

# Gender equity in sciences, mathematics and technology (SMT) education

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# GENDER EQUITY IN SMT



# Gender Gap in Education: Historical Perspective



Girls were not allowed to go to school until much later; e.g. in Rwanda girls were allowed 34 years behind boys



Even then, their school life was very much limited compared to that of boys



girls' education focused on developing skills which reinforced their socialized roles



boys were prepared to become co-partners in administration activities and other development fields.

# Boys favoured to higher level access

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.

Numerous steps have been taken to improve the gender gap in education and significant progress registered.

# Marginal gains in education

Many SSA countries have shown commitment to gender equality since they attained independence (most got theirs in the early 1960's)

SSA countries today are at different stages of addressing the gender gap at the political front and in education.

Some SSA countries have attained gender parity in primary and lower secondary schools in terms of enrolment ratios

# The Gap continues today

Numerous steps and significant progress registered.

The gap in educational achievement remains.

No significant difference at primary level, however, the gap increases as one climbs the ladder.

At secondary level, girls continue to lag behind boys. E.g. 2011 survey show that in Rwanda, for every two boys attending secondary school, there is only one girl.

At tertiary level only about 30 percent of girls achieve the grades to win government places in tertiary level.

The proportion of girls taking STM at tertiary level is less than 15 %.

# Tertiary level not spare

In Rwanda tertiary level enrolment for 2011 is 43% women; 53% are in poorly resources private institutions while 34% in public institution

Over the period 2000 - 2011 women constituted 78% of graduates at diploma level, while at undergraduate level and postgraduate level women constitute 40% and 35% respectively.

All students sponsored by government 2000 - 2011, 36% were women while 64% were men. Meaning that nearly twice as many men than women got government sponsorship.

Among the total female enrolment, 66% were self sponsored while among enrolled men, 55% were self sponsored.

# Gender mainstreaming is necessary

The many typical factors continue to afflict girls' performance, a criteria used for selection to the next level.

Across the board, boys are granted entrance to public universities in higher numbers, and are the recipients of highly coveted government scholarships.

Gender mainstreaming combined with affirmative action within secondary and university admissions are necessary in order to promote gender equality within public schools.



# Stereotyping persists

The stereotyping of knowledge and skills continues to influence the education given even today and hence determines the occupation of men and women

For example in Rwanda, in 2006, 58% of young men between 15 and 20 years worked on the family farm as compared to 73% of young women. By 2011, the gender gap in productive employment was still wide.

More women are working on the family farm than men.

Also women enter wage employment at a lower rate than their male counterparts.

# Key positions still male dominated

Men took up 75% of the newly created non-farm jobs and 60% of the small business start-ups between 2001 and 2006.

The 2011 survey established that positions traditionally occupied by men are still male dominated and gender stereotyping persists.

For example men occupy nearly 90% of all positions of District Mayors and nearly 80% of all positions of Vice Mayors of Economic Affairs, while 83.3% of all Vice Mayors of Social Affairs are women.

Key positions, such as heads of learning institutions, hospital directors and senior officers of SMT and ICT institutions show big gender gaps with very few women.

# INITIATIVES

- Numerous initiatives to address gender disparities in SMTE have been initiated
  - international level – FAWE, ADEA, UNESCO (ANSTI, EFA),
  - Regional level – AAU, IUCEF, NEPAD, EU including mechanisms to monitor progress to achieve EFA and MDG3,
  - country level efforts – Science for girls programmes
  - institutional level – e.g. Universities and Schools
  - Civil Society level etc

# SOME ACHIEVEMENTS

- Gender policies, regulations and even laws at country level and at HEI level,
- special policies and programmes focusing on girls and women empowerment in education,
- policies focusing on specific gender related issues which affect progress of one gender such as gender based violence, re-admission of girls/ women students who drop-out due to pregnancy
- Sensitisations and gender capacity building
- And many gender equity projects

# Gender Mainstreaming: Example University of Dar es Salaam

Gender mainstreaming  
started in 1994,

initial ten years phase (1994 –  
2003), focused on the  
quantitative aspect of gender  
equity, disaggregated data in  
everything,

First Policy in 1996,  
revised policy in 2006,  
has specific policies (e.g.  
GBV),

discrimination laws removed,  
does gender analysis of all its  
aspects annually to inform  
progress

# Registered achievements: University of Dar as Salaam

notable increase in the women student enrolments and retention,

below 15% in 2004 to about 50% in 2008  
in non- science discipline

7% in 2004 to 28% in 2007/8 and above  
30% in 2009/2010 in Science and  
Engineering (average).

# Attrition from SMT by women after graduation

- Women trained in SMT leave or do not take-up the profession
- Reasons are the same as was in the past:
  - limited mobility (40%) when they get married,
  - wanting a change in career (20%),
  - Career too demanding with poor pay (20%), men do overtime or go on field work,
  - greener pastures or more attractive opportunities (20%)
  - changed jobs on other domestic grounds (0.2%).
- Girls lack role models to emulate
- Transformation of all players is necessary through gender mainstreaming coupled with gender equity and capacity development in gender

# THANK YOU

