

Gender Perspectives In African Higher Education

By

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Abstract

It is well known that females are under-represented as participants at all levels of education. Their illiteracy levels are always above the national average; in only a few countries do females form more than 50 percent of those enrolled at primary school; and at secondary school, females rarely exceed 40 percent of the total enrolment. The number of females in higher education is small, particularly in scientific fields of study. Few female graduates are to be found in management, teaching, research and policy making positions in higher education institutions as well as at senior levels in departments of government.

This paper discusses three main issues, namely: (a) some basic facts on the access of females and males to higher education in Africa (b) participation of men and women with higher education in the labour market particularly, in the civil service, higher education and in entrepreneurial activities; and (c) some of the reasons why there is disparity in the percentages of men and women who have access to higher education. These issues are explored with emphasis on the social and cultural impediments, and the disempowering effects of the curriculum and methodology of education. Emphasis is placed on what takes place in the home, at primary and secondary school, and during higher education. It is concluded that once females have overcome the cultural and social impediments at the household level, education itself becomes a stumbling block in their progress through school. This is because the curriculum and methodology at all levels of the system, teaches technical knowledge and skills without ensuring that students acquire basic skills in social justice and developmental work.

At the higher education level in particular, there is failure to evolve teaching methodologies which would enable students to participate in processes of development and raise the consciousness of the university community regarding the dimensions of the gender inequality. It is emphasized throughout the discussion that while females may require compensatory education and be availed more access to education through positive discrimination, the essence of bringing about gender parity lies in educating both females and males. Therefore policy action for increasing the representation of women in higher education include: (a) setting up a quota system to increase the number of women admitted; (b) using diagnostic tests to identify weakness in knowledge levels at entry and providing remedial courses; (c) ameliorating the total learning environment for women; and (d) working on broader issues in gender participation including, developing policy for female access and advancement in the labour market and setting up structures for dialogue and research. Furthermore, it is recommended that all universities, should as a matter of priority, develop and ensure that all students attend well integrated courses on gender issues emphasizing six main areas: basic knowledge on learning and teaching; home economics; public law interest; reproductive biology; child development; and participation of females and males in sector development.

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1.0 Introduction

The World Bank study, *Education in Sub-Saharan Africa* (1988) which suggested policies for reforming education, precipitated fears among African academicians because it appeared as if the recommended strategies for re-allocating more resources to the primary and secondary education sectors would be at the expense of higher education. Since then, much of the attention and discussion on higher education has centred on the financial performance of universities which have, in the mean time, suffered a financial crisis of unprecedented severity. This has inevitably lured attention away from a serious debate on the pedagogical work of the university. The financial crisis in higher education was not at first understood as long-term, judging it to be 'a short-term discomfort' arising out of a strain on resources as a result of the relatively large student enrollment in the post-colonial era. In fact, such discomfort, coming on the heels of political independence, should have been recognised as the warning signal that if the university was to serve the needs of newly independent nations whose budgets had to serve the whole population and not just a minority of the privileged, it had to change not only its mission but also its operational model.

That universities did not seriously re-think their role and carve out a new and clearly defined mission for themselves, attests to the incomplete nature of higher education during both the colonial and post-colonial era. This fact, which many who either passed through universities as students at the time or presided over their management and faculties find unpalatable, claiming that institutions like Makerere, Ghana, and Ibadan had 'some of the best traditions of higher learning', is the root cause of the now well publicised crisis in higher education. For universities in Eastern and Central Africa, Court (1991) has stated that, "Symptoms abound ... to suggest that the inherited model of the university, which seemed to serve well in its first era of transplantation, is not adapting to the needs and conditions of economic austerity and political transformation." This is the kind of sentiment which would have provided a turning point had universities subjected their work to a critical examination in the early 1960s and 1970s. Universities needed to put in place a new organisational structure different from the transplanted model in order to support a pedagogy which would take into account the realities of that time. Two such realities were that (a) in most countries, more than three quarters of the population was illiterate and living in poverty; and (b) the cultural, social and economic infrastructure in place had traditionally disadvantaged the largest proportion of the population - the women and girls.

Therefore, the widespread undernourishment of universities as now evidenced by - overcrowded classrooms, demoralised teachers, inadequate equipment, deteriorating infrastructure, diminished resources, and a repressive management (Court, 1991) fit in well with the larger national statistics in the form of miserable social-economic indicators, of which females are major contributors. It is well known that females are under-represented as participants at all levels of education. Their illiteracy levels are always above the national average; in only a few countries do females form more than 50 percent of those enrolled at primary school; and at secondary school, females rarely exceed 40 percent of the total enrolment. The number of females in higher education is small, particularly in scientific fields of study. Few female graduates are to be found in management, teaching, research and policy making positions in higher education institutions as well as at senior levels in departments of government.

Various cultural, social, economic and educational factors which prevent girls, who now in most African countries constitute at least 45 percent of the enrollment in the first grade of the primary school, from moving to secondary school and eventually to higher education have been docu-

mented since the 1975-85 UN Decade for Women, and more recently during the World Conference on Education for All, in Jomtien, as well as by individual researchers such as Brock and Cammish(1991), Palme(1991) and Namuddu(1991a). These efforts have also coincided with renewed intentions internationally as well as nationally to increase the participation of females in national development generally and in education in particular. Consequently the phrase 'gender sensitization' has gained currency in internationally driven initiatives in those countries in Sub-Saharan Africa which depend heavily on external support for undertaking various development projects.

Yet, in many African countries a number of fora promising an in-depth examination of the gender perspective in national development usually deteriorate into a patchy exploration of "the problems of women seeking independence from men"(Namungalu,1992) This is hardly surprising within a context in which data gathering and research are not an everyday habit and where statistics of participation dis-aggregated by gender are rare. Lacking these tools, discussion on gender is often abandoned in favour of anecdotes about extremes regarding inequalities in gender relations because the term gender is used interchangeably with women. Yet gender addresses questions and issues of equality between males and females. A discussion of the gender perspective in African higher education aims at portraying three main categories of information: (a) the differences in the distribution of economic and social resources among females and males with regard to access to higher education and as a result of their possession of higher education; (b) the root causes of inequalities among females and males where disparities exist; and (c) policy options open to decision makers, managers and teachers in higher education institutions in the pursuit of gender parity.

2.0 Objectives of the Paper

In the light of the foregoing definition, the purpose of this paper is three fold: First, some basic facts on the access of females and males to higher education are presented in order to provide background for subsequent discussion of the participation of men and women with higher education in the labour market. Second, some reasons why there is disparity in the percentage of men and women who have access to higher education are explored with emphasis on the social and cultural impediments, and the disempowering effects of the curriculum and methodology of higher education. Third, the curriculum and methodology of higher education debilitates both women and men, as evidenced by the present levels of underdevelopment in Africa. Therefore it is assumed that strategies for improving the structure and methodology of higher education would constitute important steps in bridging the gender gap. It is proposed that universities need a fundamental change in order to: (a) transform higher education into a mechanism for redistributing the centres of intellectual growth and application of knowledge from the campus to the rural areas; (b) make higher education a visible and viable project in the amelioration of the image of Africa as now constituted by the deplorable social-economic indicators; and (c) enable higher education to evolve practical and immediately usable knowledge relevant to the individual and to national development.

3.0 Trends In Male and Female Access To Education

There has been a sizeable expansion in education at all levels in Africa since the early 1960s for both men and women. At the primary level, the gross enrollment ratio rose from 36 percent in 1960 to 75 percent in 1983. At the secondary school level gross enrollment ratio grew from 3 percent in 1960 to 20 percent in 1983. Unfortunately, this expansion has not been uniform for females and males and the quality of education has often been left to deteriorate in an effort to expand access.

3.1 Enrollment At Tertiary Level

World-wide, the greatest percentage increase of female to male enrollment has been at the tertiary level, moving from 32 to 43 percent from 1959 to 1983. The number of students enrolled in African institutions grew from 21,000 in 1960 to 437,000 by 1983. But according to UNESCO

data, male post-secondary enrollment in developing countries out-numbered that of females by a factor of two to one. Given the fact that tertiary level education is at least 50 times more costly than primary education per student in low-income African countries, the actual monetary values invested in the education of males is therefore, much greater than that of females. Table 3.1 presents data on student tertiary enrollment in 20 countries of Sub-Saharan Africa between 1960 and 1984.

Table 3.1 Tertiary Enrolment In Selected Countries Of Sub-Saharan Africa

Column	A	B	C	D	E	F	G	H	I	J	K
	Total Thousands				Average Annual growth rate (percent)		Females as percentage of total			Population (millions) mid-1984	Life expectancy at birth(yrs) 1984
Country	1960	1970	1980	1983	1960-80	1980-83	1960	1970	1983	1984	1984
Low-income Semi-arid											
2. Burkina Faso	.	0.2	1.6	3.4	.	28.6	.	15	22	6.6	45
5. Somalia	0.1	1.0	2.9	3.0	18.3	1.1	13	13	11	5.2	46
6. Chad	.	.	2.0	5.0	.	35.7	.	.	.	4.9	44
Low income Other											
7. Ethiopia	0.9	4.5	14.4	16.0	14.9	3.6	5	8	11	42.2	44
9. Malawi	.	1.1	2.2	2.4*	.	4.4	.	23	28*	6.8	45
11. Tanzania	.	2.0	5.0	6.2	.	7.4	.	17	17	21.5	52
13. Uganda	1.3	4.2	5.9	7.3*	7.9	11.2	12	18	27*	15.0	51
18. Rwanda	.	0.6	1.2	1.4	.	5.3	.	9	14	5.8	47
19. Kenya	1.0	7.8	13.0	22.2	13.7	19.5	16	15	19	19.5	54
20. Sierra Leone	0.3	1.2	1.8	2.0	9.4	3.6	11	16	25	3.7	38
Middle -income oil importers											
28. Zambia	.	1.4	7.5	8.1*	.	3.9	.	15	22*	6.4	52
29. Lesotho	0.2	0.4	2.2	2.7	12.7	7.1	22	34	59	1.5	54
30. Cote d'Ivoire	0.3	4.4	19.6	17.9*	23.2	-4.4	11	14	18*	9.9	52
31. Zimbabwe	0.3	5.0	8.3	19.0	18.1	23.0	25	42	42	8.1	57
32. Swaziland	.	0.2	1.9	1.7	.	-3.6	.	39	41	0.7	54
33. Botswana	.	.	0.9	1.4	.	15.9	.	.	44	1.0	58
Middle Income oil exporters											
35. Nigeria	7.0	22.0	69.0	120.0	12.2	14.5	7	15	.	96.5	50
36. Cameroon	.	2.7	11.5	13.3	.	5.0	.	8	14	9.9	54
37. Congo P. R.	0.4	1.8	7.3	8.5*	15.6	7.9	7	5	14*	1.8	57
38. Gabon	.	0.2	2.0	3.0*	.	22.5	.	15	26	0.8	51

. No data

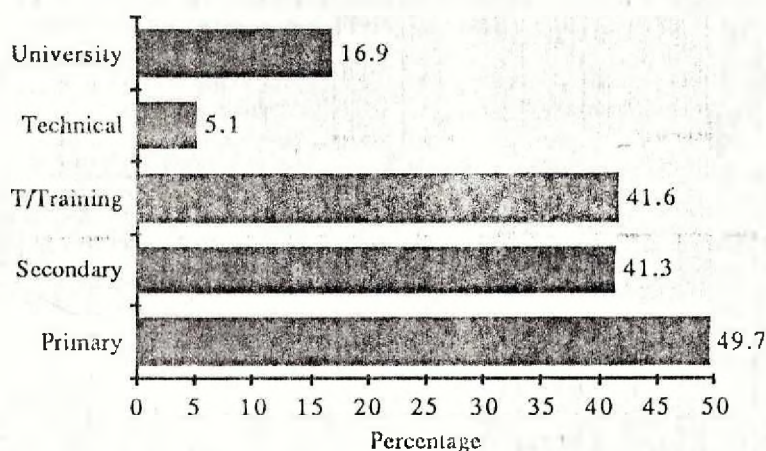
* Figures are for 1982

Source: Table A-5 Tertiary Enrollment, p.128; and Table B-1 Basic Indicators, p.153. World Bank (1988) Education in Sub-Saharan Africa: Policies for Adjustment, Revitalization, and Expansion. A World Bank Policy Study.

It is clear that there has been overall increase in enrollment over the 23 year period. However, three factors portrayed in Table 3.1 need emphasis. First, comparison of column D (which shows the total enrollments in thousands in 1983) and column J (which gives the total population in millions in 1984) clearly indicate that it is a very small proportion of the population with access to higher education. For instance, this proportion is for: Chad=0.0693; Ethiopia=0.0379; Tanzania=0.0288; Kenya=0.1138; Cote d'Ivoire=0.1808; Botswana=0.1400; and Nigeria=0.1244. None of the 20 countries listed in Table 3.1, had by 1984, put at least 0.2 percent of their population in higher education. Second, column K shows the average life expectancy at birth in 1984. While it is not possible to state how long those with higher education live, the low life expectancy rate suggests that those who have access to higher education, which is extremely costly, have relatively few years in which to work and realise maximum social, economic, and intellectual returns for themselves and the nation. Third, in terms of gender, columns G, H and I show females as a percentage of the total enrollment in tertiary education. The proportions of females are evidently lower than those of males for all years and all countries except for Lesotho.

Regrettably, the 1983 figures are outdated and more up-to-date figures are not yet available on a large scale. However, more recent data is available from Tanzania and Swaziland, which suggests minor changes in the overall situation over the 10 year period, 1983-1991. Chart 3.1 below shows females as a percentage of the total enrollment in the Tanzania education system in 1988. At university, females and males make up 16.9 and 83.1 percent respectively, while at technical education 94.9 percent of those enrolled are males.

Chart 3.1 Education for Women In Tanzania in 1988

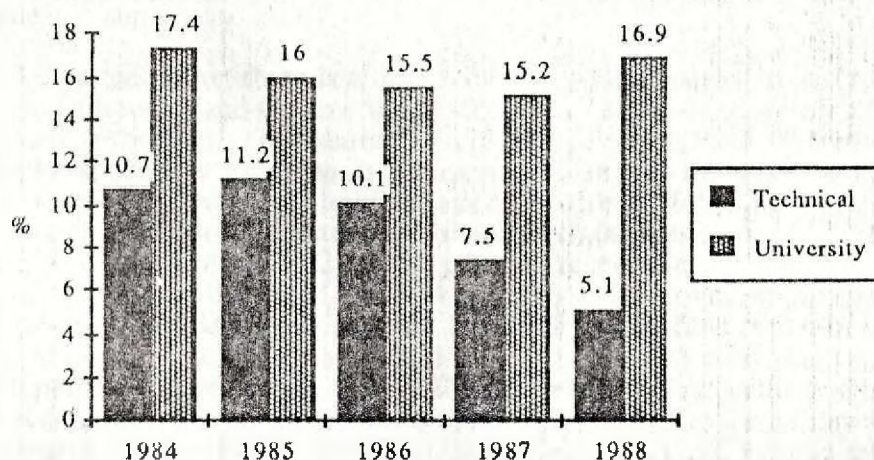


Source: Re-designed from Chart 9, p. 35, published in; *Basic Education Statistics in Tanzania(BEST) 1984-1988*. The Ministry of Education, Dar es Salaam, Tanzania June 1989.

3.2 Changes In Tertiary Enrollment

Chart 3.2 below confirms and updates the efficacy of the more global figures given in Table 3.1. The enrollment of females at university reached its peak at 17.4 percent in 1984, then it declined steadily for the next three years rising again to less than 17 percent in 1988. The decline in female enrollment was even more dramatic in technical education, where enrolment dropped from its peak of 11.2 percent in 1985 to 5.1 percent in 1988.

Chart 3.2 Changes In Female Enrollment At Tertiary Institutions In Tanzania Between 1984 and 1988



Source: Compiled from figures published in; *Basic Education Statistics in Tanzania(BEST) 1984-1988*. The Ministry of Education, Dar es Salaam, Tanzania June 1989.

3.1.3 Enrollment By Male and Females In Scientific Fields of Study

The main purpose of higher education in Africa is to train high level human resources for national development. In this regard, the participation of men and women in higher education in fields of science and technical knowledge is extremely important. Table 3.2 shows the distribution of tertiary enrollment in 20 selected countries of Sub-Saharan Africa by field of study around the period 1982-1983.

Table 3.2 Distribution of Tertiary Enrollment In Selected Countries of Sub-Saharan Africa by Field of Study, circa 1983

Column	A	B	C	D	E
	All	Percentage	All	Percentage	Percentage
Country	Arts	of all females enroled in Arts	Sciences	of all females enroled in Sciences	of all females enroled in other
Low income semi-arid					
2. Burkina Faso	72	86	28	14	
5. Somalia					
6. Chad					
Low income other					
7. Ethiopia	46	59	53	40	1
9. Malawi	43	30	34	22	48
11. Tanzania	65	75	35	24	
13. Uganda	65	83	35	17	
18. Rwanda	55	70	45	30	
19. Kenya	29		48		
20. Sierra Leone					
Middle income oil importers					
28. Zambia	58	83	41	17	
29. Lesotho					
30. Cote d'Ivoire	70		28		
31. Zimbabwe	89	94	11	6	
32. Swaziland	60	78	40	22	
33. Botswana	89	96	11	4	
Middle income oil exporters					
35. Nigeria	59		41		
36. Cameroon	76	88	23	12	
37. Congo P. R.	84	75	16	25	
38. Gabon	71		29		

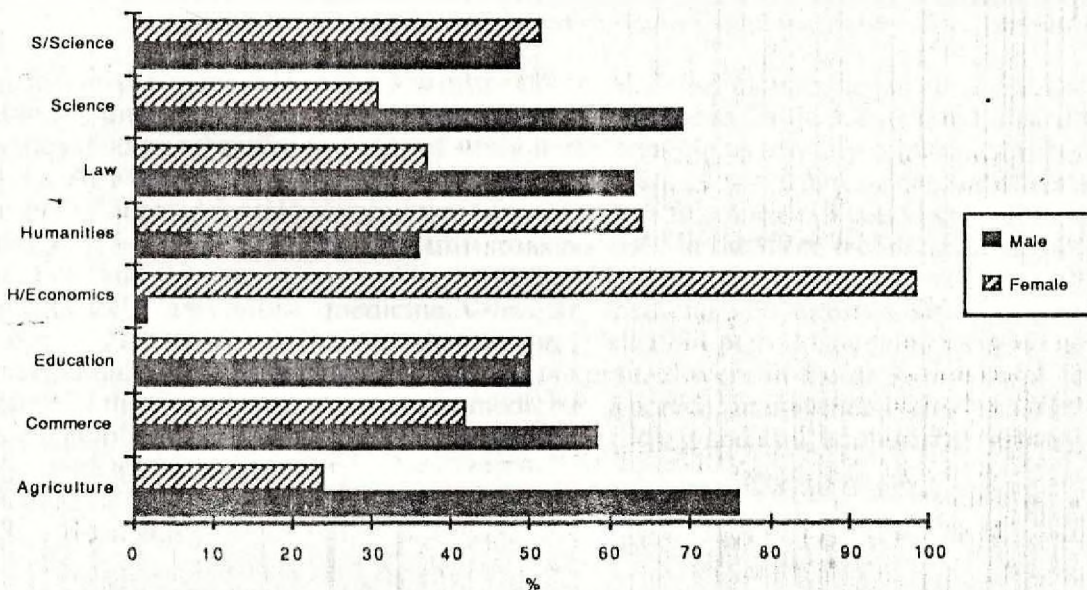
Source: Table A-4 Distribution of Tertiary Enrollment by Field of Study, circa 1983. p.129. World Bank (1988); *Education in Sub-Saharan Africa: Policies for Adjustment, Revitalization, and Expansion*. A World Bank Policy Study.

Generally, Table 3.2 suggests that there is a dearth of data on this aspect in several countries of Sub-Saharan Africa. Column A and C show the percentage of all students enroled in the arts and science fields of study respectively. In column B and D the percentages of all females enroled in the arts and sciences respectively are given. It is important to keep in mind the data presented earlier in Table 3.1 in order to appreciate the implications of the data in Table 3.2. For example, Table 3.1 shows that Ethiopia, had a total tertiary enrollment of 16,000 students of which females and males constituted 3520(22 percent) and 12,480(78 percent) respectively. Table 3.2 implies that of the 16,000 students, 7360(46 percent) and 8640(54 percent) were enroled in the arts and sciences respectively. A combination of data from Tables 3.1 and 3.2 reveals further that of the enrollment in the arts, 2077(59 percent) were females, and 5283(41 percent) were males; while in the sciences, 1408(41 percent) were females and 7232(59 percent) were males. The situation of Ethiopia was however, unique among all countries in Africa in that there were more students in the sciences than in the arts. More representative of Africa was the case of Tanzania whereby, of the total 6200 students at tertiary level, 5146(83 percent) and 1054(17 percent) were males and females respectively. Of the total, 4030(65 percent) and 2170(35 percent) were enroled in the arts and

sciences respectively. There were 801(76 percent) and 253(24 percent) of all females enrolled in the arts and sciences respectively, while 3229(80 percent) and 1917(20 percent) of males were in the arts and sciences respectively.

Table 3.1 indicates that by 1983, Swaziland had approximately 1700 students enrolled in tertiary education which included education outside the university. Females and males comprised 697(41 percent) and 1003 (59 percent) respectively. Sixty percent or 1020 students were in the arts while the remainder of 680(40 percent) were in science. Females enrolled in arts comprised 78 percent or 544 students while those in the sciences were only 153(22 percent). Of the males, 576(57 percent) and 427(43 percent) were in the arts and science respectively. By the 1990/1991 academic year, the university of Swaziland alone had a total enrollment of 1716 students of which 751(44 percent) and 965(56) were females and males respectively. Chart 3.3 gives more specific information regarding the enrollment of students in various areas of study in the arts and sciences at the University of Swaziland.

Chart 3.3 Percentage Enrolment by Subject and Gender For All Degree and Diploma Courses University of Swaziland Academic Year 1990/1991



Source: Compiled from data in Figure 2 and Table 3 in: Sister A. C. Smith; "Access of females to education in Swaziland: Questions of quantity and quality". Paper presented at the BOLESWA Educational Research Symposium, July 29 - August 2, 1991, University of Swaziland.

Only in home economics (which in most cases is not regarded as a scientific field), the humanities¹ and social sciences (University of Swaziland, 1990) do women predominate. A similar picture was evident at Makerere University in Uganda as indicated in Table 3.3.

Table 3.3 Makerere University Intake of Ugandan Students in 12 Fields of Study Between 1974 and 1985.

Column Field	Intake		C %
	A Male	B Female	
Medicine	755	207	27
Agriculture	558	181	32
Forestry	214	7	3
Engineering	593	14	2
Veterinary Medicine	350	60	17
Law	519	154	30
Commerce	641	141	22
Social Work & Admin.	175	96	55
Arts	2869	1012	35
Sciences	2252	309	14
Arts(Fine Art)	154	68	44
Statistics	181	16	9
Total	9261	2265	24

Source: Compiled from figures in: The Uganda Five Year Education Sector Investment Programme 1992/93 - 1996/97. Ministry of Education, Education Planning and Development Office, Kampala, June 1991.

Consistently, figures in Table 3.3 confirm the more global picture presented in Tables 3.1 and 3.2. Table 3.3 underscores the observation illustrated earlier in Table 3.2 namely, that although more females tend to subscribe to fields of study in the arts, males actually predominate in the field as a whole. At Makerere, only in the specialisation of social work and social administration did the number of enrolled females exceed that of males. Data in columns B and C show the miserable percentage of women enrolled in scientific areas not only in the more technical fields of engineering, statistics, and the pure sciences but also in areas which are traditionally recognised as women's work, namely: agriculture, medicine, veterinary medicine and forestry. This picture is confirmed by Karani (1989) who points out that for the 1981-1984 period, approximately 45 percent of the undergraduate women enrolled in Kenyan universities were in the departments of education; 20 percent in the liberal arts; 9 percent in medicine; 7 percent in commerce and less than 2 percent in other disciplines like architecture, engineering, building and land economics, forestry, and veterinary science.

3.3 Summary

The foregoing examination of the access of females and males to higher education, though cursory, paints a clear and definite picture of inequality in favour of males. First, more males than females have access to higher education by a factor of almost 3 times. Second, males predominate in all fields of study except home economics. Even in the arts' faculties where the largest proportion of females are enrolled, males still predominate in absolute terms. Third, although females have made improvements in enrolling in the pure sciences and even ventured in engineering, their numbers are still relatively low. More crucially, females in higher education have not made a substantial breakthrough in medicine, forestry, agriculture and veterinary medicine, areas where the majority of rural women are traditionally active and continue to shoulder a great deal of work related to these areas using outdated knowledge and skills. The next section considers the quality of achievement of students in higher education.

4.0 Male and Female Achievement in Higher Education

Overall data on achievement of females and males at the primary and secondary schools is difficult to obtain, in part because of its sensitive nature as a result of using unstandardized achievement instruments. But obviously performance varies from country to country and across regions, category of school, and sponsorship within the same country. The African Academy of Sciences points out

that what data do exist suggests strongly that girls consistently perform less well than boys on achievement tests (AAS, 1990). For example, the extent of such poor performance can be gleaned from the general conclusions reached by a report by the National Examinations Council of Tanzania (1985) regarding the overall performance of the various school types in the Certificate of Secondary Education Examinations which states in part: "If the school type are rank-ordered on the basis of the aggregate number of subjects passed at either good or average level of performance, Private Boys Schools (largely Seminaries) top the list, followed by Boys Public School, Co-educational Public Schools, Girls Public and Private Schools, and lastly Co-educational Private Secondary Schools." The largest number of girls were enrolled in co-educational private secondary schools.

4.1 Achievement In Higher Education

Except for simple head counts, there is no data on the levels of output and the quality of achievement by students in various institutions of higher education in Africa. Yet this data exists in files in all departments of the university since it would have had to be generated in order to promote students from year to year and to allocate grades of degrees awarded per year. Unfortunately, planning departments at universities have yet to collect such data consistently, even for internal consumption. Failure by institutions of higher learning in Africa to keep more detailed data on student output and achievement is all the more unfortunate because opinion that across the board, the standard and quality of higher education has deteriorated considerably, is gaining widespread acceptance. The World Bank report (1988) states that among the interrelated weaknesses which threatens higher education's continuing contribution to development is the fact that the quality of outputs shows signs of having deteriorated; in many instances the fundamental effectiveness of the outputs may be in doubt. Were universities able to collect and publish some yardstick by which they monitor the quality of the graduating students, the picture of where weaknesses do or do not exist would become clearer than is presently the case. Table 4.1 gives the total number and percentage of students by gender graduating on first degree courses from various faculties and fields of study at the University of Dar es Salaam between 1970 and 1990.

Table 4.1 Students By Gender Graduating on First Degree From Various Faculties/Fields of Study at the University of Dar es Salaam 1970-1990. (Percentage in Brackets)

Column Faculty Female	A		B		C		D		E		F	
	1970/71		1979/80		1989/90							
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1. Arts & Social Sciences	772(81)	183(19)	608(74)	215(26)	738(78)	218(22)						
2. Commerce & Management			201(87)	31(13)	285(80)	73(20)						
3. Bachelor of Arts-Education	284(77)	85(23)	215(75)	75(25)	268(74)	96(26)						
4. Bachelor of Science-Education	253(83)	50(17)	161(63)	98(37)	198(81)	45(19)						
5. Engineering	61*(100)	0*(0)	487(98)	12(2)	599(96)	31(6)						
6. Law	147(94)	11(6)	105(67)	51(33)	148(76)	49(24)						
7. Medicine	114(92)	10(8)	232(77)	69(23)	233(78)	69(22)						
8. Science	307(83)	61(17)	265(63)	153(37)	330(83)	66(17)						
TOTAL	1877(82)	400(18)	2274(76)	704(24)	2799(81)	647(19)						

Course not yet awarding degrees.

* Data is for 1973/1974 when degrees were first awarded for this course.

Source: Compiled from figures in: *Twenty Years: University of Dar es Salaam 1970-1990*.
Printed by the Dar es Salaam University Press, 1991.

Generally, a small percentage of women, i.e. between 18 to 19, graduated. From Table 3.1 showing 1983 data, 17 percent in tertiary enrollment were female. Data in Chart 3.2 shows that there was a drop in enrollment from 17.5 percent in 1984 to 16.9 in 1988. These fluctuations are also reflected in Table 4.1 where the percentage of female graduates dropped from 24 percent in 1979/1980 to 16.9 percent in 1989/1990.

4.2 Efficiency of Higher Education

Table 4.2 which complements Table 3.3 (Makerere University Intake of Ugandan Students in 12 Fields of Study Between 1974 and 1985) shows the total number and percentage of Ugandan students graduating in 12 fields of study between 1974 and 1985. In columns A, B, C, D and E two aspects of the efficiency of the higher education system in Uganda are illustrated. The average percentage of females, 24 percent, who go into the system all seem to graduate within the period. But this figure is deceptive since Table 4.2 indicates clearly that there is wastage in every field with the possible exception of commerce, but even here, it appears as if there is a fresh intake of students in the middle of the course rather completion of the course by all students.

Table 4.2: Makerere University Output of Ugandan Students in 12 Fields of Study Between 1974 and 1985

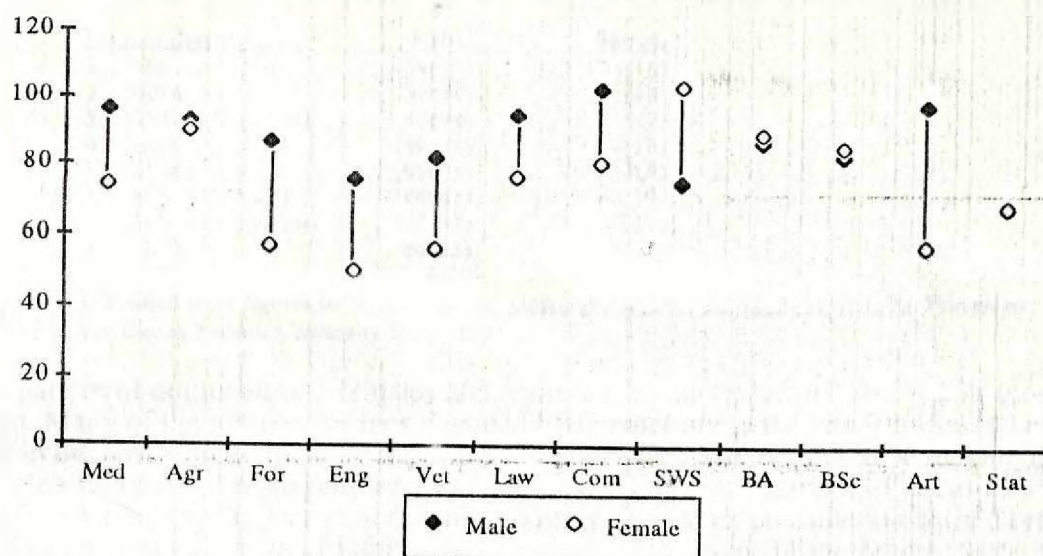
Column Field	A		B	C	D	E
	Output		Female	%	Intake/Output	Intake/Output
	Male	Female		Female	Male	
	<i>Female</i>					
Medicine	729	154		21	97	74
Agriculture	519	163		31	93	90
Forestry	185	4		2	86	57
Engineering	450	7		2	76	50
Veterinary Medicine	286	34		12	82	57
Law	490	118		24	94	77
Commerce	658	114		17	103*	81
Social Work & Admin.	131	99		76	75	103*
Arts	2492	899		36	87	89
Sciences	1863	264		14	83	85
Arts(Fine Art)	151	39		26	98	57
Statistics	124	11		9	69	69
TOTAL	8078	19006		24	87	84

*Inconsistencies in the percentages are due to repetition and enrollment of students in courses after the first year intake.

Source: Compiled from figures in: The Uganda Five Year Education Sector Investment Programme 1992/93 - 1996/97. Ministry of Education, Education Planning and Development Office, Kampala, June 1991.

If it is assumed that the original intake of females and males is each represented by 100 percent, the level of student wastage as a percentage deviation from the initial intake is indicated for females and males in Chart 4.1.

Chart 4.1 Males and Females As a Percentage of The Original Total Enrollment Who Graduate In Different Fields of Study



Source:

Compiled from figures made available to consultants on: The Uganda Five Year Education Sector Investment Programme 1992/93 - 1996/97. Ministry of Education, Education Planning and Development Office, Kampala, June 1991.

Again, only in the area of social work and social administration is there an appreciably larger output of females than males. In the arts and general sciences, the difference in wastage between females and males is minimal. A substantial amount of wastage among females appears to take place in the fields of medicine, forestry, engineering, veterinary medicine, law, commerce, art and statistics. This means that consistently lower proportions of women than men manage to graduate from these fields. There has been no research to document reasons for such wastage. In part, the lower proportions of females than males who graduate are the result of initial low enrollment of females. However, it is now widely recognised that there is a great deal of wastage among females at university as earlier pointed out, especially among those who initially enrol in the more technical and scientific areas of study which leads to failure to graduate. There is as yet no accurate information on the causes of failure, although it is generally believed that girls fail to succeed in these areas because: (1) Even though some females fulfil the minimum requirements for entry, they will not have covered all the pre-requisite science content needed as background for courses at university. As a result they make slow progress leading to repetition and dropping out; (2) Universities do not offer bridging courses or content in order to eliminate the variety of weaknesses students may come with. These weaknesses are aggravated by the large quantity of content and inappropriate learning and teaching methodologies, resulting in failure to graduate. (3) The majority of females who enrol at university have attended single sex secondary schools, often run on strict missionary traditions where interaction between females and males is kept to a minimum. The sudden and drastic change in lifestyle from highly controlled timetables and modes of interaction to the 'freedom' of the university campus apparently lures females away from serious commitment to academic work.

4.3 Achievement At Higher Degree Level

Another aspect of the quality of output and achievement in higher education, is its ability to train the teachers for higher education institutions and much more crucially, researchers who should investigate the nature of the various developmental problems and apply new strategies to their solution. Table 4.3 gives the total number and percentage of students by gender obtaining higher degrees from various faculties and fields of study at the University of Dar es Salaam between 1970 and 1990.

Table 4.3 Total Students by Gender Obtaining Higher Degrees From Various Faculties/Fields of Study at the University of Dar es Salaam 1970-1990.

Name of Degree	Male	Female
1. MA	659(84)	105(16)
2. MBA	139(84)	22(16)
3. M.Sc. (Engineering)	56(98)	1(2)
4. LL.M	88(84)	14(16)
5. M.Medicine	195(91)	17(9)
6. M.Sc.(Science)	214(81)	40(19)
7. MA (Dev. Studies)	47(83)	8(17)
8. Ph.D	84(83)	14(17)

Source: Compiled from figures in: Twenty Years: University of Dar es Salaam 1970-1990. Printed by the Dar es Salaam University Press, 1991.

The same pattern of output among females and males as that observed in Table 4.2. is more or less maintained. Many of the masters degrees obtained by females are in the arts faculties but evidently, the output in the arts is predominantly male. However, females may be said to be making important strides in the sciences and management. Item 8 represents the total number of doctorates awarded in the university over the 20 year period. Unfortunately, it was not possible to obtain a breakdown by field of study. The only item of information available is that none of the degrees were in the department of education. Again females constitute only 18 percent of the graduates at this level.

4.4 Summary

Generally, a high percentage of females who enrol for various courses graduate although data on the quality of achievement is not available. Much of the commentary on this aspect is derived not from data assembled by institutions of higher learning but from the performance of graduates in various aspects employment. The mooted generalisation is that the quality of higher education has deteriorated considerably over the past two decades as a result of the economic crisis in which Africa is gripped. There is a relatively high percentage of wastage among females. While the majority of males initially enrolled complete their course, an average of 20 percent of females fail to complete their studies as expected. Overall, only 15 percent of females obtain masters degrees, the majority in the arts' faculties. In the next section, a brief discussion of what females and males do with the higher education they possess is presented.

5.0 Male and Female Participation In The Labour Market

The pioneering research and policy-analytic work by the World Bank on the quantitative and qualitative socio-economic contribution of education to development has emphasized the considerable benefits of primary education to females. However, regression analyses shows that not only does primary schooling of both females and males have strong positive effects on GNP per capita but also that the impact of female's primary education in Africa and other poorer developing countries is significantly stronger than that of boys' primary education. Floro and Wolfe in their detailed study entitled: The Economic and Social Impacts of Girls' Primary Education in Developing Countries(1990) confirm the general conclusion running through related studies that the expansion of girls primary education has a stronger positive effect on the longer-term economic growth, especially of the poorer developing countries, than that of boys.

5.1 Tertiary Level

As the title of the study by Floro and Wolfe indicates, it deals with primary education. However, questions, dimensions and elements considered can be usefully extrapolated to considering the situation of men and women with higher education. For example: (1) How does men and women's higher education affect their contribution in the wider range of economic activities in which they

participate? (2) What is the process by which men and women's higher education affect their productivity as members of the labour force in both the formal and informal sector? and (3) Under what contexts and in what ways does men and women's higher education lead to increased economic contribution to society?

All documents stating the role of the university in national development usually begin by pointing out that high level 'manpower' should be produced by universities in order to 'man' various sectors of the economy. There is little doubt that graduates have traditionally been employed in various capacities in both the civil service and and public and private economic sectors. Unfortunately, as anywhere else in the area of gender, there is hardly any reliable data. The African Academy of Sciences' first edition of Profiles of African scientists revealed that African scientists are mainly to be found in universities (76 percent) and research institutions(16 percent). A mere 1 percent are to be found in industry and of this 1 percent, the majority are in management positions. In some professional classes such as teaching, the judiciary and medicine, women have made some progress but this is partly due to the size of the bureaucracies and in any case, women are mainly appointed at the lower levels. From the sample analysed for the Profiles of African scientists, women comprised only 16 percent of the whole scientific community in Africa. A further analysis of the position of women at various levels of scientific leadership showed that their role becomes less and less representative of their demographic profile. Women in science, whether at university or elsewhere, do not seem to climb up the ladder of responsibility in the various sectors of research, production and management. As elsewhere, there appears to be discrimination against women at the senior levels though some women may be in high positions as the factor of tribal affiliations is also at work in employment. Similarly, Hughes(1988) has observed in the case of Kenya, those women who persist and reach the university enter the labour force in jobs and at salaries not significantly different from their male colleagues. However, there are limits as to how high a woman will be promoted and how much she will be compensated. No significant differences were found in the amount of time it took males and females to find their first permanent job after graduation. However, no women were able to attain high level positions over time. Married women often do not receive the same benefits as men in terms of housing allowances and cost of living allowances.

5.2 Employment In The Civil Service

Governments have traditionally been the largest employers of people with technical skills and knowledge. But the largest proportion of employees in the civil service are males as illustrated by Table 5.3 which shows the number of established staff in ten departments of the Uganda civil service in 1987.

Table 7: Number of Established Staff In Ten Departments of The Uganda Civil Service -1987

Ministry/Institution	A		B		C		D		E		F		G		H		I		J	
	Administrative & Managerial		%		Professionals		%		Technicians & Semi- Professionals		%		Total		%		%			
	Male	Female	Female	Male	Female	Female	Male	Female	Male	Female	Female	Male	Female	Female	Female	Female	Female	Female	Female	
1. Office of The President	376	52	12	22	6	21	52	24	32	15										
2. Judiciary	22	1	4	111	14	11	15	10	40	14										
3. National Assembly	5	3	38	2	0	0	6	3	33	32										
4. Audit	8	0	0	1	0	0	4	6	60	32										
5. Public Service & Cabinet Affairs	142	34	19	26	9	26	41	112	73	43										
6. Foreign Affairs	65	11	14	0	1	100	11	17	61	28										
7. Justice	93	22	19	36	329	90	39	94	71	73										
8. Finance	503	58	10	183	27	13	98	77	44	17										
9. Commerce	52	6	10	52	6	10	17	8	32	14										
10. Agriculture & Forestry	188	26	12	305	43	12	349	90	21	16										
Total	1454	213	13	738	435	37	632	441	41	9										

Source: Compiled from figures in Table 9; Hope Chigudu and Sylvia Tercka; "Census of Civil servants: A Gender Sensitive Analysis". Paper presented at Conference on Research Data and Documentation on Women in Development, 13-17 November, 1989. Kampala Uganda.

Positions in the Uganda Civil Service have been divided into three categories: administrative and management; professional; and technicians and semi-professional. The overwhelming predominance of males in all departments and categories of work is evident. The exception is in the department of justice in the two categories of professionals, and technicians and semi-professionals. Table 5.3 does not unfortunately, contain two important categories of university graduates, those in health and in education, two areas which have suffered a very high level of brain drain from the country for the last 20 years. As will be recalled, data from Table 4.2 indicated that females comprised about 21 percent of the output of students at Makerere between 1974-1985. While a number of Uganda's medical doctors work for the civil service, the larger proportion work for Makerere University and would therefore not be included in the civil service census. As for education, although the number produced between 1974 and 1985 have not been specified, they are included under the arts and sciences in Table 4.2 and is estimated to comprise 36-45 percent of the total. Teachers in Uganda are not considered as civil servants since they work for the ostensibly autonomous Teacher Service Commission under the Ministry of Education. In 1989 there were about 3698 graduate teachers at secondary school, but these figures were not dis-aggregated by gender.

5.3 Access to Faculty and Administrative Positions

Members of staff in academic positions in institutions of higher learning require a minimum of a masters degree in order to become senior staff. But as was indicated in Table 4.3 above, which shows the total number of students by gender who obtained higher degrees from various faculties and fields of study at the University of Dar es Salaam between 1970-1990, only about 15 percent of the graduates with masters degrees were females. Moreover, since women were late entrants into formal education, it is unlikely that a large proportion of them could have benefited from the massive airlift of students from Africa to Europe and America to undertake both undergraduate and post-graduate studies as part of the initial institutional development strategies during the 1960s and early 1970s (King, 1991). The majority of today's senior teachers in many university faculties are males from this era.

As one female academician at a university in East Africa has pointed out, 'either you go to the bottom of the staff list to find the females, or there is usually a smattering of one or two in the middle or top ranks'. There are now two women vice-chancellors in universities in Sub-Saharan Africa and a number of professors and senior lectures which is a step in the right direction. But generally, the largest number of females are either teaching assistants, junior research fellows, tutorial fellows, or simply 'waiting' to be put on staff development programmes. There is no question that in some universities with large faculties of education, the humanities and social sciences, a few more females have made progress in reaching the top academic positions. But these efforts have not been achieved without constant battles and acrimonious controversy. It is a sad fact that many universities do not have clearly spelt out criteria for promotion and advancement from junior to senior academic positions. The criteria of 'research and prolific publication' has in most universities been watered down to mediocrity. As a result, accusations of 'unfit' academicians, men and women promoted on the basis of political coercion and lobbying rather than strictly scholarly productivity, abound. Within this atmosphere, some females who traditionally have no access to 'male dominated networks' where lobbying for senior positions is usually carried out, are often left with no clear guide-lines as to the nature, quantity and quality of the scholarly work they would have to accomplish in order to earn promotions.

Female participation at administrative levels in institutions of higher education is summarised by Coombe(1991): "The under-representation of women in university management, disproportionately low even in relation to the number of academic staff, ought to be one of the issues under scrutiny in any management audit."(Coombe, 1991) And although females are beginning to subscribe to university management in slightly larger numbers than in the past, they face a number of constraints. The terms for promotion and advancement to higher administrative positions in the university are in fact, more vaguely defined than those of academic positions. This vagueness is compounded by the fact that a member of staff can move from academic work to administration where the financial rewards may seem slightly better than those of academic positions, but where the actual level of work may be very menial. In addition, when women in academic positions take on administrative positions during periods of very scarce financial and other resources, as is happening in a number of universities where large numbers of senior male staff are joining the brain drain, the inadequacies in management which ensue are likely to be interpreted as failure on the part of inexperienced women and not as a consequence of lack of inputs.

5.4 Shifts in Labour Force Participation

Up until recently, men and women with higher education in Africa had little or no decision to make with regard to employment. Increasingly however, due to the economic crisis as well as poor management and irrational personnel deployment policies, few governments can still afford to employ every graduate from tertiary institutions. Overall, the largest percentage of women graduates are from the arts faculties and the teaching of various arts subjects at secondary school. As a result, their bargaining power for better wages or a shift to other employment opportunities are extremely limited. It is becoming increasingly important that university graduates for example, have entrepreneurial skills to enable them to start their own enterprises instead of seeking employment from elsewhere. Generally, few females and males have acquired entrepreneurial skills from their training, but the situation is definitely more difficult for women than men.

5.5 Summary

There is little data on the levels and quality of employment undertaken by females who have had access to higher education. The majority work for the civil service as secondary school teachers. Women form a small percentage of academicians at university although recognizable achievements have been recorded in arts faculties. There is evidence that women in academic work are getting into administrative positions at a time when there are inadequate resources to sustain reasonable functioning of institutions. This may result in further denigration of female abilities rather than in enhancing their status. Graduate women lack options in employment, promotion and upward mobility because of discrimination and because of their role as housewives.

6.0 Causes of The Gender Gap

It will not be possible in a paper of this size to review exhaustively the findings and conclusions of the large amount of existing literature and case studies regarding the cultural, social and economic causes of the gender gap in terms of access, persistence and outcomes in the education system. The interested reader should consult the exhaustive report by Brock and Cammish entitled: Factors affecting female participation in education in six developing countries. The report gives both a catalogue of factors sustaining the gender gap as well as 23 possible recommendations of policy action to work towards eliminating such a gap at the primary and secondary school levels. The discussion in this paper is confined to a few conclusions regarding, the operation of the cultural and social norms and imperatives, and the contribution of the educational system in causing and sustaining the gender gap.

6.1 Cultural and Social Norms and Gender Roles

Factors pertaining to the cultural and social norms and imperatives which are responsible for creating and sustaining the gender gap in access to education operate through the enforcement of gender roles. Gender roles are culturally determined patterns of behaviours expected of females and of males, including personality attributes, economic, social, domestic and other tasks and responsibilities. It is therefore necessary to explore: (a) How learning and teaching of gender roles as per cultural and social norms and imperatives, cause and enforce gender inequality in the home and in access to education at the primary and secondary school, and ultimately at the tertiary level.

While traditionally women are the teachers of culture, their status in society remains low and inferior to that of males. It is generally known that beliefs and practices in gender relations are inculcated among children at a very early stage in life. Dirasse(1990) states that children are selectively rewarded or punished for gender appropriate or inappropriate behaviour and so learn their adult roles. Brock and Cammish(1991) state that the negative attitudes towards the education of girls by girls and boys are often well-established in 11 and 12 year old children. By 1980, all countries in Sub-Saharan Africa had less than 5 percent of the 4-6 year-olds intending to enrol in primary school, attending any form of pre-school. If we concur that over 40 percent of children between 6-11 years do not enrol in school at all, then it becomes clear that much of the learning about unequal gender relations takes place in the home and community and more specifically, from the custodians of the culture - the women. Moreover, the 30 percent or so of women who comprise the teaching force in formal education are usually to be found at the elementary rather than the upper grades of the primary school. Hence women in propagating their culture have actually perpetuated their inferior position by preaching and practicing inequality in gender relations. What is it that prevents females from teaching young children positive attitudes and values about women?

Ramdas(1990) has pointed out that:

"The institutionalization of both private property and marriage, and the male control over both, led inevitably to woman herself being seen as part of the private property of the male. Different cultures and societies across the centuries evolved their own specific codes of conduct and behaviour which extended to every single sphere of a woman's life and activities. In effect, this meant that female behaviour, mode of dress, freedom of movement, role and responsibility, access and right to learning, participation in public life, every action, was determined by those who wielded power and control - the emerging patriarchs, the men. Women themselves were influenced to varying degrees by those very values which kept them subordinate and often played an active role in perpetuating both feudal and patriarchal values through the family structure in particular. [italics mine]

Ramdas's assertions suggest that women are expected to preserve and pass on to their children the traditions including the culturally determined gender roles - which extend to every sphere of a woman's life and activities. Women have been influenced by those very traditions and values which keep them subordinate; and they play an important and active role in perpetuating such values. As a result, few women, in an uncertain world, will want to pass on to their children incomplete or unacceptable cultural knowledge. Therefore, whether highly educated or not, women strive not only to learn the correct cultural and social norms themselves but also to ensure that they behave accordingly particularly in front of their minors and elders. Within the broader effort of Africans to re-assert their cultural preferences by authenticating traditions which contradict with generally accepted Western conventions and behaviours, females and males are implicitly and indirectly taught early that modern education is an imposition of a foreign culture which brings with it an inappropriate way of socially behaving, unsuitable in a 'proper African culture'. The manner in which young children actually learn such attitudes remains a matter for debate as part of the larger controversy on the development of identity and morality. However, an insight into where such 'knowledge' is easily found was given by an old man in Zimbabwe who when asked whether or not he approved the practice of a husband beating a wife, replied: "We always teach our children that women are children and they should be treated like children. What do you do when a child makes a mistake? You beat her!" Females are expected not only to resist change which appears to alter their traditional position and role as custodians of the culture who are subordinates to males, but also to ensure that they continue to teach their own children such a tradition. Since more than 70 percent of females at the grade 1 level never move beyond primary education, after which they return to the village to become mothers, it should not be surprising that many will continue to perpetuate these cultural edicts as well as negative aspects of school.

With regard to access to education, the main cultural imperatives and social norms to be surmounted at the household level concern the decision of parents, particularly un-schooled rural parents, whether or not their female children should be allowed to enrol in school. Part of the problem here is of course, of access to a school plant within reasonable distance from the household. But as Brock and Cammish(1991) have stated, "In almost all countries there is a fundamental cultural bias in favour of males... and deeply rooted social and cultural attitudes which fail to perceive the crucial significance of involving the talents of women in the process of development." Ramdas(1990) has pin-pointed the gender personality trait likely to be used as reason for the reluctance of parents in sending female children to school: "It was a commonly held view that a woman's social life as well as her morality could be endangered by too much learning." It is therefore, not surprising that the progression of female access to primary education has in many countries been slow from the middle 1960s to the late 1980s as shown by Table 6.1.

Table 6.1 Total Primary Enrollments and Female Students as a % of Enrollments

Country	Total(thousands)					1988 ¹	Females as a percentage of total					
	1965	1970	1975	1980	1985		1965	1970	1975	1980	1985	1986 ²
Burkina Faso	90	105	141	202	352	32	32	36	37	37	37	59
Somalia	29	33	198	272	194	52	21	24	35	36	34	.
Chad	164	192	213	246	338	51	19	25	26	27	28	40
Ethiopia	379	655	1084	2131	1449	36	28	31	32	35	39	64
Malawi	338	363	642	810	943	72	37	37	40	41	43	80
Tanzania	769	856	1592	3368	3170	66	38	39	42	47	50	99
Uganda	569	720	974	1292	2015	77	37	39	40	43	43	82
Rwanda	330	419	402	705	837	64	41	44	46	48	49	97
Kenya	1042	1428	2881	3927	4702	93	36	41	46	47	48	94
Sierra Leone	126	166	206	315	370	53	36	40	39	42	41	.
Zambia	410	695	872	1042	1348	97	44	44	45	47	47	90
Lesotho	168	183	222	245	314	112	61	60	59	58	56	125
Cote d'Ivoire	354	503	673	1025	1200	.	34	36	38	40	41	70
Zimbabwe	676	736	863	1235	2215	128	42	45	46	46	48	95
Swaziland	.	.	.	.	.	.	.	.	.	.	.	.
Botswana	66	83	116	172	224	116	56	53	55	55	52	107
Nigeria	2912	3516	6166	13760	12915	62	38	37	43	43	44	82
Cameroon	742	923	1123	1379	1705	111	40	43	45	45	46	85
Congo P. R.	187	241	319	391	476	.	41	44	46	48	49	95
Gabon	79	101	129	155	184	.	46	48	49	49	49	98

Legend:

Either no data; or country profile is not provided in data set

1 Figures represent Primary school enrolment total percentage, 1988.

2 Figures represent primary school enrolment 1988; Females per 100 males.

Source: 1. Figures for 1965-1985 are Excerpts from Table 2: Total Primary Enrollments & Female Students as A Percentage of Enrollments, p.169-170. Marlaine E Lockheed and Adriaan M. Verspoor et al; Improving Primary Education in Developing Countries: A Review of Policy Options. A World Bank Policy Study.

2. World Bank, Draft for WCOEFA Bangkok, March 5-9, 1990.
Figures for 1986 are from, CPMD/DPI; UN; Africa Recovery : Country Profiles. August 1991.

While the persisting economic crisis with attendant astringent measures occasioned by structural adjustment have played an important role in stagnating female access to school, the modes of thinking, pin-pointed by Ramdas are not outdated in African society. In the study by Brock and Cammish(1991) in Cameroon where in 1985-86 girls between the ages of 6 and 13 years made up 46 percent of the enrollment in primary school, it was revealed that out of 320 pupils interviewed (177 boys and 143 girls) aged 9 -18, only 63 percent (201) agreed that "girls need to go to school as much as boys", and 27 percent (86 mainly boys) went so far as to agree that "Girls don't really need to go to school." It is evident that for a female to be enroled under these circumstances particularly in the rural areas, there are severe cultural costs to be met by the family and the female. Pressure exerted on households by relatives, neighbours and clan members, many of whom are women, not to enrol females in school are quite common.

6.2 Education's Contribution To The Gender Gap

Once females and males are enroled in primary schools, a larger proportion of females than males drop out. There is a long catalogue of economic reasons, coupled with the cultural and social attitudes discussed above, which are said to contribute to the dropping out of school by females. Table 6.2 shows the ratio of female to male primary school students by grade in 1985/1986.

Table 6.2 Ratio of Female to Male Primary Students By Grade (1985-86)

Country	Number of Grades in Cycle	Year	Grades							
			1	2	3	4	5	6	7	8
Burkina Faso	6	86	0.59	0.59	0.59	0.59	0.59	0.56		
Somalia	8	85	0.54	0.53	0.51	0.46	0.47	0.48	0.53	0.60
Chad	6	86	0.47	0.40	0.34	0.30	0.31	0.25		
Ethiopia	6	86	0.65	0.60	0.59	0.61	0.61	0.67		
Malawi	8	86	0.91	0.85	0.83	0.81	0.75	0.75	0.68	0.45
Tanzania	7	86	0.97	0.98	1.00	1.05	1.00	1.02	0.99	
Uganda	7	86	0.90	0.88	0.85	0.83	0.79	0.73	0.60	
Rwanda	8	86	0.99	0.98	0.98	1.01	1.00	0.97	0.88	0.83
Kenya	8	85	0.94	0.93	0.94	0.97	0.98	0.95	0.89	0.79
Sierra Leone	.	.	.	.	.	.	.	.	.	.
Zambia	7	86	0.98	0.96	0.94	0.92	0.88	0.84	0.73	
Lesotho	7	85	1.03	1.08	1.22	1.34	1.54	1.74	1.88	
Cote d'Ivoire	6	84	0.78	0.77	0.76	0.72	0.70	0.53		
Zimbabwe	7	86	0.98	0.97	0.98	0.98	0.97	0.94	0.84	
Swaziland	.	.	.	.	.	.	.	.	.	.
Botswana	7	86	0.99	1.02	1.03	1.02	1.10	1.17	1.26	
Nigeria	6	83	0.81	0.80	0.78	0.79	0.77	0.75		
Cameroon	6	86	0.84	0.86	0.84	0.86	0.85	0.82		
Congo P. R.	6	86	0.74	0.96	0.92	0.95	0.97	0.98		
Gabon	6	86	0.98	1.01	1.02	1.01	0.99	0.93		

Source: Excerpt from Table 7: Ratio of Female Primary Students to Male Students By Grade, p. 189-190. Marlaire E. Lockheed and Adriaan M. Verspoor et al; *Improving Primary Education in Developing Countries: A Review of Policy Options*. A World Bank Policy Study. World Bank, Draft for WCOEFA Bangkok, March 5-9, 1990.

The ratios in Table 6.2 suggest that in countries which have reached nearly 100 percent enrollment at the grade 1 level, there is less tendency to drop out, while in those countries with lower enrollment levels at grade 1 for females, more females drop out as they progress to higher grades. Some research results suggest that dropping out of school may be initiated by decisions at the household level particularly in circumstances of severe economic strain where parents influenced by the patriarchal cultural beliefs mentioned above, are more prepared to terminate the education of a female in order to continue supporting a male child's schooling. Brock and Cammish (1991) summarise other reasons as follows: "A major deterrent to female take up and follow through of educational opportunities(even when these are available) ...is the widespread operation of patriarchal systems of social organisation; of customary early marriage; of the incidence of early pregnancy (in and out of marriage); of heavier domestic and subsistence duties of females (especially in rural areas); a generally lower regard for the value of female life; all of which combine though differentially in each case, to adversely affect the participation of girls and women in formal education."

Furthermore, studies outside Africa have consistently shown how pupils 'resist' school when they judge it not to be a viable project in their daily and future lives. At some point, children will eliminate themselves from school either physically or through refusal to learn. There is a possibility that girls who fail to drop-out on their own, probably contribute to the orchestration of the in-school and out-of-school conditions which ultimately result in dropping out intellectually. Palme(1990) in a study on dropouts in rural and urban Mozambique, states that the basic principles governing achievement, repetition and drop out, are gender and social group adherence, and that the pupils least likely to get anything out of primary schools are girls in the rural areas. This is because schools' importance as an educational agency is limited. Palme asserts that even though school is regarded as an educator in the broad moral and technical sense of the word, it is just one of the several educational agencies and in reality, by no means the most important one. " When school comes into conflict with more trustworthy and impelling principles for social production such as marriage, or working for the survival of the family, it is abandoned."

The incidence of early pregnancy seems a problem which is gaining momentum. Within many systems of education which generally lack alternatives and options for re-entry by females into formal education after delivery, the education of a substantial proportion of girls is terminated by pregnancy. Although accurate figures in any one country are hard to find, the few that are available present a grim picture. For example, Sihlangu(1991) points out that in 1988, out of a total of 14,225 babies delivered in 9 Harare City health clinics, 4600(32%) of them were born to girls between the ages of 16-18. This does not include babies born to girls under the age of 16. Sihlangu urges that what leads to teenage pregnancy is a combination of physiological and developmental imperatives within a mentality of immaturity with regards to self-responsibility. Girls become reproductively mature at a time when they also happen to develop a tendency to rebel against authority, are overly in need of attention, and have a strong desire for individual identity and freedom and self assertion in making their own decisions. Within a cultural-social environment where parents have a tendency to blame their children for displaying non-traditional behaviours and values, and where schools are generally silent about sexuality, girls are enticed by anyone whose rhetoric carries an aura of value to the girls' ostensibly 'mature' actions and decisions, including those on sexuality.

While the potency of all factors concerning the 'culture of poverty, and the poverty of culture' should not be underestimated, there is need to understand more concretely how the process of education itself contributes to the dropping out and self elimination of females from the school system. Researchers including Brock and Cammish(1991), have pointed out that schools must ask themselves to what extent their ethos, teachers, textbooks and the overall curriculum are subconsciously reinforcing the negative attitudes towards females. Generally, both the traditional curriculum and the so-called new initiatives suffer from unquestioned devotion to a model where it is virtually impossible to put in place all the essential and necessary conditions and ingredients needed to make it reasonably successful (Namuddu, 1989). Education is so totally inefficient and ineffective, that it perpetually defeats two of the cardinal foundations of education, namely: its effect as a multiplier of intellectual and social capital; and its ability to spiral the economies of scale from one school cohort to another and from one generation to the next." (Namuddu, 1991b). As a result, females suffer disproportionately from these overall shortcomings. For instance, teaching literacy is generally unsuccessful as tool for developing permanent skills and as a vehicle for learning social justice. Ramdas(1990) emphasizes that when schools and other educational programmes teach people technical knowledge and skills without ensuring the acquisition of a basic appreciation of social justice, then the education system itself simply becomes part of the wider system of cultural and social regulation and control which is likely to continue to condone a situation of gender bias to exist. Similarly, in the new initiatives designed to increase participation of women and girls such as BRAC(Lovell and Fatema, 1989, Chantavanich, 1990; UNICEF, 1990) the issue of social justice is a purely peripheral one, and the primary concerns are of other side-effects of education, so to speak, and their impact on the desirable national goals such as: demonstrating how schooling will help girls to better perform their traditional role as mother. Such initiatives tend to "...generally overlook the women themselves as active participants in their own lives, and the manner in which their education affects social variables is explained only tangentially, if at all. ...The girl who receives the education has become unimportant in understanding social impact, which is defined in terms of her offspring, rather than in terms of herself."(Dhingara, 1990).

At a more specific level, research on classroom discourse and the nature of both the explicit and hidden curriculum is beginning to assemble evidence which suggests strongly that the underachievement, often leading to dropping out by girls, in almost all subjects of the school curriculum begin very early due to three basic but interrelated realities of the African classroom: (1) In an environment generally lacking supplementary instructional avenues, the classroom teacher is the most authoritative purveyor of knowledge and skills. Unfortunately, most teachers whether female or male tend to be influenced to varying degrees by the values which denigrate the intellectual integrity of women. During teaching, teachers often play an active role in perpetuating and reinforcing patriarchal values through their speech and behaviour; (2) The content of officially selected textbooks whether directly available to learners or indirectly transmitted and interpreted by the teacher,

preaches social conformity by exposing all children to a common national set of values and norms. In enabling all children access to officially approved knowledge, the textbook, which carries authoritative messages on female and male role models, is a powerful socialising factor in the lives of African children. If such a common and national curriculum also violates the intellectual integrity of women and trivializes their economic contribution to national development, then both boys and girls will build up negative images of females throughout their educational careers; (3) School content is not just the substantive elements of disciplines but also the ways in which learners are intellectually coerced to identify the nature and quality of their own lives and futures within the context of generating, using and validating such content. If the content of subjects such as mathematics, the languages and science which form critical filters for successful persistence in the total education system is presented as "male" there is the likelihood that most females will withdraw from learning such content at an early stage and will therefore, be barred from advancement in the education system because of their under-achievement.

The results of a study of Kenya textbooks at the primary school by Obura(1991) which sought to analyse the transmission of gender images vehicled by schools shows clearly that there are few appearances of females in the mathematics textbooks (and all other subjects except home economics). The few appearances are further undermined since females are presented late in the books, they appear in order of appearance relative to male figures, and they are less frequently named than male figures. Females are portrayed as less intelligent than males, un-resourceful and either economically useless or poor. In addition, adult females are the least depicted of all the human categories, suggesting that adult women do not participate in viable adult 'male' activities. Obura (1991, p. 31) concludes that girl readers are deprived of adult role models in the mathematical world to identify with and to imitate. She observes that females are depicted as engaged in the traditional areas of petty trading, nursing, teaching and typing; they are mainly depicted in un-remunerative tasks around the home and in un-remunerative subsistence farming. There are no role models at all of leadership and entrepreneurship or of women engaged in non-traditional activities such as driving a car, banking and buying nails. Despite the fact that the portrayal of educated, and rural women as shadowy figures in society who are intellectually dull, passive and retiring, is inaccurate and does not fit the realities of present-day Africa where women are known to be working in many spheres of economic activity, the message of these textbooks is persistent, internally consistent and is taken seriously by both female and male students, not to mention the authors, the majority of whom are males!

This negative portrayal of women presents real unfavourable learning conditions and consequences for the achievement of girls in the mathematics, physical science and language. Mathematical practice enhances ability to learn physical science and the more physical sciences a student learns, the more she will use mathematical skills in order to solve physical science problems. In addition, the ability to manipulate efficiently the medium of instruction, be it mother tongue or a metropolitan language such as English, French or Portuguese will enhance learning not only the language but also mathematics and physical sciences. Overall then, the more practice is made available to learners in these three categories of disciplines, the better the general achievement will be in the end. Constant and persistent failure by girls to discover in textbooks, general readers and the teacher's delivered content, strong and positive models of females playing important roles in the generation, validation and use of the substantive content, gradually persuades girls to withdraw from serious attention to such content. Being too young to appreciate the importance of gaining skills in manipulating such crucial content outside its purely disciplinary domain, girls at primary school develop interest in and channel all their energies into non-technical subject areas thereby creating for themselves a basis for lifelong disqualification from the pursuit of technical and scientific careers. Ultimately, therefore, the under-achievement of girls in the primary school is not simply the result of their inability to learn but of the failure of the curriculum and the pedagogy as a whole to demonstrate to the girls the important link between learning and achieving well on subjects such as mathematics, the physical sciences and language, and advancement in education and the world of work. Until there is sufficient research on schooling, classroom practices particu-

larly those concerning the teaching, acquisition and use of literacy and their impact on the perceptions and life of children, it will be difficult to dismiss out of hand the possibility that the nature of school is the most potent factor contributing to self-elimination and dropping out of school (Namuddu, 1991c).

At secondary school, in-school factors, particularly those concerning the structuring of subject choices and the nature of the curriculum itself have been blamed for the streaming of girls in non-scientific areas of study. Duncan (1989) found that a gender ideology that defined various subjects as female or male was a significant factor determining achievement among secondary students in Botswana. She also found a consistent negative association between femininity and achievement, which implies that many girls are forced to choose between competence and femininity, and sometimes they decide to drop out of school altogether in order not to compete with boyfriends. Other effects of the gender gap include absence of useful female role models, discouragement by both female and male teachers, plus the fact that on the average, schools in which girls predominate have poor facilities and resources and tend to have a larger population of teachers with minimal academic qualifications and without professional training (Sifuna, 1991). In addition, lack of seriousness in the pursuit of their studies, and detraction from their studies in pursuit of traditional sex roles have been blamed for female poor performance and achievement at the secondary school.

6.3 Summary

The main causes of the gender gap in society concern cultural and traditional beliefs and practices which limit the access of females to education. Education may legally be available to females, but there is no assurance that they will be allowed to receive an education, or to persist in the system. Several factors in and outside the school contribute to the high rates of female drop-out. Normal biological developmental milestones affect many girls' advance to higher levels of education since they reach child bearing age from 12 years, and since there is lack of proper counselling within the home and at school and a dearth of opportunities, activities, and role models which truly stimulate the minds of adolescent females to pursue ideals and lifestyles not based solely on the female reproductive ethic treasured by cultural imperatives. Within the classroom, the curriculum and pedagogy create and enhance negative images and attitudes about females and fail to ascertain that basic knowledge and skills such as social justice and literacy are mastered. This has resulted in the paradoxical situation where education which should be in the forefront of liberating society and ensuring that all acquire positive attitudes about all members of society and understand the basics of social justice, is itself a key factor in entrenching the gender inequality and under-achievement of females.

7.0 Effects Of The Gender Gap

As a consequence of dropping out of primary school or repeating grades plus all the other factors listed above, the proportion of females applying for entry from primary into secondary school is usually quite low. In the case of Uganda for instance, while females make up nearly 50 percent of the initial enrollment in grade 1, only 35 percent of the females survive to register for the public examination terminating the 7 year grade cycle. Therefore, a major effect of the gender gap is that there is always only a small pool of educated females eligible for participation in advanced levels of education. For example, Table 7.1 shows the percentage entry and percentage pass rate for selected subjects chosen by Swaziland candidates by gender, on the 1988 Cambridge Overseas Examination Syndicate Council (COSC).

Table 7.1 The Percentage Entry and Percentage Pass Rate Of Swaziland Candidates by Gender, 1988 COSC Examination

Subject	A		B		C		D		D		E	
	% Entry				Cumulative % Pass				% Excellent grades (1 & 2)			
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
*1. siSwati	100.0	100.0			99.0	95.0			6.0	3.0		
*2. English Literature	83.1	72.8			66.0	55.0			2.0	0.2		
3. Human & Social Biology	69.0	53.6			71.0	78.0			2.0	4.0		
4. Bible	61.1	55.6			78.0	78.0			0.7	1.0		
5. Mathematics	56.0	70.7			68.0	79.0			4.0	7.0		
6. Geography	53.3	65.4			68.0	78.0			0.3	2.0		
7. History	40.0	41.0			68.0	75.0			2.0	4.0		
8. Accounts	38.8	35.5			64.0	70.0			0.6	1.0		
*9. Food & Nutrition	25.0	1.0			99.0	100.0			18.0	8.0		
10. Biology	20.8	24.2			77.0	82.0			8.0	8.0		
11. Physical Science	16.9	31.6			50	92			0.0	3.0		
12. Combined Science	14.9	31.6			74.0	80.0			2.0	3.0		
13. Technical Drawing	0.5	12.3			50	92			0.0	3.0		

Source: Table 2 in Sister A. C. Smith; "Access of females to education in Swaziland: Questions of quantity and quality". Paper presented at the BOLESWA Educational Research Symposium, July 29 - August 2, 1991, University of Swaziland.

It is evident that even in a country such as Swaziland where the proportion of females enrolling in primary and secondary school is high, the proportion of females who register for terminal examinations in a number of subjects, particularly those within the sciences is low. Females' cumulative rate of passing is lower than that of males in a number of important subjects. The data in columns D and E is important because, although incomplete, it suggests the trend in the quality of achievement by females and males with regard to requirements for admission to tertiary education. In only three areas of study, siSwati, English literature and foods and nutrition do more females than males obtain top grades. And for subjects such as physical science, technical drawing, and accounts, the number of females obtaining good grades is extremely small, if at all. The importance of results in Table 6.3 for determining the percentage of women likely to enter scientific fields of study can be gauged from the fact that not only do very few of the potential candidates for tertiary education pass with the high grades needed for entrance, but also their proportion at registration is very small.

7.1 Cultural, Social and Economic Effects of The Gender Gap

Second, because education allows only a few females to participate in the formal labour market, this perpetuates un-recognition of the larger contribution of women generally to economic development. The World Declaration On Education For All (1990) defines basic learning needs as "...the knowledge, skills, values and attitudes necessary for people to survive, to live in dignity, to continue learning, to improve the quality of their own lives and their communities and nations. When basic learning needs are met, people are empowered to make informed decisions, respond to opportunities, adapt to change and undertake initiatives from which they or others benefit." Learning is seen as the link between the development of the individual and the development of society. But the development of a nation is generally envisaged as economic development - or the improvement of the material standard of the population. Within the African cultural and social norms described above, those who are perceived as economically productive will be accorded a higher status than those not so perceived. This implies that the status of females, whether highly educated or not, is determined not so much by the amount of education acquired, but by how well their contribution to economic development is recognised within a cultural environment which favours male definitions of economic productivity (Namuddu, 1991d). Since the economic role women play in their societies, particularly in individual households, has long been underestimated by the assumptions un-

derlying how economic input and output are measured, their overall economic contribution is regarded as small, if at all.

Floro and Wolfe(1991) point out that the accumulation of evidence suggests that decision-making power is generated more frequently by economic power than by education alone. And within the African context economic power is very much tied to the observation made by Brock and Cammish(1991) with regard to the position and role of the the Camerounian woman:

" Even if one accepts the hypothesis that traditionally, Camerounian women were 'parallel' or 'complementary' on their roles rather than oppressed, they were certainly in a marginal position. Women were a scarce resource 'given in marriage to the highest bidder.' Their bride price bought their labour, their sexuality and their child-bearing capacity. Marriage is the only possible future for a female: In one group for instance, all females are married - even widows immediately marrying their husband's heir!"

Therefore women's own status as well as their economic contribution can only be judged in reference to those of the husband. These overall effects of the cultural and social norms are superimposed over economic differentials in gender roles to result in a diminished status for women, whether educated or not. The gender gap in status and therefore, in education at all levels has incalculable ramifications for the development of African nations. While it is true that education as part of the modernisation processes equips people with some skills and knowledge which they require to participate in public life and household affairs, it is not always possible to utilize such knowledge optimally in a situation of gender inequality. For example, even though at present many more males than females have knowledge and skills which would enable them to act and improve the basic social indicators such as: maternal mortality; infant mortality; calorie intake; protein nutrition; household sanitation; energy conservation; and literacy; they do not apply such knowledge and skills because males do not, culturally, constitute a group whose 'natural' roles would allow them involvement, outside professional roles, in household activities where decisions to improve the stated social indicators are generally taken. Similarly, while education favourably affects both the willingness of women to enter the labour force as well as the shift from marginally productive to high productive activities, intervening variables such as age, cultural restrictions on women's activities, extent, type and dispersal of industrialization, gender discrimination, and women's limited or lack of access to complementary resources such as land, technical training, capital equipment or machines, etc, may limit the alternative options and job opportunities available to educated women. Furthermore, a real and permanent shift in attitudes, values and behaviours needed to raise the quality of life cannot be sustained when, only a few educated women are expected to make use of their knowledge and skill within a social-cultural context in which they are out-numbered by the uneducated and the insufficiently educated.

Third, the gender gap results in the under-representation of females at all levels of society and excludes them from making decisions concerning their own welfare. As a result, the widespread adoption of equal opportunity regulations, constitutional or otherwise, has not been followed by real political will at the centres of power to adopt radical programmes designed to redress the gender imbalance in economic power and the structures and resources which support such power. The fundamental basis for this lack of real political will stems from the fact that the majority of males in powerful positions do not in fact, accept that females, educated or not, should have an economic status equal to that of males with regard to instruments of national governance and distribution of economic resources. The majority of males do not accept that the existing cultural, social and economic systems disadvantage females; to them a problem does not exist. Consequently, while the majority of males agree that there is numerical inequality in the participation of females and males in education and other sectors, they do not accept that such inequality is not 'natural' and that it is therefore, a disadvantage to the females. The majority of males have persuaded themselves that gender inequality is an existential problem which is an unalterable element of the human condition, as inevitable as mortality.

There is a small proportion of males who accept that the gender gap is indeed a disadvantage to females but they regard such disadvantage as solely the fault of the females and not society. They argue that society provides equal opportunities to females and males but the former because of either lack of ambition, or self-depreciation, or desire to acquire wealth without striving to earn it, fail to make it in life. The overall consequence is that males who control decision-making will formulate policy urging women to 'participate in national development' without appreciating the need for males and society as a whole to change their attitudes and practices. As long as gender inequality is not understood as a disadvantage which is socially constructed, it will be difficult to genuinely contemplate let alone implement policy and activities which provide options and choices that truly increase females' access to resources, give them more opportunity to realise aspirations and potential, and increase their capacity to cope, in a word - to be empowered.

7.3 Summary

The theme in the foregoing discussion on the effect of the gender gap has been to emphasize three issues namely: (a) females without an adequate education suffer considerable handicaps as individuals and as participants in national development as a result of their lack of knowledge and skills; (b) females with various levels of education are generally unable to use fully their technical knowledge and skills because of discrimination in the labour market as a result of the low status accorded to them as women; and (c) because the decision-making process has traditionally been presided over by males and females with an entrenched ideology of patriarchy, recognition of the negative effects of the gender gap on all who attend educational programs has been slow.

8.0 Closing The Gender Gap At Higher Education

How can the representation of women in higher education be improved? As has clearly been demonstrated in the foregoing description and analysis of the situation of enrollment of females in the education system, the under-representation and under-achievement of women in higher education have their origin at earlier levels of education. We cannot expect the number of women entering higher education to rise dramatically until there has been a correspondingly larger enrollment and persistence of females at secondary and primary schools. This point has clearly been demonstrated in Kenya. An aspect of policy in the 8.4.4 education system implemented in 1983 insisted on science for all secondary schools. As a result, in one agricultural college the intake of women rose from 10 percent in 1983 to 37 percent within a period of 10 years. Admittedly, the majority of women who gained access to the college had attended good secondary schools with laboratories and science resources enabling them to conduct experimental and practical work. However, the dramatic rise in their numbers as a result of a policy mandating science for all shows that policies of this nature can be effective in forcing at least, the well equipped girls' schools to use available resources in order to open career opportunities in higher education previously closed to women because of availability of easier options in the choice of subjects at secondary school. The following examples of policy formulations to increase the participation and retention of females in higher education are offered as suggestions for discussion.

8.1 Increasing Numbers

Any policy designed to increase the number of female participants in higher education must take cognizance of the overall purpose of higher education. Higher education is expected to contribute to national development in three critical ways, namely: (1) the preparation of people needed to fill high-level scientific, technical, professional and managerial jobs; (2) the generation of knowledge and innovation needed for development through indigenous scientific research and as agents for the acquisition, adaptation, and dissemination of scientific and technical knowledge developed elsewhere; and (3) the preparation of people who can create, organise and manage social and non-governmental institutions and fora which provide a counterpoint and a consultative role to various analytical perspectives presented by traditional institutions such as political and religious

groups (World Bank, 1988). This implies that the intellectual calibre of females enrolled in higher education must be such that women can take maximum advantage of the knowledge and facilities offered so that on graduation their capacities can indeed reflect a reasonable correspondence to the task that lies ahead. Therefore, the number of females can be increased by setting up a quota system to enable the admission of all women who qualify for entry.

Makerere University in Uganda for instance, has in place a quota system whereby all women who apply for admission are given an extra 1.5 points. This means that a number of females are enabled to reach the minimum points required for admission in courses of study requiring the lowest entry grades. In cases where a female had already attained the minimum requirements, the extra 1.5 points may enable her to pursue the area of study of her first choice. It is important to note that this admission policy does increase the number of females at tertiary education and at the same time, enables a number of them to pursue their desired careers and thus distribute them more evenly across a range of technical and arts fields. While the policy has been generally accepted there have been a lot of controversy about it basically because of the tendency to regard it as a mechanism for admitting into university, women who do not initially qualify. Because all women applicants are given the extra points, some males meeting the minimum requirements may be denied entry into either a course of study or the university altogether. There has been no follow up to see how those females who were given an extra 1.5 points in order to pursue courses of their first choice had fared. Those opposed to the admission policy have claimed that it is these women who contribute to the wastage through repetition and dropping out. But without figures of any kind, it is impossible to judge the substance of such claims. It might therefore be extremely useful to conduct tracer studies since this is the sort of policy other universities may need to examine for adoption.

8.2 Working On Retaining Females In Higher Education

Since quite a sizeable proportion of females - approximately 20 percent - who enrol fail to graduate, the economic, academic and other environmental causes of dropping-out and underachievement should be eliminated. Unfortunately, there are still many gaps in knowledge in this area but sufficient insight into the persisting constraints exists to enable policy makers to devise initial strategies while research attempts to discover a more complete picture of these constraints. With regard to academic performance, females may stagnate early in the pursuit of courses such as statistics, engineering, medicine, bio-chemistry and physics and chemistry even when they have come with adequate grades. The fast pace at which such courses are conducted is often a source of anxiety particularly for students with a variety of backgrounds. Since it is generally known that pre-university teaching concentrates on specific examinable content, important content and skills which form useful background to university courses may be skipped at secondary school in pursuit of these narrower aims. It is important for higher education to devise diagnostic tests which can pin-point exactly the weaknesses which students, particularly those who have attended schools without adequate scientific equipment, come with. This should be followed by making available to all students remedial courses in various technical areas as well as in skills, such as independent study skills; speed reading and paper writing.

Women professionals in some countries such as Ghana hold what they call clinics for young women in secondary school who show potential in technical subjects and mathematics to try to encourage them to pursue such subjects up to tertiary level. Although participants in these clinics have found that it is often too late to 'salvage' all potentially capable girls, this is a model that could be replicated on campus. All universities now have some female academicians and administrators. These women could form informal organisations for female students where they could play not only a counselling role but also offer positive role models in different areas of study. The informality of these groups should not be interpreted to mean that universities should leave the formation of these organisations to the interests and resources of individual members of staff. An institutional policy framework, a clear mandate, financial and time resources as well as mechanisms for rewarding participants in such programs must be set up. Linking undergraduate women with se-

nior academic, professional and administrative females would help to improve knowledge and instruction for both teachers and students and assist in attracting and recruiting the best women into post graduate work.

With regard to the learning environment itself, Coombe's report leaves little doubt that board and lodging conditions have deteriorated considerably on many campuses. Hand in hand with this physical deterioration has come a laxity in the kind of security women students can expect on campus. Sexual harassment is rampant on many campuses and there are suggestions that some females are dropping out due to insecurity while other women prefer to terminate their contact with the university campus as soon as they complete their first degree. It is obviously unrealistic to expect campuses to be a haven for mutual understanding among men and women, be secure for women, and lacking in violence when the rest of society is gripped under these very negative conditions. In this situation, having information available, and setting courses on how women students can protect themselves against attacks, kidnapping, rape and other acts of violence may be the most critical action that policy makers need to make.

A special constraint to women students concerns those who decide to become mothers while still pursuing courses at university. Up-to-now university policy has argued that university women being mature and therefore, responsible for their decisions should bear the consequences of their actions. Universities have therefore always refused to offer financial assistance and accommodation to pregnant students and married undergraduates. This results in probably the highest number of female drop-outs and those performing poorly in the examination. If such women are taking sciences, they will in all probability miss important tracts of experimental work, graduate with low grades and be disqualified from pursuit of post-graduate work. What is needed is a policy which calls on the university to affirm not only its broad mindedness and pursuit of excellence but also to be an active agent in changing outmoded institutional culture so as to become a positive role model to the rest of society. The policy needs to formulate strategies which supplement the resources made available to the female to enable her to have a health pregnancy and bring up decently a new member of society. This could be done by increasing the amount of financial assistance to enable the student to hire decent accommodation and help. The medical schemes normally available on campuses could be used to assist women with all medical expenses and needs. In addition, the female should have options available for pursuing the course without incurring stigmatizing punishments such as repetition, being assigned supplementary examination, and being refused to conduct experiments missed.

All the above policy options and suggestions should not be considered in isolation of other policies seeking to introduce either cost sharing or full-fee paying schemes at tertiary level. If as earlier pointed out, a disproportionately large number of females have difficulty raising school fees at primary and secondary school, how will they cope when they reach tertiary education when fees are extremely high? Similarly, how will the number of female students be affected by decisions to privatise services such as medical schemes, on-campus accommodation and feeding, and the purchase of instructional resources? Overall, is the situation of females likely to be improved or aggravated by new policies on private management, private sector funding of the education of professionals, and self-financing at post graduate level?

8.3 Broader Issues In Gender Education

There are however broader issues which must be tackled by the university community in order to sustain the reforms and policies mentioned above. These include at least two activities, namely: (1) Raising the consciousness of the university community regarding the dimensions of gender inequality; (2) Tackling the whole way of thinking about education and the nature of the curriculum.

8.3.1 Dialogue Rather Than Confrontation

Evidently the first need is to create a forum where dialogue rather than confrontation between females and males will take place. Until now, efforts by academicians, mainly females, to introduce gender sensitive ways of either organising life at the university or introducing gender-sensitive courses have been characterised by resistance from their colleagues, the majority of whom are males. The most disheartening aspect of such resistance has been the use of ridicule rather than rational argument by males to dissuade females from instituting gender education. Any female academician who chooses to become a visible proponent of gender education runs the risk of being insulted, her intellectual integrity questioned, and given all sorts of unpleasant names. Such harassment does not stop at the woman. If she is married, men will make a systematic effort to persuade her male partner to curtail her activities by branding him a coward who has acquiesced to 'having another man' in his own house.

Another detrimental tactic by males when confronted with a debate on gender issues is to divert the discussion from the real issue - gender inequality. For instance, whenever a discussion on the property rights of women is broached, the males will interject that the majority of men are as poor as the majority of women. Whenever a discussion on rape is opened, males will insist that females 'ask for it' by wearing flimsy clothes. Males are generally unprepared to accept the fact that, "Regardless of how a woman looks, whether she is five or eighty-five years old, all women are potential rape victims". Similarly, whenever women insist that just as workers should make decisions for workers from their experience of being workers, women should make decisions for women from their experience of being women, men sweep the issue aside by insisting that it is not democracy, it is not biblical, or it is against culture, thus effectively terminating the discussion. Unfortunately, females have not been known to cut heroic figures as they either 'drove their point home' or took to flight from such provocation!

8.3.2 Research On Gender Issues

There is need to understand the variety of ways in which gender inequality operates by finding genuine answers to questions such as: What are the causes of the problem and circumstances which perpetuate its existence?; What is the scope and its depth?; Who are the primary victims?; Who are the beneficiaries? Who are the secondary and tertiary victims? And research must play an increasingly important role in assembling the answers to these questions. After all, not even the females know all the different facets involved. It would be disastrous if not suicidal, in an area as controversial as this, if proponents and opponents, in setting out their positions, were to continue to rely solely on their intuitive understanding and haphazard knowledge as is presently the case. Academicians, particularly females should not believe that the mere setting up of a strong women's movement will suffice in an era which is increasingly persuaded by numerical and researched evidence.

Parajuli and Enslin(1990) have urged that the relationship between critical education and social movements is mediated by the dynamics of creating and asserting knowledge. An empowering education is not one which imposes alien knowledge but one which critically generates the history and culture of the participants. An empowering education should reveal the conflicting interpretations of knowledge between dominant and subordinate groups such as men and women. This is crucial when knowledge, rather than traditions, must serve as the most significant factor in the contestation over power, identity and public spaces. It is therefore, gratifying that the African Academy of Sciences in Nairobi, with financial support from donors who constitute the DAE Working Group on Women Participation in Education of which the Rockefeller Foundation is the lead agency, is underwriting several in-depth case studies and research projects aimed at: (a) answering some of the above questions; (b) identifying on-going innovative programmes in the area of gender; and collating data on the most strategic ways of increasing female participation in education and national development.(AAS, 1990, Rockefeller Foundation, 1990)

8.3.3 A Case For Gender Education

As noted earlier, major flaws in the curriculum and methodology at all levels of education affect and handicap all students, whether female or male. The overall effect is that students graduate without being properly trained for deployment in development work. However, although the severity of these shortcomings is comparable among females and males, females suffer from them more than males because of the already deeply entrenched cultural, social and economic biases against them. As noted earlier, less females enrol in tertiary education. Among those who enrol the largest proportion is to be found pursuing the arts, education and home economics while few register in the sciences and in fields such as medicine, forestry, agriculture, and veterinary science. In addition, there is a high percentage of wastage among females and fewer numbers of females achieve sufficiently high grades at undergraduate level to enable them to pursue post-graduate work. In view of these disparities in the performance of females and males there is a tendency to think that either females need special courses or knowledge to prop them along the way or higher education institutions should create special departments for women's studies. These approaches, although initially well intentioned, rarely solve the problem of gender inequality because the courses or departments offering female courses often become ghettos for female students. In the real-world economics and politics of the university, such courses or departments, usually started with external support, are vulnerable to shifts in funding and management, and more crucially, they fail to make a dent in the negative attitudes and values of the males, who do not subscribe to female courses.

The creation of women's departments, courses and similar structures have the positive element in that they provide a permanent forum in which issues on women and gender can be discussed. However, the real temptation of 'pushing' all bothersome issues that have something to do with women in the women's department, is a frequent but unpalatable consequence which administrators and academicians ought to be wary of. What is needed are not courses on females for females but courses on gender for females and males. Such courses should properly integrate information about females and males in such a way that the participants can critique not simply the validity of such information but more crucially the behaviours which are manifested by such information. The courses would have another characteristic namely, integrating into one course information which is normally dealt with in different disciplines. For example, a course on human reproductive biology would include not simply the structure and physiology of the reproductive system but also human sexuality; reproductive anthropology; reproductive rights; the cultural, social and economic impact of paternal and maternal rights; contraception and family planning; rape, child defilement and child pregnancy; and family health and multiple sexual partners. A serious handicap in tertiary education is the lack of a category of knowledge which has a practical and personal application to the student. Many graduates have a hard time arguing their case for gender equality or inequality precisely because they do not have knowledge which would enable them to conceptualize their personal situation sufficiently to be able to take the most strategic options whether in subject choice, career prospects or indeed, in their personal lifestyle. There are at least six fundamental areas of such knowledge: basic knowledge on learning and teaching; home economics; public law interest; reproductive biology; child development; and participation of females and males in sector development; whose ignorance by students seriously affects gender relations:

The potential contribution of gender education for all students is unknown since no university or secondary school is known to be offering such courses. But as has frequently been asserted in the case of racism, knowledge may or may not wipe out racism, but it broadens the mind sufficiently to enable one to reflect on the situation of another, thus widening the possibility for embarking on positive change. For instance, it is possible that understanding teaching and learning might enable all students, but particularly females to re-claim a public area which, if they knew how, they could use most effectively to chip away at the negative attitudes and values about females. With regard to home economics, the exclusion of the majority of male students from any understanding of the immense amount of work in the home is most probably responsible for the continued under-esti-

mation of the economic value of such work. The area of public interest law deals with such issues as the protection of civil rights and liberties, curbing of the arbitrary use of executive and administrative power, defense of the rights of minorities, women and children, and the assertion of the right to legal representation and due process. Until all students learn and understand these aspects of law, they cannot be expected to make rational decisions at critical and often crisis times in their lives. Many students, especially women who may not have had adequate learning of biology, retain many misconceptions regarding reproduction. As potential parents, guardians and professionals they should understand why concentrating on self-development is the most cost-effective, long-term investment that can be made in order to ensure and strengthen their capacity to attend effectively to children's emotional, intellectual and physical needs. As Paz (1990) points out, future parents should understand early not only their biology, but also that formal educational provision cannot compensate for an impoverished home environment, nor offset the effects of inadequate parental care and support. The first task of parents is to prevent disadvantage by sundering the vicious cycle of improper care and teaching of children through which the heritage of disadvantage is passed from generation to generation. And finally, students need knowledge on the status of the various sectors of national development without which they are severely handicapped in choosing careers and searching for the kind of employment which would appropriately actualize their deep yearning to develop their society.

Whatever field of study, be it medicine or the arts, a student pursued at university, if in addition s/he had a reasonable grounding in these areas of knowledge, s/he would certainly leave the university a better informed graduate, much more prepared to face the world of work and public and private life. Universities are now embarking on new and innovative ways on how to raise and organise their finances, their curriculum and their governance. These changes and reforms are conceived and their implementation attempted within a philosophy which focuses on what individual institutions can do to improve the quality and functioning of society and not on what others are doing or have done before. It is in areas such as gender education where the university in Africa needs to play a first and leading role rather than replicate what others have refined or wait until all of society gives approval to the task of bringing about gender equality!

9.0 Concluding Remarks

While raising the participation and achievement of women in higher education is correctly regarded as a pre-requisite for improving their situation in all other spheres of life, education of itself is a slow process which must be given every kind of support and nurture by policies outside the school. Therefore, there is need to create a sustain a total policy environment which screens all development action and targets for their involvement of women as decision-makers, participants and beneficiaries. In other words, women's issues should become an aspect of each and every policy under consideration. Fortunately this will cost little and yet have the potential for bringing about equitable development. It is patently unwise to continue to expect that women's issues will be adequately dealt with by a single ministry or department or bureau. In addition, the total policy environment must address itself to a number of existing discriminatory practices, not so much in recruitment but in promoting graduate women to senior managerial and leadership positions in the labour market. The realization by women that society will continue to deny them chances for promotion, advancement and leadership even when they possess high levels of education and training is a serious de-motivating factor in their pursuit of education. It is important that specific policy be clear on how the employment and promotion mechanism will operate to ensure that a certain quota of women are promoted at each grade every year. Similarly, the policy needs to be specific on how women can seek redress in cases of what they judge as discrimination. With specific targets of women set to be achieved on an annual basis and within a known timetable of work, employers should be made to explain why such targets were not realized.

Females, particularly those who have benefited from higher education, are agitated by society's disregard of their potential, their knowledge and skills which lie dormant, even after surmounting

such difficult odds. Many professional and long serving females watch helplessly in their gate-keeping roles as males with less qualification and experience move up the ladder to become 'those in command'. Females in teaching and administrative positions at university are disheartened by the economic crisis which has brought them below the poverty line. Combining their dual role as professionals and housewives, does not afford them the time and opportunity to hold 'a third job' at a time when holding 'a second job' is something which has become more or less 'normal' for their male colleagues. In addition, in many countries where there has been repeal of discriminatory laws to enforce equal opportunity; to punish severely sex offenders; to protect female property rights; or even to increase female participation in education; little, if any, of the promised action has been realised. Women, educated or not, remain overburdened with work, live on marginal incomes, participate peripherally, if at all, in important national decisions, and rarely have peace of mind about their future and that of their children.

The guiding principle for educators, policy makers and planners in tackling the entrenched dimensions of gender inequality in African societies should be the edict that "*We cannot exceed the physics; if some things have to grow other things have to diminish, so that the constituent elements can be released and recycled.*" (Fuglesang, 1991). Females, supported by an appropriate programme context which offers opportunities for action should increasingly become unwilling to settle for second best standards and attenuated provision and should demand equal rights in access to a proper education and economic productivity as equal citizens and not as the 'deserving'. As Paz(1991) has promised, if one believes in the 'journey' design there is no recipe. There is only the attempt to do it, and the learning process that emerges as a result. But by accepting the need to embark on such a journey, the first step is already taken. Another 'first' step has been taken by including the discussion of gender issues in a seminar of this calibre.

Yunus(1991) has argued that peace should not be understood in military terms like absence of armed conflict. Peace should be understood in a human way, in a broad social, political and economic way. Peace should mean social justice between nations and within nations. It should mean establishment of human rights for all people. He concludes: "I *do* believe that energy expressed through actions by large enough numbers of people can change things. ... this energy in action... manifested itself in individual boldness. Individual boldness soon grew into collective boldness to break open barriers. People forced themselves free from the barriers of dogmas, from the legacy of the past, from the routine submission to the authority. They showed that the free spirit of human beings cannot be contained no matter how skilfully you packaged it". Therefore it is not enough for females, highly educated or not, to keep themselves hopeful by what Friedrich (1991) has called the grandest dream - that one day, one would understand. Women will have to do the understanding fast, by educating themselves through research on gender issues; by working hard in all sectors of production; and by forming coalitions and pressure groups for a relevant curriculum at all levels of education and society. More crucially, females will have to boldly insist that others should begin to *know* how to eliminate gender inequality, because, to paraphrase what Yunus(1991) has said about eliminating poverty:

"There must be a thousand and one ways to remove gender inequality from the earth. We may or may not know some of those ways already. Obviously there are many more ways yet to be designed, each more effectively than others. When we shall find them, how many of them we shall find, how quickly we find them, will depend on how eager we are to find them. But to say that gender inequality cannot be overcome, directly and quickly, is to underestimate the capacity of the human mind'.

References

- African Academy of Sciences; Education research priorities for girls and women in Africa. A proposal submitted to The African Education Working Group on Female Participation , c/o The Rockefeller Foundation, June 1990.
- Brock, C. & Cammish N. K.; Factors affecting female participation in education in six developing countries. A project carried out on behalf of the The Overseas Development Administration. The University of Hull, School of Education, Department of Educational Studies and Institute of Education, January 1991.
- Chantavanich, A. et al; Evaluating primary education: Qualitative and Quantitative Policy Studies in Thailand. IDRC-261c Ottawa, 1990.
- Chetley, A.; The Power to Change: The experience of Costa Atlantica Project in Columbia (1977-1989) Bernard van Leer Foundation, 1990.
- CIDA; Barriers and Strategies for overcoming barriers to women's participation in training and scholarship programmes. JT3/062 October 29, 1986.
- Coombe, T.; A consultation on higher education in Africa: A report to The Ford Foundation and The Rockefeller Foundation. Department of International and Comparative Education, Insitute of Education University of London. January 1991.
- Court, D.; Issues in Higher Education: A note from East Africa. NORRAG News, December 1991.
- Dhingara, K.; Gender issues and development. WCOEFA Discussion notes. Jomtein, 1990.
- Dirasse, L.; Gender in education: Selected issues in gender and education research in the SADCC Region. In G. Mautle & F. Youngman(Eds.) Educational Research In The SADCC Region: Present and Future, BERA, Gaborone 1990.
- Duncan, W. A.; Engendering school learning: Science, attitudes and achievement among girls and boys in Botswana. Studies in Comparative and International Education, No. 16, 1989.
- Floro, M. & Wolf, J. M.; The economic and social impacts of girls' primary education in Developing countries. A report prepared for Advancing Basic Education and Literacy(ABEL) Project. December 1990.
- Friedrich, A. G.; Towards Reforming the UN system: A Bold proposal to restructure the economic and social sector, p. 4. In Development and Cooperation No 6, 1991.
- Fuglesang, A.; Rethinking development: An Introduction. p.6-10. In A. Fuglesang & D. Chandler (Eds.)Early Childhood Development: Essays with perspectives from Africa. Redd Barna. Lessons Learnt No. 2, 1991.
- Jarvis, D. S. L.; "Paradigm Lost: The crisis in development studies. Development Forum, Vol. 17, No. 6 Nov./Dec. 1983.
- Karani, F. A.; "Education Policies and Women's Education". In Mary Adhiambo Mbeo and Oki Ooko-Ombaka (Eds.) Women and Law in Kenya. Nairobi: The Public Law Insitute, 1989.
- King, K.; Building capacities in the developing world: A review of experience in the field of education. Education Department, Edinburgh University, Edinburgh, UK, 1991.

- Lovell, C. H. & Fatema, K. ; The BRAC non-formal primary education programme in Bangladesh. Assignment Children, UNICEF, 1989.
- Motala, S.; Training for transformation: Research Training Issues in South Africa. Education Policy Unit, University of the Witwatersrand South Africa. July 199.
- Namuddu, K.; The Status of Educational Research Training Programs in Eastern and Southern Africa. Consultant's report to The International Development Research Centre, Ottawa, 1986.
- _____ Relations between research and action and between research and policy. Paper presented at an International Meeting on Educational Research In West Africa. January 30 - February 8, 1989, Freetown, Sierra Leone.
- _____ Development, communication and language: Problems of communication between Northern and Southern researchers: The case of Africa. Paper presented at the VI Congress of the International Comparative Education, Montreal June 26-30, 1989.
- _____ Shifting perceptions of the status and role of women within the family and community in Africa from the 1960 to 1980s. Paper written for a Conference on Women, Family and Population, Ouagadougou (Burkina Faso/Lome(Togo); Organised by the Union for African Population Studies (UAPS) March 1991.
- _____ Capacity Building In Educational Research and Policy Analysis: Case Study of Eastern, Central and Southern Africa. A consultant's report for The International Development Research Centre, Ottawa, June 1991.
- _____ Educational research priorities for girls and women in Africa: A review of a Proposal by the African Academy of Sciences, Nairobi, July 1991.
- _____ Strengthening Analytical And Research Capacity In Education: Lessons From National Experiences. Paper presented at the seminar on Strengthening Analytical and Research Capacities in Education - Lessons from national and donor experience. July 1 - 5, 1991, Bonn.
- _____ Educational Research Priorities in Sub-Saharan Africa. In Strengthening educational research in developing countries, Report of a seminar held at the Swedish Royal Academy of Sciences, 12-14 September, 1991.
- Namungalu, M.; Report on the proceedings of a seminar on Gender Sensitization for Senior Media Executives, organised by the Ministry of Women in Development, Culture and Youth, Uganda Government. The New Vision newspaper, p. 4. Thursday January 2nd, 1992.
- National Examinations Council of Tanzania; Certificate of Secondary Education Examination: School Subjects Grade Point Averages Profiles 1971-1982. Dar es Salaam, April 1985.p.177.
- Palme, M.; Repetition and Drop out in Mozambique's Primary Schools. Report from a research study conducted in November 1989 and August 1990. Planning and External Relations Department, Ministry of Education, Maputo, 1990.
- Parajuli, P. & Enslin, E.; From learning literacy to regenerating Women's Space: A story of women's empowerment in Nepal, Convergence Vol. 23 No.1. 1990 p.44-55.
- Paz, R.; Paths to Empowerment: Ten years of Early Childhood Education Work in Israel. Bernard van Leer Foundation, June 1990.
- Ramdas, L.; Women and Literacy: A Quest for Justice. Convergence. Vol 23, Number 1, 1990 p. 27-41.

- Sifuna, D.; Research in educational inequality issues and policy trends in Kenya. Paper presented at The Fourth BOLESWA International Research Symposium. July 29-2 August, 1991, Kwaluseni, Manzini, Swaziland.
- Sihlangu, R.; Teenage pregnancies: What can we do? p.16. Speak Out January-March 1991 Number 10. p 16-17. Produced by Women's Action Group P.O. Box 135 Harare.
- Tapsoba, S. J. M.; Building Educational Research Capacity In Sub-Saharan Africa. Report prepared for the International Development Research Centre(IDRC) Nairobi, May 1991.
- UNICEF; The girl child: An investment in the future, A publication of these section for development programmes for women. New York.
- UNICEF; World Declaration on Education for All and Framework of Action To meet basic Learning Needs. World Conference on Education for All, 5-9 March 1990, Jomtien, Thailand.
- University of Swaziland; Calender 1990/1991; (Undated).
- Women's Action Group; January-March 1991, Number 10. P.O. Box 135 Harare.
- _____ Speak Out. No. 17, 1991, P.O. Box 135 Harare.
- World Bank; World Bank; Education in Sub-Saharan Africa: Policies for Adjustment, Revitalization and Expansion. 1988.
- _____ The African Capacity Building Initiative(ACBI): Towards Improved Policy Analysis and Development Management, Washington D. C. 1990.
- Yunus, M.; Peace is freedom from poverty: Some thoughts on the new World Order. Towards reforming the UN System, Development and Co-operation. No. 6 1991, Bonn.
- _____