

# **DEVELOPING AND RETAINING THE NEXT GENERATION OF ACADEMICS IN AFRICA: AN ANALYSIS OF ISSUES AND CHALLENGES**

by

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## **Introduction**

While academic staff recruitment and retention remains a challenge across the globe, the situation in many African countries appears to be particularly strident. University leaders on the continent acknowledge the devastating impact of staff shortage on the mission of institutions of higher education and warn that if something is not done very soon to address the problem, the African academy will not only lose its ability to produce the requisite number of personnel to support the countries' human resource needs, but the quality of intellectual life will continue to erode.

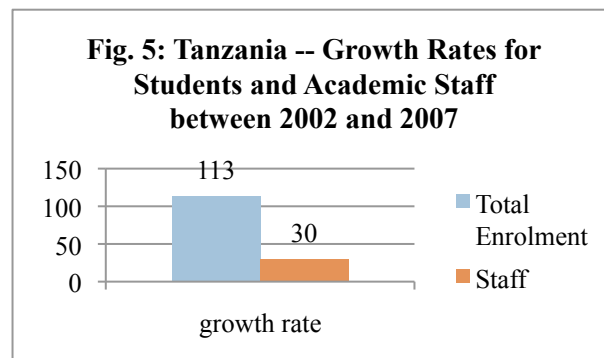
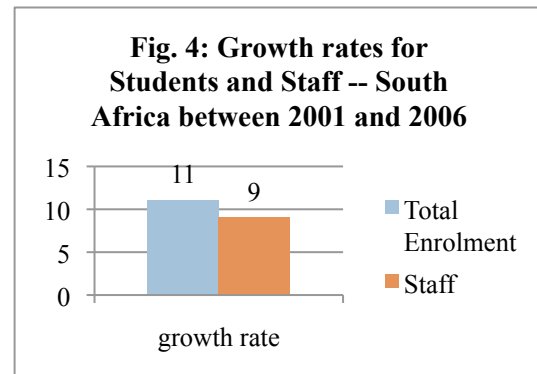
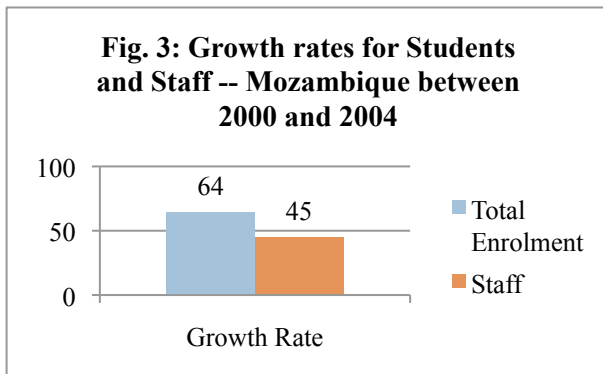
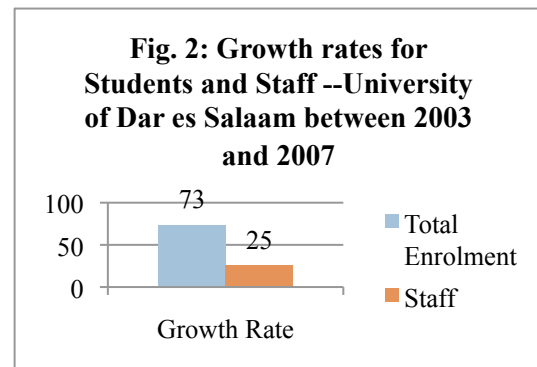
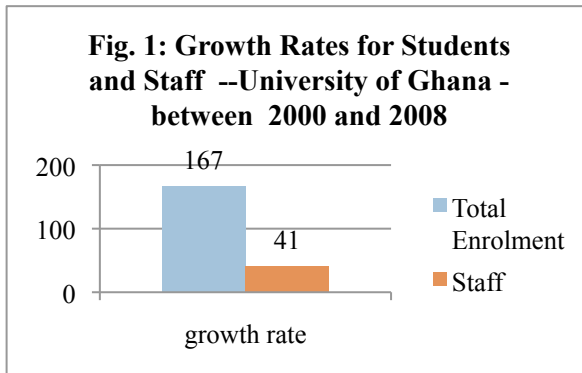
It is in the context of the preceding concerns that the Partnership for Higher Education in Africa (PHEA) sought to analyze the staffing situation in various universities that are members of the Partnership. The purpose of the study, which covered 15 universities and seven countries, is not only to ascertain the extent of the problem in these institutions, but also to examine the ability to develop the next generation of academics in order to combat the decline. Furthermore, the study hopes to provide a concrete context for discussions about what can be done to ensure the regeneration of academic staff capacity and, by extension, intellectual life that will enable these institutions to discharge their mandates with the requisite levels of quality. This article highlights some of the key findings from the study.

## **Expanding Enrolments and Incommensurate Staff Capacity**

Over the last decade, student enrolment in African universities has grown by significant amounts to absorb the increasing demand on higher education. Enrolments at Stellenbosch University, for example, jumped from 20,421, in 2000, to 23,439, in 2007 – an increase of over 15% in 7 years. Makerere University saw a four-year increase of 22% from 27,420, to 33,488, between the 2002 and 2007. The statistics for the University of Dar es Salaam (UDSM) are even more striking, as student numbers exploded by 73%, from 8,439, in 2003, to 14,637, in 2007.

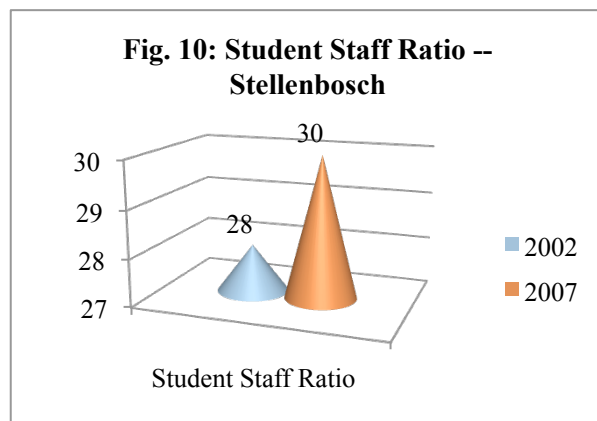
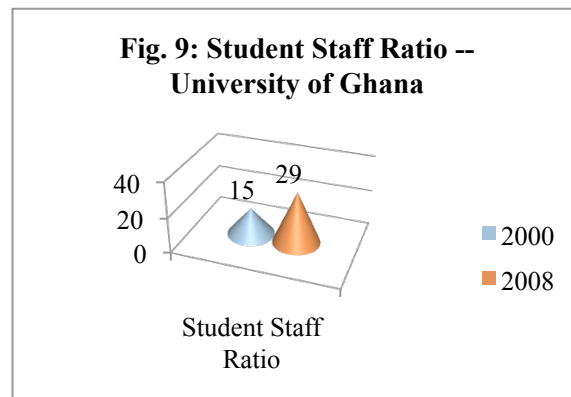
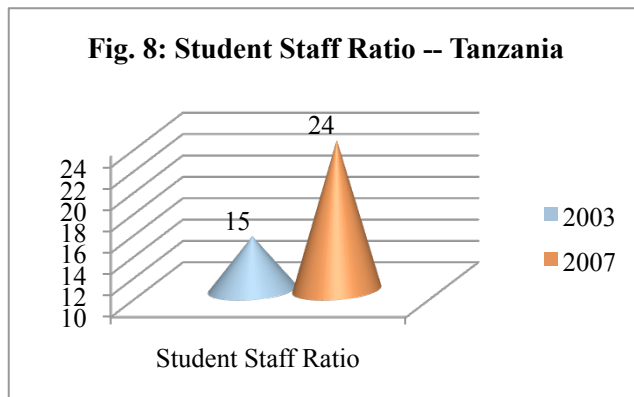
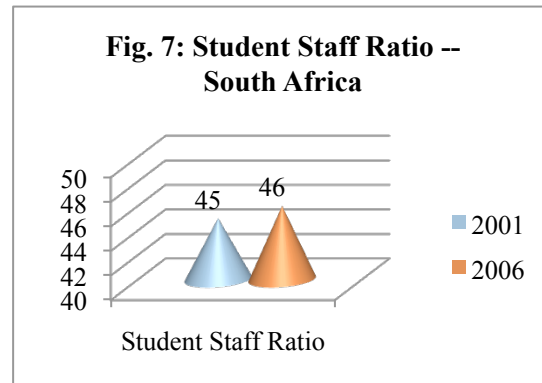
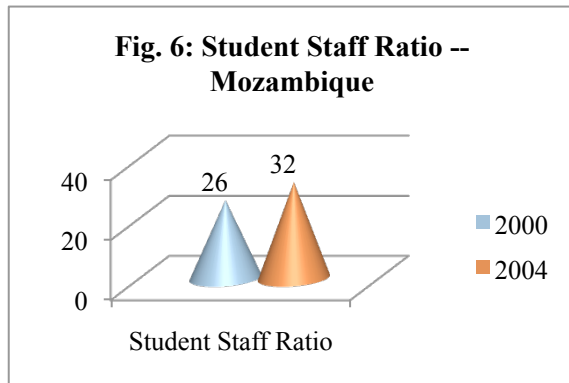
The pressure of enrolment growth on the capacity of universities to provide quality education is, undoubtedly, dire, especially as there is no commensurate expansion in academic staff numbers in most institutions. It is clear that total academic staff growth has generally lagged behind student enrolment growth. Thus, while student numbers at the

University of Ghana went up by 167%, between 2000 and 2008, staff numbers only went up by about 40% (fig. 1). At UDSM, student numbers grew by 73% between 2003 and 2007, compared to a 25% growth in staff numbers (fig. 2). National level data reflects the general trend found in institutions, as illustrated by Mozambique, South Africa, and Tanzania (figs. 3-5).



### *Student-Staff Ratios*

As a corollary to the student and staff trends above, student-staff ratios in various countries have generally gone up over the years. In Mozambique, the ratio increased from 26:1 in 2000 to 32:1 in 2004 (fig. 6). The comparative ratio for South Africa is 45:1, in 2001, and 46:1 in 2006 (fig. 7). In Tanzania, the ratio went from 15:1 in 2003 to 24:1 in 2007 (fig. 8). Similar patterns are reflected in data for most institutions, as illustrated by the University of Ghana (fig. 9) and Stellenbosch University (fig. 10).



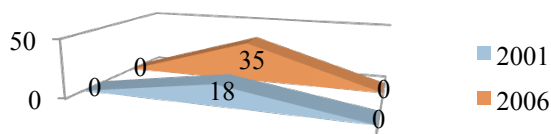
Incommensurate staff and student growth rates, as well as high and increasing student-staff ratios put a tremendous burden on academic staff, a factor that has been noted to discourage people from entering the academy, thereby creating a vicious cycle. While the increasing student-staff ratios present a daunting challenge to the professoriate, as a whole, but particularly so for those at the early stages of their career. The anxiety that comes with such a burden, in a context that demands high standards of research productivity, can discourage potential academics.

### **Cultivating the Next Generation -- Postgraduate Student Enrolment, Gender and Program Distribution, and Retention Issues**

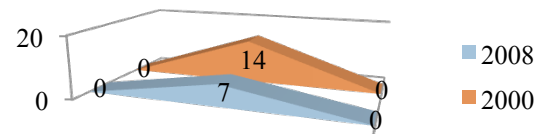
Postgraduate students constitute the pool from which the next generation of academics will be drawn. It is important, therefore, to evaluate not only their overall numbers but, more critically, how many of them are registered at levels that are necessary to ensure a high caliber future professoriate, i.e., Masters and doctoral levels. While it is encouraging that most institutions have seen an increase in the proportion of postgraduate students, relative to undergraduates, the trend in others is toward a reduction in that proportion.

For example, the University of Ibadan has increased the percentage of postgraduate students from 18% of the total student population in 2001 to 35% in 2006 (fig. 11), whereas the University of Ghana has seen a 50% reduction in that proportion from 14% in 2000 to 7% in 2008 (fig. 12). The University of Kwazulu-Natal also saw a drop in the proportion of postgraduates from 32% in 2000 to 26% in 2007 (fig. 13). The proportion of postgraduates across various countries was generally low – with Ghana, Nigeria and South Africa showing figures of 4%, 7% and 15%, respectively (fig. 14)

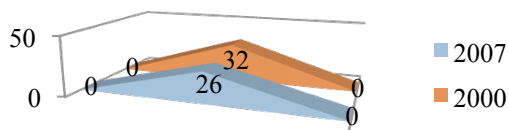
**Fig. 11: Postgraduates as a Proportion of Total Enrolments -- University of Ibadan (2001 and 2006)**



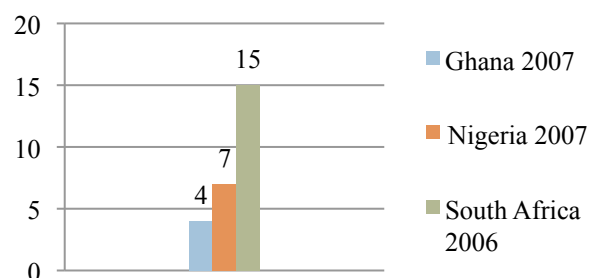
**Fig. 12: Postgraduates as a Proportion of Total Enrolment -- University of Ghana (2000 and 2008)**



**Fig. 13: Postgraduates as a Proportion of Total Enrolments -- University of Kwazulu-Natal (2000 and 2007)**



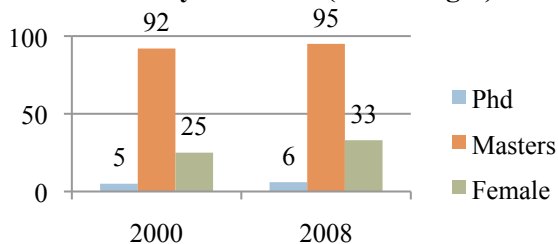
**Fig14: Postgraduates as a Proportion of Total Enrolments -- Country Comparisons for Latest Year Available**



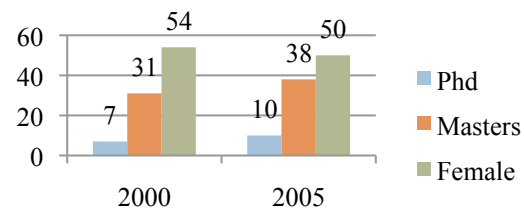
### *Proportion of Masters and Doctoral Enrollees*

When postgraduate students are disaggregated according to masters and doctoral enrollees, an instructive picture emerges. Only 5% of postgraduate students at the University of Ghana were enrolled in doctoral programs in 2000, with their numbers increasing marginally to 6% in 2008 (fig. 15). The proportions for the University of Kwazulu-Natal were 7% and 10% in 2000 and 2005, respectively (fig. 16). National data for South Africa shows that only 1% of postgraduate enrolments were at the doctoral level in 2000 and 2006 (fig. 17). The findings show that Masters enrolments have increased over the years. However, the combined proportion of masters and doctoral enrollees make it clear that the percentage of postgraduate students constituting the potential pool from which to draw the next generation of academics is still very limited. They constitute less than half of the total postgraduate student complement at the University of Kwazulu-Natal, and less than 2/3 at Nelson Mandela University and the University of Cape Town. Their proportions are higher at Witswatersrand where they make up around 3/4 of the postgraduate complement.

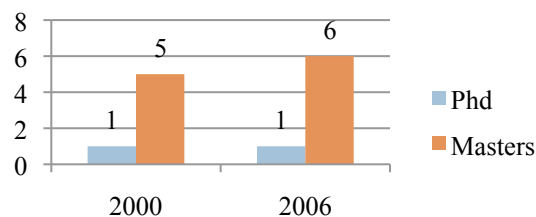
**Fig. 15: Postgraduate Enrolment by Program Level and Gender -- University of Ghana (Percentages)**



**Fig. 16: Postgraduate Enrolment by Program Level and Gender (Percentages)-- University of Kwazulu-Natal**



**Fig. 17: Postgraduate Enrolment by Program Level (Percentages)-- South Africa**



### *Program Choices and their Implications*

Another important consideration -- beyond the level at which students are enrolled -- is the programs in which they are enrolled. The kinds of programs in which students are enrolled provide a good indication of whether graduates are likely to complement the existing pool of the professoriate in the future. The institutional profiles show that the

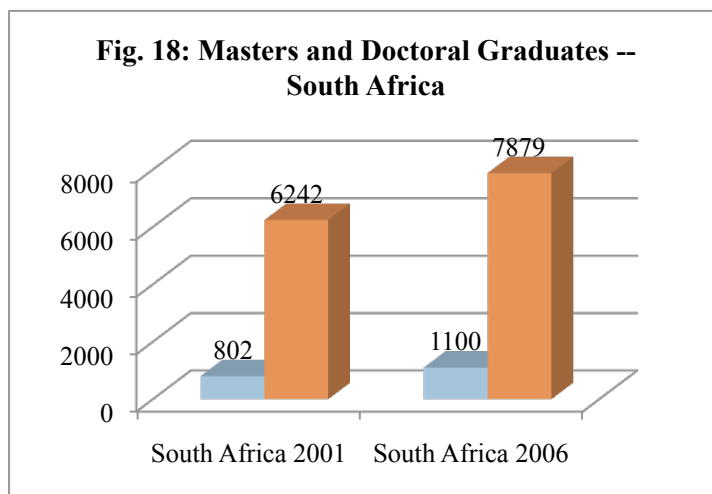
majority of postgraduate students are pursuing programs at levels, and in fields, that are meant to provide them with opportunities for career advancement outside of the academy, with little potential to regenerate the professoriate by a significant factor. A significant number of postgraduate enrolments, over the past decade, has, for example, been in professional business and management programs (eg. MBA). This trend is not unique to African institutions, as universities in various countries respond to market demands.

#### *Gender Distribution*

Postgraduate enrolments are dominated by males, even though South African institutions are closer to parity. At the University of Ghana, females made up 25% of postgraduate enrolments in 2000, growing to 33% in 2008. The University of Kwazulu-Natal saw a reduction in the proportion of postgraduate females, between 2000 and 2005, from 54% in 50%. Hopefully, the UKZN trend will recover upwards, instead of going further down.

#### *Graduation Rates*

While enrolment figures are useful in telling us about the potential pool from which we can draw future academics, they do not provide good insights into how many bodies are actually qualified and available to fill places in the academy. Only 11 of the graduates at the postgraduate level received doctorate degrees at the University of Ghana in 2006. This represents 2% of the graduates. Of these, only 18% were female. The number of masters graduates was higher at 570, but only 32% of them were female. Just 30% of the 182 doctoral graduates at the University of Ibadan, in 2006, were female. It is clear that the proportion of doctoral graduates, relative to their masters counterparts, is quite small. Only 6% and 1% of postgraduates from Nelson Mandela Metropolitan University, in 2006, obtained masters degrees and doctoral degrees respectively. The corresponding proportions for Stellenbosch University, in the same year, was 14% and 2%. Fig. 18 illustrates the number of doctoral and masters graduates produced by South African institutions in 2001 and 2006. Of the total number of postgraduate degrees given, just a quarter was for masters programs and only a mere 1% was for doctoral programs.



### *Retention Challenges*

While postgraduate enrolments are a useful proxy for determining the potential pool of future academics, an even more crucial determinant is the percentage of those enrollees who complete their programs. While we do not have data for all the institutions and countries studied, the following illustration from the University of Kwazulu-Natal is instructive in alerting us to the need for such data and its importance for any strategic plans at growing the number of future academics.

In the Faculty of Health Sciences, at UKZN, the average drop-out rates for thesis-based Masters students, for 2000-2006, was about 56% while the corresponding figure for their doctoral counterparts was about 35%. With more than half of Masters students and over a third of doctoral students dropping out of their programs, the potential pool of the next generation of academics is significantly impacted in a negative direction.

The statistics are even more worrisome when the related indicator of completion rates is assessed. The rates for thesis-based masters and doctoral students average about 11% and 10%, respectively, for the 2000-2006 period. With only a tenth of these cohorts graduating, there is obviously a huge disconnect between intake and output, with serious implications for replenishing the professoriate with requisite numbers and appropriate levels of training

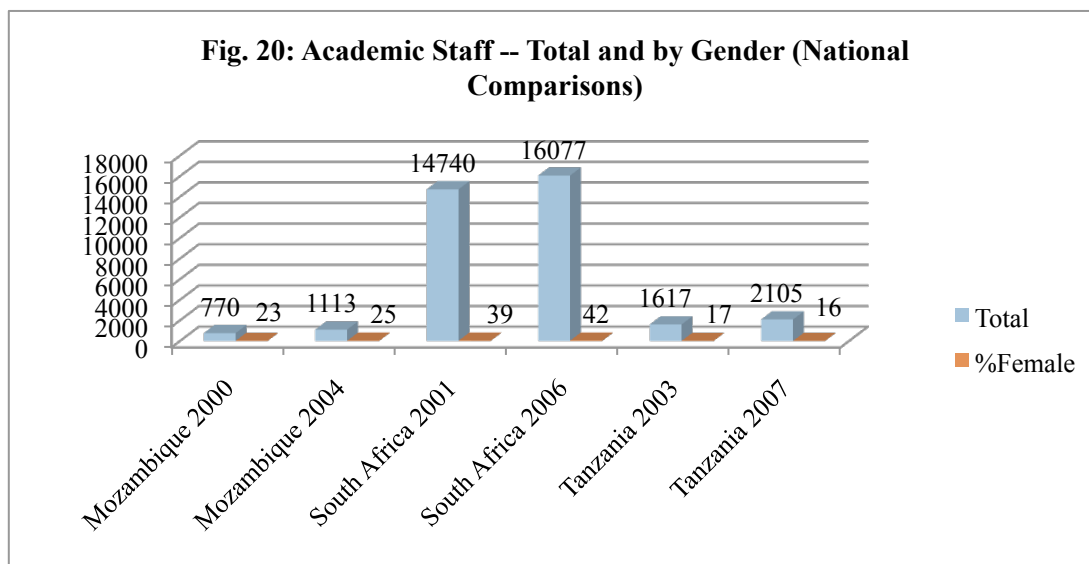
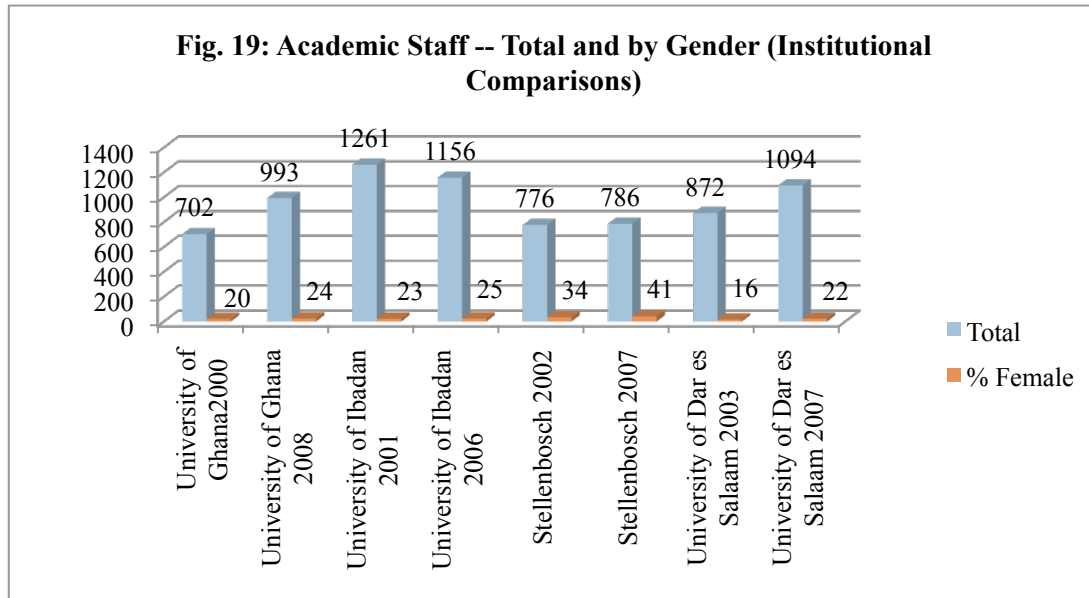
### **Sustaining and Promoting a High-Caliber Professoriate**

The difference between staff establishment and vacancies is a very good indicator of gaps in human resource capacity and the extent to which existing academic staff are able to meet the institution's own assessment of the complement of staff it needs to carry out its research and teaching responsibilities. Anecdotal evidence from all the institutions suggest that they do not have a full complement of staff needed to carry out their academic missions. The following analysis of data from Makerere is, therefore, based on very conservative numbers. Those numbers are, nevertheless, very significant, and the fact that the institution cannot even meet outdated establishment levels says a lot about the depth of the problem. While the establishment for the university in 2004/2005 was 1796, the actual number of staff stood at 1052, showing a deficit of 41%. The deficit is much higher for particular units such as Public Health, Medicine, East African School for Library and Information Science (EASLIS), and Psychology with deficits of 54%, 57%, 62%, and 62%, respectively.

### *Gender Gap in the Professoriate*

One of the gaps that African Universities need to close, as they struggle with staff shortages and think about regenerating the professoriate, is the gender gap. While the proportion of female staff in various institutions has improved over the years, it is clear, from fig. 19, that they still constitute a small fraction of academic staff. At the University of Ghana, the proportion went from 20% in 2000 to 24%, in 2008. At the University of Ibadan, the respective numbers were 23% and 25% in 2001 and 2006. Stellenbosch University saw a significant jump in female staff proportion, and sat at 41% in 2007. National-level data corroborates the evidence from the institutional data (see fig. 20).

Females made up only 23% and 25% of academic staff in Mozambique, in 2000 and 2004 respectively. In Tanzania, the proportions even dropped, from 17% in 2003 to 16% in 2007. The trend in South Africa is very encouraging with the percentage of female staff going up from 39% in 2001 to 42% in 2006.



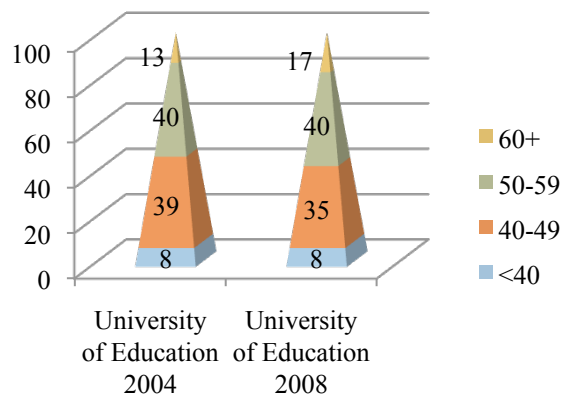
The gender gap is significant for a variety of reasons, not the least of which is the fact that a potential source of academic staff is not being tapped. A second significance of the gender gap, which is also related to graduate student output, is the fact that there are not enough females in the professoriate to serve as role models who can attract prospective female academics or mentor those already in their institutions. The disparities between

male and female staff numbers are brought into sharper relief when we look at certain faculties or fields of study. For example, only 6% of academic staff at both the Business School and the Faculty of Engineering Sciences, at the University of Ghana, are female.

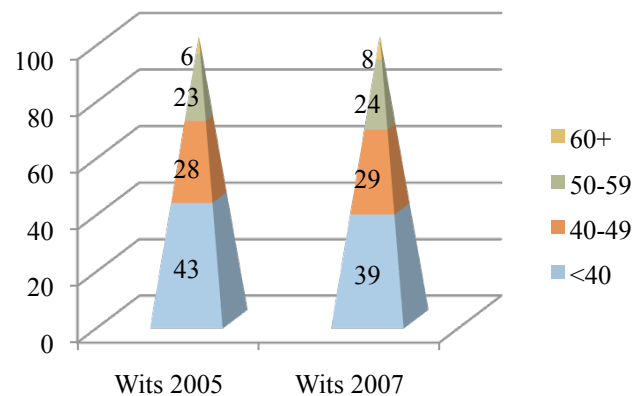
### *Ageing Professoriate*

The current crop of the African professoriate is aging very fast, with no commensurate expansion in the numbers of young scholars entering the profession. Only 20% of Obafemi Awolowo University's staff in 2006/2007 was 40 years old or younger, compared to 39% over 50 years old. In view of the fact that the mandatory retirement age is 65, these figures give cause for concern about the future of the academy. The fact that around 11 percent of staff at OAU, in the two years for which data is available, were past the retirement age just amplifies the extent of the problem. Clearly, the situation at the University of Education – Winneba is very disheartening, as only about 8% of staff was under 40 years of age, while a little over 57% was above 50 years of age in 2008 (fig. 21). Witswatersrand University is better positioned, with almost 40% of staff under 40 years of age in 2008 (fig. 22).

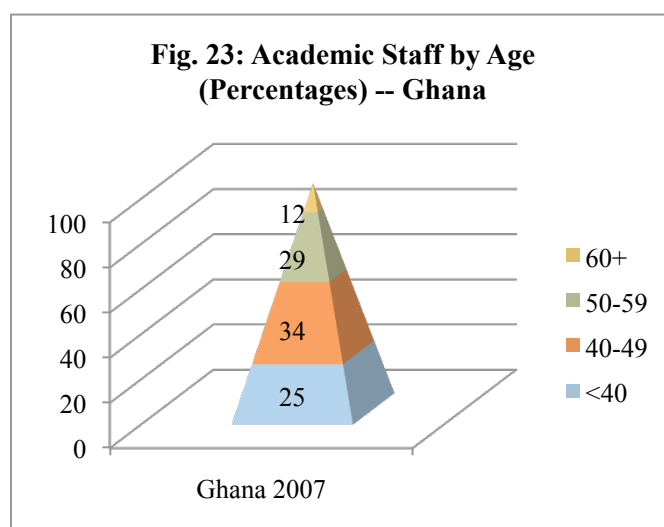
**Fig. 21: Academic Staff by Age (Percentages) -- University of Education Winneba**



**Fig. 22: Academic Staff by Age (Percentages) -- University of the Witswatersrand**



It is important to point out, however, that about a third of staff (32%) were over 50 years. This means that a significant number of senior scholars will be retiring in the next decade. National-level data for Ghana echoes the general concern with an ageing professoriate, with 41% of staff over 50 years (fig. 23)

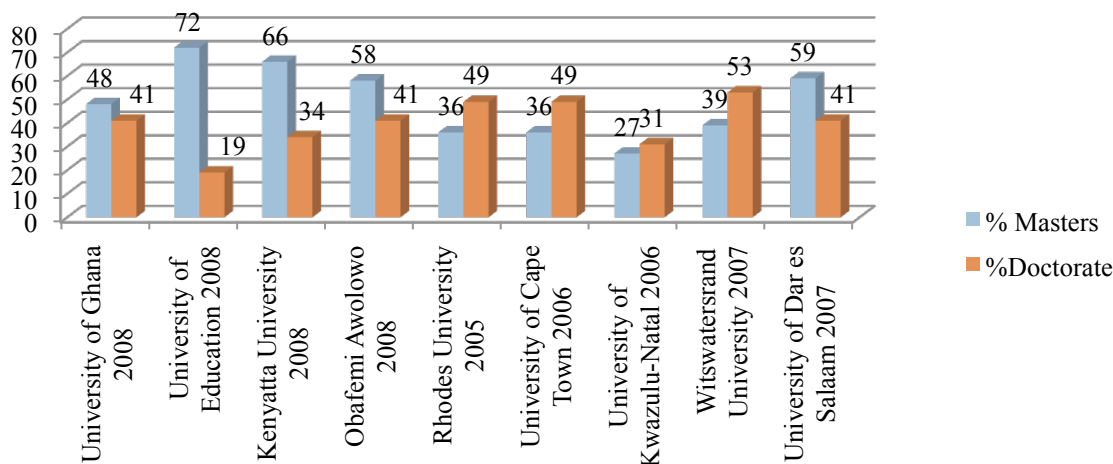


### *Caliber of the Professoriate*

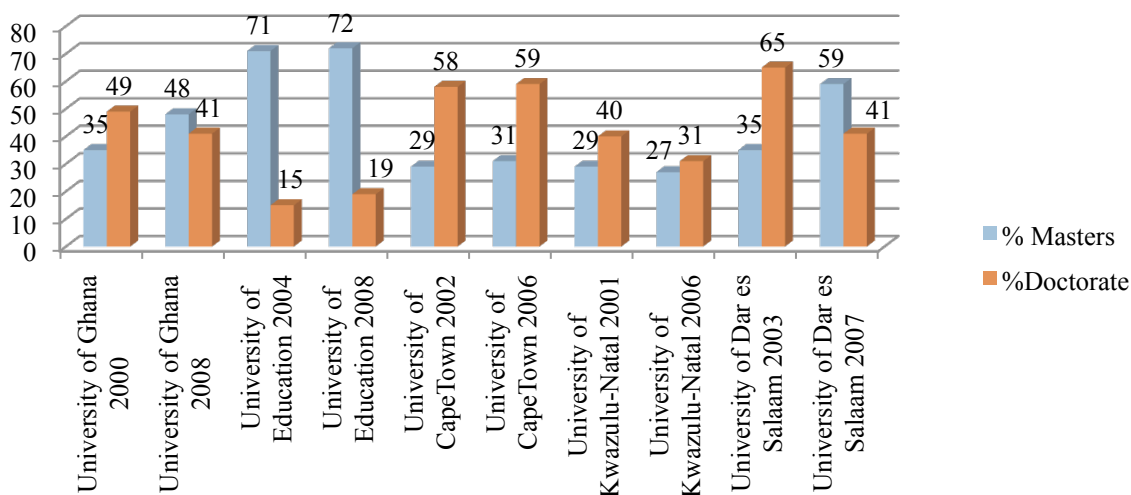
The quality of any higher education system is determined, not only by the number of people teaching in it, but even more importantly, by the qualifications of its academic staff. One significant measure of the capability of the professoriate to provide quality research and instruction is doctoral level certification. The evidence suggests that there is a paucity of doctoral degree holders in the African academy. Apart from the University of the Witwatersrand where 53% of staff held doctoral degrees, less than half of all staff in the remaining institutions had doctorates. Only 19% of staff at the University of Education -- Winneba have doctorates. In 2006, masters and doctoral degree holders, together, constituted only 58% of the total staff complement at UKZN (fig.24).

Of even more concern is the trend of declining proportions of doctorate holders over the years (fig. 25). The University of Ghana, for example, saw the percentage of staff with doctorates go down from 49% in 2000 to 41% in 2008. In the same vein, the University of Kwazulu-Natal registered a drop from 40% in 2001 to 31% in 2006. The University of Dar es Salaam also experienced a downward slide from 65% in 2003 to 41% in 2007. The picture is even more sobering when we analyze staff qualifications at the national level. Only 28%, 15%, and 12 % of staff in Ghana, Mozambique and Uganda had doctorates in the latest year for which data is available (fig. 26). Clearly, all institutions and countries have to redouble their efforts to ensure that they are staffed by academics with the highest terminal degrees in their fields.

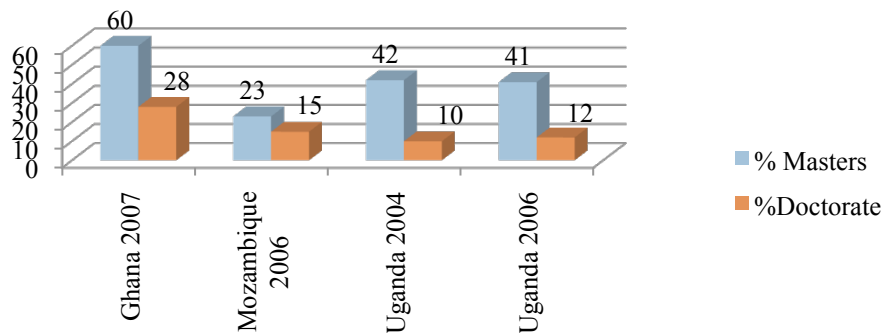
**Fig. 24: Academic Staff by Qualification -- Institutional Comparisons**



**Fig. 25: Academic Staff by Qualification - Trends Within Same Institution**

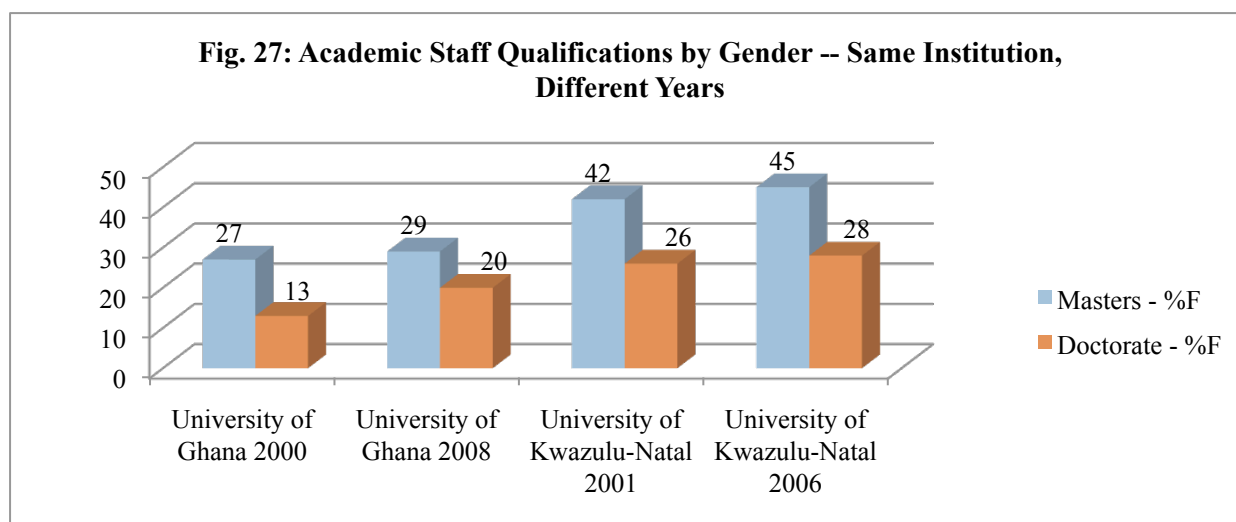


**Fig. 26: Academic Staff by Qualification -- National Comparisons**



There are, at least, three significant implications to these trends. The first is that there is a new generation of staff being hired who do not have the best possible qualifications to undertake their teaching and research mandates. The second is the potential for these trends to perpetuate a vicious cycle whereby institutions in these countries are incapable of training many doctoral level students, because they do not have the human resource capacity to do so, or do a poor job if they try to. Either way, the quality of the next generation of the professoriate may be compromised in some way, especially since many of these institutions are not in a financial position to train many of their potential members abroad. Finally, the potential for intra-regional doctoral training is severely handicapped by the fact that, apart from Witswatersrand, there is no institution with a doctoral complement of, at least, half of its staff.

The numbers and, therefore, proportions of males with masters and doctorate degrees have been consistently higher than those of females with such degrees, even though the proportion of the latter has been increasing, as illustrated by the University of Ghana and the University of Kwazulu-Natal (fig. 27). In the former, females made up 27% and 13%, respectively, of masters and doctorate holders in 2000. By 2008, these proportions had increased to 29% and 20%. In the case of the University of Kwazulu-Natal, the percentage of masters degree holders who were female went up from 42% in 2001 to 45% in 2006. The percentage of doctorate staff who were female also improved marginally from 26% to 28% during the period. The implications of the relatively low proportions of female staff with these degrees are similar to those discussed in relation to the skewed gender distribution of academic staff as a whole.



#### *Scholarly and Gender Implications of Rank Distribution*

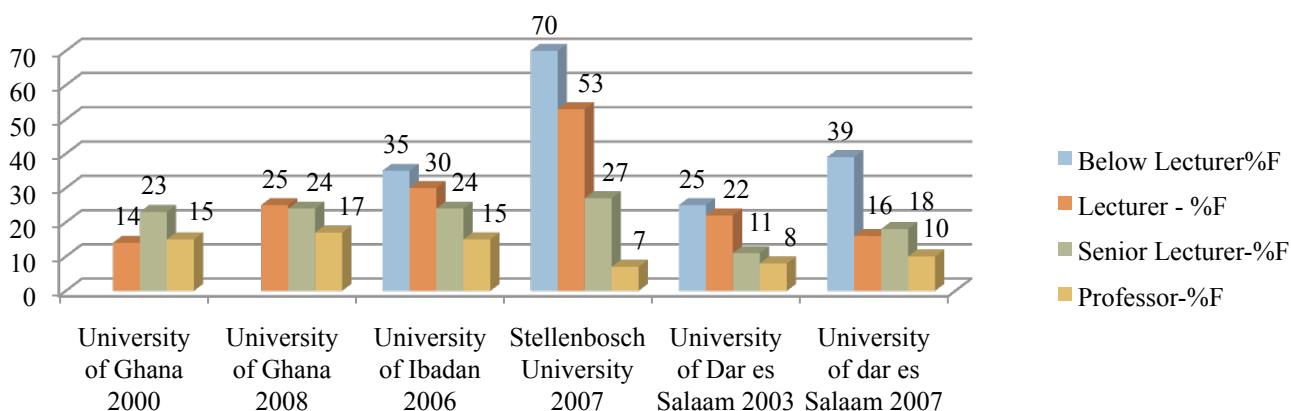
As we discuss the next generation of academics, we should not lose sight of the fact that a reasonable distribution of scholars across the various ranks helps to build a solid

community of scholarship. Established scholars mentor younger/newer ones, thereby helping to build or maintain a culture of excellence within a institution. In all the institutions for which data is available, apart from UDSM, lecturers made up the majority of staff. At the University of Ghana, 48% of staff, in 2008, were at the rank of lecturer. The figure at the University of Ibadan, in 2006, was 43%, while those for Rhodes and UKZN were 38% and 36%, respectively. At UDSM, the majority of staff (47%) was made up of those below the rank of lecturer. In 2007, those below the rank of lecturer constituted 56% of academic staff in Nigerian universities.

Another significance of looking at rank is to get a sense of how it correlates with gender. As noted earlier, there is value to having female academics in universities to serve as role models and mentors. Even more important is the need for them to be established in their professions. This gives them the clout to push for gender-sensitive initiatives and to provide leadership on a variety of fronts. Furthermore, if upward mobility for female staff is seen as a difficult proposition, there is a strong likelihood that women will not see academia as a career worth pursuing, further diminishing the capacity of these institutions to increase the number of qualified staff. Fig. 28 vividly portrays the extent to which women at various institutions are consistently under-represented within all ranks, and especially so at the Professorial ranks. Only 17%, 15%, 7%, and 10% of staff at the professorial ranks were female at the Universities of Ghana, Ibadan, Stellenbosch and Dar es Salaam.

It is interesting to note that their highest proportion is at the level below lecturer, for those institutions that have this rank. It was most staggering at the University of Stellenbosch in 2007. This pattern suggests that females are either unable, for whatever reasons, to gain upward mobility from this rank, or that institutions are making strenuous efforts to increase the pool of female staff by providing them with the opportunity to enter the academy at this level. Further research is needed to ascertain which of these scenarios is reflected by the data.

**Fig. 27: Academic Staff by Rank and Gender -- Institutional Comparisons**



**Conclusion**

From the foregoing, it is obvious that African universities are not only contending with significant shortages of academic staff but are also debilitated by the dearth of academics with terminal degrees and a large ageing professoriate. The situation is accentuated by the pressures imposed on them by the phenomenal growth in student enrolment. Student-staff ratios in various countries have generally gone up over the years putting tremendous burden on academic staff, a factor that has been noted to discourage people from entering the academy. This situation creates a huge challenge since the ability of existing or new institutions to absorb the increasing numbers will depend, to a very large extent on an adequate pool of instructors.

Low graduation and time-to-completion rates, as well as high drop-out rates in some programs, do not augur well for developing an adequate pool of high quality future academics. Any hope of increasing the low proportion of females in the academy has to start with efforts at improving their numbers in postgraduate programs. While the proportion of female staff in various institutions has improved over the years, it is clear, that they still constitute a small fraction of academic staff. Consequently, there are not enough females in the professoriate to serve as role models who can attract prospective female academics or mentor those already in their institutions.

It is imperative that national tertiary bodies, universities, governments, and development partners come together to address the problem of staff shortage and quality, because in spite of the huge expansion in student enrolments over the last decade, a significant number of qualified applicants are unable to avail themselves of tertiary education in a continent where human resource capacity is sorely lacking. Concerted efforts are, therefore, needed to design and implement creative and complementary funding models, forward-looking curricula, and strategies for growing future academics. Institutions' sensitivity and responsiveness to young academics' work-life circumstances and career development are particularly helpful in attracting and retaining the next generation of academics for the continent.