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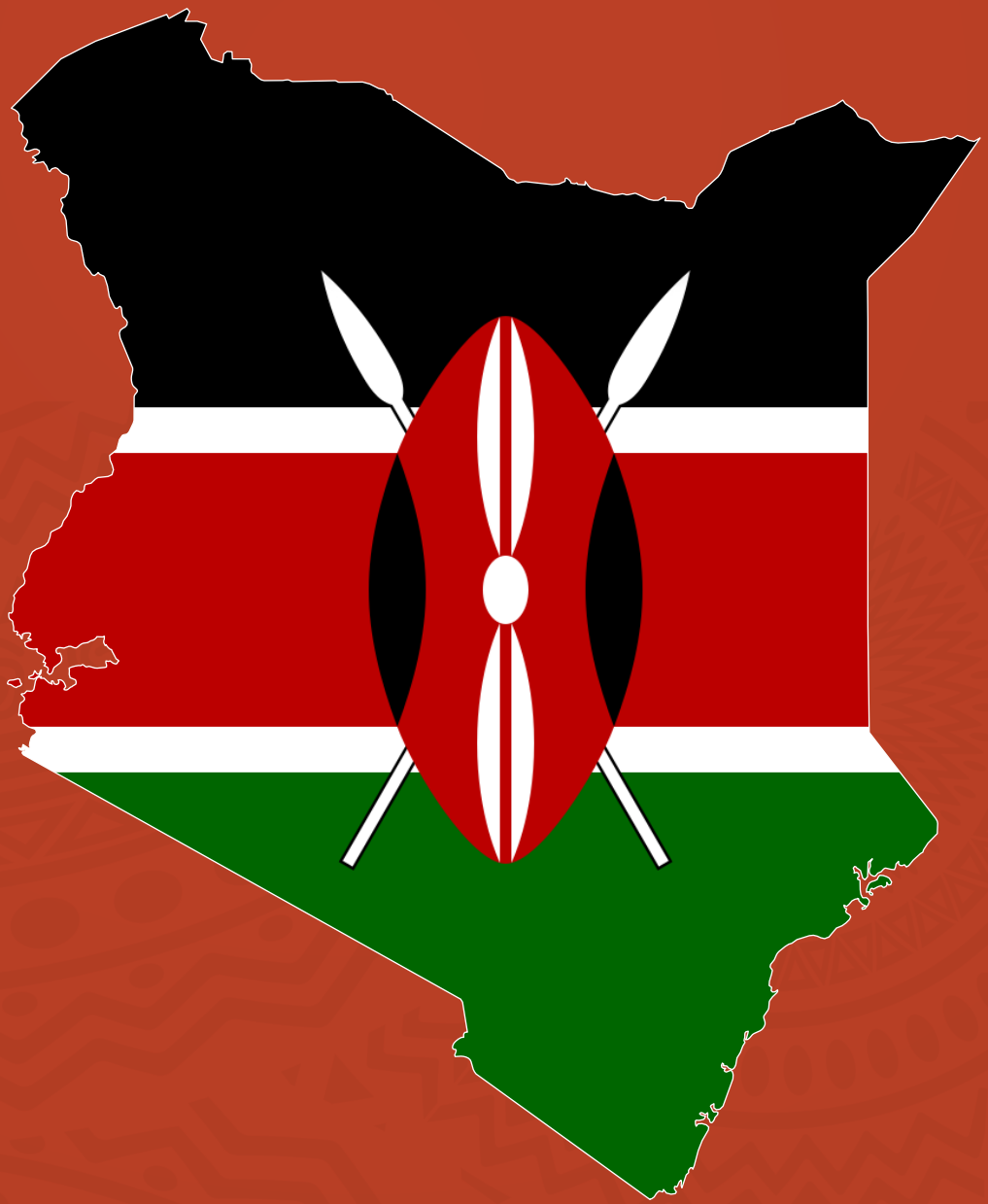
Policy Brief

Investing in Faculty: A Call to Action for Strengthening Kenya's University Education



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1. Introduction

This Policy Brief is the result of a collaborative effort, the Demographics of African Faculty (DAF) in the East African Community (EAC) study, conducted in Kenya and five other EAC partner states, specifically Burundi, Rwanda, South Sudan, Tanzania and Uganda 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 of the DAF-EAC report encompasses education sector leaders in government entities, private sector organisations, civil society organisations and international development institutions.

2. Overview of university education in Kenya

Universities are crucial to Kenya's economic and social development, producing skilled graduates and fostering research-driven innovation. Over the past five decades, university education in Kenya has grown and flourished. It has evolved from a single public university (University of Nairobi) and one private university (United States International University) to a robust system of 79 higher education institutions in 2023. This includes 62 fully-fledged universities (37 public and 25 private), nine university constituent colleges, and eight private universities with a Letter of Interim Authority (see Table 1).

Growth in the number of universities saw an accompanying increase in student enrolment from 3,000 in the 1970s to 20,000 in 1989. For the 2022-2023 academic year, 579,046 students were enrolled in Kenyan universities. The rise in student enrolment has been more significant in public universities than in private universities due to the subsidised nature of education in public universities.

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

Table 1: Number of Universities Licensed in Kenya

	2018	2019	2020	2021	2022	2023
Public Chartered Universities	31	31	31	32	36	37
Public Universities Constituent Colleges	6	6	7	8	5	6
Private Chartered Universities	18	19	20	21	25	25
Private Universities Constituent Colleges	5	5	3	3	3	3
Private Universities with Letter of Interim Authority	14	13	13	12	8	8
Total	**74**	**74**	**76**	**76**	**77**	**79**

Source: Kenya National Bureau of Statistics, Economic Survey (2024)

The Commission for University Education (CUE) accredits and awards charters to universities in Kenya. It is the regulator and custodian of quality for relevant and sustainable university education. The Kenya Universities and Colleges Central Placement Service places students under government sponsorship in public and private universities, national polytechnics, technical training institutes, and other accredited colleges.

The National Education Sector Strategic Plan (NESSP) guides the education sector. During the DAF-EAC study, NESSP 2018-2022 was being implemented. This all-inclusive sector-wide strategic plan is aimed at enhancing access and equity, providing quality and competency-based education, training, and research, strengthening management, governance, and accountability, and improving relevance and capacities for science, technology and innovation in education, training, and research for labour markets.

3. Methodology

The study adopted a mixed-methods approach that involved data collection at various national offices, including the Ministry of Education, CUE, the Kenya National Bureau of Statistics, and the Kenya Universities and Colleges Central Placement Service. Additionally, desktop reviews were conducted to gather background information on university education practices in Kenya, 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 DAF model to forecast future faculty supply and demand within the Kenyan university education system. The DAF model is an MS Excel-based quantitative model that projects faculty needed to meet policy norms using data on student enrolment in the current period, projected student enrolment, number of faculty in the current period, faculty exit rates and policy norms.

4. Key findings of the assessment of faculty demographics in Kenyan universities

4.1 Policy norms

The 2014 Universities Standards and Guidelines spell out the policy norms for the accreditation and operation of all universities in Kenya. The student-teacher ratios (STRs)[2] spelled out in these Guidelines is hardly met (see Table 2). Most disciplines fail to meet the recommended thresholds due to the increased number of universities and programmes without a commensurate increase in staffing.

Policy norms require faculty at lecturer rank and above to have a PhD. At the same time, tutorial fellows must be registered for a PhD, and teaching assistants must be registered for a relevant master's degree programme. DAF analysis found that for Kenya, approximately 74% of the faculty are in public universities, while 26% are in private universities. Most faculty members are at the lecturer rank (40%), followed by 33% tutorial fellows, 12% senior lecturers, 6% graduate assistants, 5% assistant professors, and the least 3% professors.

Table 2: Student-teacher ratio in academic year 2017-18

Discipline	Student	Faculty	Actual STR	Policy Norm (CUE 2014)
Education	119,899	2,268	53:01	18:1
Arts and Humanities	43,209	2,570	17:01	15:1
Social Science, Journalism, and Information	61,633	2,173	28:01	18:1
Business and Administration	123,422	3,841	32:01	18:1
Natural Science, Mathematics and Statistics	49,562	2,899	17:01	10:1
Information and Communication Technology	34,431	1,437	24:01	10:1
Engineering, Manufacturing and Construction	29,269	1,476	20:01	10:1
Agriculture, Forestry, Fisheries and Veterinary	28,559	1,512	19:01	10:1
Health and Welfare	36,620	2,033	18:01	07:1
Services	10,314	199	52:01	15:1
Grand Total	**536,918**	**20,408**		

Source: DAF-EAC Report (2023)

4.2 Reasons for faculty turnover and factors attracting faculty and students to universities

The DAF-EAC study identified several reasons for faculty and students to exit universities. Faculty exit was driven by the retirement or death of teaching staff and the pursuit of better opportunities in the form of government appointments or politics. Good working conditions and employment opportunities were the key factors attracting faculty to specific universities. On the other hand, students are attracted to universities due to their infrastructure, accessibility, year of establishment, credibility, and ranking.

[2] Student-Teacher Ratio (STR) refers to the ratio of the number of students per faculty.

4.3 DAF model projections[3]

4.3.1 Estimated number of faculty needed to meet STR goals in the baseline year (2017)

The DAF analysis employed student enrolment and faculty data, disaggregated by discipline, to estimate faculty shortage in Kenyan universities. Using 2017 as the baseline year, the study revealed a significant discrepancy between actual STRs across all disciplines and national policy norms (see Table 3). Furthermore, DAF projected that over 39,000 faculty members would have been needed in 2017 to achieve the existing STR policy norms. However, about 20,000 faculty were recorded in 2017, representing a shortfall of almost 19,000 faculty members.

The analysis further highlights how the additional faculty members required would need to be distributed across disciplines. To achieve policy-mandated STRs in 2017, 29% of this additional faculty would have been required in natural sciences and mathematics category comprising natural sciences, mathematics, statistics, engineering, manufacturing, construction, and Information Communication Technology (ICTs). Similarly, 24% were needed in arts and humanities category (comprising arts and humanities, social sciences, journalism and information, business administration, law, and services). The education category would have required 23%, followed by health and welfare category at 17% while agriculture, forestry, fisheries, and veterinary category would have accounted for the remaining 7%.

Table 3: Additional faculty needed in 2017 (Baseline year)

Description	Faculty needed
Panel A: Total	
Additional faculty needed to meet STR goals	18,921
Additional faculty needed to replace the ones projected to exit during the year*	39
Additional faculty needed to account for overestimation**	1,020
Total	**19,980**
Panel B: Breakdown of the additional faculty needed to meet STR goals by discipline	
Arts & Humanities/ Social Sciences/ Journalism & Information/ Business Administration/ Law/ Services	4,471
Education	4,393
Health & Welfare	3,198
Natural Sciences/ Mathematics &Statistics/ Engineering/ Manufacturing/ Construction/ ICTs	5,514
Agriculture/ Forestry/ Fisheries/ Veterinary	1,344
Total	**18,921**

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%.

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

[3] Projections are based on existing norms as per the Kenyan Commission of University Education's University Standards and Guidelines (2014).

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

The analysis revealed that about 7,600 additional faculty members will be required by 2030 to accommodate projected increases in student enrolment driven by population growth, even if the enrolment ratios remain at the level observed in 2017 (Table 4, Panel A). Table 4, Panel B details the distribution of these additional faculty across disciplines. The largest proportion (43%) will be needed in arts and humanities category, followed by natural sciences and mathematics category at 28%.

Table 4: 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*	7,593
b) Additional faculty needed to meet STR goals, considering population growth	25,961
c) Additional faculty needed to replace the ones projected to exit during the year**	657
d) Additional faculty needed to account for overestimation***	1,020
Total	**35,232**
Panel B: Breakdown of the additional faculty needed to meet the increased enrolment due to population growth by discipline	
Arts & Humanities/ Social Sciences/ Journalism & Information/Business Administration/ Law/ Services	3,268
Education	844
Health & Welfare	756
Natural Sciences/ Mathematics & Statistics/ Engineering/Manufacturing/ Construction/ ICTs	2,163
Agriculture/ Forestry/ Fisheries/ Veterinary	563
Total	**7,593**
Panel C: Breakdown of the additional faculty needed to meet STR goals by discipline, given population growth	
Arts & Humanities/ Social Sciences/ Journalism & Information/ Business Administration/ Law/ Services	6,135
Education	6,028
Health & Welfare	4,388
Natural Sciences/ Mathematics & Statistics/ Engineering/ Manufacturing/ Construction/ ICTs	7,566
Agriculture/ Forestry/ Fisheries/ Veterinary	1,844
Total	**25,961**

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 will need to be replaced. ***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%.

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 26,000 additional faculty members (see Table 4, Panel C). This significant figure (based on existing policy norms used for the projections) suggests that Kenya would need to double the number of faculty observed at 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 natural sciences and mathematics category require the highest proportion (29%), followed by arts and humanities category (24%), education category (23%), health and welfare category (17%), and agriculture, forestry, fisheries, and veterinary category (7%).

4.3.4 Addressing faculty gender disparity

To achieve gender parity among faculty by 2030, the DAF model projects a need for around 11,200 additional female faculty members. This represents a significant increase of 65% compared to about 6,800 female faculty members recorded in 2017.

5. Conclusion and policy recommendations

The study confirmed university education policies addressing faculty qualifications, gender ratio, and STRs by discipline. The results revealed that universities have achieved the national faculty gender ratio of 2:1 as mandated by the constitution (based on 2017 data), but they fell short of established STRs across various disciplines. This means universities require additional faculty members to meet the recommended STRs. Projections indicate that approximately 26,000 additional faculty are needed by 2030 to achieve these policy-mandated STRs. Notably, around 11,200 of these new hires should be female to maintain the constitutional gender parity. Considering rising student enrolment due to population growth, projected annual faculty exits due to retirement, death, or other reasons, and potential overestimation due to faculty holding positions at multiple universities, the findings suggest an additional 9,200 faculty members will be needed by 2030. In total, the university education system will require over 35,200 additional faculty members by 2030. Addressing the faculty shortage is urgent. To address this challenge, the following recommendations are proposed:

a. **Review and Update University Standards and Guidelines:** To ensure relevance in the rapidly evolving educational landscape characterised by technological advancements and sustained student enrolment growth, a comprehensive review of the 2014 Universities Standards and Guidelines is recommended. This review should incorporate new and emerging developments within university education.

b. **Strengthening Policy Implementation:** The CUE should prioritise effectively implementing updated university education policies and faculty development strategies in collaboration with universities. This will ensure that universities leverage existing frameworks to address faculty needs.

c. **Enhancing Faculty Supply:** The CUE and universities should collaborate on long-term solutions to bridge the faculty supply and demand gap. Strategies could include increased funding for faculty development programmes and targeted scholarships to attract and retain qualified individuals, particularly in disciplines facing the most significant shortages.

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 Kenya'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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