



Supporting women participation in higher education in Eastern Africa

Building sustainable and equitable higher education
systems in Kenya, South Sudan and Uganda

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Foreword



Dr. Francesc Pedró, Director of the UNESCO International Institute for Higher Education in Latin America and the Caribbean

In commemoration of International Women's Day in 2021, the UNESCO International Institute for Higher Education in Latin America and the Caribbean (UNESCO IESALC) developed and launched a global study on the participation of women in higher education (HE). The study covered all UNESCO regions and gathered data on key issues for the higher education sector, including female enrollment, female participation in STEM, female participation in leadership positions, and female research performance. In all regions, except for Sub-Saharan Africa, women are the main beneficiaries of access to higher education. Although in Sub-Saharan Africa, the female gross enrollment ratio (GER) has doubled from 2000 to 2018, going from 4% to 8%, it still remains below the male GER (10% in 2018). In order to fully understand this

particular situation, UNESCO IESALC, in partnership with the UNESCO Regional Office for Eastern Africa, decided to do a more in-depth analysis of women's participation in the African higher education system. For this first phase of the assessment, three countries were selected (Kenya, South Sudan and Uganda). This report gives the results of the assessment, and includes interesting data that helps us to understand the higher education landscape in the selected countries in Africa. I consider this publication to be an important first step in assessing the higher education system in African countries and hope that it can be a useful resource for the various stakeholders working on this subject matter.

Foreword



**Dr. Alexandros Makarigakis, Director and Representative
a.i. UNESCO Regional Office for Eastern Africa**

Women and girls in Sub-Saharan Africa have traditionally experienced gender roles that have placed them in a disadvantageous position as far as participation in education is concerned. Targeted strategies and programs encouraging girls to enroll and stay in school over the past decades have seen considerable increase in the participation of girls in education and indeed, also in higher education. While the increased enrollment of girls in higher education institutions is positive, the question is, has this translated into the increased participation of women in the higher education space, including senior management roles? For instance, to what extent are women academics and researchers, deans, professors/professoriate, vice chancellors and represented in other leadership positions? And how do they compare with their male counterparts for instance, in research output? In March 2021, the UNESCO International Institute for Higher Education in Latin America & the Caribbean (IESALC), Caracas, Venezuela, published the results of a global study on women in higher education entitled “Women in higher education: has the female advantage put an end to gender inequalities?”. Although there have been improvements in female participation in higher education globally, including in senior management, gender-based inequalities still persist. The levels of improvements seen in other regions of the world were not observed in Sub-Saharan Africa. The picture there seemed worse than in all the other regions. This sparked our interest in doing a regional study in an attempt to find out what is hindering

women from full or equal participation in higher education. To this end, the UNESCO Nairobi Office and UNESCO IESALC collaborated on a study covering three countries in Eastern Africa. The results of the three case studies on women’s participation in higher education in Kenya, South Sudan and Uganda presented in this publication have shown that women are under-represented, for instance, in leadership roles. This is a carryover from the low enrollment of girls in the lower education levels in almost all the countries in sub-Saharan Africa. The implications of the results of the study are far-reaching and governments, especially ministries of education are called upon to do what it takes to increase the enrollment of girls in schools. More importantly, they also call on the leadership of higher education institutions to implement measures, some of which already exist, to increase the opportunities for women to assume leadership positions in higher education institutions. The benefits accruing from these measures is that our education system will be more participatory, inclusive, equitable and just. In this scenario, society as a whole benefits. In addition to providing a region-specific body of information, the exercise has enabled the engaged UNESCO staff and the researchers to learn from each other in the joint development of this multi-country study. I do hope that our collaboration continues to grow and will contribute to the elimination of the barriers hindering the full and equal participation of women in the higher education space in Sub-Saharan Africa.

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The team wishes to also highlight that this document can be subject to updates, new ideas and additional information. Contributions are encouraged as part of the continuous development of this research. For more details on how to contribute, please write to info-iesalc@unesco.org.

Executive Summary

Some takeaways from the Report:

Policy frameworks and various legislations have enhanced the implementation of programs aimed at improving women's education from primary school to university level. At the Higher Education (HE) level, some progress has been made, but the institutions are lagging behind in having gender parity, more so in top leadership positions. Men dominate leadership positions. At lower education levels, progress is hampered by socio-economic and cultural gender inequities, and limited resources. Socio-cultural practices such as Female Genital Mutilation (FGM) and early marriages have also had a negative effect on women's advancement to HE.

There are multiple factors that hinder women's participation in HE and in reaching leadership positions. These include fewer women having PhD, maternal household engagement, limited time for participation in research and related activities that are a requirement for upward mobility as well as lack of child care and women-friendly facilities within universities. Ongoing mainstreaming of gender in HE is improving the situation, albeit minimal. More effort is needed to increase the number of women in HE. In addition, there is limited administrative commitment on the part of the universities to address gender inequality in leadership positions.

Overall, HE institutions have not fully exploited opportunities that exist for gender advancement in HE, including potential partnerships for supporting the advancement of women. There is need for effective governance to achieve gender equality and collaboration between HE institutions, and development partners through public-private partnerships. Such partnerships have the potential for making resources available and

for funding opportunities to enhance the support to women students, in particular those undertaking STEM courses which require more time for study.

In Kenya, higher education has evolved over time from the technical and commercial institute in Nairobi – the Royal Technical College of East Africa – established in 1951 to offer technical courses within the East Africa region. The college was transformed to Royal Technical College in 1961, and later to the University of Nairobi in 1970. From this initial one university, Kenya currently has 32 chartered public universities, 9 public university constituent colleges, 21 chartered private universities and 3 private university constituent colleges.

In South Sudan, at its commencement, missionary education did not provide for girls. When schools re-opened in August 1956, the Sudanese government authorities maintained the closure of the girls' schools, irrespective of whether government or missionary, for the following four to five years. The impact has been the severe retardation of girls' education for almost a generation. Tradition and tribal customs regarding gender equity are still very strong and dominant in everyday life. Consequently, traditional male stereotypes also dominate within almost all higher education institutions, including the Ministry of Higher Education (MoHEST) itself. This research is in fact the first time an effort is being made to investigate the participation of women in HE and in leadership positions in universities and other tertiary institutions. This explains the very limited response to the questions sent out to the institutions outside Juba. Today, however, a good start has been made in advancing girls' education in general.

In Uganda, under similar circumstances, women do not have good access to higher level jobs, positions, voice and wealth like men. The low representation of women in leadership positions in higher education institutions in the country can be traced back to the late start in women's enrollment in modern schooling due to a number of factors.

1 Introduction

Education is considered to be the ultimate equalizer, and its being skewed towards men is disadvantageous to women. Irrespective of the education level at which the gender disadvantage occurs, its effect is longstanding and is reflected in the socio-economic and political status of women and men. It is acknowledged that education imparts requisite skills and competencies for human development which enhances quality of life (UNESCO, 2020). It is significant for the creation of human capital, which is a factor of economic growth and poverty alleviation (Sifuna, 2006). Unfortunately, access to, and participation in education, especially in higher education, among women – who are the majority in terms of population – continues to be unequal in Africa (Sifuna, 2006).

Globally, women's enrollment at the tertiary level has experienced exponential growth compared to that of men over time. However, this has not been the case in the developing economies where only 73 females are enrolled for every 100 males (UNESCO, 2020). J.E Aggrey Kwegyir, quoted in Syomene and Kindiki (2015) is of the opinion that *'If you educate a man, you simply educate an individual, but if you educate a woman, you educate a family'*⁸. This underscores the place of women's access and participation in higher education in the social and economic development of the society. Syomene and Kindiki (2015) further note that the literacy and numeracy competence among children is directly linked to the mother's level of formal education.

Global, regional and local policies and legal frameworks provide for equity in education and the full accommodation of both male and female genders. These frameworks further provide

for the special treatment of women who over the years have been left behind. However, the implementation of these policies has had mixed outcomes in Africa, with many countries still struggling to bridge the gender divide in education at all levels.

Globally, education has been declared a basic human right which must be enjoyed by all: girls and boys, women and men alike. The Universal Declaration on Human Rights (1948) under Article 26 (1) provides that everyone has the right to education which should be free, at least at the elementary and fundamental stages. The article advocates for technical and professional education, and equally accessible higher education to all⁹. The Convention on the Elimination of all Discrimination Against Women (1979) requires countries to eliminate all forms of discrimination against women. Under article 10, countries are called upon to end discrimination against women and girls and to ensure equal rights in education by ensuring access to education and vocational training at all levels. The convention also emphasizes the need to enhance access to scholarship for women and girls. The Beijing Declaration and Platform for Action (1995) made calls for equal treatment of women and men in education, while the Dakar Framework of Action on Education For All (Dakar 2000) gave a commitment on the need to provide access of education to women and girls. It further called for the need to eliminate systemic gender disparities in the education system from enrollment to completion, from teacher training to career development. The Millennium Development Goals (2000-2005) and Sustainable Development Goals (2015-2030) all call for access to quality education. SDG 4 calls on governments to see to it that the learning outcomes for the entire lifecy-

8 Kwegyir, J.E Aggrey was one of the leading figures in Africa and African - American history. He was an accomplished missionary, an educator, a public intellectual and Pan-Africanist. <https://www.blackpast.org/african-american-history/people-african-american-history/james-emmanuel-kwegyir-aggrey-1875-1927/>

9 Universal Declaration of Human Rights, 2015. https://www.un.org/en/udhrbook/pdf/udhr_booklet_en_web.pdf

cle for women and girls is improved. Regionally, African Union Gender Policy calls for the use of sex-disaggregated data and the performance indicators in a bid to enhance gender equality and responsive environment.

Still, there remains a general scarcity of detailed analyses of the state of women leadership and participation in higher education in many African countries. This position is in line with the observations by Mooley (2005) whose first attempt at this subject gave the phenomenon of gender inequality in higher education at college and subject levels a detailed attention. There has been reports indicating that during the 1970s and '80s women became better integrated into the education systems of most African countries. While this is true and the female participation rates have been approaching parity at the primary and secondary school levels, the tertiary sector has lagged behind (Smock, 1980; Kwesiga, 2002; World Bank, 1988). Less scholarly attention has been paid to the nature of the support which needs to be rendered to those few women in higher education leadership positions to succeed in their performance and to encourage their counterparts in ascending to leadership positions. There is the assumption that the nature of the support for the successful performance of those in leadership may be a strong attraction to many others to assume similar positions (Nakayima, 2017).

Countries with a high number of women enrolling and completing education have been known to have high levels of poverty reduction and economic productivity (Carvalho & Machado, 2010). Leadership and governance of the higher education sector is often used to describe certain categories of positions in both administrative and academic systems of univer-

sities. Nakayima et. al. (2017)¹⁰, while alluding to leadership in higher education, reported a dearth of women occupying leadership positions in universities globally, particularly in Africa. Whereas senior leaders were vice chancellors and deputy vice chancellors, the middle level leaders were deputy principals and faculty deans. The authors described this situation as very bad.

Despite some improvements, women generally are still lagging behind and there seems to be limited targeted interventions addressing the issue of vertical advancement in administrative and academic positions.

In line with this, this study is aimed at assessing the situation of women's participation in higher education in three selected African countries: Kenya, South Sudan and Uganda.

10 Florence Nakamanya, Ronald Bisaso, and Joseph Kimoga, "This Motivates Me to Work towards Great Performance': Higher Education Female Leaders' Voices on the Nature of Support to Their Leadership." *American Journal of Educational Research*, vol. 5, no. 9 (2017): 990-995. doi: 10.12691/education-5-9-11.

2 Data collection

This study has the overall objective of assessing and analyzing women's participation in higher education in Kenya, South Sudan and Uganda through literature review and primary data collection. This is the first phase of an assessment of women's participation in the African higher education system. For this first phase, the three participating countries were randomly selected by the editorial team. Other countries in the region will be included in the samples for the following phases of the project.

Specific research questions included the following:

1. What is the current status of women's representation in higher education, including in leadership and governance positions?
2. What are the key competencies considered critical for women in current leadership and governance positions in higher education?
3. What key factors inhibit women from holding higher education leadership and governance positions?
4. What strategies are needed to increase the participation of women in the higher education sector?

The study relied on secondary and primary methods for data gathering. Secondary data was drawn from documentary sources and government publications. Relevant policies and legislations were reviewed to assess how they provide for gender equity and women's inclusion. The study also reviewed the existing documents on the state of women in leadership within the countries' higher education system. In addition to this, some general literature on the position of women in higher education leadership was examined. Further review included the policy and legal frameworks that

support women's participation. Annual reports, such as the one produced by Uganda National Council for Higher Education (UNCHE)¹¹, were examined to generate some information on the gender distribution of enrollment trends within universities. Peer-reviewed publications complemented documentary and government publications.

A lesson learned in the information-gathering process, is the challenge of sourcing readily available data from the universities. While the majority were able to respond to the open questions, most designated officers had a challenge providing quantitative data. Data had to be compiled to give the current gender status of the university. It was also observed that co-opted members in governance structures are often not listed, thereby obscuring the participation of women. Of particular mention, are boards of universities, in which representatives of government ministries are included.

A checklist (see Annex 1) was developed to generate primary information on, for instance, the key staffing positions in selected universities. This was submitted to the appropriate persons within universities and other institutions of higher learning. Respondents to the questionnaire were selected on the basis of length of service in employment and administrative position. Almost all those chosen to respond have served at least above 5 years up to 20 years and above and all hold positions of heads of departments in colleges/faculties/centers of the institutions.

The purpose was to generate basic statistics on the distribution of women across various governance and leadership structures within the higher education subsector. To supplement the secondary information and the statistics generated from the above checklist, the survey

11 UNCHE is an institution of government that regulates higher education in Uganda. It regulates both public and private universities.

questionnaire also identified the key factors inhibiting the representation of women in higher education, the competences of those in leadership positions and the strategies likely to promote the participation of women in higher education. The purpose was to generate opinions and ratings of various higher education participants on the subject of women's positions within the sub-sector. The instrument was administered through an online format. The findings which emerged were analysed using basic descriptive statistics of frequencies and percentages. The emerging scores for each item reflected the respondents' opinions and rating of the assessment measures and these were used to determine important implications for the agenda of promoting women's participation in the higher education sector. This primary data aimed at complementing secondary data which was gathered from the following institutions:

In Kenya, the total sample included 9 universities, but two of the private universities did not complete the survey. One (Bomet University) out of the six public universities is a University College (constituent university), while the rest are full-fledged universities. The University of Nairobi is the largest among the sampled universities, Maseno University is medium-sized, while the Technical University of Kenya, Eldoret University, Rongo University and Bomet University are comparatively smaller and younger in their establishment. The private institution, Riara University, is the smallest among the sampled ones. The questionnaire was administered to senior university officials who are conversant with university leadership and governance issues. Three questionnaires were completed by the Vice Chancellors of the respective universities.

Kenya				
Name of institution	Status	Number of students	Source	Opening Year (year established)
University of Nairobi	Public	62,963	KNBS/Economic survey (2021). 2019/2020 enrolment statistics	1970
Maseno University	Public	18,908	KNBS/Economic survey (2021). 2019/2020 enrolment statistics	2001
Technical University of Kenya	Public	8,605	KNBS/Economic survey (2021). 2019/2020 enrolment statistics	2007
Eldoret University	Public	12,801	KNBS/Economic survey (2021). 2019/2020 enrolment statistics	2010
Rongo University	Public	6,031	KNBS/Economic survey (2021). 2019/2020 enrolment statistics	2011
Bomet University	Public	2,036	www.buc.ac.ke	2017
Riara University	Private	1,114	CUE University statistics report 2019	2012

South Sudan				
Name of institution	Status	Number of students	Source	Opening Year (year established)
University Of Juba	Public	23,839	Akec (2021)	1977
Upper Nile University	Public	3,816	Akec (2021)	1991
University of Bahr el Ghazal	Public	3,160	Akec (2021)	1991
Dr. John Garang Memorial University of Science and Technology	Public	921	Akec (2021)	2008
Rumbek University	Public	731	Akec (2021)	2008
Catholic University	Private	1,397	Akec (2021)	2017
Stafford University	Private	2,384	Akec (2021)	2016

In South Sudan, the total sample included 7 institutions, of which two are private. Dr. John Garang Memorial University of Science and Technology and Rumbek University are relatively small institutions. The University of Juba is the largest among the sampled universities. Data collection and methodology regarding the issue of the participation of women in higher education in the country presents quite a challenge. Communications in South Sudan is still at a low level. The conduct of the research at the time was confined to a limited physical area, since lack of security is a major obstacle to access most places. However, in the case of this research, the common and unified approach to

the application of the research tools was of tremendous advantage. Following the introductory letter from the Secretary General of the National Council for Higher Education and personal contacts, copies of the questionnaire were sent to the heads of the institutions. Nevertheless, the distribution of the questionnaires and their responses required quite some time. This was because individual institutions, in particular the government universities, are widely distributed over enormous distances. Moreover, some of these universities, since their closure as a result of the COVID-19 pandemic, had not resumed operations up to the date of data collection.

Uganda			
Name of institution	Status	Number of students	Opening Year (year established)
Makerere University	Public	35,000 (2018)	1922
Kabale University	Public	5,400 (2020)	2015
Mbarara University of Science and Technology	Public	3,000 (2018)	1989
Gulu University	Public	4,700 (2021)	2002
Lira University	Public	1,000 + (2019)	2015

In Uganda, the total sample included 5 universities, all public. It is important to note that Kabale University started in 2002 as a private university but was taken over by the Government in 2015. Makerere University is the largest among the sampled institutions, while Mbarara University of Science and Technology is the oldest institution studied.

The findings from the study in the three countries are the focus of the next sections. Apart from the background information which is provided in the beginning of each country section, the study also uses literature to review women's participation in higher education, and primary data drawn from the sampled universities to reassess participation of women in HE. Key issues examined include: policy and legal framework, challenges to women's participation in HE, women enrollment in STEM, and reflections on literature and findings.

3 Kenya

3.1 Background

Participation of women in higher education is closely linked to women's participation at lower levels of education and overall economic development. In Kenya, the data shows that at the primary level, girls and boys are almost equal, with the occasional leap in the numbers of girls. However, as girls and boys progress in education, more girls are lost from the system compared to boys. This loss intensifies as education progresses to high levels with all HE institutions having lower numbers of females compared to males. This deficit and skewedness is further seen in the numbers of women in Science, Technology, Engineering and Mathematics (STEM) and women in leadership and governance of HE institutions. This continual loss of women in the education system is a global concern, especially in the developing regions and countries such as Kenya.

Kenya has registered tremendous achievements in providing access to education despite the inequalities that are traceable to colonial policies entrenched in exclusionary practices. These policies divided Kenya into colonial administrative units, with some regions ending up being more developed. This exacerbated the inequality in the socio-economic sector (Mulongo, 2013) and influenced the provision of educational amenities. In turn, this resulted in gender variations in access to education (Alwiya and Susanne, 2004), dictated by the economic status of one's family (UNESCO, 2005), and level of sensitivity, particularly to female education.

In line with the Sustainable Development Goals (SDGs), the Government of Kenya has prioritized education as a basic human right to all, to address the inequalities and imbalance in the sector, more so in the female population. Vision 2030, which is the guiding development blueprint, emphasizes inclusive education for eco-

conomic growth and development. It provides a road map for formulating various policies that support mainstreaming of gender in Kenyan education system. Under Medium Term Plan (MTP) II on education and training (2013-2018), the vision set the target of increasing literacy levels to 90% by 2017, with the focus on access, equity, quality and relevant education from primary through to secondary, tertiary and university levels. The current MTP III (2018/2022) acknowledges regional disparities in access, completion rate, and transition. The plan aimed to provide enhanced loans and bursaries to trainees to enable them to fully participate and complete their education and training. In respect to gender, the plan committed to strengthening equity and gender equality building on MTP II.

Higher education in Kenya can be traced back to the establishment of the technical and commercial institute in Nairobi – the Royal Technical College of East Africa in 1951 – to offer technical courses in the East African region (Onsongo, 2007). The college would later become the Royal Technical College in 1961, and then the Royal College of Nairobi.

Higher Education was transformed through the various eras between Kenyan independence in 1964 and now. Against the backdrop of the need for skilled human resources for an independent Kenya, the only existing institution – The Royal College of Nairobi was upgraded to be the now University of Nairobi on 20th May, 1964, first as a university college of the then inter-territorial Federal University of East Africa. The institution hinged its operations on social sciences marking the genesis of growth of higher education in Kenya (Mutula, 2012). To prioritize education, the government through a blueprint, Sessional Paper No.10 of 1965 entitled “*African Socialism and Its Application to Planning in Kenya*”, emphasized investment in training through university education for social, economic and political development.

The sessional paper heralds the growth of education especially higher education with various programs put in place to enhance access. Through the University of Nairobi Act of 1970, the University of Nairobi was transformed from East Africa University to a full-fledged autonomous university. Since then, tremendous growth has been witnessed making Kenya the country with substantial university education in the East African region (Nyangau, 2014). Between 1970-1984, the University of Nairobi operated in Kenya with an increase in enrollment from 100 students in 1970 to 8,900 students in 1984.

A Presidential Working Group put in place by the government to evaluate the feasibility of a second university supported the establishment of Moi University in 1984. The period between 1979-1990 saw expansion to meet increased enrollment. Kenyatta University was established in 1985 followed by Egerton University in 1987. The government also opened doors for private universities such as the Catholic University of East Africa, University of East Africa Baraton, and Daystar University established in the years 1984, 1989, and 1989 respectively. Onsongo (2007) notes that the expansion was accompanied with the requirement of an increment in enrollment of students in universities from 8,900 to 20,000 in 1989.

The 1992-2000 era saw further expansion and liberalization of university education in Kenya. The Jomo Kenyatta University Of Agriculture and Technology and Maseno University were established in 1994 and 2001 respectively. The 2002-2022 period witnessed further expansion and a regional trajectory adopted in higher education where existing tertiary colleges and Polytechnic have been elevated to universities. Technical University of Kenya was formerly Kenya Polytechnic and Technical University of Mombasa elevated from Mombasa polytechnic. This decision has been criticized as messing with the creation of the required middle-level manpower-

er that is significant for development in Kenya (Anadye, 2019). Higher education management has witnessed drastic changes: the enrollment of government-sponsored students in private universities and a further reform to secondary school exit examinations that has resulted in a reduction in university enrollments, impacting on the module two (parallel) university programs that were cushioning the financially struggling universities.

In the early phases of higher education development very few women featured, a trend which is changing albeit very slowly. The few were enrolled mainly in domestic science and nutrition courses, and education. Gradually, women started to enroll in science courses with the late Nobel Peace Prize winner, Wangare Maathai becoming the first woman in East Africa to earn a PhD in veterinary anatomy at the University of Nairobi. The Laureate managed to penetrate the male university administrative positions by becoming a Senior Lecturer (1975), Chair of Veterinary Anatomy (1976) and Associate Professor (1977). She later scaled the male world by being elected to Parliament (2003 – 2005) and intensively campaigned for the protection of the environment. Not many women manage to break the ceiling glass in both academia and practice. It is for this reason that the case of women's participation in higher education is the subject of this study.

3.2 Advancements in women participation in higher education: policy and legal framework

The education sector in Kenya, higher education in particular, has witnessed tremendous progress as well as challenges with regards to women over the years. To ensure equal opportunities and access to quality education for all,

in line with international treaties and standards, Kenya is committed to providing opportunities supportive to women and girls. A human rights-based approach embedded in policy and legislation has also been embraced through various legislations and policy frameworks to enhance access to higher education.

In Kenya, the government is committed to providing access to quality education and training to the citizens of Kenya. Under Article 43 on economic and social rights, the Constitution provides that every person has a right to education. To achieve the spirit of the article, a number of legislations have been developed to promote equal participation of women in national development, and commitment has also been shown by the government through the initiation of gender related policies.¹² These policies have provided grounds for gender mainstreaming across all sectors and levels of government.

Kenya is not short of policies, legislations and strategies for ensuring gender equity, but much still remains to be done at a practical level. This subsection provides an overview of some of the instruments in place for ensuring gender equality.

3.2.1 Kenya Vision 2030

Vision 2030, which is the Kenyan long-term development blueprint, espouses gender, youth and vulnerable groups as significant to social, economic and political development. The vision emphasizes access to quality, relevant and globally competitive education, training and research as a priority development agenda¹³. This broad vision is anchored in the Kenya Constitution and supported by several policies, legislations and strategies as discussed below.

12 Wango, G. M., Musomi, M, and Akinyi, C. (2012). Gender and Education in Kenya and Re-Alignment of Education to the Constitution. Nairobi: ITP Human Rights Towards Gender Equality Seminar

13 Kenya Vision 2030. *A Globally Competitive and Prosperous Kenya*

3.2.2 The Constitution of Kenya, 2010

Kenya has domesticated international calls and treaties on the need for access to education with regard to gender equality and the State Department of Gender Article 27(2) of the Constitution provides that every citizen has equal enjoyment of all rights and freedoms without discrimination¹⁴. One of these is the right to education under Economic and Social Rights in Article 43 (f)¹⁵. The Constitution further provides for equality and freedom from discrimination noting that, “women and men have the right to equal treatment, including the right to equal opportunities in political, economic, cultural and social spheres” (Article 27 (3)). To implement these provisions, the State has put in place various relevant policies and legislations as highlighted below.

3.2.3 National Policy on Gender and Development, 2019

This policy sought to address inequality and gender discrimination. It was a follow-up on the National Policy for Gender and Development of 2000 and the Sessional Paper No. 2 of 2006 on Gender Equality and Development which were similarly hinged on mainstreaming gender needs. The policy acknowledges the gains made in gender equality in education, but also observes that the right to education is far from being realized. The policy highlights challenges facing women in fully fulfilling their educational goals (Box 1).

Extract from Gender and Development Policy

Girls and boys from poor and disadvantaged backgrounds drop out of schools for lack of school fees and as parents from poor homes elect to educate either girls or boys taking into account social and structural factors. For instance, girls may be withdrawn from school because their education is perceived as a financial asset to the families into which they get married and not to their biological families who would have paid for it.¹⁶ Socio-cultural practices such as Female Genital Mutilation (FGM) and early marriages which hamper girls’ education.¹⁷ In other instances, biological cycles such as menstruation coupled with poverty, keep girls from poor families (no access to sanitary pads) from attending school during menstruation.¹⁸ Additionally, there are cases of girls dropping out of school in January after the long December holiday due to pregnancy and marriage.¹⁹

3.2.4 National Gender Equality Commission Act, 2011

Established in 2011 by an Act of Parliament, the Commission seeks to reduce gender inequalities and discrimination against all citizens of Kenya. The Commission ensures compliance with gender equality and freedom from discrimination of the marginalized, including women. The Commission is also responsible for coordinating and

14 The Constitution of Kenya, 2010, Article 27

15 The Constitution of Kenya, 2010, Article 43

16 Kasomo Daniel ‘The factors militating against the education of girls: A case study in Kenya’ (2009) *International Journal of Sociology and Anthropology* 116.

17 GIZ ‘Female Genital Mutilation and Education’ (2011) <https://www.giz.de/expertise/downloads/giz2011-en-fgm-bildung.pdf> (accessed 7 July 2016).

18 Sarah Jewitt and Harriet Ryley ‘It’s a girl thing: Menstruation, school attendance, spatial mobility and wider gender inequalities in Kenya’ (2014) 14 *Geoforum* 137.

19 Miriam Gathigah ‘Student Dropout Rate on the Increase despite Free Education’ <http://www.ipsnews.net/2010/12/student-drop-out-rate-on-the-increase-despite-free-education/> (accessed 7 July 2016).

advising on public education programs for the creation of a culture of respect for the principles of equality and freedom from discrimination.

3.2.5 Education and Training Sector Gender Policy, 2015

This policy reviewed the Gender in Education Policy of 2007 with a view to incorporating emerging issues that have implications for gender equity and equality in the education sector. The policy provides for promotion of gender equality and equity as well as coordination and facilitation of gender mainstreaming in national development. By calling for equal rights to education for all, boys, girls, men and women, the policy advocates for more equal participation. The policy prohibits gender discrimination in determining access to education and outcomes.

3.2.6 The Universities Act, 2012

Under section 3(1) (j), the Act provides that the object of university education for all includes promotion of gender-balance and equality among students and employees. Section 6(6) provides for gender consideration in determining the nomination criteria for the members of the Commission, by ensuring balanced gender equity in the commission. Further, section 12(2) stipulates that all appointments take into account gender equity in accordance with the Constitution.

3.2.7 Technical and Vocational Education and Training (TVET) Act, 2013

To ensure gender parity and equality, the Act provides for non-discrimination in gender regarding the admission of students in technical institutions. This has contributed to equality in access to education among women in Kenya. The TVET Authority is mandated to ensure efficient and effective regulation and coordination of TVET training. The authorities' strategic plan for 2018-2022 provides for equity and equal opportunity.

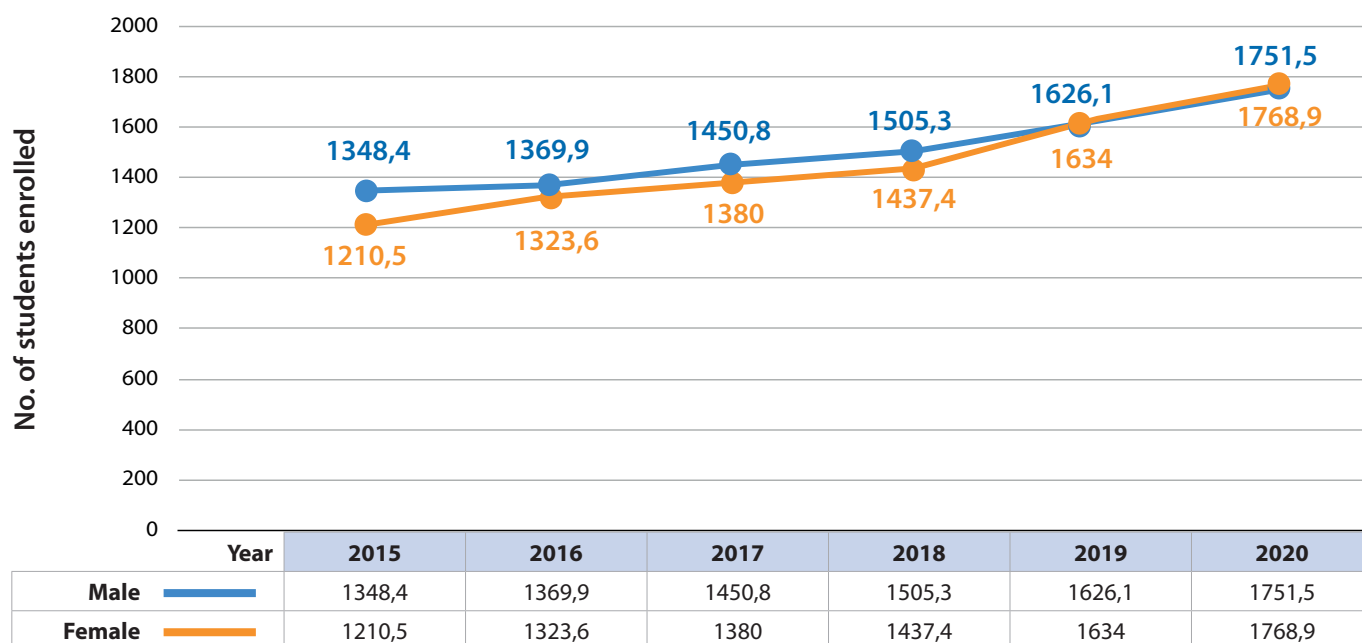
3.3 Challenges to women participation in higher education

In spite of several policies and legislations, access to higher education has been hampered by socio-economic inequities as, for example, in gender. Those falling within the low socio-economic bracket are still underrepresented in accessing higher education. With expansion and high demand for higher education, limited resource investment capacity has been developed in HE institutions to support the expansion. This has resulted in financially incapacitated institutions with students unable to finance their studies. This has prompted reviews of the HE sector, in particular universities, which is still ongoing. Most universities are heavily indebted with many suspending recruitment of new staff and retrenching staff. As a result of the expansion without capacity, and with the increased enrollment, higher education has become more expensive in Kenya.

Lack of resources has hindered the majority of qualified potential students from accessing higher education. The case of women is dire due to related socio-cultural disadvantages which result in them not being prioritized in cases of resource scarcity. Though Kenya has a Higher Education Loans Board (HELB), its funding has not been enough for tuition fees in addition to other expenses for students from poor backgrounds, in particular women. In most cases, the loan is not available to all. Consequently, there is still need for gender equity-based scholarship and grants adoption. This will help eliminate discrimination of gender and those from poor backgrounds (Odebero et al. 2007). There is also a missing link with regards to monitoring and evaluation of gender performance. It is therefore not easy to have a real time status of women's participation in education, an aspect that is useful for learning and making informed policy interventions.

Women are still to fully catch up with men in work places, including in higher education which

Figure 1: Secondary school enrolment in Kenya from 2015 to 2020, by gender (in 1,000s)



Source: Fara, J. (2021). Statista Data.

is significant for self-development. This relegates women to the periphery with regards to wage employment (Fatuma Chege, 2016). This deficit affects women's advancement, including remuneration. According to a report on Kenya's gender pay gap, women in Kenya earn KES 55 for every KES 100 that men take home for undertaking a similar task. The World Economic Forum (WRF) report of 2017 further emphasizes this discrepancy between men and women earnings. The report indicates that men earn KES 350,715 compared to KES 242,771 for women in terms of Gross National Income per capita.

3.3.1 Enrolment

The expansion of higher education capacity has seen enrollment increase in Africa. According to Gyimah-Brempong & Ondiege, (2011) Africa registered an increase of 77% enrollment in higher education compared to 53% increase globally between 2003 and 2008. In Kenya, the implementation of Free Primary Education was

aimed at increasing completion rate in primary schools. This impacted on the transition rate to secondary level which in turn impacted positively on girls. As a result, the enrollment of girls in secondary schools increased significantly from 88,328 in 2003 to 1,180,267 in 2007 (World Bank, 2007). Likewise, since 2003, Kenya has witnessed an expansion in higher education with enrollment in higher education increasing from 58,637 in 2004/2005 to 122,847 in 2008/2009 and to 177,735 in 2009/2010. By year 2010/2011 the enrollment had risen to 231,871, to 276,349 in 2013 and to 324,560 in 2014 (Odhiambo, 2016). As shown in Figure 1 below, there was also an increase in the number of female students in secondary schools. This can be attributed to the elaborate education policies and the political goodwill of the National Rainbow Coalition (NARC) government administration²⁰.

Improvement in gender enrollment is also documented by the Kenya Universities and Colleges Central Placement Services (KUCCPS). The data

²⁰ The National Rainbow Coalition (NARC) was a multiparty alliance in Kenya which acquired power in 2002-2007 replacing the independent party KANU.

shows that in tertiary education, women students sponsored by government to attend universities increased from 22,731 in 2018/19 to 39,702 in 2020/21 representing a 74 percent enrollment increase. At the tertiary level, women slightly exceeded male students in government-sponsored diploma programs in 2016/17 to 2020/21, which is a good sign of progress (KNBS, 2021).

Odhiambo (2012) was of the opinion that there continued to be a gap between boys and girls despite government effort to promote access to education among women. Glaring gender disparities at the higher levels continue to be of concern. According to Wamahiu (2011), in Kenya girls are at a greater disadvantage. In every 100 girls, only 76 complete primary schools compared to 87 boys. Writing on why women lag behind on gender equality in education, Akala (2019) observed that only 30% of the 85% of learners progressing from primary school to secondary level get to higher education, with women accounting for only one-third of the enrollment figure, thereby creating the imbalance experienced in higher education. Akala (2019) further noted that the gender gap which goes beyond higher education to all levels in Kenya is as a result of lack of opportunities, poverty, insecure learning conditions, high cost of education, long distances from schools and the ever-de-meaning cultural practices that have always relegated women to the periphery. This impact reverberates in the access to employment opportunities for women in Kenya.

3.3.2 Employment

Women's participation in higher education is directly linked to their engagement in the labour market. A study by Psacharopoulos and Patrinos (2020) found that there is correlation between the level of education among women and opportunities available in the labor market. According to this study, any extra year of school-

ing among girls over and above the average, ultimately increases wages by 1,020 percent. However, imbalances occasioned by the aforementioned factors have dictated the course to be undertaken by the few that transit to universities and those who pursue their education beyond the bachelor's degree. Ultimately, the penetration of the labor market, even from within the higher education system, is a struggle.

According to the Kenya Economic Report (2020) limited access to education limits employment options and women's involvement in decision-making. As a result, in Kenya, more women than men find employment in the services sector, not so in the productive sector. In 2017, 74.5% of women were working in the service sector compared to 64.2% men. The Ministry of education and related agencies were leading by 36% followed by 12% in public administration, 11%, 10% and 9% in health/social work, household activities and wholesale/retail trade respectively (Kenya Economic Report, 2020).

Many women are employed in the education sector, but there is a vast difference in the numbers of males and females in the institutions of higher learning. This is demonstrated by data from the 22 public universities in Kenya, in which only Karatina University is slightly above (51%) the expected gender parity (Table 1 & Figure 2).

There is also a gender imbalance in university governance. An examination of the leadership in public universities over the past ten years shows male dominance. Apart from Kenyatta University, Technical University of Mombasa, Jomo Kenyatta University of Science and Technology, Pwani University, Masai Mara University, Kirinyaga and University of Eldoret that have been led by female vice chancellors at one point or another, the rest have been male dominated.

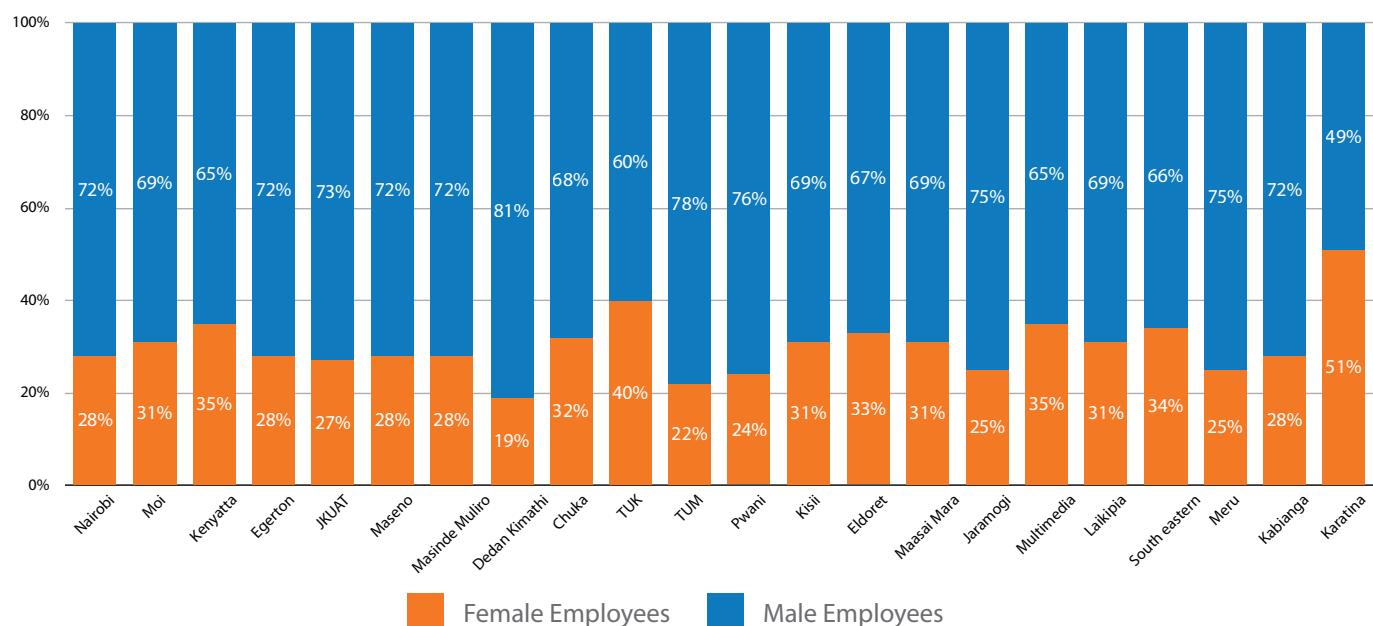
A look at the staff of public universities equally shows the gender gap which the Kenyan Gov-

Table 1: Gender diversity in academic staff in public chartered universities

	M	F	Total	%M	%F
1. University of Nairobi	1,265	482	1,747	72%	28%
2. Moi University	620	278	898	69%	31%
3. Kenyatta University	638	351	989	65%	35%
4. Egerton University	427	163	590	72%	28%
5. Jomo Kenyatta University of Agriculture and Technology	542	197	739	73%	27%
6. Maseno University	296	113	409	72%	28%
7. Masinde Muliro University of Science and Technology	239	93	332	72%	28%
8. Dedan Kimathi University of Technology	111	26	137	81%	19%
9. Chuka University	117	54	171	68%	32%
10. Technical University of Kenya	270	177	447	60%	40%
11. Technical University of Mombasa	185	51	236	78%	22%
12. Pwani University	130	42	172	76%	24%
13. Kisii University	157	70	227	69%	31%
14. University of Eldoret	182	89	271	67%	33%
15. Maasai Mara University	97	44	141	69%	31%
16. Jaramogi Oginga Odinga University of Science & Technology (JOOUST)	88	29	117	75%	25%
17. Multimedia University of Kenya	51	28	79	65%	35%
18. Laikipia University	69	31	100	69%	31%
19. South Eastern Kenya University	95	49	144	66%	34%
20. Meru University	76	26	102	75%	25%
21. University of Kabiranga	93	37	130	72%	28%
22. Karatina University	71	73	144	49%	51%
Total	5,819	2,503	8,322	70%	30%

Source: Mukhwana Koskei and Oura (2018)

Figure 2: Gender diversity in academic staff in public chartered universities



Source: Kenya Economic Report (2021)

Table 2: Gender diversity of employees in public chartered universities

Public Chartered Universities		M	F	Total	%M	%F
1	University of Nairobi	3,411	2,118	5,529	62%	38%
2	Moi University	2,415	1,611	4,026	60%	40%
3	Kenyatta University	1,656	1,264	2,920	57%	43%
4	Egerton University	1,274	724	1,998	64%	36%
5	Jomo Kenyatta University	1,326	908	2,234	59%	41%
6	Maseno University	788	518	1,306	60%	40%
7	Masinde Muliro University	492	263	755	65%	35%
8	Dedan Kimathi University of Technology	415	209	624	67%	33%
9	Chuka University	255	164	419	61%	39%
10	Technical University of Kenya	673	453	1,126	60%	40%
11	Technical University of Mombasa	539	251	790	68%	32%
12	Pwani University	259	121	380	68%	32%
13	Kisii University	714	506	1,220	59%	41%
14	University of Eldoret	729	494	1,223	60%	40%
15	Maasai Mara University	324	228	552	59%	41%
16	Jaramogi Oginga Odinga University	238	110	348	68%	32%
17	Multimedia University of Kenya	175	148	323	54%	46%
18	Laikipia University	373	200	573	65%	35%
19	South Eastern Kenya University	235	194	429	55%	45%
20	Meru University	193	119	312	62%	38%
21	University of Kabianga	274	190	464	59%	41%
22	Karatina University	194	193	387	50%	50%
Total		16,952	10,986	27,938	61%	39%

Source: Mukhwana Koskei and Oure (2018)

ernment has been addressing. No university has gender parity except Karatina University at 50 % male, 50% female. The Universities of Pwani, Technical University of Mombasa and Jaramogi Oginga Odinga University of Science and Technology (JOUUST) are lagging behind at 32 per cent each (see Table 2 above).

A further examination of research grants also shows a skew towards men in respect of the number of research fund applications, successful applications and on-going research (see table below).

Public secondary and teacher training colleges are equally facing challenges of bridging the

**Table 3: Applications and distribution of research funds by gender
2016/17 – 2019/2020**

Research Category	Number of Applications			Number of Successful Applications/Ongoing Research			Amount of Funds Disbursed ¹ (KSh Million)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Masters and Doctorates									
2016/17	435	327	762	188	145	333	117.09	77.23	194.33
2017/18	-	-	-	120	98	218	41.68	26.87	68.55
2018/19	-	-	-	120	98	218	41.68	26.87	68.55
2019/20*	579	467	1,046	114	58	172	46.47	13.42	59.88
Multidisciplinary									
2016/17	511	112	46	158	690.98	283.79	974.77
2017/18	-	-	-	112	46	158	345.49	141.9	487.39
2018/19	-	-	-	112	46	158	345.49	141.9	487.39
2019/20*	811	41	17	58	347.88	158.85	506.73

Source: Kenya Economic Report (2021)

Table 4: Teachers in public secondary schools and teacher training colleges by qualification / category and gender (2016-2020)

Qualification/ Category	2016			2017			2018			2019			2020*		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Master/PhD Degrees	1,346	1,107	2,453	1,285	1,075	2,360	1,085	930	2,015	1,024	896	1,920	909	816	1,725
Bachelor's Degree	46,952	30,704	77,656	51,614	34,341	85,955	55,313	37,554	92,867	59,074	40,551	99,625	63,481	44,628	108,109
P.G.D Education	37	18	55	34	18	52	10	6	16	9	6	15	6	5	11
Diploma	4,914	3,732	8,646	3,643	2,814	6,457	2,343	1,969	4,312	1,951	1,663	3,614	1,763	1,547	3,310
Contract Teachers	-	-	-	-	-	-	54	8	62	52	8	60	-	-	-
TOTAL	53,249	35,561	88,810	56,576	38,248	94,824	58,805	40,467	99,272	62,110	43,124	105,234	66,159	46,996	113,155

Source: Kenya Economic Report (2021)

gender gap, although the situation has improved over the years. Female teachers in the public secondary schools and teacher training colleges are mostly bachelor's degree holders followed by diploma holders (see table below). It is worth noting that the number of female teachers with a bachelor's degree has been increasing yearly.

The Kenya Economic report data, shows that several of the public universities met the third gender-rule threshold provided for under the Constitution. Karatina leading in being responsive to gender parity at 50% while JOOUST, Pwani and Technical University of Mombasa are yet to meet the threshold at 32% each respectively. This is an indication that the policies on gender affirmative action by the government are bearing fruit, albe-

it with challenges in some quarters. According to Koskei (2013) this notable progress has been attributed to the 2010 constitution that advocates for gender equality which most chartered universities are yet to meet. Specifically, the constitution requires that all public appointments adhere to the two-third gender rule, which was not the case before the 2010 Constitution.

3.3.3 Participation in STEM courses

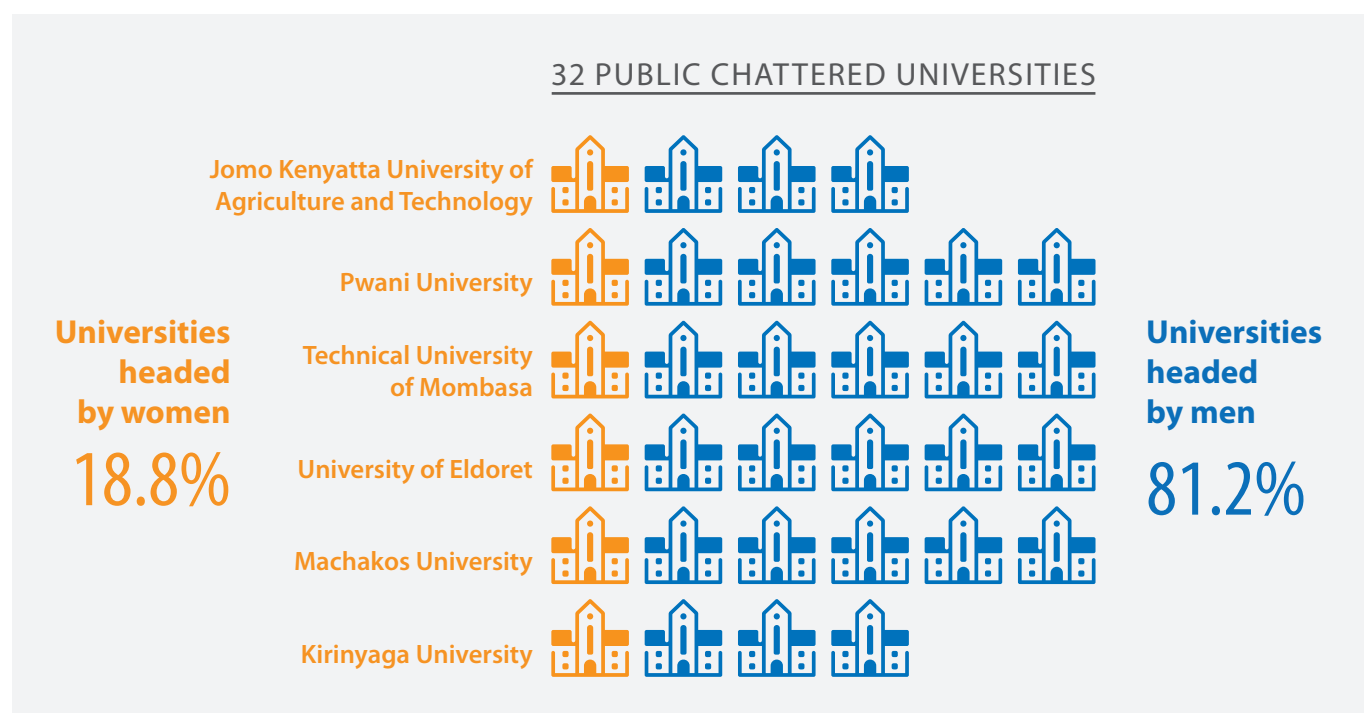
In Kenya, the 2019/2020 placement by the Kenya Universities and Colleges Central Placement Service (KUCCPS) showed that out of the 57,687 students enrolled for STEM courses only 37% were female compared to the majority (63%) who were male. This low enrollment in the technical courses at the university is reflected in the labor market. According to Nyayieka (2019) in 2017, the number of women in sciences and technical fields in Kenya were 21,400 compared to 52,400 men, more than double that figure. A study by the National Gender and Equality Commission on gender mainstreaming in the public sector in Kenya (status report 2013-2015) reported a gender imbalance in the uptake of STEM courses in Kenya. Admissions data from the Technical University of Mombasa showed male predominance with the ratio being

67% male and 33% female students. The situation was not any different in the applied sciences where distribution showed 14% female compared to 86% male and engineering courses indicated 6% female against majority (94%) male.

3.4 Findings from primary data analysis

The analysis of the sample universities regarding female participation in higher education confirm the review of secondary literature. In particular, there is minimal representation of women at the top leadership and governance positions across the Kenyan universities. This is contrary to the constitutional requirement of two-third gender rule fostering gender equality in leadership. However, good representation is noticeable in few selected universities. Out of the 32 public chartered universities only 6 universities are headed by women (18.8%) compared to 26 male led universities representing 81.2 percent. These are Jomo Kenyatta University of Agriculture and Technology, Pwani University, Technical University of Mombasa, University of Eldoret, Machakos University and Kirinyaga University.

The situational analysis from the case studies is not any different with regards to women's rep-



resentation in governance and leadership. From the study, only 29% represents women vice chancellors against 71% male vice chancellors. With regards to the university council, as shown in figure below, there is an average women representation of 37% against male at 63%. Both University of Nairobi and Maseno University are leading in the public universities with high (44%) female representation against 56% male representation. Technical University of Kenya comes second at 38% against 62% men while Bomet University College, University of Eldoret and

Rongo University has 33% women against 67% men, 29% women against 71% men and 22% women against 78% men respectively. Riara University which is private has a balanced gender representation at 50%. (see Figure 3).

The research showed an average representation of women (32%) and men (68%) in the senate across the sampled universities. This is below the two-third gender constitutional requirement of composition of the public service. Though below this threshold, universities score

Figure 3: Composition of University Council by gender

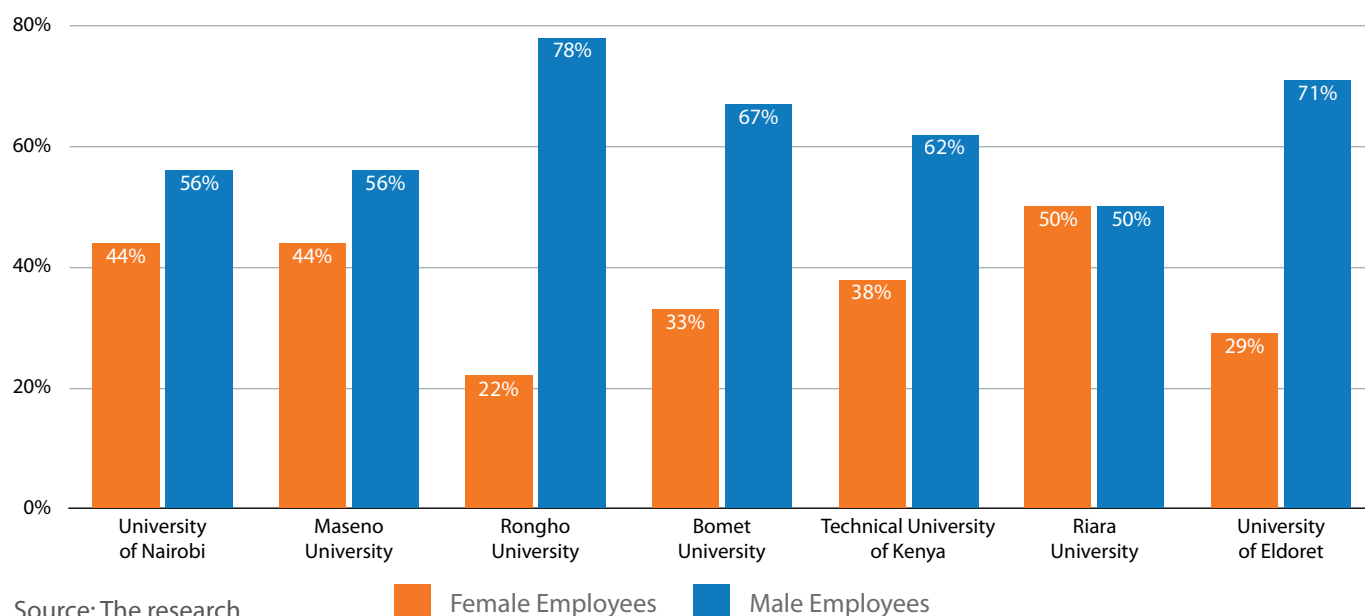
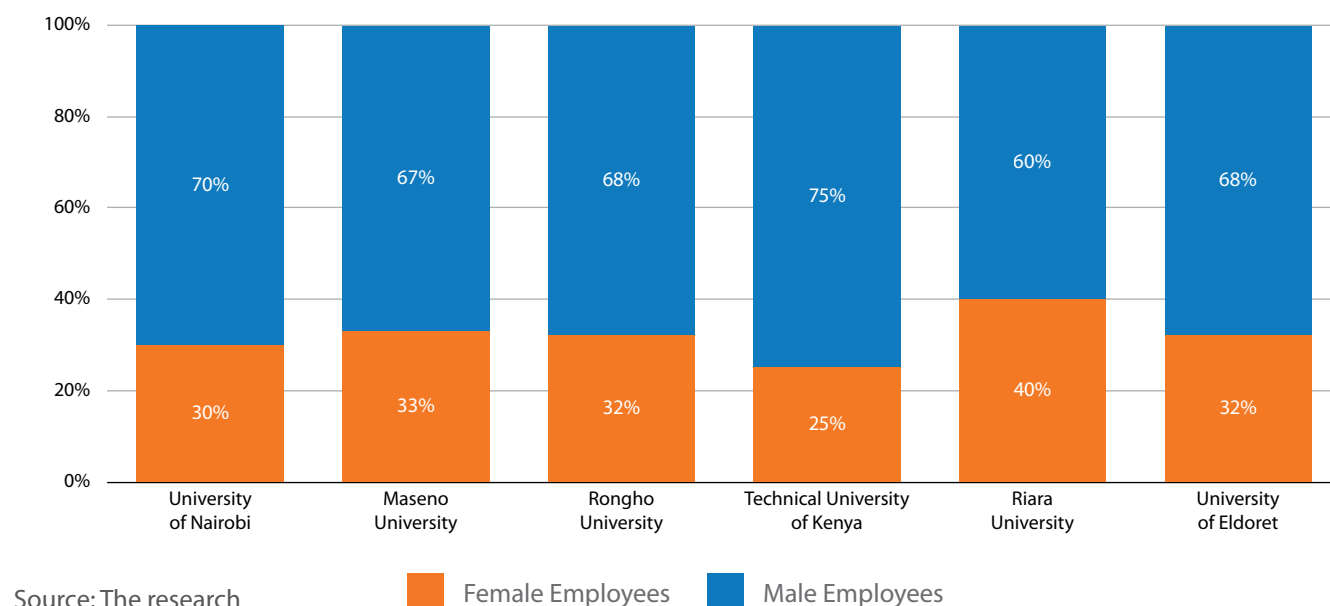


Figure 4: Composition of University Senate by gender



differently, ranging from 25 percent gender representation in Technical University to 40 percent in Riara University (Figure 4). This shows more inclusion in the private university, and merits deeper investigation.

In central management, an average of 32% female and 68% male representation across the universities was registered as shown in the figure below. Bomet University College has the highest (43%) women representation across the universities against 57% male representation. Maseno Universities came second at 40% against 60% followed by University of Nairobi at 29% against 71%. University of Eldoret and Rongo University both have 25% women representation against 75% men with Technical University of Kenya having the least women representation at 13% against 87% men. Bomet University and Maseno University are the only institutions with constitutionally required gender representation among the case studies (see Figure 5).

A very low female representation was registered among the university deans, directors and principals at an average of 25% against male majority of 75%. Bomet University College, Maseno University and University of Nairobi had a representation

of 29% women against 71% men, 25% against 75% and 23% against 77% men respectively. Rongo University had the lowest female representation at 14%. However, University of Eldoret has an outstanding gender representation at 40% women against 60% men as shown in Figure 6.

With regards to the gender representation of professors, the three (3) professors in Bomet University are women representing 100%. Similarly, the six (6) professors in Rongo University are all men representing 100% as shown in Figure 7. The University of Nairobi with the highest (107) number of professors had only 18 women professors, representing 17% against the majority (83%) men. Technical University of Kenya in second position with 30 professors had only 4 female professors representing 13% against 26 male professors representing 87%. Maseno University followed with 28 professors of whom, only 2 are women professors representing 7% against 26 male professors representing 93% while at the University of Eldoret with 21 professors, only 4 were women representing 24% against 13 male professors (76%). Cumulatively, the governance and leadership positions in Kenyan universities is male dominated at 73% against 27% female representation.

Figure 5: Composition of University Central Management by gender

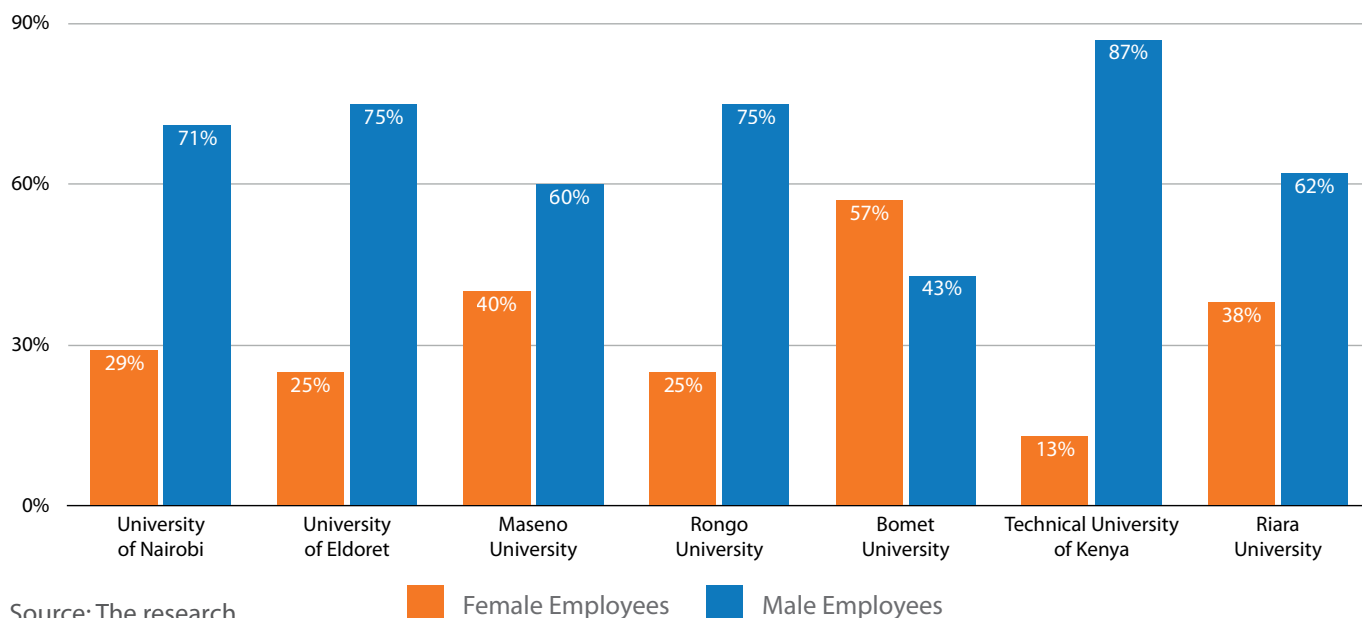


Figure 6: Composition of University Dean / Directors / Principals by gender

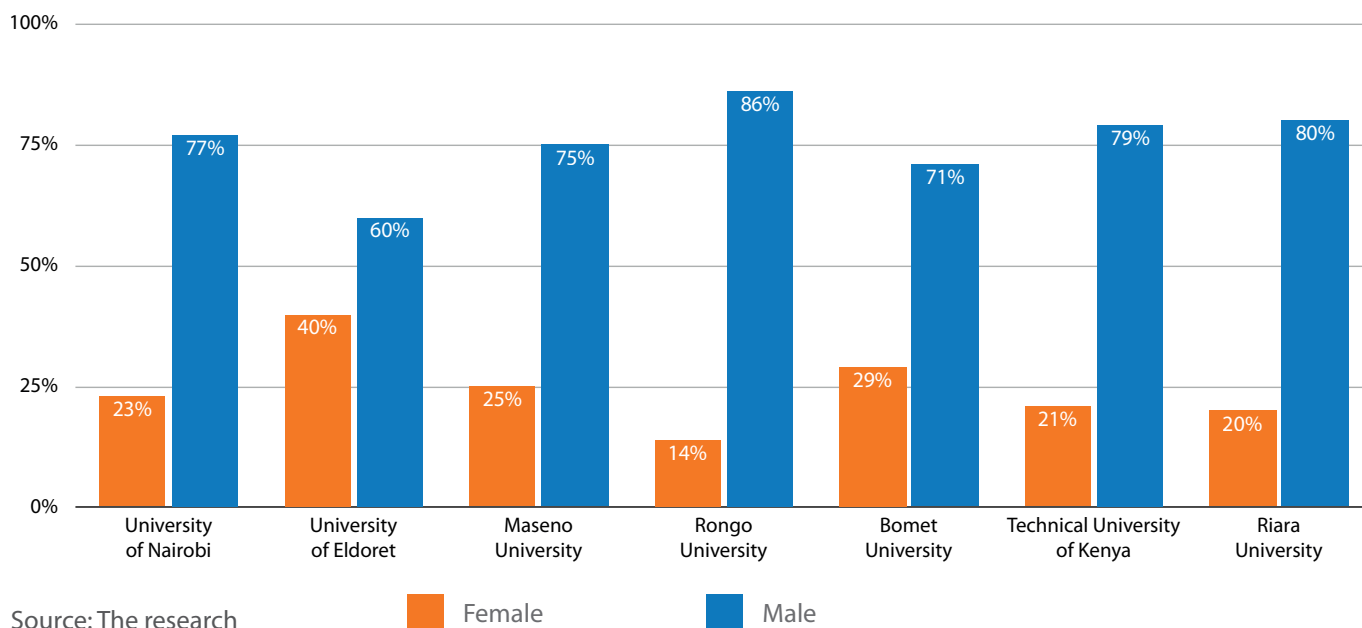
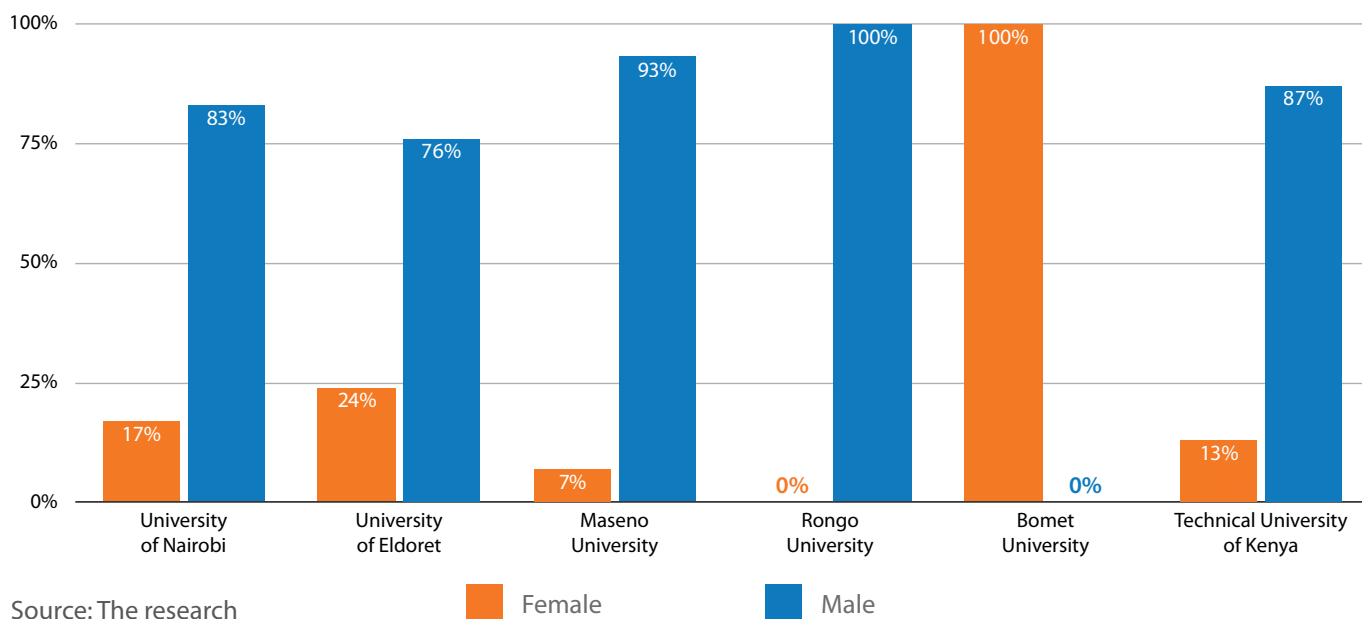


Figure 7: Composition of University Professors by gender



There is a low representation of women among the associate professors in public and private universities. As shown in Figure 8, all the associate professors in Rongo (9), Bomet (3) and Riara (4) Universities are male. University of Nairobi top the list with the highest (220) associate professors, 49 of whom are women representing 22% against majority (171) men representing 78%.

Maseno University, Technical University of Kenya and University of Eldoret had 33% against 67% men, 12% women against 88% men, and 21% women and 79% male representation respectively. Cumulatively, men dominated the position of associate professors at 87% against a low women representation of 13% (see Figure 8).

Figure 8: Composition of University Associate Professors by gender

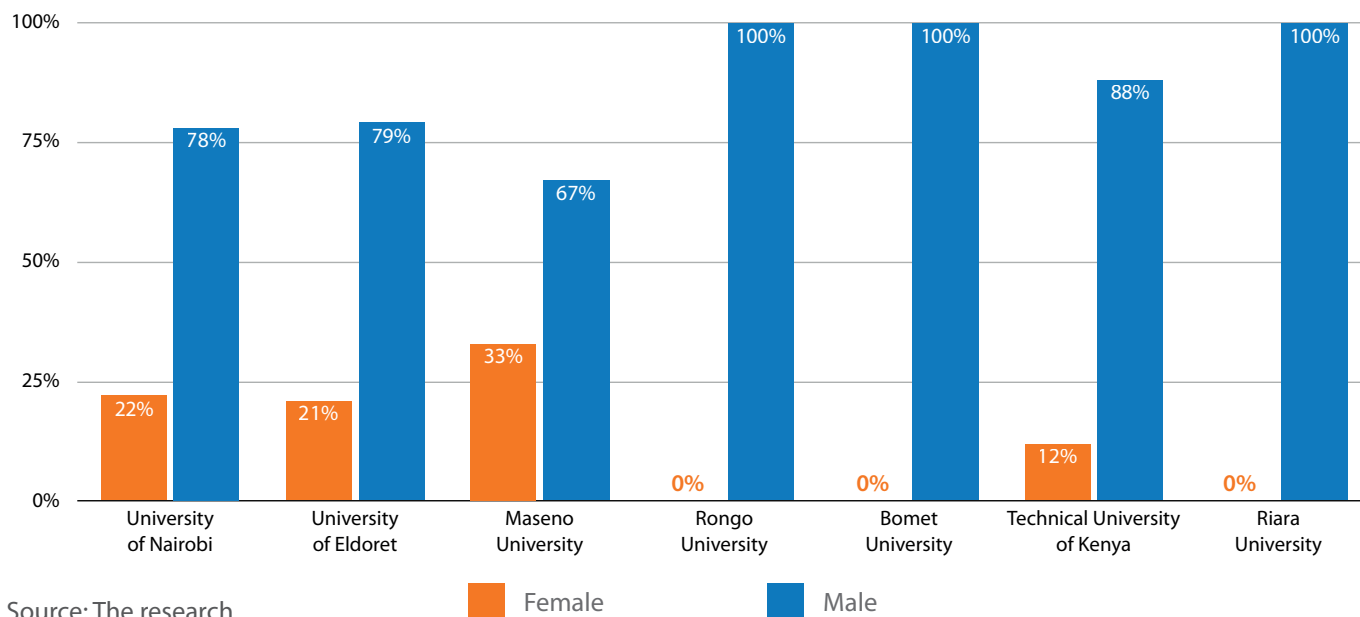
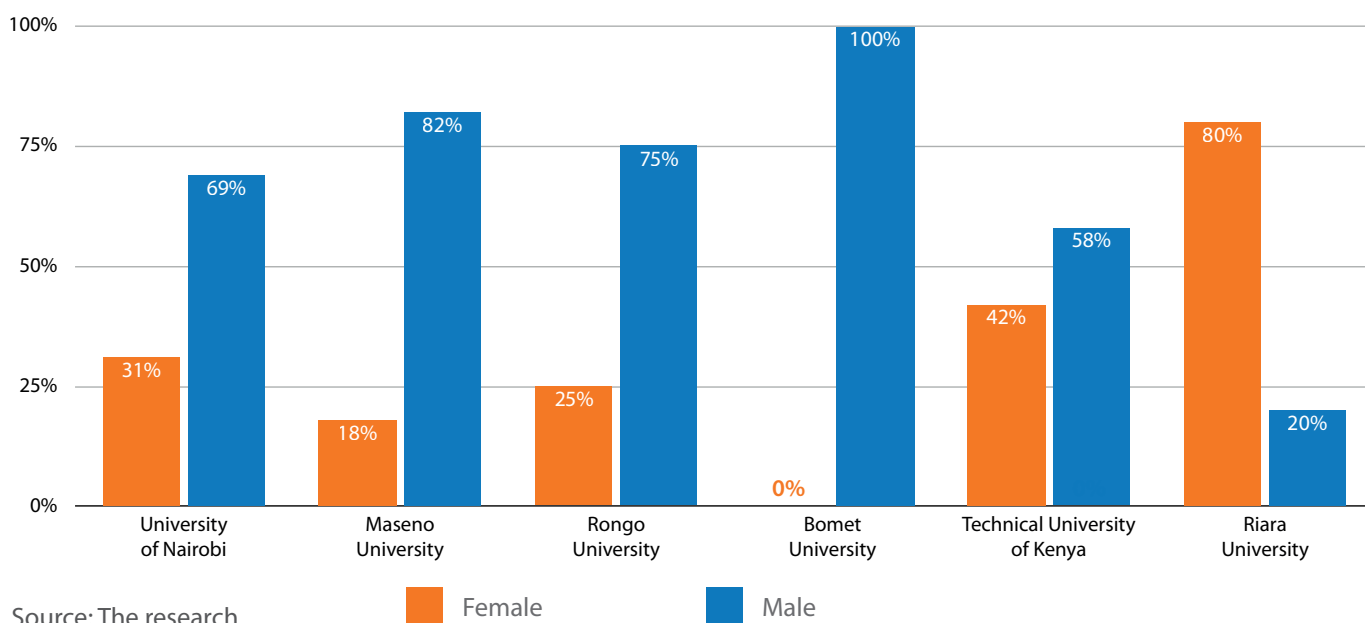


Figure 9: Composition of University Senior Lecturers by gender



In terms of women representation in the senior lecturer position as shown in Figure 9, University of Nairobi top the list with the highest (373) senior lecturers, of whom 115 are women representing 31% against the majority (258) male representing 69%. Technical University of Kenya in second position with a total of 43 senior lecturers, of whom 42% (18) are women against the

58% majority (25) men. The senior lecturers in Bomet University College are all men, however, it is worth noting that Bomet is still a constituent college of Moi University. Rongo University had 25% women against 75% male representation, while Maseno University had 18% women against 82% male representation (see Figure 9).

Figure 10: Composition of University HoDs by gender

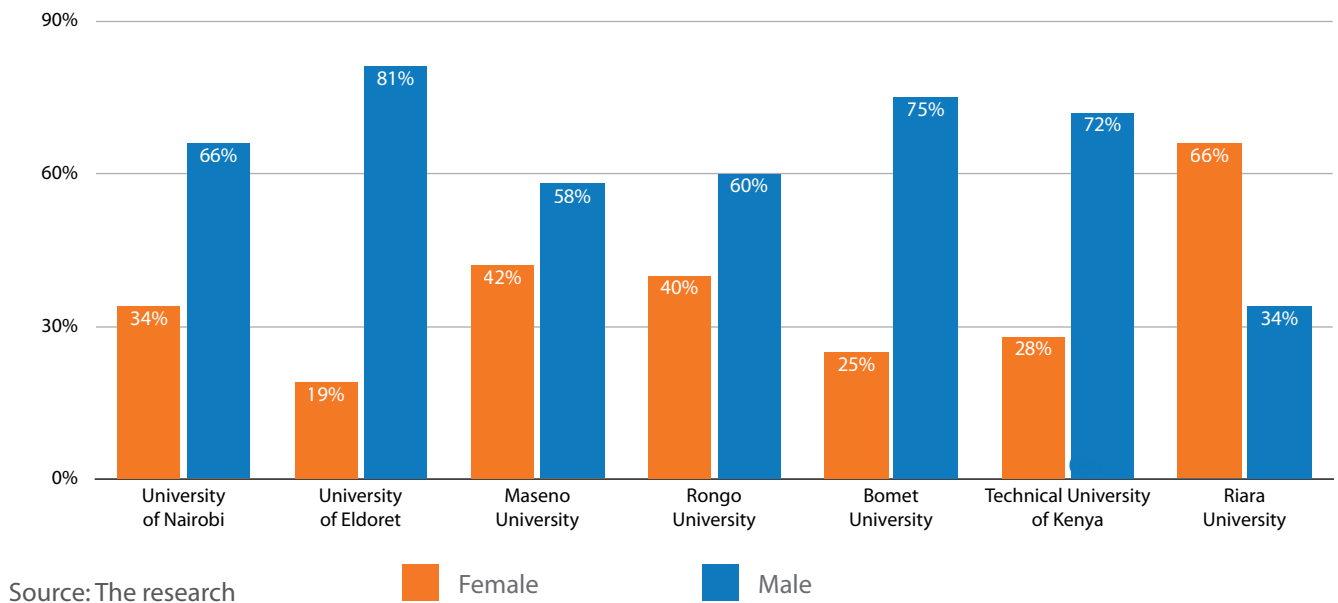
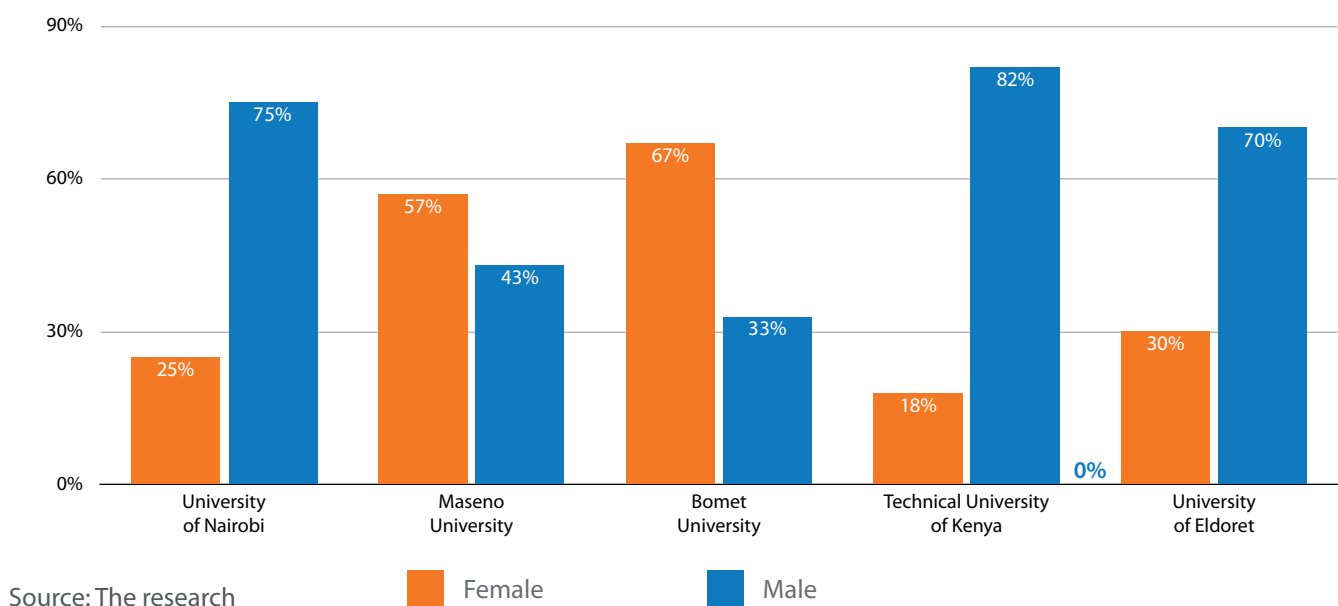


Figure 11: Composition of the University Appointment Board by gender



With regards to heads of departments, there is an average women representation of 36% against men at 64%. As shown in Figure 10, Maseno University leads with 42% women representation against 58% male. Followed by Rongo University at 40% against male representation of 60%. 34% women against 66%, 28% women representation against 72% male, 25% women against 75% male, and 19% women against 81% male representation for University of Nairobi, Technical University, Bomet University College, and University of Eldoret respectively.

Riara University had 34% women representation against the majority (66%) male representation among the heads of department (see Figure 10).

The study found an outstanding representation of women on the Appointment Boards of Bomet University College and Maseno University at 57% women against 43% male, and 67% women against 33% male respectively, with Bomet University College recording the highest (67%)

women representation across all the universities sampled for the case study. University of Eldoret, University of Nairobi and Technical University of Kenya had low women representation on their Appointment Boards at 30% women against 70% male, 25% women against 75% male, 18% women against 82% male, respectively. Cumulatively, the women representation on the Appointments Boards of all the universities sampled is 39% against 61% male representation as shown in Figure 11. This falls within the requisite constitutional provisions. However, the individual universities, in particular the University of Nairobi which is the largest in the country, need to do more to implement the already existing gender mainstreaming policies in the Institutions of Higher Learning in Kenya (see Figure 11).

3.4.1 Factors considered in appointment of women in leadership positions

A Doctor of Philosophy (PhD) is a key requirement for one to get a top leadership position in the institutions for Higher Education in Kenya (Onyambu, 2019), and contributes in part to the skewed gender outlook. Onyambu's study found that the majority (71%) of PhD holders

in Kenyan universities are male against 29% female representation. This study investigated the main factors considered by universities in hiring for positions of leadership. Qualification in terms of experience scored 100% followed by potential leadership qualities (86%), formal preparation (71%), effective management skills (57%), next step for upward mobility (57%), affirmative action compliance (43%), reward for hard work (29%) and expertise in community relation and good mediation skills (14%) as shown in the Figure below.

3.4.2 Factors inhibiting women joining higher education

There has been increased representation and participation of women in political positions in Kenya. However, this is not the case with the management of institutions of higher education. Various inhibiting factors are at play. As shown in the table below, the Likert scale analysis of the data from the study characterized the inhibiting factors to be socio-cultural, institutional and individual. At the individual level, the majority (72%) agreed with the perception that women demonstrate behaviors that prevent develop-

Figure 12: Considerations when hiring and appointing women for leadership positions



Source: Research Findings

ment of sisterhood and support which impact on their advancement to leadership positions. Almost an equal number (71%) cited difficulties in building and maintaining positive relationships with female colleagues, while 57% strongly held the perception that women in senior organizational positions tend to dissociate from members of their own gender which blocks their ascension to higher positions.

Culturally, slightly over half (57%) of the respondents maintained that career women are frequently torn between family and work responsibilities, while an equal percentage (57%) agreed with the assertion that traditional societal biases of male against females is a key inhibiting factor to women's progression to leadership positions.

Institutionally, the majority (71%) held the view that weaknesses in implementation of existing inclusive policies by universities is a major impediment to women's progression to leadership position. The study findings confirmed the existing policies with majority (72%) attributing women underrepresentation to leadership positions to the absence of gender inclusive policies in higher education institutions. Other institutional inhibiting factors include: bias in appointment bodies (58%), structural problems in institutions that prevent women to ascend to leadership positions (58%) and lack of regulatory obligations for universities to allocate ratios for women in leadership (50%). Conversely, majority (86%) of sampled institutions disagreed with the view that women are being discriminated against and lack support from men in authority and male colleagues. Similarly, 71% disagreed that women are considered ineffective in decision making (see Table 5).

3.4.3 Participation in leadership

In order to enhance women's progression in leadership position in higher education, it is in-

cumbent on higher education institutions to put relevant strategies in place. Key among these are the existing gender policies and mainstreaming programs shown in the Table below. At the policy level, the consensus of the institutions under study was that implementation is of the essence. There was need to undertake an assessment of the efficacy of the existing policies, the development and implementation of gender inclusive policies for leadership in higher education institutions, and the implementation of affirmative action for leadership positions. Similarly, all the institutions called for the revision of laws to make it obligatory to have women in governance and leadership organs in universities. This has the potential to ensure adherence to the constitutional requirement that secures affirmative action, including the two thirds rule regarding the representation of each gender in any appointment, so as to address gender imbalances in leadership positions.

Institutionally, all the institutions under study (100%) emphasized the need to build the capacity of women to engage in gender-responsive research, and to nurture gender-responsive organizational environment. This has potential of creating a critical mass of potential women leaders in various universities, and active participation of women in leadership. The study also encourages an open competition rather than nomination for the top positions, as well as undertaking gender awareness campaigns among different stakeholders.

A high percentage (86%) supported the implementation of institutional mentoring programs for staff, and establishment of women's career growth funds to support women's progression. This corroborates the findings by Kedir Ahmed (2021) that attributed the lack of academic qualification to the setback in the ascension of women to senior leadership positions in higher education institutions. Similarly, 86% call for

Table 5: Major factors inhibiting the progression of females

Inhibiting factors	Strongly Agree	Agree	Disagree	Strongly Disagree
1 Disconnect between national laws and university policies	43%	14%	29%	14%
2 Structural problems in institutions that prevent women to ascend to leadership positions	29%	29%	13%	29%
3 Absence of gender inclusive policies in higher education institutions	14%	14%	43%	29%
4 Biases of appointment bodies in the institutions	29%	29%	29%	13%
5 Lack of adequate qualifications by females	14%	14%	43%	29%
6 Weaknesses in implementation of existing inclusive policies	29%	42%	0%	29%
7 Traditional societal biases of males against females	43%	14%	14%	29%
8 Lack of regulatory obligations for universities to allocate ratios for women in leadership	50%	0%	33%	17%
9 They Demonstrate behaviors preventing development of sisterhood and support where all women can advance the leadership	14%	58%	14%	14%
10 Apparent tendency of women in senior organizational positions to dissociate from members of their own gender and blocking other women's ascension in organizations	14%	43%	43%	0%
11 Tendency to engage in female power struggles within Higher Educational institutions	14%	29%	57%	0%
12 Blaming others for their problems rather than taking responsibility for actions	14%	43%	29%	14%
13 Difficulties in building and maintaining positive relationships with female colleagues	43%	28%	29%	0%
14 Career women being frequently torn between family and work responsibilities	57%	0%	0%	43%
15 Failure to apply for advertised senior positions	43%	0%	0%	57%
16 Women often lacking freedom of geographic mobility which impedes their career advancement.	43%	0%	0%	57%
17 Women valuing personal relationships more than power in institutions of higher learning	43%	14%	14%	29%
18 Women considered not as effective in their decision making as men	29%	0%	57%	14%
19 Women being considered "emotional" and "indecisive," thus considered not suitable for leadership position	29%	14%	28%	29%
20 Women having multiple roles like looking after children, parents and husbands that prevent them from taking leadership positions	14%	29%	0%	57%
21 Eligibility for promotions emerging at the crucial period when childbirth is most important.	43%	14%	0%	43%
22 Women being discriminated against lacking support from men in authority and male colleagues	0%	14%	57%	29%
23 Lack of on-campus facilities and support services, namely, day care/ elderly care center, discouraging women from taking a responsible position.	14%	29%	14%	43%
24 Negative attitude and dominating behaviour of male faculty, issues of personal safety, and lack of gender sensitization or stress management programs.	43%	14%	29%	14%

Source: Research Findings

changing the patriarchal traditional norms and perceptions regarding female leadership within higher education Institutions. Finally, there is the need for effective orientation in the institutional policies, procedures, guidelines, and job descriptions of senior leadership positions, and to de-

velop a uniform process of accessing leadership positions (86%) as well as a uniform definition of women leadership (71%). Some called on the universities to apply a rotational approach for top positions (43%) to provide opportunities for qualified women leaders (see Table 6).

Table 6: Mechanisms for ensuring gender equity and equality

	Mechanisms	Yes	No
1	Implementing affirmative actions for some leadership positions	100%	0%
2	Developing and implementing gender inclusive policies for leadership in HEIs	100%	0%
3	Revising laws to make it obligatory to have women in governance and leadership organs	100%	0%
4	Undertake a candid assessment of the efficacy of the existing HEIs policies	100%	0%
5	Developing a uniform definition of women leadership	71%	29%
6	Developing a uniform process of accessing leadership positions in HEIs	86%	14%
7	Changing Patriarchal traditional norms and perceptions regarding female leadership	71%	29%
8	Implementing institutional mentoring programmes for staff and emerging leaders	86%	14%
9	Creating a critical mass of potential women leaders in Higher Education	100%	0%
10	Building capacity to engage in gender-responsive research	100%	0%
11	Nurturing a gender-responsive organizational environment that allows women to thrive in leadership	100%	0%
12	Conducting gender awareness campaigns among different stakeholders	100%	0%
13	Establishing women's career growth funds in HEIs	86%	14%
14	Orientation to the institutional policies, procedures, guidelines, and job descriptions of the senior leadership positions	86%	14%
15	Encouraging open competition than nomination for the top positions	100%	0%
16	Applying a rotational approach for top positions	43%	57%

Source: Research Findings




4 South Sudan

4.1 Background

Higher education in the Republic of South Sudan, like the country, is fairly new as an organization or government. Unlike most ministries of the National government, it was established for the first time following the declaration of independence of the country on 9th July, 2011.

Nevertheless, Higher Education in South Sudan, as part of a universal concept, refers to

education offered at post-secondary level. The institutions are where students are expected to acquire knowledge; contribute effectively to its productions; and develop critical faculties. However, as already noted, like the country, it is quite new as an organization or ministry. As a result, the majority of those serving within it, as well as the general population/public are not familiar with its vision, mission, motto, core values and wide-ranging objectives. The details of these are as follows according to MoHEST (2015):

		
<p>Vision To achieve relevant, accessible, sustainable and quality Higher Education.</p>	<p>Mission Ensure Higher Education Institutions in the Republic of South Sudan have recognizable and relevant national, regional and international standards.</p>	<p>Motto Commitment to quality and relevance.</p>
<p>Core Values</p> <ol style="list-style-type: none"> 1. Strive for academic research, community services and excellence 2. Promote good corporate culture 3. Enhance professionalism and integrity in service delivery 4. Improve clients and stakeholders relation and care 5. Ensure team work and respect for partnership 6. Endeavor for creativity, research and innovation 7. Build an integrated and peaceful society 8. Merit-based access to Higher Education 		<p>Strategic Objectives</p> <ol style="list-style-type: none"> 1. To meet the learning needs of South Sudanese Nationals, develop and transmit appropriate skills and create relevant and useful knowledge for all. 2. To build highly skilled human resources in order to stimulate, direct and utilize the creative and intellectual energies of the entire population of the country.
<p>Specific Objectives</p> <ol style="list-style-type: none"> 1. Produce Highly skilled human capital capable of re-engineering knowledge based society, and robust economy in the Republic of South Sudan. 2. Provide equitable access to tertiary Institutions in the Republic of South Sudan. 3. Improve and expand infrastructures befitting of the status of world –class Universities in the Republic of South Sudan. 4. Develop effective and efficient management system and service delivery to satisfaction of clients, stakeholders and donor. 5. Solicit funding to manage Higher Education in the Republic of South Sudan. 6. Promote private sector role in the educational field and bilateral donors investment in tertiary education. 7. Establish Higher Education institutions in the Republic of South Sudan. 8. Accredite institutions and evaluate programs for private and foreign Higher Education providers in the Republic of South Sudan. 9. Implement policy and decision of the National Council for Higher Education and relevant authorities. 10. Ensure Higher Education Institutions meet national, regional and international market demands. 11. Promote research, science and technology innovation and skills transfers for national, regional and international development. 12. Strengthen cultural ties through training, partnerships and bilateral donors. 		

Throughout the condominium period when southern Sudan was part of Sudan (1902-1956), it did not have any higher education institutions. All post-secondary institutions for the whole country were established in northern Sudan and concentrated in the national capital, Khartoum. southern Sudan, despite its large physical size, was considered by the condominium authorities "difficult" and the people therefore uneducable at the time. The first entry of southern Sudanese into a post-secondary institution was at Makerere University in the early 1940s.

In 1945, there was a condominium policy pronouncement regarding "attachment southwards" that was intended to join southern Sudan to the East African countries. This was however soon reversed in 1946 because of political developments in northern Sudan and international situation concerning the Suez Canal. It was therefore not until 1975 that the University of Juba was decreed by the then President of the country, General Jaafar Nimery and opened by him two years later in September 1977. This was prompted by the Addis Ababa Agreement of March, 1972, which resulted in the establishment of the autonomous regional government of Southern Sudan, based in Juba.

The current Ministry of Higher Education, Science and Technology (MoHEST) was established on 21st June, 2010 by Presidential Decree No. 62/2010, in accordance with the provision of Articles 55, 56 and 103 [1] of the interim constitution of Southern Sudan [ICSS], and Schedule B of the Interim Constitution of the Republic of Sudan, 2005.

This was as a result of the Comprehensive Peace Agreement signed in Machakos, Kenya, between the President of the Republic of Sudan, Omar Hassan El Bashir and Dr. John Garang Mabior, chairman of the Sudan Peoples' Liberation Movement and Army (SPLM/A), celebrated in Nairobi in December, 2005.

On 9th July, 2011, as a result of a referendum of Southern Sudan, the region attained independence and is now known as the Republic of South Sudan (RSS). The country presently has two ministries of education: Ministry of General Education and Instruction (MoGEI), and the Ministry of Higher Education, Science and Technology (MoHEST).

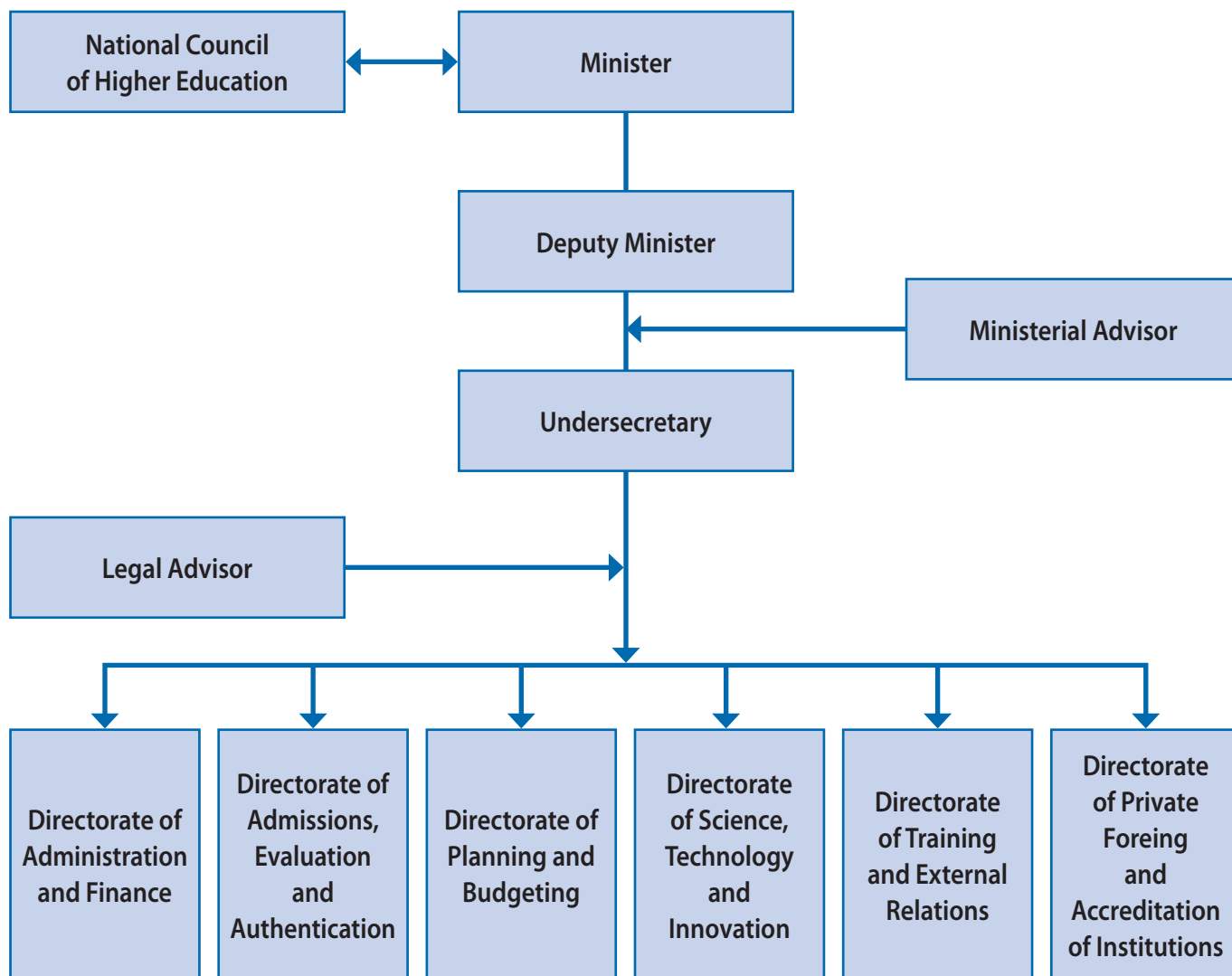
In terms of structure, functions and responsibilities, the Ministry of Higher Education has six (6) Directorates plus the National Council for Higher Education, all headed by an Undersecretary. These include: 1. Directorate of Administration and Finance; 2. Directorate of Planning, Budgeting and Grants; 3. Directorate of Training and External Relations; 4. Directorate of Admission, Evaluation and Authentication; 5. Directorate of Science, Technology and Innovation (STI); 6. Directorate of Accreditation of Private and Foreign Higher Education Institutions; and 7. National Council for Higher Education

In accordance with Article 12 [a] of the Higher Education Act 2012, each Directorate is a secretariat to the six permanent Committees of the National Council for Higher Education. These directorates are professional units headed by Directors General, as represented in the attached organogram (see Figure 13).

In terms of positions, the Ministry is led by the Undersecretary (PhD) and has the following Directorates and Departments (see figure 14).

There are seven Directors General of whom only one is female (14%). There are twenty-five departments, eighteen of which are presently filled by males (62%); and five of them by females (38%). The Ministry is guided by a policy making body known as the National Council for Higher Education that reports to the Chancellor of universities (the President of the Country) on matters related to Higher Education general policies. The Council currently comprises 38 members, of whom 33 are male (87%), and five female (13%).

Figure 13: Republic of South Sudan, Ministry of Higher Education, Science and Technology



Source: MoHEST, Structures, Functions & Duties (2015)

Figure 14: Republic of South Sudan, Ministry of Higher Education, Science and Technology, Directorates and Departments

Directorates	Departments	Filled Positions	Male	Female
Administration & Finance	4	3	2	1
Planning & Budgeting	4	2	1	1
Accreditation, Private & Foreign HE	3	3	2	1
Training & External relations	3	3	2	1
Admissions, Evaluation & Authentication	3	3	3	0
ST & I	5	3	3	0
Secretariat, National Council	3	1	0	1
Total	25	18	13	5

Source: MoHEST, Structures, Functions & Duties (2015)

Of all the Directors General of the Directorates of MoHEST, there is only one female (16.6%). If we add the Executive Directorate of the National Council and the Undersecretary, making a total of 8 leadership positions, the percentage female is 12.5 %. This is far below the 35 % of the leadership positions allocated to females by the 2018 Peace Agreement and even the previously stipulated 25% in the constitution. However, considering the history of female participation in education in the past, specifically in the Ministry of Higher Education, Science & Technology and eligibility requirements in terms of academic qualifications, the current situation is not totally surprising.

In terms of the composition of these institutions, there are two major groups, as listed below:

4.1.1 Public universities

There are five (5) public universities in South Sudan.

In terms of administrative structure, each of these institutions is organized as follows:

1. Central administration, which comprises a) Vice Chancellor (VC); b) Deputy VC (Academic Affairs); c) Deputy VC (Administration & Finance); d) Registrar Academic Affairs/Academic Secretary; and e) University Librarian.

2. Deans and Directors of Colleges/Faculties/Centers, which comprises a) Dean/Director; b) Deputy Dean/ Deputy Director; and c) Head of Department (HOD).
3. Academic Hierarchy/Professorate, which comprises a) Professor; b) Associate Professor; and c) Assistant Professor.

Between 1975 and the signing of the Comprehensive Peace Agreement (CPA) in 2005, three universities were established in southern Sudan. These were University of Juba (1975), University of Bahr el Ghazal (1991) and Upper Nile University (1991). Though the universities were originally established in their respective locations in the South: Juba, Wau, and Malakal, they were all eventually moved to Khartoum, the nation's capital, during the two long decades of the Sudan Peoples' Liberation Movement (SPLA) war (1983-2005) - first, University of Juba in 1989, followed in 1992 by University of Bahr El Ghazal and Upper Nile University.

In this situation of exile, the highest number of admissions attained by the three institutions was a total of 3,000 students, a mere 4% of the total admissions into Sudanese universities (Akec, 2021). The universities then started to return from exile during the interim period (2005-2011). Bahr el Ghazal was the first to do so, followed

Table 7: Public universities in South Sudan

University	Location	Opening Date
University of Juba	Juba	1977
Bahr El Ghazal	Wau	1991
Upper Nile University	Malakal	1991
Dr. John Garang Memorial University of Science & Technology	Bor	2008
Rumbek University	Rumbek	2008

Source: MoHEST National Council (2012)

by Upper Nile and finally University of Juba in 2007. However, by independence in 2011, the numbers of public functioning universities had increased to five with the additions of Dr. John Garang Memorial University of Science and Technology and Rumbek University. A serious consequence of the separation of South Sudan from Sudan was that the three oldest universities which were heavily dependent on Sudanese staff suffered acute staff shortages.

Financial support from the Government for Higher Education, as was the case for the rest of the education system, has been challenging. Funding for universities has been insufficient. External partners in higher education were greatly lacking, unlike the case of basic education. Yet, students and the government have been resistant to any attempt to raise fees in order to make up for insufficient funding for government universities (Akec, Ruforum Report, 2021). In the case of University of Juba, for example, there are in fact hardly any partners to support the implementation of practical work in the limited existing laboratory and workshop faculties, let alone expand them to cope with the large numbers of students being admitted into the university in recent years. This is therefore the challenge facing the implementation of STEM specialization in the institution and the rest of the universities. They all lack workshops and laboratories for training in practical work. This lack of financial support to the universities in the form of scholarships has also tended to affect the participation of female students in higher education as a whole, including teacher training.

4.1.2 Private and foreign universities

Private and foreign universities started to mushroom in the country, during the interim period (2005-2011). On the establishment of the Ministry of Higher Education, Science and Technology at Independence, a committee was established by the Ministry to assess their eligibility quali-

cations in terms of availability of physical facilities, equipment for practical work, and qualified and experienced academic personnel.

Most of the so-called universities were found to be lacking in the provision of the basic services of a university. It was therefore recommended that they be closed. Those currently open largely belong to local religious organizations. All were however advised to drop the title of university and encouraged to use that of University College as it normally takes time to earn the title of a fully-fledged university. The Table below gives the current private and foreign University Colleges, including their locations and accreditation dates (see table 8).

The years in which the private and foreign university colleges were accredited shows that they were opened at least five years after the establishment of the Ministry of Higher Education. Secondly, the majority of the universities are located in Juba. In fact, even an institution like Nile Theological College, though its official location is Malakal, it is currently based in Juba. It is therefore only Mary Help College of Bahr-el-Ghazal that is based in its original location, which is Wau. The main reasons for this concentration in Juba is the lack of security in locations outside Juba, the nation's capital. This relocation also applies to the general population who are largely drawn to Juba. As a result, a large population of educated youth who are seeking post-secondary education have moved into the city of Juba.

Besides the issue of security, the concentration of foreign private institutions of Higher Education in Juba is partly influenced by the presence of qualified and experienced academics in Juba, in particular those at the University of Juba.

4.1.3 Teachers Training Institutes (TTIs)

The third category of post-secondary institutions of higher education are the Teachers Training

Institutes (TTIs). Under normal circumstances, these are usually affiliated to the college or faculty boards of universities from the time they begin the process of establishment, regardless of whether they are government sponsored or private institutions.

In almost all African countries, the universities to which teacher training institutions are affiliated help to elevate them by submitting regular reports to the national body responsible for teacher education. This sponsorship continues until the graduation of the first batch of students to be admitted into the college or institute. The advantage to the new institution is national recognition and the opportunity for the graduates

to be employed throughout the country as qualified teachers.

In the case of South Sudan, the number of these institutions was well above ten before the outbreak of the national conflicts in 2013 and again in 2016 (see Table 9).

Currently, there are only four that are functional. Student numbers are equally drastically reduced. The present existing institutions are the following: 1. Maridi NTTI, Maridi (government); 2. Maper NTTI, Aweil (government); 3. Rombur NTTI, Juba (government); and 4. Solidarity NTTI, Yambio (private).

Table 8: Private universities in South Sudan

University	Location	Accreditation Date
Stafford University	Juba	2016
Star International University College	Juba	2016
Mary Help College	Wau	2016
Catholic University College	Juba	2017
South University for Medicine, Science & Technology	Juba	2020
African Institute for Developmental & Leadership Studies	Juba	2021
Saint Mary College	Juba	2021
Nile Theological College	Malakal	2020
Emmanuel Christian College	Juba	2021

Source: MoHEST (December, 2021)

Table 9: Number and percentage of Institutes by State and Ownership

State	Year	Total	Government	Non-Government	Government %	Non-Government %
Central Equatoria	2015	4	2	2	50.0%	50.0%
Eastern Equatoria	2015	4	4	-	100.0%	-
Northern Bahr El Ghazal	2015	2	2	-	100.0%	-
Western Equatoria	2015	3	-	3	-	100.0%

Source: EMIS (MoGEI)

In terms of administrative leadership, each institution is headed by a board of governors (BoG) led by a chairperson. The total membership is normally 15. In terms of academic leadership, each institution is headed by: a) Principal; b) Deputy Principal for academic affairs; c) Deputy Principal for administration and finance; and d) Heads of Departments.

All the TTIs in South Sudan are currently affiliated to the College of Education, University of Juba. They are also guided in their teaching by a textbook produced by the college. This involves the college, especially the staff of the department of education, in a number of joint academic activities as well as the supervision of teaching practice of the institutions as external examiners. The institutes are under the Ministry of General Education and Instruction (MoGEI).

Prior to the outbreak of the 2013 conflict in Juba and its eventual spread to the rest of the country, there were 13 primary teacher training institutes in South Sudan. However, since then, the numbers have been drastically reduced to only four functional ones, three Government and one private. Likewise, student enrollments are small, considering the size of the dormitories and lecture rooms, especially in institutions like Maridi and Rombur. Female enrollments are particularly small, only 45 (18%) out of the total of 243 students enrolled in the affiliated institutes.

Coupled with the inadequate numbers of teachers being produced by the few existing institutes, there is awareness among the 10 state ministries of education, as illustrated with the launch of the new National Curriculum for primary and secondary schools. This is a competence-based and child-centered Curriculum. This means there is a complete paradigm shift from the teacher-centered approach of the existing curriculum. It therefore means that the teachers currently teaching in the schools all over the country,

would need to be retrained in the application of the methodologies required by the new curriculum. Efforts have begun in the form of continuous professional training (CPT). Nevertheless, in appreciation of the new reality, the 10 state ministries of education of the interim state governments – formed as a result of the 2018 Revitalized Addis Ababa Peace Agreement between the government and opposition groups – are calling for the establishment of TTIs in each state to fast track the preparation of the teachers needed for the effective implementation of the new curriculum. This is at present a tall order. The national budget for education has remained very limited since independence. Moreover, as the data of the four institutes indicate, the majority of the tutors in government - owned institutes are part-timers and have no training experience in teaching. The need for the rapid supply of trained tutors is therefore a critical concern. Although the college of education, University of Juba, has developed a curriculum for the establishment of a bachelor's degree program in primary education, funding for its implementation remains a major constraint, as the government lacks funds and the university does not have partners to assist in the implementation of the program. Graduands of this program would be potential tutors for the TTIs.

As regards female participation in the administration of the institutions, there is yet a long way to go. The lack of a support program for trainee mothers while at the institution, means that their academic performance is likely to be affected. Their choice to proceed to diploma programs, which is based on excellent performance, is therefore limited. A possible lee-way is the female tutors' innovative approach to online training being introduced by Solidarity TTI. This may offer a potential opportunity for the Ministry of General Education and Instruction to explore.

Another approach with more potential for a rapid expansion in the numbers of primary school

teachers would be for the Ministry to adopt the approaches implemented by other African countries such as Nigeria and neighboring Uganda. These countries adopted new approaches when their education systems were at the current stage of development of South Sudan. This is basically to recruit additional students for the TTIs from among successful primary 8 leavers and train them for 4 years. If such an approach was adopted in South Sudan, then each of the 10 states could quickly establish a TTI to produce trained teachers, including female teachers for their school systems, who would not only teach, but also serve as role models for the rural populations to emulate.

4.2 Advancements in women participation in higher education: policy and legal framework

The normal advancement of girls' education in South Sudan was severely retarded by northern Sudanese authorities in the wake of the Torit Mutiny in Southern Sudan in August 1955. All elementary (Primary 1-4) and Intermediate schools (Primary 5-8) for boys and girls were shut down for an entire year and reopened only in August 1956 (Forojalla, 2019). However, all-girls schools, whether missionary or government, were not reopened for the following 4 to 5 years. The two secondary all-boys schools (Rumbek and Juba Commercial) and Maridi Teachers Training Institute for Elementary schools, were relocated to Khartoum after several months of closure. There were two main reasons for these decisions.

The first was that some of the boys intermediate schools, for example Juba Boys Intermediate, was occupied by the Sudanese army that had been brought into the South to quell the Torit mutiny; Mundri Intermediate was moved because of the fear felt by northern Sudanese teachers since the school was located far from

where the Sudanese army was stationed. Both schools were moved to Maridi town in the western part of Equatoria province and in turn displaced both the boys' and girls' elementary schools. The boys, however, retained their classrooms, but the girls elementary and intermediate lost both dormitories and classrooms and therefore remained closed.

The second reason was the prevailing insecurity in Southern Sudan. At that time, the highest level of girls' education in Southern Sudan was intermediate schools (Primary 5-8) and there was only one which had opened in April 1955 on the school site in Maridi town. Girls were admitted from elementary schools from the three provinces of Southern Sudan-Bahr el Ghazal, Equatoria and Upper Nile. The closure of the girls' elementary schools lasted for 5 years, but that of the intermediate school was permanent. By the time the missionaries were allowed to re-start the girls' school, almost all the former school girls were either married or pregnant or had given birth.

The next milestone in advancement in girls' education was the establishment of Aboudia girls' Intermediate school in Juba in 1960. The school was named after the military ruler of the Sudan at the time, General Ibrahim Aboud, who ruled the country from 1958 to 1964. He was ousted by a civilian public uprising in Khartoum, led by lawyers and workers Trade Unions. In accordance with the educational policy of the northern Sudanese Self-government of Arabization of Education in Southern Sudan, the language of instruction at the Aboudia School was Arabic.

Perhaps the most critical development in the advancement of girls' education in Southern Sudan was the return of a group of young men and women, after completing their secondary schooling in Uganda, to join Khartoum University in July 1972, following the Signing of the

Addis Ababa Peace Agreement between the Sudan Government and Southern Sudan Liberation Movement (SSLM). These were the children of South Sudanese refugees who had fled to Uganda following the outbreak of fighting against the Sudan army. The Southern Sudanese fighters were led by the military wing of the SSLM, known as Anyanya, under the command of Lieutenant Joseph Lagu. The return of these student refugees was in reaction to the Ugandan policy that denied Southern Sudanese entry into the medical and engineering faculties, leading to the frustration of the Southern Sudanese students. With the signing of the Addis Ababa Peace Agreement, the Sudan Government offered some 50 places for Southern Sudanese students at Khartoum University, the only university in the country.

In 1977, the first admissions to the University of Juba finally materialized. This favored the prospect of girls' advancement into higher education. It did not take place immediately as there were no girls in the first group of students enrolled in the first University colleges -Adult Education and Training, Education, Natural Resources and Environmental Studies, Economics and Social Studies; and Medicine. This was because there were no girls' secondary schools in Southern Sudan at the time. Gradually, however, Southern Sudanese girls who could not find university places in Uganda or had up to 'O' level qualifications, began returning to join the University of Juba. Nevertheless, it was not until the appointment of the first Southern Sudanese Vice Chancellor at the University of Juba in 2007, that the first female Teaching Assistants (TAs) were appointed.

With the formation of the interim Government of Southern Sudan (GOSS) in 2005 and the constitutional requirement that 25 percent of leadership positions be allocated to women, the universities were included and the first two

female Deputy Vice Chancellors were appointed at the University of Juba and Rumbek University, in 2015.

South Sudan communal societies are heavily based on tradition and customs. Consequently, its liberation struggles for leadership have always been predominantly male-led. Women, however, became actively involved in the politics of peace when large scale population displacement took place from the South to the North, particularly into Khartoum during the SPLM/A liberation struggle, 1983-2005. Women, the major victims of the conflict, embarked on the process of peace in different urban centers. They were supported in this effort by the Sudan Council of Churches and foreign partners such as the Embassy of Norway. The value of this effort was that when peace was attained in 2005, the Comprehensive Peace Agreement (CPA), the interim Constitution of South Sudan, section (4a) Article 16, called on all levels of government to "promote women's participation in public life and their representation in legislative organs by at least twenty-five percent as an affirmative action to redress imbalances created by history, customs and tradition". Furthermore, Article 16 (section 2) upholds the right of women "to equal pay for equal work and other related benefits with men". The 2018 Addis Ababa Peace Agreement currently being implemented by both government and opposition groups, has raised women's representation from 25 to 35 percent, in recognition of the status of women's contribution.

In the domain of education, Article 29 (section 1) of the 2011 constitution, amended in 2013, states that 'Education is a right for every citizen and all levels of government shall provide access to education without any discrimination on the basis of religion, race, and ethnicity, health status including HIV/AIDS, gender or disability'. It goes further in section (2) of the same Article

to stipulate that 'all levels of government shall ensure free and compulsory education at the primary level; they shall also provide free literacy education programs'. Consequently, access to and equity in education figure among the top priorities of the National General Education Policy, 2017-2027, (MoGEI, 2016). The main access and equity objective is to increase the participation of all children, youth and adults in general education.

4.2.1 Higher Education Act, 2012

In the case of South Sudan, higher education is regulated by the Higher Education Act 2012. Section 6 of the Act sets the strategic goals and objectives, and establishes the Council for Higher Education as a policy - making body. Sections 8 to 25 defines the functions, powers and membership of the Council and procedures for appointing Vice Chancellors (VCs) and deputy Vice Chancellors (DVCs). The Act further provides a wide range of powers to the Council including in section (14b) the nomination of VCs and DVCs by the Minister of Higher Education, to be confirmed by the President of the Republic. Section 28 in turn, empowers the Vice Chancellors to appoint deans and directors of Centers and institutions at the universities, in consultation with the chairperson of each University Council.

The functions and powers of the Council for Higher Education in (section 12) include: development and formulation of higher education and scientific research policies; accreditation of institutions of higher education; protection of university autonomy; promotion of social, cultural and economic progress; and certification of private higher education institutions. The Council performs its functions through 6 permanent committees and 8 specialized scientific committees. The former follow the form of Directorates General and their departments. The specialized committees (Section 17 (b)) include: Engineering Sciences; Technical and Technological Education;

Agriculture, Veterinary, and Natural Resources; Medicine and Health Sciences; Economics and Social Sciences; Law; Education and Humanities; and Environmental Science. The committees make their recommendations to the Minister of Higher Education to approve, reject or return the curricula for adjustment. The work of these specialized scientific committees is regulated by the Regulation of 2012 Act. The Council for Higher Education is chaired by the designate Minister of Higher Education, Science and Technology while the President of the Republic is the Chancellor of all public universities (Section 20, Higher Education Act 2012). However, in terms of gender, as is the case of the Directorates, the members of the Specialized Scientific Committees are predominantly males.

4.2.2 South Sudan Vision 2040

Another positive higher education prospect is provided by the South Sudan Vision 2040. In 2011, South Sudan developed a long-term strategic plan : 'South Sudan Vision 2040: Towards Freedom, Equality, Justice, Peace and Prosperity for All'. The first of the seven pillars of the Vision focuses on the realization of an 'Educated and Informed Nation'. Accordingly, the plan envisages that by 2040, the country will have a quality education system that will be able to prepare its youth to cope effectively with a global dynamic environment and that the education system will be relevant, of high quality and accessible. This requires the country to have acquired the latest available information technology capable of placing it on the path of becoming 'an educated and informed nation'. In order to achieve this, South Sudan would aim to realize the following strategic objectives.

1. Increase access to general and higher education opportunities.
2. Provide education infrastructure to meet the need of the nation.
3. Build institutional capacity.

4. Design curricula that meet the needs of the people of South Sudan and enhance their international outlook.
5. Improve quality of and wider participation in teacher education program.
6. Improve quality of education.
7. Promote the use of English as a medium of instruction.
8. Promote equity and social change.
9. Promote application of science and technology.
10. Promote access and use of information and Communication Technology.

It is clear that South Sudan has fairly good documents that spell out its future perspectives. However, in higher education, there are no specific directives to the higher education institutions regarding the need to promote gender equality. There are no basic practical gender policies to tackle gender issues such as sexual harassment in all its forms as is being pointed out in emergency education at the College of Education, University of Juba. There are no clear university objectives concerning equitable admission, retention and promotion of women and their monitoring and evaluation. There is the need to address the employment of STEM women graduates to advance women not only to close the gender gap but also to provide role models to other women.

4.3 Challenges to women participation in higher education

The major constraint to women participation in education has generally been the very long period of conflict in the country. This has reduced the country to a fragile state. The characteristics of such a state is that during on-going conflict, women participation in schooling is seriously affected. This starts with the occupation of schools by the army or armed opposition or rebel groups, resulting in the closure of schools. When this occurs, the results are fourfold.

Girls and women cannot go to school. There is high risk of sexual harassment on the journey to and from school, forcing parents to stop them. At home, girls are overloaded with domestic chores and minding younger siblings. It is therefore only boys who have freedom to venture to school. Nonetheless, the boys also run the risk of forced recruitment as child soldiers into any of the armed groups, government army or rebel groups. These situations apply to all levels of the education system, including higher education.

However, when Sudan was one country, a girl student who escapes the above situations and gets admission into higher education is then likely to continue with her studies. The government organized a special Fund under the Ministry of Higher Education that catered for the needs of such students from all over the country. The fund was known as 'Special Student Fund' and was used to secure accommodation in the form of hostels for higher education students according to gender. Food was provided in the hostels, also general logistics covered, including transport to and from lecture sites of individual universities. This was implemented particularly in Khartoum, where quite a number of institutions were displaced from different parts of the country, especially from Southern Sudan. This arrangement continued to be provided to universities in the South of Sudan in the interim period 2005-2011. Unfortunately, since independence, this fund has ceased to exist. This has imposed serious constraints on female students, and on their male student counterparts in public universities. Lack of financial resources may therefore have hindered many qualified potential students from accessing higher education.

Socio-cultural beliefs and influences have made the situation more difficult for women students to meet their financial obligations as they are not prioritized in situations of scarcity of resources. This has resulted in incapacitation of institutions with students in general unable to finance their

studies. In fact, a large number of university students recently appealed to the National Youth Society to help cover substantial shares of their fees. The ideal case approach would be to establish gender-based scholarships for students in higher education. The alternative is to finalize the on-going process of trying to establish a National Student Fund for higher education. A good example of how this could be useful was provided by USAID funding of a Master’s Degree program in Education in Emergencies at the college of Education, University of Juba in 2014-2016. Twelve (12) female students graduated out of a total of 20 students. The program was unfortunately brought to an abrupt halt by the outbreak of the 2016 conflict. Although the college has continued to offer the same course and the numbers of students has increased, unfortunately the number of female students has drastically dwindled. For example, out of the present group of 37 students in the course only 4 (11%) are women because of lack of funding. Constantly in South Sudan, whenever there is resource constraint, male family members are prioritized. Thus, the challenge to women participation in higher education as students or academic staff is real.

4.3.1 Enrollment

The expansion of higher education capacity in South Sudan has been seriously limited following the separation of the country from the

Sudan. Admission into the three oldest universities in the united Sudan was national. However, with separation in 2011, students from Sudan withdraw from the three universities. Since there were few secondary schools in the South, the number of students who met the standards for university entrance were limited. By 2020, the numbers of secondary schools had increased and these were boosted by students from Uganda and Kenyan secondary schools. This is indicated in a study by (Akec, 2021) as shown in the table below.

4.3.2 Employment

There are three kinds of institutions of higher learning considered in the present study; public universities, private & foreign universities and TTIs. A study conducted in 2020 (Akec, 2021) shows that among the total number of professors, associate professors and assistant professors in the 5 public universities, women were 4 (6%), 10 (8%), 17 (6%) respectively. However, the numbers in the two private universities were: 2 professors both male, no associates and 24 assistants, 3 of them females (13%) (see Figure 15).

The results show that out of the total enrollment in the 5 public universities of 12,978, women were 3,325 (26%). Even when the enrollments in the two private universities were added, increasing the total to 13,871, the percentage of

Table 10: Distribution of students according to programme level

Level of Programme	Male	Females	Total
Diploma/Certificate	8,828	3,575	12,403
Bachelor	19,087	6,222	25,309
Post-graduate Diploma	154	17	171
Masters	794	70	864
PhD	15	-	15
GRAND TOTAL	28,878	9,884 (25%)	38,762

Source: Akec (2021)

Figure 15: Employment in South Sudanese HEIs

S/No	Names of Institutions	Category	Professors		Associate Professors		Assistant Professors		Lecturers		Teaching Assistants		Total		
			Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	TOTAL
0	South Sudan	Sciences	23	2	50	5	112	6	426	85	481	67	1092	165	1257
		Social Sciences	46	2	67	5	160	14	481	63	390	89	1144	173	1317
1	Upper Nile University*	Sciences	12	1	30	2	78	5	134	32	141	21	395	61	456
		Social Sciences	10	0	21	1	65	4	170	25	65	10	331	40	371
2	Upper Nile University*	Sciences	3	0	4	1	18	1	73	13	128	20	226	35	261
		Social Sciences	0	0	6	1	30	2	50	5	36	13	122	21	143
3	University of Bahr El Ghazal*	Sciences	5	1	9	2	5		20	6	28	7	67	16	83
		Social Sciences	8	2	14	3	19	3	82	23	142	53	265	84	349
4	Dr. John Garang Memorial University of Science and Technology*	Sciences	3		7		5		90	20	145	15	250	35	285
		Social Sciences	0		5		8		27	3	29	2	69	5	74
5	Rumbek University of Science and Technology*	Sciences	0				2		5		11	1	18	1	19
		Social Sciences	26		21		18	2	73		68		206	2	208
6	Catholic University of South Sudan**	Sciences	0				2		4		3	1	9	1	10
		Social Sciences	0				14	3	35	4	27	9	76	16	92
7	Starford International University College**	Sciences	0				2		39		14		55	0	55
		Social Sciences	2				3		27	1			32	1	33

Source: Research Findings

women remains the same at 26. However, when all the prevailing circumstances of conflict are taken into account, this achievement by women is quite encouraging.

4.4 Findings from primary data analysis

The response rate has been very slow. As already mentioned, the public universities in South Sudan are widely dispersed all over the country and communication in the country is rather difficult and slow. In the case of the private university colleges, these are largely concentrated in Juba, and there are few staff members who are recruited full-time by the in-

stitutions. This means there are limited numbers of available staff members to undertake the responsibility of responding to research questions. Moreover, as indicated in the 2021 study by Akec, there are very limited numbers of female academic staff members who are currently fully employed at the institutions. The institutions are largely dependent on part-time academics from government institutions.

Nevertheless, according to respondents from the University of Juba, the oldest and largest populated institution in the country, followed by Upper Nile University now also located within Juba city, women's participation at governance and

leadership levels is at best below 20 percent. At the professorial level, the highest representation is 5 percent. These are detailed in the following two tables.

The statistics of the two institutions show that female representation at leadership level in no instance has reached 20 percent. This of course

is not unexpected, considering the historical evolution of female education from the very commencement of modern education by the missionaries in South Sudan in 1902.

The Sudanese takeover of power and authority in the country started with the closure of girls' schools in August 1956 for nearly five years.

Table 11: University of Juba

Leadership Level	Number of Females	Number of Males	Percentage of Females	Percentage of Males
University Council	7	29	19%	81%
University Appointments Board	1	13	7%	93%
University Senate	16	100	14%	86%
University Central Management	1	12	8%	92%
Deans/Directors/Principles	7	32	18%	82%
Heads of Departments	9	60	13%	87%
Professors	1	20	5%	95%
Associate Professors	1	59	2%	98%
Assistant Professors	8	135	5%	95%

Source: Research Findings

Table 12: Students' Statistics University of Juba by Colleges / Schools 2021

Colleges	First year		Second year		Third year		Fourth year		Fifth year		Sixth Year	
	M/%	F/%	M/%	F/%	M/%	F/%	M/%	F/%	M/%	F/%	M%	F%
Medicine	273/82.7	57/17.3	210/83	43/17	115/87.1	17/12.9	51/80.1	12/19.9	36/81.8	08/18.2	31/81.6	07/18.4
Business and management sciences	843/88.9	105/11.1	679/87.6	96/12.4	443/80.6	106/19.4	309/80.9	73/19.1				
Law	375/82.4	80/17.6	255/81.5	58/18.5	198/82.5	42/17.5	68/82.9	14/17.1				
Education	187/83.4	37/16.6	125/86.2	20/13.8	66/89.2	08/10.8	52/85.2	09/14.8	04/100			
Social and Economic studies	698/87.3	302/12.7	489/84.6	89/15.4	376/85.1	67/14.9	267/83.7	52/16.3				
Engineering and Architecture	327/81.8	73/18.2	253/80.3	62/19.7	209/85.7	35/14.3	157/91.8	14/8.2	47/90.4	05/9.6		
Natural resource and Environmental studies	667/81.3	153/18.7	358/81.2	83/18.8	396/81.2	92/18.8	98/85.2	17/14.8	185/79.7	47/20.3		
Total	3370/80.7	807/19.3	2369/84	451/16	1803/83.1	367/16.9	1002/84	191/16	272/81.9	60/18.1		

Source: Research Findings

Table 13: Students' Statistics for Specialized Centres 2021, University of Juba

Centre	Male	Male percentage	Female	Female percentage	Total
Human resource development and continuing education	945	85.7	157	14.3	1102
Distance education	179	88.2	24	11.8	203
Languages and Translation	151	81.2	35	18.8	186
Peace and Development	87	88.8	11	11.2	98

Source: Research Findings

Table 14: Number of Students in Postgraduate Programs, University of Juba

Postgraduate programs	Male	Male percentage	Female	Female percentage
High diploma	560	79.7	143	20.3
Masters	1875	93.8	125	6.2
PhD	4	80	1	20
Total	2437	89.9	271	10.1

Source: Research Findings

Table 15: Upper Nile University

Leadership Level	Number of Females	Number of Males	Percentage of Females (%)	Percentage of Males(%)
University Council	-	-	-	-
University Appointments Board	-	-	-	-
University Senate	5	87	6	94
University Central Management	-	7	0	100
Deans/Directors/Principles	4	17	19	81
Heads of Departments	5	51	9	91
Professors	-	4	0	100
Associate Professors	-	12	0	100
Assistant Professors	5	138	4	96

Source: Research Findings

Table 16: Students' Statistics in Upper Nile University

Colleges	First year				Second year				Third year				Fourth year				Fifth year			
	M	M%	F	F%	M	M%	F	F%	M	M%	F	F%	M	M%	F	F%	M	M%	F	F%
Agriculture	64	89	8	11	18	86	3	14	25	83	5	17	21	100			18	90	08	18.2
Veterinary medicine	93	82.3	20	17.7	10	83.3	2	16.7	29	80.6	7	19.4	30	83.3	6	16.7	21	80.8		
Human development/ community development	28	80	7	20	36	92.3	3	7.7	36	87.8	5	12.2	59	79.7	15	20.3				
Computer science	38	79.2	10	20.8	10	83.4	2	16.6	23	79.3	6	20.7								

Source: Research Findings

The long period of civil war between North and South Sudan re-enforced the absence of girls' education in South Sudan. The only beacon of hope was provided by the children of South Sudanese refugees who attended schools in neighboring countries such as Uganda, Kenya and Zaire. The South Sudanese themselves created schooling opportunities for their children in camps around Khartoum for locally displaced populations. Moreover, the endless conflict at the start of independence in 2011 has continued to constrain the advancement of female education. All of this has continued to strengthen the socio-cultural belief held by the majority of the population, especially the pastoralists, that girls are a source of wealth for the alleviation of family poverty or an increment to family wealth.

4.4.1 Factors considered in appointment of women in leadership positions

All the respondents are unanimous that women are hired or appointed in leadership positions because of their potential leadership qualities; they are equally best qualified for positions in terms of experience as well as formal preparation. Other attributes considered for women in leadership positions currently include reward for hard work and being an effective manager.

4.4.2 Factors inhibiting women joining higher education

The survey assessed the different factors that the participants considered as the main reasons constraining the advancements of females in leadership positions within their higher education institutions. A total of 23 evaluation aspects were considered. Unfortunately, for South Sudan, the findings that emerged are from only two (Juba and Upper Nile) out of the five public universities. The issues of distance, security and the fact that this was the first time that such data collection was being conducted, presented a lot of difficulties. It is therefore only some of the critical inhibiting factors that will be summarized. The first factor is that all participants agree (100%) that universities have no obligation to allocate ratios for women in leadership. The second factor is that women have multiple roles, for example, looking after children, parents and husbands, and these prevent them from taking leadership positions. A third inhibiting factor is the weak implementation of existing inclusive policies. However, if these policies do exist, they are not clearly communicated in the institutions. A fourth factor is "women valuing personal relationships more than power in institutions in higher learning". A fifth inhibitor is "women being discriminated against and lacking support

from men in authority and male colleagues". This is in the context of "basis of appointment bodies in the institutions". The sixth inhibiting factor is that women in leadership positions exhibit behavioral patterns that impede the "development of sisterhood and support where all women can advance leadership". This is followed by the fact that "women are considered not as effective in their decision-making as men". Lastly, "women find difficulty in building and retaining positive relationships with female colleagues". These are the main inhibiting factors that have emerged from the analysis of the responses of the participating senior academics from the two institutions who were accessible within the limited time allowed for the research. South Sudan would need more time and resources to undertake this type of research properly.

4.4.3 Participation in leadership

Concerning the suggested mechanisms or strategies needed to increase women's participation in leadership of higher education institutions, 94 percent are considered positive by the respondents and only 6 percent negative. It can therefore be concluded that the suggested strategies and mechanisms on the whole, if applied, can assist in the promotion of women's participation in the leadership of higher education institutions.

5 Uganda

5.1 Background

The number of women in higher education in countries like Uganda still falls below their male counterparts, including in leadership and governance positions across almost all levels of the tertiary education sector. This state of affairs has re-ignited the longstanding issue of and demands for women's representation in higher education and attracted intense debates from both policy makers and academia especially those who champion the feminist agenda. At both country and regional levels, the issue of women's representation in higher education has been a major subject of debate in the context of the broader gender equality and equity discourse in development (Morley, 2005).

In Uganda specifically, Kwesiga (1991) conducted a study of women's access to higher education with the intention of analyzing the factors that affected women's access to higher education in Uganda. The primary conclusion of her study was that in Uganda, the family, society and state acted as if they were constantly weighing the profitability of investing in boys' or girls' education, albeit not in the conventional way of measuring the earnings of educated workers. The focus was on assessing the future practical value of the individual. As a result, lower status within the family structure, lower perceived social value, exacerbated by general economic constraints and deficiencies in the education structure made girls' education, particularly higher education, appear less profitable than that of boys. This obscured the indirect benefits that families and society would reap from higher rates of female participation in higher education.

Other earlier studies have concluded that some universities have made attempts to mainstream gender concerns in their policies and practices (Kwesiga, 2002). Other studies have revealed

that only a few higher educational institutions have actually instituted a system-wide approach to gender mainstreaming (Goode, 2000). There is no real understanding of the exact position of women participation in higher levels and more so on the factors that actually inhibit women's representation in governance and leadership positions. While there is no question that the legal and institutional framework in Uganda has generally been commended on being favorable to gender equality in the country, there are variations in women's representation at various levels of the education sector with the tertiary education sector being the most affected.

In any country, higher education occupies the highest level of the academic ladder. Higher education is the knowledge hub of research and innovation. Those countries which have heavily invested in this subsector have seen a good return of dividends. This argument augurs well with feminists who advocate for increased representation of women in governance and leadership positions to enable them to participate in the production processes of the sub-sector.

Some progress has been made in women's representation in higher education in Uganda. The progress has however tended to be slow and not systematic. Among the current nine public universities in the country, for example, 3 (33%) currently have female vice chancellors. This picture is not different from private universities in the country. At the level of Vice Chancellors of public universities, one of the female vice chancellors has also since joined the Uganda National Council for Higher Education (the regulator of the higher education sector). A closer analysis of the gender parity levels at universities which are led by women can be intrusive. At Kabale University, for example, where the vice chancellor has been at the helm since 2012 and is a known gender activist, the representation of

women in leadership and governance levels is poor. Out of the nine faculties/institutes, none of them is occupied by a female. The situation is better at the University Council level where out of the 23 posts, 10 (43%) are occupied by females. Among the professors, there are 11 and out of these, there is only one (0.9%)²¹ female who is a full professor. At the associate professorship level, there are only nine and there is no female; at senior lecturer level, out of 23 currently in place, only two (8.7%) are females. There are 36 heads of academic departments, and of these, only eight (22%) are females.

Uganda has made some progress in the general policy environment for gender equity. However, the country lacks institutional policies crucial for the success of women in leadership as has been done in other countries. For instance, family-friendly work policies such as generous parental leave provisions, paid maternity leave policy, and flexible work arrangements for female leaders have been adopted in universities in countries like Australia, Canada, New Zealand, Turkey, the United States of America, and the United Kingdom (Nakayiwa, 2017). These are not prioritized in Uganda and this affects the progression of women into leadership positions. The recruitment, promotion and retention policies are gender-biased (Nakayiwa, 2017) and do not clearly indicate a focus on gender equity and equality.

There has generally been a lack of literature that adequately compares the gender differences between university faculties and governance and leadership positions. There has been some research on the relationship between the increase in female participation at undergraduate and post graduate levels of education and their access to senior positions. In these studies, UNESCO has highlighted the assumption that as of the 1970s women have been given the

21 This excludes the Vice Chancellor who is in leadership and management levels.

opportunity to catch up with men in terms of enrollments in school. The growing number of enrolled women heightened their education achievements and thus created opportunities for them to access senior positions (O'Connor et. al 2015).

Across Africa, women used to enroll in limited numbers in higher education despite the fact that there had been global commitments to ensure gender equality and justice in access to education. Recent trends, however, seem to indicate some useful progress. As a result, a new model of higher education management and organization has been called for to substitute a male-dominated one. For instance, the participation of women at the doctorate level is still low and as a result, women do not have access to higher level jobs, positions, voice and wealth as men do (Geoffrey 2020). This is why the emphasis in research on gender inequality is placed on topics such as faculty demographics in higher institutions of learning, gender pay / income gap considered to be areas where women have significantly lagged behind (Muijs et al., 2004).

Even when women's participation is greater, compared to decades ago, there has been gender inequality on issues related to access to higher education for women where numbers of women enrolled are by far less than that of men. This has been attributed to the customs and cultures of previous decades, the pillars of peoples' behaviors. Men are therefore favored more than women when it comes to admission to certain courses in Uganda's higher education system (Geoffrey 2020). Although there is little analysis of the phenomenon of gender inequality in Uganda's higher education institutions, a number of universities have mainstreamed some gender concerns into their policies and practices; others reveal that only a few have instituted a system-wide approach to gender mainstreaming (Onsongo, 2009). According to Geoffrey (2020), structural impediments to gender equality in the

higher education systems explain why high-profile fields of study and managerial positions remain deeply embedded in masculinity. This institutional environment perpetuates a culture of inequality that impacts on women's welfare and development.

Cultural and societal issues still impact on women's ascending to higher levels. The university admission custom and tradition in the country strongly favors men and appears to promote widespread acceptance of masculinity as a norm in the country's public university educational distribution system (Carvalho & Machado 2010). In a study by Morley (2005), it was reported that fewer women from districts located in geographically disadvantaged areas were admitted to public universities from 2009 to 2017. Half of the population of female students were admitted to one of ten universities; eight of 10 in two colleges. The result was the "*Humanities effect*" - with nearly 50 percent of women in the public university education system located in the college of Humanities and Social Sciences at Makerere University. There is also the lack of appropriate support mechanisms. Support encompasses policies, support from senior management, and family support as success factors for women in leadership positions in H.E (Nakayiwa, 2017:991).

5.2 Advancements in women participation in higher education: policy and legal framework

Education policies and their implementation play an important role in challenging gender stereotypes that can liberate women from gender margins. In 1990, the government of Uganda introduced the Affirmative Action policy in the governance of higher education. Through this policy intervention, as of 1991, qualified women were entitled to a bonus points of 1.5 for college admission. The primary purpose of this was to increase the participation of women in higher

education. In 2005, a quota system was introduced as a second high-level strategic measure. This required that 25 percent of all government sponsored public university educational opportunities be allocated through a district population quota-based system, and seventy-five (75) percent through the national merit system. The Ministry of Education subsequently developed the Gender in Education Policy (GEP) which was designed in line with the 10 Year Education Sector Strategic Plan (ESSP 2007-2017) and provided a framework for the implementation and monitoring of a gender-sensitive and responsive education system in Uganda. The key legal and policy instruments for gender in Uganda include: The 1995 Constitution of the Republic of Uganda; The National Gender Policy 2007; The Equal Opportunities Act of 2007; The Gender in Education Policy of 2016; The Public Finance & Management Act of 2015. There are other policy frameworks within individual universities and all are clear on gender considerations. However, University & Other Tertiary Institutions Act of 2001 (UOTIA) (as amended) is not aligned to these instruments.

5.3 Challenges to women participation in Higher Education

The primary reasons for the inequality at higher education levels:

1. The dual roles of women (as care-takers and professionals) is a generic factor that is likely to prevent them from doing what it takes to fulfill the requirements for higher education leadership and positioning in academic governance.
2. The lengthy and bureaucratic processes required of the women to reach these positions is presumably an important factor to explain this poor representation.
3. While most institutions have gender sensitive policies that would ideally promote the representation of women in leadership and governance positions, their implementation has not been seriously addressed.

An analysis of available literature informs on some of the major challenges to women participation in Uganda's higher education:

1. Policy environment: the policy environment within the individual institutions is sometimes unfavorable. In most cases, gender policies are not implemented as colleges and fields of study appear to be largely inept regarding gender issues (Mooly, 2005).
2. Traditional stereotypes: there are still traditional masculine stereotypes which dominate within the individual higher educational institution. Carvalho & Machado found that horizontal and vertical forms of segregation still existed in many higher education systems (Carvalho & Machado, 2010).
3. Structural Impediments: within the higher education landscape, there are still structural impediments to women in leadership and governance representation.
4. Institutional culture and systems: institutional environment perpetuates a culture of inequality that impacts on women's welfare and development.
5. Lack of qualifications by women: the participation of women at the doctorate level drops by nearly 30%. This has a cumulative effect on the actual participation of women in leadership and governance positions in Higher Education.
6. Entry barriers: there are also pre-entry barriers faced by women in their transition from primary to higher levels of education and; entry barriers located at the points of entry in different colleges and fields of study. Onsongo (2009) confirms that those policies that address pre entry and entry barriers and which

take gender parity into account, provided opportunities to disadvantaged students, who otherwise would not have had access to higher education in countries such as Uganda, Kenya and Tanzania (Onsongo, 2007).

7. Multiple role complexities: women tend to balance a number of activities. Even when they have joined academia, they tend to make priorities for their families at the expense of research and academic publications which are a requirement for promotion to senior academic positions which in turn are a ticket to leadership positions.

5.4 Findings from primary data analysis

In 2009, there were 112 districts, five public universities, 10 colleges and 158 fields of study, as verified in the public university college admissions record (Mooley, 2005). The authors used 2009 as the base year to account for gender inequality in higher education at college and subject level for the period of 2009–2017. Their study overall concluded that although women in Uganda today participated in higher education at much higher numbers, gender inequality re-

mains a major factor in the country’s higher education system. The realities on the ground were found to be much more complex and nuanced than anticipated.

To this end, the findings of this study generally indicate a small representation of women in leadership and governance positions in selected higher education institutions. The following tables give a situation analysis (see table 17).

Historically, Makerere is the first university in East Africa and the largest in the country. The university opened its doors in 1922, as a male technical college. It was not until 1945 when its first female student was admitted (Onsongo, 2009). Even though the numbers have changed significantly since 1945, realities on the ground remain largely unchanged for most women especially as far as leadership and governance representation are concerned (see table 18 and 19).

At Kabale University Council, there are a total of 13 Male members and 10 Female Members. A close analysis of their distribution on the various committees of the University Council indicates the following (see table 20).

Table 17: Situation of women representation at Makerere University

Example: Makerere University in 2004 and 2020											
	Academic Positions	2004					2020				
		Female	Male	Total	% Female	% Male	Female	Male	Total	% Female	% Male
1	Professor	2	44	46	4%	96%	14	78	92	15%	85%
2	Ass. Prof	4	64	68	6%	94%	32	120	152	21%	79%
3	Senior Lecturers	36	153	189	19%	81%	65	113	178	36%	64%
4	Lecturers	115	345	460	25%	75%	140	355	495	28%	72%
5	Assistant Lecturers	46	111	157	29%	71%	143	295	438	32%	68%
	Total	203	717	920	22%	78%	395	961	1355	29%	71%

Source: Makerere University Human Resource Records

Table 18: Gender distribution of men and women at Makerere University

	Organ	Females	Males	Total	% Females	% Males
1	University Council Members	6	18	24	25%	75%
2	Appointments Board	3	6	9	33%	66%
3	Senate	13	63	76	17%	83%
4	Central Management	5	11	16	31%	69%
5	Principals	1	9	10	10%	90%
6	Deputy Principals	3	7	10	30%	70%
7	Deans	3	26	29	10%	90%
8	Heads of Department	24	59	83	29%	71%
	Total	58	199	257	23%	77%

Source: Human Resource Directorate, Makerere University.

Table 19: Situation of women representation at Gulu University

Organ	Females	Males	Total	% Females	% Males
University Council Members	5	18	23	22%	88%
Appointments Board	3	6	9	33%	67%
Senate	4	35	39	10%	90%
Central Management	0	7	7	0%	100%
Deans	0	9	9	0%	100%
Heads of Department	1	44	45	2%	98%
Total	13	119	132	10%	90%

Source: Human Resource Records, Gulu University

Within the Senate, there are 38 members and of these, there is only 18% women representation compared to 81% male representation (see table 21).

One can also highlight the case of Muni, which is one of the public universities located in the West Nile region of the country, and the case of Busitema University. The former was established by government to address the concerns of the

Table 20: Situation analysis at Kabale university

ORGANS			
S/N	Name of committee	Males	Females
1	University Council	13	10
2	Appointments Board	4	5
3	Finance, Planning and Procurement Committee	6	5
4	Student Affairs & Disciplinary Committee	4	4
5	Resource Mobilization Committee	7	4
6	Estates and Works Committee	7	5
7	Audit and Risk Committee	5	1

Source: Human Resource Unit – Kabale University (2021)

Table 21: Gender composition of governance and management structures at Kabale University

ORGANS				
S/N	Name of committee	Males	Females	Total
1	Management	6	2	8
2	Deans	9	0	9
3	HoDs	36	8	44
4	Professor	11	1	12
5	Associate Professor	9	0	9
6	Senior Lecturer	23	2	25
7	Lecturer	44	14	58
8	Assistant Lecturer	69	32	101
9	Teaching Assistant	16	11	27
10	Library staff	13	6	19
11	Administrative Staff	38	33	71
12	Support Staff	22	19	41

Source: Human Resource Unit – Kabale University (2021)

Table 22: Situation analysis at Mbarara University of Science and Technology (MUST)

Organ	Females	Males	Total	% Females	% Males
University Council Members	5	22	27	18%	82%
Appointments Board	2	8	10	20%	80%
Senate	7	22	29	24%	76%
Central Management	1	7	8	12%	88%
Deans	2	6	8	25%	75%
Heads of Department	Not available	Not available			
Total	17	65	82	21%	79%

Source: Human Resource Records – MUST

Table 23: Composition of Governing Council, Senate and Management Units by Gender-Muni University

S/N	Position	Males	Females	Total
1	University Council	5	14	19
a	Appointments Board	4	5	9
b	Finance, Planning, Resource Mobilization & Investments Com	1	4	5
c	Audit Committee	0	5	5
d	Students Affairs Committee	1	5	5
e	Estates Committee	0	5	5
2	Senate	5	17	22
a	Quality Assurance	3	11	14
b	Admissions	2	10	12
c	Awards and Ceremonies	8	16	24
d	Board of Graduate Studies	6	10	16
3	Senior Management (Top Management)	2	6	18
4	Middle Management (Management)	1	15	24
5	Deans and Directors	6	1	7
6	Heads of Department (Academics)	6	14	20
7	Professors	1	2	3
8	Associate Professors	0	2	2
9	Senior Lecturers	1	8	9

Source: Human Resource records-Muni University

people in the region to share the 'national cake' and for the gender representation in leadership to depict the likely trend of the subject in the years ahead. The Table above shows that out of the 19 members of the university council which is an oversight governance organ of the university, only five (26%) are females. The situation is

not any better at management and academic levels as seen in tables 23 and 24.

Finally, the situation analysis at the National Council for Higher Education is worthy of mention. This regulatory body generally has not been involved in determining statistics on women par-

Table 24: Situation analysis at Busitema University

Organ	Females	Males	Total	% Females	% Males
University Council Members	6	17	23	26%	74%
Appointments Board	0	9	6	0%	100%
Senate	6	17	23	26%	74%
Central Management	2	5	7	29%	71%
Deans	1	5	6	17%	83%
Heads of Department	8	38	46	17%	83%
Total	23	91	111	20%	80%

Source: Human Resource Records – Busitema University

participation in governance in HEIs. However, on the Council there are five (25%) women out of the 20 members of the governance body. In the case of the Council committees, on the quality assurance and accreditation committee 4/12 are women; ICT, Research & Innovation Committee 4/12 are women; Finance & Management 4/12 are women; Disciplinary 2/4 are women; Audit & Risk 1/6 are women; Management 3/8 are women.

In terms of enrollment by gender, in 2018/19 the number of male students enrolled in HEIs increased by 7,341 representing 5.41%, from 142,839 in 2017/18 to 150,190 in 2018/19. Similarly, the total enrollment of female students increased by 3,806 from 121,248 in 2017/18 to 125,064 in 2018/19, representing 3.14% increase. The reported situation in 2015/16 was that the overall proportion of females in higher education institutions remained at 44% although in absolute terms it dropped from 114,643 in 2014/15 to 113,210 (or 1.2%). The males on the other hand dropped from 143,312 to 14,833 (or 1.6%). The enrollment for both males and females increased from 140,833 and 113,210 for males and females in 2015/16 to 142,069 and 116,958 in 2016/17 respectively. The females had a percentage increase of 3.3% which was much higher than that of the males at 0.87%²².

5.4.1 Factors considered in appointment of women in leadership positions

Through the administered survey instrument, the participants were asked why, in their opinion, some women in their institutions were hired or appointed to leadership positions. The participants were required to select all options that they thought applied. The ratings which emerged are summarized in the Figure 16.

The results above suggest that the majority of higher education institutions in Uganda select women for leadership positions because they believe women are the best qualified for such positions and reward for hard work is not a major reason why women are recruited into leadership positions.

5.4.2 Factors inhibiting women joining higher education

The survey also assessed the different aspects that the participants contemplated as the main reasons constraining the advancement of females in leadership positions within their institutions of higher education. A total of 23 evaluation aspects were considered and the findings emerging are summarized (see Figure 17).

²² The statistics are obtained from the National Council for Higher Education's annual state of Higher Education reports for the respective years.

Figure 16: Reasons why institutions hire women in leadership positions



The above findings indicate that the majority (92%) of the participants agreed that “Lack of regulatory obligations for universities to allocate ratios for women in leadership” was the main reason for the limited advancement of women in leadership positions within their institutions of higher education in Uganda. This was followed by “Career women being frequently torn between family and work responsibilities”; “Women often lacking freedom of geographic mobility which impedes their career advancement” and “Negative attitude and dominating behavior of male faculty, issues of personal safety, and lack of gender sensitization or stress management programs” at 83% respectively; followed by “Absence of gender inclusive policies in higher education institutions”. The results suggest that the majority (92%) of the participants were not in agreement that the “Apparent tendency of women in senior organizational positions to disassociate from members of their own gender and blocking other women’s ascension in organizations” was the main reason constraining the advancement of women in leadership positions within their institutions of higher education. The tendency to engage in female power struggles within Higher Educational institutions” at 83%; followed by “Biases of appointment bodies in the institutions” and “Women in leadership positions

demonstrating behaviors that prevent the development of a sisterhood and support where all women can advance the leadership” were also not considered to be major constraining factors.

5.4.3 Participation in leadership

Having extracted the factors which supported or hindered the progression of women into leadership position, the study survey then examined the strategies which needed to be undertaken to increase the participation of women in leadership positions. The participants were asked to choose from a set of 15 predetermined strategies.

All participants agreed that Changing Patriarchal traditional norms and perceptions regarding female leadership, implementing institutional mentoring programs for staff and emerging leaders, and building capacity to engage in gender-responsive research were the best strategies needed to increase women participation in leadership of higher education institutions (see Figure 18).

The results show that 92% of the participants all suggested that “Implementing affirmative actions for some leadership positions”, “Developing and implementing gender inclusive policies for leadership in HEIs”, “Revising laws to make it obligatory to have women in governance and

Figure 17: Factors inhibiting women joining leadership in higher education

Evaluation aspect	SA	A	D	SD	Indicator
Lack of regulatory obligations for universities to allocate ratios for women in leadership	42%	50%	8%	0%	●
Career women being frequently torn between family and work responsibilities	25%	58%	17%	0%	●
Women often lacking freedom of geographic mobility which impedes their career advancement.	25%	58%	17%	0%	●
Negative attitude and dominating behavior of male faculty, issues of personal safety, and lack of gender sensitization or stress management programs.	25%	58%	8%	8%	●
Absence of gender inclusive policies in higher education institutions	17%	58%	17%	8%	●
Blaming others for their problems rather than taking responsibility for actions	17%	58%	25%	0%	●
Women having multiple roles like looking after children, parents and husbands that prevent them from taking leadership positions	33%	42%	25%	0%	●
Lack of on-campus facilities such as accommodation, transportation, health care, and support services, namely, day care/elderly care center, discouraging women from taking a responsible position.	17%	58%	17%	8%	●
Lack of adequate qualifications by females	8%	58%	25%	8%	●
Women being considered “emotional” and “indecisive,” thus considered not suitable for leadership position	8%	58%	25%	8%	●
Traditional societal biases of males against females	17%	42%	33%	8%	●
Weaknesses in implementation of existing inclusive policies	8%	50%	42%	0%	●
Eligibility for promotions emerging at the crucial period when childbirth is most important.	0%	58%	42%	0%	●
Women valuing personal relationships more than power in institutions of higher learning	17%	33%	50%	0%	●
Women being discriminated against lacking support from men in authority and male colleagues	17%	33%	33%	17%	●
Apparent tendency of women in senior organizational positions to dissociate from members of their own gender and blocking other women’s ascension in organizations	0%	8%	92%	0%	●
Tendency to engage in female power struggles within Higher Educational institutions	0%	17%	75%	8%	●
Biases of appointment bodies in the institutions	17%	8%	67%	8%	●
Women in leadership positions demonstrating behaviors that prevent the development of a sisterhood and support where all women can advance the leadership	8%	17%	67%	8%	●
Disconnect between national laws and university policies	17%	25%	42%	17%	●
Structural problems in institutions that prevent women to ascend to leadership positions	17%	25%	58%	0%	●
Women considered not as effective in their decision making as men	0%	42%	58%	0%	●
Difficulties in building and maintaining positive relationships with female colleagues	0%	42%	50%	8%	●

SA: Strongly Agree, A: Agree, D: Disagree, SD: Strongly Disagree;

Source: The research

● Majority Positive ● Majority Negative ● 50% Positive & 50% Negative

leadership organs”, “Undertake a candid assessment of the efficacy of the existing HEIs policies”, “Creating a critical mass of potential women leaders in Higher Education”, “Nurturing a gender-responsive organizational environment that allows women to thrive in leadership”, “Conducting gender awareness campaigns among different stakeholders”, and “Orientation to the institutional policies, procedures, guidelines, and job descriptions of the senior leadership positions” were the strategies needed to increase women’s participation in leadership of higher education institutions (Figure 19).

Majority 83% of the participants in this category suggested that “Developing a uniform definition of women leadership”, “Establishing women’s career growth funds in HEIs” and “Encouraging open competition than nomination for the top positions” respectively were the strategies needed to increase women participation in leadership of higher education institutions. Lastly, 75% of the participants suggested “Developing a uniform process of accessing leadership positions in HEIs” was the strategy needed to increase women’s participation in leadership of higher education institutions..

Figure 18: Mechanisms for ensuring gender equity and equality

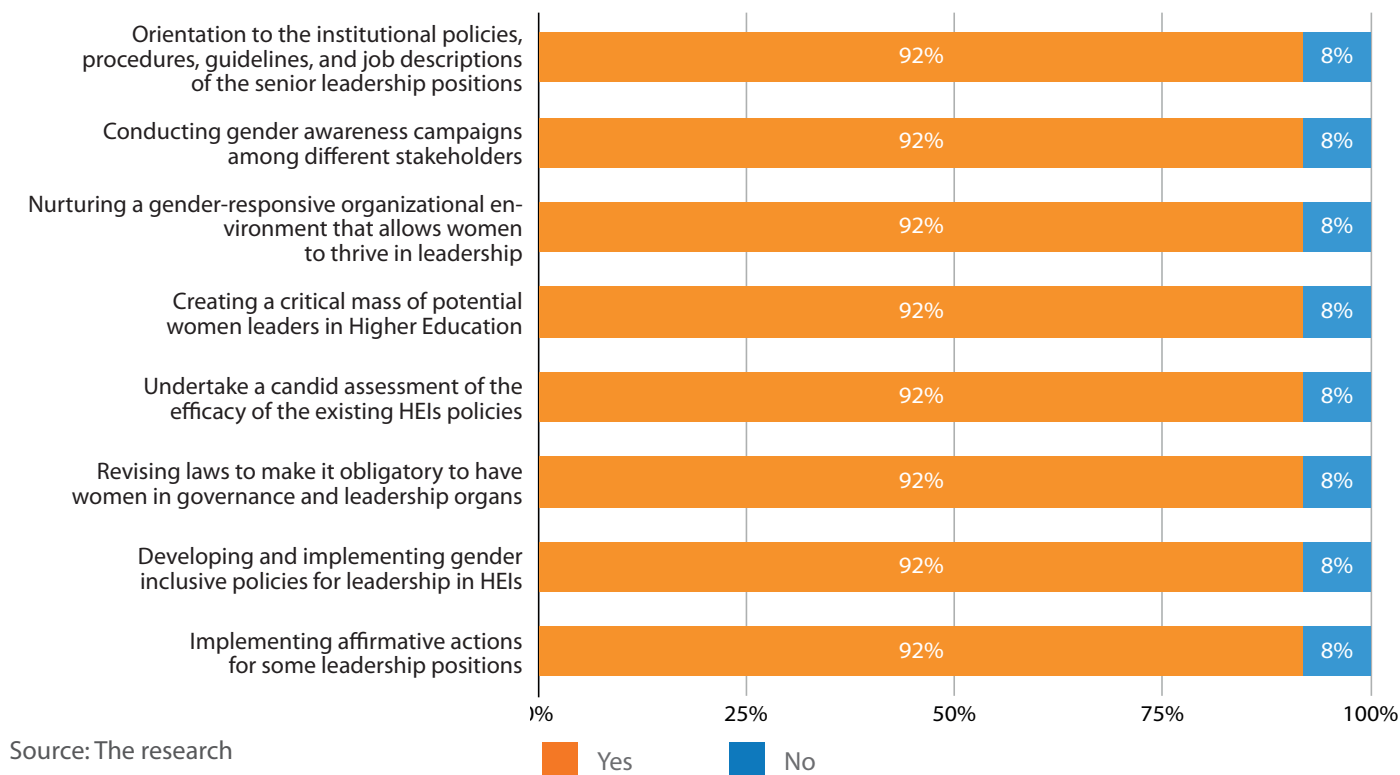
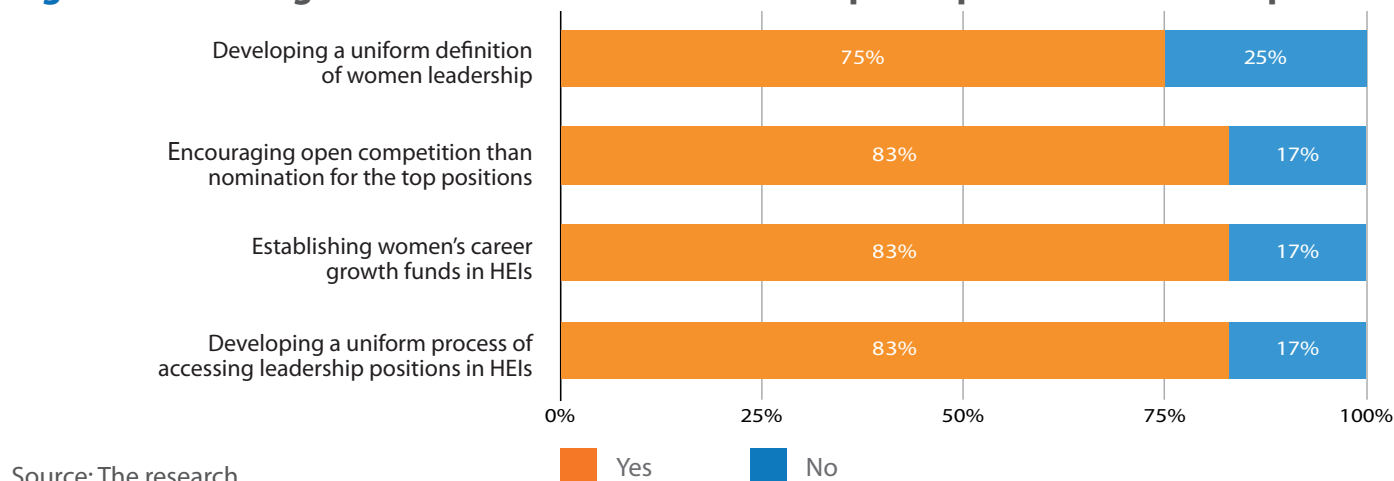


Figure 19: Strategies needed to increase women’s participation in leadership



6 Recommendations for future action

Recommendations for policy makers and government

Proactive policies, legislations and programs



There are proactive policies, legislations and programs for bridging the gender gap. However, more needs to be done, especially in tracking girls and women who drop out of the education system. Many women tend to drop out due to pregnancy, marriage, and resource constraints. At the HE level, women are mature and their maternal, household engagements and marriage relations at times undermine their ability to be as competitive. These bottlenecks are often not stated and not easy to identify, and can only be addressed by availing them of opportunities that support women such as having a child and mother care program within HE learning institutions, and ensuring that services such as health and transport are within access.

Child and mother care programs



Child and mother care programs, for instance, should also address institutional and socio-cultural barriers such as gender stereotypes, sexual harassment and household chores, as well as access to infrastructure and services that contribute to gender inequalities. These care centers need to be directly linked to university programs including the synchronising of the centers' schedule with university time-tables. This will enable female students to effectively learn, including taking STEM courses, which have laboratory and studio lessons, which require longer hours of learning.

Dedicated funding for financing women's education



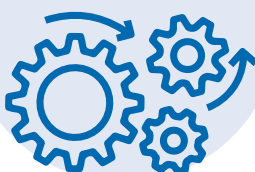
In addition to an enabling environment, there is also the need for dedicated funding for financing women's education as they move towards HE. Furthermore, affirmative action through structured joint Public Private Partnership is required. This can be a source of loan opportunities at lower interest rates to female students desiring to further their education whether publicly or privately.

Gender issues such as gender-based violence in all its forms



Gender issues such as gender-based violence in all its forms, marginalization from potential opportunities, including promotion, equitable admission and retention of women require well planned monitoring and evaluation if progress is to be made.

Operationalize and implement all gender improvement policies in the higher education sector.



While policy frameworks are in place in the countries, there are problems of implementation. There is thus a need for deliberate effort to operationalize and implement all gender improvement policies in the higher education sector. There will be the need to scale up on the financial modalities for the higher education subsector which will see implementation of all the planned initiatives. Tracer studies should be undertaken on women who enter early into academic careers and the challenges faced in this effort.

Recommendations for the higher education institutions

Statistics on all public and private universities and other tertiary institutions should be collected, initially as a properly funded study, to lay the foundation for annual reports.

Fewer women are holding top positions in both administrative and academic levels in the universities covered in the survey. This requires HE, in close collaboration with government and other development actors, to come up with deliberate policies and administrative procedures for ensuring the inclusion and active participation of

women in HE institutions. The approach should have two tracks, with the first one addressing entry into university, while the second addresses bottlenecks to vertical movement of women in administrative and academic positions of power. The first track requires partnership with government ministries, departments, and agencies, and with other development actors, including UN-ESCO. The second track requires proactive university administrators determined to implement Constitutional and legal provisions.

Some potential interventions could include the following:

Track 1

ENTRY INTO UNIVERSITY

A support fund dedicated to women who qualify for STEM subjects

Increased loans for women

Track 2

WOMEN'S VERTICAL MOVEMENT IN ACADEMIC AND ADMINISTRATIVE POSITIONS

Operationalization of gender mainstreaming policies and career development in compliance with the Constitution and related legislations and administrative procedures

Provision of child care centers and women- friendly facilities and spaces

Flexible working hours, especially during the first year following child birth

Sensitization, training and mentorship in Leadership and Management

Internal advocacy for women's advancement led by top university management

7 Conclusions

The number of women in Higher Education governance and leadership is improving albeit not satisfactorily. Almost all universities have gender policies and gender mainstreaming programs; some have affirmative action on gender, yet the barriers to take up administrative positions persist. Most respondents call for sensitization, mentoring and training in self-advocacy. Furthermore, it has been evidenced that academic qualification is not enough, therefore women should be mentored and trained in leadership.

In Kenya, for instance, in all the case studies there are no programs to support women's access to positions of power, except at Rongo University. The university has affirmative action during recruitment, but the details were not provided. Apart from this, public universities have gender mainstreaming as part of their performance contracting but the majority focus on sensitization on gender issues and hardly address the hard strategic questions of upward mobility in administrative and leadership positions. A reflection on what can be done to motivate women to leadership positions revealed a willingness to take action. Training in administration and management, mentorship, supporting career growth, flexible working hours, women-friendly facilities such as day care centers were highlighted as important for motivating women faculty members for administrative positions. There was also a mention of committing to gender inclusion policy and funding career growth either from internal resources or from external resources, with the inclusion of development partners. One university highlighted the need to recognise value added in advertised positions such as professional courses and contribution to the HE community, rather than length of service and research grant contributions. While the latter two are good academic requirements, they are often disadvantageous

to women. For example, research requires long hours of work, including evening and weekends, in addition to the teaching load. Most women find it quite challenging to run research projects alongside teaching and their other family chores and yet promotions and upward mobility in HE require research output, and in recent years, research grants contributions. The latter is an extra effort, in which one not only spends time developing a proposal but also leads a team of researchers, and can range from several months to over four years, depending on the duration of the research.

In South Sudan, the first consideration at public universities for increasing the level of their functioning, is the need to increase salaries and regular payments, to align with neighboring countries in the region. The gathering of statistics for all the institutions in order to arrive at a comprehensive conclusion in the available time period allowed for the current study, is difficult. This is because the majority of the institutions in South Sudan have recently re-opened following their closure in response to the COVID-19 pandemic in 2020. In fact, the University of Juba was the only institution that tried to shift its pedagogical approach from face to face to that of distance learning, challenging the pandemic-induced closure. However, the obstacles to such a shift were enormous for it to be easily implemented. But the institution was lucky in that the National COVID-19 Committee reconsidered its decision to close down and gave permission to the university to re-start normally, provided that the COVID-19 pandemic measures prescribed by the World Health Organisation (WHO) were strictly followed. This meant that the university had a head start over all the others since its academic staff and other workers were already present. This explains its lead in enrollment in 2020. In addition, it went further by establishing new colleges resulting in increases in its student population. Upper Nile University on the other hand, along with the rest of the institutions, did not re-

open immediately and its enrollment numbers have remained largely the same as in 2020.

In Uganda, universities mentioned some of the adjustments needed to reduce the barriers that women face in Higher Education. Apart from repeating the need for women-friendly facilities and gender-inclusive policies, adopting communicative leadership where dialogue, nurturing and problem-solving are central, is noted as a viable option. It was further conceived that women are likely to be open to alternative approaches that are communicative and participatory.

In general, some universities also called for more hybrid work (online & physical) initiated during COVID-19, and an attitude change in employees to recognise efficiency and leadership over gender identity. However, hybrid work also has implications, especially for women, which are still to be fully studied and documented.

Special consideration should be given to females both as students and academics by providing them with conditions facilitating their study and work. In the case of women academics, special provision in form of scholarships to world universities of high academic standing, should be considered by the government and its partners.

All the above cannot apply, however, unless the national leadership and the nation as a whole give special consideration to education as the foundation of the countries' socio-economic development and progress.

References

- Akala, B. (2019). Kenya and South Africa still lag behind on gender equality in education. <https://www.weforum.org/agenda/2019/11/kenya-africa-education-gender-inequality>
- Akec, J.A. (2021). Report: Status of Higher Education and TVET Sector in South Sudan: Gender-based analysis of the ST&I Ecosystems, University of Juba.
- Akinyi Otieno, M. and Ndayambaje, I. (2015). Gender and area of specialization vis-à-vis students' enrollments in undergraduate degree programmes by platform in Public Universities in Kenya. *Rwandan Journal of Education - Vol 3 No. 1 (2015)*.
- Alwy, A. and Schech, S. (2004). *International Education Journal*, Vol. 5, No 2, 2004 <http://iej.cjb.net>
- Anadye, D. (2019). Polytechnics being Upgraded, *University World News*.
- Basir, M. (1969), *Education Development in the Sudan*, Clarendon Press Oxford.
- Carvalho, T. and Machado, M.T. (2010). *Gender and shifts in higher education managerial regimes*, Centre for Research in Higher Education Policies, Portugal, 52 (2) (2010).
- Chege, F. and Sifuna, D.N. (2006). Girls' and women's education in Kenya: gender perspectives and trends, UNESCO.
- Geoffrey, O. (2020). Gender in Uganda's tertiary educational distribution, *Social Sciences & Humanities Open*, Volume 2, Issue 1, 100023, ISSN 2590-2911, <https://doi.org/10.1016/j.ssaho.2020.100023>. (<https://www.sciencedirect.com/science/article/pii/S2590291120300127>)
- Goode, J. (2000). 'Is the position of women in higher education changing?' M. Tight (Ed.), *Academic Work and life: What it is to be an academic, and How this is changing*, *International perspectives on higher education research*, Vol. 1, Emerald Group Publishing Limited, pp. 243-284.
- Gyimah-Brempong & Ondiege, (2011). Reforming Higher Education: Access, Equity, and Financing in Botswana, Ethiopia, Kenya, South Africa, and Tunisia: The Africa Competitiveness Report (Pg 41). World Economic Forum.
- Kwesiga, J.C. (2002). Women's access to higher education in Africa: Uganda's experience, Fountain Publishers, Kampala.
- Ministry of Education, Science and Technology (MoHEST, 2015) General Education Sector, Republic of South Sudan. Structures, Duties and Functions.
- Ministry of Gender, Child and Social Welfare, (2021) Republic of South Sudan.
- Progress Report on the South Sudan National Action Plan, UNSCR 1325 (Women, Peace and Security 2015-2020).
- Morley, L. (2005), Gender equity in Commonwealth higher education. *Women's Studies International Forum*, 28 (2-3), pp. 209-221.
- Muigua K. (2020). Actualising the National Policy on Gender and Department in Kenya. <http://kmco.co.ke/wp-content/uploads/2020/10/Actualising-the-National-Policy-on-Gender-and-Development-in-Kenya-Kariuki-Muigua-Ph.D-October-2020.pdf>
- Muijs, D.; Harris D.; Chapman, C.; Stoll, L; and Russ. L. (2004). Improving schools in socio-economically disadvantaged areas – a review of research evidence. *School Effectiveness and School Improvement*, 15 (2) (2004), pp. 149-175.
- Mulongo, G. (2013). Inequality in Accessing Higher Education in Kenya; Implications for Economic development and Well-being. *International Journal of Humanities and Social Science* Vol. 3 No. 16 [Special Issue – August 2013]
- Mutula. G (2002). *The Growth of University Education*. Abidjan: CODESRIA

- Nyangau, J. Z. (2014). Higher Education as an Instrument of Economic Growth in Kenya. *Forum for International Research in Education*, 1(1). Retrieved from <http://preserve.lehigh.edu/fire/vol1/iss1/3>
- Nyayieka, I. (2019). Women in Kenya closing gender gap in science and tech. *Business Daily*
- O'Connor P.; Carvalho T.; Vabo A.; Cardoso S. (2015) Gender in Higher Education: A Critical Review. In: Huisman J., de Boer H., Dill D.D., Souto-Otero M. (eds) *The Palgrave International Handbook of Higher Education Policy and Governance*. Palgrave Macmillan, London. https://doi.org/10.1007/978-1-137-45617-5_30
- Odebero, S.O.; Bosire, J.N.; Sang, A.K.; Ngala, F.B.J.; and Ngware, M.W. (2007). Equity in the distribution of HELB loans in Kenya in relation to student's characteristics: An empirical analysis. *Educational Research and Review*, 2(8), 209–219. Retrieved from http://www.academicjournals.org/article/article1379600264_Odebero%20et%20al.pdf (Google Scholar)
- Odhiambo, G. (2016). Higher education in Kenya: an assessment of current responses to the imperative of widening access, *Journal of Higher Education Policy and Management*.
- Okeke, I, N.; Babalola, P. C.; Byarugaba, K. D.; Djimde, A.; and Osoniyi, R. O. (2017). Broadening Participation in the Sciences within and from Africa.
- Onsongo. J (2007). *The Growth of University Education*. Abidjan CODESRIA.
- Onsongo. J., (2009). Affirmative action, gender equity and university Admission-Kenya, Uganda and Tanzania. *London Review of Education*, 7 (1) (2009), pp. 71-81.
- Passmore Sanderson, L. and Sanderson, N. (1981). Ithana Press London; Khartoum University Press.
- Psacharopoulos G., Patrinos H. A (2020). Returns to education in developing countries. Steve Bradley and Colin Green (Editors). *The Economics of Education* (Second Edition), Academic Press, Pages 53–64.
- Republic of Kenya. (2021). Economic Survey. Nairobi: Kenya National Bureau of Statistics (KNBS).
- Sifuna, D. (2006). A Review of major obstacles to women's participation in higher education in Kenya. [http://lst-iiep.iiep-unesco.org/cgi-bin/wwwi32.exe/\[in=epidoc1.in-1/?t2000=023217/\(100](http://lst-iiep.iiep-unesco.org/cgi-bin/wwwi32.exe/[in=epidoc1.in-1/?t2000=023217/(100)
- Syomene, A. and Kindiki J. (2015). Women Education and Economic Development in Kenya: Implications for Curriculum Development and Implementation Processes.
- UNESCO (2019). Women in Science. Fact Sheet No. 55 June 2019 FS/2019/SCI/55. <https://doi.org/10.18356/cb3dbe0d-en>
- UNESCO (2020). Towards universal access to higher education: International trends. UNESCO-IESALC. Caracas.
- UNESCO (2021). Women in higher education: has the female advantage put an end to gender inequalities? UNESCO. Paris.
- Wamahiu, S. P. (2011). Educate more girls today for a better Kenya. Talk presented at the Global Action Week- Big Story Campaign at Milimani primary school, Nairobi on 6th May 2011.
- Wango, G. M., Musomi, M, and Akinyi, C. (2012). Gender and Education in Kenya and Re-Alignment of Education to the Constitution. Nairobi: ITP Human Rights Towards Gender Equality Seminar.
- Williams, S. (2020). Opinion: Let's get more girls into STEM — for them and for us all. Devex.

Annexes

ANNEX 1: Data collection questionnaire

WOMEN IN HIGHER EDUCATION QUESTIONNAIRE FOR KENYA, SOUTH SUDAN AND UGANDA

INSTRUCTIONS

SECTION A

BACKGROUND INFORMATION

1. Background
2. Name of the institution
3. Years of service
4. Gender
5. Position in the institution

SECTION B

STATUS OF FEMALE PARTICIPATION IN HIGHER EDUCATION GOVERNANCE AND LEADERSHIP

How many females are in the following leadership positions in your Higher Educational Institution?

Leadership Level	Number of Females	Number of Males	Percentage of Females	Percentage of Males
1. University Council				
2. University Appointments Board				
3. University Senate				
4. University Central Management				
5. Deans/Directors/Principles				
6. Heads of Departments				
7. Professors				
8. Associate Professors				
9. Assistant Professors				

SECTION C

COMPETENCES CONSIDERED FOR WOMEN IN CURRENT LEADERSHIP POSITIONS IN HIGHER EDUCATION INSTITUTIONS

Why do you think some women in your institution were hired or appointment for the leadership position? Check all responses that apply.

- Potential leadership qualities
- Affirmative action compliance
- Longevity
- Best qualified for position in terms of experience
- Best qualified for position in terms of formal preparation
- Reward for loyalty
- Next step in upward mobility (of positions)
- Reward for hard work
- Expert in community relations/good mediator
- Effective manager
- Other

SECTION D

FACTORS INHIBITING WOMEN JOINING LEADERSHIP IN HIGHER EDUCATION

Which of the following would you consider as a major factor inhibiting the progression of females in leadership positions within your higher education institution:

Indicator	SA	A	D	SD
1. Disconnect between national laws and university policies				
2. Structural problems in institutions that prevent women to ascend to leadership positions				
3. Absence of gender inclusive policies in higher education institutions				
4. Biases of appointment bodies in the institutions				
5. Lack of adequate qualifications by females				
6. Weaknesses in implementation of existing inclusive policies				
7. Traditional societal biases of males against females				
8. Lack of regulatory obligations for universities to allocate ratios for women in leadership				
9. Women in leadership positions demonstrating behaviors that prevent the development of a sisterhood and support where all women can advance the leadership				
10. Apparent tendency of women in senior organizational positions to dissociate from members of their own gender and blocking other women's ascension in organizations				
11. Tendency to engage in female power struggles within Higher Educational institutions				
12. Blaming others for their problems rather than taking responsibility for actions				
13. Difficulties in building and maintaining positive relationships with female colleagues				
14. Career women being frequently torn between family and work responsibilities				
15. Women often lacking freedom of geographic mobility which impedes their career advancement.				
16. Women valuing personal relationships more than power in institutions of higher learning				
17. Women considered not as effective in their decision making as men				
18. Women being considered "emotional" and "indecisive," thus considered not suitable for leadership position				
19. Women having multiple roles like looking after children, parents and husbands that prevent them from taking leadership positions				
20. Eligibility for promotions emerging at the crucial period when childbirth is most important.				
21. Women being discriminated against lacking support from men in authority and male colleagues				
22. Lack of on-campus facilities such as accommodation, transportation, health care, and support services, namely, day care/elderly care center, discouraging women from taking a responsible position.				
23. Negative attitude and dominating behavior of male faculty, issues of personal safety, and lack of gender sensitization or stress management programs.				

SA: Strongly Agree, **A:** Agree, **D:** Disagree, **SD:** Strongly Disagree;

SECTION E

STRATEGIES NEEDED TO INCREASE WOMEN PARTICIPATION IN LEADERSHIP OF HIGHER EDUCATION INSTITUTIONS

Which of the following mechanisms or strategies should HEIs put in place to ensure gender equity and equality in leadership and management levels?

Mechanisms/Strategy		Yes	No
1	Implementing affirmative actions for some leadership positions		
2	Developing and implementing gender inclusive policies for leadership in HEIs		
3	Revising laws to make it obligatory to have women in governance and leadership organs		
4	Undertake a candid assessment of the efficacy of the existing HEIs policies		
5	Developing a uniform definition of women leadership		
6	Developing a uniform process of accessing leadership positions in HEIs		
7	Changing Patriarchal traditional norms and perceptions regarding female leadership		
8	Implementing institutional mentoring programmes for staff and emerging leaders		
9	Creating a critical mass of potential women leaders in Higher Education		
10	Building capacity to engage in gender-responsive research		
11	Nurturing a gender-responsive organizational environment that allows women to thrive in leadership		
12	Conducting gender awareness campaigns among different stakeholders		
13	Establishing women's career growth funds in HEIs		
14	Orientation to the institutional policies, procedures, guidelines, and job descriptions of the senior leadership positions		
15	Encouraging open competition than nomination for the top positions		
16	Applying a rotational approach for top positions		

SECTION D

OTHER GENERAL COMMENTS AND OBSERVATIONS

(a) Is there anything else that you consider as a barrier for women to take up administrative positions?

- a.
- b.
- c.

(b) Suggest ways to overcome the barriers you experienced in your institutions

- a.
- b.
- c.

(c) Are there any programmes in HE aimed at supporting women to access positions of leadership?

- a.
- b.
- c.

(d) What can universities/colleges do to motivate women faculty for an administrative position?

- a.
- b.
- c.

(e) What are the adjustments needed to overcome the barriers of women employees who occupy or take up administration positions?

- a.
- b.
- c.