ESSA
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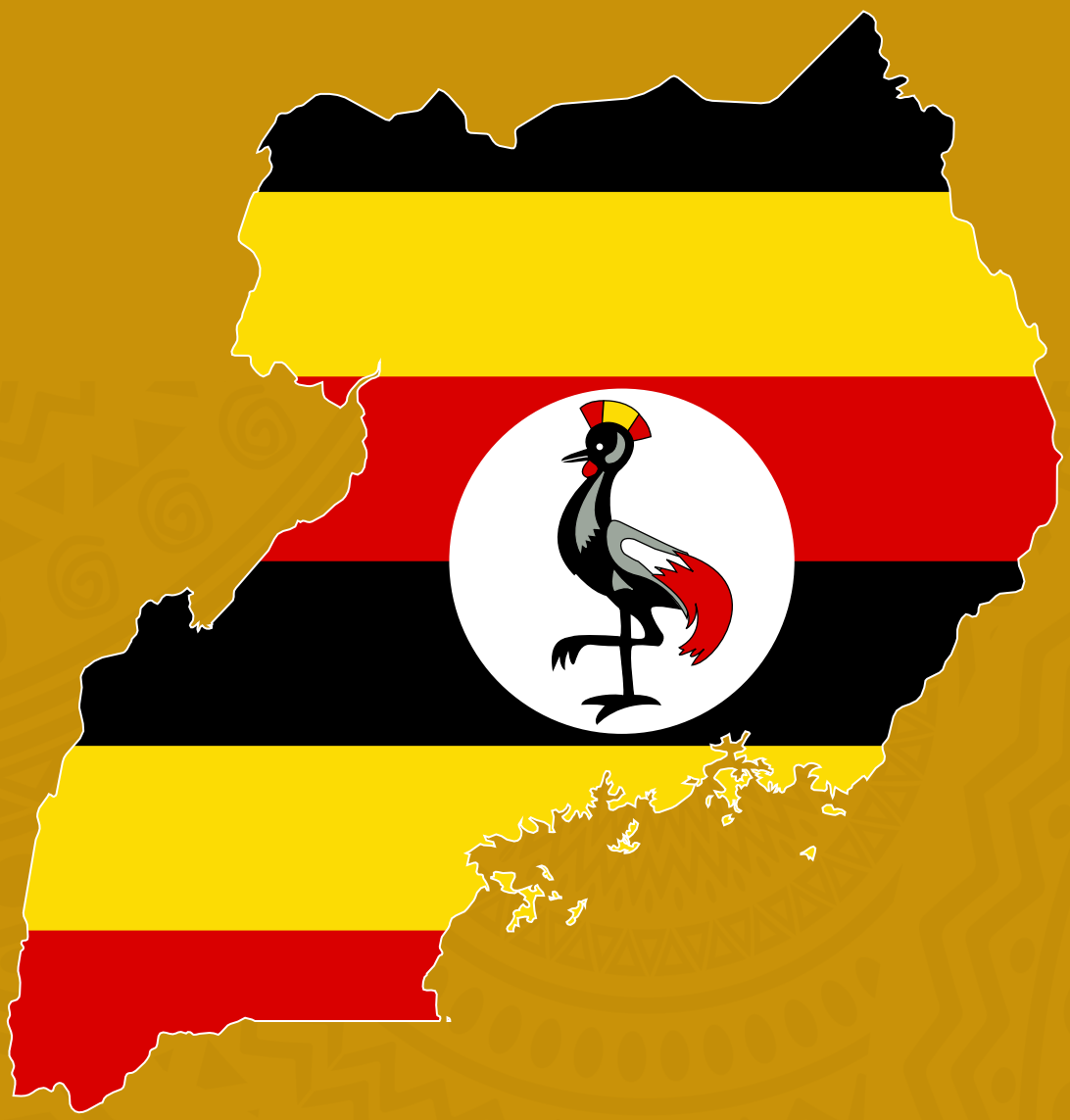
Policy Brief

Faculty First: Addressing Faculty Challenges in Uganda's Universities



September 2024/DAF-EAC- PB-006

1. Introduction

This Policy Brief draws insights from the Demographics of African Faculty (DAF) in the East African Community (EAC) study, conducted in Uganda and five other EAC partner states, specifically Burundi, Kenya, Rwanda, South Sudan, and Tanzania between 2021 and 2023. This study, a joint endeavour by the Inter-University Council for East Africa (IUCEA), Education Sub Saharan Africa (ESSA), Association of African Universities (AAU), and the Population Reference Bureau (PRB), is the first to systematically document the status of higher education faculty in the EAC, following a prior examination of the DAF in Ghana. The DAF-EAC study provides a comprehensive analysis of the state of higher education faculty in the six EAC partner states and forecast demand through 2030.

The primary objectives of the DAF-EAC study were to:

1. Conduct an extensive desk literature review and gather data on the higher education policy landscape and faculty status at both national and institutional levels.
2. Utilise the DAF model to forecast future faculty supply and demand based on gender, discipline, policy norms[1], and turnover rates.

The DAF-EAC report provides accurate and consolidated data on faculty in higher education. This data is crucial for making effective policy decisions, planning, and securing the investment required to enhance the quality of education in East Africa. The report's target audience encompasses education sector leaders in government entities, private sector organisations, civil society organisations, and international development institutions.

2. Overview of university education in Uganda

The structure of education in Uganda is a 7-4-2-3 model. This means that students complete seven years of primary education, four years of lower-secondary education (ordinary level, O level), two years of upper-secondary education (advanced level, A level), and three years of tertiary education. University education is Uganda's highest level of education and provides both undergraduate and postgraduate programmes.

Established in 1922, Makerere University is the country's oldest university and dominated university education for several decades. However, with the enactment of the Universities and Other Tertiary Institutions Act (UOTIA) of 2001, there has been a surge in private universities. Since then, the landscape of university education has transformed significantly. At the end of the academic year 2019/20, the total number of public universities was nine (9), and private universities were forty-four (42), with private universities accounting for 82% of the 51 universities in the country.

[1] Policy Norms are set specific targets or limitations related to numbers, such as student-teacher ratios, class sizes, or minimum qualifications for educators.

The legal, policy, and institutional framework of university education is anchored on the UOTIA, which aims to maintain quality and increase access to higher education, ultimately contributing to national development. The National Council for Higher Education (NCHE), established under the UOTIA, is the regulatory body that ensures quality standards and sets admission requirements. Further, the UOTIA establishes the legal framework for recruiting, appointing, and promoting highly qualified and experienced academic staff. This act mandates that universities adhere to standards set by NCHE. Additionally, universities must have publicly available regulations governing staff hiring, promotion, and termination. Compliance with these regulations allows universities to implement effective quality assurance mechanisms.

The Ugandan university system offers six distinct entry points into academic service: Teaching Assistant, Assistant Lecturer, Lecturer, Senior Lecturer, Associate Professor, and Professor. Most staff enter at the Teaching Assistant or Assistant Lecturer level. Within four years of appointment as an Assistant Lecturer, individuals must pursue a doctoral degree (PhD). While some choose programmes within the university itself, others pursue them abroad. To facilitate this, universities typically offer employees from the Assistant Lecturer level upwards either study leave with continued salary or require resignation to pursue their PhD. The university may also cover tuition and living expenses for some staff, while others receive only living expenses. Additionally, universities may secure funding from development partners to support staff PhD programmes. The Makerere University human resources manual exemplifies the national standards. It emphasises that a PhD is mandatory for all academic positions and disciplines, reflecting the university's commitment to academic maturity. Section 6 of the manual[2] outlines additional details on promotion and faculty positions.

Table 1 provides a clear overview of the various academic positions in Ugandan universities and their respective qualifications for appointment or promotion.

Table 1: Qualification for Academic Staff in Universities

Academic position	Qualification
Teaching Assistant	First Class Degree / Upper Second or Lower Second (in Special Circumstances)
Assistant Lecturer	Master's Degree
Lecturer	Master's Degree but on PhD track
Senior Lecturer	PhD, original contribution to knowledge through research & publication
Associate Professor	PhD, teaching experience of at least seven years, publication
Professor	PhD, teaching experience of at least seven years, publication

This structure ensures a clear progression within the academic hierarchy. The lowest position, Teaching Assistant, requires a First-Class Bachelor's degree (or, in exceptional cases, an Upper or Lower Second-Class degree). The pinnacle of the academic staff hierarchy is the Professor position, requiring a PhD, a minimum of seven years of teaching experience, and publications in peer-reviewed journals.

[2] Human-resource-manual.pdf (mak.ac.ug)

3. Methodology

The study adopted a mixed-methods approach that involved data collection at various national offices, including the Ministry of Education and Sports, NCHE and Makerere University Fact Book. Additionally, desktop reviews were conducted to gather background information on university education practices in Uganda, encompassing policy norms, academic staff mobility trends, and student enrolment statistics. Key informant interviews were also conducted with individuals within these institutions, enriching the quantitative data with valuable qualitative insights. Furthermore, the study employed the Demographics of African Faculty (DAF) model to forecast future faculty supply and demand within the Ugandan university education system. The DAF model is an MS Excel-based quantitative model that projects faculty needed to meet policy norms using data on various indicators, including current period student enrolment, projected student enrolment, number of faculty in the current period, faculty exit rates and policy norms. Due to data challenges across universities, the analysis focussed on the Makerere University, which had adequate data for DAF analysis.

4. Key findings of the assessment of faculty demographics in Uganda

4.1 University policy norms

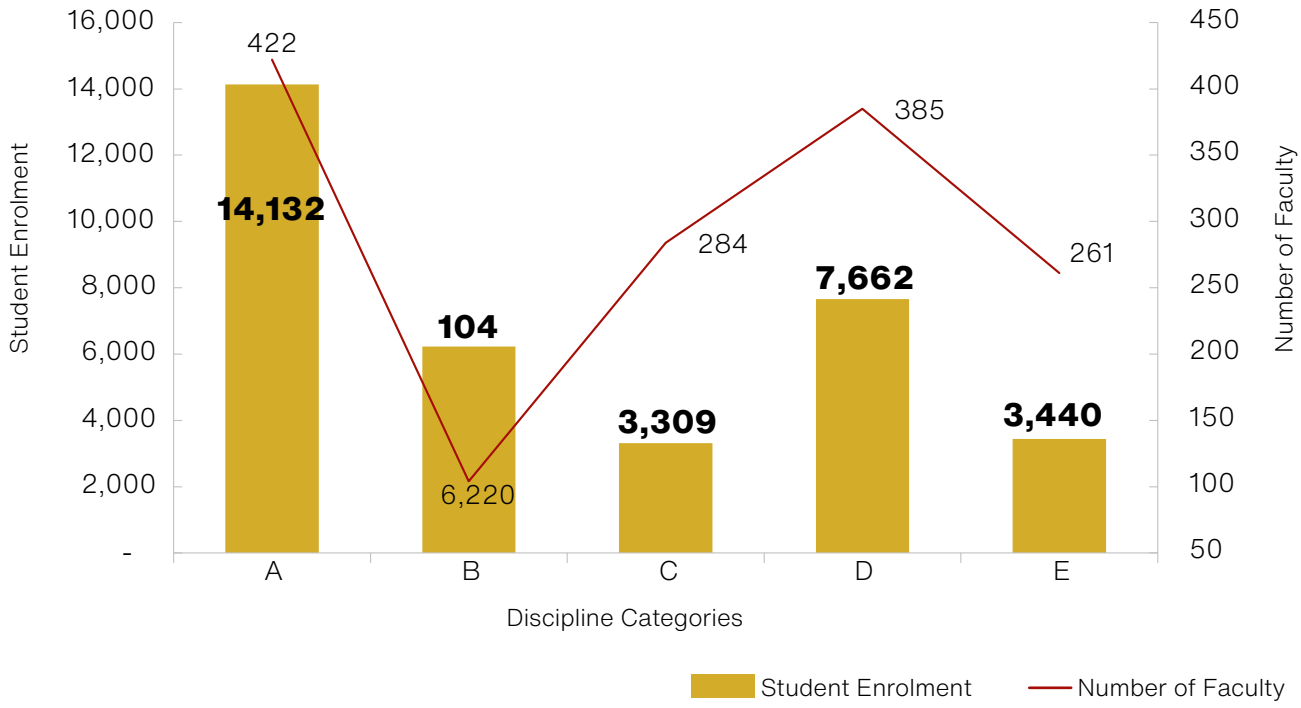
The Ministry of Education and Sports in Uganda aspires to an ideal Student-Teacher Ratio (STR) of 1:15. This focus on a manageable class size aligns with the national goal of promoting equitable access to quality education for all. The Ministry emphasises gender parity in education, aiming for a 50:50 faculty-gender ratio outlined in the Gender in Education Sector Policy. This policy prioritises ensuring that both boys and girls, women and men, have equal opportunities to participate in and benefit from education and sports throughout the country. However, Uganda needs a dedicated policy document addressing STR and faculty-gender ratios in higher education. Consequently, for this analysis, Kenya's established policy goals for these aspects were adopted as benchmarks.

4.2 Student enrolment

In 2019/2020, student enrolment at Makerere University was recorded at 34,763 supported by a total faculty of 1,456 as shown in Figure 1. The highest number of students enrolled was in the Arts and Humanities discipline, with a total of 14,132, followed by Natural Sciences, with 6,220. The discipline with the highest number of faculty was the Arts and Humanities.

Even though male student dominates enrolments, the number of female students has steadily risen; for instance, female students accounted for 45% of enrolments in the academic year 2023/25 compared to 35% in the academic year 2015/16.

Figure 1: Total Student Enrolment and Faculty Across Discipline in 2019/2020



Discipline Categories

A: Arts & Humanities/ Social Sciences/ Journalism & Information/ Business Administration/ Law/ Services

B: Education

C: Health & Welfare

D: Natural Sciences/ Mathematics & Statistics/ Engineering/ Manufacturing/ Construction/ ICTs

E: Agriculture/ Forestry/ Fisheries/ Veterinary

Data Source: Makerere University Fact Book

Figure 2 shows that between 2017/18 and 2019/20, the gender gap in student enrolment remained narrow at Makerere University, with each gender recording more than 40% representation. However, male students dominate total enrolment.

Figure 2: Total Student Enrolment by Gender at Makerere University 2017/2018 – 2019/2020

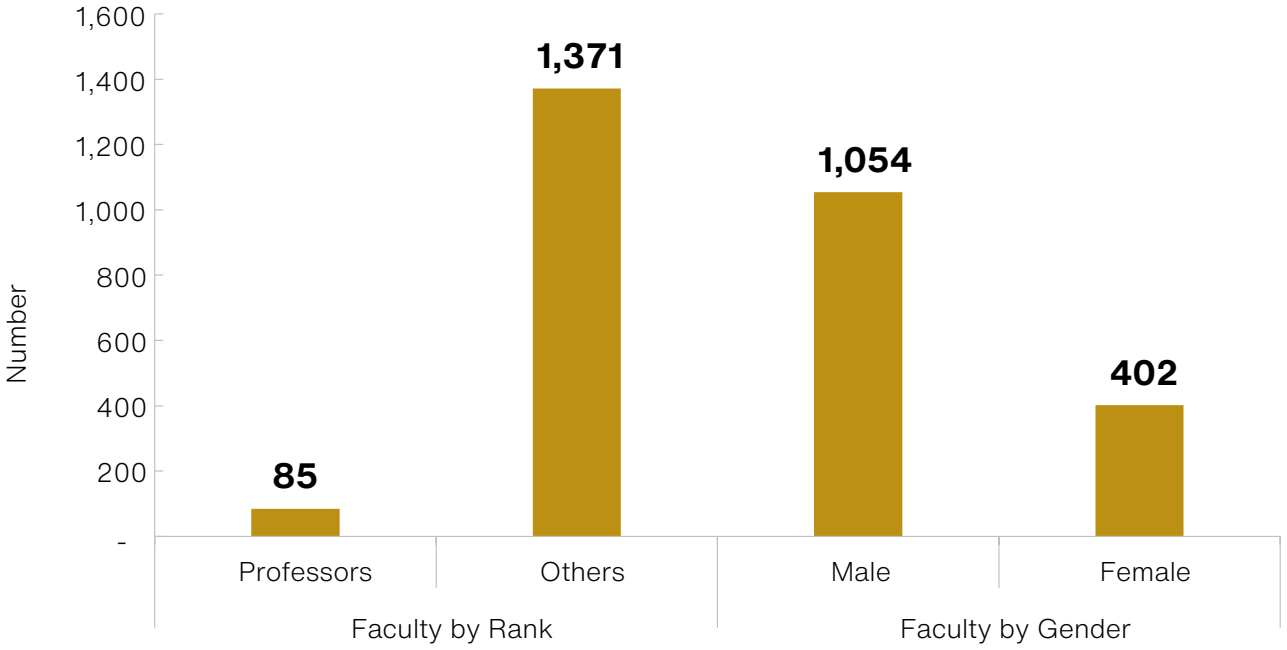
Year	Male		Female		Total
	Number	%	Number	%	
2017/2018	18,519	55.1	15,116	44.9	**33,635**
2018/2019	19,294	55.8	15,272	44.2	**34,566**
2019/2020	19,382	55.8	15,381	44.2	**34,763**

4.3 Faculty distribution

Universities in Uganda typically employ a mix of permanent and part-time staff, with a controlled ratio of 70% permanent to 30% part-time, as stipulated by Statutory Instruments 2008 No. 34. Data from the academic year 2018/19 to 2019/20 for Makerere University revealed a decrease in full-time faculty, dropping from 1,492 to 1,456.

In the academic year 2019/20, Makerere University boasted 85 Professors, with the remaining 1,371 faculty members spread across other ranks. A significant gender gap was also evident, with a male-to-female ratio of 3:1 (1,054 males vs. 402 females).

Figure 3: Faculty Distributed by Rank and Gender in 2019/20



Data source: Makerere University Fact Book

4.4 DAF model projections[3] the case of Makerere University

The DAF analysis produced projections for student enrolment and additional faculty needed by 2030. Assuming that student enrolment grows at the same rate as the population ages 18 – 21, the age group typically associated with higher education, the DAF model used the projected population growth rates produced by the UNPD. The model projected that students' enrolment in 2030 would be 297,987, an increase from 229,049 in 2021. However, the additional faculty needed after ten years will be 33,291 (**see Table 6**).

4.4.1 Estimated number of faculty needed to meet STR goals in the baseline year (2019)

The DAF analysis employed student enrolment and faculty data, disaggregated by discipline, to estimate the faculty shortage at Makerere University. Using 2019 as the baseline year, the study revealed a significant discrepancy between actual STR across all disciplines and policy norms (see **Table 3**). In the Arts and Humanities category, the STR was 33:1 in 2019, falling short of the policy target of 18:1. The Education category presented an even more significant challenge, with a ratio roughly four times higher than the desired level. The study also found that the university recorded a faculty-gender ratio of 3:1, which breached the benchmark policy target of 2:1 (see **Figure 4**)

Table 2: Policy Norms versus Actual STR by Discipline in 2019 (Baseline year)

Discipline categories	Student enrolment	Number of faculty	Actual STR	Policy goals for STR
Arts and Humanities [a]	14,132	422	33:1	18:1
Education	6,220	104	60:1	18:1
Health and Welfare	3,309	284	12:1	7:1
Natural Sciences and Mathematics [b]	7,662	385	20:1	10:1
Agriculture, Forestry, Fisheries, and Veterinary	3,440	261	13:1	10:1

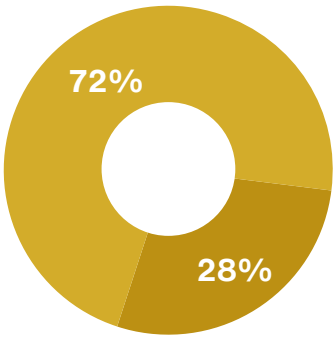
Note: The policy goals are adopted from Kenya.

[a] Arts and Humanities – comprise the arts and humanities, social sciences, journalism and information, business administration, law and services

[b] Natural Sciences and Mathematics comprise natural sciences, mathematics and statistics, engineering, manufacturing, construction and ICTs

Data source: DAF-EAC Report (2023)

Figure 4: Policy Norm Versus Reality for Faculty-Gender Ratio (Male-to-Female Ratio) in 2019



Male faculty
1,054

Female faculty
402

Actual male-to-female Ratio
3:1

Policy goal for male-to-female ratio
2:1

Note: The policy goal is adopted from Kenya.

Data source: DAF-EAC Report (2023)

The size of faculty at Makerere University in 2019 was 1,456. As observed in **Table 4**, the University would need about 1,260 additional faculty if it was to meet the STR goals in 2019. The faculty needed to replace those projected to exit in 2019 was about 260 faculty members, and to account for overestimation was about 70 faculty members. Moreover, to meet STR goals by discipline category, the university would have needed about 380 additional faculty members for the Natural Sciences and Mathematics category and approximately 360 additional faculty members for the Arts and Humanities category. In contrast, about 240 additional faculty would have been required for the Education category.

[3] The analysis adopted the policy goals from Kenya for the STR and faculty-gender ratio from its Commission for University Education as benchmarks.

Table 4: Additional faculty needed in 2019 (Baseline year)

Description	Faculty needed
Panel A: Total	
Additional faculty needed to meet STR goals	1,258
Additional faculty needed to replace the ones projected to exit during the year*	263
Additional faculty needed to account for overestimation**	73
Total	**1,594**
Panel B: Breakdown of the additional faculty needed to meet STR goals by discipline	
Arts and Humanities[a]	363
Education	242
Health and Welfare	189
Natural Sciences and Mathematics[b]	381
Agriculture, Forestry, Fisheries, and Veterinary	83
Total	**1,258**

Notes: *Assumption: 5% of professors and 10% of other teaching staff exit each academic year and need a replacement; **Overestimation of faculty can result from having faculty who are on the payroll but are absent from the universities for some reason e.g., faculty may lecture in private universities and have a post in public universities. The assumption is that the faculty is overestimated by 5%.

[a] Arts and Humanities – comprise the arts and humanities, social sciences, journalism and information, business administration, law and services

[b] Natural Sciences and Mathematics comprise natural sciences, mathematics and statistics, engineering, manufacturing, construction and ICTs

Source: DAF-EAC Report (2023), DAF Model results

4.4.2 Projected faculty needed to meet growth in student enrolment by 2030

The analysis revealed that about 5,800 additional faculty members will be required by 2030 to accommodate projected increases in student enrolment driven by population growth, even if the enrolment ratio remained at the level observed in 2019 (**Table 5,** Panel A). Approximately 480 additional faculty will be needed to meet the increased enrolment due to population growth in 2030, and about 1,700 additional faculty will be needed to meet STR goals, considering population growth. If the faculty projected to exit are considered and replaced, there would be a demand for 3,600 additional faculty. Lastly, about 70 additional faculty will be needed to account for overestimation.

Panel B of **Table 5** details the distribution of the additional faculty needed across disciplines to account for increased enrolment due to population growth. The most significant proportion (138) will be required in the Arts and Humanities category, followed by the Natural Sciences and Mathematics category (126).

Table 5: Additional faculty needed to meet increased student enrolment by 2030

Description	Faculty needed
Panel A: Total	
a) Additional faculty needed to meet the increased enrolment due to population growth*	476
b) Additional faculty needed to meet STR goals, considering population growth	1,669
c) Additional faculty needed to replace the ones projected to exit during the year**	3,566
d) Additional faculty needed to account for overestimation***	73
Total	**5,785**
Panel B: Breakdown of the additional faculty needed to meet the increased enrolment due to population growth by discipline	
Arts and Humanities[a]	138
Education	34
Health and Welfare	93
Natural Sciences and Mathematics[b]	126
Agriculture, Forestry, Fisheries, Veterinary	85
Total	**476**
Panel C: Breakdown of the additional faculty needed to meet STR goals by discipline, given population growth	
Arts and Humanities[a]	3,878
Education	2,954
Health and Welfare	3,210
Natural Sciences and Mathematics[b]	1,308
Agriculture, Forestry, Fisheries, Veterinary	265
Total	**11,614**

Notes: *Assumption: student enrolment grows annually at the rate of the population of age 18–21 projected by UNPD. **Assumption: 5% of professors and 10% of other teaching staff exit each academic year and need replacement. ***Overestimation of faculty can result from having faculty who are on the payroll but are absent from the universities for some reason, e.g., faculty may lecture in private universities and have a post in public universities. The assumption is that the faculty is overestimated by 5%.

[a] Arts and Humanities – comprise the arts and humanities, social sciences, journalism and information, business administration, law and services

[b] Natural sciences and mathematics comprise natural sciences, mathematics and statistics, engineering, manufacturing, construction and ICTs

Source: DAF-EAC Report (2023), DAF Model results

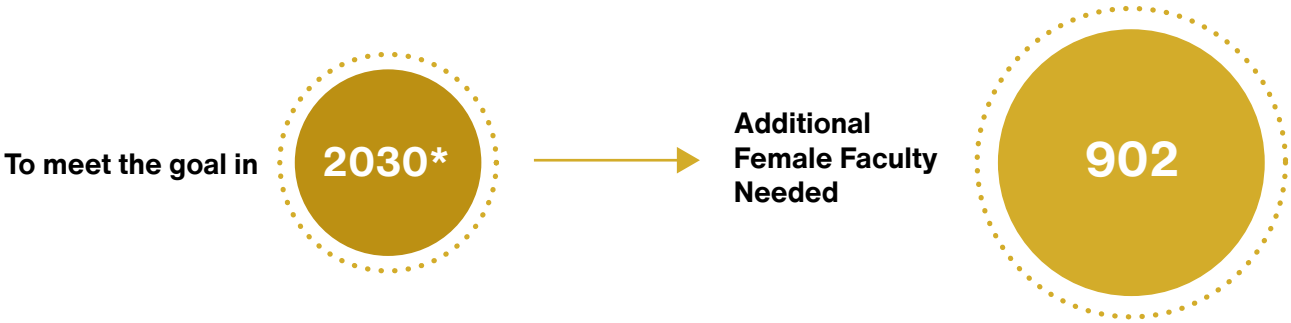
4.3.3 Projected faculty needed to meet STR goals by 2030

Focusing on achieving established STR goals by 2030, the analysis identified the need for approximately 1,700 additional faculty members (see **Table 5** Panel C). This significant figure (based on policy norms adopted from Kenya) suggests that Makerere University would need to significantly increase the number of faculty observed during the baseline year to meet these goals. The distribution of required additional faculty by discipline to bridge the identified faculty shortfalls by 2030 shows that the Natural Sciences and Mathematics category requires the highest proportion (506), followed by the Arts and Humanities category (482), the Education category (321), the Health and Welfare category (250), and agriculture, forestry, fisheries, and veterinary category (110).

4.4.4 Addressing the faculty-gender disparity

To achieve gender parity among faculty by 2030, the DAF model projects a requirement for around 900 additional female faculty members. This implies that of the estimated 1,700 faculty needed by 2030 to meet STRs, about 53% must be female.

Figure 5: Female Faculty Needed to Meet Policy Norms for the Faculty-Gender Ratio



***Assumption:** The 2030 faculty projections will reflect the same gender ratio as in the baseline year and that an additional increase in female hiring is needed to meet the policy norm for the faculty-gender ratio rather than decreasing the number of male faculty.

Source: DAF-EAC Report (2023), DAF Model results

5. Conclusion and policy recommendations

The study confirmed the existence of university education policies addressing faculty qualifications and overall STR and gender ratio. The STR policy goals disaggregated by discipline and gender ratios for faculty were unavailable. The study identified a significant rise in Makerere University's student enrolment, reflecting the growing population and demand for higher education. However, this increase has not been accompanied by a proportional growth in faculty, leading to high STR exceeding policy norms. Furthermore, the faculty exhibits a significant gender imbalance, deviating from established policies. These staffing limitations threaten educational quality and accessibility. Projections indicate a substantial need for additional faculty to meet the student influx and policy benchmarks. To address this challenge, the following recommendations are proposed:

1. **Review and Update Faculty Staffing Norms:** Establish clear guidelines for student-teacher and faculty-gender ratios. This review should incorporate novel and emerging developments within university education alongside the disaggregation of faculty STRs by discipline category, aligning them with UNESCO's International Standard Classification of Education Fields.
2. **Promote Gender Parity:** Implement targeted initiatives to attract and retain qualified female academics. This can involve scholarships, mentorship programmes, and addressing potential workplace biases.
3. **Promote Faculty Development:** To enhance faculty satisfaction and retention, prioritise faculty development opportunities, including professional training and research support. In addition, competitive salaries and comprehensive benefits packages should be provided to incentivise faculty to remain in academia.
4. **Increased Funding:** Allocate adequate funding to higher education institutions. This will enable hiring more faculty members to accommodate the growing student population.
5. **Technological Integration:** Leverage technology to enhance teaching and improve STR. Additionally, explore technology for data collection, management, and access within higher education.
6. **DAF Methodology Expansion**: Apply the Demographics for African Faculty (DAF) methodology and analysis to other universities beyond Makerere. As up-to-date national data becomes available, consider extending the analysis to the national level.

6. Next steps

The findings of the DAF-EAC study underscore the critical need for a robust and sustained approach to addressing the faculty shortage in Uganda's universities. To ensure the ongoing relevance and effectiveness of policy interventions, it is imperative to regularly update and refine the data-driven insights generated by this study. A key next step involves undertaking new DAF projections utilising the most recent available data. Policymakers can understand evolving faculty demand and supply trends by periodically recalibrating the model. This will enable more precise forecasting of future faculty needs, facilitating proactive planning and resource allocation.

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ESSA
Education Sub Saharan Africa

ESSA
3rd Floor, Chancery House
St Nicholas Way
Sutton
SM1 1JB, UK

info@essa-africa.org
@ESSA_Africa
@essa1
www.essa-africa.org