

Graduate Education in Sub-Saharan Africa: Prospects and Challenges

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Higher education in Africa in the 1960s and 1970s pictured excitement, creativity, and pride—given that faculty members dedicated to teaching were involved in innovative research, and many helped lay the foundations for governance and development. Quality was high, and universities held in great esteem. Most students were eager scholars, exhilarated by their good fortune, and certain they were destined for leadership roles. And a start was made on graduate programs. By the early 1980s, the picture was different for most universities—including budget shortfalls in declining national economic circumstances, repression, curtailed academic freedom, civil unrest, and loss of status. Donor interest shifted to primary education, and external funding declined from US\$103 million annually as late as 1994, dropping to an average of US\$30.8 million from 1995 to 1999.

Enrollment pressure added its toll with student numbers increasing from 21,000 in 1960 to 473,000 in 1983. By 1991 enrollments reached 2.7 million, and by 2006 there were 9.3 million students. This resulted in tremendous pressure on governments to increase access. Yet, only 5 percent of the college age population is in higher education in Africa, and demand will grow especially as the success of “education for all” at the primary level produces more secondary school graduates.

While public expenditures in education continued at about 20 percent of government budgets, over the last 15 years student expenditures declined about 30 percent. Public spending per capita fell from US\$6,800 in 1980 to US\$1,200 in 2002, and by 2009 to US\$981. The combination of declining per capita budgets and growing student numbers at many institutions led to larger classes, declining real income for faculty and staff, and falling faculty morale. Efforts to establish graduate programs became especially difficult, given their higher cost and greater demands on staff time.

#### **TODAY'S CONDITION OF GRADUATE EDUCATION**

Graduate education expanded after the 1980s. By 2001, 82 African universities reported they offered PhD programs (or the French equivalent). In spite of that expansion, only 7 percent of enrollments are in graduate education.

The financial problems of African higher education have spawned a shortage of faculty members, and fewer than 34 percent of those have PhDs. That has hindered graduate education. The World Bank estimates that if the current trends in enrollment continue, African universities will need an additional 450,000 faculty members by 2015.

Graduate training at high-quality institutions outside Africa is expensive. The costs for a PhD in Europe or the United States can be US\$200,000 or more. In contrast, graduate study in sub-Saharan Africa is much less expensive, being as low as US\$3,000 for science and engineering in Ghana (for students living at home). In South Africa it is about US\$11,000 a year. Thus, postgraduate training locally, or in other African countries, is the least-expensive way to foster advanced training for faculty.

The decline in funding has also resulted in a reduction in faculty research. The level of research at most universities is not adequate to support quality graduate programs. One measure of this decline is the drop in output of African scholars over the last 25 years, as measured by international journal publications. Sub-Saharan African publications in the sciences, for example, declined by 31 percent since its peak in 1987. To produce high-quality master's and PhD graduates, an institution must have its own active research program with faculty members ready to serve as advisers, mentors, and research models.

Providing adequate opportunities for women in higher education, both as students and faculty members, has proven difficult. My 2009 examination of graduate programs found that only 29 percent of the graduate students were women. Ethiopia was at the low end, with 8 percent. Only South Africa, with 45 percent of women in graduate education, came close to gender equity.

Fiscal austerity has also resulted in deterioration of infrastructure, making quality graduate education more difficult. It is estimated that the investment required to bring the higher education infrastructure to satisfactory levels is US\$45 billion.

In spite of the severe financial problems, staff shortage, overcrowding, and declining working conditions in most universities—there remains a corps of dedicated faculty members and administrators throughout Africa, who are committed to quality teaching and are producing excellent research. Also, several centers of excellence in graduate education in universities in places like Ghana and South Africa have continued to have the resources needed to provide high-quality graduate training.

## THE NEED TO EXPAND GRADUATE EDUCATION

In many respects, the development of postgraduate studies has been held hostage to the growing demand to expand undergraduate programs, which have consumed limited university resources. Thus, the lack of graduate programs is part of the reason for the shortage of faculty members.

The case for the expansion of graduate education is compelling. The critical contribution of higher education to national development has been empirically demonstrated by the World Bank's research and other studies. In large part, African universities continue to provide the majority of the research done in Africa, and graduate programs are a key to meeting the critical shortage of faculty members.

The short-run major efforts to expand graduate studies should focus on existing quality graduate programs and give them a regional focus—much as South Africa has done through the Southern African Development Community, providing lower-cost tuition to its members. In addition, university partnerships might focus on regional solutions to the current shortage of quality graduate programs.

The primary focus in developing graduate programs must be on high quality. The most promising way to build the kind of outstanding graduate programs and the research capacity needed in Africa is to focus resources on a few high-quality programs in countries with governments willing to invest in graduate education and cooperate with regional partners. These centers will attract the brightest minds, best teachers, and public-minded academics to build programs equal to any around the world. Success will require major investments in higher education by governments, foundations, and other funders. Such

commitments are critical to expanding outstanding graduate programs in Africa—programs that will build on existing examples of excellence and on those universities willing and able to create the conditions to produce first-class research, graduate teaching, and service.