



ADDRESSING FACULTY CHALLENGES IN SUB-SAHARAN AFRICA:

**OBSERVATIONS AND POTENTIAL
SOLUTIONS FROM SELECT
COUNTRIES IN THE REGION**

May 2023

About the Report

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About ESSA



ESSA is a charity founded in 2016. Our vision is high-quality education that enables young people in sub-Saharan Africa to achieve their ambitions and strengthens society. ESSA's mission starts with universities and colleges. Driven by the needs of young people, we join up leaders (e.g., educators, funders, policymakers) and provide them with the data and evidence they need to make good decisions and change the system. ESSA offers:

- A strong, African team and board based in Africa and Europe, blending experience in research, mapping, knowledge management, advocacy, and communication;
- A unique position in African tertiary education, via a proven track record in researching important educational issues in sub-Saharan Africa, and delivering practical and innovative solutions;
- Well-established research and dissemination partners and networks for tertiary education (e.g., **All-Africa Students Union**, **Association of African Universities**, **Decent Jobs for Youth**, **Ghana Tertiary Education Commission**, **Inter-University Council for East Africa**, **Population Reference Bureau**, **Quilt.AI**, **UNESCO**, **UNHCR** and **Zizi Afrique Foundation**, among others); and,
- Strong values that guide everything we do. We are evidence-driven, solutions-focused, we strengthen trust, and we are always learning.

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Executive Summary

ESSA prepared this report to feed into a study about the Demographics of African Faculty (DAF)¹ in the East African Community (EAC). This report presents examples of approaches to addressing faculty challenges that could be used by other education leaders and/or policymakers. These examples are framed as observations and potential solutions, since data on effectiveness of these approaches and their costs were, in general, unavailable.

The DAF EAC project is undertaken by an international consortium comprising of the Inter-University Council for East Africa (IUCEA), Education Sub Saharan Africa (ESSA), The Association of African Universities (AAU), and Population Reference Bureau (PRB). The evidence and insights in this report, regarding existing and potential approaches that are intended to be useful for tackling faculty challenges in the EAC region, will help the consortium to refine its methodology for engaging with higher education stakeholders, identify and/or co-create new solutions to address the faculty challenges identified, and engage with education leaders and/or policymakers in tackling the challenges.

The provision of quality higher education has a direct impact on individual, economic, and societal development. Therefore, it is essential that Higher Education Institutions (HEIs) in all countries in sub-Saharan Africa (SSA) manage faculty resources effectively and improve the students' experience. However, many African countries are facing a critical shortage of academic staff at a time when there is a rapid expansion of higher education across the region. The DAF consortium therefore aims to generate data and evidence to understand the faculty challenges in SSA, and increase awareness about the fact that sufficient, relevant, qualified, equitable (gender parity), and skilled faculty are needed, in line with appropriate education policy goals, to deliver quality higher education. Furthermore, the consortium aims to provide insights to enable HEIs to alleviate existing challenges by planning for the future and improving teaching, learning, and research.

In 2018, ESSA, AAU, and PRB, in partnership with the National Council for Tertiary Education in Ghana (now the Ghana Tertiary Education Commission - GTEC), undertook a **pilot study** to assess and provide evidence about the Demographics of African Faculty in Ghana, with a focus on the public HEIs. The study provided important demographic data and identified challenges concerning faculty. Recommendations for tackling the challenges included the need to: improve data management in HEIs and by the government to enhance planning; develop a planning tool to help institutions and the government project potential supply and demand for faculty; and revise existing policies and standards regarding the recruitment of students and faculty. Having established a robust DAF methodology in Ghana, the study is now being scaled up to understand the nature of the faculty demographics in HEIs in the EAC and the scale of their faculty challenges - including development and retention.

Understanding existing approaches for tackling faculty challenges in SSA (i.e., in addition to recommendations from Ghana) is needed to develop and co-create effective strategies and new solutions for addressing faculty challenges identified in the EAC. As a first step in achieving this objective, ESSA's researchers conducted a qualitative analysis by reviewing existing literature. This included academic journals, books, newspaper articles, blogs, websites, reports from higher education stakeholders, and speeches by government education officials regarding faculty challenges and policy goals.

From ESSA colleagues' literature searches and analyses, it is evident that African governments and HEIs have focused more on addressing challenges arising from the demand side of higher education (i.e., student enrolment), and less so on challenges that the HEIs face with respect to faculty. However, there are some existing observations and potential solutions for addressing the faculty challenges in the SSA region, which are presented in this study.

¹The numbers of faculty by age, gender, field/department, role, and rank.

Observations and Potential Solutions for Addressing Faculty Challenges in Higher Education Institutions in Sub-Saharan Africa

Faculty challenges are complex and solving them requires input from universities, colleges, commissions of higher education, governments, and policymakers. Some observations of how educational institutions and policymakers are responding to these challenges are provided below.

In dealing with the challenges, some HEIs and Commissions of Higher Education are:

1. Improving efficiency by ending the duplication of academic programmes, abandoning the aggressive marketing of degrees and diplomas of low academic rigour, and implementing contractual recruitment based on cost-impact analysis for non-technical staff. This allows effective allocation of faculty, efficient utilisation, and maximisation of existing resources, resulting in an increase in the quality of graduates and research, as well as freeing budget for other areas such as research and faculty recruitment. The details are available in section 3.1.

2. Institutionalising part-time faculty development, since in the long run, “investment in adjuncts is an investment in the institution” (Morton, 2012, p. 405). Furthermore, HEIs could introduce the professor emeritus position by engaging retired professors to contribute their accumulated knowledge and wisdom in their disciplines. See sections 3.2 and 3.3 for more information.

Postgraduate enrolment and centres of excellence are important for identifying, recruiting, and supporting the ongoing development of future faculty members. To create such a pipeline:

3. Some HEIs are increasing postgraduate enrolment but providing an evidence-informed cap as needed. This is presented in section 3.4.

4. Other HEIs are engaging with non-government organisations (NGOs) to mainstream gender in their curriculum and establishing conducive networks for female academics. These are key for professional development and can ensure equity in the provision of government education loans to females. Furthermore, it presents a pipeline for the future recruitment of female academics. See sections 3.5 and 3.6 for more information.

5. Some education stakeholders are establishing homegrown research databases to increase the visibility of African research and researchers by

publicising their research findings. This could boost faculty recruitment and collaboration since African research results are rarely indexed in major international databases. More information is provided in section 3.7.

6. Some HEIs are enhancing regional partnerships through centres of excellence, blended learning, entrenching innovative pedagogy, doctoral and postdoctoral programmes, as well as residential training schools and workshops. See section 3.8.

7. Some governments are exploring comprehensive transformative approaches to develop future generations of academics by using an estimation, planning and development framework to recruit, support and retain faculty. This is explained in section 3.9.

8. Some education stakeholders have partnered to develop the first African Jobs Boards to address faculty challenges in the hiring and retention processes, as presented in section 3.10.

In transitioning to the post COVID-19 pandemic phase:

9. Some education stakeholders are setting up an early warning system and a communication channel to enable dialogue among themselves regarding the objectives and plans for finding solutions to the faculty challenges, as explained in section 4.1.

10. There are observations that some private sector institutions are highly involved, for example, in the training of faculty and students in the use of technology. More information is presented in section 4.2.

11. There should be the right balance between investment in physical infrastructure and e-resources, regular inspection of HEIs to ensure a quality standard for both teaching and examinations, and investment in systems that safeguard the integrity of online examinations. This is discussed in more detail in section 4.3.

Glossary

AAU	Association of African Universities
ACE-IDHA	Africa Centre of Excellence in Infectious Diseases of Humans and Animals
ACE-SM	Africa Centre of Excellence in Sustainable Mining
ADA	African Doctoral Academy
AERC	African Economic Research Consortium
AERD	African Education Research Database
CARTA	Consortium for Advanced Research Training in Africa
CODESRIA	Council for the Development of Social Science Research in Africa
CPP	Collaborative PhD Programme
DAF	Demographics of African Faculty
DATAD-R	Database of African Theses and Dissertations-Research
EAC	East African Community
EACEP	Existing Academics Capacity Enhancement Programme
ESSA	Education Sub Saharan Africa
FAWE	Forum for African Women Educationalists
HEIs	Higher Education Institutions
IUCEA	Inter- University Council for East Africa
KACC	Kenya Civil Aviation Authority
NESP	Nurturing Emerging Scholars Program
MOE	Ministry of Education
nGAP	New Generation of Academics Programme
NGO	Non-Government Organisation(s)
PASET	Partnership for skills in Applied Sciences, Engineering and Technology
PEBL	Partnership for Enhanced and Blended Learning
PEDAL	Pedagogical Leadership in Africa
PRB	Population Reference Bureau
RISE	Regional Initiative in Science and Education
SSA	Sub-Saharan Africa
SSAU-DP	Staffing South Africa's Universities Development Programme
SSAUF	Staffing South Africa's Universities Framework
SSEP	Supplementary Staff Employment Programme
STEM	Science, Technology, Engineering and Mathematics
TCU	Tanzania Commission for Universities
TVET	Technical and Vocational Education and Training
UK	United Kingdom
US	United States



1

Introduction

Over the past decade, population growth and economic development have increased demand for tertiary education across sub-Saharan Africa. Such demand has led to an increase in student enrolment in Higher Education Institutions (HEIs). This calls for a sufficient supply of qualified and skilled faculty members to meet policy targets that ensure the quality of education. However, increased student enrolment has not been met with a commensurate increase in faculty capacity, both in number and with respect to gender parity.

For example, only 24% of the region's academic staff in tertiary education are women (UNESCO, 2019). In addition, a **pilot study** by Education Sub Saharan Africa (ESSA), the Association of African Universities (AAU), and Population Reference Bureau (PRB) in partnership with the National Council for Tertiary Education in Ghana (now GTEC) in 2018, that focused on the faculty demographics in Ghana showed that only 8% of professors in Ghana's public universities were

women – a challenge regarding equity. Furthermore, overcrowding in lecture halls had become the norm for enrolled students and staff. On average, African universities are documented to have 50% more students than their counterparts outside the region (UNESCO, 2018). These challenges identified in Ghana have the potential to cause a deterioration in the quality of research, teaching, and learning there.

In other parts of SSA, heavy teaching loads leave little or no time for research, and many faculty members teach part-time in private institutions after work (Mukhanji et al., 2016). Furthermore, low salaries make it difficult to attract or retain qualified faculty and existing ones are either about to retire or have significant administrative duties. Another disconcerting trend is the small number of graduate students being produced by African institutions (Swanzy, 2018), which adversely affects the pipeline for recruiting future faculty.

The findings in the paragraph above were also confirmed in the DAF pilot study in Ghana in 2018. The results of the data analysis showed that for the Ghanaian public universities to achieve the government's goal for student-faculty ratios in 2016-17, they needed to have recruited 3,410 more faculty members (i.e., in addition to the existing 11,906), of which 71% would have to be women. Furthermore, it was projected that 6,988 (i.e., 59%) more staff would need to be recruited by 2025 (ESSA et al., 2019), in line with existing government policy.

It was recommended that to ensure quality higher education in Ghana (and ideally in other countries in SSA), adequate, evidence-based policy planning for recruitment of faculty (e.g., through an increase in postgraduate student numbers), faculty development to replace aging senior staff, an increase in the number of female faculty and retention of faculty are needed.

Lastly, approximately 98% of tertiary level students — 8.4 million, were out of school in the region at some point during the COVID-19 pandemic (World Bank, 2020). Lecturers and students have had to grapple with new technologies, changes in lifestyles, and livelihoods. All of these have had a negative impact on people's physical and mental health and could negatively impact the quality of education students receive in the region (Idris et al., 2021). Therefore, a clear understanding of the effects of the pandemic on these challenges is vital, to finding ways to address, alleviate or prevent them when feasible.

Fortunately, the faculty challenges have not gone unnoticed. Using the methodology outlined in section 2 below, ESSA's researchers have identified/observed some (potential) homegrown solutions in some countries in the SSA region and outlined them in section 3 further below.

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2

Methodology

This report was created as a desk-based study by synthesising key literature addressing significant and practical policy implications on key observations as well as existing/potential solutions from HEIs and education stakeholders in addressing the faculty Challenges in Sub-Saharan Africa. The research in the report is limited to six countries in SSA, namely Ghana, Kenya, Uganda, South Africa, Tanzania, and Zambia.

The search criteria focused on relevant information from education journal articles catalogued in the African Education Research Database (**AERD**), books, newspaper articles, blogs, and websites covering tertiary education. Further, we searched Google Scholar using search terms such as “faculty challenges,” “adjunct faculty,” “learning crisis,” and “COVID-19”. Finally, we investigated stakeholder responses (from government and

non-governmental organisations (NGOs)), from institutional reports and speeches by government education officials. Due to resource constraints, the researchers limited their review to documents published in the English language. More detail about the sources of relevant information is provided in the next section and its sub-sections.

Our analytical strategy involved coding the following data: identified faculty crises in our countries of interest, type, and year of intervention, implementing stakeholder (government, NGO, HEIs, private sector, or regional organisations), and interventions that different education stakeholders are proposing. Finally, the findings were grouped into common themes and presented in a narrative that leaves room for researchers and policymakers to use local context and provide a deeper understanding of each country (Evans and Acosta, 2021).

3

Observations and Potential Solutions from Select Sub-Saharan African Countries

The following are the approaches and potential solutions to addressing faculty challenges in the region from select SSA countries.



3.1 Improving Efficiency of Academic Programmes and Support for Faculty

HEIs have been conducting duplicate academic programmes and spending most of their budget on non-technical staff. To address these challenges, the following approaches have been adopted.

3.1.1 Discontinuing Unattractive and Duplicate Academic Programmes

In Kenya, some programmes were not attracting sufficient students and yet an overburdened faculty were expected to teach the few students. This was neither cost or time effective. Therefore, the Commission for University Education analysed all courses and addressed this problem by recommending the removal of such programmes. There are also academic programmes in the local universities that were similar or in some cases duplicated. Such a situation is not ideal either, given the insufficient staff and inadequate facilities. Therefore, in collaboration with the Commission for University Education and the universities, the Ministry of Education (MOE) is reviewing and cancelling duplicate academic programmes. This is to enable HEIs to allocate faculty effectively, utilise existing resources efficiently, and increase the quality of their graduates (MOE, 2019).

In Uganda, *Makerere University, through the Makerere University Strategic Plan 2020-2030: Unlocking the Knowledge Hub in the Heart of Africa* (2020), has abandoned the aggressive marketing of degrees and diplomas of low academic rigour. They are offloading single-subject degree courses in social sciences and humanities, as well as those courses that have not attracted students over several years. Other courses to be discontinued are secretarial, tourism, and hospitality degrees designed for an expected job market demand that did not materialise or seemed unattractive to students.

Their current goal is to increase STEM-related programme enrolment to 40% of total enrolment, as envisaged by the McGregor Visitation Committee report on public universities of 2007. The radical rescaling of programmes is expected to increase quality and spur research (NHE, 2017).

3.1.2 Freeze on Non-Technical Staff Recruitment and Revision of Contract Terms

Public universities in Kenya employ most of their staff on permanent and pensionable terms. In some cases, the percentage of non-technical staff is much higher than that of technical staff. Therefore, most of the budget is allocated to activities that do not contribute to the universities' mandate. The Ministry of Education therefore proposed adopting different models, such as outsourcing non-technical functions and having fixed tenure tracks for staff employment.

In 2015, a circular from the National Treasury directed a "freeze on new recruitment (with specific exceptions), purchase of office furniture, computers, and new office equipment". A circular from the Office of the President in 2017 reiterated the contents of the 2015 circular, directing that "...henceforth, no recruitment of any new staff should be undertaken, unless in exceptional circumstances and with the approval of this office". This move was intended to free the budget to focus on other areas such as research and faculty recruitment (MOE, 2019).

3.2 Development of Part-time and Adjunct Faculty

Part-time faculty are those faculty members with no full-time contract who are often referred to as adjuncts, non-tenure-track faculty, or associate faculty (Dolan, Hall, Karlson, & Martinak, 2013). To cut costs, many universities have resorted to part-time faculty. For example, according to Barret (2014), 70% of Australia's first-year classes are taught by part-time faculty, while 60% of part-timers teach 60% of all courses in universities in the United States (Benton and Li, 2015). While the part-time positions in those non-African countries are mostly used as pathways to tenure-track positions, in Kenya, 60% of part-time faculty take the positions to supplement their income (Kyule et al., 2014).

The presence of many satellite campuses by public and private universities in Kenya has seen the numbers of enrolled students surpass the available full-time faculty. To cut costs, HEIs have opted to employ part-time faculty. Such faculty provides affordable labour and brings fresh-life examples to the classroom for those who are industry practitioners. However, a lack of professional development and training for part-time faculty could be detrimental to the learners and the universities in the long run (Anderson, 2007), particularly regarding the quality of teaching and learning. Therefore, in Kenya, Wanjohi (2020) proposed the following solutions for developing part-time faculty:

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60%

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.....

In Kenya

60%

of part-time faculty take the positions to supplement their income (Kyule et al., 2014).

- a) Properly orient the part-time faculty into the academic community and help them bond with the full-time faculty, to ensure that part-timers also play a key role in deciding goals.
- b) Faculty development and training should help to improve the level of teaching. To counter the challenges that come with teaching, part-timers should be trained in course design and teaching models, as well as how to communicate with students and the administration.
- c) Institutions of higher learning should provide mentoring opportunities through seasoned faculty members or those on the tenure track, thus fostering collegiality between the part-time and full-time faculty.
- d) Professional development should be ongoing through scheduled workshops and training. Eventually, this investment will pay off because "investment in adjuncts is an investment in the institution" (Morton, 2012, p. 405).

3.3 Introduction of Professor Emeritus Position

In 2020, the *Handbook for Standards and Guidelines for University Education in Tanzania (2019)*, released by the Tanzania Commission for Universities (TCU), introduced the position of Professor Emeritus. Through this position, the universities will continue to engage retired professors to contribute to their disciplines' accumulated knowledge and wisdom and provide some mentorship to more junior academics and graduate students, among other functions.

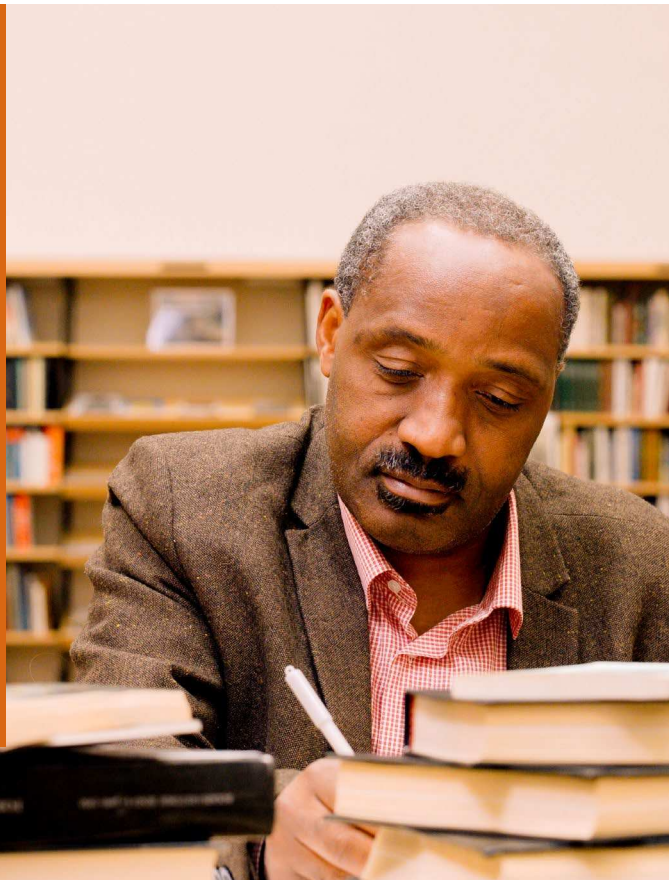


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3.4 Capping Student Admissions and Increasing Postgraduate Enrolment

From 2020, Makerere University in Uganda capped admissions to 25,000 students per year and focused more on postgraduate enrolment and knowledge production. Another strategy they have adopted is to enrol 40% of the students in postgraduate degrees, compared to the previous 30%. The university's gradual focus on increasing postgraduate enrolment over time has already resulted in them increasing the number of teaching and research staff that have PhDs from 40% in 2012 to 51% as of 2019 (Kigotho 2020 and Kasozi, 2019). This is boosting their capacity to deliver quality education at the postgraduate level and such students, once they graduate, could also feed into the pool of potential faculty to recruit.

Increasing postgraduate enrolment at Makerere University resulted in an increase of teaching and research staff that have PhDs from

40% in 2012, to



51% as of 2019



(Kigotho 2020 and Kasozi, 2019).

3.5 Improving Equity in Access to Higher Education

Female students constitute only 20% of enrolments in public universities in Zambia (Lusaka Times, 2020). To improve the pipeline for female graduate students in Zambia in 2020, the government included private universities in the student loan scheme to allow higher education financing through loans, as opposed to bursaries. The bursary scheme was thought to be linked to inequality in access to education for children who did not have influence in society. The loan scheme, on the other hand, would allow every student, regardless of gender or social status to access education, as the funds could be recovered after the students graduate and gain employment. This would improve the pipeline for female graduate students and, hence, future faculty in Zambian HEIs.

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20%

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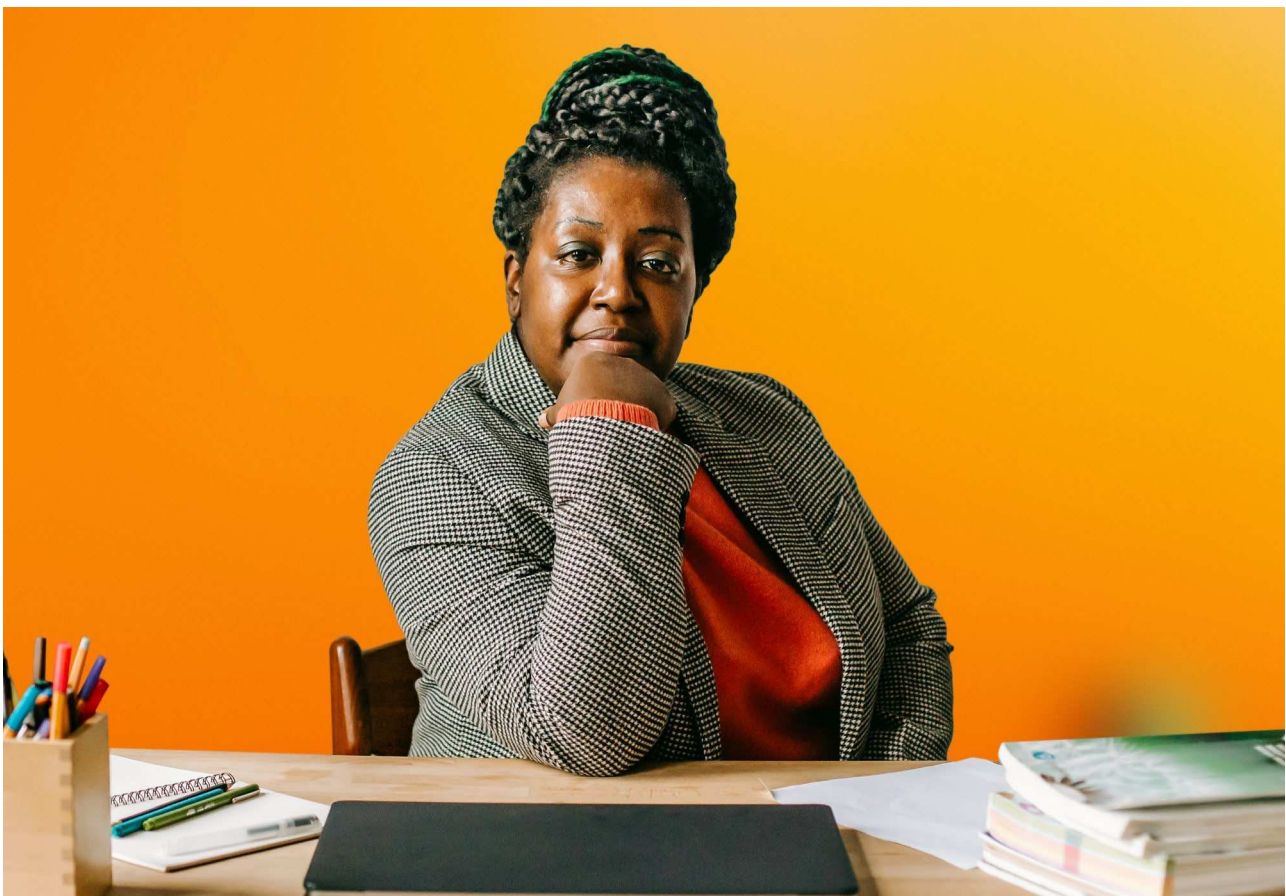


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3.6. Addressing Gender Disparities

The under-representation of women in the academic workforce and graduate programmes that are the pipeline for generating future academics is well pronounced. Despite these challenges, **FAWE** and women academics in STEM in Ghana provide some solutions.

In 2009-2014, the **FAWE-DANIDA TVET programme** was established in Liberia, Sierra Leone, Burundi, and Somalia to support girls and women previously excluded from male-oriented skills development and entrepreneurial training. The programme targeted TVET courses previously stereotyped as being for men. To ensure positive change, FAWE provided training to ministry personnel, teacher trainers, tertiary institution directors, and education instructors.

For courses catering to male students, most instructors were male. Therefore, FAWE called for the recruitment of female instructors as well as the integration of gender elements into the curriculum and lesson plans, to cater to newly entering female students. Lecturers were also given refresher courses to ensure their commitment to supporting the female beneficiaries. This led to easier enrolment processes for girls. The lecturers and mentors provided additional support such as modified classes, remedial assistance, and psychological support. Also, gender awareness seminars contributed to a much broader and more inclusive spectrum of quality teaching and learning. As a result of the programme, many women continue to enrol in STEM courses and teach in male-dominated programmes. Therefore, mainstreaming gender from an early stage can have a long-term impact on higher education.

Gender disparities persist in STEM fields too, in many African countries. For example, in Ghana, the disparities come from the composition of female academic staff relative to males, academic

staff promotion, and trends in female postgraduate academic qualifications. However, some capable women rise through the ranks and become heads of departments and deans through strong academic networks. Etzkowitz et al. (2000) concluded that including female STEM academics in strong networks provides a head start to STEM careers. Boateng (2017) also found networking in academic settings to be a key factor that helped female academics unearth their leadership potential and professional development, which in turn helped them progress in their careers in the education sector. One faculty member expressed the importance of these networks:



I have won two research grants. One is from DANIDA (in Denmark). The other is from the University of Michigan and is being undertaken in Ghana - I am the local PI. "I am also trying to commence my PhD studies at the University of Utah, with the support of my research collaborator in Michigan."

Female STEM academics in sub-Saharan Africa can use social capital and networks to reform the patriarchal structure in the STEM discipline. However, those networks should be available and accessible to women for change to happen.

ESSA's State of Women Leading Report (2021) affirms most of the above approaches by firstly proposing affirmative action in increasing female student enrolments and women's participation in leadership. The second is to establish gender departments and programmes to teach, research, and carry out gender equity advocacy. The third is to increase and improve the number and quality of female faculty by supporting junior academics to complete their doctorates, as well as to address gaps in teaching, research, and leadership development.

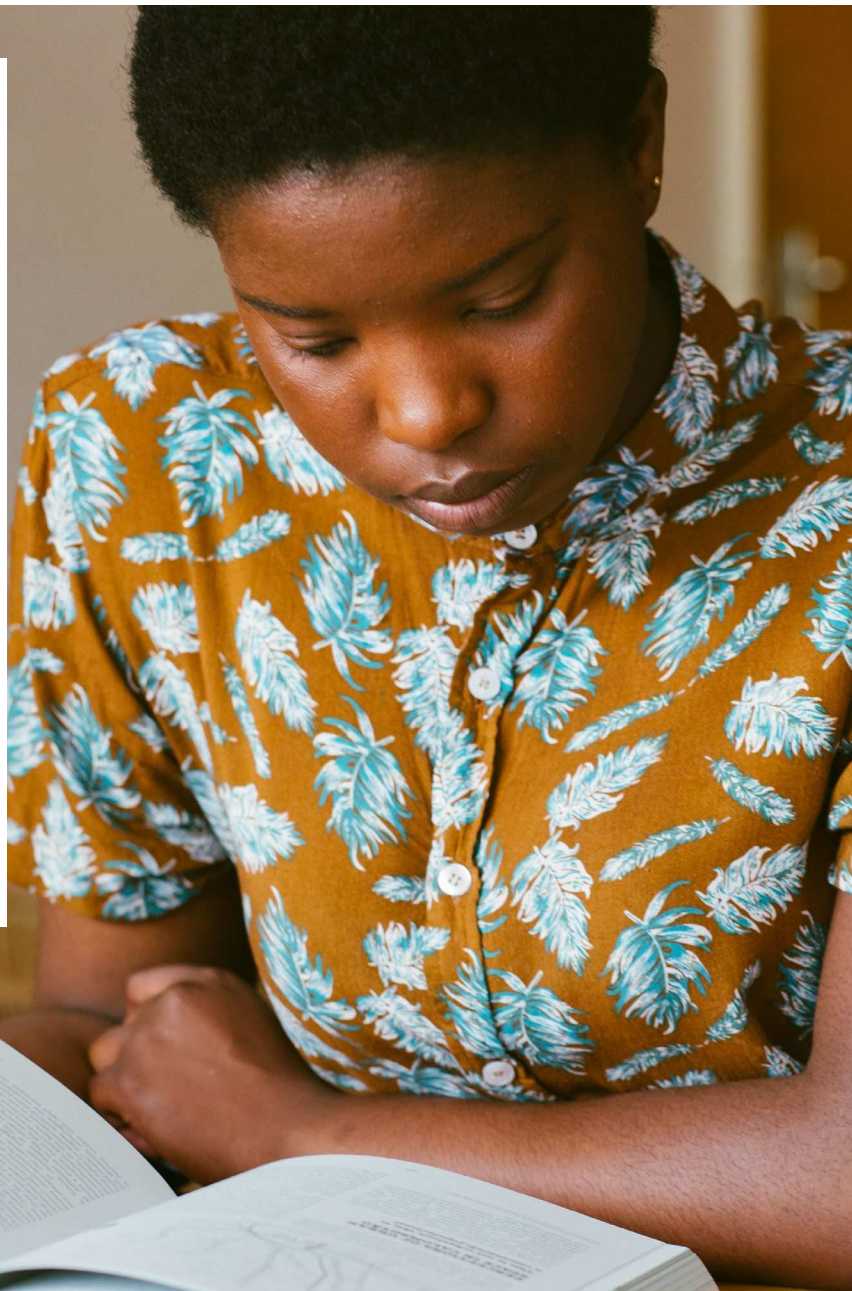


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3.7. Investing in African Research and Researchers, to Attract and Retain More Faculty

Increased student enrolment without a commensurate increase in faculty has led to heavy teaching loads, leaving no time for research. The lack of time is also compounded by a lack of research funds, research visibility, and collaboration across the region. In addition, African research results are rarely indexed in major international databases and need increased visibility. This could ensure greater investment in African faculty, either through grants or fundraising, which would enable them to conduct high-quality research, provide opportunities for networking and collaboration, motivate young people to join academia, and provide extra resources for HEIs to hire more faculty. Furthermore, the availability and visibility of African research will help policymakers and other stakeholders identify institutional partners and build on existing evidence from the region to find tailor-made solutions to faculty challenges and other problems in higher education. The following initiatives are helping to solve this problem.

3.7.1 Database of African Theses and Dissertations-Research (DATAD-R)

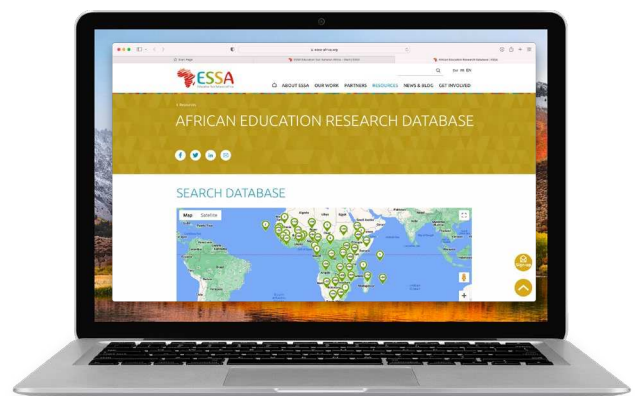
DATAD-R is an initiative by The Association of African Universities (AAU) to put Africa's research output into mainstream world knowledge. DATAD-R improves the management of and access to African scholarly work by providing accessibility to theses and dissertations prepared in the region. However, there is a need for straightforward and up-to-date copyright policies within the partner universities for wider success.

3.7.2 AfricArXiv African Preprint Service

AfricArXiv is a community-led digital archive for African research; an Africa-owned open scholarly repository to disseminate African knowledge and expertise. **AfricArXiv** has made African research more visible and discoverable globally and enabled research exchange and cross-continental collaboration. In addition, it disseminates research results in African languages such as Afrikaans, Amharic, Chichewa, Hausa, Igbo, Malagasy, Sesotho, Somali, Sunda, Swahili, Xhosa, Yoruba, and Zulu. Thus, it is more accessible to a broader African population.

3.7.3 African Education Research Database (AERD)

In partnership with ESSA, this free interactive online database was developed by the Research for Equitable Access and Learning (REAL) Centre at the University of Cambridge. The **AERD** includes peer-reviewed articles, chapters, PhD theses, and working papers from the continent and is helping to raise the visibility of research conducted by Africans based in Africa. The AERD also consolidates the evidence base for policy and practice and informs future research priorities and partnerships. Some of the evidence about the faculty challenges in SSA and proposed solutions has been obtained from the publications in this database.



3.8 Regional Partnerships

Regional partnerships often bring momentum and resources to ideas discussed in earlier sections. The following regional partnerships have been crucial in addressing faculty challenges.

3.8.1 Partnership for Enhanced and Blended Learning (PEBL)



Under the leadership of The Association of Commonwealth Universities (UK), The Commission for University Education (Kenya), The Commonwealth of Learning (Canada), Kenyatta University (Kenya), Makerere University (Uganda), The Open University of Tanzania, The State University of Zanzibar (Tanzania), The Staff and Educational Development Association (UK), Strathmore University (Kenya), The University of Edinburgh (UK), and The University of Rwanda have come together to provide a solution to East Africa's shortage of academic teaching staff.

PEBL's solution is anchored on expanding delivery methods for undergraduate and postgraduate courses by providing quality-assured blended courses for gaining degree credits. PEBL has also undertaken educational capacity building among academic staff within its network, focusing on effective blended learning pedagogies. As a result, by the end of 2020, over 50 academics across the network had been trained in blended learning pedagogy and curriculum design, cascading the knowledge to over 1,000 additional academic staff in their universities. In addition, nine universities across the region had developed 16 blended modules in information and communications technology, business, health and applied sciences, and education. Furthermore, the PEBL modules have benefitted over 10,000 students across 11 universities in the region, with 80% of students reporting satisfaction with its content and format and 89% believing that the modules helped them improve their technical skills (Young et al., 2021).

3.8.2 Pedagogical Leadership in Africa (PEDAL)



This programme builds on existing partnerships between 13 universities across seven African countries to entrench innovative pedagogy within social science courses. **PEDAL** develops capacity among course leaders who act as systemic catalysts of PEDAL pedagogy. Also, it ensures the use of virtual learning platforms, staff exchanges, and joint research and staff seminars. Dr Kwame Asah-Asante of the University of Ghana observed:



This programme challenged us to think critically to deliver to our students. It prepares us for the next moment in our academic life, which is focused on improving teaching methodologies to help students become useful graduates."

By the end of 2020, 1,460 teaching staff from over 70 universities had received PEDAL training. Notably, 80 participants became trainers in their host institutions and other countries.

3.8.3 African Centres of Excellence (ACE)



Through the Africa Higher Education Centers of Excellence (**ACE**) Project, The World Bank has since 2014 collaborated with African governments and HEIs to fund the establishment of Centers of Excellence in STEM, Environment, Agriculture, applied Social Science / Education and Health. The project has supported and continues to support students and HEIs through improved research, teaching, scholarships, and graduate internships in 17 countries in the region. In addition, the funding helps to promote regional specialisation among participating universities in areas that address regional challenges and strengthen these African universities' capacities to deliver quality training and applied research.

As part of the second phase of the ACE project that was launched in 2018 and will run until 2022, 24 Centres of Excellence were established and are being supported in Africa. The Centres will produce over 3,500 graduates in regional development priority areas, with 700 expected to be PhDs and more than 1,000 female students (Mashinga, 2018). That should positively impact the pipeline for future faculty in the universities and countries in the region.

Two of the Centres were established in public universities in Zambia, to the tune of \$12 million. The Africa Centre of Excellence in Infectious Diseases of Humans and Animals (ACE-IDHA) is based at the University of Zambia, whereas the Africa Centre of Excellence in Sustainable Mining (ACE-SM) is based at the Copperbelt University. These two Centres are developing research capacity and improving the training of academic staff and students in infectious diseases and sustainable mining, respectively, which should have a positive impact on the existing and future faculty.

3.8.4 Collaborative PhD Programme (CPP)



Launched in 2002 by the **African Economic Research Consortium (AERC)**, the aim of the CPP is to strengthen teaching and research capacity in sub-Saharan African countries, to increase the pool of potential researchers and policy analysts, and to gradually build up and retain African scholars in Africa, thus leading to an increase in capacity across the continent. The CPP awards 26 PhD scholarships annually, some of who go on to become academic lecturers.

3.8.5 Consortium for Advanced Research Training in Africa (CARTA)



The **Consortium for Advanced Research Training in Africa (CARTA)** is an initiative of eight African universities, four African research institutes, and select non-African partners. CARTA offers an innovative model for doctoral training in sub-Saharan Africa to strengthen the capacity of participating institutions to conduct and lead internationally competitive research. CARTA is currently supporting 228 PhD fellows, who have already produced 1,180 peer-reviewed publications. In addition, 594 institution-based faculty and administrative staff have benefited from attending CARTA workshops that help to strengthen research capacity and support research management at an institutional level.

²Phase one (ACE I) included Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Gambia, Ghana, Nigeria, Senegal, and Togo. ACE II includes Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Tanzania, Uganda, and Zambia.

3.8.6 The African Doctoral Academy (ADA)



The **African Doctoral Academy** (ADA) serves to coordinate and strengthen excellence in doctoral education at Stellenbosch University (SU) and across the African continent. The ADA's bi-annual, two-week-long doctoral schools take place every year in the summer (January) and winter (June-July). The aim is to offer high impact research and methodology training and options in academic preparedness and career development. Its vision is to support, strengthen and advance doctoral training and scholarship on the continent across disciplines through an integrated approach that contributes to global, regional, national, and institutional objectives and priorities. This could be positive for the faculty pipeline in SSA.

3.8.7 Partnership for Skills in Applied Sciences, Engineering and Technology (PASET)



The **Partnership for Skills in Applied Sciences, Engineering and Technology** (PASET) was launched in 2013 by the governments of Senegal, Ethiopia, and Rwanda, in partnership with The World Bank. Kenya and Cote d'Ivoire joined the initiative later. PASET aims to address systemic gaps in skills and knowledge in sub-Saharan Africa's priority ASET fields and build the capacity of African education and training institutions to train high-quality technicians, engineers, and scientists to meet the economy's demands. Since 2013, more than 25 African countries and representatives of Brazil, China, India, Japan, and Korea have participated in PASET's various activities. This is another potential route for enhancing faculty recruitment.

3.8.8 DAAD In-Region/In-country Scholarship Programme



The German Higher Education Cooperation Agency (**DAAD**) supports several collaborative PhD programmes that strengthen higher education in sub-Saharan Africa through the training of future faculty members. These programmes are run in conjunction with individual German and African universities and examples of such programmes include the Ghanaian-German PhD programme in development studies at the University of Ghana, the Tanzanian-German programme in law at the University of Dar es Salaam, and the programme in development and criminal law at the University of the Western Cape in South Africa.

3.8.9 Regional Initiative in Science and Education (RISE)



The **Regional Initiative in Science and Education** (RISE), supported by funding from Carnegie Corporation of New York from 2008-2017 and managed by the US Science Initiative Group, established five networks for training MSc and PhD scientists and engineers in Materials Science, Natural Products, Biochemistry, Water, and Marine Science, via nodes in Botswana, Namibia, Kenya, Nigeria, and South Africa. Most of the graduates from the initiative were academics already employed by participating universities. The initiative thus helped build the university staff's capacity, improved retention and attracted new staff.

3.8.10 The AESA-RISE Postdoctoral Fellowship Programme



The AESA-RISE Postdoctoral Fellowship Programme

This is a successor to RISE, to build on the previously set foundation of training high calibre PhD and masters-level scientists in SSA. The **AESA-RISE Postdoctoral Fellowship Programme** supports globally competitive research in universities within the region through initial funding by Carnegie Corporation of New York. The programme provides a three-year postdoctoral fellowship to academics based in African institutions to enable them to research critical issues that will enhance sustainable development in Africa. The fellows also receive mentorship from senior academics to help them improve the quality of their teaching and research. Since the fellows tend to already be staff of the African institutions, this programme boosts faculty development and retention.

3.8.11 Residential training schools and workshops

Given that African universities suffer from a shortage of qualified academic staff and high student-teacher ratios, effective faculty and staff development is critical to improving institutional capacity. As a result, funding agencies, research networks, and university associations provide several residential and ad-hoc training workshops, courses, and other forms of support. Noted below are training workshops specifically targeted at African students and academics:



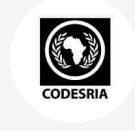
a) The **AERC** runs methodology workshops in Economics for researchers sponsored through its programmes.



b) **The African School of Fundamental Physics and its Applications** is organised every second year in Africa. It is targeted at early career researchers and young faculty members



c) The **CARTA** programme has an annual 'joint advanced seminar' that aims to equip a doctoral cohort with strong conceptual, technical, analytical, writing, leadership, and professional skills.



d) **The Council for the Development of Social Science Research in Africa (CODESRIA)** runs research training workshops and sub-regional methodology workshops for early-career social scientists and doctoral students.



e) The **AAU** runs technical workshops on various subjects. These include Quality Assurance, Teaching and Learning, Research Methods, Research Leadership, Data Ethics, and Transparency.



f) The **AuthorAid** programme is notable in its use of online support, providing a website of resources, an online discussion space for advice, and a facility to enable researchers to identify a mentor to assist them in publishing their work, or to advise them as they formulate research or develop grant proposals. Training workshops on scientific writing are also run by AuthorAid.

3.9. Comprehensive Government-led Reform

South Africa's **SSAUF** (Department of Higher Education and Training, 2015) is a comprehensive, transformative approach to developing future generations of academics and building staff capacity. It entails estimating future faculty needs and developing a planning and development framework to recruit, support, and retain black academic staff in order to address their significant under-representation at all levels of the sector.

The analysis is built on the following justification:



Lessons are being drawn from the framework. The estimation generated was used to design a programme that is linked to the academic development pathway of future faculty, which could then improve the quality of teaching and learning, as well as retention in academic institutions. Elements of the programme include:

3.9.1 The Nurturing Emerging Scholars Programme (NESP)

This **NESP** programme identifies students who are beginning to demonstrate academic ability at junior levels (senior undergraduate or honours) and who might be lost to the system unless structured, attractive prospects and opportunities are available and active recruitment efforts are undertaken.



Image by Oladimeji Ajegbile on pexels.com

3.9.2 The New Generation of Academics Programme (nGAP)

This **nGAP** programme recruits new academics against carefully designed and balanced equity considerations. Once the disciplinary areas of greatest need are identified, nGAP draws on promising current senior postgraduate students or past students who hold appropriate postgraduate degrees and who have ambitions or can be attracted to become academics. This group of current students and past graduates then forms the major cohort of what the SSAUF calls “nGAP Scholars.”

3.9.3 The Existing Academics Capacity Enhancement Programme (EACEP)

The **EACEP** programme supports the development of existing academics, for example, through support to complete their doctoral studies or by addressing specific gaps with respect to teaching development, research development, social engagement, and academic leadership.

3.9.4 The Supplementary Staff Employment Programme (SSEP)

The **SSEP** programme allows universities to hire staff with specific skills on an as-needed basis. This is to help bridge specific gaps while the overall staffing challenge is being addressed. In addition, SSEP is a cross-cutting programme that supports the implementation of other core SSAUF programmes underway at the university.

3.9.5 The Staffing South Africa’s Universities Development Programme (SSAU-DP)

The **SSAU-DP** programme cuts across the core programmes and supports teaching and research development needs in each programme. This component of the framework is designed to ensure that the different categories of academics or scholars are supported sufficiently to enable a better chance of success in their development, and to ensure greater retention and throughput.

3.10 Faculty Recruitment: African Jobs Board

To address faculty challenges in the hiring and retention process, ESSA has partnered with AAU and Warwick Employment Group in the UK to develop **Edujobs Africa**, the first **African Jobs Board** for hosting job vacancies in academic and research-focused roles in HEIs in Africa. As a result, the Jobs Board increases the visibility of higher education jobs available on the continent, helps African HEIs and governments retain academic talent, and promotes academic mobility between educational institutions across the region.





4

Impact of COVID-19 on Faculty challenges

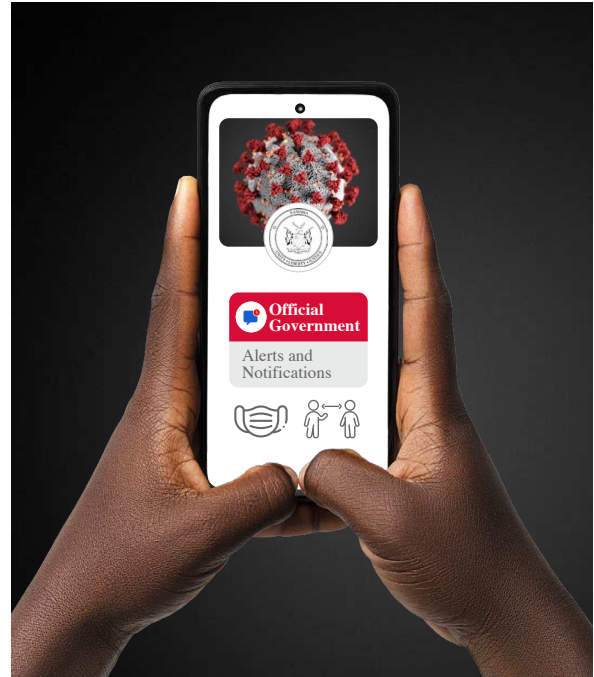
COVID-19 has exacerbated most of the faculty challenges. However, education stakeholders have adopted and proposed the following innovations and solutions.

4.1 Effective Communication at the National Level

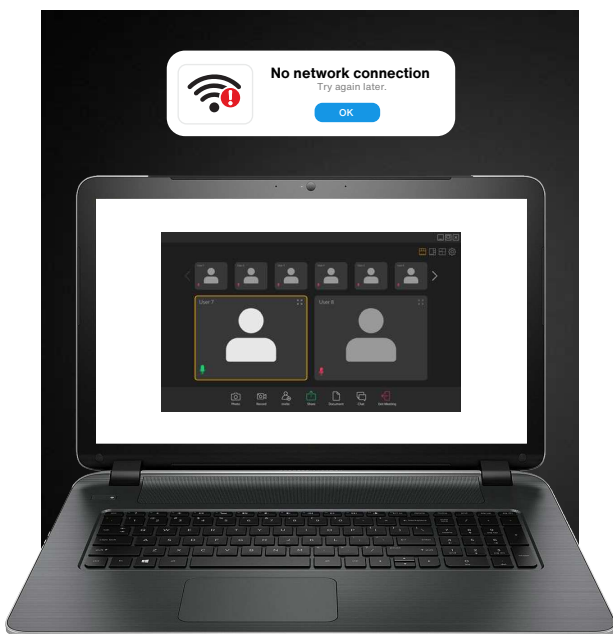
Early warning systems and a communication channel between the key education stakeholders are essential to enable dialogue about the objectives and plans to find sustainable solutions to the faculty challenges. For instance, in Namibia, the government took the lead in coordinating communication between such stakeholders. Maggy, a lecturer in Namibia, observed (eLearning Africa, 2020:36):

"The government," she said, "has been supportive in finding out the status of all educational institutions." They motivated and encouraged a lot of resource sharing and sharing of best practices. "Getting all stakeholders together allowed all them to share their stance and progress regarding online learning and teaching nationally with everyone on national television, administer various surveys to get to know the actual status, allow a lot of open debate and rapport, and many more."

This observation suggests that the Namibian government's effective communication has been ensuring that all stakeholders' needs are known and practical solutions implemented.



4.2 Involving the Private Sector in Addressing Faculty Challenges



During emergencies, the private sector should ideally be involved, from an early stage, in discussions that education stakeholders have about faculty challenges in HEIs, in identifying proposed solutions to these challenges, and in implementing these solutions. For example, since the onset of the COVID-19 pandemic in Kenya, the Kenya Civil Aviation Authority, in partnership with Alphabet Inc. and Telkom Kenya, has had Google's Loon Balloons floating over Kenyan airspace. These carry 4G base stations that provide internet connectivity to rural and remote areas. Furthermore, Kenya Education Network has collaborated with Kenya's HEIs and mobile network providers to create discounted E-Learning bundles for the university community. The discounted bundles provide students and staff at HEIs with access to e-learning and e-teaching, respectively. Such public-private partnerships can therefore help to improve access to resources for students and faculty, and hence the quality of education.

4.3 Proposed Solutions for Mitigating the COVID-19 Pandemic

The following are proposed solutions (eLearning Africa, 2020) based on the lessons learned from the effect of the COVID-19 pandemic on the faculty challenges in the SSA:

- a) At the regional level, there is a need to develop intra-African cooperation, to integrate distance learning and hence expand Africa's online education provision.
- b) At the government level, African governments could work with international and private sector partners to develop technological infrastructure and provide training to assist faculty and students in e-learning. Such a partnership could also create an enabling environment for the private sector to contribute to the technological advancement of the education sector more generally.
- c) Institutions of higher learning should raise awareness among students and parents about the benefits of distance and technology-assisted learning and ensure wider engagement with all stakeholders in the students' learning process.
- d) In the East African Community, the IUCEA (2021) proposed the following solutions:

i. HEIs should continuously train the HEI community, especially faculty and students, on the operations of online learning.

ii. Weed out redundant academic programmes that do not attract enough students to free resources; strike the right balance between investment in physical infrastructure and e-resources.

iii. Regularly inspect HEIs to ensure quality standards are met for both teaching and examinations

iv. Invest in systems that safeguard the integrity of online examinations.

5. Conclusion

Although limited, the analysis and evidence-based review in this ESSA report show that HEIs and education stakeholders in select countries in sub-Saharan Africa are creating and/or observing some (potential) solutions to address the faculty challenges, as provided below:

- a) End the duplication of academic programmes and abandon the aggressive marketing of degrees and diplomas with low academic rigour. This enables effective allocation of faculty, efficient utilisation, and maximisation of existing resources, hence an increase in the quality of graduates and research.
- b) Conduct a cost-impact analysis and adopt a contractual recruitment model for non-technical staff, thus freeing the budget for other areas such as research and faculty recruitment.
- c) Institutionalise adjunct faculty development and introduce the professor emeritus position.
- d) Increase postgraduate enrolment but provide an evidence-informed cap as needed.
- e) Mainstream gender in the curriculum and establish conducive networks for female academics.
- f) Establish homegrown research databases to publicise faculty research findings and encourage research collaboration.
- g) Enhance the development of faculty members through strong regional partnerships, Centres of Excellence, blended learning approaches, entrenching innovative pedagogy, as well as organising effective doctoral and postdoctoral programmes, residential training schools, and workshops.
- h) Establish a transformative approach to developing the future generation of academics by creating an estimation, planning and development framework to recruit, support and retain faculty.
- i) Develop an Africa-based faculty job board.
- j) Rethink the curriculum delivery model by making it learner-centred rather than content-centred.
- k) Establish early warning and communication channels between key stakeholders for risk mitigation, in case of disasters or pandemics.
- l) Involve the private sector in the training of faculty and students in the use of technology and infrastructure development.
- m) Strike the right balance between investment in physical infrastructure and e-resources.
- n) Ensure a high-quality standard for online and hybrid teaching and examinations.
- o) Invest in systems that safeguard the integrity of online examinations in African HEIs.

It is urgent that these evidence-based, homegrown (potential) solutions to faculty challenges in HEIs in sub-Saharan Africa are carefully considered. Depending on resource availability, the ones relevant to local situations could then be adopted to address faculty challenges in specific institutions, countries, or regions of Africa. Through the implementation of some of these approaches and the sharing of lessons learned, the persistent faculty challenges observed in HEIs can be turned into opportunities to improve the quality of higher education for the growing youth population in sub-Saharan Africa.

The main limitation of this report is the limited information on data cost and effectiveness and the selective country sampling. Based on this evidence, education stakeholders need to learn the following: the long-term impacts of the interventions; the replicability of the interventions in both private and public HEIs; the external validity of the interventions in other SSA countries; the cost-effectiveness of the interventions; and other interventions in other SSA countries not documented here. The time to act, though, is now!

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