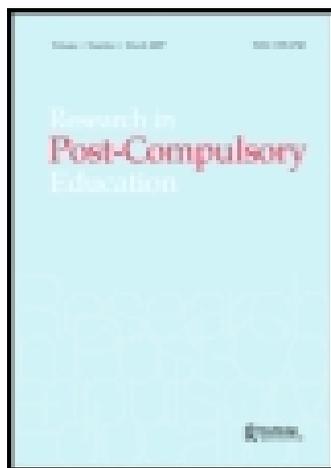


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Daniel N. Sifuna ^a

^a Kenya University , Kenya

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A review of major obstacles to women's participation in higher education in Kenya

Daniel N. Sifuna*

Kenyatta University, Kenya

The paper provides a comprehensive review of the major obstacles that hinder the participation of girls and women in higher education in Kenya. This is on the basis that their low participation in this level of education is a key constraint to the development of the country. While it is reckoned that girls' and women's education is inextricably linked with other facets of human development, the focus in the paper is on educational issues. Among the major obstacles identified include policy framework, in which it is seen that since the colonial period in Kenya, gender was an important determinant of educational provision. Women's subordinated position arising from colonial economic structures coupled with traditional cultural practices determined the extent to which they could participate in education; such that by the last decades of colonialism, a very small proportion of girls attended primary and secondary schools. It is also seen that while on the whole independence increased women's educational and employment opportunities, gender inequality has remained persistent. The government is called upon to promote female education through legislative and policy reform. There should be an entitlement to good-quality primary and secondary education for all. While secondary education is the gateway to women's higher education, government policies have often forced girls to attend poor-quality secondary schools. The effect of poor-quality secondary education for girls is reflected in their serious under-representation in more competitive courses, such as medicine and engineering in the public universities. It is suggested that some affirmative measures be adopted in university admissions to increase the participation of women as well as mounting bridging courses in the sciences and technology and allowing for credit transfers in university admissions for students from technology-based tertiary institutions.

Introduction

The low levels of educational attainment, especially among women, represent a very serious constraint on development in most of the Sub-Saharan countries in general, and Kenya in particular. This constraint hampers progress for individuals as well as the nation. At the individual level, for example, education is perceived to be the

*Daniel N. Sifuna, Department of Educational Foundations, Kenyatta University, Nairobi, Kenya.
Email: dnsifuna@wananchi.com

ultimate liberator, which empowers a person to make personal and social choices. Education is also perceived to be the ultimate equaliser, particularly in promoting greater equity for women, and the poor disadvantaged groups, since education is often the only capital such groups can aspire to acquire. At the national level, educated citizens are said to be the foundation for well-functioning democratic institutions and for achieving social cohesion. Education beyond a certain level is also considered as a necessary condition both for creating, applying and spreading the new ideas and technologies critical to achieving the economic growth required to reduce poverty and for creating the human capital among the poor required for them to benefit from that growth. Educating girls and women is considered most critical to achieving these benefits as well as for improvements in the areas of health, fertility and nutrition (World Bank, 2004).

While there is wide international recognition that there is no investment more effective for achieving development goals than educating girls, reaching gender equity in school enrolment, especially at secondary school and tertiary levels, is still a major challenge in many countries. As a World Bank study (2002) points out, ‘if evidence of the development benefits of female education is so “persuasive”, why is research on the challenges and obstacles not quite as comprehensive?’ (p. 5.) This is partly because the obstacles to girls’ participation in education are quite diverse, ranging from macro-development factors, national policy and legislation issues, institutional, social and cultural concerns and local community/household factors which, all have an impact.

Women’s entry into higher education institutions in Africa, both as students and employees, has remained slow and uneven, suggesting a serious problem of gender equality. Gender inequality in higher education in Africa should be seen within a historical context. The establishment of universities in Africa during the colonial period was part of a masculine scheme dedicated to the production of colonial subjects to inherit the exclusive masculine mantle of colonial leadership and further the existing imperial interests (Mama, 2003). Premier university institutions like Makerere in East Africa, Al Azhar in Cairo, Usman “Dans Fodio” in Sokoto, were largely gender-segregated institutions concerned with the reproduction of traditional norms for masculinity and femininity (Mama, 2003). Makerere College only admitted its first women students in 1945, after a long struggle. The number of women admitted, however, grew slowly at the secondary school level such that in the years leading to independence Makerere had only 328 women enrolled which was no more than 15% of the total enrolment (Kwesiga, 2002). In Congo, even without any formal exclusion clauses, no woman was admitted until 1962. At the national university of Cote d’Ivoire, women made up only 6.75% of the enrolment at independence (Ajayi *et al.*, 1996).

The unequal gender patterns of enrolment in universities still remains constrained in Africa. This is partly because post-independence developments in higher education have not been radically transformed from their colonial modes. The legacy of the colonial period in which very few women were either qualified or socially equipped to enter the formal economy or the universities has largely been entrenched. Higher

education institutions continue to be masculine in their composition and masculine in their educational philosophies (Mama, 2003). In terms of enrolment profiles, gender-segregated data for higher education for all Sub-Saharan African countries are not readily available. Studies have mostly concentrated on access at primary and secondary education to draw conclusions about the causes of the low female enrolment at universities and in science- and technology-oriented courses. Data provided by Teferra & Altbach (2003) paint a general picture of gender enrolment profile in selected African universities. It is shown, for example, that women constitute 4% of enrolment in Angola, 9% in the Central African Republic, 24% in the Democratic Republic of the Congo, 15.6% in Ethiopia, 35% in Ghana, 30% in Kenya, 46% in Madagascar, 25% in Malawi, 19% in Mali, 35% in Nigeria, 47% in Senegal, 18.7% in Sierra Leone, 51.9% in Swaziland, 34% in Uganda and 33% in Zambia, with an average of 33% for 18 Sub-Saharan countries. Women's access to higher education in Africa remains largely unequal, with the exceptions of Botswana, Lesotho, Swaziland, Namibia and South Africa. The gender gap in enrolment is also manifested in the fields of study. Between 1994 and 1997, female enrolment in the sciences as a percentage of the total female enrollment in the tertiary sector ranged from 6.5% in Chad, 9.1% in Tanzania, 12.6% in Benin, 14% in Zimbabwe and 16.7% in Uganda to 32.4% in Tunisia and 36.8% in South Africa (Zezeza, 2003).

With specific reference to higher education in Kenya, this paper provides a comprehensive review of some key obstacles hindering women's and girls' participation. The review is intended to assist the country in developing more effective education strategies to increase access and retention in higher education. It is, however, appreciated that girls' and women's education is so inextricably linked with other facets of human development that to make it a priority is to also make changes on a range of other fronts, such as health and the status of women, nutrition, water, community empowerment and related areas (World Bank, 2004). While recognising this complicated situation for intervention to increase girls' and women's participation in higher education, it is reckoned that a start needs to be made to address the situation by a formulation and commitment to policies that are likely to contribute to increased access and survival of girls and women, and tackling obstacles at both secondary and tertiary education which are of great hindrance to participation.

The focus on access in higher education is predicated by the fact that Kenya has achieved an impressive increase in adult literacy since its independence. In 1960, for example, the adult literacy rate was merely 20%. Within 15 years, the rate had doubled to 40%, and then increased to 59% by 1985 and 77% by 1995, an annual growth rate of nearly 4% during the 35 years. These achievements in literacy reflect the country's impressive progress in expanding access to education during the first three decades, largely by establishing a comprehensive network of primary schools throughout the country. In this sector, in 1960 just before independence, the gross primary enrolment ratio was 47%. By 1980, Kenya had nearly doubled the gross primary enrolment rate to 90%. During those two decades, primary enrolments grew annually by 8.4%, outstripping the growth in the school-aged population (Knight & Sabot, 1990). Although there was some decline in the gross enrolment rate following

the introduction of the cost-sharing policy in 1989, the recent introduction of the free primary education programme in 2003, increased the GER to around 97%.

The absence of gender policies that would ensure that gains made at the primary school level are not lost during transition to secondary level portray a lack of strategic planning that would help improve the educational status of girls and women in the broader analysis. The *status quo* therefore suggests that, for a majority of girls compared with boys, primary education is terminal, as has been the tradition in the country.

Policy framework

In this section, I review the educational policy framework since the colonial period through independence in Kenya and how it has influenced girls' and women's participation in education.

The educational provision for women in the colonial period was within the context of the broad colonial policy in the country. Gender was a very important determinant of school participation. Women's subordinated positions arising from the colonial economic structures determined their participation in colonial education. As it is often argued, one group was usually omitted from the colonial transformation, since colonialists, missionaries and local people all used gender as a criterion for deciding who would receive education. Girls were not usually sent to school, and the few who attended school received an education that would not fit them for the more prestigious and better paid jobs that were opening up for men or even for the less desirable wage occupations (Robertson, 1986).

The low priority given to women's education was as a result of the labour needs of the local economic systems. Women's labour was increasingly relied upon to provide casual workers for large farms and plantations as well as family labour in peasant production systems. By making economic use of women's free labour, men were freed to join the migrant labour and to enter semi-skilled occupations open to Africans in the settler plantations and the colonial institutions in Kenya.

Girls' poor participation was also reinforced by the traditional cultural norms. These norms influenced the willingness of parents to send their daughters to school even when they could afford to. In many of the Kenyan communities, women's social position was related to the creation and recreation of life. They performed important economic tasks and experienced autonomy within their field of production to some extent, but they had no political, social or ritual power. Women's poor participation in the socio-economic structures was therefore partially due to official policy, but also augmented by traditional leaders who complied with and in some cases encouraged the policy of exclusion utilising arguments of tradition and custom. Hence official government policies augmented by arguments for tradition, created structural constraints limiting women's education both in quantitative and qualitative terms (Mbilinyi & Mbughuni, 1991).

There is indeed some evidence in the colonial setting which demonstrates deliberate connivance between African patriarchs, who felt that with colonising processes they were losing control, and colonial authorities for whom the control of women's

and children's labour by African men was necessary for both the establishment and the consolidation of colonial rule. In this regard, both the colonial authorities and African elders shared the same position on the status of women in society and about the need for some tight control. Consequently, both were disturbed by the possible consequences of education leading to greater mobility of women.

On the whole, the traditional view about the status of women and the type of education considered suitable to them was in a large measure shared by the first Europeans who settled in Kenya. The Christian missionaries who pioneered African education were middle-class educated men with Victorian ideals. Although they did not approve of some of the traditional customs and practices, their encouragement of women's education was motivated by the need to provide the men with literate wives, the 'ideology of domesticity' (Dubel, 1981). They considered women as being wives of men, mothers of children, housewives in their homes without any status of autonomy. In their view, the education of women had to fulfil these objectives. In this regard, their perspective did not differ much with the traditional line of thinking. Christian missionaries generally favoured the exclusion of women from work outside the home. In their initial core curriculum, therefore, boys were taught wagon-making and masonry, while girls were tutored in the skills required of 'angels of the house', namely cooking, food preserving, making clothes and laundering. African women, far from being lifted out of drudgery, were encouraged to be subservient, and found themselves dutifully combining these additional domestic chores with hoeing, animal rearing and many others (Mama, 1996).

Christian missionaries' conceptualisation of sex roles determined the structure and curriculum of the educational system. Up to 1905 no boarding facilities for girls in the mission stations were available. The first classes for African girls included laundry and some training necessary for administering services for missionaries and settlers (Murray, 1974).

Other classes for girls were started around 1907 in a few parts of Kenya. Some of these classes were not so much boarding schools but a combination of orphanages and refugee centres which came to be known as *Native Girls Homes*. These homes often consisted of girls who ran away from home in order to escape arranged marriages (Dubel, 1981).

The government was also generally slow in opening up training opportunities for expanded occupational structures for women. In 1950, for example, the first training school for women in the country was of a Jeanes school type, drawing its students from married women. The curriculum consisted of the following subjects: cookery, housewifery, laundry work, hygiene, childcare, first aid, home nursing, needlework, handwork, games, curios, literacy, agriculture and simple accounting (Shepherd, 1955). The purpose of the training was to produce women leaders of the community.

Until after the end of World War II, girls' attendance at school was generally low. The first high school for African girls was opened in 1949, from where they also had the opportunity to attend Makerere College in Uganda for more advanced education, but the number of women who participated was extremely small as compared to the men who qualified to join Makerere College.

It was estimated that during the last two decades of colonial rule, the number of African girls attending elementary schools constituted about 25% of all school going African children. Within the secondary education, the distribution between sexes was extremely skewed with 5–10% of the pupils who were girls.

The achievement of independence in Kenya in the 1960s did not by and large result in revolutionary changes in the gender division of labour. This is of course not to say that there were no changes at all, but rather that gender inequalities have persisted. Perhaps the most dramatic change that followed independence was the increase in the numbers of both men and women that have received formal education and thus became available for formal sector employment.

The United Nations Decade for Women (1976–1985) played a crucial part in highlighting and publicising the important but often previously invisible role of women in the economic and social development of their countries and communities, and the plight of low-income women in less industrialised economies. As a result of these developments, there has been considerable discussion, albeit at the policy level, about women and development at international, governmental and non-governmental circles and research institutes. This has not necessarily meant, however, that the issue of gender has been satisfactorily incorporated into the wide diversity of planning disciplines concerned with the lives of low-income communities.

With the emergence of the Women's Decade, the government created the Women's Bureau in 1976 as part of the national machinery for integrating women in development. In this regard, the third National Development Plan (1974–1978) referred to women directly for the first time. The programmes emanating from this plan were supposed to have a bias towards activities that directly or indirectly promote women's integration in development. Successive development plans have re-emphasised this trend.

The Women's Bureau, a division of the Department of Social Services of the Ministry of Culture and Social Services, was established with the broad objective of ensuring opportunity for women in the development process. The establishment of the bureau was seen as the means of ensuring continuity in the follow up and the implementation of the World Plan of Action for the Integration of Women in Development as a result of the First UN International Women's Conference held in Mexico in 1975. The conference raised considerable world interest in women's issues.

Although these developments were highly significant, the impetus for research and policy in gender-related issues was enhanced by the second UN International Conference on Women, popularly referred to as 'Forum 85', which was held in Nairobi in 1985. This conference highlighted and substantially raised awareness about many fundamental issues that affect the status of women and girls in Kenya. Following 'Forum 85', the government stepped up its policy statements on gender issues. The development plans have put greater emphasis in development programmes that include all citizens irrespective of gender. Despite such pious platitudes, the country has no explicit policy on women and development. For example, the National Policy on Gender and Development which was drafted by the Women's Bureau has not been formally ratified by the Kenya Government. The policy seeks to

promote a deliberate move towards, among other things, gender equity in Kenya by ensuring, for example, in education a policy that would lead to increased education and training opportunities for women and girls (Royal Netherlands Embassy, 1994).

With regard to developments in education in particular, the government has often boasted of educational expansion since independence which has substantially increased female participation, especially at the primary school level. There have been considerable policy statements about the government's plans to increase available places for women at secondary and post-secondary levels in all public and government aided schools and institutions of higher education. There has also been talk about policy action undertaken to further expand opportunities for women and girls in science and technical subjects at secondary and university levels. Improved career information and counselling in all government educational institutes for girls and women as a way of diversifying their opportunities, especially in subjects that would give them a wide range of marketable skills, have also been subjects of discussion.

On the basis of inadequate policy intervention as discussed, to achieve gender parity and equality in education, in general and higher education in particular, the Kenya Government needs to take more concrete measures than it has done in the past. Although there is no single 'magic solution', it is evident, especially from examples of interventions in other countries, of the importance of purposeful actions by the state and related agencies, to weaken the forces leading to gender inequalities, and to address some of their root causes.

Some examples from a number of countries provide ways in which legislative change can underpin changes in the sphere of education. Costa Rica, for example, legislated to eliminate sexist stereotypes and practices that legitimise gender inequalities in the education system. Its Act for Promoting the Social Equality of Women in 1990 made all educational institutions responsible for guaranteeing equal opportunities for men and women, which led to the creation of a Gender Equity Office in the Ministry of Public Education in 2000 (UNESCO, 2003).

In Ethiopia, for example, consistent with the current international educational targets, Ethiopia's Education and Training Strategy placed emphasis on achieving universal primary education by 2015. Apart from striving to achieve this particular goal, on which it has made considerable progress in recent years, a specific objective of the strategy was to use education to change attitudes towards the role of women in development. This included giving attention to gender issues in curriculum design, placing special emphasis on the recruitment, training and assignment of female teachers, and giving financial support to raising the participation of women in education. There was also the establishment of a process which ensured that gender issues were addressed at all levels of the system, with women affairs officers appointed to both the central and regional (and sometimes also at district) education positions. Furthermore, the 1994 National Policy for Ethiopian Women (UNESCO, 2003) specified strategies to ensure that women received vocational guidance at all institutions of education, had access to the same curricula as men, and were free to choose their field of study. These are among the many examples of policy intervention to increase women participation whose lessons Kenya may want to borrow from.

Access, retention, quality and performance in secondary education

This section discusses girls' access to and participation in secondary education, the key gateway to higher education, and determines their transition. It mainly focuses on access, retention, quality and girls' performance and transition to post-secondary education.

In terms of access, as in other parts of the less industrialised countries, girls' enrolment at the secondary school level has been more dramatic since the early 1960s. The enrolment of females from the 1960s to the 1980s rose faster than did that of males. Enrolment at secondary school level for both boys and girls generally increased from 30,120 in 1963 to 658,253 in 1996. The proportion of female students enrolled out of the total enrolment at independence was 31.8%, which improved to 46.4% in 1996. Between 1999 and 2003, total enrolment in secondary rose by 5.3%, from 819,227 to 862,907. More boys than girls were enrolled in the ratio of 108 boys to 100 girls. It estimated that girls constitute 47% of the secondary school enrolment. Despite the apparently widespread participation of girls at the secondary school level, government policies have forced the majority of secondary school girls into the unaided (former *harambee* self-help schools) sector where they are disadvantaged in the quality of education they receive.

With the rapid expansion of secondary education after independence, there seemed to have been a much greater focus on boys' than girls' schools. For example, in 1968 there were over twice as many government secondary schools catering for boys than for girls. There were 143 boys' schools while there were only 61 girls schools and 28 coeducational or mixed schools. The gap between government provision for males and females widened progressively until the 1974 decision to freeze the expansion of the maintained secondary schools in order to upgrade the rapidly growing numbers of unaided schools, mainly *harambee* secondary schools (Government of Kenya & UNICEF, 1978). By that time there were almost three times the number of government secondary schools for boys than for girls. There were 235 boys' schools while girls schools numbered 82, and mixed schools 47. Thus, the growth in female secondary school enrolment that began in the 1970s was primarily a growth in enrolment in *harambee* schools. The proportion of girls and boys enrolled in the three main secondary school sectors showed both boys' overall advantage at the secondary school level and their monopoly of maintained schools' provision. They constituted 68% of government-maintained, 50% of government-assisted and 55% of unaided schools as compared to 32%, 50% and 45% for the girls, respectively (Government of Kenya & UNICEF, 1984). By the turn of the century, boys still constituted 53.6% of secondary school enrolment.

It should also be pointed out that it is not just the numerical strength of schools that determine enrolment by gender at the secondary school level. It has been established that the enrolment capacity of particular secondary schools also depends to a great extent on the number of streams per class available in the school. Data on the number of streams per class are not readily available, but cursory observations from one key study indicated that boys schools have more streams than girls' schools, sometimes

even up to four as compared to one or two streams for girls. In which case boys' schools have greater capacity to admit more students at the secondary school level than the girls' schools (Wamahiu *et al.*, 1992).

The structure of secondary school opportunities also seriously disadvantages girls from less developed regions and less affluent families. As is the case with primary schools, there is a sharp regional and district diversity in girls' enrolment. Regions of greatest economic development have the largest increases in the proportion of girls enrolled. Central Province, Eastern, Nairobi, and Western had the highest rate of girls' participation between 1975 and 1980. These were followed by the Rift Valley and Nyanza Provinces. The North-Eastern Province inhabited mostly by nomadic pastoralists lagged behind the rest of the provinces.

Apart from the regional diversity in secondary school enrolments by gender, the socio-economic factors also play a major role in girls' access to secondary education. A girl's chances of being able to attend a secondary school depend to a greater extent than a boy's upon the income of her family. Secondary school fees, even in government-maintained schools, tend to be high in comparison with the income of the average family. However, in *harambee* schools fees were a good deal higher, since they were the source of the entire operating budget, whereas in maintained schools fees accounted for only one-quarter and in government-contribution three-quarters of the expenditures.

With regard to quality, most girls' schools at the secondary school level have in the past been categorised as unaided schools, mainly *harambee* schools. Very few had been government-maintained (Government of Kenya & UNICEF, 1984). Since around 1969, the increased representation of girls in Forms 1 to 4 had been due to their growing enrolment in unaided secondary schools. By 1973, 51% of the girls (i.e. 17% of all students enrolled) in Forms 1 to 4 were attending unaided schools, compared to 39% of the boys (i.e. 10% of all the students) (Krystal, 1979).

The reasons for girls' high attendance in unaided schools are not difficult to discern. Unlike maintained schools which have national or provincial intakes, the catchment area of the unaided schools, mainly *harambee*, secondary schools is usually confined to the district or sub-district units. Because of the limited availability of places in maintained schools, a majority of girls who completed the primary school and secured creditable Kenya Certificate of Primary Education (KCPE) results thus had to depend upon the initiative, resources, and self-help priorities of their local communities to have even the possibility of continuing their education. The introduction of the 8-4-4 education system in 1985 served to disadvantage the girls further. In the new system these schools have been faced with major crises in terms of providing facilities for implementing the system. The 8-4-4 system requires that all schools in Kenya provide science subjects and at least one practical subject. Hence girls, mostly attending the unaided schools, are often streamed out of the sciences and mathematics into traditional female subjects.

In all of the secondary schools, the proportionate loss between each successive year of schooling is greater for girls than for boys. Overall, only slightly more than half the female secondary school entrants remain to Form 4. For example, 40% of the girls

who entered Form 1 in 1973 were lost from the system by the time their class entered Form 4 in 1976, as compared to 26% of the boys. To some extent the loss in female enrolment reflects their disadvantage of attending unaided rather than aided schools. The higher cost of education in the unaided sector is a major factor in the lower levels of female attainment (Krystal, 1979). Some more recent government statistics puts girls' attrition rate at around 30% (Republic of Kenya, 2005).

Another cause of high dropout rates among girls is attributed to premarital pregnancies. Although data are not readily available to quantify the influence of pregnancy in female drop out of secondary schools, it is generally acknowledged that sexual harassment and pregnancy cause a significant number of girls to terminate their secondary education. One study, however, details the frequency of sexual harassment, particularly in unaided *harambee* schools. It was noted:

The most overwhelming data in girls' problems in their schooling is the high rate of teachers having love relationships with students and the problems it causes. Over 85% of the students reported that teachers try to have love relationships with students ... all of whom are male teachers dating female students. Although some girls try to date teachers, over 89% of the students reported that the teacher trying to date the student caused many problems in the classroom. Most significant problems were that girls could not concentrate in class, they had to drop out of school because of pregnancy, their behaviours towards the teacher would disrupt the class, and they would be given high marks in school work which would lead to poor performance on the Kenya Certificate of Secondary Education (KCSE) exams. It causes problems because a girl seduced by a teacher can be marked high even if she fails the test and can end up failing exams in future. Additionally, all these male teachers would either buy sex from the girls by giving them money or gifts or give them high marks or 'leakage' of the class exams.

Additionally, over 98% reported that students date one another and around 80% claimed that this dating caused problems in the classroom. The most common reasons reported was that if one's 'friend' was in the classroom then they could not concentrate in the class-work. Additionally, it will cause problems because girls will get pregnant and have to drop out and the boy might be expelled (yet he can transfer to another school whereas a girl cannot), they waste time writing notes to each other, will feel shy to answer questions, and may become rivals with another person and hate one another ... Over 93% reported that male students initiate these relationships and will buy gifts, give them money, write letters, buy sex, or engage in sex (Deabster, 1995).

Much of the sexual harassment, although not new at schools, was reported to exist more in *harambee* schools. Cases of teachers preying on their female students, threatening to fail them, or publicly humiliating them, to prod them into sexual relationships have been widely reported in the press. Teachers are reported to reward female students who 'cooperate', with grades and tuition waivers. Although more recent studies of sexual harassment at the secondary school level have generally been scanty, an ongoing study by Kaime (2005) cites research which shows that within the Kenyan primary schools, adolescent girls experience sexual violations from male teachers. He gives an example of sexual violations and violence targeting girls from poor families who are humiliated by being indecently exposed while undergoing 'inspections' of personal hygiene. It is also noted that while sexual harassment of girls is often

identified with boys and male teachers, female teachers are accused of abetting their male colleagues' sexual harassment of schoolgirls (Kaime, 2005).

The last decade or more has shown that there is a pandemic of sexual violence and harassment especially in Kenyan secondary schools that causes major concern for students, parents and school authorities. The main offenders are groups of male pupils who prey on female students, abuse them verbally, harass and beat as well as raping them. That has been the result of a high level lack of discipline in educational institutions, especially secondary schools, as gauged by the amount of student unrest in schools frequently reported in the local press. Cases of unrest and violence involving girls schools alone are not quite as common. The most outrageous case involving girls was in July 1991 at the St. Kizito Mixed Secondary School in Tigania of the then Meru District, where 71 girls were raped and 19 died after being attacked by their male colleagues. This was followed by a spate of violence and rape cases in some schools in many parts of the country.

With regard to the overall performance on the KCSE, research findings show that generally girls are lower achievers compared to boys. As at the primary school level, the worst performance for girls was in mathematics and science (Eshiwani, 1984). A study by Kaggia (1985) supported this conclusion. She showed that in the 1984 KCSE examination, although the total number of candidates was lower at 37.6% their failure rate was proportionately higher, at 46.9%. That finding was further supported by a research conducted by Maritim (1985), which showed that boys did better than girls at the 'O' level examinations in all subjects.

With the 8-4-4 system of education, the trend does not seem to have changed. If anything it has become worse. An analysis of the 1989 and 1990 KCSE performance in mathematics, the percentage of the candidates who scored a B grade and above was 2.1 and 0.6% for boys and girls, respectively. For physics, the percentages were 8.4 for boys and 2.6 for girls in 1989. In physical sciences, a subject that seems to be generally very poorly performed by both boys and girls, the former had 0.25% while the girls had 0.01%. Performance in chemistry was 7.1% and 3.9% for boys and girls, respectively.

More recent data on performance does not seem to show much change in performance by gender in the KCSE examination. From Table 1, which shows performance in languages (English and Kiswahili), mathematics and key science subjects, it is clear that girls seem to have an edge over boys in the language subjects only. They perform relatively poorly in mathematics, biology, physics and chemistry. It is also important to note that overall performance by both boys and girls in these subjects is generally poor, with most of them scoring below 40% and in the key mathematical subject being well below 20%, as shown in Table 1.

From the foregoing analysis, there is therefore the need to address the obstacles that limit access and participation of girls at the secondary level as a way of increasing their enrolment in higher education. The role of the state is again quite crucial. Among the key interventions as proposed by a recent government Commission of Inquiry into the System of Education in Kenya would be to transform secondary education to fulfil the objective of providing equal opportunities to every individual

Table 1. KCSE performance by gender in languages, mathematics and science, 2000–2003

Subject	2000		2001		2002		2003	
	Female	Male	Female	Male	Female	Male	Female	Male
English	37.4	32.2	34.7	34.4	29.7	29.6	32.8	32.5
Kiswahili	48.9	47.9	44.7	43.3	45.5	44.4	50.1	48.6
Maths	13.4	18.7	15.8	21.2	16.4	22.5	16.1	22.1
Biology	30.2	33.6	29.5	34.5	24.6	28.3	27.2	31.4
Physics	29.5	32.7	22.2	26.8	26.6	30.9	29.1	32.3
Chemistry	27.7	31.8	29.4	23.4	22.1	26.6	24.0	29.3

Source: Kenya National Examinations Council, Analysis of 2003 Kenya Certificate of Secondary Education (KCSE) results.

to a minimum of 12 years in school. This would be a universal and compulsory level with a kind of curriculum which addresses the needs of all disadvantaged groups, girls in particular. (Republic of Kenya, 1999). This particular level of education will benefit from the measures launched in 2003 of abolishing school fees in primary education. The removal of school fees would probably be the single most effective means of raising enrolments and reducing gender disparities in the short term.

As already discussed, gender issues in secondary schools are generally deeply imbedded in socio-cultural norms. Changing the unequal access to secondary schools participation and performance in Kenya requires not only that in-school factors are addressed, but also non-school issues, which are strongly related to socio-cultural norms. Among the school-based issues which need to be addressed include the following.

- Gender stereotypes, i. e. challenging stereotyping such as girls being unable to benefit from secondary education or less to succeed in mathematics and science.
- Sexual violence, abuse and harassment—raising awareness of these issues and using teachers to raise awareness of learners.
- Ideologies underlying the curriculum and school textbooks.
- Curriculum choices—e.g. encouraging girls to take mathematics, science and technology subjects.
- Teaching styles, including differential attention paid to boys and girls.
- School organisation and discipline—making schools more girl-friendly.

University education

In this section women's access to university education and performance in academic courses is analysed. It needs to be pointed out that while Kenya has now a number of private universities, the focus is mainly on the public universities, which enrol the bulk of the students.

Access and participation

As is the case throughout Sub-Saharan Africa, women are dramatically under-represented in Kenyan higher education. Their access to higher education is certainly a reflection of factors that limit their education at the lower levels, especially at the secondary school level as discussed in the previous section. Although the participation gap narrowed slowly in the 1970s, the 1980s produced no changes. Since 1981, roughly 30% of university students have been female and that representation has remained so to the present. The rates are strongly affected by the retention of women at lower levels of education. As Kinyanjui (1978) noted, 'as girls ascend from one level of education to another, their proportion of the total enrolment, decreases by 10%' (p. 23).

On the basis of the overall enrolment, females have, however, increased over the years. The enrolment increased from 4740 in 1987/88 to 11,280 in 1990, although the proportion remained around 30%. An analysis of the 1990/91 undergraduate students in the national universities, for example, revealed that they represented 31% of the total enrolment of 40,153 students. In 1997/98, which was among the highest of public university enrolment, female students constituted 30.5% of the population. In 1999/2000, however, the percentage went up slightly, due to enrolments in the parallel degree programmes as well as enrolments in the private universities. Out of a total enrolment of 49,891, women students constituted 35.8%. However, this dropped slightly in 2003/2004 to 34.7%, out of a total enrolment of 67,558 students (Republic of Kenya, 2004).

To provide easier access to education to women and other disadvantaged groups, governments have often adopted what is often referred to as 'affirmative action'. In Uganda, for example, Makerere University attempted this measure in 1990. Working from the perspective that a student body consisting of 21% women was unrepresentative, the university undertook to recruit more women students. It weighted admission examination scores by an additional 1.5 points for women students. The percentage of women students in the university rose from 21% in 1989/90 to around 30% in 1990/91. Universities in Ghana also accepted the need for increased female participation and decided to allocate residence hall space in accordance with the number of women admitted. This was expected to solve the limited space available in women's halls of residence as a constraint to women's access to university education (Saint, 1992).

In Kenya, in August 1992, the Joint Admissions Board (JAB) made proposals, which were consequently accepted, that were to provide a gender consideration in university entrance. The university cut-off points were lowered from 69 points for women. This raised the number of female students from the initial 2547 (25.6%) to 2771 (27.7%) (Chege, 1994).

Although the affirmative action raised women's admission by around 3%, one research study has shown that the practice does not receive much support. Female academic staff in particular are opposed to the practice, as it is said to consign women to an inferior status. There was the feeling that the whole issue of lowering admission

points was a very cosmetic gesture. It was reasoned that such a gesture has often turned out to benefit girls from well known schools and well-connected students from the so-called disadvantaged regions. The practice has also been widely abused by politicians, who tend to believe that it amounts to some kind of quota system from which the respective areas they represent should enjoy university admission (Nungu, 1996).

In terms of background, it is apparent that those women who do attend universities come from proportionately more advantaged backgrounds. Apparently, this has been the characteristic of Kenya higher education. For example Van den Berghe (1973), in his study of 130 African students attending the then University of East Africa, found that 40% of the women in the sample had fathers who had completed secondary education, compared with only 7.9% of the male students. Hughes (1986) in his study of 295 University of Nairobi graduates from the years 1970, 1975, 1979 and 1983 supported Van den Berghe's findings. On the basis of parents' education, occupation and income level, women tended to come from higher socio-economic levels. Similarly, Njenga (1986) reported that parents of the women in her sample of 410 agriculture, veterinary science and engineering graduates from the University of Nairobi were more educated and had higher incomes than did parents of male graduates. These findings are generally consistent with data gathered throughout the less industrialised countries on women in secondary and post-secondary education (Bowman & Anderson, 1980).

As already discussed, the low participation of women in tertiary education begins at the secondary school level. At the universities, there are other sets of factors that make university education rather unattractive for women. One is the high failure rate in certain fields, such as medicine and engineering. A high level of sexual harassment of women students has also been cited by some studies. A number of women students reportedly chose not to enrol at the University of Dar es Salaam, Tanzania, main campus because of *Punch*, a form of wall literature that has increasingly subjected girls to sexual harassment (Mbilinyi & Mbughuni, 1991). Some cases of sexual harassment have also been reported at a number of the Kenyan public universities.

At the postgraduate level, opportunities have been severely reduced as a result of both the economic crisis and the deprioritisation of higher education by many donor agencies. The University of Nairobi Medical School, for example, has operated at under-capacity due to the deterioration of their equipment, materials and other resources. Consequently, the female ratio is even lower in postgraduate enrolment than at the undergraduate level (Aduda, 1999).

On the demand side, the low level of manufacturing and service activities tend to discourage parents from sending their girls for university education as they do not see prospects for absorption in the formal labour market (Subbarao *et al.*, 1994). There is also the growth of alternative tertiary education opportunities outside university education and student preferences for more vocationally oriented courses. Admission requirements for such courses are often lower and such training is preferred because it is shorter and leads almost immediately to higher paid work than university education. Seemingly these material rewards outweigh the greater prestige value of university education.

Finally there are still the socio-cultural factors within some Kenyan communities that still confine women to the lower levels of the education system. This perception coupled with economic factors leads some families to terminate girls' education at the lower levels. A recent study also shows that many men tend to shun highly educated girls especially where candidacy for marriage is concerned. Most of them view highly educated women as rude, uncooperative and unable to manage housework. These perceptions are also said to discourage some female graduates to continue with post-graduate studies at Masters and PhD levels (Kanake, 1998).

The broad participation rates hide even greater variation when enrolments are examined at individual faculty levels. For example, between 1976 and 1987, women did not constitute more than 15% of the total Bachelor of Science enrolment or 4% Engineering enrolment. Differences in the type of courses pursued by boys and girls begin to emerge mainly at the secondary and tertiary levels of education, since at the earlier levels there is not much choice in the curriculum. Very few girls enrol in science and technologically based courses at the secondary and tertiary levels. Consequently, a very small number of females are to be found in the generally rewarding, scientific and technological spheres of work. Both in the 7-4-2-3 and 8-4-4 education systems in Kenya, the number of girls' schools equipped well enough to offer science subjects especially at the secondary level is much smaller than that of boys (Twoli, 1986).

Under the current 8-4-4 system of education, inaugurated in 1985, both boys and girls are exposed to science subjects. One would expect that such a system offers more opportunities for girls' admission into university science and technology faculties. This has certainly not been the case. By 1993/94 when the system had taken effect and admissions depended on performance in the Kenya Certificate of Secondary Education (KCSE) examination, it was apparent that fewer girls overall got admission in the science and technology faculties, and in particular female admissions dropped rather significantly. Enrolments for girls in science- and technology-related courses have dropped from the previous 30 and 31% to around 26–28% in all the public universities. This is because admissions requirements are that applicants have to at least pass some science subjects, for which girls' schools are not adequately equipped. Very few girls attained good grades for admission into science programmes in all the public universities. At Moi University, which has a stronger science and technology orientation, for example, female representation in the 1993/94 academic year dropped from 26% to 18% (Ominde, 1999).

On the whole, therefore, most of the female students tend to pursue law, teaching subjects and arts subjects over science, engineering, agriculture and medicine, although the last two tend to attract slightly more female participants. Between 1980 and 1987, bachelors degrees in education and arts alone accounted for between 63.7% and 67.6% of the total obtained by women in the public universities. Obviously, the areas of educational concentration do weigh heavily upon the nature of subsequent employment, especially for women in science-based professions. As Kinyanjui (1978) has noted 'girls educational and occupational aspirations tend to be shaped by the educational system to conform to the existing definition of the role of women in the society' (p. 25). There is strong reason to fear that the potential exists

for the increasing isolation of women in, and identification with, a narrow range of service and teaching occupations.

At postgraduate level at the University of Nairobi, for example, in the early 1990s women were at least represented in the Faculty of Engineering by only 1.2% of the total post-graduate enrolment in the Faculty. Journalism had the highest proportion followed by African Studies and Population Studies (Wamahiu *et al.*, 1992). At both undergraduate and postgraduate levels, gender representation is not any different in other public universities.

Academic performance

Students attending university education in Kenya receive one of the four grades; the highest or first class degree, followed by upper second, lower second and pass at the undergraduate level. Generally, the opportunity for postgraduate education is awarded to students receiving either a First Class or an Upper Second. Studies undertaken in the 1970s and 1980s showed that, academically, female university students tend to be under-represented among those students who graduate with honours degrees.

In terms of academic performance at the University of Nairobi for selected years beginning from 1975, for example, women's performance was on the whole lower than that of men. Performance records for graduates in arts, education, commerce and law were examined, which accounted for between 79.4% and 83.1% of the total number of women who graduated in the four years of 1975, 1978, 1981, 1987. Results of the Home Economics Department were, however, excluded from the tabulations because of the skewing caused by the extraordinary proportion of very high marks scored by its graduates. In 1981, for example, 19 of the 23 Home Economics graduates received a first class or upper second class degree, while in 1984, 88.7% of 97 graduates, and in 1987, 97.5% of 79 graduates received a first class or upper second. These proportions are well over double the overall percentage of graduates earning these marks. Table 2 shows male and female performance in arts and education, disciplines where they had a strong representation.

Without the Home Economics marks, the pattern that has consistently emerged showed that women were under-represented among those graduates receiving a first or upper second class degree. Explanations which were highly speculative tended to suggest that women had a greater fear of success (Fleming, 1972), had less incentive to achieve and were socialised to be less aggressive and competitive than their male peers (Edwards & Whiting, 1976).

Some more recent data, however, seem to reflect marked improvement in women's performance. Although they are relatively few, in the first class degree, they are now quite sizeable in this class and upper second class combined. For example in 1992 at the University of Nairobi, males constituted 40.6% in first class and upper second class, while females were 46.5%. In the same year, males were 59.3% in lower second class and pass degrees, while females were 53.6%. In 1994, males were 43.9 in first class and upper second class, while females were 55.1%. Males constituted 57.1% in the lower second class and pass degrees, while females were 42.9% (Ominde, 1999).

Table 2. University of Nairobi, academic performance by sex (graduates in Arts and Education)

Year	Sex	First class/upper second (%)	Lower second/pass (%)
1975	Female	19.0	81.0
	Male	24.0	76.0
1978	Female	32.0	67.5
	Male	40.5	59.5
1981	Female	31.7	68.3
	Male	37.0	63.0
1984	Female	35.1	64.9
	Male	40.1	59.3
1987	Female	43.2	56.8
	Male	45.5	54.5

Source: Cited in Hughes & Mwiria (1989).

The situation does not appear different at Kenyatta University. In 1992, males were 26.1% in the first class and upper second class, while females were 29.0%. In the lower class and pass degrees, males were 73.9% and females 71.0%. In 1994 males were 25.1% in the first class and upper second, while females were 29.9%. In the lower second class and pass degrees, males were 74.9% and females were 69.1%. At most public universities, therefore, females have shown very remarkable improvement in academic performance, doing much better than their male peers (Ominde, 1999).

Although female students are on the whole performing as well as their male counterparts, a recent study shows that early marriages before completion of their courses, especially at the undergraduate programmes, and subsequent pregnancies and child-care responsibilities, put extra demands on female students' study time. In addition, there are household chores that also burden them, making good performance difficult (Ominde, 1999).

The study further reports cases of sexual harassment by male lecturers, some of which have appeared in the dailies, which are said to contribute to women's poor performance. These have included victimisation due to non-responses to sexual approaches. There are also negative attitudes of male students regarding women's academic performance. Some of the male students hold perceptions that female students are not expected to perform well academically because they spend a lot of time on leisure and beauty instead of academic assignments (Ominde, 1999).

Among the major challenges facing universities, especially public ones, is the need to improve accessibility for women. The rigid admission regulations and practices make it difficult for many qualified persons to have access to this level of education. There is a need, therefore, to initiate some affirmative actions towards improving the accessibility of university education for women in general and in highly competitive courses such as medicine, engineering and technology, physical sciences, architecture

and others. This needs to be done through such strategies as crash remedial programmes and outreach to secondary and tertiary institutions. Universities should also work out a credit transfer system that can enable graduates from other accredited institutions to gain entry into university-level education and pursue programmes of study leading to the award of degrees. There is also the need to give more preference to girls in the award of scholarships and university education loans provided by the Higher Education Loans Board (HELB) of the Ministry of Education. These will go a long way to increasing their access to higher education, because as already discussed, women are disadvantaged in their exposure to science and technology courses as well as the cost of higher education limiting their participation.

Conclusion

With specific focus on Kenya, the paper provides a comprehensive review of some obstacles to girls' and women's participation in higher education with a view to assisting in developing more effective education strategies that would increase its access and survival by girls and women. The review is premised on the fact that the low levels of educational attainment of women in higher education in Kenya as in many of the Sub-Saharan African countries, represents a very serious constraint to development. This constraint hampers progress for individuals as well as the nation. At the individual level, education is perceived to be the ultimate liberator, which empowers a person to make personal and social choices, while at the national level, educated citizens are believed to be the foundation of well functioning democratic institutions and achieving social cohesion.

The influence of gender in the provision of education is traced since the colonial era through independence. It is shown that gender discrimination in the provision of education had its origin in the colonial policies and practices. Men were readily availed with opportunities that included education to facilitate their effective participation into the colonial economy. Low female participation in education was as a result of deliberate colonial policies reinforced by African traditional cultural practices. Consequently, girls and women constituted a very small percentage of the school enrolment by independence in 1963. Although independence provided more opportunities for female participation in the formal employment, as well as primary education, where gender parity has been realised, gender differences in secondary and higher education, as well as formal employment, have proved remarkably persistent.

To achieve gender parity and equality in higher education, it is suggested that the government takes more concrete policy measures than it has done in the past. The state's role should be creating a more enabling environment for promoting female education through legislative and policy reform for gender equality. There is need for legal measures to ensure that women enjoy rights to non-discrimination and the protection of fundamental freedoms and a design of well-articulated and mutually consistent policy framework to complement legislation for achievement of gender equality in education.

In secondary education that is key to increased women participation in higher education, despite relatively high girls' enrolments since independence, educational policies have forced a majority of girls to attend poor-quality secondary schools, with less access and more concentration in arts-based subjects. It is suggested that the government urgently adopts the recommendation of a recent education commission; that the secondary school component be incorporated into basic education, which would be universal and free to increase access for both boys and girls. There is also a need to address some in-school issues, which are an obstacle to increased participation to secondary education, such as gender stereotyping, sexual harassment and ideologies underlying the curriculum and textbooks.

At the university level, despite increased admission of women, which constitutes around 30–35% of the university population, there is a serious female under-representation in the sciences and technology and overall performance is generally lower compared to that of men. To increase female participation in public universities in particular, there is the need for some affirmative action, especially in the more competitive courses like medicine, engineering, technology and architecture, through the adoption of more flexible admission processes which would include crash remedial programmes, especially bridging courses in these areas and allowing for credit transfers for students enrolled in technology-based tertiary institutions such as Kenya Science Teachers College, Kenya Technical Teachers College and the national polytechnics in the university admissions.

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