

Gender Equality in Education in Rwanda: What is happening to our Girls?

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Abstract

Rwanda has made enormous strides forward in improving access of boys and girls to education at all levels, and in promoting gender equality within the education system. Yet girl students continue to lag behind in educational achievement and access, particularly at the secondary and tertiary levels, where girls' enrolment, completion and achievement rates are lower. Girls are under-represented in government schools, and are instead more likely to attend more expensive and lower quality private schools and universities. Despite an enabling policy environment, a number of social and institutional barriers continue to prevent girls and young women from attending schools and universities and from performing equally to their male classmates. The prioritization of science and technology within the educational and development policies of the country may act to further exclude female students unless additional actions are taken to promote women's participation in these fields. Addressing gender equality in the education system, with a focus on improving girls' educational performance and outcomes, is crucial to meeting Rwanda's development goals and to protecting women's human rights within the country.

Introduction

Improving girls' access to education, with the goal of attaining gender equality, is a critical component of promoting development and meeting the Millennium Development Goals (MDGs) in Rwanda, across Sub-Saharan Africa and around the world. Educating women is fundamental to economic development and poverty reduction within the region, to promoting women's human rights, and is intrinsically linked to improving other development indicators, such as reducing maternal and child mortality rates, reducing birth rates, and improving basic health indicators of entire families. Educating girls is also instrumental in the fight against HIV/AIDS. Although the importance of educating girls is widely recognized, girl children throughout the region continue to lag behind boys in terms of enrolment rates, completion rates, and performance in school.

Rwanda has made a firm commitment to gender empowerment in the political and social realms, a goal which is most clearly laid out in its 2003 Constitution

¹ Biographical note at end of paper.

and the Vision 2020 development plan, adopted in 2000. Education for all, achieving gender parity in higher education, and practicing a policy of affirmative action to promote women's educational and social advancement are designated as policy priorities for realizing the development goals of the country. Rwanda has seen substantial progress toward gender empowerment, most notably with the achievement of 48.8 percent female representation in Parliament and similar high levels of female representation at all levels of governance.² These achievements are supported by strong institutional measures, including policy and budgetary commitments in connection to the Economic Development Poverty Reduction Strategy (EDPRS) process, which seek to mainstream gender equality within government policy-making. These achievements are particularly significant given Rwanda's tragic past, as its infrastructure for social service delivery was virtually destroyed during the 1994 genocide.

Given the strong commitment within government and broader society to promote the status of women, Rwanda has made impressive gains across a range of sectors, improving the social well-being of women and girls within the country. Yet a good policy framework is not in itself sufficient to achieve gender parity in education, and girls continue to trail behind boys in educational attainment, a fact which becomes increasingly exaggerated at the secondary and tertiary levels. A number of socially constructed barriers and entrenched social practices continue to prevent girls from accessing education and from performing equally in their national examinations. Identifying and remedying the sources of girls' continued inequality within this sector is imperative to lifting the status of girls and women within Rwandan society, and to promoting equitable socio-economic development within the country.

Rwanda's Policy Framework for Equality in Education

The Rwandan government has enacted a range of policies to work toward achieving the MDGs of 'universal primary education' and 'gender equality and women's empowerment' by promoting gender equality at all levels of education. The 2003 Constitution states that education at the primary level should be free and mandatory for all primary school children, and policies were put in place through the Organic Education Law to realize this goal. Gender equality in educational attainment is also enshrined in the Constitution, the Organic Education Law, and the Higher Education Law. These policies are consistent with Rwanda's international obligations under the Convention for the Elimination of Discrimination against Women, the Convention on the Rights of the Child, and the International Covenant on Economic, Social and Cultural Rights, and contribute to meeting Rwanda's obligations under the Beijing Platform for Action and the Dakar Goals on Education for All.

² For more information on Rwanda's progress toward gender equality in governance, see: Powley, E. *Strengthening Governance: The Role of Women in Rwanda's Transition*. Hunt Alternatives Fund, 2003.

Vision 2020 aims to correct the historic marginalization of girls from the educational system and from the political and economic spheres more generally. This vision underpinned Rwanda's first Poverty Reduction Strategy Paper (PRSP1), approved in 2002, which elaborated a number of policy goals to alleviate poverty and meet the Government of Rwanda's objectives in line with the MDGs.

PRSP1 detailed specific activities to increase girls' completion rates and to promote gender equality in education. These activities included increasing the number of female teachers and role models within schools, sensitizing communities on the importance of educating girls, awarding scholarships to disadvantaged girl students, sensitizing teachers to gender disparities in education, making the physical learning environment more accommodating to female students, especially by improving toilet and dormitory facilities, and undertaking gender-specific research to collect qualitative and quantitative data on girls' education. According to the EDPRS Education Sector Self Evaluation (2006), substantial policy work was undertaken under PRSP1, however budget execution on gender projects was low, and these actions were only partially achieved.³

The country's vision for its economic future lies in shifting from an economy which is heavily dependent on agricultural production to a service-based economy. This growth will focus on developing the science and technology industries, specifically in the area of information and communication technologies (ICT), with the objective to "modernize the Rwandan economy and society using information and communication technologies as an engine for accelerated development and economic growth, national prosperity, and global competitiveness."⁴ To realize this objective, the country must orient its education system toward science and technology disciplines to ensure harmony between the qualifications of students it produces, and national development needs. The country's educational objectives, laid out in the 2003 Education Sector Strategic Plan (ESSP), aim to promote growth within this sector and to meet the country's demand for a skilled ICT labour force. The ESSP is widely regarded by government officials and development partners to represent a comprehensive, sector-wide plan which is fully consistent with PRSP1 priorities. Though significant progress was seen in the education sector from the period 2002-present, independent evaluators have questioned the extent to which this progress was driven by the PRSP1 process.⁵

A second PRSP, the EDPRS, to be approved in 2007, is building on the successes and shortcomings of the first PRSP to refine the country's policy priorities. Based on recommendations which emerged from the independent audit of PRSP1, gender concerns will be mainstreamed at each level of

³ MINEDUC. *EDPRS: Draft Education Sector Self-Evaluation*, 2006.

⁴ Republic of Rwanda. *An Integrated ICT-Led Socio-Economic Development Policy and Plan for Rwanda: 2001-2005*, March 2001.

⁵ See Evans, A. *et al. Independent Evaluation of Rwanda's Poverty Reduction Strategy 2002-2005 (PRSP1)*, 2006.

education policy, not just as a consideration tacked on at the end of the policy-making process.⁶

The Government, in consultation with international donors, has developed a fully-costed budget to ensure that these educational goals are met. Education spending has increased in real terms over the last five years, and has shown slight increases as a percentage of overall government expenditure on public goods.⁷ In 2006, the total budget for the education sector was 65.9 billion RWF, and accounted for 16.3 percent of public expenditure.⁸ Funding priorities have shifted to reduce the overall percentage of expenditure on higher education, and to increase the proportion spent at the primary level. Gender was given strong attention throughout the budgeting process to ensure that this priority area received the necessary funding. However, according to the 2006 EDPRS Education Sector Self-Evaluation, the execution of gender issues within the budget remains poor.⁹ In 2005, only 36 percent of the budget ear-marked for girls' educational equality was spent because decentralization efforts prevented the completion of plans to construct toilets and water points in needy schools.¹⁰

The most recent ESSP, which covers the period from 2006-2010, is based on six fundamental principles, which include: results-based management, particularly with respect to the performance of girls in schools and to women's access to education; and a special emphasis on gender issues.¹¹ Policy measures to promote girls' education largely focus on gender sensitization campaigns and providing female role models within schools. Specific activities are also planned to increase the participation of girls in science and technology courses, including opening girls-only schools specializing in science and technology fields.¹² Specific outcome-related objectives are outlined in Table 1.

Table 1: Proposed ESSP Indicators for Promoting Girls Involvement in Science and Technology Fields, Rwanda, 2004, 2008 and 2010

ESSP indicator	2004 baseline level	2008	2010
% girls enrolled in maths courses at secondary level	22	26	33
% girls enrolled in chemistry courses at secondary level	35	40	45
% girls enrolled in first year science and technology courses at tertiary level	20	25	30

Source: African Development Fund. *Appraisal Report: Programme in Support of the Education Sector Strategic Plan (ESSP) - 2006-2010*, May 2006.

⁶ Ibid.

⁷ EDPRS: *Draft Education Sector Self-Evaluation*.

⁸ World Bank. *Rwanda FTI Assessment: Assessment of the Government's Education Strategy and Financial Framework, 2006-2015, for the Fast Track Initiative*, September 2006.

⁹ EDPRS: *Draft Education Self-Evaluation*.

¹⁰ MINEDUC. *Joint Review of the Education Sector: Aide Memoire*, April 2006.

¹¹ African Development Fund. *Appraisal Report: Programme in Support of the Education Sector Strategic Plan (ESSP) - 2006-2010*, May 2006.

¹² African Development Fund, *Appraisal Report: Programme in Support of the Education Sector Strategic Plan (ESSP) - 2006-2010*.

It could be argued that these projections are far too low. If the percentage of women in Parliament could be raised 400 percent from 1994 to 2003, why should it take four years to raise girls' percentage enrolment in mathematics from 22 percent to 26 percent and six years to 33 percent? Political will for positive discrimination in political representation is clear in Rwanda's Constitution, but this same political will does not seem to extend to affirmative action in education. The discontinuation in 2007 of the Girls Empowerment Program at the Kigali Institute of Science and Technology (KIST) is such an indicator, and will be discussed below.

Despite considerable attention being given to gender equality at the policy level, outcomes continue to fall short of the objectives which were planned and budgeted for. Evaluations have stressed that there needs to be a stronger relationship between budget inputs, outputs, and educational results. According to World Bank assessments, not enough emphasis has been placed on improving the achievement indicators of girls at all levels of schooling, which is a primary factor in keeping girls in school and encouraging girls to enroll in secondary and higher education.¹³

A Look at the Numbers: How are Rwanda's Girls Performing?

Primary and Secondary Education

With an enabling policy environment in place, Rwanda has made strong progress in improving access to education at all levels, and improving gender parity at the primary and secondary levels, consistent with ESSP policy goals. With this progress, Rwanda has moved from a position near the bottom of regional education performers, to become one of the regional leaders in achieving universal primary education and demonstrating continued improvement in secondary enrolment rates (see Table 2).

Table 2: Primary Attendance and Secondary Enrolment, Eastern Africa, 2000-2005

Country	Primary School Net Attendance Ratio (2000-2005)		Secondary School Gross Enrolment Rates (2000-2005)	
	Male	Female	Male	Female
Kenya	79	79	50	46
Tanzania	71	75	6	5
Uganda	87	87	18	14
Rwanda	75	75	15	14

Source: UNICEF website, 2007.

Rwanda is ahead of other countries in the region in promoting gender equality at both the primary and secondary levels, with gross enrolment ratios far above the average for Sub-Saharan Africa (see Table 3).

¹³ World Bank *Rwanda FTI Assessment: Assessment of the Government's Education Strategy and Financial Framework, 2006-2015, for the Fast Track Initiative.*

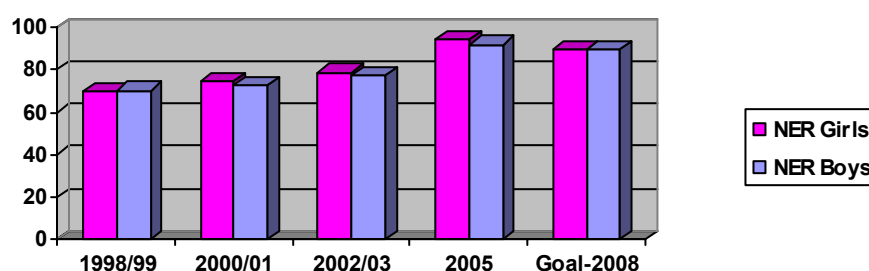
Table 3: Primary and Secondary Gross Enrolment Ratio (Females Enrolled per 100 Males), Eastern Africa, 2000-2005

Country	Primary (GER 2000-2005)	Secondary (GER (2000-2005))
Kenya	95	92
Tanzania	96	83
Uganda	99	78
Rwanda	102	93
SSA	86 (2001/02)	79 (2001/02)

Source: UNICEF website, 2007; United Nations, *The Millennium Development Goals Report, 2005*. New York: United Nations.

As Figure 1 shows, primary net enrolment rates have been steadily rising in the past decade. With the elimination of primary school fees in 2003, enrolment rates for 2005 exceeded the goal elaborated in the ESSP, which sought to reach 90 percent enrolment for both girls and boys by 2008.

Figure 1: Primary Net Enrolment Rates (%), Rwanda, 1998/99 to 2005



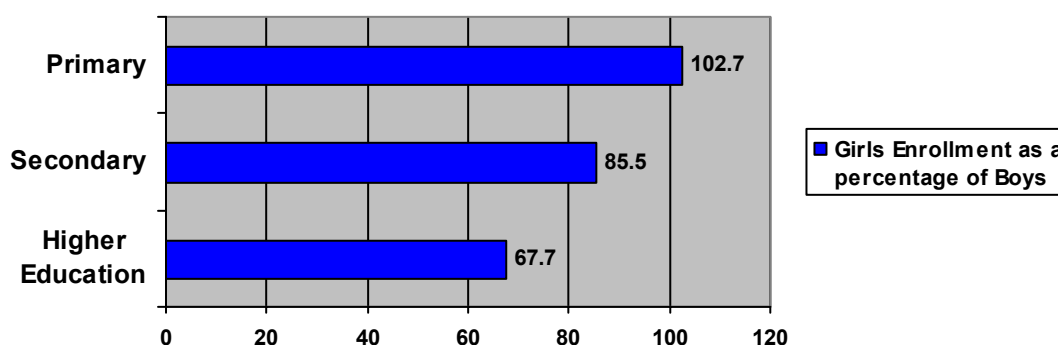
Source: Figures for 1998-2002 taken from NEPAD Secretariat and UNIFEM Rwanda. *Independent Review Report on the Progress and Prospects of Gender Mainstreaming in Rwanda, 2000-2005*, May 2006; 2005 figures taken from FAWE website 2007; 2008 Goals found in MINEDUC, *Education Sector Strategic Plan, 2003*.

At the primary level, girls' net enrolment slightly surpasses that of boys, yet this trend is reversed at higher levels of education (see Figure 2). At the university level, women represent only 4 out of every 10 students.

Despite significant progress in increasing primary enrolment, completion rates continue to be low, falling short of both regional averages and government projections in line with ESSP goals. Although specific gender-disaggregated data on completion rates are not available, it is well recognised that completion rates for girls are lower than those for boys at all educational levels. Poverty and low levels of achievement are the most significant reasons that students drop out of school at the primary level, and there are considerable disparities between urban and rural children. According to the recent Core Welfare Indicators Questionnaire survey, 35 percent of families withdraw their children due to the inability to afford the costs associated with education, such as books, uniforms and lunches; another 30 percent of households cite failure on the primary school leaving exam as the reason that

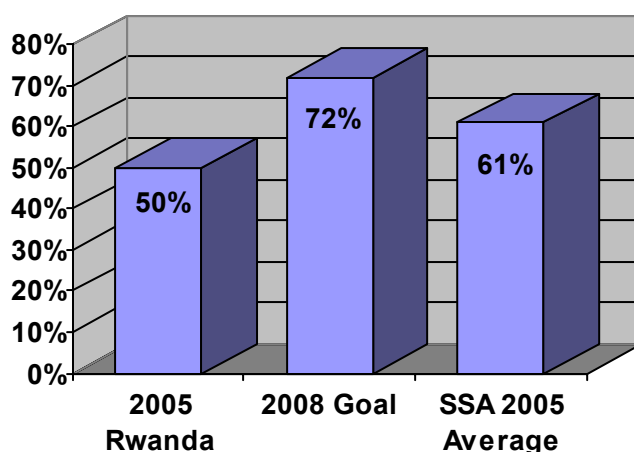
their children drop out.¹⁴ At the current rate, Rwanda will be hard pressed to meet its objective of 72 percent primary completion by 2008 (see Figure 3).

Figure 2: Girls' Net Enrolment Rates as a Percentage of Boys, Rwanda, 2005



Source: FAWE website, 2007.

Figure 3: Primary Completion Rates 2005, Rwanda and SSA



Source: World Bank. *Rwanda FTI Assessment: Assessment of the Government's Education Strategy and Financial Framework, 2006-2015, for the Fast Track Initiative.*; MINEDUC. *EDPRS: Draft Education Sector Self-Evaluation, 2006.*

Some interesting pilot programs to address the drop-out problem should be monitored for possible replication. For example, a program to ameliorate child labour, sponsored by World Vision Rwanda in collaboration with the Ministries of Education (MINEDUC), Gender and Family Promotion, and Public Service and Labour, assists many girl drop-outs. This catch-up program is linked to a special curriculum that facilitates those girls and boys to finish their primary school in three years instead of six years giving them the competencies to go on to secondary school and beyond.

¹⁴ World Bank. *Rwanda FTI Assessment: Assessment of the Government's Education Strategy and Financial Framework, 2006-2015, for the Fast Track Initiative.*

Educating girls beyond primary school empowers them in a way that primary education alone cannot. In doing so, it strengthens economies, decreases HIV/AIDS rates and builds healthier societies. As such, secondary education for girls is fundamental for development. Yet at secondary school level, gender disparities widen. In sub-Saharan Africa, 17 percent of girls are enrolled in secondary school¹⁵, but in Rwanda the net secondary enrolment figure is only 10 percent, and there are significant differences between rural and urban areas, as illustrated in Table 4. The preliminary findings of the second Integrated Household Survey on Living Conditions (Enquête Intégrale sur les Conditions de Vie des Ménages [EICV]), indicate that the enrolment rate of girls declined against boys in rural areas and in the total enrolment over the five years from 2000/01 and 2005/06.

Table 4: Net Enrolment Rate at Secondary Schools, by Gender and Stratum, Rwanda, 2000/01 and 2005/06 (%)

Stratum	EICV1			EICV2		
	Male	Female	All	Male	Female	All
City of Kigali	24.9	22.7	23.6	29.2	29.0	29.1
Other Urban	7.4	11.3	9.3	12.6	14.9	13.8
Rural	4.5	5.4	5.0	8.9	7.0	7.9
National	6.2	7.5	6.9	10.6	9.5	10.0

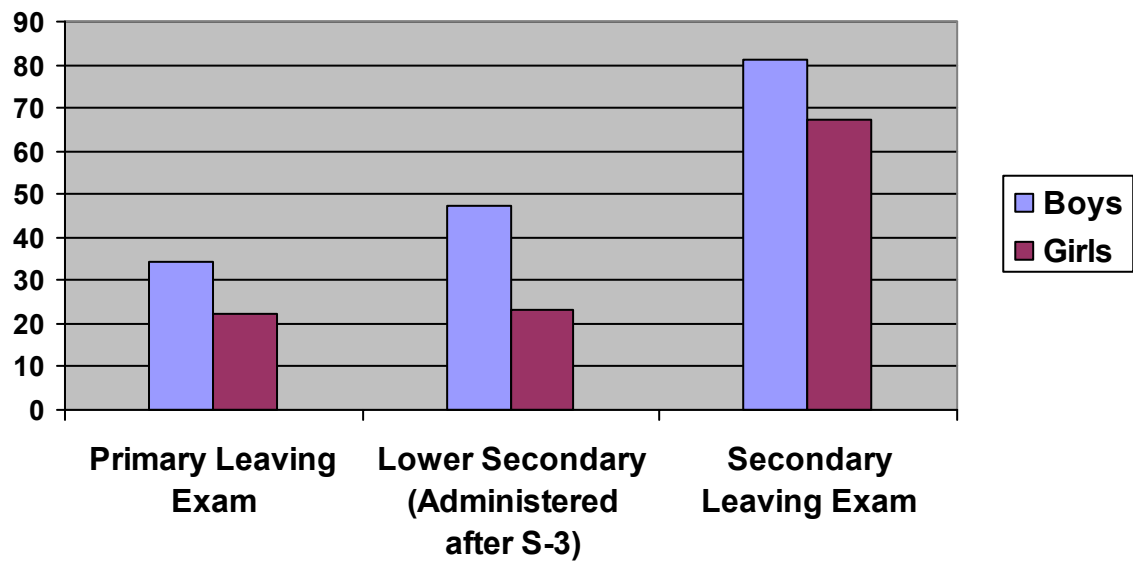
Source: EICV1 and EICV2 data

Secondary school admission in Rwanda is largely based on a student's performance in the primary school leaving exam. Boys consistently outperform girls in examinations at all levels, as demonstrated in Figure 4 below. As a result, boys comprise a higher percentage of students in government secondary schools, which tend to be of higher quality and less expensive than private schools. An added barrier to gender equality at the secondary school level is the prevalence of seminary schools, which only admit boys. These schools, though private, attract the highest quality teachers and consistently rank near the top in terms of performance. Thus, the total number of secondary positions available is higher for boys than for girls. The quality of other private secondary schools, where most girls are enrolled, is generally very low. Figure 5 illustrates the distribution of students in private and government schools, disaggregated by gender.

A number of social factors, including traditional gender roles such as domestic chores and family care, entrench girls' underperformance throughout their schooling. This has a cyclical effect, as low performance in the primary leaving exam results in girls being admitted to lower quality secondary schools, and ultimately into higher education institutions (HIEs) in lower numbers.

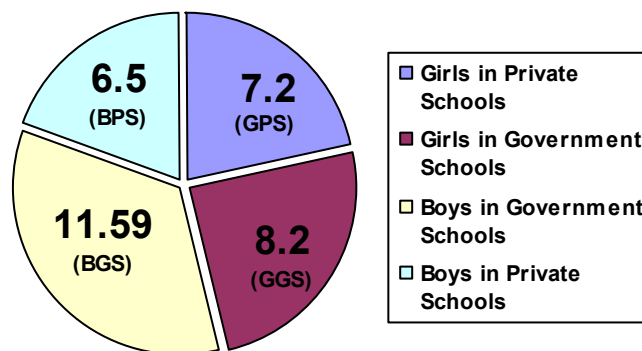
¹⁵ Rihani, MA, Kays, L. and Psaki, S, 2006.

Figure 4: Examination Performance by Gender, Rwanda, 2003/04



Source: FAWE website, 2007

Figure 5: Secondary School Enrolment Rates by Category of School, Rwanda, 2005



Source: FAWE website, 2007.

Boys comprise a higher proportion of those who successfully pass their national examinations at all levels (see Table 5). At the secondary level, poor performance is the reason given for young women's lower rates of admission to universities, their admission into lower quality private universities and for young men's over-representation in public educational facilities.

It should be noted that the Ministry of Education advises that there is no actual pass grade for HEI entry. The pass grade for each stream is adjusted each year by the Schools Examinations Council so that the numbers 'passing' in each subject meet the number of places in the public HEIs, with a lower limit on grade set by the HEIs themselves. For example, the Kigali Institute of Education (KIE) cannot fill its places in mathematics and physics, despite lowering the grade to a level that the institution believes might be indicative of failing. The grades for biology and chemistry are also very low. However,

given that 67.2 percent of girls passed their examinations in 2003/04, there is no reason why girls should not comprise 50 percent of HEI students if a policy of gender equity were adopted.

Table 5: Gender Breakdown of Students who pass National Examinations, Rwanda 2000/01, 2002/03, 2004/05

Year	Primary Leaving Exam		S-3 Leaving Exam		Secondary Leaving Exam	
	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %
2000/01	63	37	59	41	56	44
2002/03	58	42	66	34	52	48
2004/05	61	39	66	34	59	41

Source: NEPAD Secretariat and UNIFEM Rwanda. *Independent Review Report on the Progress and Prospects of Gender Mainstreaming in Rwanda, 2000-2005*, May 2006.

Efforts are now being undertaken to encourage girls to do well at school and achieve high results. The First Lady and many women parliamentarians, through the Protection and Care of Families against HIV/Aids (PACFA) project give awards and prizes to the girls who receive the top marks in examinations and this is accompanied by considerable publicity. The best student in the primary school from every sector, the first in the district at Ordinary level and the best three in the province at the Advanced level are recognised. Primary and 'O' level students each receive a bag containing scholastic materials, English and French Dictionaries and a calculator. 'A' level students each received a laptop computer, FRW 20,000 and a free three-month computer course.

Tertiary Education

A recent Women's Competence Profile Report by MIGEPROF gave some alarming figures about tertiary education outcomes in Rwanda. The National University of Rwanda had enrolled 3,002 women over the last 40 years, ULK: 3,969 in 10 years. There were only 13,119 women with bachelors degree and at least 30 percent of women failed to finish their degrees.

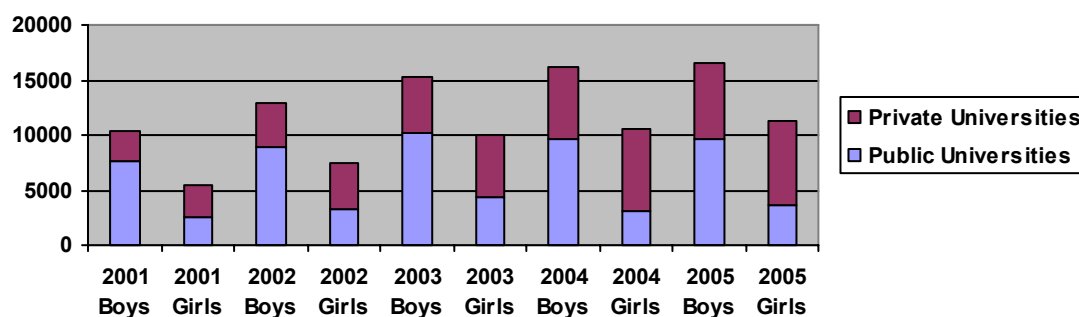
Although total enrolment rates have been steadily increasing over the past five years, women continue to be under-represented in HEIs (see Figure 6). This difference becomes particularly stark within highly competitive public universities¹⁶, where education is generally of higher quality and tuition fees are lower. The private universities offer subjects that female students are qualified to take: for example, nearly half the undergraduate students are women at the School of Banking and Finance.

An examination of admission statistics shows that within public universities, there is a strong bias toward admitting men. The discriminatory nature of admissions becomes all the more clear when comparing passing rates in secondary school examinations to admission rates in public universities.

¹⁶ There are six public universities in Rwanda, at least four credentialed private universities and many others not recognised by MINEDUC.

An analysis of transition rates to tertiary education demonstrates the discriminatory practices which underlie this disparity. The Rwanda 2003/04 pass rate for the 'A' level was 74.5 percent of all those who sat for the examination: 48.31 percent of those passing were girls and 51.69 percent boys. Out of every 100 passing candidates, 48 were girls while 52 were boys, so the gap was only 4 percent. Only 19.1 percent of those who passed were admitted into government HEIs. While 15.16 percent of boys who passed were admitted into government HEIs, only 8.18 percent of all girls who passed were admitted. That is, of every 100 passing girls only 8 were admitted while for every 100 passing boys 15 were given a chance. The impartial treatment comes out quite clearly. With girls comprising 48 percent of students who pass at A level, why can't Rwanda attain gender parity in enrolment in government HEIs? What are the factors that do not allow that to happen?¹⁷

Figure 6: Total Enrolment in Higher Education Institutions by Gender and Category of University, Rwanda, 2001-2005



Source: NEPAD Secretariat and UNIFEM Rwanda. *Independent Review Report on the Progress and Prospects of Gender Mainstreaming in Rwanda, 2000-2005*, May 2006.

Statistics from the year 2004/05 show a similar trend: 59 percent of those who passed the exam were young men and 41 percent were young women - a margin of 18 percent. However, men constituted 72 percent of students who enrolled in public universities in 2005 - a margin of 45 percent. In numeric terms, 10,671 men and 7,424 women passed their examinations; yet the number of men and women admitted to public universities was 9,657 and 3,621, respectively (see Table 6). Although this data does not tell us how many of those students who sat their exams and passed were admitted, and it is likely that some of those offered admission to university did not sit their secondary exams the preceding year, the strong gender bias toward enrolling men in higher education is out of proportion to the gender breakdown of those sitting and passing their secondary school leaving exams.

Another aspect of HEIs is that they are overwhelmingly staffed by men, which works to further exclude female students. There is no male Rector and only two female Vice Rectors - one at the Kigali Health Institute and one at KIE. Most academic staff are men. At KIE there are only 22 female academic staff out of 143. The majority of women are tutorial assistants and the most senior

¹⁷ Masanja, V.G., 'Female Access to and Participation in Higher Education: Interventions and Challenges.' PowerPoint presentation.

are three lecturers. The system for sending academic staff abroad to take postgraduate qualifications also discriminates against women who feel less free than the male staff to leave their families for up to four years to study for a PhD. There is at present little in-country provision for postgraduate studies.

Table 6: Gender Discrimination in Public Higher Education, Rwanda, 2001-2005

	2001		2002		2003		2004		2005	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Number of Students Enrolled in Public Universities	7641	2511	8935	3276	10,180	4336	9638	3143	9657	3621
% of Total Enrolment in Public Universities	75	25	73	27	70	30	75	25	72	27

Source: NEPAD Secretariat and UNIFEM Rwanda. *Independent Review Report on the Progress and Prospects of Gender Mainstreaming in Rwanda, 2000-2005*, May 2006.

Prioritization of Science and Technology Subjects

It is essential that the country's education system be tailored to produce an adequate number of graduates with relevant qualifications to meet the demand of the labour market as defined by the country's development objectives. In line with the vision of promoting economic growth through the development of the science and technology sectors, these disciplines are prioritized at the university level and in the allocation of government scholarships. Yet in the interest of gender empowerment, both the HEIs and the school system need to be reformed – young women are not qualified in the subjects that the Government has decided the country needs, and HEIs are not providing remedial courses that would assist women to catch up to the standards needed for entry to formal programs.

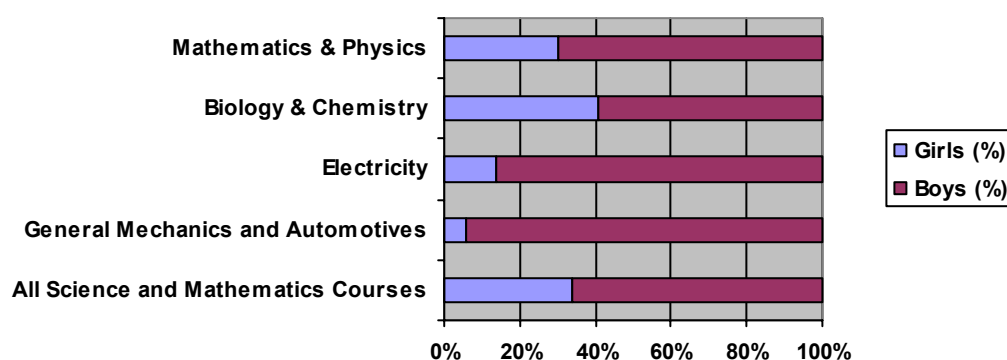
Poor performance in mathematics and science at the secondary level is not confined to girls and probably relates to the low number of qualified mathematics and science teachers and the poor facilities in schools. The very low salaries of school teachers makes it difficult for schools to recruit and retain teachers of all subjects at all levels, particularly mathematics and science teachers. Nevertheless, statistics show that boys systematically outnumber girls in science and technology courses at the secondary level, and thus gain privileged access to positions at government schools specializing in teaching these disciplines (see Figure 7). Many girls have been socialized to see social sciences or arts as more appropriate subjects for them to study, and science and technology as subjects reserved for boys.

A lack of female teacher role models within these disciplines further discourages girls from pursuing science and technology courses. Within

science and mathematics faculties at secondary schools, only 5 percent of teachers are women.¹⁸ Girls may experience intimidation or harassment in classrooms which are dominated by male students and teachers.

To remedy this problem, the Forum for African Women Educationalists (FAWE) Rwanda has established a girls-only secondary school, focused on science and mathematics education. The school has seen remarkable success in encouraging girls to excel in these subjects: in 2005, 80 students were accepted to science courses at the University level.¹⁹ This example may serve as a model to demonstrate what girls can achieve if given the proper encouragement and support. FAWE has advocated for four new girls' centres of excellence in education to be established in the provinces.²⁰

Figure 7: Participation in Science and Technology Courses within Secondary School by Gender, Rwanda, 2005



Source: NEPAD Secretariat and UNIFEM Rwanda. *Independent Review Report on the Progress and Prospects of Gender Mainstreaming in Rwanda, 2000-2005*, May 2006.

At the level of higher education, young women's representation in science and technology fields is even weaker. For the year 2005, only 19 percent of students studying agriculture and 16 percent of science and technology students at the National University of Rwanda were women; of students studying science and technology fields at KIST, only 20 percent were women; and at the Institut Supérieur de Agriculture et Elevage (ISAE), only 23 percent of students were women.²¹ Rwanda's policy of favouring science and technology courses in offering tertiary scholarships therefore disadvantages young women who are not equipped in this field.

To counteract this problem, KIST put in place a special women's empowerment program (EP) in 2006, which enrolled 200 young women who had applied to do science and technology courses, but had narrowly failed to get the grades necessary for admission to KIST. The circumstances of this politically controversial catch-up program were fraught, as the students faced considerable resistance: they received no allowance, endured negative

¹⁸ MINEDUC. *Joint Review of the Education Sector: Aide Memoire*, April 2006.

¹⁹ FAWE website.

²⁰ Randell, S.K., *Rwanda's Progress towards a Gender Equitable Society*, 2007

²¹ NEPAD Secretariat and UNIFEM Rwanda. *Independent Review Report on the Progress and Prospects of Gender Mainstreaming in Rwanda, 2000-2005*, May 2006.

publicity about their accommodation and the program itself, and had to sit for two different examinations before their course was completed. They studied in French and English - and studying in English was especially challenging for the majority of the young women who did not have a command of English and who were learning it in parallel with the academic program. Despite these challenges, 93 students passed, and in 2007 they are enrolled in academic programs within KIST faculties. It should be noted that this pass rate is much lower than similar programs in countries like Tanzania, and should have been considerably higher under more favourable conditions.

Table 7 shows data for students admitted at KIST in 2007 as of 17 January 2007²². The actual enrolment figures may vary slightly, as more students have been admitted while some did not appear. However, they provide a good overview of the situation.

Table 7: Participation in Science and Technology Courses at KIST by Gender, Rwanda, 2007

Department	Total	Women	Men	Direct Women	Women admitted through EP	% Women	% Women after EP	Women % increase due to EP
Biology	73	35	38	16	22	29.6	47.9	18.3
Chemistry	84	39	45	19	20	29.7	46.4	16.7
Civil Engineering	89	18	71	15	3	17.4	20.2	2.8
Computer Engineering	89	21	68	18	3	20.9	23.6	2.7
Electrical Engineering	77	31	46	26	5	36.1	40.3	4.2
Electronics	74	15	59	12	3	16.9	20.3	3.4
Food Science	78	37	41	22	15	34.9	47.4	12.5
Mathematics	71	29	42	22	7	34.4	40.8	6.4
Mechanical Engineering	77	19	58	16	3	21.6	24.7	3.1
Physics	71	21	50	14	7	21.9	29.6	7.7
Technical Education & Entrepreneurship	71	0	71	0	0	0	0	0

Source: Office of Director Academic Services, KIST, 2007.

It can be observed that more young women from the empowerment programme were admitted in science programmes ranging from 22 in biology, 20 in chemistry, 15 in food science to 7 in mathematics and physics. The

²² The contribution of Professor Verdiana Masanja in obtaining and analyzing this data is gratefully acknowledged.

engineering programmes admitted very few of these women, technical education admitted none, electrical engineering admitted 5 and the rest each admitted 3. Women admitted under the empowerment programme constitute 3.6 percent of all students admitted in engineering disciplines and 23.3 percent of those admitted in science disciplines.

It can also be observed that with this single intervention, some programmes have nearly bridged the gender imbalance, increasing the proportion of women enrolled in certain subjects from under 30 percent to near parity. Such programmes are biology, chemistry and food science, which are life sciences. With the exception of physics, all other science disciplines have attained a proportion of over 40 percent women proportions to men. Unfortunately such gains will not be registered in the future because the programme has been halted.

It should also be noted that the departments that admitted more young women from the empowerment programme had also admitted relatively more young women directly. Since admissions are based on preferences as well as performance, is it possible that within the science and engineering disciplines gender stereotyping continues to be a problem. Even with a functioning empowerment programme, there is a need to address the lack of women in these programmes.

Despite these challenges, as the figures above for primary, secondary and tertiary education demonstrate, the policy measures enacted by the Government have translated into impressive progress, particularly in the area of increasing primary enrolment. Primary school enrolment (net enrolment rate) has risen by 15 percent since fees were eliminated in 2003, reaching over 93 percent, and girls and boys are attending in roughly equal numbers. At the secondary level, gross enrolment rates for girls are lower than boys, yet the gap is narrowing. At the level of higher education, universities continue to expand to accommodate more students. The gender gap between men and women has begun to narrow, however young women continue to be underrepresented, comprising only 4 of every 10 students attending universities. This disparity is even more exaggerated when comparing enrolment rates between public and private universities: female students comprise only 25 percent of students within public institutions, the implications of which will be discussed below.

Nonetheless, challenges remain at all levels. Drop-out rates remain higher for girl students than for boy students throughout the educational system, and completion rates are lower for girls. Moreover, girls' performance in school consistently trails that of boys. The following section will examine the barriers to girls' equality in education, and some of the factors which inhibit the achievement of gender parity, particularly at higher levels of education.

Explaining Girls' Lower Attainment

Despite the progress in promoting girls' educational attainment, as demonstrated above, a number of social and institutional barriers remain,

which impair girls' performance in school, and combine to prevent girls from completing secondary school in equal numbers to boys or young women from reaching university in equal numbers to young men. Girls continue to lag behind their male classmates in terms of completion rates and in their overall performance in school. Attendance rates for girl students are generally lower, which translates into lower scores on national examinations. The following section will examine the causes of this under-achievement, which persist despite the strong policy framework in place.

Historic marginalization

Rwandan girls and women have historically been marginalized from the educational system, and from participation in public life more broadly. Girls' schools were introduced a full 40 years after boys'. Initially, girls' education focused on developing skills which reinforced their socialized roles, such as secretarial skills, home economics and general hygiene, while boys were prepared to become co-partners in administration activities and other development fields. Young men also enjoyed favoured access to education at higher levels and in different fields, including administration, science and technology. Though policies have been revised to promote equal access to education at all levels, people's attitudes have evolved more slowly, and socialized roles and stereotypes continue to prioritize boys' education and access to employment.

Poverty

The elimination of school fees at the primary level is thought to be the primary factor in raising overall enrolment rates and in reaching gender parity at the primary level. Yet, according to a 2005 Citizen Report Card survey, 42 percent of households report that the costs associated with primary education, such as books, uniforms, and school lunches were too high. These costs, combined with the lost opportunity cost of having children participate in household labor, place a substantial burden on families living in extreme poverty.²³ Moreover, as discussed above, 35 percent of Rwandan families say that they withdraw their children before they complete primary schooling because of the inability to afford these costs. Poverty remains a significant barrier to particular disadvantaged groups, such as orphan-headed households or street children, and generally prevents them from accessing education at any level.

At the secondary level, high school fees prevent children from poor families from accessing secondary school. Many poor families can only afford to educate a few of their children. In many cases, sons are often chosen over daughters, both out of patriarchal social traditions, and because boys are likely to find more employment opportunities and higher average wages in the future. They thus constitute a greater return on the family's investment.

²³ MINEDUC. EDPRS: Draft Education Sector Self-Evaluation, 2006.

Traditional Gender Roles

Particularly in rural areas, girls continue to be responsible for household tasks, such as fetching water and gathering firewood. They also care for younger siblings or aged and sick relatives, particularly those suffering from HIV/Aids. These responsibilities may prevent girls from attending school, or may limit the time which they can devote to their studies. Persistent discrimination against girls may mean that parents do not see the same value in educating their daughters as their sons, and instead, girls may begin to work within the home at an early age. There is a culture within schools that encourages girls to accept traditional gender roles and there are few fellow female students at secondary and tertiary levels who can provide peer support.

Gender-biased Curriculum and Teaching Methods

A major barrier in girls' education is a masculinized school environment: the curriculum, classroom buildings, assessment methods, etc. are all consistently tailored to male students. Moreover, there is a lack of female teachers or role models for girls. The number of female teachers should be increased, which would raise consequent expectations for girls' independence and success. Additionally, there is a need to develop student-centred teaching, a gender equitable learning environment and teaching practices, and to ensure that classes are relevant to girls.

Lack of Facilities

Many schools do not have adequate sanitary and dormitory facilities, and many do not have separate facilities for boys and girls. In addition, poverty prevents many families from purchasing sanitary napkins. Many adolescent young women therefore must stay home from school during their monthly periods, causing higher rates of absenteeism. This ultimately affects their achievement within the classroom, as well as their performance in national examinations. The Ministry of Education, with the support of UNESCO, has initiated a Child Friendly School Policy which aims to make schools places where children will want to stay, with an explicit focus on making schools friendly places for girls. Priorities include renovating buildings and improving sanitation facilities, combating sexual harassment, and engendering the curriculum.

Discrimination in Public Institutions

At the level of secondary school, entrance to public institutions, which provide higher quality and lower cost education, is determined on the basis of performance in primary school leaving examinations. Statistically, girls perform much lower in examinations at all levels, due to high rates of absenteeism and examination formats which may be biased against girl students. Using examination scores as the criteria for entrance to public schools institutionalizes discrimination against women. At the university level, this bias is even more exaggerated. Across the board, boys are granted

entrance to public universities in higher numbers, and are the recipients of highly coveted government scholarships. Affirmative action within secondary and university admissions is necessary in order to promote gender equality within public schools.

Gender-Based Violence in Schools

Gender-based violence (GBV) remains a widespread problem in Rwanda, as it is throughout the region. Girls who experience abuse within their homes, at their schools or in their communities suffer from trauma, causing them to perform significantly worse in their studies. When girls encounter harassment, intimidation or violence within their school environments, they may be afraid to attend school, and may decide to abandon their studies.

KIST and KIE are among the first educational institutions in Rwanda to have equal opportunity and sexual harassment policies. The KIE Equal Opportunities Policy is part of the Code of Practice for Higher Education which will be launched by the Minister of Education (MoE) in April 2007. A Code of Practice for School Teachers, including sexual conduct, is currently being drafted. The project for Child Friendly Schools funded by UNESCO in partnership with MoE also addresses the behaviour of teachers. Other relevant projects include that of the Collectif des Lignes et Associations des defense des Droits de l'Homme au Rwanda (CLADHO) and Action Aid International who are fighting against GBV in school and out of school.

Conclusion

This paper has examined performance outcomes for boys and girls at primary, secondary and tertiary levels to identify the impact of the Government of Rwanda's *Education for All* policy. It has sought to explain the gender disparity by reviewing direct and indirect discrimination against girls within the education sector, including both out-of-school and in-school features. With all of these factors working against girls' educational attainment, it is important to build proactive policy interventions to rectify these sources of direct and indirect bias and to positively promote girls' education, ensuring that women are admitted into public education institutions in equal numbers, are given equal footing to compete in science and technology courses, and that money is available within the education budget to rectify the above-mentioned barriers to girls' education. Responsibility for the implementation of such policies remains with the Government. As the Government continues to monitor its progress in the educational sector generally, and toward gender equality more specifically, there is a need for more gender-disaggregated data collection at all levels.

Policies designed by the Government and elaborated in the EDPRS and ESSP hold the potential to begin to rectify these disparities. Policy measures, and the associated budgetary commitments, must be adhered to and prioritized to ensure that they achieve the stated objectives. In particular, there is a need to ensure that gender mainstreaming efforts reach the decentralized level, and are incorporated into educational policies at the

district and local levels, and within both urban and rural schools. School administrators and teachers must embrace principles of gender equality, and promote girls' educational attainment within their classrooms.

A particular area for attention is to devise interventions that improve the performance indicators of female students at all levels and raise completion rates. Addressing the reasons for girls' absenteeism and low performance in examinations is imperative to increasing their retention and rates of admission at both the secondary and tertiary levels. Increasing the number of female teachers, especially in science and technology subjects, and continuing efforts to ensure gender-inclusive curricula are critical.

In particular, consistent with objectives outlined in Rwanda's Vision 2020 development plan, the Government must implement affirmative action measures to give girls equal access to higher education, and to rectify the disparities caused by low performance indicators. The creation of more girls secondary schools, such as FAWE, which provide female teacher role models and science and technology curricula, are essential. Policies such as KIST's program to offer conditional admission to female candidates with lower levels of performance, contingent on completion of a remedial 'catch-up' programme, could go a long way toward making up for patterns of inequality at both the secondary and tertiary levels.

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