixed Secondary School	()
	ii) Single sex Secondary School	()
C	i) Boarding Secondary School	()
	ii) Day Secondary School	()

11. Indicate the number of girls who joined the public Universities from your school together with you in that particular year (tick one)

Very many	()
Many	()
Few	()
Very few	()

SECTION II

1. The following are factors related to low enrolment of undergraduate female students in the University of Nairobi and Kenyatta University. Please tick (✓) the opinion that best represents your feelings.

1. strongly agree (SA)
2. Agree (A)
3. Disagree (DA)
4. Strongly disagree (SD)
5. Undecided (U)

	FACTORS	SA	A	DA	SD	U
i	High cost of University education					
ii	Poor performance of girls in Kenya Certificate of Secondary Education (KCSE)					
iii	University admission criteria by the joint admission board.					
iv	Most girls do not have high career aspirations					
v	Low attitude of girls towards Mathematics and Sciences.					
vi	Lack of role models in the public Universities					
vii	Lack of morale due to the unemployment in the Country.					
viii	HIV/AIDS related problems					
ix	Socio-cultural influences like the culturally assigned roles of girls in the society					
x	The nature of courses offered in the Universities					
xi	Harassment of female students in the Universities					
xii	Frequent unrest of students in the Universities hence low attitude of parents toward the public Universities					
xiii	Low enrolment of girls in primary and secondary levels of education					
xiv	High drop out rate of girls at lower levels of education (primary and secondary)					

2. The following are factors related to poor performance of girls in Kenya Certificate of Secondary Education (KCSE). Please tick (✓) the opinion that best represents your feelings.

1. Strongly agree (SA)
2. Agree (A)
3. Disagree (DA)
4. Strongly disagree (SA)
5. Undecided (U)

	FACTORS	SA	A	DA	SD	U
i	Most girls are generally poor academically					
ii	Lack of adequate facilities like books and well equipped science laboratories					
iii	Most girls do not have higher career aspirations					
iv	Generally, girls cannot perform as well as boys					
v	Lack of financial support from parents					
vi	Unfriendly learning environment in school					
vii	Negative attitude of teachers towards girls ability to perform well.					
viii	Most girls are in school to pass time as they wait for marriage and motherhood hence do not work hard					
vix	Girls are discouraged by teachers who refer to them as people who can not make it					

3. The following are factors attributed to low enrolment and high drop out rates of girls in primary and secondary schools in the education system. Using the scale given, indicate your opinion. (Tick where appropriate).

True (T)

False (F)

Undecided (U)

	FACTORS	T	F	U
i	Early pregnancies			
ii	Lack of school fees			
iii	Girls should learn how to be wives and mothers hence formal education is not important			
iv	Early marriages			
v	HIV/AIDS related problems			
vi	Poor performance			
vii	Cultural influences like Female Genital Mutilation (FGM)			
viii	Low parental attitude towards education of girls			
ix	Child labour			
x	Unfriendly learning environment in school			
xi	High demand of domestic labour			
xii	Lack of role models in the society			

SECTION III

1. Write down 3 major factors that affect the performance of female students in the University.

- i) _____
- ii) _____
- iii) _____

2. Give the factors that lead to low enrolment of female students in undergraduate courses in the university.

- i) _____
- ii) _____
- iii) _____
- iv) _____
- v) _____

3. There is notably few female students in the mathematics and science oriented courses in the university like in faculty of Engineering, medicine and architecture. In your own view, give the factors that contribute to this situation.

- i) _____
- ii) _____
- iii) _____
- iv) _____

4. Explain your view on the cost of University education and its effect on female students enrolment in the university

5. a) How effective is the Higher Education Loans Board in allocation of loans and bursaries to students?.

b) Suggest ways of improving loan and bursary allocation by HELB to the university students.

6. Indicate three measures that can be undertaken to solve the problem of gender imbalances in the public Universities in Kenya.

- i) _____
- ii) _____
- iii) _____

7. What is the effectiveness of the guidance and counseling services in the University in dealing with female students problems?. (Tick where appropriate).

- Very effective ()
- Effective ()
- Less effective ()
- Not effective ()

b) Suggest ways of improving the performance of the guidance and counseling services in the University.

8. Do you think parents prefer educating boys than girls in your community? (Tick one).

- Yes () No ()

b) Please explain your response briefly.

9. Some parents enroll their students especially girls to Universities outside Kenya. In your opinion give the reasons for this tendency.

- i) _____

- ii) _____

- iii) _____

10. Most of the female undergraduate students marry while in the University. Does this have any effect on their performance?. (tick one)

Yes () No ()

b) Explain your response

c) What factors lead to female students marriage while still in the University?

- i) _____

- ii) _____

- iii) _____

Thank you for your co-operation.