

**CHALLENGES OF DEVELOPING AND RETAINING
THE NEXT GENERATION OF ACADEMICS:
DEFICITS IN ACADEMIC STAFF CAPACITY AT AFRICAN
UNIVERSITIES**

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Wisdom J. Tettey
December 1, 2009

EXECUTIVE SUMMARY

While academic staff recruitment and retention remain a challenge across the globe, the situation in many African countries appears to be particularly urgent. Leaders of African universities acknowledge the devastating impact of staff shortages on the goals of institutions of higher education and warn that if something is not done very soon, the African academy will not only lose its ability to produce adequate personnel to support the countries' human resource needs but also to uphold and protect the quality of intellectual life in the Africa region.

In the context of such concerns, this report seeks to analyse the staffing needs of various universities that are members of the Partnership for Higher Education in Africa (PHEA). The purpose is to ascertain the extent of the problem in these institutions, examine their ability to develop the next generation of academics as a means of forestalling the decline and proffer some suggestions about what can be done to regenerate the African professoriate.

The study shows that over the last decade student enrolment in African universities has grown by significant amounts in response to the increasing demand for higher education. While expanding access to the underserved but eligible population is commendable, the pressure of enrolment growth on the capacity of universities to provide quality education is a serious problem, especially as it has not been met by an adequate expansion in academic staff.

Student-staff ratios in various countries have generally risen over the years. Incommensurate staff and student growth rates, as well as high and increasing student-staff ratios, have put a tremendous burden on academic staff — factors that have been found to discourage people from enrolling in the academy. This situation warrants concern because the ability of existing or new institutions to absorb increasing numbers of students depends to a large extent on an adequate pool of instructors.

Postgraduate students constitute the pool from which the next generation of academics will be drawn. Unfortunately, the number of master's and doctoral enrolments remains relatively small, with declining trends in some countries. Available data show that men dominate postgraduate enrolments, even though South African institutions are closer to gender parity. Any hope of increasing the low proportion of women in the academy has to start with efforts at improving their numbers in postgraduate programmes. The data also points to low graduation and time-to-completion rates, as well as high dropout rates in some academic programmes. These trends do not bode well for developing an adequate pool of high-quality future academics. It therefore behooves governments, national tertiary educational bodies, universities and the private sector to work together to develop creative and complementary funding models that promote high quality postgraduate training.

The difference between established staff and job vacancies offers a useful indicator of gaps in human resource capacity and the extent to which existing academic staff is able to meet an institution's needs for teaching and research output. Anecdotal evidence suggests that these institutions do not have sufficient staff to carry out their academic missions. While the female-to-male staff ratio has improved over the years, women 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 women academics and mentor those already enrolled in their institutions. New initiatives are urgently needed to build the next generation of academics in African universities; the current staff is ageing very fast, with no corresponding expansion in young qualified scholars to take their place. Institutions need well-organized mentoring programmes within each department or faculty to match new colleagues with committed, exemplary mid-career or established professionals. Sensitivity and responsiveness to young employees' work-life circumstances are especially helpful in attracting and retaining female academics whose careers otherwise might be significantly compromised by the contending demands of home and workplace.

The quality of higher education is determined not only by the number of teachers but even more importantly by their qualifications and staff. One significant measure of professorial capability for quality research and instruction is doctoral-level certification. In most of the institutions studied, however, there were fewer doctoral than master's degree holders. The evidence further points to the fact that the number of males with master's and doctorate degrees has been consistently higher than that of females with such degrees. The distribution of men and women across ranks shows that the latter are underrepresented at the higher ranks — from senior lecturer to full professor — and overrepresented at the level of lecturer and below. Concerted efforts are required to encourage female enrolment in postgraduate programmes, to support them to stay in those programmes, to ensure that they are able to complete their programmes successfully and to mentor them in their pursuit of academic careers.

Our ability to draw meaningful conclusions from this study across different variables and from a longitudinal perspective has been severely constrained by a lack of relevant and consistent data. Universities are not able to introduce credible and feasible remedies if they lack appropriate data on which to design new strategies. African universities need to shore up their information gathering and processing capabilities and to establish offices of institutional analysis to mine data relevant to particular purposes on a consistent and continuing basis.

It is imperative that national tertiary bodies, universities, governments and development partners come together to address these staff shortages since, in spite of the huge expansion in student enrolments over the last decade, many qualified applicants are unable to avail themselves of tertiary education on a continent where greater human resource capacity is urgently needed.

INTRODUCTION

Context and Objectives

While academic staff recruitment and retention remains a challenge across the globe (Hugo, 2005; Metcalf et al., 2005; Smolentseva, 2003; Thewlis, 2003), the situation in many African countries is particularly urgent. African university leaders acknowledge the devastating impact of staff shortages on institutions of higher education and warn that if something is not done very soon, the African academy will not only be unable to produce the personnel required to support countries' human resource needs, but also the quality of intellectual life in these institutions will continue to erode. This description of the situation is particularly poignant:

The most significant human element is an absence of sufficient highly qualified academics. A 'pandemic of enrolment explosion' had taken place in recent years without commensurate growth in faculty numbers. Sawyerr [former Secretary-General of the Association of African Universities] told a conference in Dublin City University in 2008 that one consequence, for instance, was that for the first time teaching positions in the University of Dar es Salaam (UDSM) were being filled by staff with only a bachelor's degree (Walshe, 2008).

During the 2008 University Leaders' Forum (ULF), University of Dar es Salaam officials argued that these bachelor's degree holders were not really involved in teaching and that they were only in training to move up the ladder to regular academic staff status. This argument notwithstanding, there is no denying the fact that the bachelor's degree holders are counted as academic staff in the institution's own publications and can be reasonably seen as having the responsibilities associated with that position. In any case, the shortage of academic staff is exacerbated if these individuals are removed from the academic staff list. Their presence on the list does not disguise the serious shortage of qualified academic staff at this institution. In fact, Tanzania is not alone in relying on first-degree holders for university instruction. 'In Ethiopia, staff shortages are reportedly forcing the use of graduates with bachelor's degrees to teach undergraduates following the recent tripling in the number of public universities' (World Bank, 2008, 53).

In the context of these concerns, this report analyses staffing in various PHEA member universities. The purpose is not only to ascertain the extent of the problem in these institutions, but also to examine their ability to bring forth the next generation of academics as a way to reverse the decline. The report also offers a concrete context for discussions about the regeneration of academic staff capacity and, by extension, the intellectual environment that will allow these institutions to meet their mandates with the requisite levels of quality.

Methodology

The original goal of this study was to cover all institutions and countries that are members of the PHEA. An invitation to participate in this study was extended to all Vice-Chancellors and heads of national tertiary educational bodies. A common survey instrument was sent out to gather national and institutional data on the following variables:

- Enrolment numbers and growth rates for all students;
- Gender distribution of various categories of students;

- Graduation numbers and rates;
- Time-to-degree completion rates;
- Academic staff numbers and growth rates thereof;
- Distribution of academic staff by gender, age, rank, qualification and the source of their highest degrees;
- Academic staff pursuing master's and doctoral degrees at home and abroad;
- Academic staff vacancies.

Along with this quantitative data, the survey also requested qualitative data on:

- National and institutional initiatives to recruit, develop and retain academic staff;
- Relationships with donors to enhance staff teaching and research capabilities;
- Programmes to incorporate and develop diaspora talent and resources.

Each institution was asked to designate a contact person to provide the relevant data. Several institutions and national bodies either declined to participate or failed to respond to the request. In some cases where institutions and countries did not complete the questionnaire, the research team was able to locate reliable data from other sources. Ultimately, the study covered 15 of 22 PHEA member institutions and seven of nine member countries as follows:

Ghana

University of Ghana
University of Education, Winneba

Kenya

Kenyatta University

Mozambique

Catholic University of Mozambique

Nigeria

Bayero University
Obafemi Awolowo University
University of Ibadan

South Africa

Nelson Mandela Metropolitan University
Rhodes University
Stellenbosch University
University of Cape Town
University of KwaZulu-Natal
University of the Witwatersrand

Tanzania

University of Dar es Salaam

The study also incorporated valuable input from the 2008 University Leaders' Forum. A preliminary report was presented there to elicit discussions that clarified the quantitative survey data and considered some of the feasible options for resolving current and future academic staff shortages. In addition, the research team made use of secondary data from many published sources, including governments, national and international bodies, institutions and researchers.

Limitations of the Study

While the original goal of the study was to encompass all PHEA member institutions and countries, this turned out not to be possible given the dearth of available data. However, feedback from the ULF made clear that the study findings were representative of the full range of PHEA-supported countries and institutions.

Most institutions and national bodies were also unable to provide relevant data on opportunities and challenges related to the concerns of this study. Although the study aimed to cover ten years of recent data, most participants could not generate the longitudinal data needed, thus limiting both the scope and comparability of the results and the ability to identify trends. Additional inconsistencies in data from particular institutions, national bodies, or other agencies were addressed through triangulation.

Limitations also arose from the inability of the research team to undertake fieldwork in some countries and institutions, so data could not always be checked, probed or expanded through on-site interviews. Similarly, the study team was not successful in many of its efforts to gather additional information from universities, national education bodies, and donors on staff recruitment, retention and development strategies and engagement with the diaspora. Some initiatives such as the Nigeria National Universities Commission's *Linkage with Experts and Academics in the Diaspora* (LEAD) programme and the University of KwaZulu-Natal's *Leadership and Equity Advancement Programme* (LEAP) for nurturing new academics helped fill important gaps in the data. More work is necessary to evaluate these strategies.

Organization of Findings

The findings from the study begin with an introductory section, followed by a comparative analysis of staff capacity at African universities that explores the key issues related to the next generation of academics. The report concludes with recommendations for further research. An annex incorporating seven sections, one on each country covered by the study, provides detailed national and institutional analyses of the issues.

COMPARATIVE ANALYSIS OF ACADEMIC STAFF CAPACITY AT AFRICAN UNIVERSITIES

Over the last decade, student enrolment in African universities has grown by significant amounts due to an increasing demand for higher education and training.

Participation rates are rising, and there was a dramatic hike in student numbers in Sub-Saharan Africa in the six years to 2005: from 2.1 to 3.5 million. Mauritius has the highest gross enrolment ratio in the region, 17%, followed by South Africa, while Nigeria's tertiary student numbers nearly doubled to 1.3 million during the six-year period (MacGregor, 2008).

These developments are reflected in data captured for this study. Enrolments at Stellenbosch University, for example, rose by 15% between 2000 and 2007. Makerere University saw a four-year increase of 22% during the same period, while student numbers at the University of Dar es Salaam (UDSM) grew by 73% between 2003 and 2007 and by 167% at the University of Ghana between 2000 and 2008. Only two institutions registered negative student growth: the University of Ibadan experienced a decline of 21% in student enrolments between 2001 and 2006, due to a conscious decision to emphasize graduate over undergraduate training, and at Nelson Mandela Metropolitan University (NMMU) they declined by two percent between 2005 and 2006, for reasons that remain unclear.

Similar trends can be observed at national levels as well. In Kenya, student enrolment expanded by 55% between 2001 and 2005, while enrolment in Uganda increased by 54% between 2000 and 2006. In Mozambique, enrolments grew by 64% between 2000 and 2004, while in Tanzania, they grew by 173% between 2002 and 2007.

Expanding enrolments are not necessarily a problem in themselves. They have become challenging because they expose the extent of the capacity deficit that African higher education institutions face concerning their ability to deliver quality education while expanding enrolment. In the ensuing sections, we explore some of the key indicators that measure these institutions' educational capabilities.

Staff Capacity Deficits vs. Student Enrolment Pressures

The pressure of enrolment growth on the capacity of universities to provide quality education is a difficult problem, especially without an equivalent expansion in academic staff. The gap between current staff needs and vacancies is a good indicator of human resource limitations and needs within a particular institution. While anecdotal evidence suggests that all institutions suffer staff shortages, specific information on this indicator was available only for one institution — Makerere University. Many institutions indicated that their ongoing staff had not caught up with the rapid growth in student enrolments over the last two decades. The lack of up-to-date figures shows the dearth of data collection capacity in African institutions, with negative implications for planning for staff recruitment and retention.

An examination of the data from Makerere shows that actual academic staff numbers fell short of established staff levels by 41%, with shortfalls in particular units, such as Public Health,

Medicine, East African School for Library and Information Science (EASLIS) and Psychology ranging between 54 and 62%.

Additional data shows that the growth of academic staff lagged behind that of student enrolments at the Universities of Ghana, Dar es Salaam and Winneba and throughout Mozambique, South Africa and Tanzania. The only exception was at the University of KwaZulu-Natal where staff growth exceeded the growth in student enrolment by seven percent. The most severe disparities between enrolment and academic staff growth rates appear to be at the University of Ghana, at the institutional level, and in Tanzania, at the country level.

As a result of enrolment increases without adequate growth in staff, student-staff ratios have generally risen over the years with only a few exceptions, such as the University of Cape Town and the University of Ibadan. Country-level data reflect these trends as well for Mozambique, South Africa and Tanzania, as seen in Table 1.¹ Here again, as could be expected, the situation is most aggravated at the University of Ghana, and in the country of Tanzania.

Table 1: Student-staff ratios, by institution and year

Institution/country	Years covered by data	Student-staff ratio (1 st year)	Student-staff ratio (2 nd year)	Change
<i>Institutions</i>				
U of Ghana	2000, 2008	15:1	29:1	93%
Stellenbosch U	2002, 2007	28:1	30:1	7%
U of Ibadan	2001, 2006	15:1	15:1	0%
U of Cape Town	2003, 2007	32:1	30:1	-6%
<i>Countries</i>				
Tanzania	2003, 2007	15:1	24:1	60%
Mozambique	2000, 2004	26:1	32:1	23%
South Africa	2001, 2006	45:1	46:1	2%

The failure of staff growth rates to keep pace with student enrolments has burdened staff and discouraged intake, often creating a vicious cycle. Student-staff ratios alone can also be deceptive. In the case of the University of Ibadan, a stable student-staff ratio was achieved by limiting enrolments in the face of dwindling staff, crumbling infrastructure and budget cuts, so reducing intake became a means of maintaining quality (Tettey, 2006). The University of Ghana also capped enrolments in 2006 as a strategy to keep up standards.

While freezing enrolment might help perfunctorily, it has troublesome national implications due to Africa's already low tertiary-level enrolments rates, which retard economic development (UNESCO, 2007). As Julius Okojie, Executive Secretary of Nigeria's National Universities Commission, recently lamented: 'Universities in Nigeria lack the needed qualified manpower

¹ Tables and figures in this chapter have been compiled from the data that appears in Annex below.

[sic] to steer the academic system to a level where they could produce quality graduates’ (Nzeshi, 2008). Current postgraduate programmes need to be expanded to meet these demands.

Cultivating the Next Generation of Academics — An examination of the Current Pipeline

Current postgraduate students are the source of the next generation of academics, as long as their numbers and quality are maintained at master’s and doctoral levels. Many institutions have expanded these programmes, but some have been falling back in these areas.

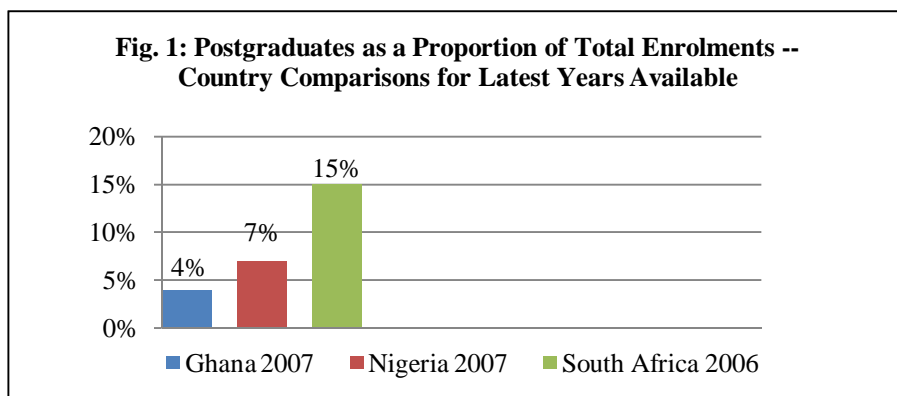
Postgraduate Enrolments

The proportion of postgraduate students at African universities on the whole is low and falling further in some cases. For example, as shown in Table 2, the University of Ghana saw a 50% reduction in that proportion from 14% in 2000 to seven percent in 2008. The University of KwaZulu-Natal also saw a drop in the proportion of postgraduates from 32% in 2000 to 26% in 2007. The situation was different at Ibadan, which has been a leader in the production of postgraduate degree holders on the continent: there the university increased the percentage of postgraduate students from 18% of the total student population in 2001 to 35% in 2006.

Table 2: Postgraduates as a proportion of total enrolments, at selected universities

Institution	Years covered by data	Postgrad (1st year)	Postgrad (2nd year)	Percent change
University of Ibadan	2001, 2006	18%	35%	94%
University of Ghana	2000, 2008	14%	7%	-50%
UKZN	2000, 2007	32%	26%	-19%

The proportion of postgraduates at national levels was generally low — with Ghana, Nigeria and South Africa showing figures of four, seven and 15% respectively (Fig. 1).



Doctoral and Master's Enrolees as a Proportion of Total Postgraduate Enrolments

When postgraduate students are disaggregated by degree programmes, an instructive picture emerges. Only five percent of postgraduate students at the University of Ghana were enrolled in doctoral programmes in 2000, with their numbers increasing marginally to six percent in 2008. The proportions for the University of KwaZulu-Natal were seven percent and 10% in 2000 and 2005 respectively. National data for South Africa shows that only one percent of postgraduate enrolments were at the doctoral level in 2000 and 2006. While postgraduate enrolments have generally increased over the years, at most universities the combined proportion of master's and doctoral enrolees remain a small percentage of postgraduate students, limiting the potential pool from which to draw the next generation of academics.

Analysis of Postgraduate Enrolments by Type of Programmes

The kinds of programmes in which students are enrolled also provide a good indication of whether graduates are likely to complement the existing pool of the professoriate in the future. Institutional profiles (see Annex) show that the majority of postgraduate students are pursuing programmes at levels and in fields that are designed to provide them with opportunities for career advancement outside of the academy, with little potential to regenerate the professoriate. A significant number of postgraduate enrolments over the past decade have been in professional business and management programmes such as the MBA. This trend is not unique to African institutions, as universities in various countries have responded to market demands.²

Disaggregating Postgraduate Enrolment by Gender

Available data show that men dominated postgraduate enrolments at all the universities studied, with the exception of South African institutions that were closer to gender parity. At the University of Ghana, women 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% to 50%. Hopefully, the UKZN trend will recover upwards, instead of dropping further. Any hope of increasing the low proportion of women in the academy has to start with efforts at improving their numbers in postgraduate programmes.

Postgraduate Completion and Dropout Rates

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 enrolees who complete their programmes. While we do not have data for all the institutions and countries studied, the case of 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 dropout rate for thesis-based master's students for 2000-2006 was 56%, while the corresponding figure for their doctoral counterparts was 35%. The phenomenon of more than half of master's and over a third of doctoral students dropping out of their programmes has had a significant negative impact on the potential pool of

² As noted in the Canadian context, 'Driving this demand is the need for highly skilled graduates in professionally oriented disciplines such as business and management, architecture, engineering, mathematics and computer and information sciences. Education and humanities disciplines have seen decreases in master's-level enrolment' (Canadian Association of Graduate Studies, 2006, i, ii).

the next generation of academics. The statistics are even more worrisome when the related indicator of completion rates is assessed: the rates for thesis-based master’s and doctoral students averaged about 11% and 10%, respectively, for the 2000-2006 period. With only a tenth of these cohorts graduating, there is a huge disconnect between intake and output, with serious implications for replenishing the professoriate with requisite numbers and appropriate levels of training. This situation bears out the assessment that South African graduation rates ‘are generally low against NPHE [National Plan on Higher Education] benchmarks and need to be enhanced’ (Subotzky, 2003, 375).

Completion of Master’s and Doctoral Programmes

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 students are actually qualified and available to fill places in the academy.

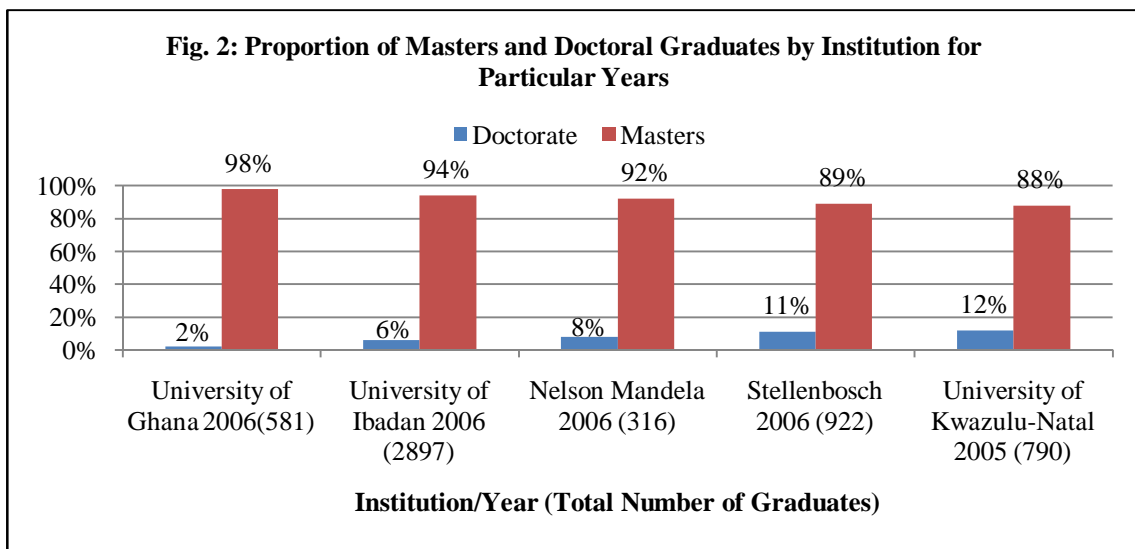


Fig. 2 shows the number of graduates at doctoral and master’s levels for several institutions. At the University of Ghana only two percent of graduates at the postgraduate level — 11 students in all, of whom only two were women — received doctorate degrees in 2006. The number of master’s graduates was higher at 570 (with 32% of them female). At the University of Ibadan in 2006, only 30% of the 182 doctoral graduates were female. Both the proportion of doctoral graduates, relative to their master’s counterparts, and the number of women in both, are quite small.

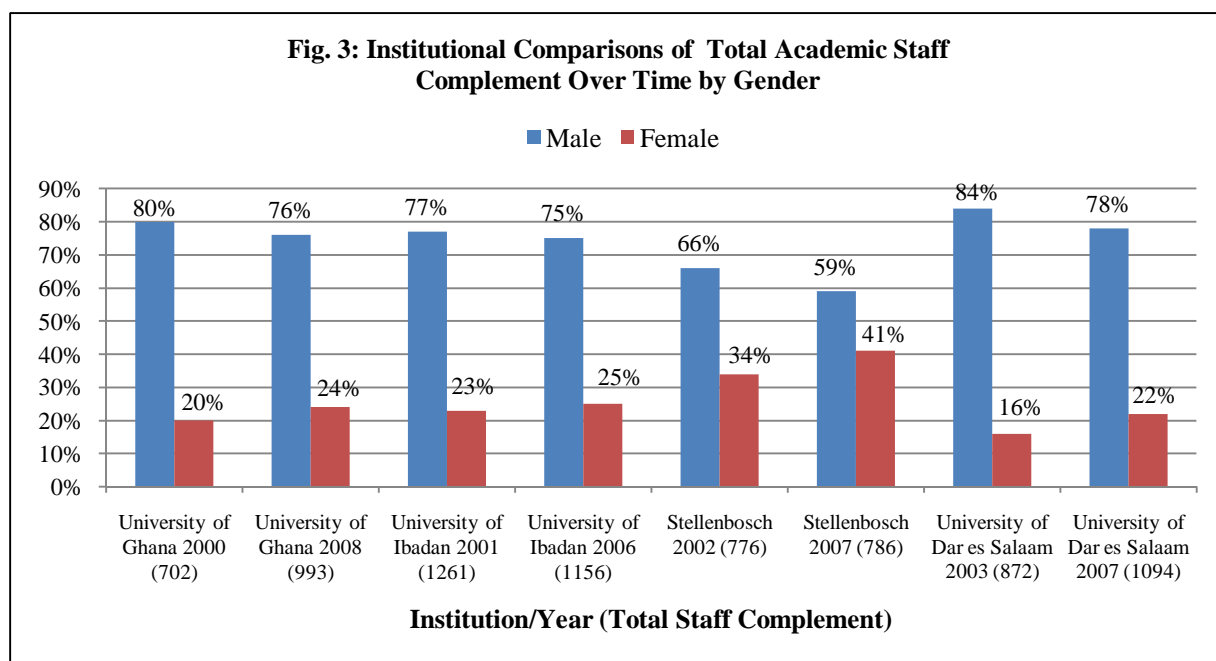
Data from South Africa add weight to the problem of the low level of production of postgraduate degree holders at African universities. In 2006, only six percent of postgraduates from Nelson Mandela Metropolitan University obtained master’s degrees, while just one percent received doctoral degrees. The corresponding proportions for Stellenbosch University in the same year were 14 and two percent, respectively. Of the total number of postgraduate degrees given countrywide in 2001 and 2006, just a quarter were for master’s programmes and a mere one percent was for doctoral programmes.

Implications for Developing the Next Generation of Academics

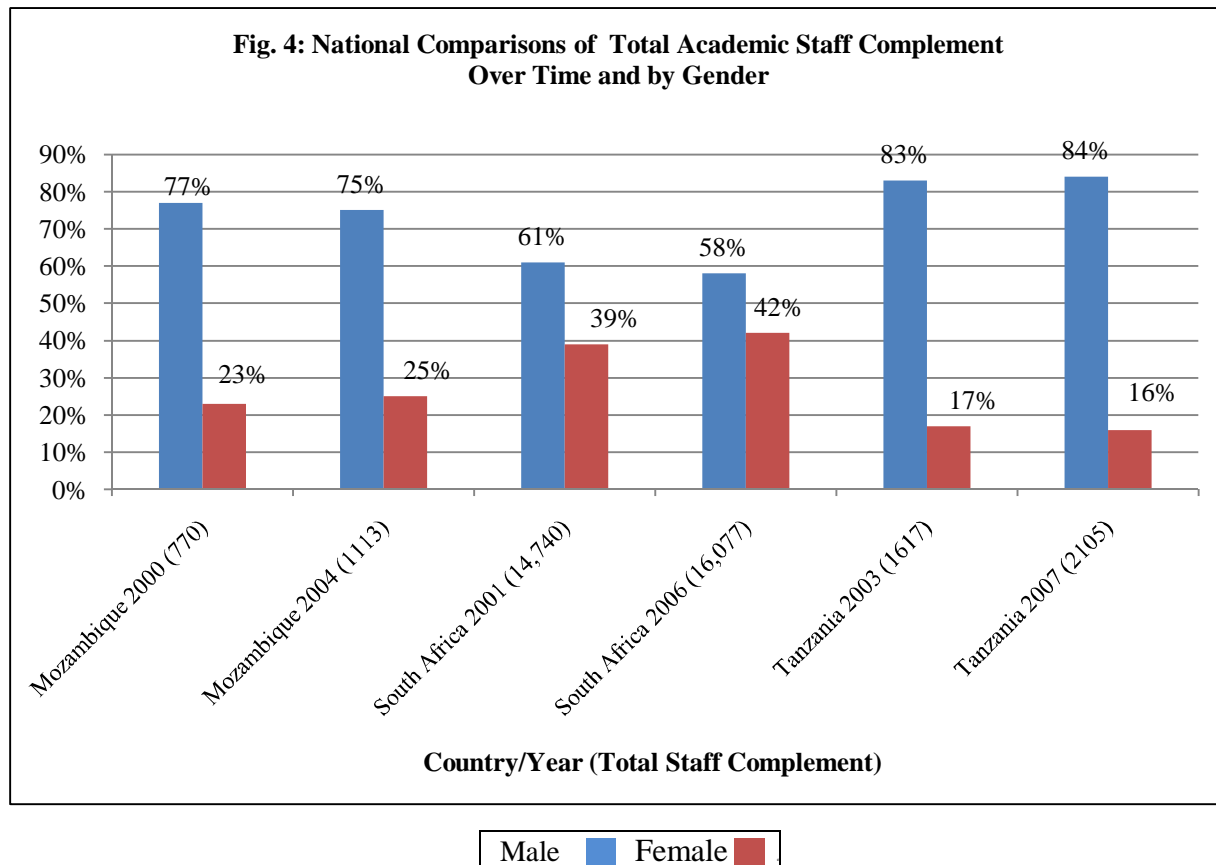
In this section we take a close look at various dimensions of the current staff composition of the institutions studied and explore their implications for growing the next generation of academics within the African academy. We also examine the extent to which these dimensions make it imperative that the development of the next generation of African academics becomes an urgent priority for all stakeholders.

The Gender Gap in Academic Staff Complement as Lost Potential

One of the most serious gaps that African universities need to close if African countries are to fully utilize their human potential is the gender gap. While the proportion of female staff in various institutions has improved over the years, it is clear from Fig. 3 that they still constitute only a small fraction of academic staff at most universities. Even when and though their numbers are increasing, the increments remain minimal. At the University of Ghana the proportion of women academic staff increased by four percent from 2000 to 2008 while the University of Ibadan recorded a two percent growth in their numbers over five years. Stellenbosch University was the leader of the group, with its female staff going up by seven percent from its 2001 level, to 41% in 2007.



Available national level data corroborate the evidence from the institutional data (see Fig. 4). Females made up only 23% and 25% of academic staff in Mozambique in 2000 and 2004 respectively while in Tanzania, the proportions dropped from 17% in 2003 to 16% in 2007. The trend in South Africa, however, is more encouraging with the percentage of female staff increasing from 39% in 2001 to 42% in 2006. Still, as can be seen, percentage increases over several-year periods remained in single digits.



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 to attract prospective female academics and 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 and fields of study. For example, only six percent of academic staff at both the Business School and the Faculty of Engineering Sciences at the University of Ghana are women (University of Ghana, 2008).

An Ageing Professoriate and the Need for Replenishment

The urgency of the need for initiatives to build the next generation of academics in African universities is made clear by the fact that the current crop is ageing very fast, with no commensurate expansion in the numbers of young scholars entering the profession. Only 20% of the staff of Obafemi Awolowo University (OAU) in 2006/2007 was under 40 years of age, compared to 39% over 50 years of age. 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% of staff at OAU, in the two years for which data are available, was past the retirement age amplifies the extent of the problem.

Table 3 illustrates the age distribution within various other institutions. Data for University of Education, Winneba (UEW) are very disheartening, as only about eight percent of staff are under 40 years of age, while 55% were 50 years of age or older. National-level data for Ghana echoes the general concern about an ageing professoriate, with 41% of academic staff over 50 years. A cursory look at UKZN elicits optimism, because 41% of staff was less than 40 years old in both 2001 and 2006. However, the fact that 42% of academic staff, including many of the younger staff, had less than a master's degree requires further analysis of the correlation between age group and qualifications. Increased numbers of academic staff, without the requisite quality and level of training, are insufficient to provide quality instruction and training for students. Expansion in the number of staff without attention to their professional development does not augur well for the future.

One institution that appears better positioned is University of the Witwatersrand, with over 40% of staff under 40 years of age and a significant number of staff with master's or higher degrees. It is important to point out that even at Wits, nearly a third of staff were over 50 years of age, indicating that a significant number of senior scholars will be retiring in the next decade.

Table 3: Academic staff by age groups, three universities (%)

<i>Institution/years</i>	<i><40</i>	<i>40-49</i>	<i>50-59</i>	<i>60+</i>
UEW, 2004-2008	8%	37%	40%	15%
UKZN, 2001-2006	41%	31%	25%	3%
Wits, 2005-2007	41%	29%	24%	7%

In the midst of these staff shortfalls, it is worrying that institutions are losing current staff through resignations, mostly in order to explore better employment opportunities elsewhere. At Wits about two-thirds of those who resigned in 2006 and 2007 were under 40 years of age. Since the people in this age category constitute relatively new scholars, their departure raises questions about the ability of these institutions to build and retain the next generation of African scholars.

Academic Staff Qualifications

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.

Most African universities in this study had relatively fewer doctoral than master's degree holders on staff (Fig. 5). Only 19% of staff at the University of Education, Winneba had doctorate degrees in 2008 while master's and doctoral degree holders together constituted only 58% of the total staff complement at UKZN in 2006. Three South African universities were exceptions to this pattern: Rhodes University in 2005, with 49% of staff having doctorates; University of Cape Town in 2006, with 59%; and University of the Witwatersrand in 2007, with 53%. In addition, two Nigerian universities had over half of their academic staff with doctorates: these were Bayero and Ibadan universities, with 51 and 63%. These exceptions notwithstanding, less than two-thirds of academic staff in the other universities covered by this study had doctorate degrees.

Clearly, all these institutions have to redouble their efforts to ensure that they are staffed by academics with the highest terminal degrees in their fields.

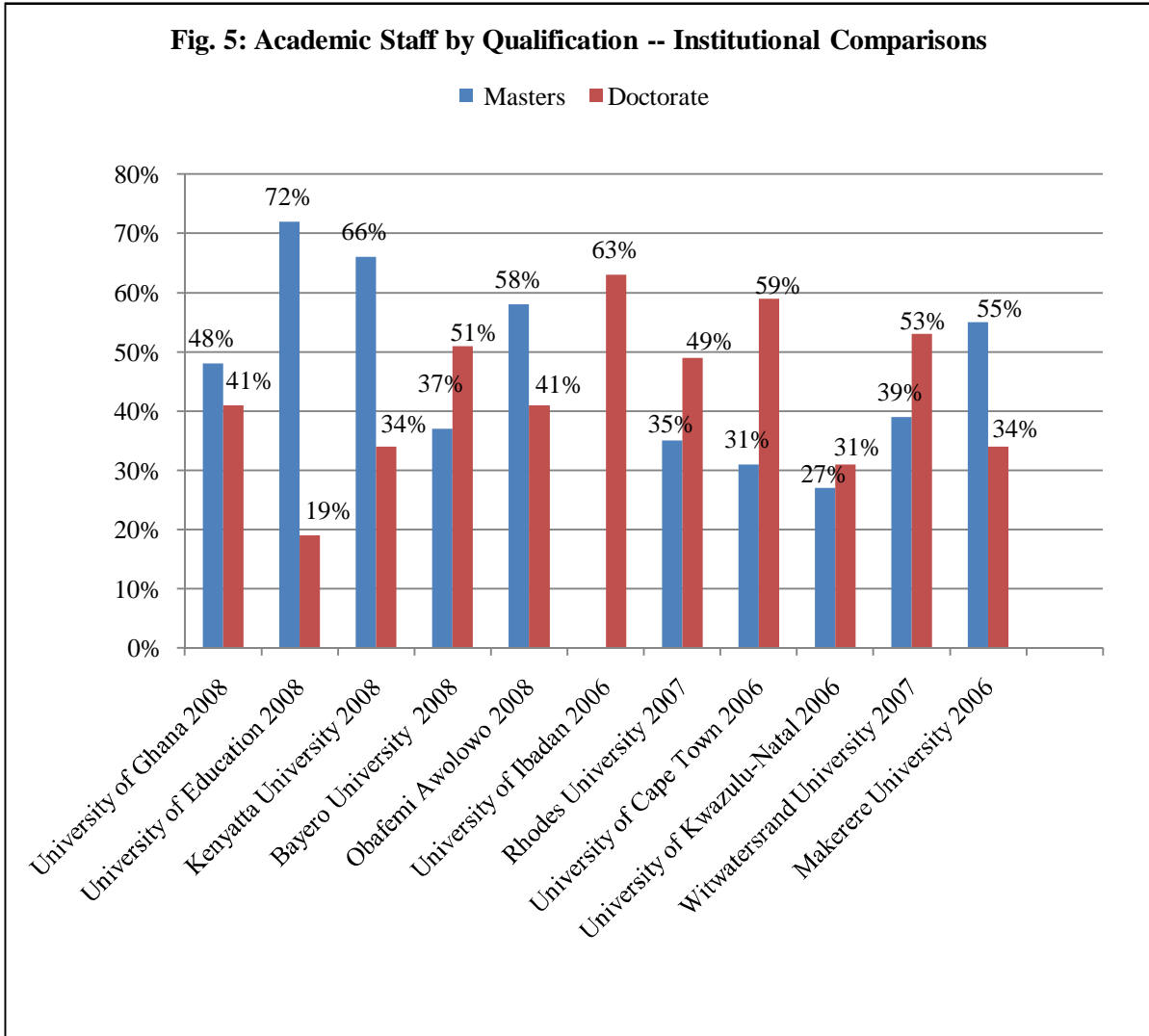
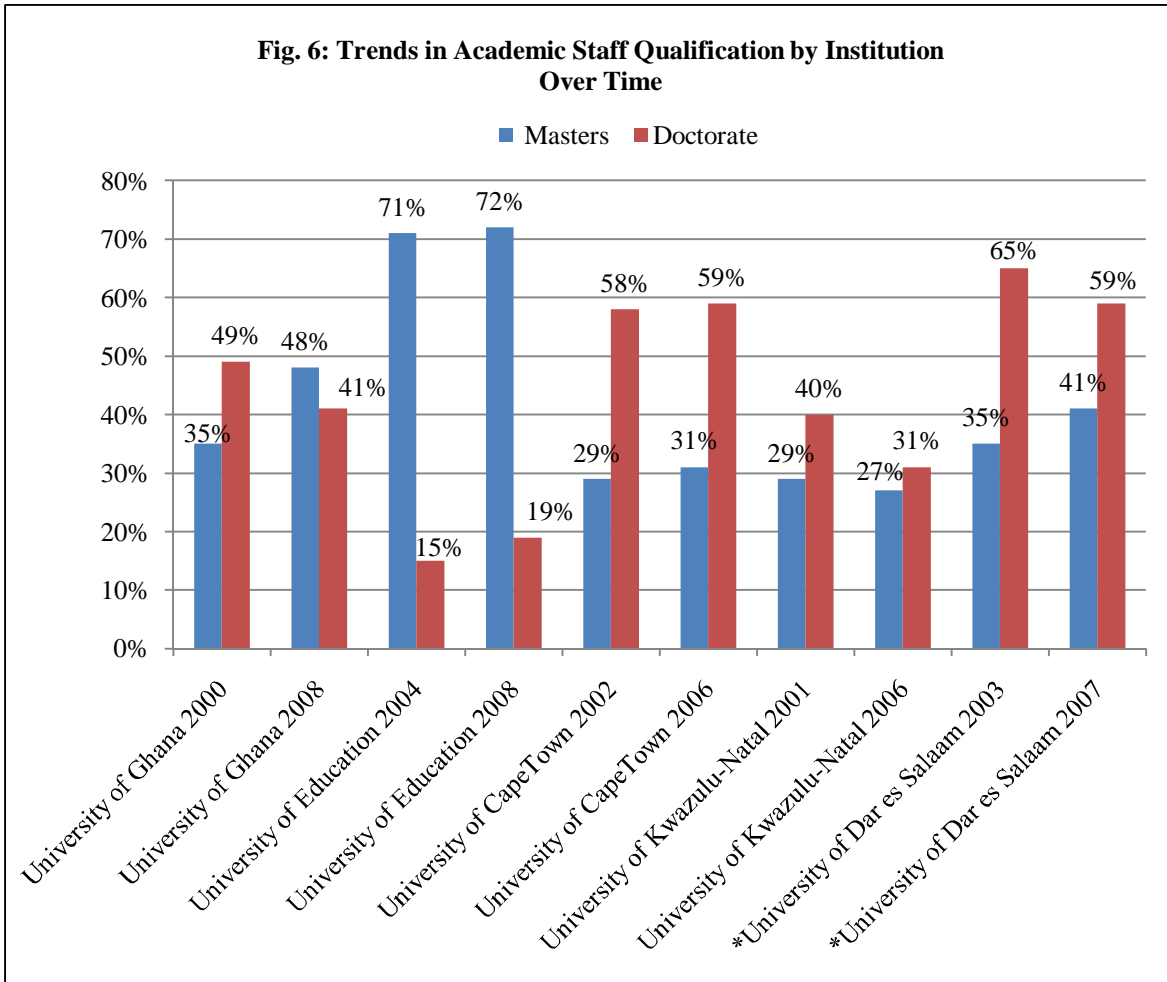


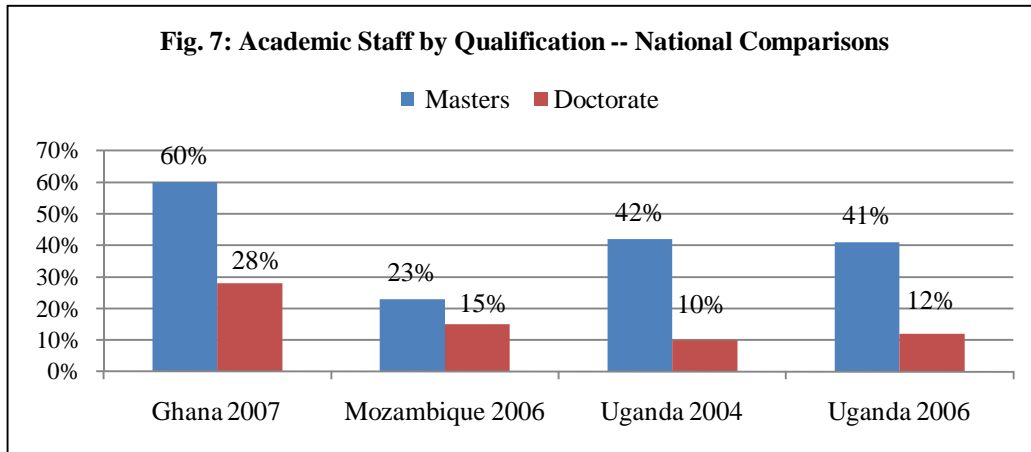
Fig. 6 shows a disturbing trend at several universities of a slide in the proportion of academic staff with doctoral degrees. At the University of Ghana the percentage of staff with doctorates decreased from 49% in 2000 to 41% in 2008. Meanwhile, the University of KwaZulu-Natal registered a drop from 40% in 2001 to 31% in 2006. The University of Dar es Salaam also experienced a downward slide from 65% in 2003 to 59% in 2007.



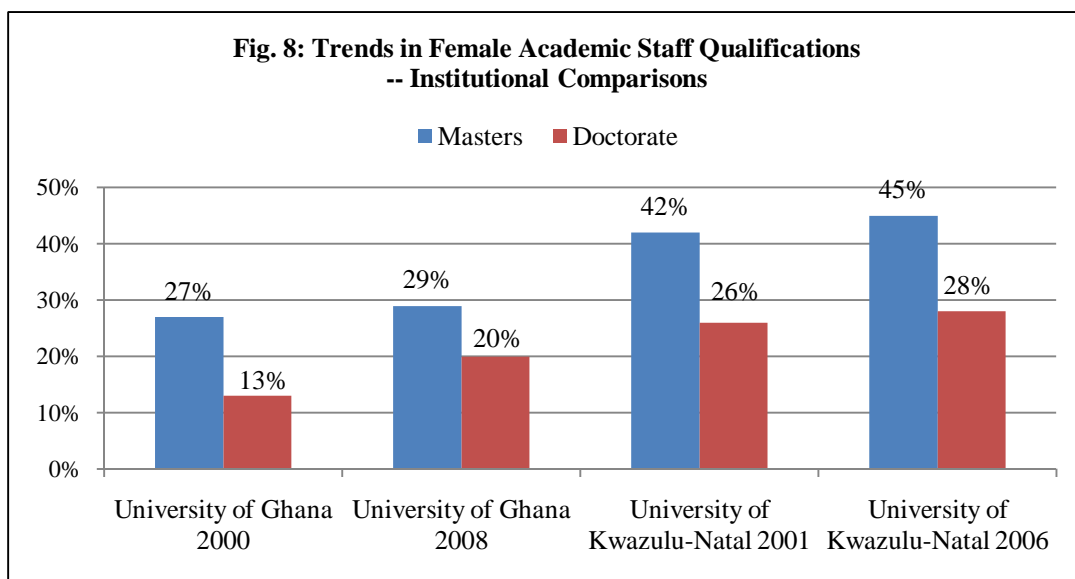
** The figures for UDSM show trends within a cohort of masters and doctoral degree holders only and do not reflect proportions of the total staff complement in each of the years.*

There are at least three significant implications to this data. 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, either because they lack the human resource capacity to do so, or because they do a poor job when they try to train them. Either way, the quality of the next generation of the professoriate may be compromised, especially since many of these institutions are not in a financial position to train significant numbers of their potential members abroad. Finally, the potential for intra-regional doctoral training is severely handicapped by the fact that, apart from the six institutions shown in Fig. 6, most institutions had doctoral complements of significantly less than half of their total staff. Even fewer have two-thirds doctoral degree holders.

The picture is even more sobering at the national level. Only 28% of academic staff in Ghana, 15% in Mozambique and 12% in Uganda had doctorates in the latest year for which data are available (Fig. 7).



Proportions of women with master’s and doctorate degrees have been consistently lower than those of men with such degrees. However, as shown in Fig. 8, the proportion of women with these degrees has been increasing, as illustrated by the cases of the Universities of Ghana and KwaZulu-Natal. At the University of Ghana, females made up 27% and 13% of master’s and doctorate holders in 2000; by 2008 these proportions had increased to 29% and 20%, respectively. At the University of KwaZulu-Natal, the percentage of female master’s degree holders went up from 42% in 2001 to 45% in 2006 while the percentage of female doctorate staff also improved marginally from 26% to 28% during the same period. The implications of the relatively low proportions of female staff with these degrees are similar to those discussed above in relation to the skewed gender distribution of academic staff as a whole.



Professional Development for Staff Capacity Building

Various universities have staff development initiatives to cultivate the next generation of academics and generally improve the qualifications of staff. Kenyatta University had 191 of its

staff enrolled in doctoral programmes in 2006; out of which one third were women. At the University of Witwatersrand 11% of staff were undertaking doctoral programmes between 2005 and 2007, while 20% of staff were enrolled in master's programmes. Data from UDSM show that 15 staff members were enrolled in doctoral programmes in 2007, including three women. Makerere had 27 of its staff in master's programmes and 128 in doctoral programmes in 2006. Uganda's national-level data for the same year indicates that 52% of staff pursuing further studies were in master's programmes, compared to 34% in doctoral programmes. The existence of all these programmes is commendable, but the need far outstrips even these encouraging enrolment figures. All such efforts need to be reinforced to strengthen the quality of academic staff at African universities.

Significance of Rank Distribution for Regenerating the Academy

A balanced distribution of scholars across the various ranks helps to build a solid community of scholarship. Established scholars mentor others, thereby developing or maintaining a culture of excellence within an institution. Okojie points out the consequences of not having a reasonable distribution of ranks:

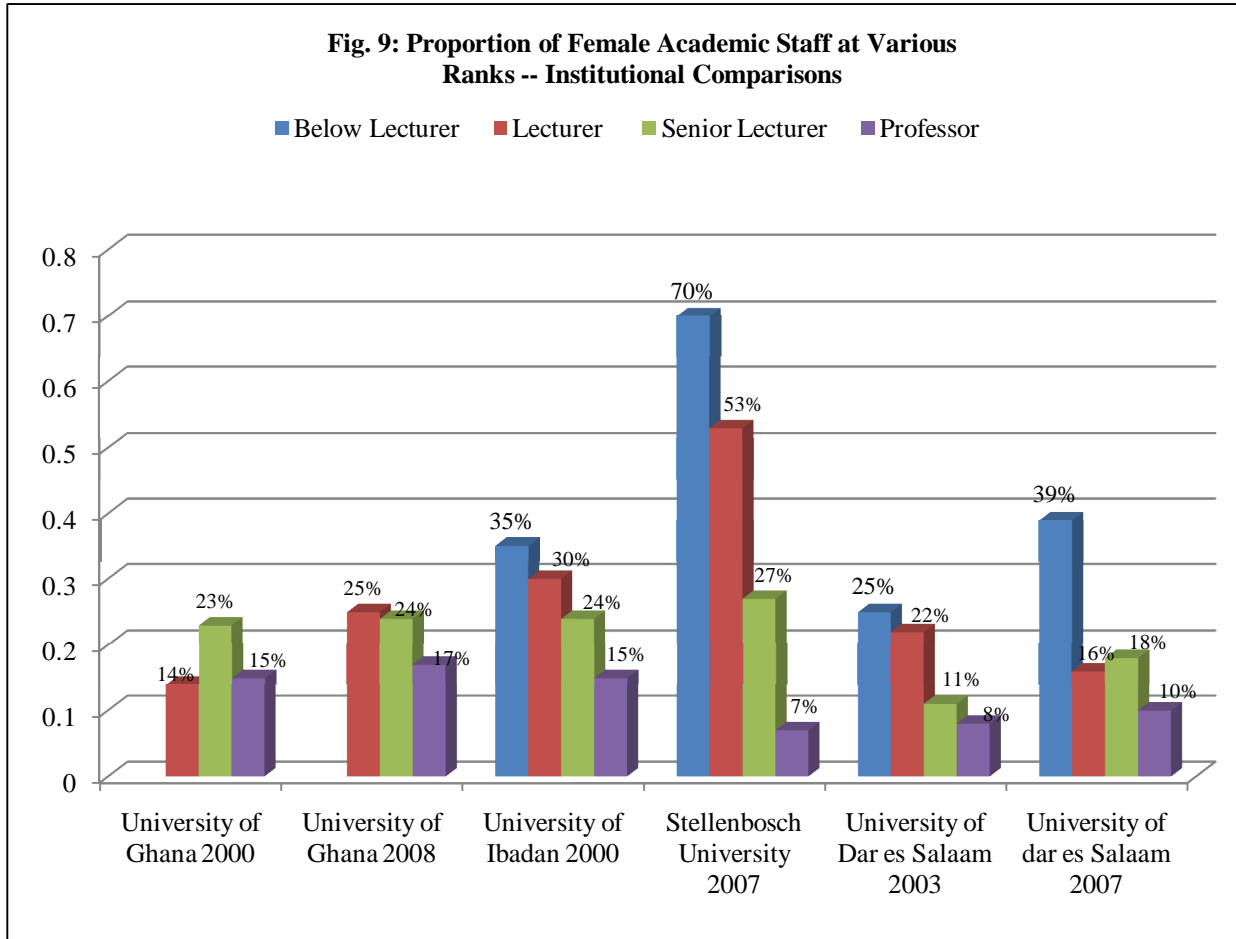
Today we are talking of the issue of the quality of teachers in the system; a survey, which is the pyramid structure, revealed that the system is deformed. Today, we are expecting 20% of the staff to be reader and above, 45% to be senior lecturer and others, lecturer grade 1 and below, but what do we have, 61% are lecturer grade 1 and below, so how can you fight a battle with scout master's [*sic*]? (Okojie quoted in *This Day*, 2008).

Those below the rank of lecturer constituted 56% of academic staff in Nigerian universities overall in 2006, a picture that explains Okojie's concern. At the institutional level across the continent, with the exception of UDSM, lecturers make up the most numerous group of staff. At the University of Ghana in 2008, 48% of staff 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 largest group of staff (47%) was made up of those *below* the rank of lecturer.

The correlation of rank with gender has important implications for the next generation of academia as well. Women academics, particularly those who are in the higher ranks, serve as role models and mentors for other women. Even more important is the need for them to be established in their professions, giving them the clout to provide leadership on a variety of fronts, including advancing gender-sensitive initiatives. Additionally, if upward mobility for female staff is seen as difficult to achieve, 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. 9 vividly portrays the extent to which women at various institutions are consistently underrepresented within all ranks, but especially so in the professorial ranks. The latest data show that the percentages of women in professorial posts ranged downwards from 17% to 10% of staff at the Universities of Ghana, Ibadan, Dar es Salaam and Stellenbosch.

It is interesting to note that the highest proportion of women is found at the level below lecturer for those institutions that have this rank, with Stellenbosch, where women comprised 70% of this group, being the most egregious case. Institutions need to hire more women academic staff not

only at the lowest entry level. Further research is needed to ascertain the reasons for the concentration of women academics at low ranks.



CONCLUSIONS AND RECOMMENDATIONS

Growth in academic staff has not kept pace with student enrolments

Huge expansions in student enrolment are increasingly overwhelming African institutions in the absence of a corresponding increase in academic staff capacity. Even when the universities establish new positions to meet increasing enrolments, many of these posts are not filled. The resultant capacity deficit means that vacancy rates in university staff positions frequently run between 25 and 50 percent (World Bank, 2008, 53).

This discrepancy in growth rates can be attributed to a variety of factors. Among them is the unattractiveness of academic positions, as conditions of service in universities fall behind those in other sectors of the economy and opportunities outside the continent beckon some of its brightest minds (see Tettey, 2006; Mihyo, 2007). The data also reveals a relationship between postgraduate student enrolment, graduation rates and injection of fresh blood into the academy. As we have seen, the proportion of postgraduate students in many African universities is low and, in some cases, falling. Of some 30,000 students enrolled at the University of Cape Coast during the 2005/2006 academic year, only 0.5% and 5.5% were in doctoral and master's programmes, respectively (Mouton, 2008, 29). To make matters worse, graduation rates were low and dropout rates high in several fields, meaning that the output of graduates vis-à-vis intake leaves a lot to be desired. These circumstances diminish the capacity of Africa's higher education institutions to generate sufficient graduates who will stay on to teach others. Institutions are having difficulty replenishing academic staff numbers at requisite levels, leading to a situation where the current age distribution is skewed towards those who are in the twilight of their careers.

Low proportions of female postgraduates and academic staff pose challenges for faculty regeneration and reduce opportunities for institutions

The gender dimension of postgraduate enrolments and its implications, not only for the composition of the future professoriate but also in absolute numbers, cannot be denied. Data cited in this study show significant gaps in the proportion of male and female enrolments at the postgraduate level. Unsurprisingly, this skewed distribution is replicated in the make-up of academic staff. Concerted efforts have to be put in place to encourage female enrolment in postgraduate programmes, support them to stay in those programmes, ensure that they are able to complete their programmes successfully, and to mentor them to pursue academic careers. These efforts will lead to growth in the numbers of female staff who can then serve as role models and mentors for subsequent generations of female students and help them sustain their careers when they become academics.

The institutional and national profiles presented below reveal an upward trend in the number and proportion of females in the African academy. While this is commendable, the fact remains that the rates of growth in both absolute numbers and percentage, across many countries, are minimal. In the midst of staff shortages, it is unfortunate that the potentials of a significant part of the continent's population are not being harnessed, developed and tapped for capacity building within universities. Efforts to address this situation will need to be pursued in tandem with the issue of low female postgraduate student complements.

Low and declining academic qualifications constrain doctoral training expansion and quality improvements

The evidence presented in this study shows that there is a relative paucity of doctoral degree holders in the African academy. Apart from five universities, less than half of all staff in the other institutions had doctorates. Of even more concern is the trend of declining proportions of doctorate holders over the years.

The shortage of doctoral degree holders raises questions of research credibility and capability that need to be addressed urgently if these institutions are to gain acceptance as reputable members of the global intellectual community. Such recognition is necessary in order to foster collaborative initiatives and build equitable partnerships with counterparts in other parts of the world. In this era of globalization, collaboration across boundaries is critical to path-breaking intellectual inquiry. If African institutions want to attract young African academics, particularly those trained and/or working abroad, to come back either as regular staff or visiting scholars, they will have to ensure that the appropriate environment exists for nurturing a critical epistemic community. An increase in the number of staff with doctoral degrees is a crucial (but not the only) ingredient in spawning such a community. The shortage of doctoral degree holders in the professoriate also constrains the ability of the universities to generate high calibre academics to staff the expanding higher education sector.

Postgraduate training is not producing sufficient numbers of future academics

The large discrepancy between postgraduate intake and output numbers can be attributed to several factors (see Koen, 2007), among which are the following. There is insufficient funding for postgraduate studies, which means that many students are unable to focus on their studies, thereby forcing them to take a long time to complete, or to drop out. Supervisors often do not provide adequate and constructive guidance to students, leading to frustration and loss of interest in academic careers. Furthermore, many institutions do not have clearly articulated and transparent expectations of students and supervisors and lack mechanisms to effectively track progress. As has been noted in other countries, 'the additional workload that graduate students generate for faculty is generating concerns on many campuses regarding the ability of faculty to take on and adequately support and supervise even more graduate students' (Association of Universities and Colleges of Canada, 2007, 37). Some observers have also argued that the deterioration in the human resource and infrastructural capacities of institutions have led to poor quality graduates who are unable to cope with the rigors of postgraduate education.

Related to the problems of postgraduate training is the question of whether graduate programme accreditation needs to be rethought to ensure that resources are concentrated in those institutions that have the ability to offer good quality programmes. Many institutions offer postgraduate programmes for which they do not have the appropriate calibre of staff or resources to meet the intellectual needs of their students. The increasing ubiquity of programmes devoid of quality is a phenomenon that will only get worse if privatization of tertiary education is not accompanied by stringent regulations and quality standards. Instead options can be explored that would allow the development and support for centres of excellence in particular fields at national and regional levels.

Quality problems are not the exclusive domain of private institutions. There are several programmes in established public universities that have not been reviewed in years to ascertain their quality, relevance and relative position vis-à-vis competitor programmes. Such programmes find themselves unable to attract excellent students who could become academics or draw only mediocre intakes who face difficulties in the programme. The success of universities in fulfilling their academic mandate is critical to the enjoyment of public support for their needs, state responsiveness to their requests for financial assistance and synergies with other stakeholders such as business and industry. Failure to meet the expectations of these groups only erodes the institutions' credibility as well as their ability to build collaborative networks that would facilitate their goals.

Postgraduate training has tremendous catalytic potential to advance human development in the twenty-first century. Such an incentive is even more salient for African countries if they are to progress in the areas defined in the Millennium Development Goals. It therefore behooves African governments, national tertiary education bodies, universities, and the private sector to work together to develop creative and complementary funding models that promote high quality postgraduate training. As noted by the World Bank:

National R&D efforts [in Africa] are more likely to be sustainable when they are grounded in national postgraduate programmes and the professional networks that emerge around them. This linkage has borne fruit in Brazil, Chile and India, where coordinated government policy initially fostered master's (and subsequently PhD) programmes, actively encouraged research and tied these expanding research capacities to their national agricultural research programmes. . . Here, also, competitive funding mechanisms are an effective means of developing programmes of strength in postgraduate teaching and research (World Bank, 2008, 19).

It is commendable that some tertiary-level institutions are engaged in revenue-generating initiatives that have led to expansion of postgraduate training programmes. There is a need for caution to avoid the perpetuation of trends whereby these efforts are taking place largely in narrowly short-term, market-determined fields, such as business. This requires strategic graduate programme planning that ensures a healthy balance between a concern for revenue generation and the urgency of building excellent, capacity-building areas of research and teaching. Support for postgraduate programme development should not be exclusively or overly determined by market-driven exigencies.

African institutions and countries have to acknowledge that they do not have the ability individually to develop expertise in all fields. They need to work together to expand and improve on existing initiatives that build regional and sub-regional nodes of research and training. Among such initiatives are the African Health and Population Research Center, the African Economic Research Consortium, and the West African Post-graduate Medical College.

So far, we have discussed the foundational issues that need to be addressed in order to develop and enrich the pool from which future generations of academics can be drawn. The next crucial issue to explore is what needs to be done to attract future academics to, and retain them within, these universities.

Strategies for sustaining the next generation of academics

Just as mentoring of undergraduate and postgraduate students is a vital mechanism for getting them through their programmes and interested in an academic career, it is also of vital importance in sustaining young scholars as they make their way through their professional careers (Klasen and Clutterbuck, 2002; Mathews, 2003). Institutions need to have well-organized mentoring programmes in place within each department or faculty that match new colleagues with more senior staff. Established academics can help new colleagues acquaint themselves with important career-advancing and -fulfilling strategies, provide them with guidance and support as they navigate the challenges of the academy, and involve them as collaborators in research endeavours.

The increasing student-staff ratios, outlined in the national and institutional profiles in the annex below, present a daunting challenge to the professoriate as a whole, but particularly so for those in the early stages of their career. The workload that accompanies responsibility for large student numbers imposes significant career-stalling burdens on young scholars. The anxiety that comes with such a burden, in a context that demands high standards of research productivity, can discourage potential academics. In order to address this concern, institutions need to provide relief to those in the early stages of their careers while helping them to gain skills needed to meet career expectations. This can be done by giving them course releases, not assigning them the most highly-subscribed courses, and providing them access to professional development opportunities that enable them to acquire pedagogical skills and to obtain an aptitude for balancing the multiple demands of academia and personal life (see Austin, 2002). Institutions' sensitivity and responsiveness to young employees' work-life circumstances is particularly helpful in attracting and retaining female academics whose careers tend to be significantly compromised by the contending demands of home and work.

Mentoring is a key part of the strategy that universities must adapt to support and grow the next generation of academics. Building the pool of appropriate mentors is constrained in many institutions where a huge percentage of staff is at the rank of lecturer or below. This rank distribution will obviously limit the number of people who can be mentors for the large pool of younger scholars. It also puts a huge burden on established scholars who are willing to be mentors and waters down the quality of the relationship if the mentors are overextended (Buetel and Nelson, 2006). These challenges are even more constraining in relation to female academics because they are so few in senior ranks and thus the pool of female mentors is relatively shallow. Cultivating senior female academics who can advance gender-sensitive institutional policies and provide mentorship to their junior colleagues should become a cardinal goal of all universities to be manifested in verifiable, measurable and recognized policies and programmes.

Ageing professoriate and low retirement age exacerbate faculty shortages

This study has pointed out the concentration of well-qualified academic staff in the age groups nearing, or, in some cases, already at retirement. In concert with efforts to increase the number of young people entering the academy, it will be useful for various governments and universities to reassess the relative value of mandatory retirement ages — currently a feature of all African institutions. It is clear from the institutional profiles that many institutions are depending on a sizeable number of retired staff to keep their programmes afloat. If these individuals are considered a necessary part of the institutions' operations, then it may be useful to consider

extending the retirement age. If the universities are governed by performance indicators that ensure that continued appointment for any staff member is conditional on meeting the expectations of his/her position, then advanced age should not pose any major problems for research and teaching contributions. In fact, productive older colleagues could be assets in a variety of ways.

Need for improvement in measurement

As noted above, our ability to make major deductions from this study in comparative institutional and national terms, across different variables and from a longitudinal perspective, has been severely constrained by the lack of relevant and, in some cases, consistent, data. Universities will not be able to undertake credible and feasible programmes to address the issues raised in this study if they do not have the appropriate data with which to design strategies. They are also unlikely to forge common purpose with other stakeholders (such as governments, the private sector and bilateral/multilateral partners) to address the problem of academic staff shortage and the development of a new generation of academics, if they cannot demonstrate the existence of the problem and base solutions on concrete evidence.

Institutions should embark on efforts to shore up their information-capturing capabilities and systems, establish offices of institutional analysis to mine relevant data for particular purposes on consistent and continuing bases, make data easily accessible, and be ready to respond expeditiously to requests for this information. Educators throughout Africa can learn from the progress made by many South African universities and the Council on Higher Education (CHE) through the Higher Education Management Information System (HEMIS). Donors and partners should make information-capturing, organization, analysis and dissemination key parts of their institutional support programmes. Ad hoc scrambling for data in response to requests from the latest donor or researcher is cumbersome, unreliable and tedious for staff.

Universities and national tertiary education bodies also need to develop a common template for collecting information. This is helpful for undertaking comparative analyses across different institutions in respect of common indicators and devising appropriate interventions. Many national bodies have complained that they do not have relevant data because institutions are unresponsive to their requests. This is an untenable situation. Appropriate regulations should be put in place, as part of statutes governing institutions of higher education, to make the completion and submission of the template mandatory, with clearly established deadlines and appropriate sanctions for institutions that default. To ensure that all institutions are measuring and reporting the same indicators, unambiguous guidelines should be developed to operationalize the indicators. Major donors and partners should also leverage their influence to make the provision of regular data on the indicators established by the national bodies a condition for support.

While the findings from this study have drawn the broad strokes of the issues impacting the development and retention of the next generation of academics in Africa, more thorough field research is needed to uncap some of the specific circumstances behind the quantitative data in particular contexts. Among issues to be explored might be the extent to which the supposed unattractiveness of academia is affecting the quality and size of postgraduate enrolment in

particular fields and other implications for the intellectual integrity of the professoriate and universities in general.

Also worth critical exploration are postgraduate dropout, time-to-completion, and graduation rates for particular countries and institutions in various fields, along with the gender dimensions of these indicators and the reasons for them. Qualitative surveys of those who quit as well as those who make it through will help shed light on the statistical data. There is currently no reliable data on research and graduate student funding for many institutions and countries, thereby making it difficult to assess any correlations with enrolment, time-to-completion, and graduation rates in specific fields. A comprehensive study examining graduate studies, particularly doctoral studies, as a process of socialization for the professoriate, will provide critical ideas for understanding whether current practices are appropriate or adequate for developing and attracting to the academy the kind of scholar needed for the university of the twenty-first century (see Austin, 2002).

It is astounding that many countries have no credible data on their nationals studying abroad, in spite of their significant numbers. While part of the reason for this may be the fact that many of these individuals gain access to foreign institutions through their own efforts, thereby leaving no bureaucratic trails in their countries of origin, it is not an insurmountable task to create a database of such nationals. African missions abroad could liaise with relevant agencies and institutions in receiving countries to access information on their nationals studying and working as academics abroad. They can also develop their own databases of such persons through concerted efforts. The value of such data lies in the ability of institutions at home to utilize it to negotiate with those who may be interested in employment and engagements of various sorts that enhance teaching and research capacity. Programmes such as Nigeria's *Linkage with Experts and Academics in the Diaspora* (LEAD) (see Saliu, 2007) and the *Ghana Diaspora Professionals Educational Network* are good beginnings that should be sustained and enhanced. There is strong commitment on the part of African academics in the diaspora to contribute to capacity building in universities; it is important that their desire and enthusiasm are not dampened by a lack of reciprocity on the part of their compatriots at home (Tettey, 2002, 2003).

Finally, a focused study on early career academics will be useful to understand not only the challenges that they face but also what attracts them to, and keeps them in, the academy. This can cover such issues as institutional governance, remuneration, research support, hiring processes, collegiality, workloads, and non-monetary reward systems (see Johnsrud and Rosser, 2002; Puplampu, 2004; Rosser, 2004). Insights from such a study will be a useful source of ideas for developing efficacious strategies to recruit and retain the next generation (see Tettey, 2006).

It is imperative that national tertiary education bodies, universities, governments and development partners come together to address the problem of staff shortages 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. In Nigeria alone, 88% of those who applied to universities, amounting to more than four million qualified students, failed to gain admission in 2008 (Punch, 2008). While lack of staff is not the only factor in this, the shortage of qualified staff at African

universities is a critical issue that requires immediate attention in shaping the future development of the entire region.

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ANNEX

National and institutional student and academic profiles

1. Ghana
 - National profile
 - University of Ghana
 - University of Education, Winneba
2. Kenya
 - National profile
 - Kenyatta University
3. Mozambique
 - National profile
 - Catholic University of Mozambique
4. Nigeria
 - National profile
 - Bayero University
 - University of Ibadan
 - Obafemi Awolowo University
5. South Africa
 - National profile
 - Nelson Mandela Metropolitan University
 - Rhodes University
 - Stellenbosch University
 - University of Cape Town
 - University of KwaZulu-Natal
 - University of the Witwatersrand
6. Tanzania
 - National profile
 - University of Dar es Salaam
7. Uganda
 - National profile
 - Makerere University

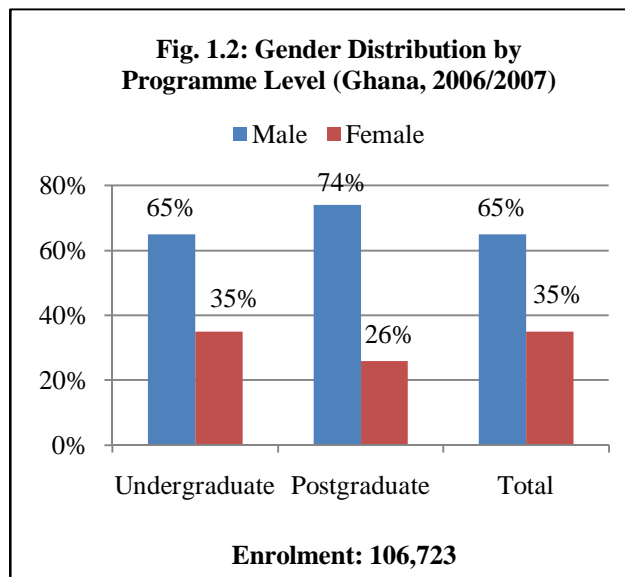
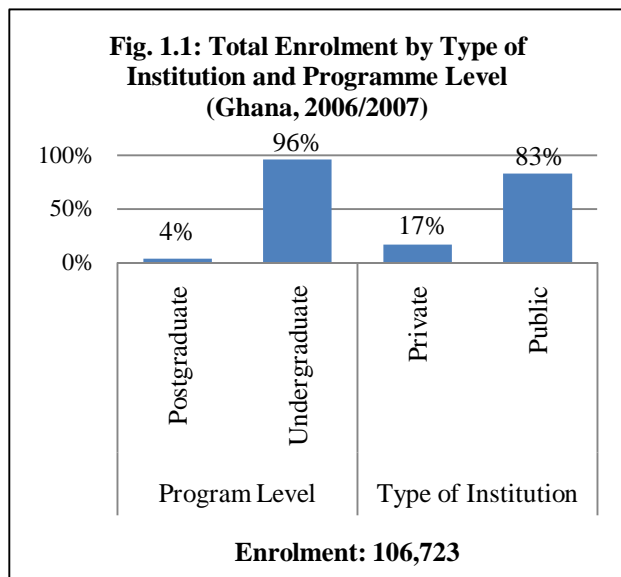
1. GHANA

National Profile

- Students -

Total Student Enrolment and Distribution by Gender and Programme Level

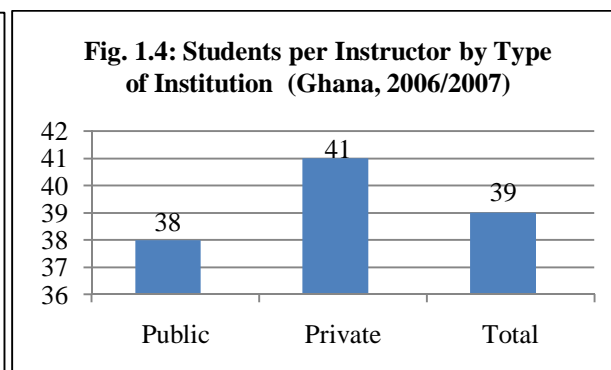
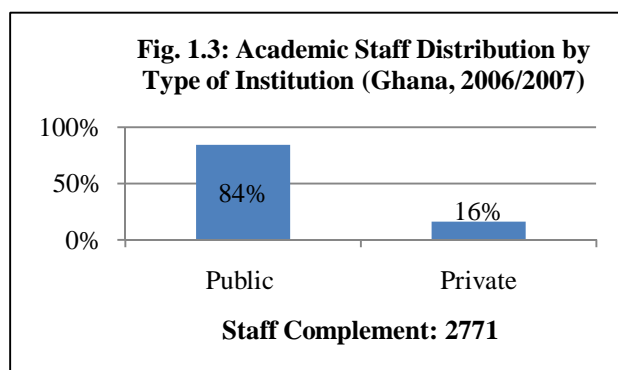
In 2006/2007, total enrolment in Ghana's universities stood at just over 100,000 students, 83 percent of whom were enrolled in public universities. Only four percent of students were enrolled in postgraduate programmes (Fig. 1.1). At the undergraduate level women constituted 35% of students, while at the postgraduate level women constituted 26% of students (Fig. 1.2).³



- Academic Staff -

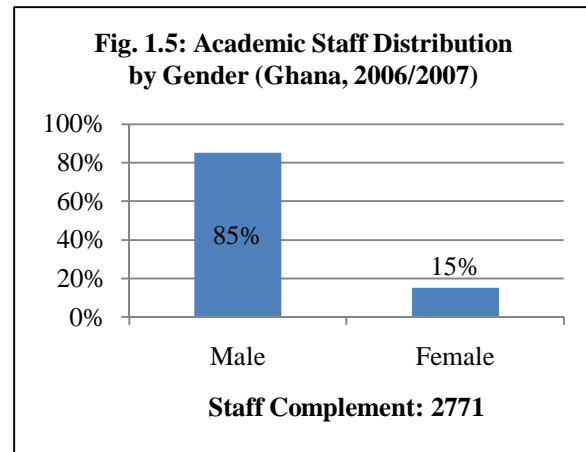
Academic Staff Capacity and Enrolment Pressures

The majority (84%) of the country's university staff were in public institutions in 2006/2007 (Fig. 1.3). Student-staff ratios, which measure the pressure of growing enrolments on academic staff, stood at 39:1 nationally, with similar figures for both public and private institutions (Fig. 1.4). This ratio compares unfavourably with the staff-student standards set by Ghana's National Council on Higher Education of 1:18, 1:10 and 1:8, respectively, for humanities, sciences and medicine (Tettey, 2006, 31).



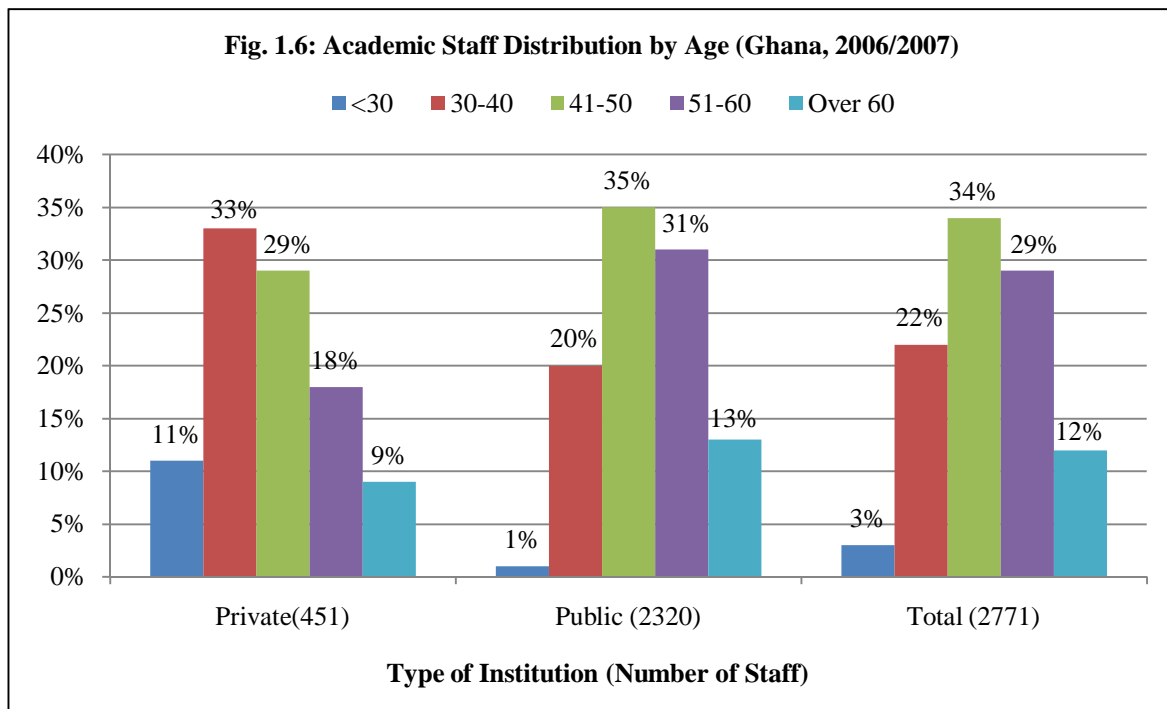
³ The source for Figures 1.1 through 1.7 is the Ghana National Council for Higher Education (2008)

Academic Staff Distribution by Gender
 Only 15% of academic staff overall were female (Fig.1.5), with the figure two percent less in private institutions.



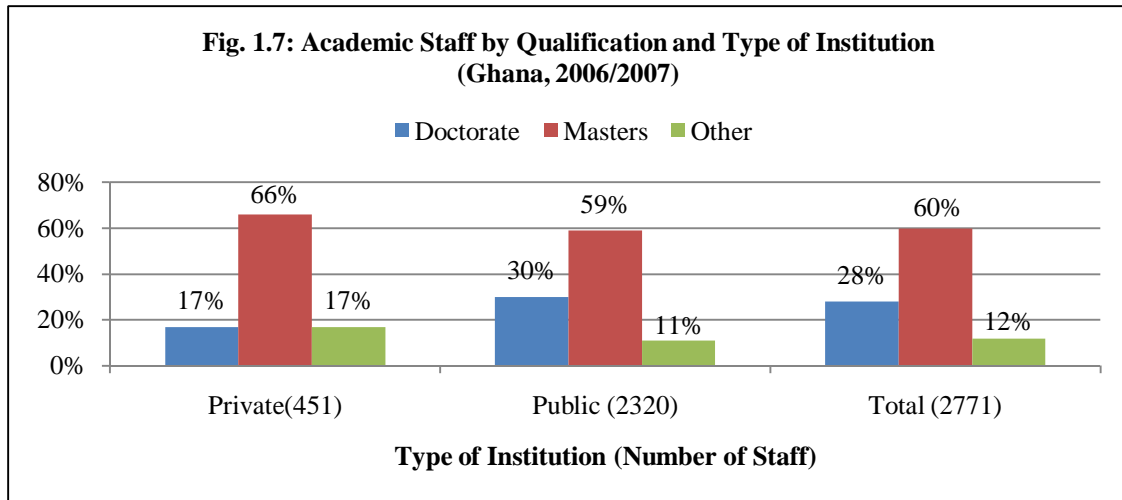
Academic Staff Distribution by Age

A significant majority of staff were over the age of 50, with staff tending to be older at public universities and younger at private institutions. As shown in Fig. 1.6, overall 41% of staff were over 51 years old, while only 25% were under 41 years old. In public universities, however, 44% of staff were above 50 years of age, while only 21% were 40 years old or younger. The pattern was strikingly different at private institutions where the 50+ age cohort accounted for only 27% of the total as compared to 44% who were below 41 years old. With a retirement age of 60, nearly one-third of current staff in public institutions are due to retire during the next decade, posing a challenge to these universities to replenish staff to meet the needs of students. The fact that public and private universities depend on staff past the retirement age for around 10% of their staff complements underlines the need to cultivate a new generation of academics.



Academic Staff Distribution by Qualification

Fig. 1.7 shows that only 28% of academic staff at universities in Ghana had doctoral degrees in 2006/2007, as compared to 60% who held master’s degrees and 12% with qualifications below the master’s level. When the distribution of qualifications is disaggregated by the type of institution, the percentage of doctoral degree holders improves to 30% for public universities and declines to 17% for private universities. The low academic credentials of private institution’s academic staff diminishes the ability of these institutions to offer high quality graduate programmes in fields that are potential sources of the next generation of academics.



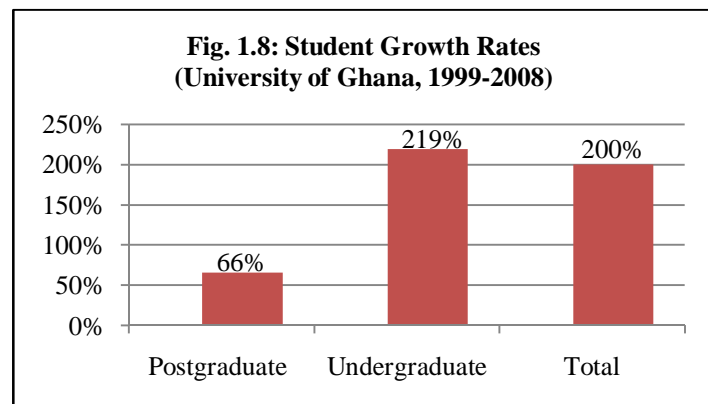
Institutional Profiles

- University of Ghana -

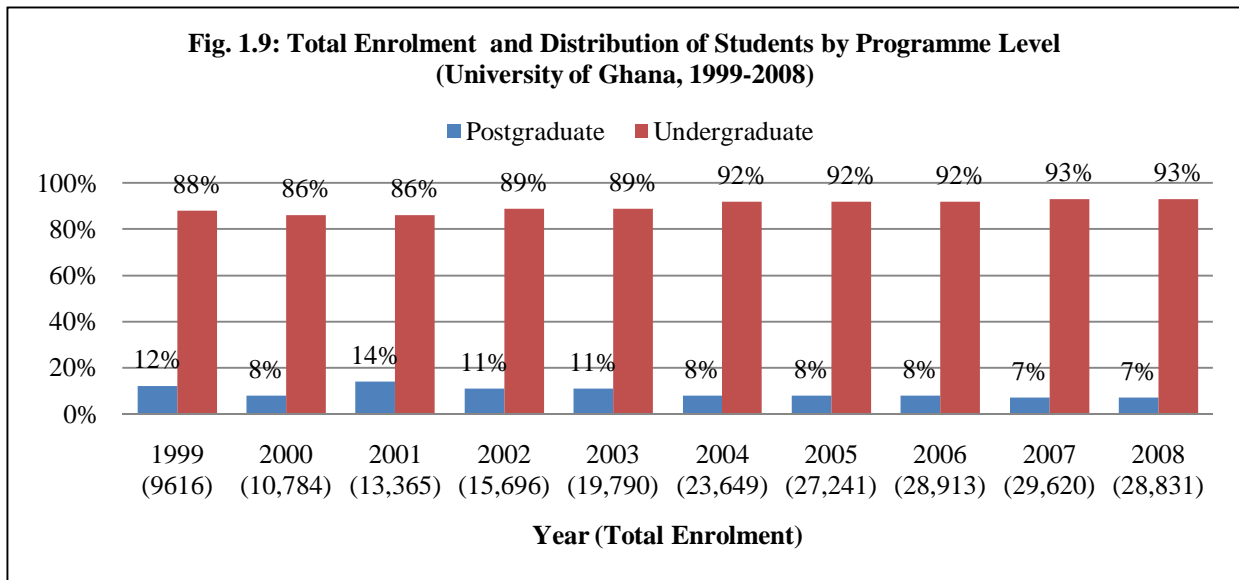
- Students -

Total Student Enrolment by Programme Level and Gender

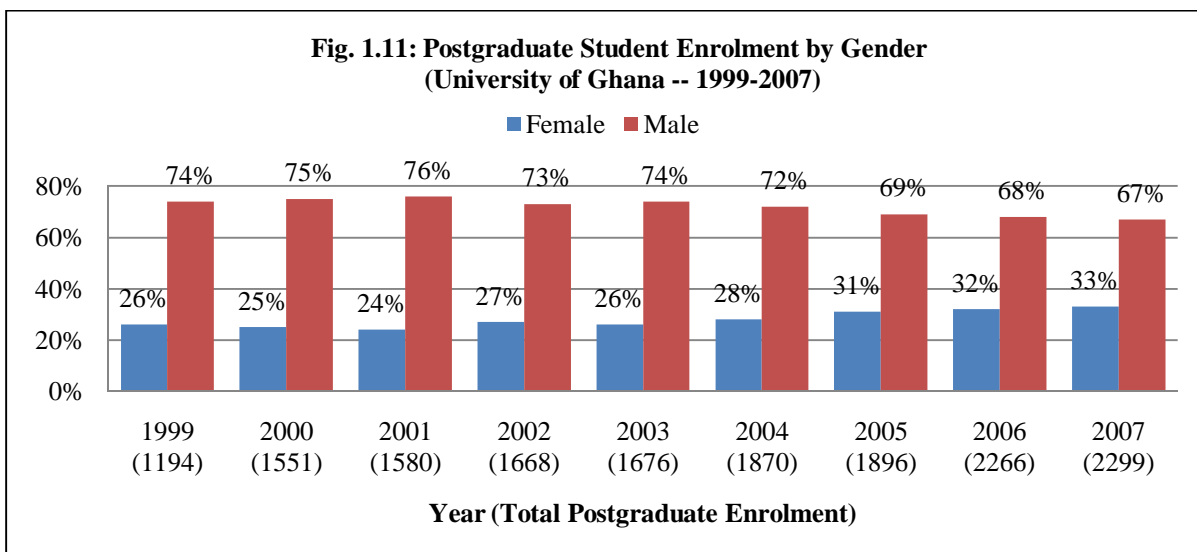
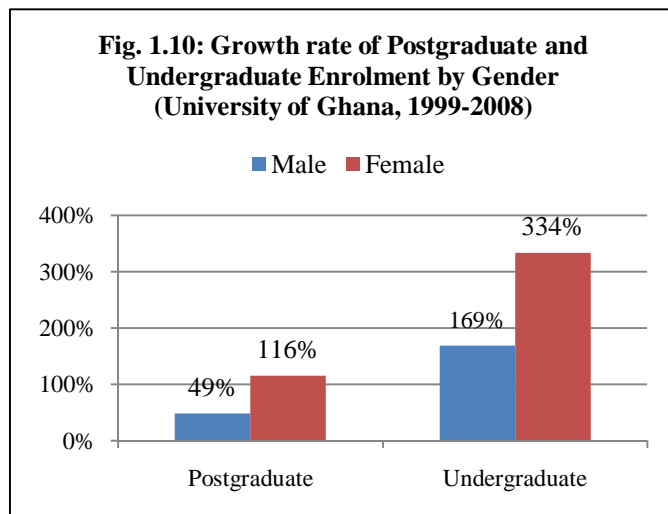
Student enrolments tripled over the decade ending in 2008 (Fig. 1.9). Undergraduate enrolments were significantly higher than postgraduate enrolments, growing more than three times as fast – 219% compared to 66%, as shown in Fig. 1.8.⁴



⁴ The source for Figures 1.8 through 1.19 is the University of Ghana (2008).



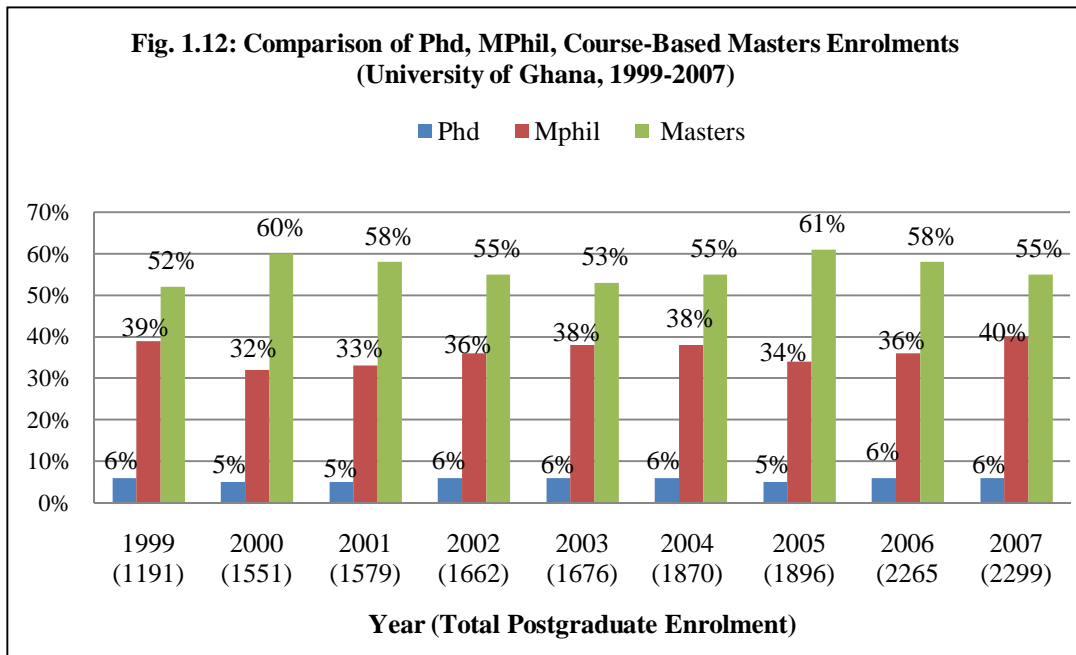
The number of men far exceeded that of women at both the undergraduate and postgraduate levels between 1999 and 2007, although the proportion of undergraduate women students went from 30% to 42% while the proportion of postgraduate women students went from 26% to 33%, thereby improving the potential for more women to join the academy (University of Ghana, 2008 and Fig. 1.11). In absolute terms, the undergraduate and postgraduate female populations increased by about 334% and 116% respectively, during this period (Fig. 1.10).



Postgraduate Enrolments

Faculties of business had the largest enrolments over the decade, amounting close to 40% of total postgraduate enrolments (University of Ghana, 2008). These relatively high enrolments in business programmes, where most students are eyeing professional rather than academic careers, is not positive for the cultivation of the next generation of academics.

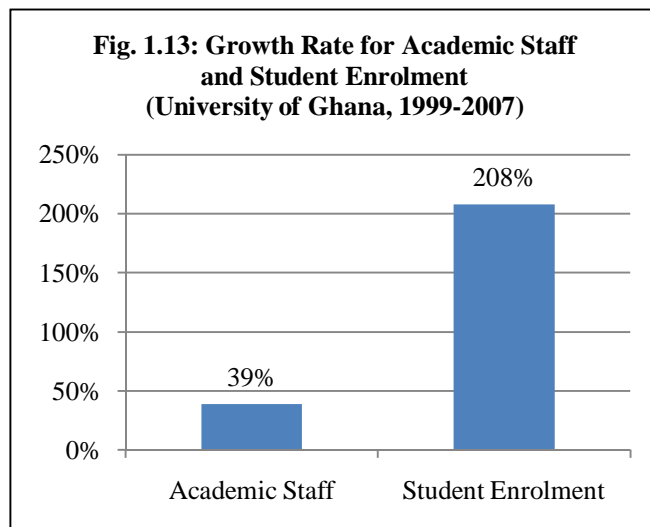
The majority of postgraduate students were enrolled in course-based master’s programmes, followed by those in thesis-based MPhil programmes (Fig.1.12). Given the implication that enrolment in a thesis-based programme is a necessary prerequisite for entry into the academy, this does not bode well for the production of future academics. The proportion of students in course-based master’s programmes increased from 52% in 1999 to 55% in 2007, while those in MPhil and doctoral programmes remained virtually unchanged.



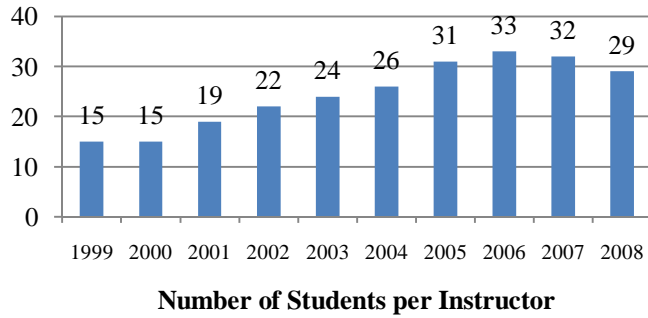
- Academic Staff -

Academic Staff Capacity and Enrolment Pressures

Academic staff numbers grew by 39% between 1999 and 2007, at the same time that student enrolments more than doubled, illustrating that academic staff growth has not come close to keeping pace with the tremendous increase in student enrolment (Fig.1.13).



**Fig. 1.14: Student Staff Ratio
(University of Ghana,1999-2008)**

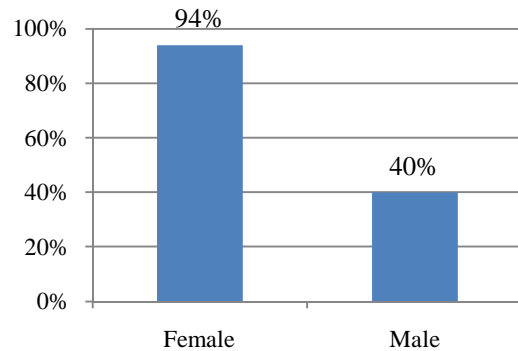


Student-staff ratios rose gradually from 1999 until 2006, before going down slightly for two consecutive years in 2007 and 2008, with the net rise amounting to a near doubling of students per instructor by the end of the period (Fig. 1.14). As noted earlier, these ratios are far above what is considered acceptable by the National Council for Higher Education, thereby imposing a severe burden on academic staff.

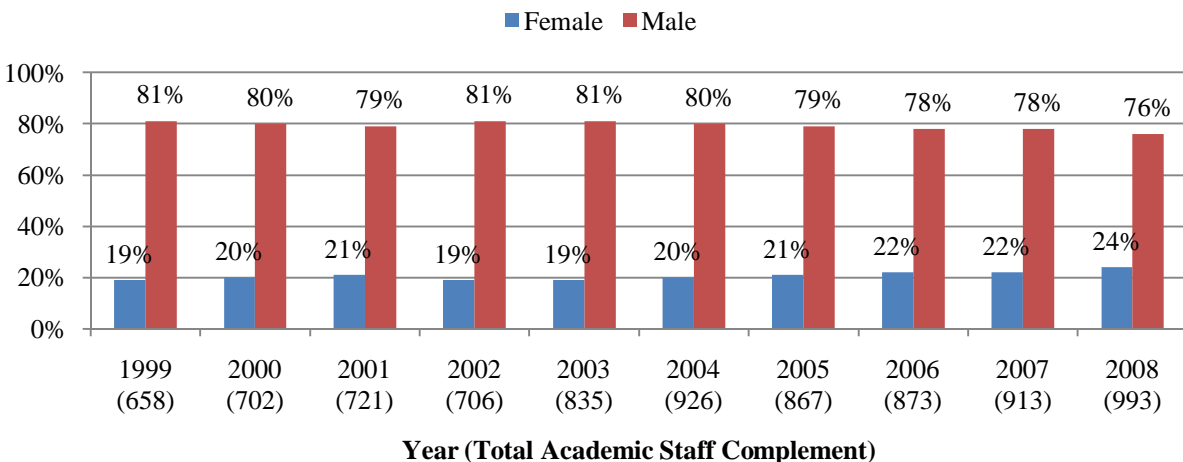
Academic Staff Distribution by Gender

An analysis of gender distribution shows the dominance of male staff. Men constituted 81% of staff in 1999, a figure that decreased to 76% in 2008 (Fig.1.16). The improvements in female numbers were due to the fact that 69% of those hired in this period were women. Over the decade female staff numbers grew by 94%, while male staff numbers increased by 40% (Fig.1.16). Although it is positive that the proportion of female staff improved gradually over the decade (by five percent), current levels still leave a huge gender disparity that needs to be addressed.

**Fig. 1.15: Growth rates for Academic Staff by Gender
(University of Ghana, 1999 and 2008)**



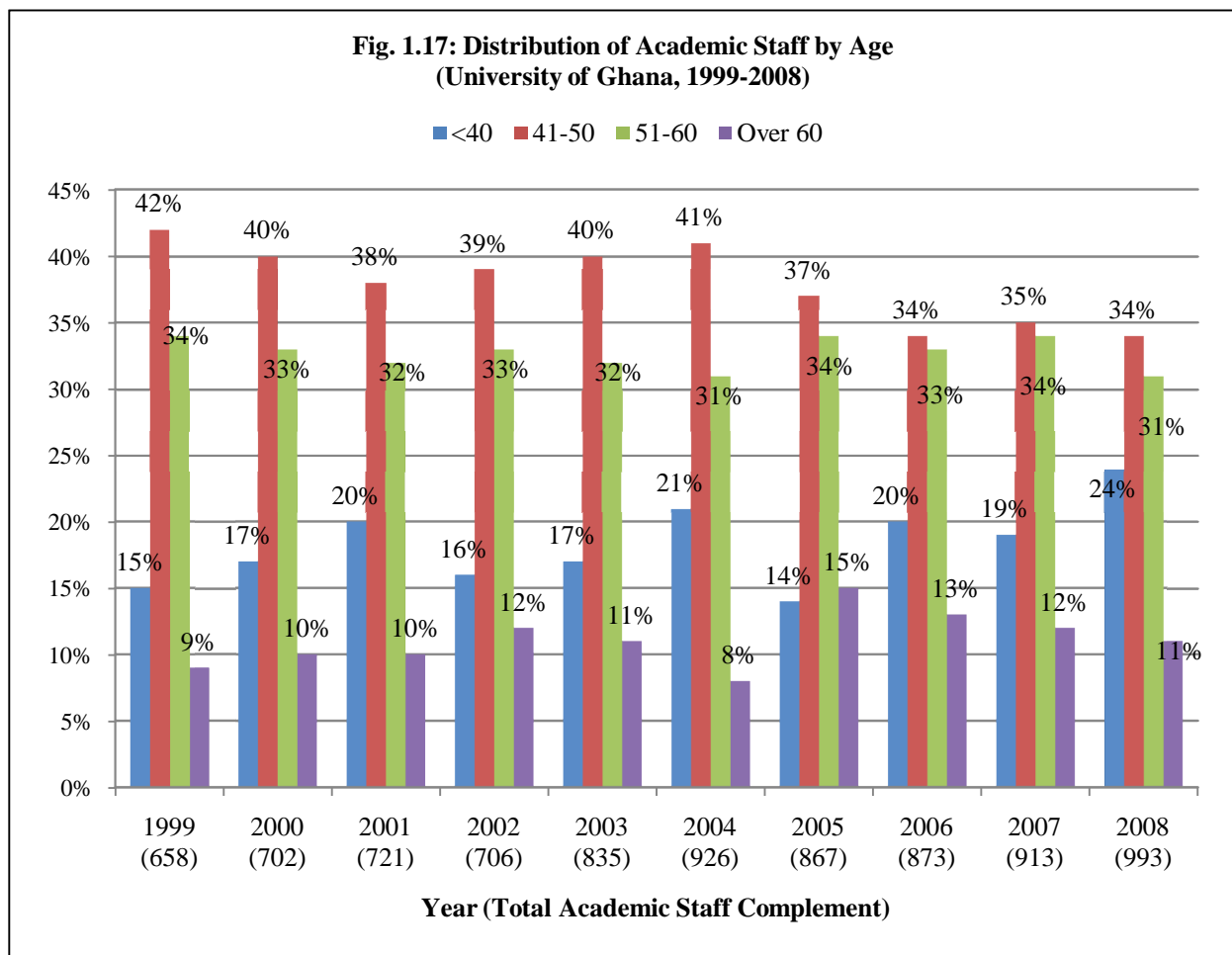
**Fig. 1.16: Distribution of Academic Staff by Gender
(University of Ghana, 1999-2008)**



Academic Staff Distribution by Age

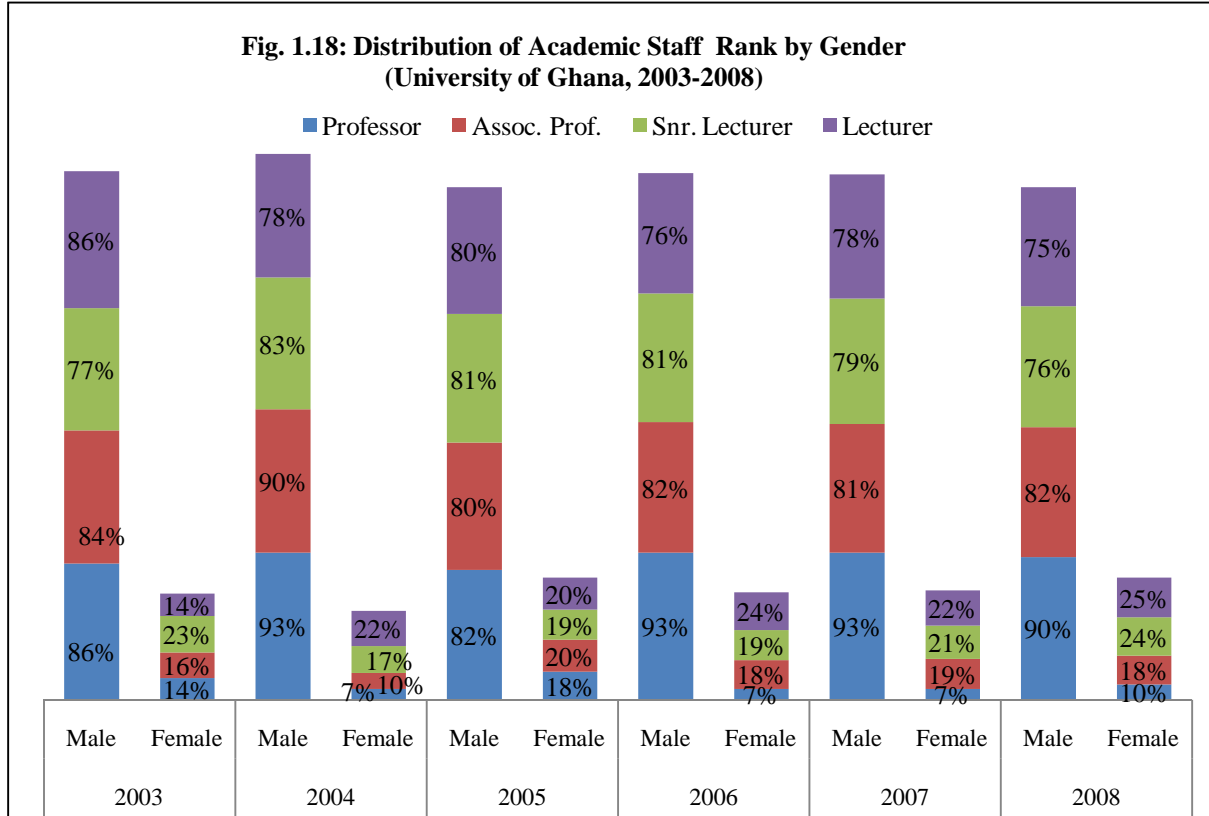
Generally, those in the 41-50 age bracket have made up the largest single group of staff (Fig. 1.17). However, when the group of those from 51-60 years of age are combined with those over 60, they outnumber those in the 41-50 age group. Within the over-50 group, 11% are over 60 years of age. A look at trends over the last ten years shows that while those in the 41-50 year group comprised 42% of staff in 1999, their proportion had dropped to 34% by 2008. The proportion of those in the 51-60 year range decreased marginally from 34% to 31% during this period, while those above 60 years grew from nine to 11 percent.

As illustrated in Fig. 1.17, the proportion of staff below 41 years of age went up from 15% in 1999 to 24% in 2008. This is largely due to the fact that a higher proportion of those hired in the last decade (54%) came from this cohort. Nevertheless, a significant majority of staff will be retiring and need to be replaced in the next decade.



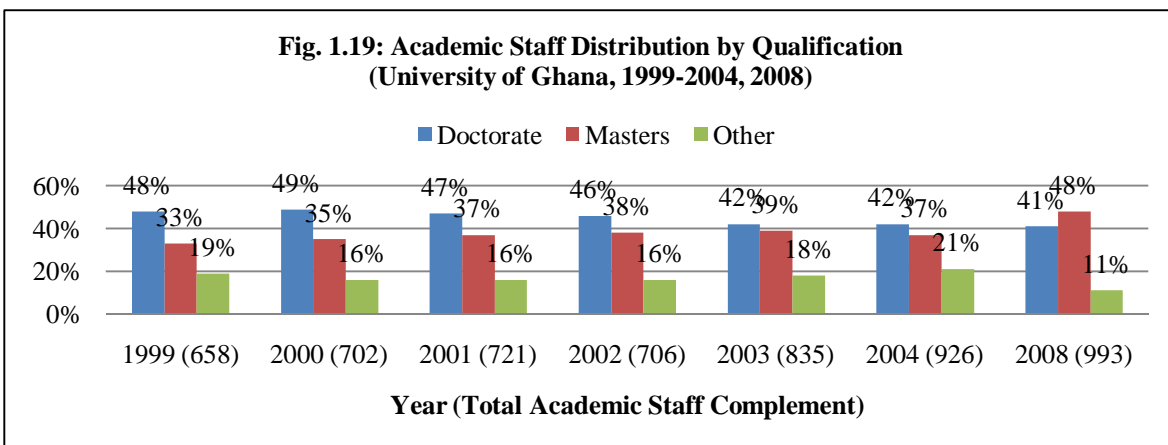
Distribution of Academic Staff Rank by Gender

Women make up the minority of staff at all ranks, with their proportion generally decreasing the higher up the ranks one goes (Fig. 1.18). While their percentage at the lecturer rank has increased significantly from 14% in 1999 to 25% in 2008, changes at the senior lecturer and professorial levels have been marginal. In fact, at the full professor rank their proportion decreased from 14 to 10% over the period.



Distribution of Academic Staff by Qualification

Over the years 1999-2008, the proportion of academic staff with doctoral degrees has declined whereas those with master's degrees have seen their proportion increase. Overall, the proportion of doctorate holders dropped from 48% in 1999 to 41% in 2008, while that of master's degree holders grew from 33% to 48% (Fig. 1.19). Those with qualifications below master's stayed relatively strong for much of the decade, exceeding a fifth of the total staff complement in 2004, before dropping to 11% in 2008.

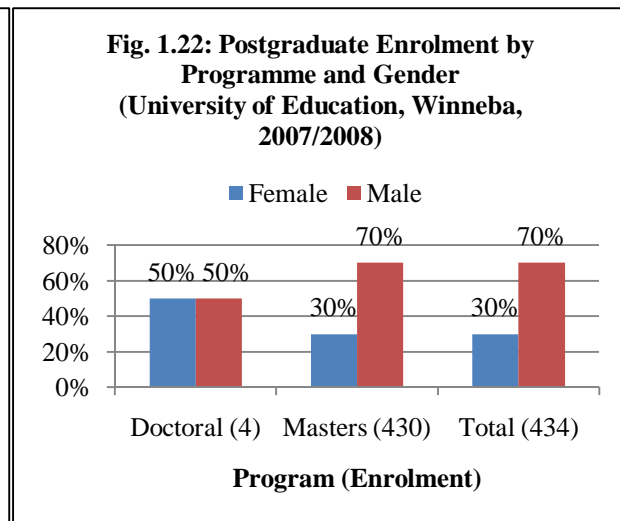
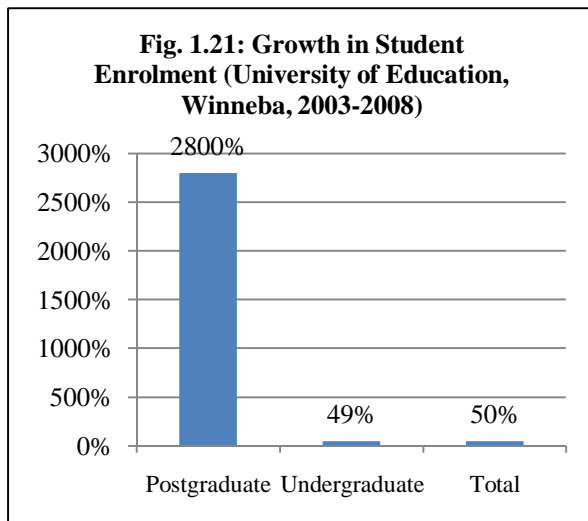
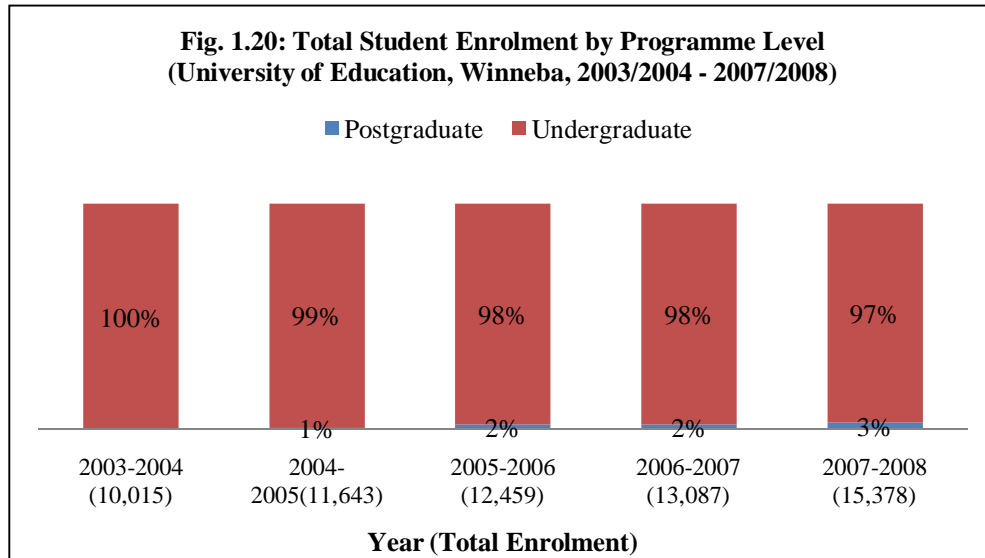


University of Education, Winneba (UEW)

- Students -

Student Enrolment

As Fig. 1.20 shows, UEW is largely an undergraduate institution, with a huge majority of students enrolled in undergraduate programmes. Enrolment in postgraduate programmes increased massively from 2003 to 2008, going from 15 students in 2003 to 434 in 2008. Altogether, postgraduate programmes increased by 2800% while undergraduate enrolments went up by 49% over this period (Fig 1.21). In absolute terms postgraduate student numbers continue to trail far behind undergraduate enrolment. Total student enrolment at UEW increased by about 50% between 2003 and 2008 (Fig. 1.21).⁵



Postgraduate Student Enrolment by Programme and Gender

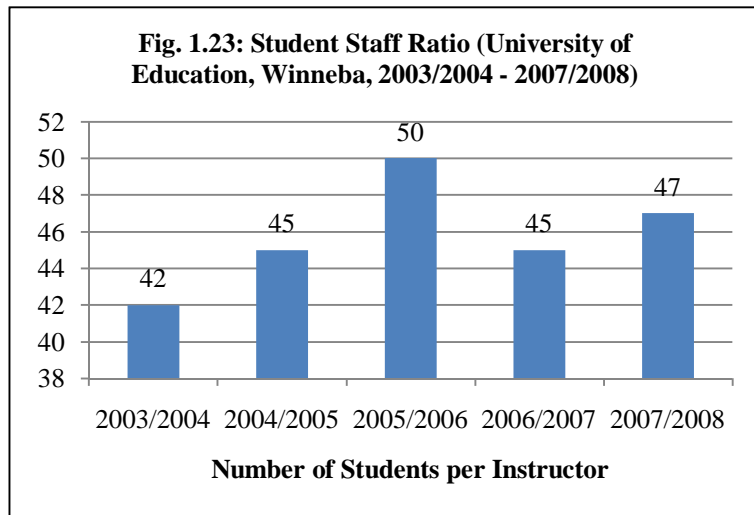
In 2007/2008, 70% of UEW postgraduate students were male. Four (equally divided between men and women) out of the 430 postgraduate students were enrolled in the sole doctoral programme, in the Faculty of Science Education (Fig. 1.22).

⁵ The source for Figures 1.20 through 1.27 is the University of Education, Winneba (2008).

- Academic Staff -

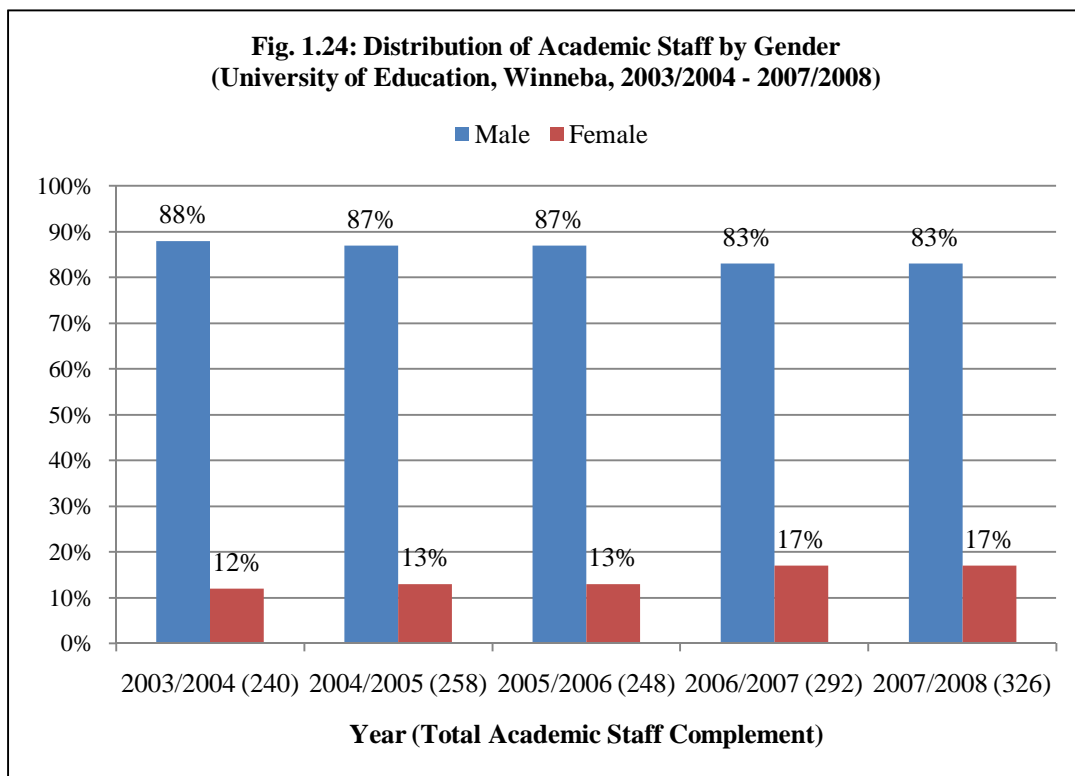
Academic Staff Capacity and Enrolment Pressures

Academic staff at Winneba experienced a 36% gain from 2003 to 2008 in comparison to the 50% growth in student numbers, resulting in already high student-staff ratios growing even higher to 47:1 at the end of the period (UEW, 2008 and Fig. 1.23). When the rate of growth of the professoriate is incommensurate with the expanding numbers of students, the institution loses its capacity to support its academic mandate adequately and provide the requisite quality of instruction and research.



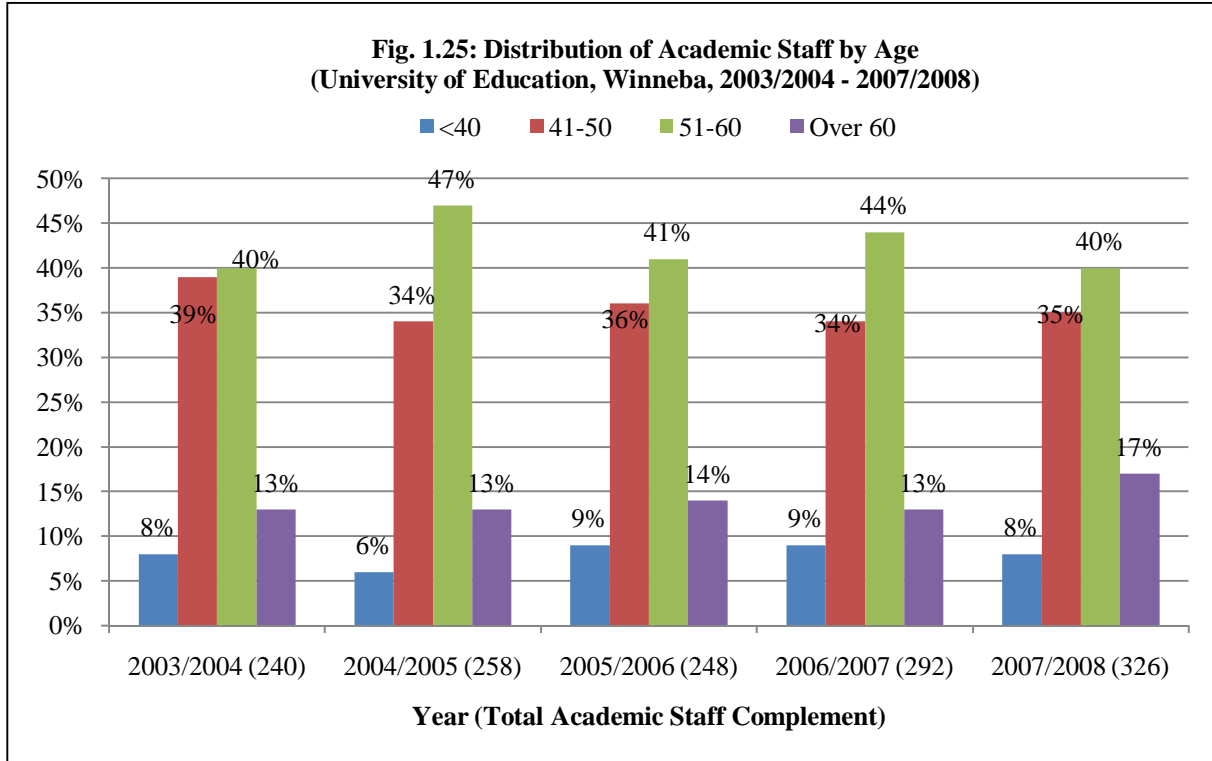
Distribution of Academic Staff by Gender

The overwhelming majority of staff at UEW is male, consistently making up over 80% of the total staff complement between 2003 and 2008 (Fig. 1.24). The proportion of female staff increased from 12% to 17% between 2003 and 2008, a growth in absolute numbers of 86%. While this is a positive sign, more needs to be done to increase the numbers of women academic staff.



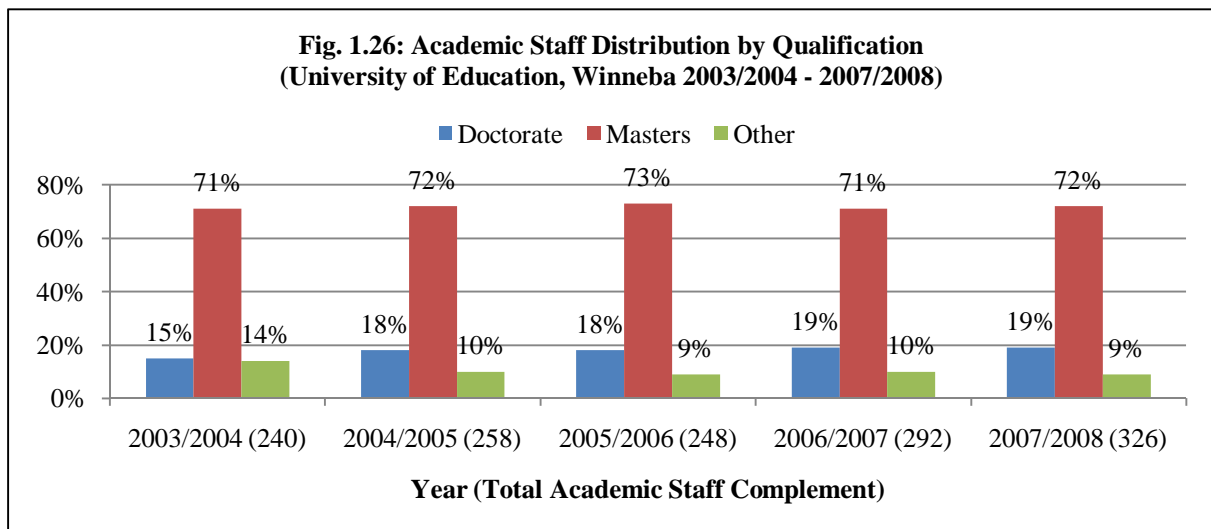
Distribution of Academic Staff by Age

From 2003 to 2008, over 50% of staff were over 50 years old (Fig. 1.25). By comparison, fewer than 10% of staff were below 40 years of age, a figure lower than those in the over-60 category, meaning that there were more ‘retirees’ on staff than those less than 40 years old.

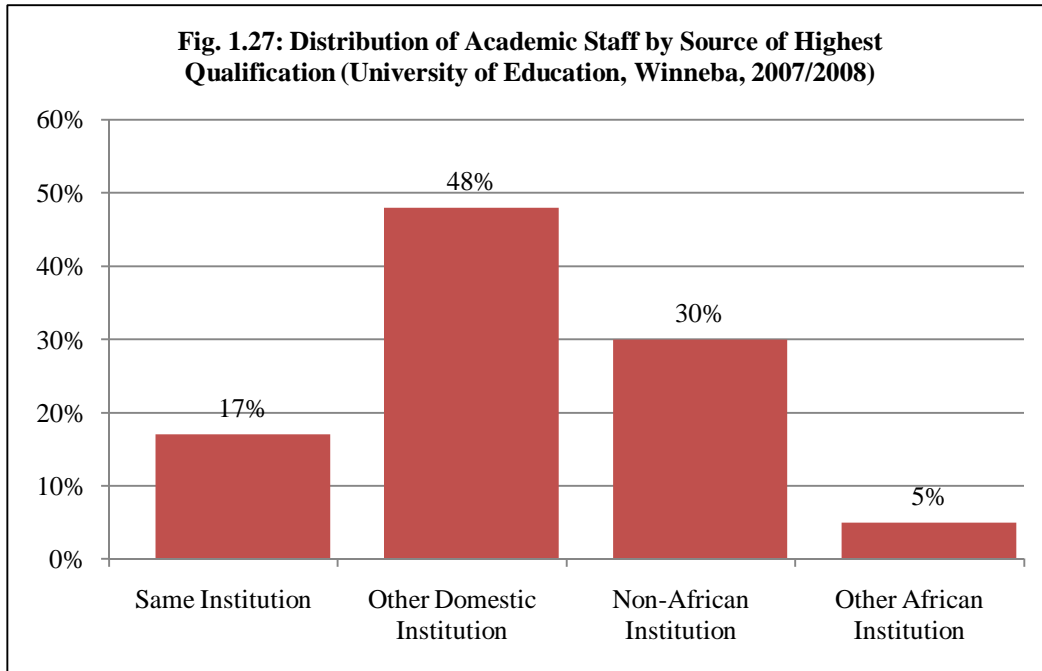


Distribution of Academic Staff by Qualification

Over 70% of staff at UEW between 2003 and 2008 had only master’s degrees, while less than a fifth had doctorate degrees (Fig. 1.26). The relatively small number of doctoral degree holders on its academic staff severely constrains the ability of UEW to offer doctoral programmes. It should be noted that around a tenth of faculty members held only undergraduate degrees.



The majority of Winneba's academic staff received their highest degrees from other institutions in Ghana. Of those that studied in other countries, only five percent of all staff received their highest degrees from other African institutions, as compared to 30% from non-African institutions (Fig. 1.27). This illustrates that cross-training of academics among African institutions is quite low relative to training undertaken at institutions outside Africa.



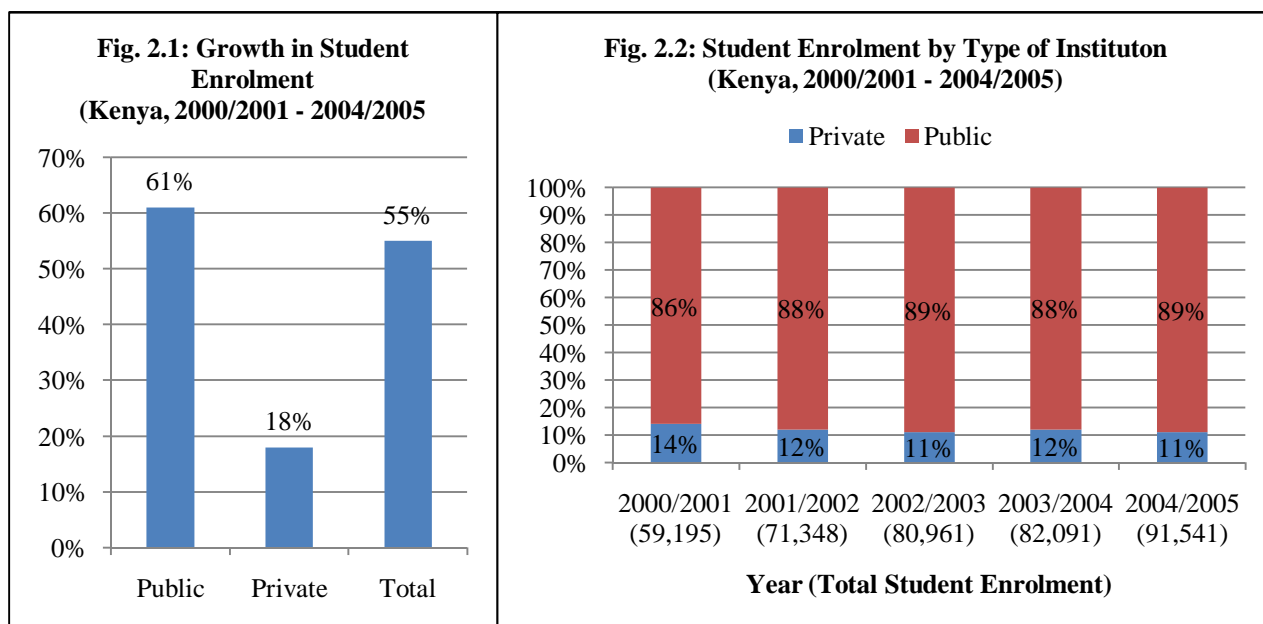
2. KENYA

National Profile

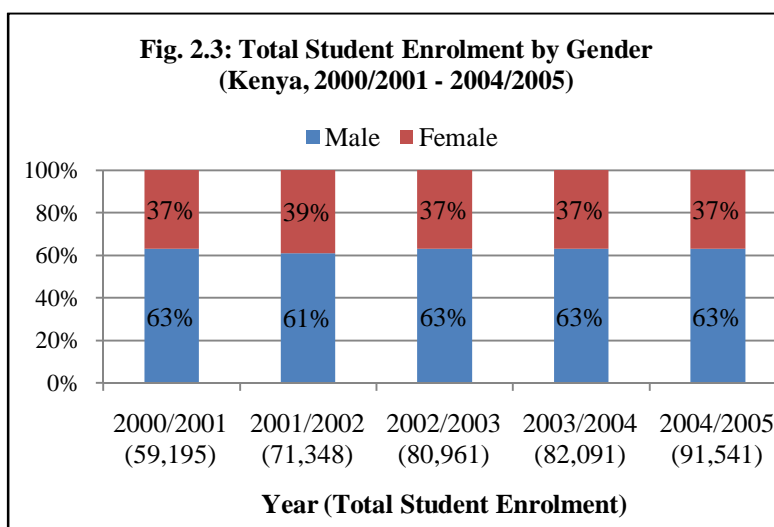
- Students -

Total Student Enrolment and Distribution by Gender

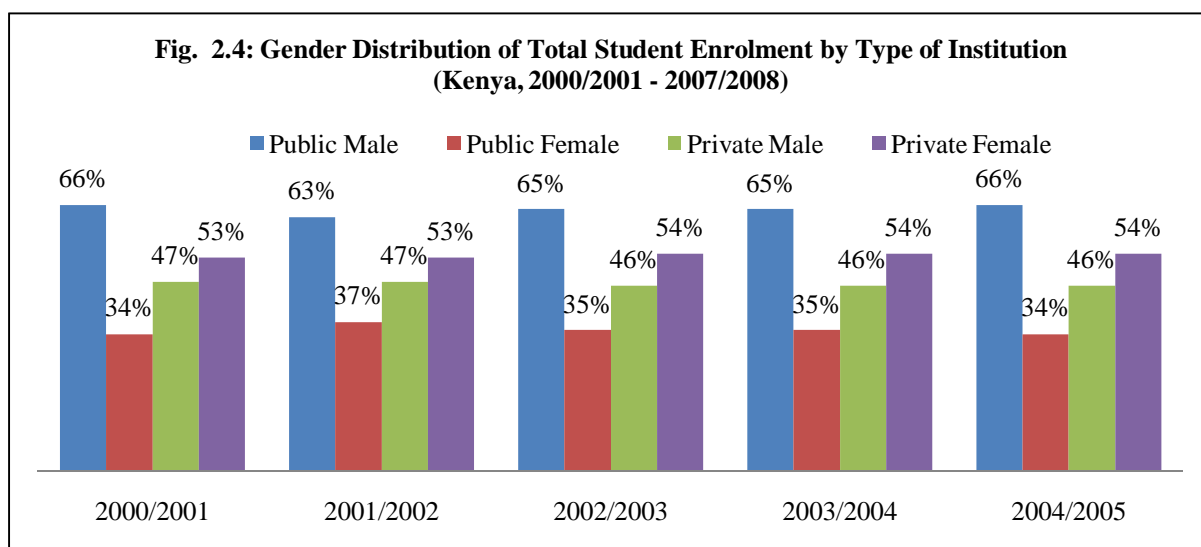
Total tertiary-level student enrolment in Kenya increased by 55% between 2001 and 2005 (Fig. 2.1). Enrolments in public universities over the same period went up by 61%, while private universities reflected a growth rate of 18%. The proportion of total enrolments in private universities, however, went down from 14% of the total in 2000/2001 to 11% in 2004/2005 (Fig. 2.2).⁶



Male students constitute the majority of the total student population, with the proportion of female students at the national level remaining unchanged at 37% for most of the period (Fig. 2.3). While the proportion of women students in public institutions stayed at about one-third, at private universities women's enrolments consistently outstripped those of men (Fig. 2.4).



⁶ The sources for Figures 2.1 through 2.4 are Kenya Commission for Higher Education (2008) and Kenya National Bureau of Statistics (2004, 2006, 2007).



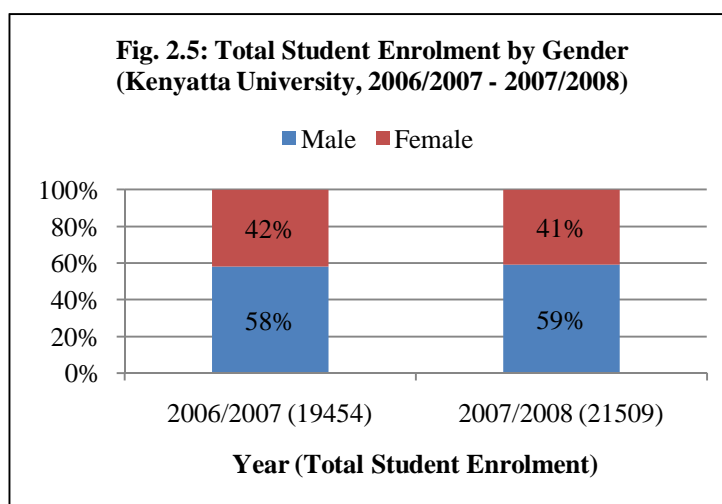
Institutional Profile

- Kenyatta University -

- Students -

Total Student Enrolment

In the academic year beginning in 2006, Kenyatta University had a total enrolment of nearly 20,000 students, increasing by 11% in the next year (Fig. 2.5). Men comprised five percent of students in 2006-2007, a figure that increased by one percent the next year.⁷

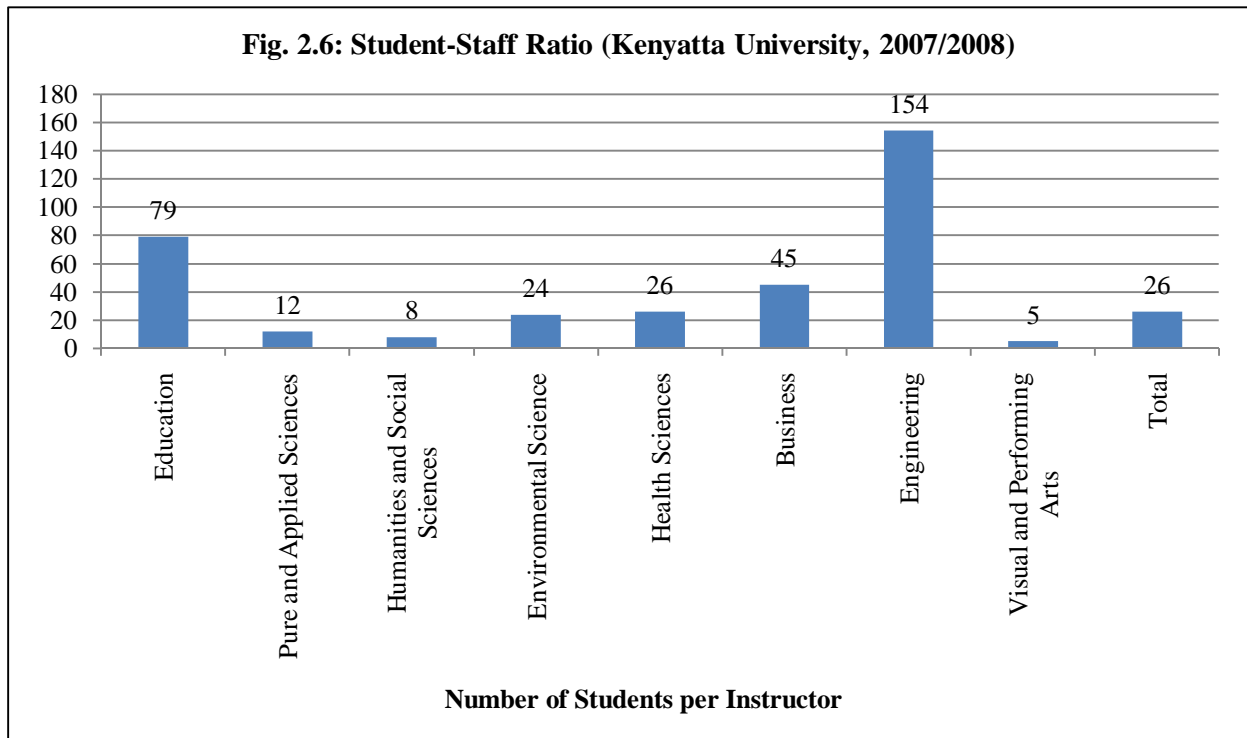


- Academic Staff -

Academic Staff Capacity and Enrolment Pressures

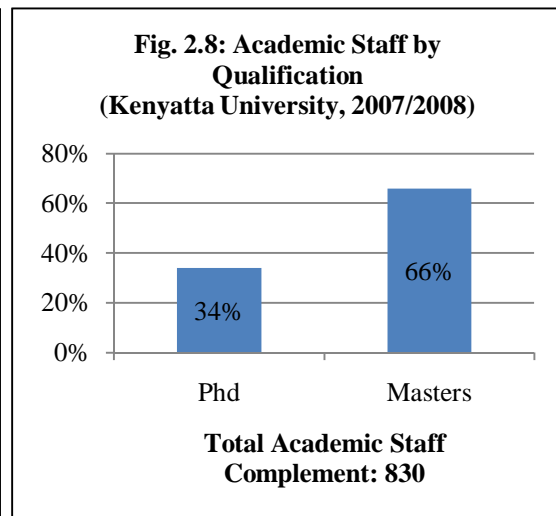
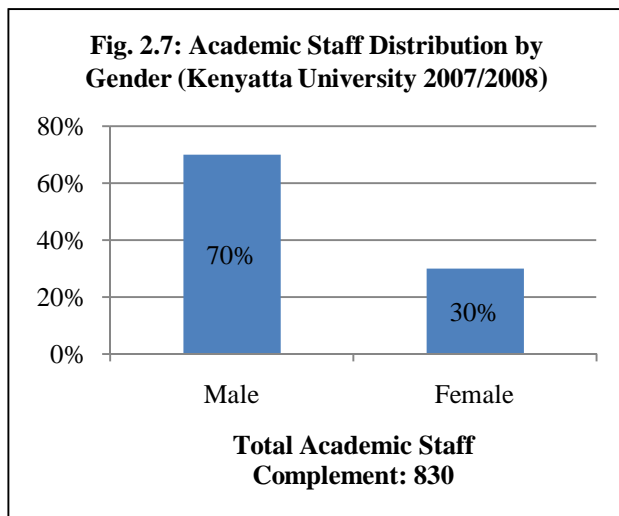
In 2007/2008, the student-staff ratio at Kenyatta University was 26:1, with wide variations across schools. Visual & Performing Arts and Humanities & Social Sciences had ratios as low as 5:1 and 8:1, respectively, while the figure for Education was 79:1 and the ratio for the School of Engineering an astounding 154:1! (Fig.2.6). These figures are evidence of significant capacity problems in some faculties that urgently need to be addressed.

⁷ The source for Figures 2.5 through 2.11 is Kenyatta University (n.d., 2008).



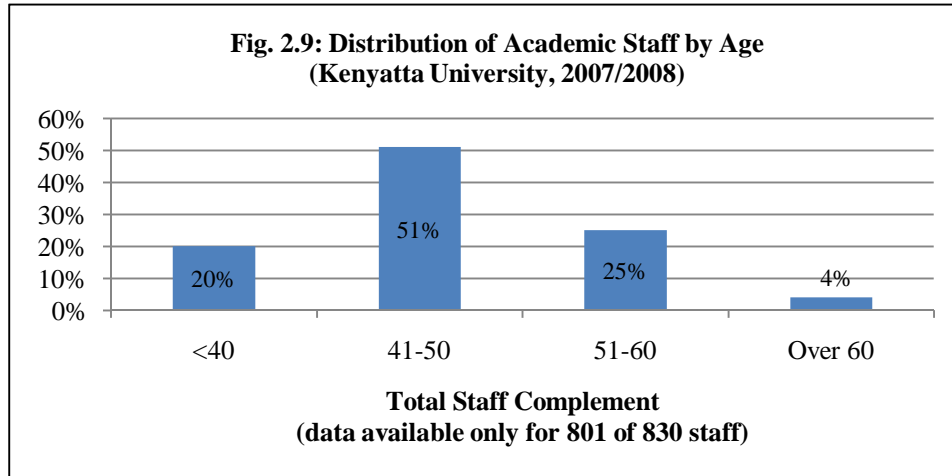
Distribution of Academic Staff by Gender and Qualification

Figure 2.7 shows that males dominated the overall staff complement, comprising 70% of the total. Only about a third of staff had doctoral degrees while two-thirds had master’s degrees (Fig. 2.8). In the Schools of Business and Economics, an overwhelming 89% and 73% of staff respectively, had only master’s degrees.



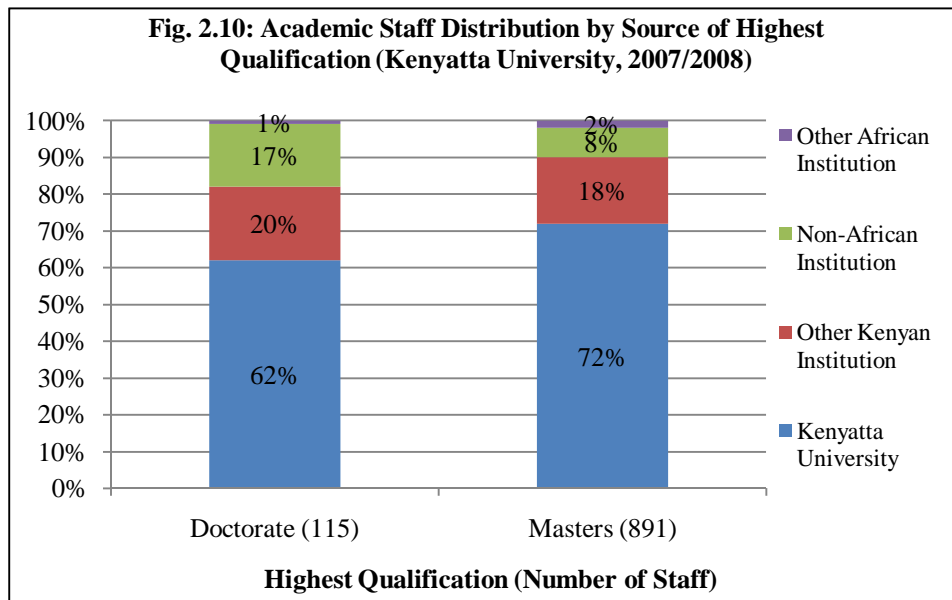
Distribution of Academic Staff by Age and Qualification

The majority (51%) of academic staff was between 41 and 50 years of age. 20% of staff were under 41 years old and 25% were between 51-60 years of age, while four percent were over 60 years old (Fig. 2.9). This age distribution shows that Kenyatta University has a sizeable proportion of staff that could fill positions to be vacated by colleagues due to retire in the next decade.



A significant majority (62%) of doctoral degree holders on Kenyatta’s academic staff obtained their qualification at that institution. Overall, 82% of staff obtained their doctoral degrees from domestic institutions, compared to about 18% who got theirs in other countries (Fig. 2.10). Only about one percent of staff obtained their doctoral degrees from other African institutions, following the tendency observed in Ghana.

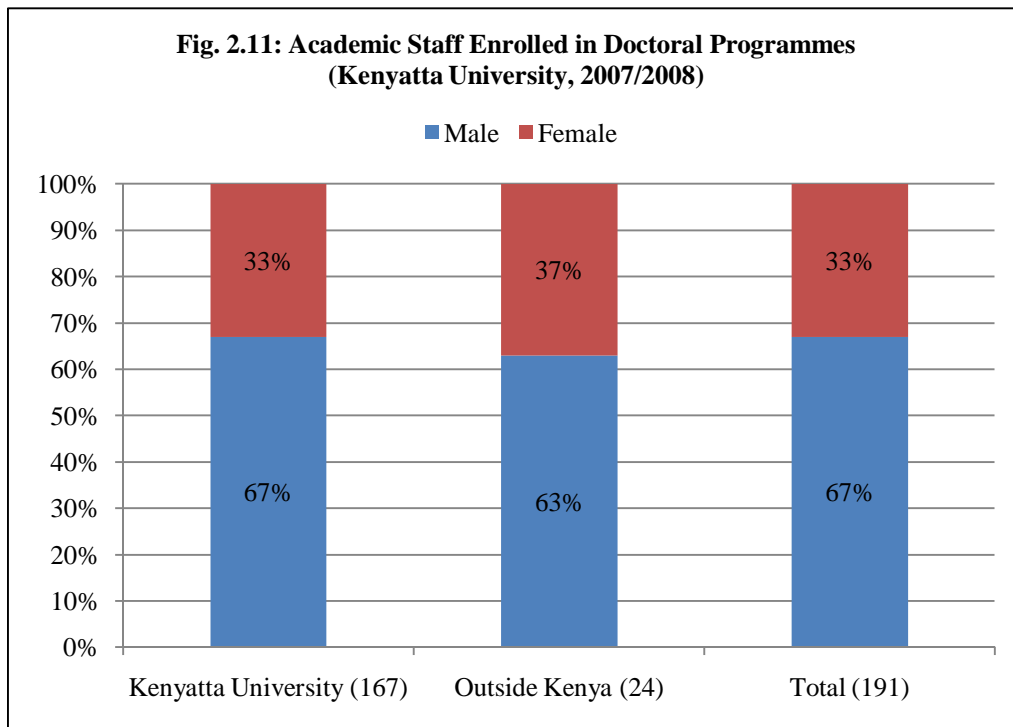
The institution is a major contributor to the production of its own next generation of academic staff: nearly three-quarters of staff with master’s degrees obtained them from Kenyatta University. Of the total with master’s degrees, about 18% received them from other Kenyan institutions, while about 10% earned them at foreign institutions, eight percent of which were outside Africa. The demonstrated importance of the home institution in training the next generation of academics in Kenya underlines the imperative of enhancing the ability of domestic institutions to produce high quality staff.



Academic Staff Development

Kenyatta University has a staff development programme that has allowed 20% of its total academic staff, two-thirds of whom are male, to enrol in doctoral programmes at the institution. The schools with the highest percentages of enrollees in the programme are the School of Pure & Applied Science (22%) and the School of Humanities & Social Sciences (15%).

In addition to those enrolled at the home institution in 2007/2008, 24 other staff were enrolled in doctoral programmes at institutions outside the country. 63% percent of this group were men and, again, the majority of them were from the School of Pure and Applied Science (Fig 2.11).



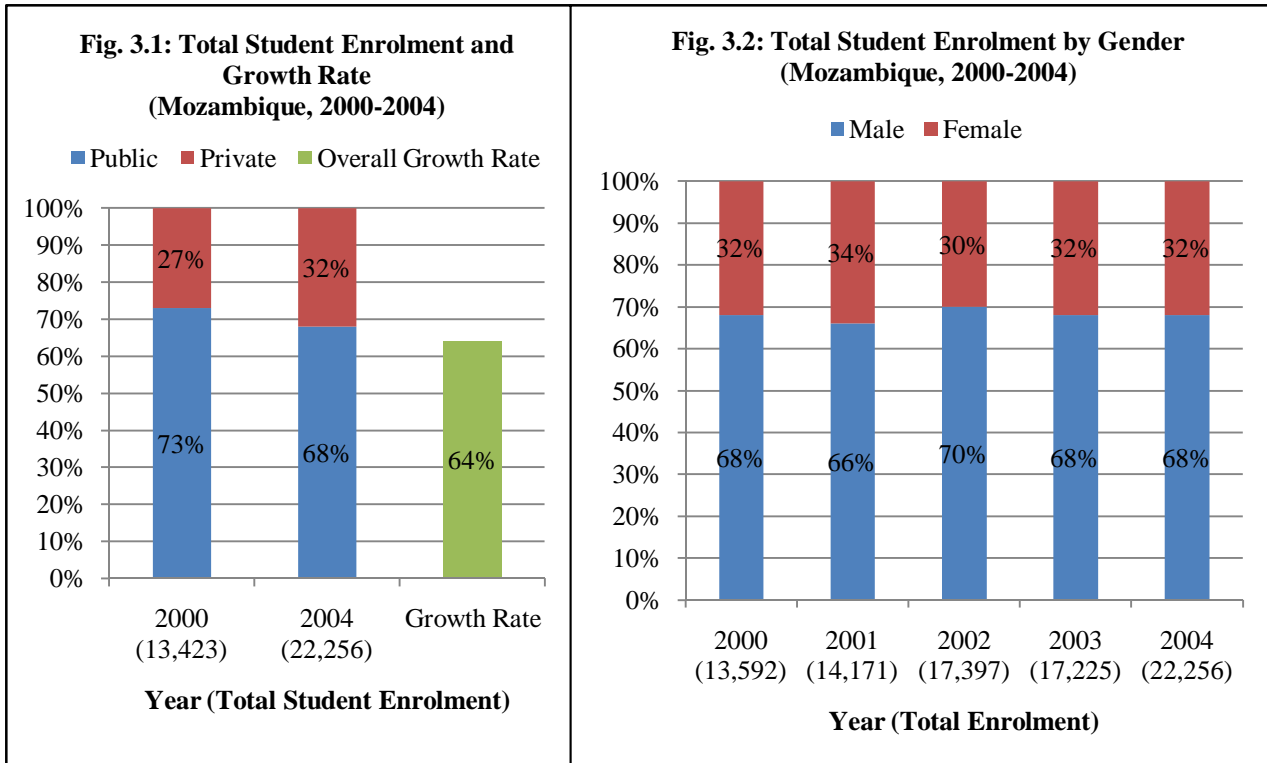
3. MOZAMBIQUE

National Profile

- Students -

Total Student Enrolment and Distribution by Gender and Type of Institution

While there were more enrolments in public universities than at private universities in both 2000 and 2004, the proportion of students in the former declined by five percent over the period (Fig. 3.1). Male students outnumbered their female counterparts every year over this period, with the proportion of women staying at the same level in 2004 as it was in 2000 (32%, Fig. 3.2).⁸

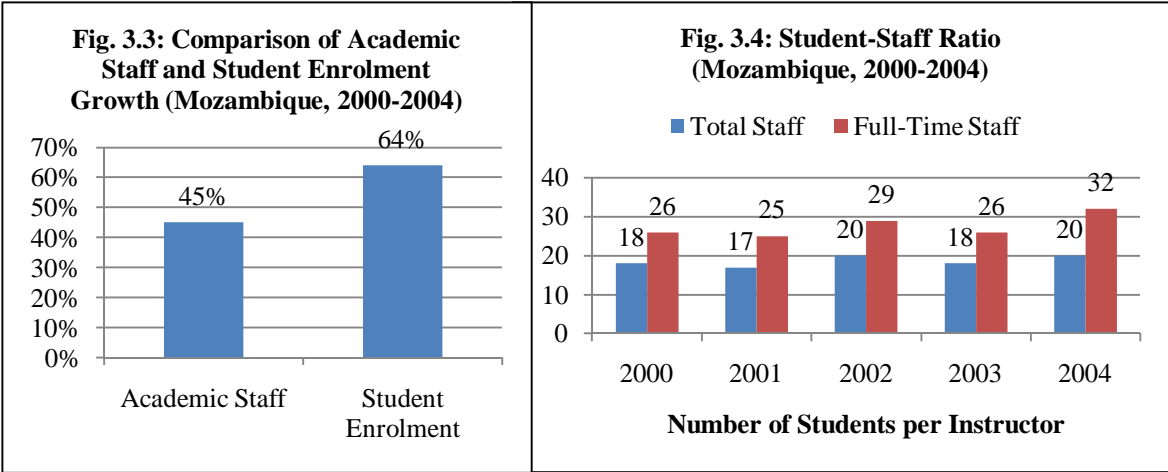


- Academic Staff -

Academic Staff Capacity and Enrolment Pressures

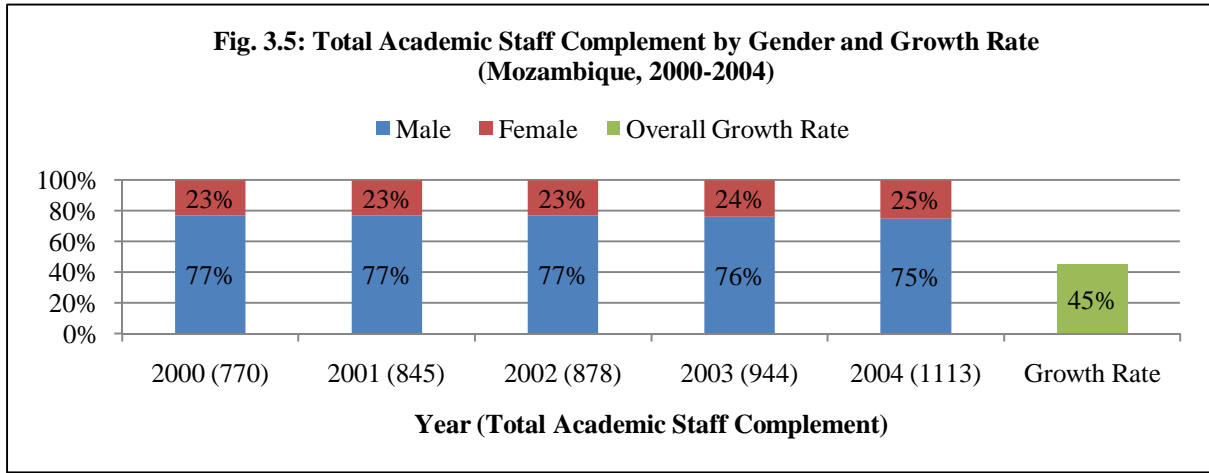
The 45% growth in academic staff between 2000 and 2004 did not keep pace with the 64% growth in student numbers during this period, leading to a student-staff ratio rising from 18:1 in 2000 to 20:1 in 2004 (Figs. 3.3 and 3.4). The figures are even less positive when one looks at ratios of students to full-time staff, which ranged from 26:1 to 32:1 over the same period, reflecting increasing dependence on part-time staff to keep ratios at relatively lower levels (Fig. 3.4). The proportion of part-time staff increased from 31% to 37% and grew at a far greater rate than full-time staff over the same period (Costa and de Nooijer, 2006). Increased dependence on part-time staff is a clear indication that institutions lack the requisite complement of dedicated staff to fulfil their academic mandates.

⁸ The source for Figures 3.1 through 3.5 is Costa and de Nooijer (2006).

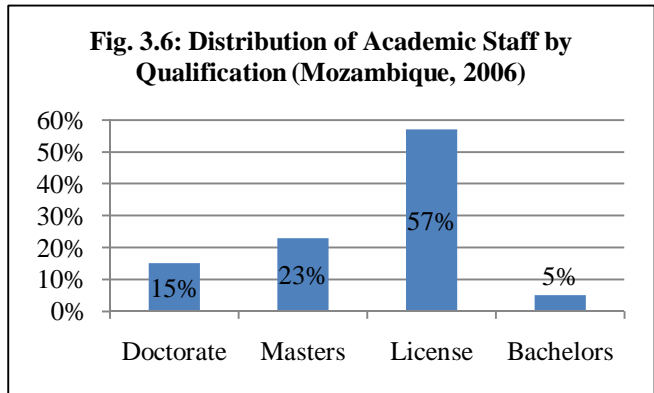


Distribution of Academic Staff by Gender and Qualification

The proportion of male staff remained consistently very high throughout the period 2000 to 2004 – over 75% – compared with their female counterparts (Fig. 3.5). The proportion of women staff increased only marginally, climbing from 23% in 2000 to 25% in 2004. Meanwhile, the percentage of full-time women staff members increased from 23% to 26% while that of their part-time female colleagues dropped from 24% to 22% (Costa and de Noojier, 2006).



The qualifications of academic staff remained at relatively low levels. Of the nearly 1,400 staff members at post in 2006, less than half (38%) had doctoral and master’s degrees while the majority (62%) held only a license or a bachelor’s degree (Fig. 3.6).⁹ These figures signal a challenge for these institutions to produce high calibre, globally competitive graduates and future academics.



⁹ The source for Figure 3.6 is Matos (2008).

Institutional Profile

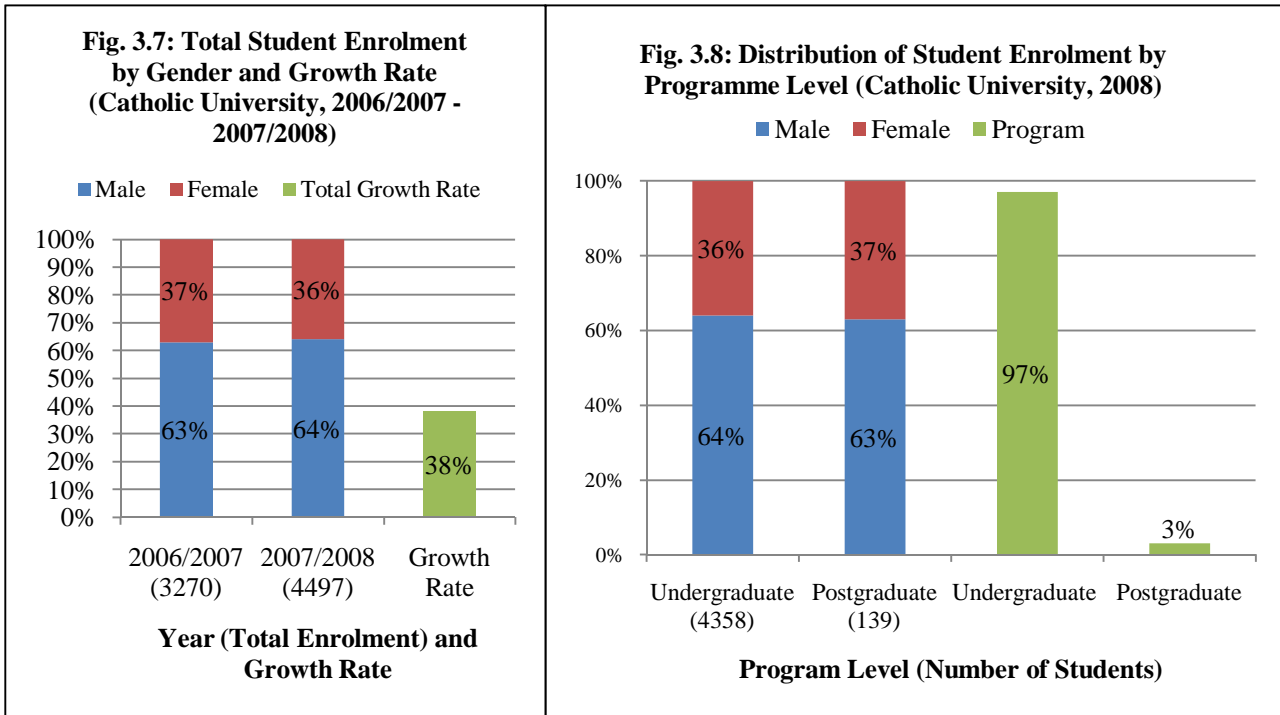
- Catholic University of Mozambique (CUM) -

- Students -

Total Student Enrolment by Gender and Programme Level

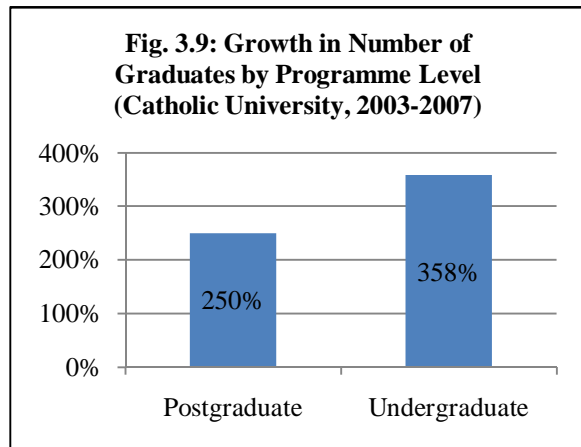
In 2006/2007, the university had 3,270 students enrolled across its various campuses. Of these, 63% were male. By 2007/2008, the total student population increased by 38%, with the proportion of female students dropping marginally from 37% to 36% (Fig. 3.7).¹⁰

In 2008, the overwhelming majority of students (97%) were undergraduates. Female students made up 36% and 37% of the undergraduate and postgraduate cohorts, respectively (Fig. 3.8).

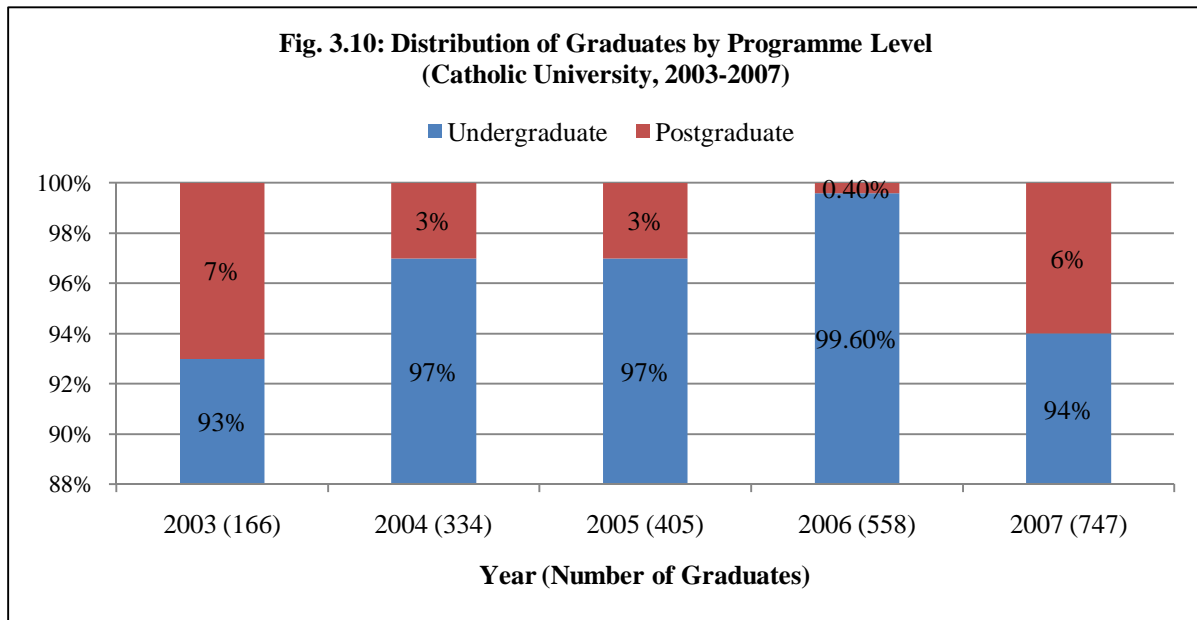


Student Graduation by Programme Level

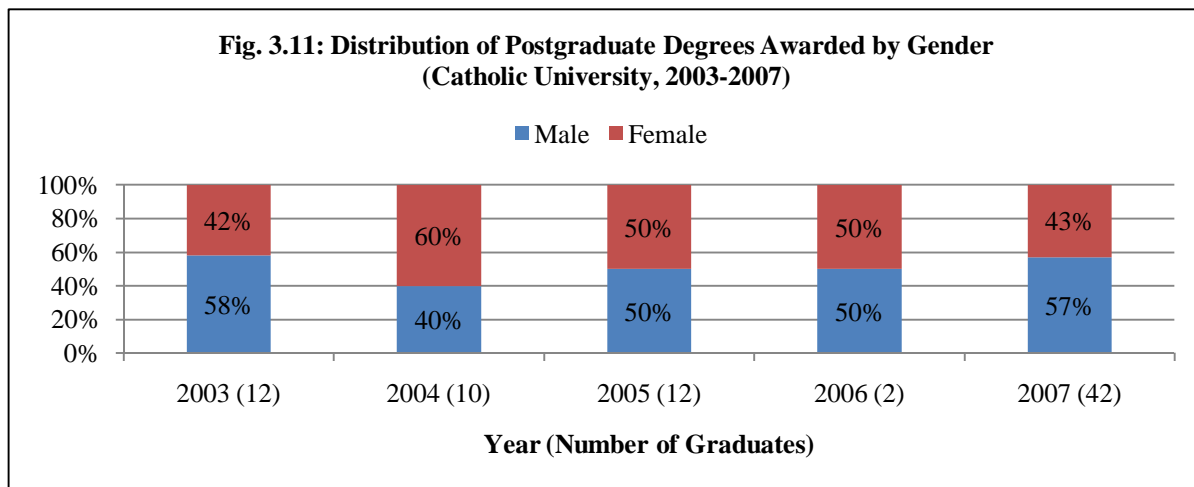
As would be expected, the number of undergraduate degrees awarded far exceeded postgraduate degrees between 2003 and 2007 (Fig. 3.10), although both grew at large rates: undergraduate degrees went up by 358% while postgraduate degrees increased by 250% (Fig. 3.9).



¹⁰ The source for Figures 3.7 through 3.11 is CUM Office of the Vice-Rector for Academic Affairs and Development (2008).



Prior to 2007, only the MBA programme graduated students at the postgraduate level; other master's programmes produced graduates from 2007 on. In three of the five years between 2003 and 2007, women made up half or more of those awarded postgraduate degrees, underlining the phenomenon of the marked presence of women students in private universities (Fig. 3.11).

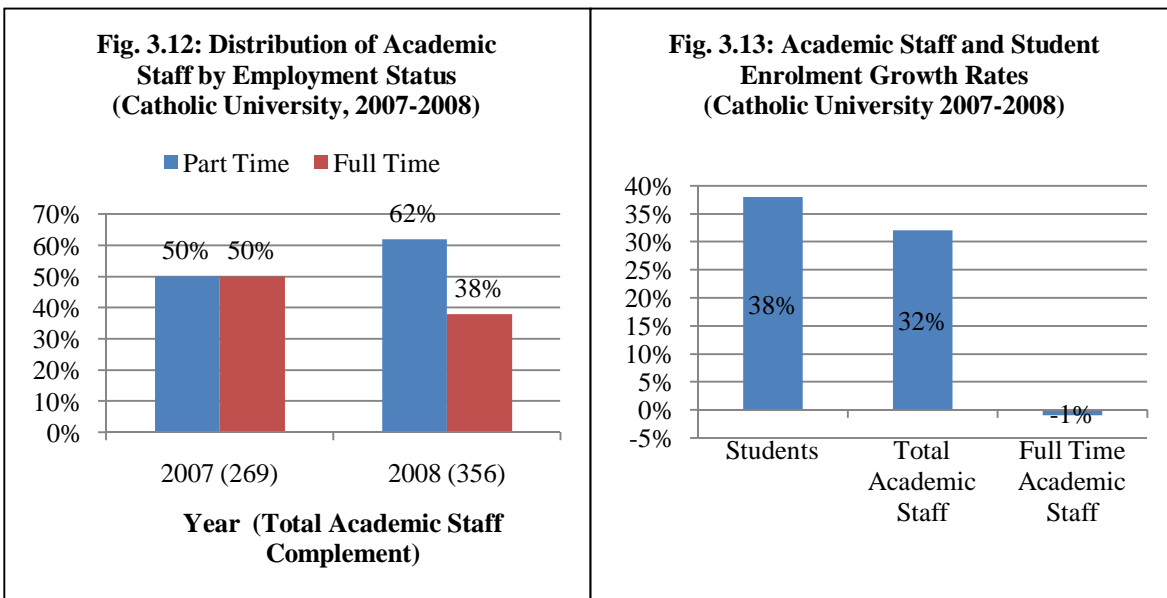


- Academic Staff -

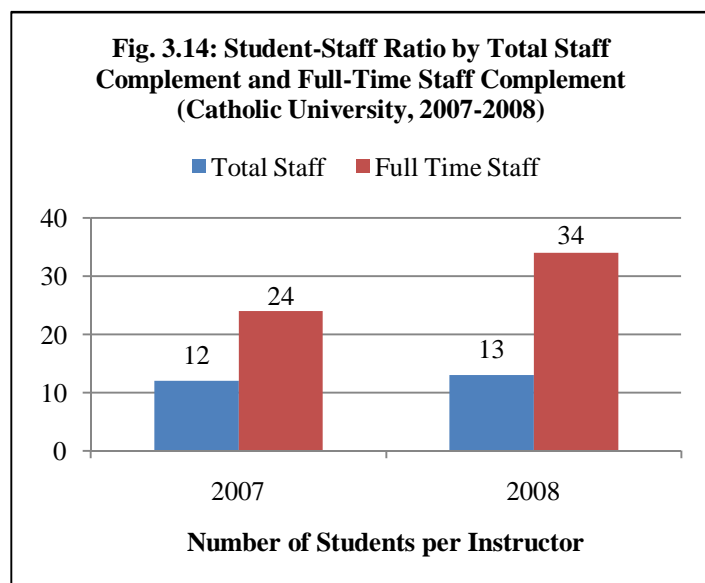
Academic Staff Capacity and Enrolment Pressures

The university showed an increasingly heavy reliance on part-time teaching staff from 2007 to 2008. In 2007, the university had 269 academic staff, almost equally divided between part-time and full-time employees; by 2008 the part-time complement had increased to 62% (Fig. 3.12). The large number of part-time instructors raises questions about the stability of the professoriate and sustainability of programmes. Even despite the use of a large number of part-time instructors, the growth in total academic

staff numbers at CUM (32%) did not keep pace with the growth in student enrolment (38%). If only full-time staff are considered, the staff growth rate drops into negative territory (Fig. 3.13).¹¹



The university’s rapidly growing distance education programmes, whose numbers more than doubled between 2007 and 2008, were heavily staffed by part-timers. In 2007, 46% of part-time staff were engaged in distance education, providing 87% of the programmes’ instructional needs. In 2008, part-time staff provided nearly all (97%) of the instructional needs in distance education.



Student-staff ratios stood at a highly respectable 12:1 and 13:1 in 2007 and 2008 respectively, taking account of both full- and part-time staff. However, when only full-time academic staff are considered, the ratios increase to 24:1 in 2007 and 34:1 in 2008 (Fig. 3.14). The discrepancy in these ratios shows that the use of total instructional figures may not provide a good assessment of the university's ability to deliver stable, sustainable programmes. Furthermore, an absence of data on academic staff qualifications raises questions about the calibre of these part-time instructors and the quality of education that students receive.

¹¹ The sources for Figures 3.12 through 3.14 are Catholic University of Mozambique (2008) and CUM Office of the Vice-Rector for Academic Affairs and Development (2008).

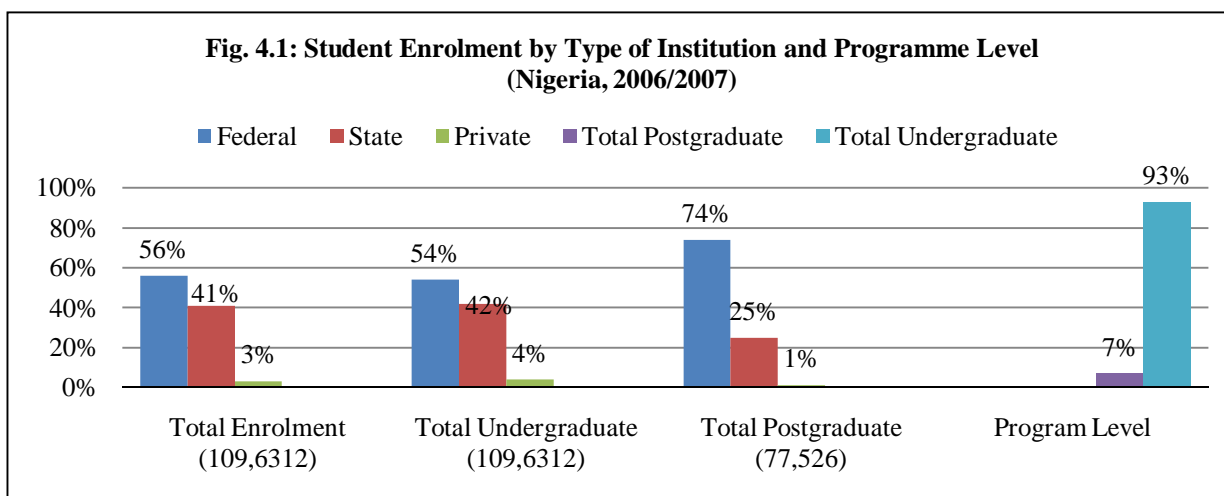
4. NIGERIA

National Profile

- Students -

Total Student Enrolment and Distribution by Programme Levels

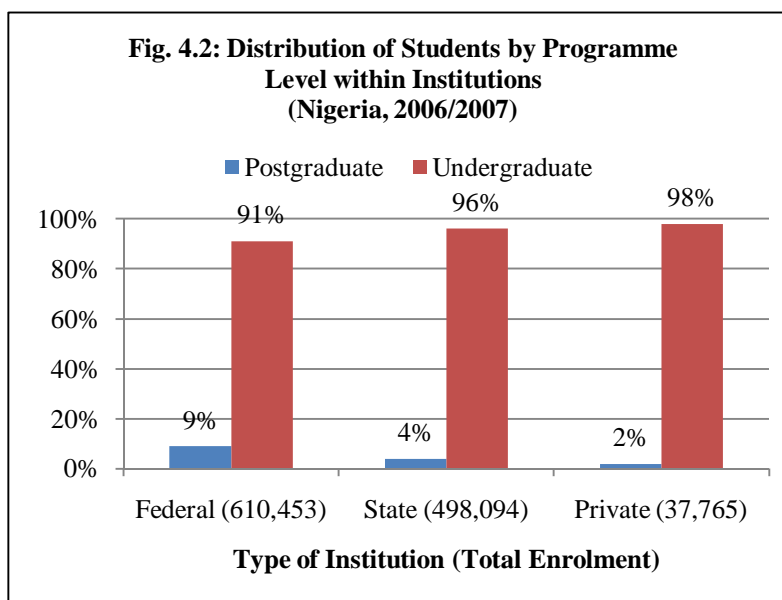
In 2006/2007, there were over a million students enrolled in Nigerian universities, with 56% enrolled in federal universities, 41% in state universities and three percent in private institutions (Fig. 4.1). The overwhelming majority of students were undergraduates (93%), with only seven percent in postgraduate programmes. Of the total postgraduate enrolment in Nigeria, federal universities accounted for 74% while state universities enrolled 25%. Only one percent of postgraduate enrolments were in private institutions (Fig. 4.1).¹²



Federal universities had the highest proportion of postgraduate enrolments at nine percent, followed by state universities at four percent, with private universities lagging at two percent (Fig. 4.2).

- Academic Staff -

There were over 27,000 academic staff members in Nigerian universities in 2006/2007, having to cope with a high student-staff ratio of 40:1 (Saliu, 2007).



¹² The source for Figures 4.1 and 4.2 is Saliu (2007).

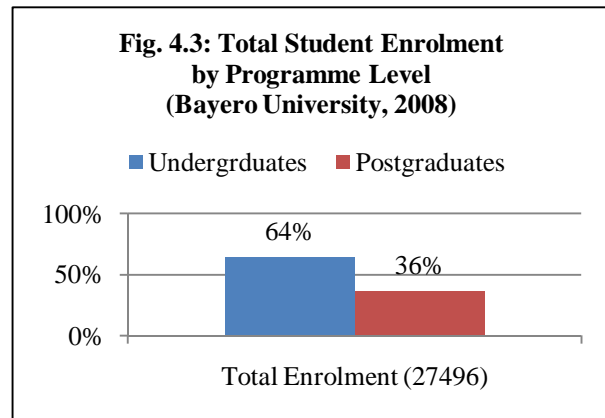
Institutional Profiles

- Bayero University -

- Students -

Total Student Enrolment

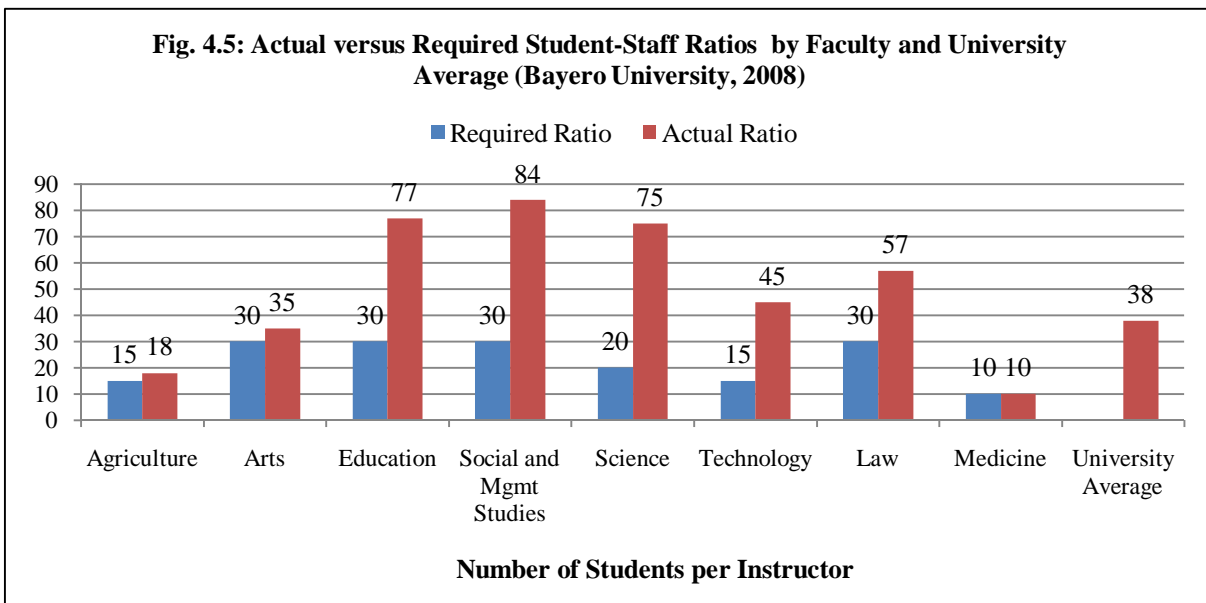
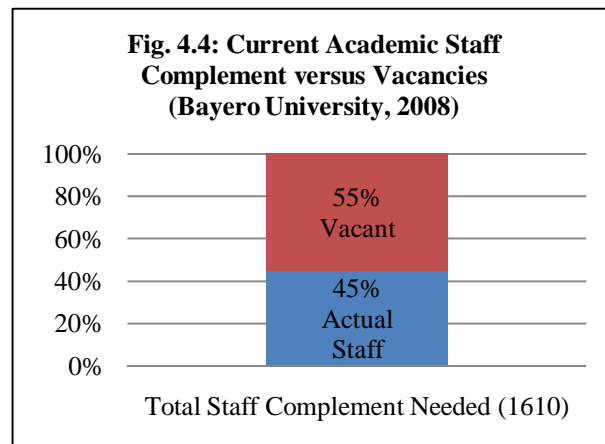
Bayero University had nearly 27,500 students enrolled in all its programmes in 2008, divided roughly between two-thirds undergraduates and one-third postgraduates (Fig. 4.3).¹³ While this appears to be a healthy proportion of postgraduate students from which to draw the next generation of scholars, the data needs to be disaggregated by programme to see how the distribution corresponds to the country's probable needs.



- Academic Staff -

Academic Staff Capacity and Enrolment Pressures

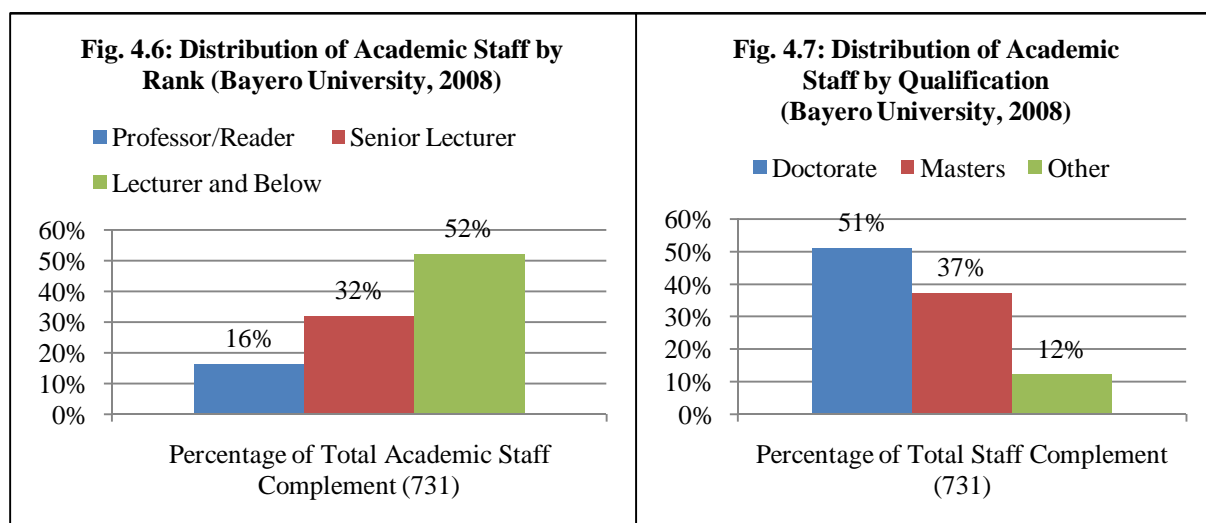
In 2008, the university had a total academic staff complement of 731. According to its vice-chancellor, this figure represented only 45% of the number necessary to run programmes adequately (Jega, 2008, Fig. 4.4). In fact, no academic unit, with the exception of the Faculty of Medicine, was able to meet its staff establishment (Jega, 2008).



¹³ The source for Figures 4.3 through 4.8 is Jega (2008).

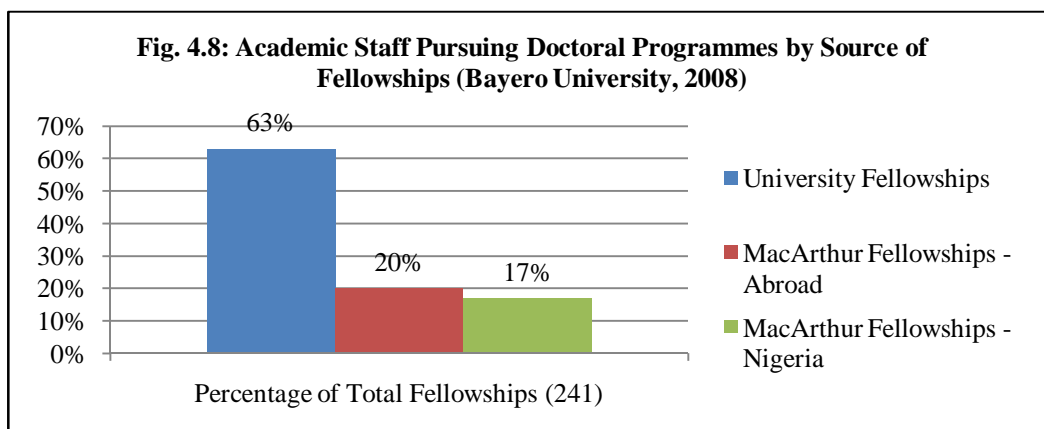
The student-staff ratio across the university in 2008 was 38:1. All faculties, with the exception again of medicine, exceeded the requisite student-staff ratios (Fig. 4.5). Among the most startling discrepancies were the Faculty of Social and Management Sciences with a required ratio of 30:1 and an actual ratio at 84:1 and the Faculty of Science with a required ratio of 20:1 as compared to an actual ratio of 75:1 (Fig. 4.5). These excessive ratios, which are related to the staff shortages noted above, make it difficult for students to receive quality instruction and pose tremendous workload challenges for academic staff who are left with little time to devote to research.

The distribution of academic staff by rank combined with the high student-to-staff ratio also have important implications for staff career development and academic maturity. In Nigerian universities more than half the academic staff are at the level of lecturer or below (Jega, 2008; see Fig. 4.6 for the example of Bayero University). Their heavy workloads leave little time for these junior scholars to do research or otherwise develop their academic expertise.



Distribution of Academic Staff by Qualification

About one-half of the academic staff in 2008 had doctoral degrees, 37% had master's degrees, and 12% had lesser qualifications (Jega, 2008, see Fig. 4.7). Having only half of academic staff in possession of doctoral degrees severely constrains the university's ability to have the requisite calibre of staff for the next generation. In recognition of this, Bayero embarked on efforts to provide staff members opportunities to acquire doctorate degrees in their fields. Between 2002 and 2008, 241 staff members benefited from various scholarship programmes (Fig. 4.8).

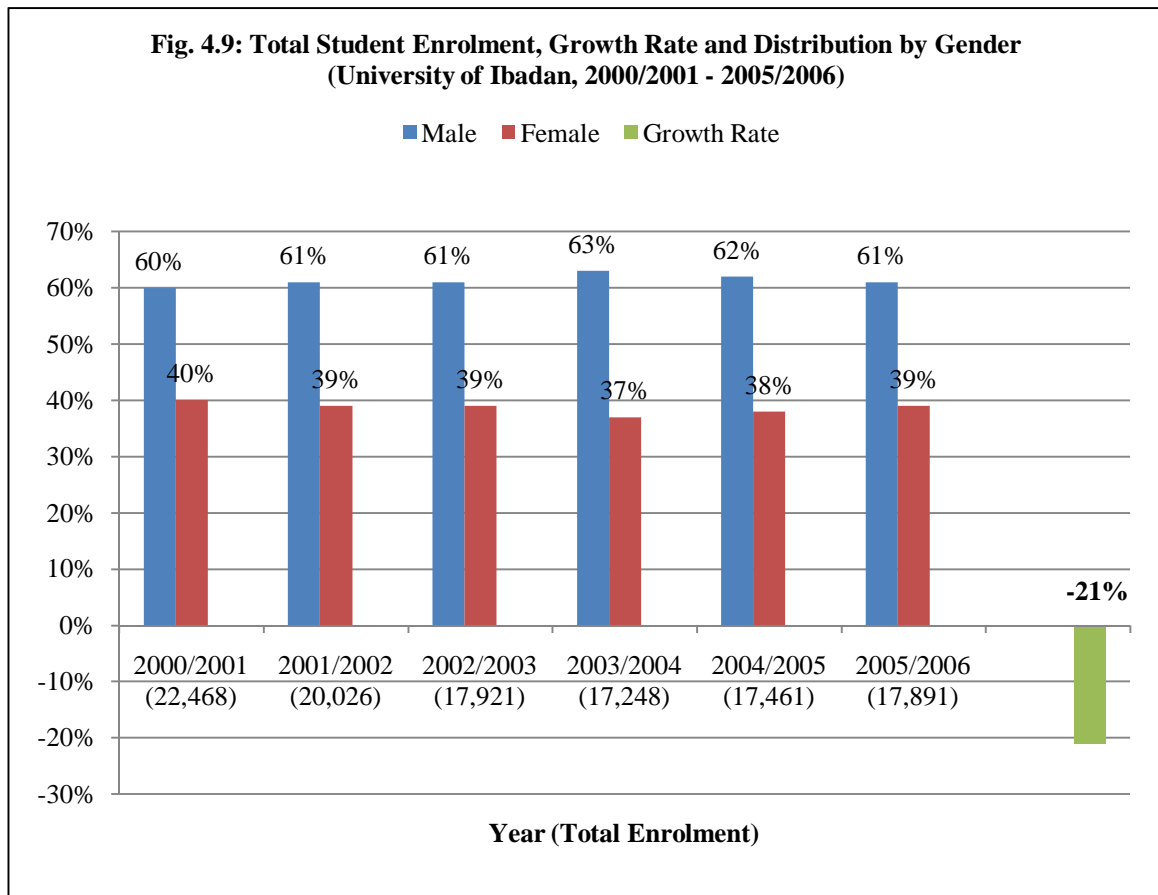


- University of Ibadan -

- Students -

Total Student Enrolment and Distribution by Gender

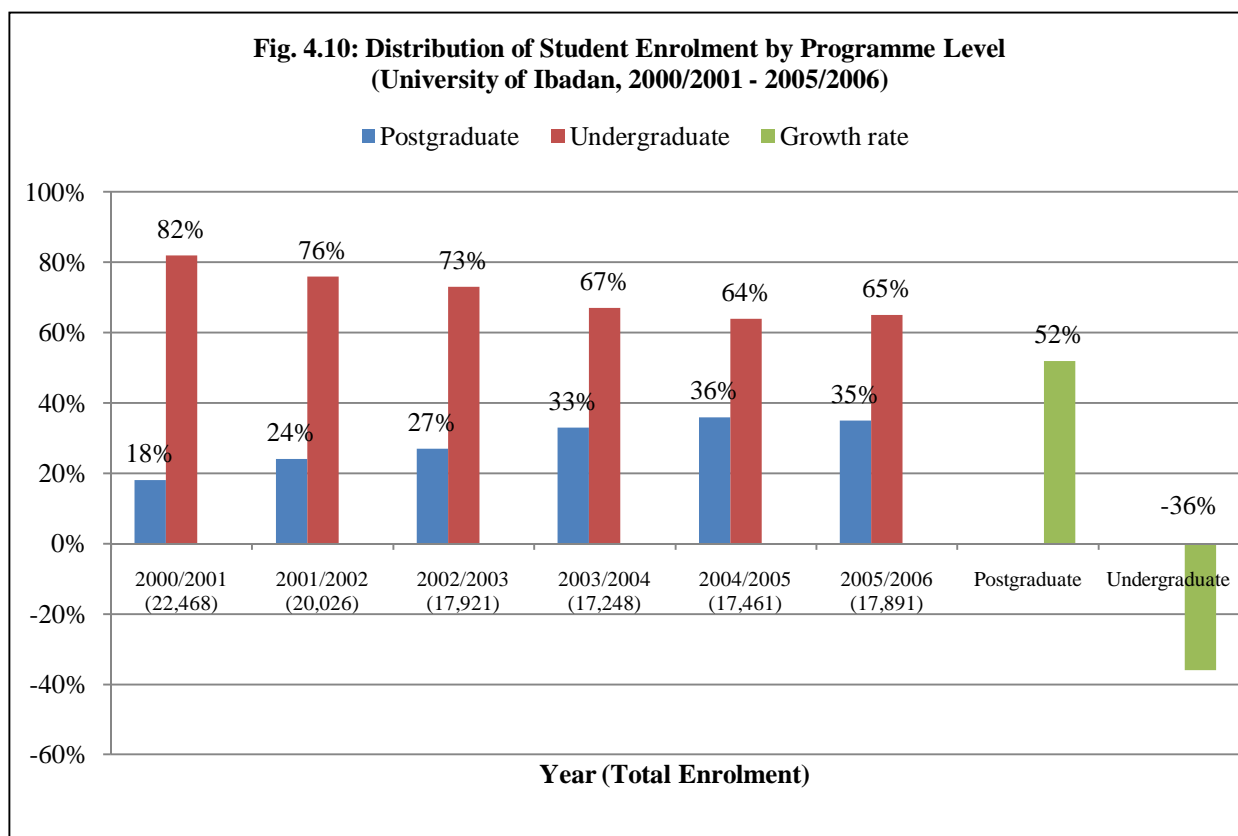
Following the implementation of university policy to limit enrolment in order to improve the quality of education, total student enrolment at the University of Ibadan decreased by 21% between 2000 and 2006. Female enrolments lagged behind those of males throughout this period, remaining at about 40% (Fig. 4.9).¹⁴



Distribution of Students by Programme Level

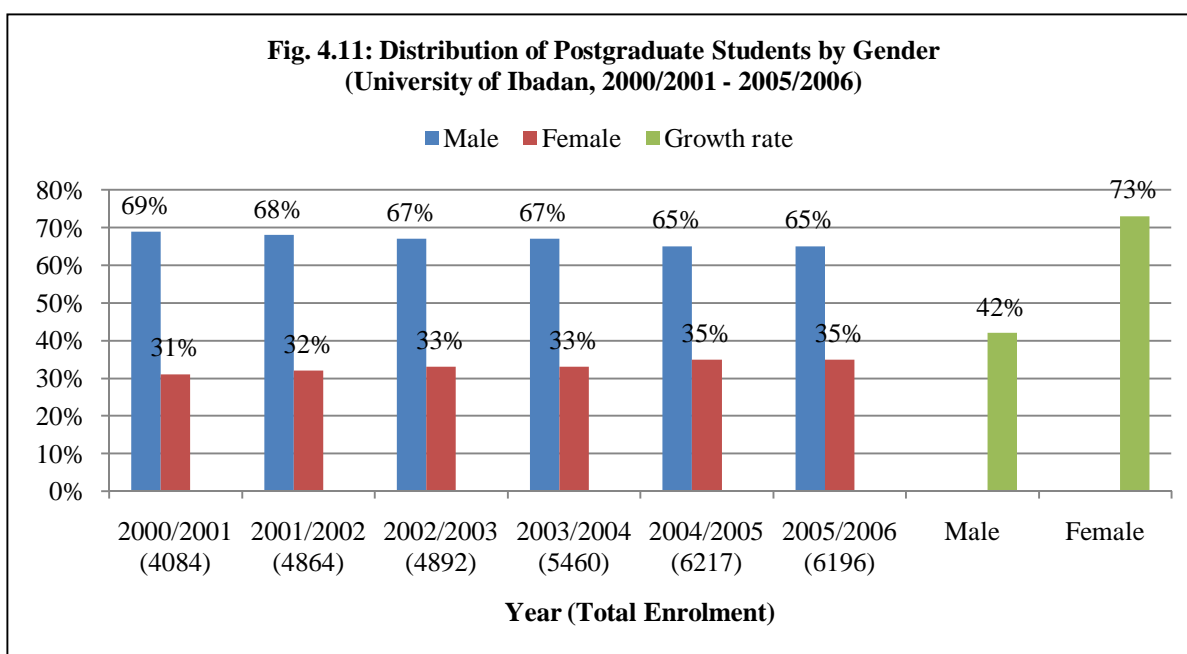
Undergraduate students outnumbered postgraduate students over the period from 2001 to 2006, even though the proportion of the latter rose each year. At the start of this period, undergraduates made up 82% of the student body as compared to 18% postgraduates. By 2006, the proportion of undergraduates had decreased to 65% of the total, while postgraduates rose to 35% (Fig. 4.10). The gender breakdown of undergraduate enrolment mirrored that of the university as a whole, with female students numbering roughly 40% and males 60% throughout.

¹⁴ The sources for Figures 4.9 through 4.16 are University of Ibadan (n.d.) and University of Ibadan (2007).



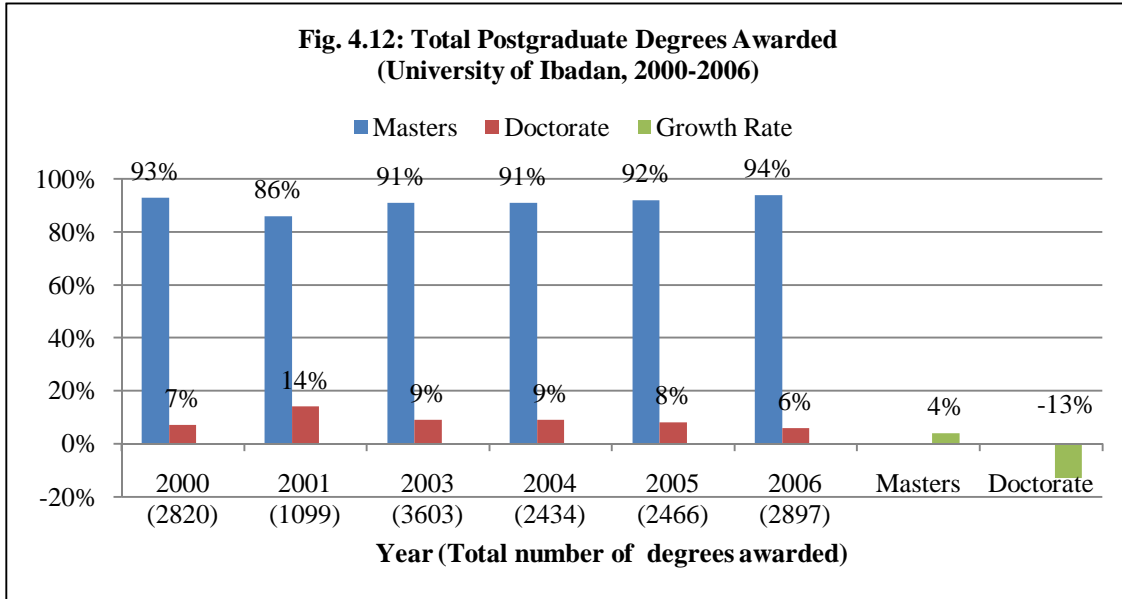
Postgraduate Enrolment by Gender

The number of women enrolled in postgraduate studies significantly increased by 73% between 2000 and 2006, while that of men increased by 42%, contributing to an overall postgraduate increase of 52% over this period (Fig. 4.11).

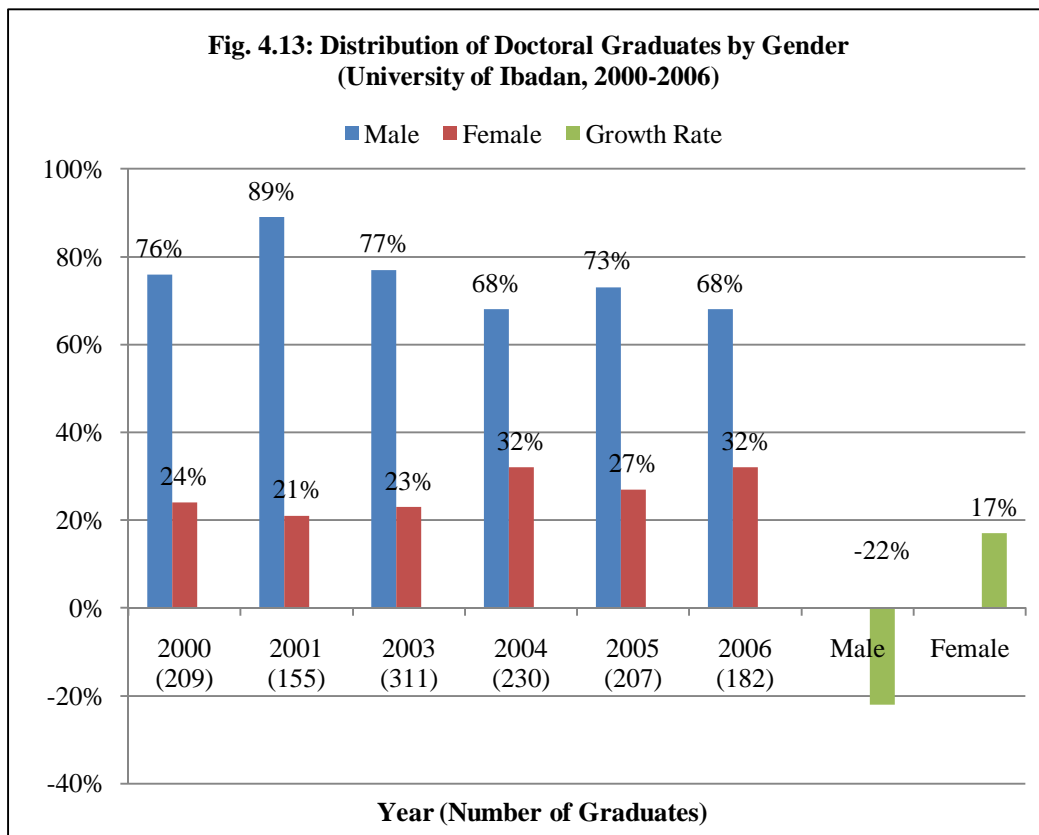


Graduates by Programme Level and Gender

Between 2000 and 2006, the number of undergraduate degree recipients decreased by 27% while postgraduate degree awardees increased by nine percent. The increase for postgraduates affected master’s and doctoral graduates differently, with the number of master’s graduates increasing by four percent, while doctoral graduates declined by 13% (Fig. 4.12).



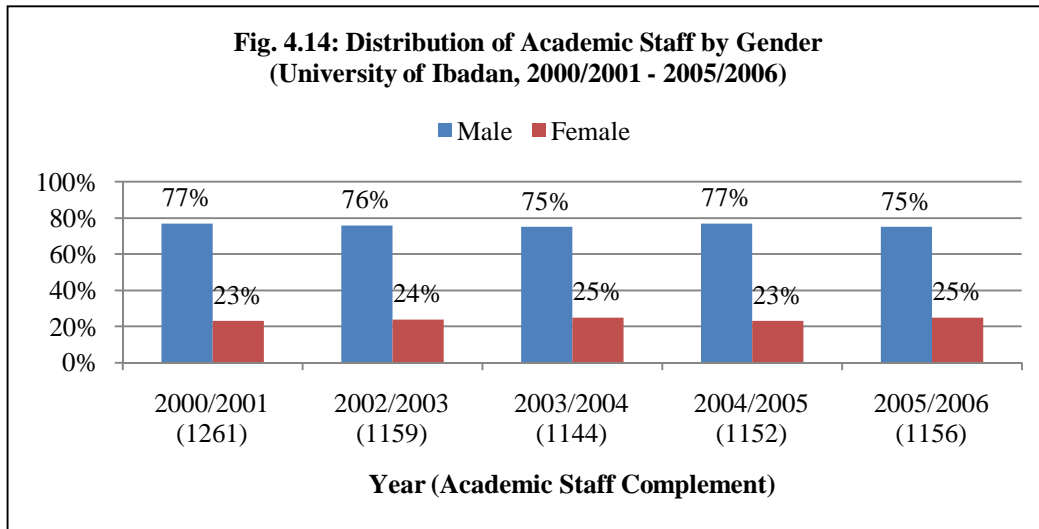
Much of the drop in doctoral graduates stemmed from the decrease in the number of male graduates after 2003. Over the course of the six-year period, male doctoral recipients saw a 22% drop in their numbers, while female doctoral recipients saw a 17% increase (Fig. 4.13).



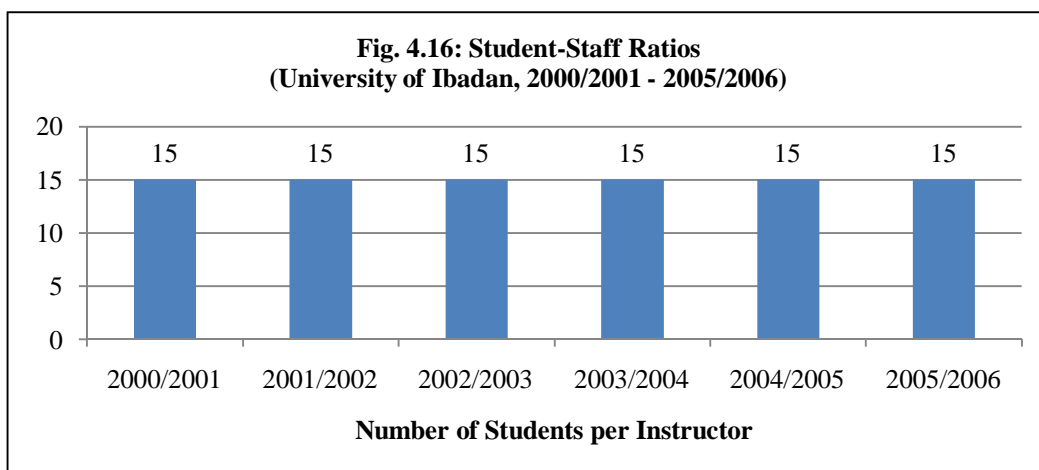
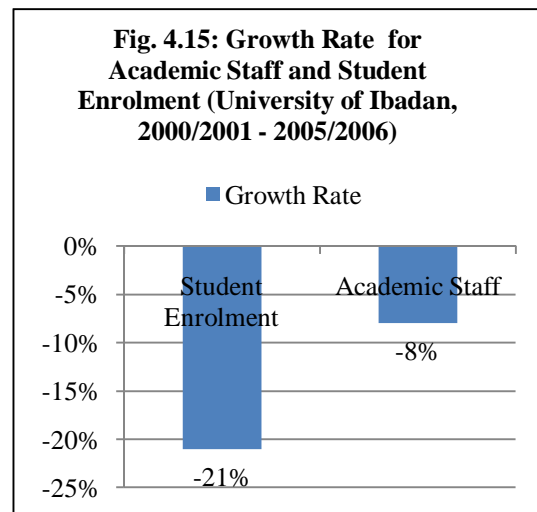
- Academic Staff -

Academic Staff Capacity and Enrolment Pressures

Academic staff numbers decreased by eight percent between 2000 and 2006. As illustrated in Fig. 4.14, male staff constituted the majority, although the proportion of females rose slightly over the years from 23% to 25%.

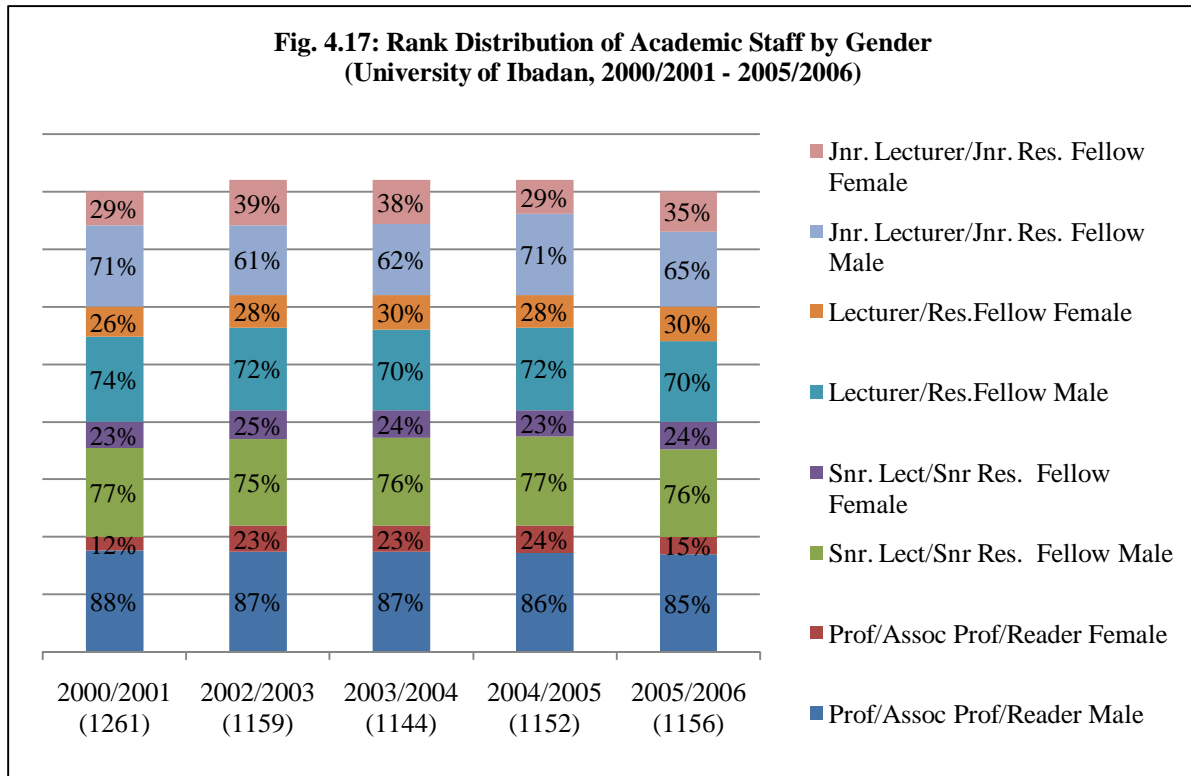


Student-staff ratios remained constant at a highly creditable 15:1 throughout the period under review (Fig. 4.16). The university was able to maintain this ratio only by cutting down on enrolments by significant margins at a time when it was losing academic staff. In order for student-staff ratios to remain at existing levels, student enrolment had to decrease by 21% (Fig. 4.15). This response to staff shortages, and possibly other pressures, had obvious implications for student access to higher education, at a time when millions of qualified students were denied admission to Nigerian universities (Punch, 2008).



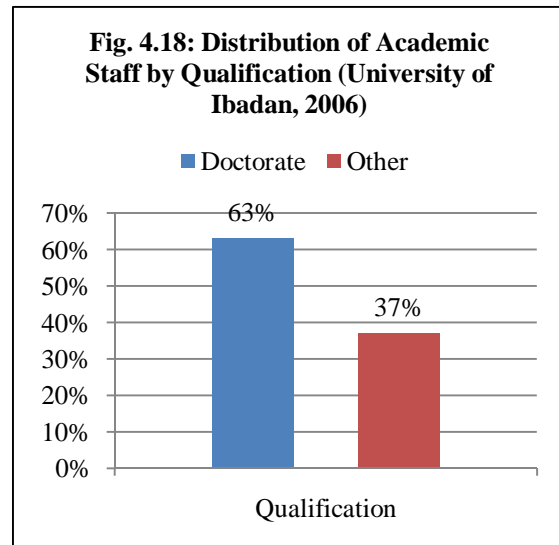
Distribution of Academic Staff Rank by Gender

Although men dominated each rank over the years, the proportion of women increased slightly at all levels — from 12% to 15% at the professor/associate professor/reader rank; 23% to 24% at the senior lecturer/senior research fellow rank; 26% to 30% for lecturer/research fellows; and 29% to 35% at the junior lecturer/junior research fellow rank (Fig. 4.17).¹⁵ The relatively small percentage of women at senior ranks reflects systemic issues that have significant implications for the attractiveness of academia to women and their career progress.



Distribution of Academic Staff by Qualification

Of the total staff complement at the University of Ibadan, about 63% had doctoral degrees in 2006 (Fig. 4.18). The proportion of staff with doctorates, however, varies across faculties, with all staff in the Institute of African Studies possessing doctoral degrees while only five percent of those in the Faculty of Law had doctorates. While the university has a very high number of doctorate degree holders among its professoriate in comparison to most African universities, it is worth noting that over a third have lower qualifications, raising questions about the extent to which professional development might be needed to enhance their capacity for high-quality research and the supervision of the next generation of academics.



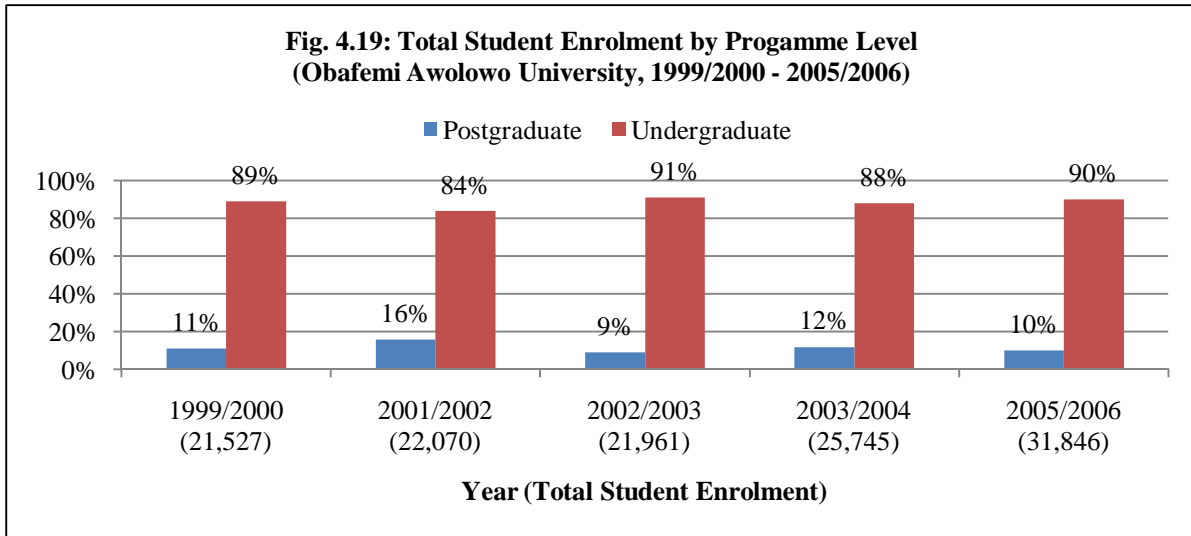
¹⁵ The source for Figures 4.17 and 4.18 is University of Ibadan (n.d.).

- Obafemi Awolowo University -

- Students¹⁶ -

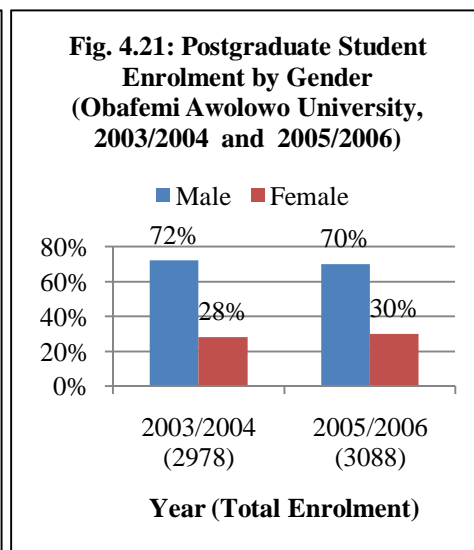
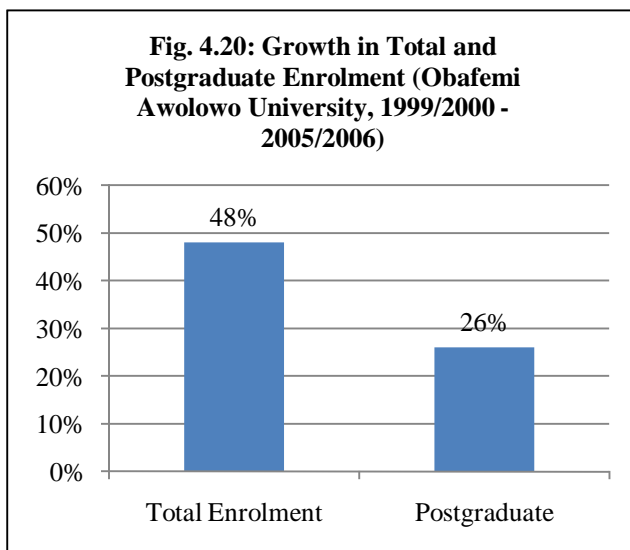
Total Student Enrolment by Gender and Programme Level

Between 1999/2000 and 2005/2006, total student enrolment increased by 48%. During the same period, postgraduate enrolments went up by 26% (Figs. 4.19 and 4.20).¹⁷



Postgraduate Student Enrolment by Gender and Programme

Male students dominated the postgraduate student population, with female students making up only 28% and 30% of the total in 2003/2004 and 2005/2006 respectively (Fig. 4.21). In 2005/2006, doctoral students constituted 13% of the total postgraduate enrolment. The population of doctoral students dropped to six percent the next year.



¹⁶ As was the case with other institutions covered by this report, there were inconsistencies in Obafemi Awolowo University (OAU) data, both in the submissions made to the research team and in official statistics on the university's website. For student data we used the official source of data consistently.

¹⁷ The source for Figures 4.19 through 4.25 is Obafemi Awolowo University (2008).

- Academic Staff¹⁸ -

Academic Staff Capacity and Enrolment Pressures

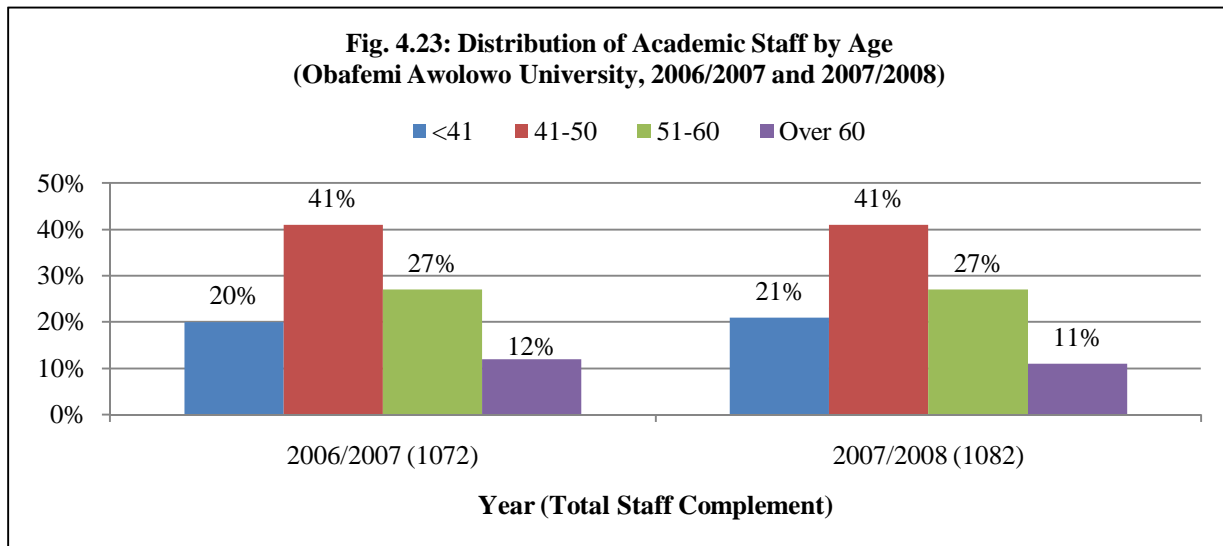
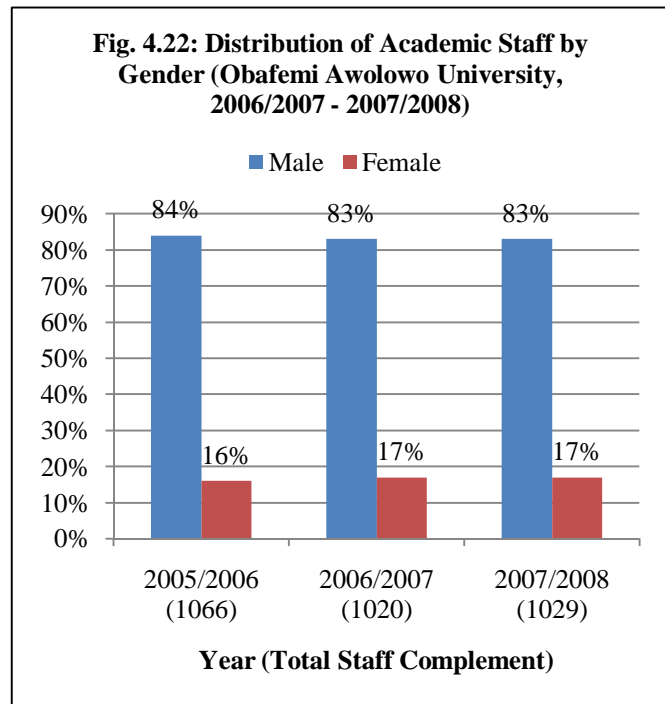
Academic staff numbers increased less than one percent from 2006 to 2007. The student-staff ratio for 2005/2006 was 30:1. Unfortunately, the absence of relevant comparative data makes it difficult to determine the extent to which academic staff growth kept pace with student enrolment growth over time.

Distribution of Academic Staff by Gender

The proportion of female staff increased only very marginally, from 16% in 2005/2006 to 17% in the subsequent two years (Fig. 4.22).

Distribution of Academic Staff by Age

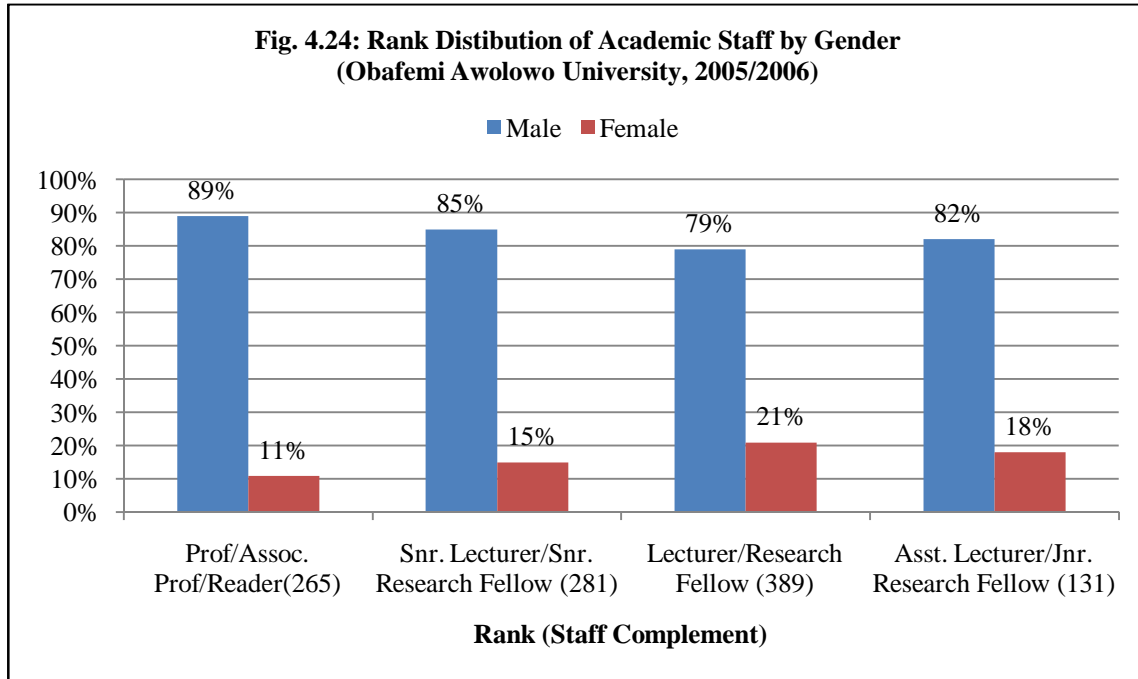
The majority of staff in both 2006/2007 and 2007/2008 were in the 41-50 age range, followed by those in the 51-60 years category. It is significant to note that 39% and 38% of staff in 2006/2007 and 2007/2008, respectively, were over 50 years old, as compared to only 20% and 21% of those less than 41 years old (Fig.4.23). Unless there is a strong effort to recruit significant numbers of staff in the younger group in the next decade, the university may not be able replace the large number of staff who will be due to retire then.



¹⁸ The same problem of data inconsistency referred to above in the context of student-related data is also noticeable in OAU for academic staff. The differences in total staff complement across various categories in similar years that are found in the following discussion are traceable to this problem.

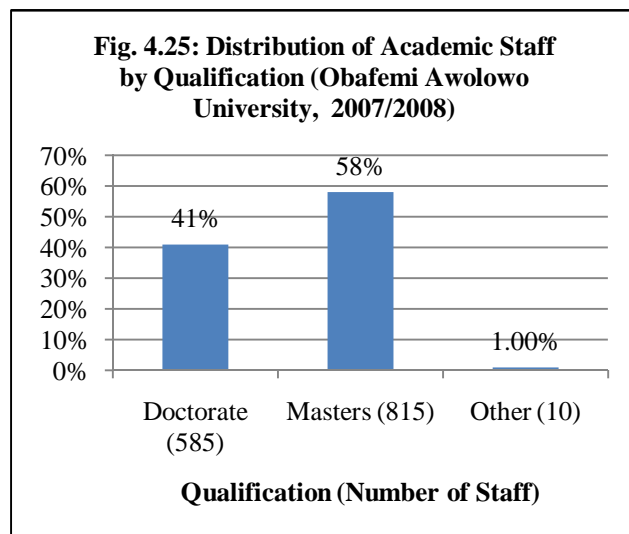
Distribution of Academic Staff by Rank and Gender

In 2005/2006, male staff overwhelmingly dominated the most senior ranks (full professor/associate professor/reader), with females constituting only 11% of that number (Fig. 4.24). This fact, combined with the overall low numbers of women academic staff members, shows that OAU has a long way to go in attracting females to its academic staff as well as in helping them climb the professional ladder.



Distribution of Academic Staff by Qualification

The highest qualification for the majority of staff at OAU in 2007/2008 was a master’s degree. Master’s degree holders made up 58% of staff, as compared to doctorate degree holders who comprised 41% of the total (Fig. 4.25). A large proportion of academic staff holding only a master’s degree considerably hampers the ability of the university to train the next generation of scholars at the highest levels of scholarship.



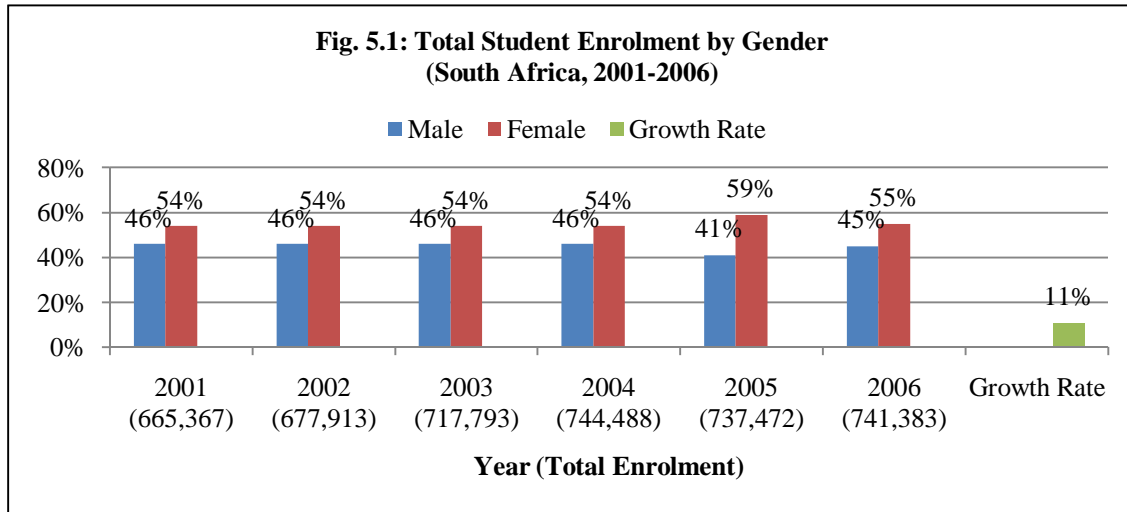
5. SOUTH AFRICA

National Profile

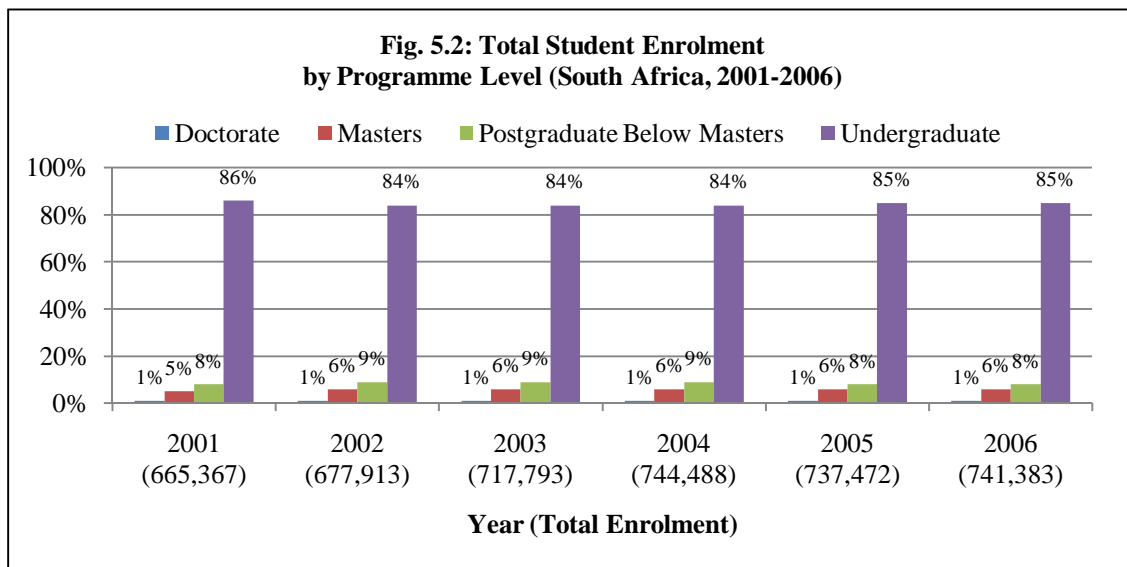
- Student -

Total Student Enrolment and Distribution by Gender and Programme Levels

Total student enrolment in South African universities increased by 11% over the period 2001-2006. Female students were the majority of those enrolled in South African universities in each of the years under review, with their proportion of the total student population increasing marginally from 54% in 2001 to 55% in 2006 (Fig 5.1).¹⁹



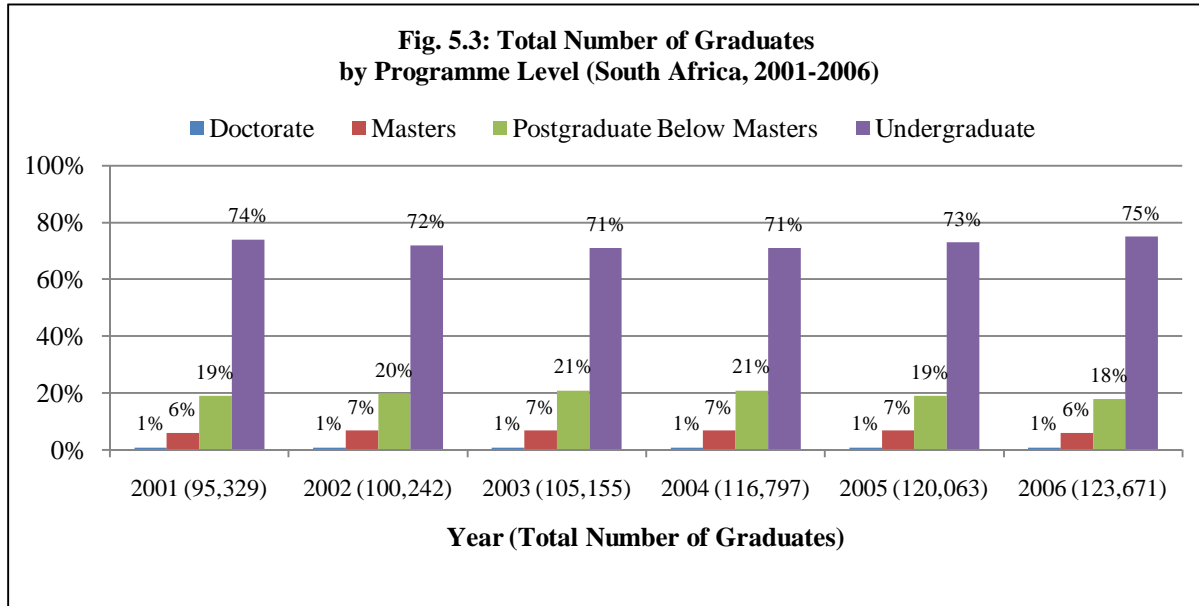
Between 2001 and 2006, the vast majority of students were enrolled in undergraduate programmes, with postgraduate enrolments constituting just between 14% and 16% (Fig. 5.2). Doctoral enrolments remained at one percent of the total throughout the 2001-2006 period, while master's enrolments increased only marginally from five to six percent.



¹⁹ The source for Figures 5.1 through 5.6 is South Africa Department of Education (2002, 2003, 2004, 2005a, 2005b, 2006, 2008).

Number and Distribution of Postgraduate Degrees Awarded

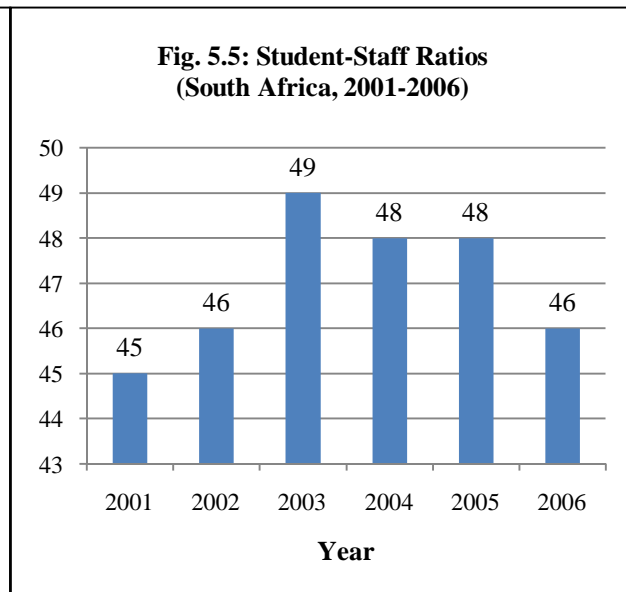
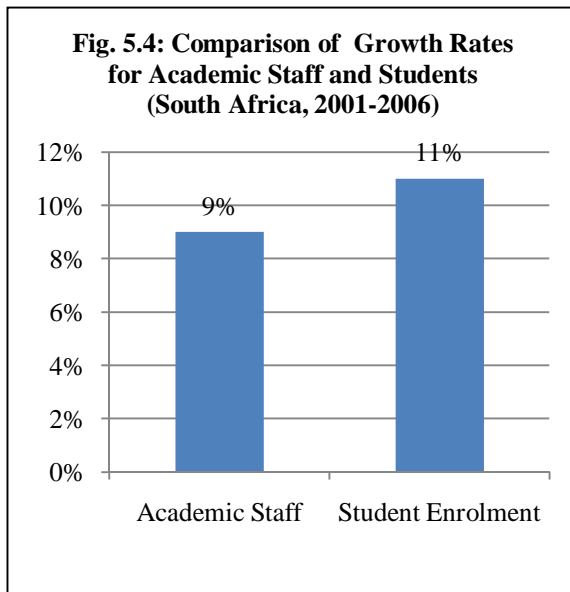
Not surprisingly, a look at the yearly number of degrees awarded shows a pattern similar to enrolments, with the proportion of doctoral graduates remaining stable at one percent, between 2001 and 2006, as did master’s graduates at between six and seven percent (Fig. 5.3). Almost a fifth of graduates received postgraduate degrees below the master’s level, indicating that the bulk of postgraduate recipients were enrolled in programmes that are unlikely to lead to the growth of the next generation of academics.



- Academic Staff -

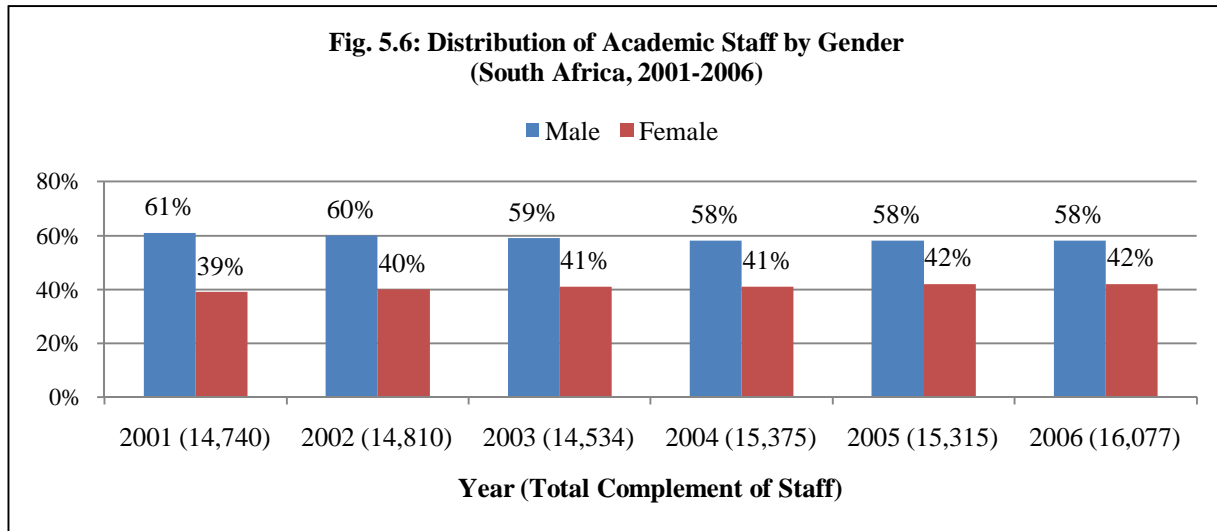
Academic Staff Capacity and Enrolment Pressures

Between 2001 and 2006 permanent academic staff increased at a rate of nine percent, which was lower than the 11% rate of student expansion over the same period (Fig. 5.4). Student-staff ratios were high, remaining in the upper 40:1 range throughout the period (Fig. 5.5).



Academic Staff Distribution by Gender

Males constituted the majority of the professoriate, but the proportion of females steadily increased from 39% in 2001 to 42% in 2006 (Fig. 5.6).



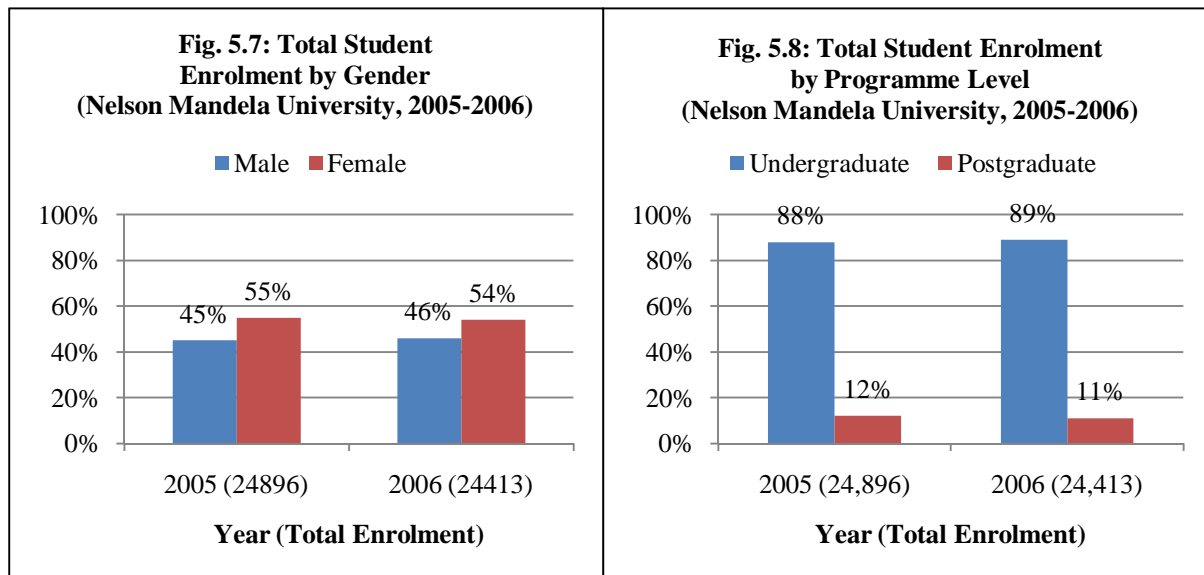
Institutional Profiles

- Nelson Mandela Metropolitan University -

- Students -

Total Student Enrolment by Gender and Programme Level

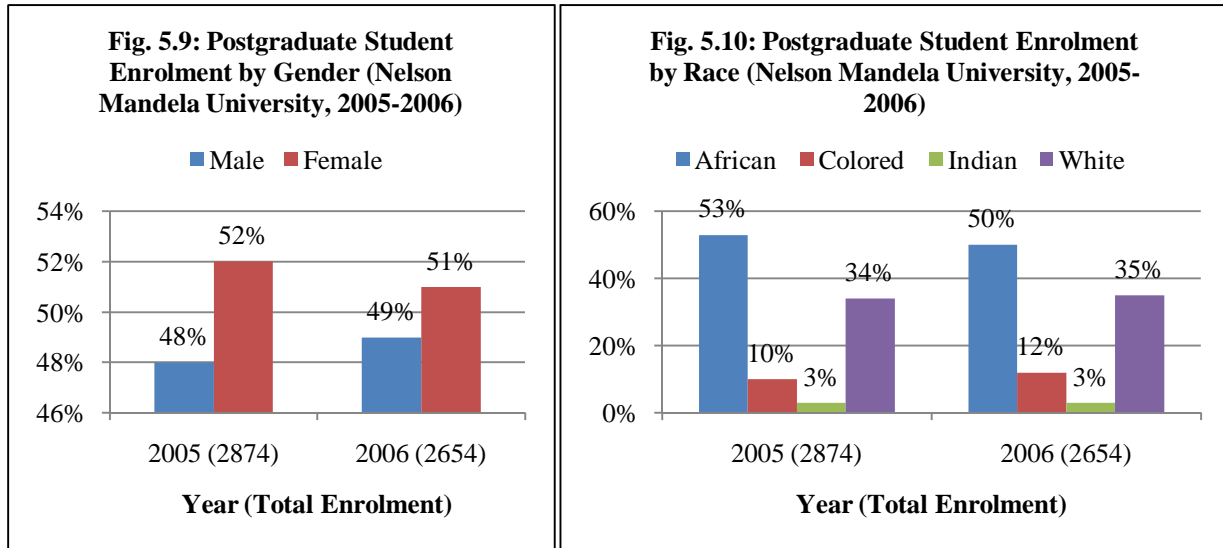
Total student enrolment at Nelson Mandela Metropolitan University (NMMU) hovered around 25,000, with female students constituting the majority at about 55% for 2005 and 2006 (Fig. 5.7). The postgraduate student complement ranged between 11% and 12% in these years (Fig. 5.8).²⁰



²⁰ The source for Figures 5.7 through 5.16 is Nelson Mandela Metropolitan University (2007).

Postgraduate Student Enrolment by Gender and Race

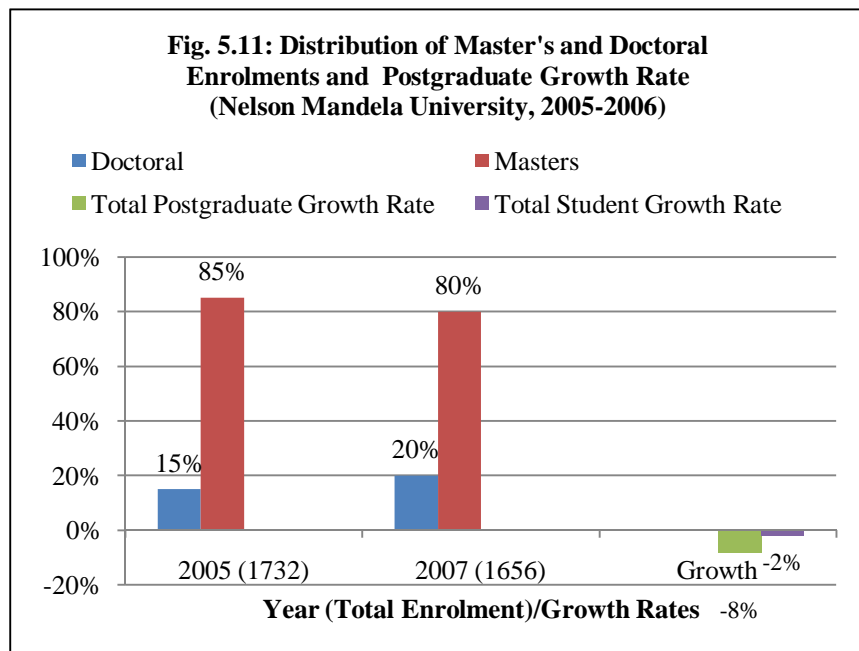
A positive note for future academics in South Africa is that the overall higher proportion of females at Nelson Mandela Metropolitan University was also reflected at the postgraduate level, where women represented just over half of enrolments in 2005 and 2006 (Fig. 5.9). Black African students made up the majority of postgraduates, although their proportion decreased from 53% in 2005 to 50% in 2006 (Fig. 5.10). Whites were the next most numerous racial group, at slightly more than a third.



Distribution of postgraduate students by programme

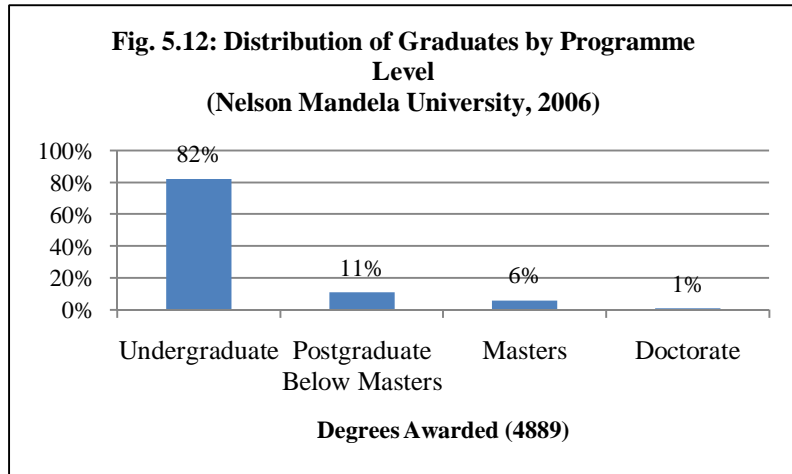
Eighty-five percent of postgraduate students were at the master’s level, compared to 15% at the doctoral level in 2005, while two years later the proportions were 80% and 20%, respectively. Overall enrolments of master’s and doctoral students dropped by eight percent during the period, compared to a two percent decrease in total enrolments (Fig. 5.11). The relatively high proportion of doctoral enrolments is a positive sign for the development of the next generation of South African academics.

While it is encouraging to see the growth in the ratio of doctoral-to-master’s enrolments during the period, the drop in master’s enrolments should raise concerns about whether the feeder programmes for doctoral enrolment might shrink over time, resulting in fewer doctoral students in the future. Both programmes need to grow to ensure the production of the next generation of academics.

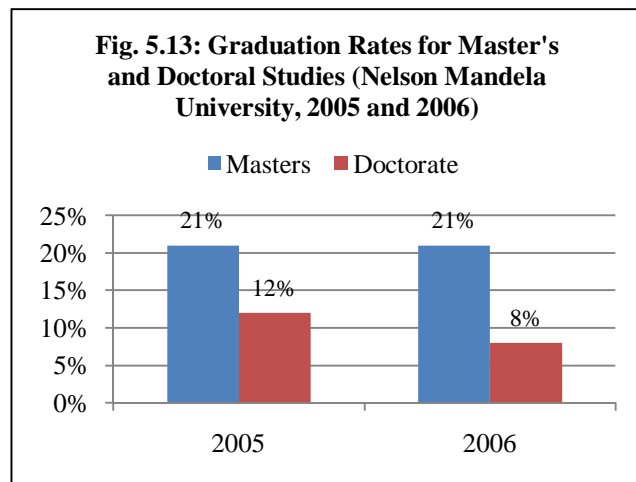


Postgraduate Degrees Awarded and Graduating Rates

The vast majority of students who graduated in 2006 received undergraduate degrees. As shown in Fig. 5.12, only six percent of graduates received master's degrees, while those with doctorate degrees constituted only one percent of the total graduating class. This is obviously a very low rate of production of doctorates for an institution of higher education.



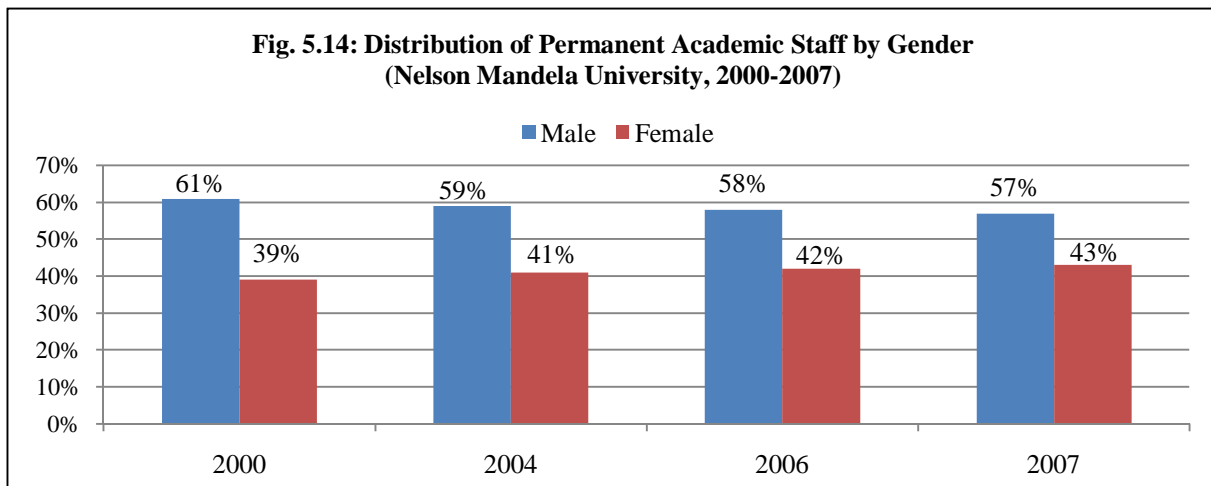
Overall, graduation rates for postgraduate students were very low (Fig. 5.13), indicating a slow rate of production of the next generation of scholars. The graduation rate for doctoral students was about 12% for the cohort that was supposed to graduate in 2005, going down to eight percent in the following year. At about 21% in both 2005 and 2006, graduation rates were relatively higher, though still not satisfactory, for master's degree students.



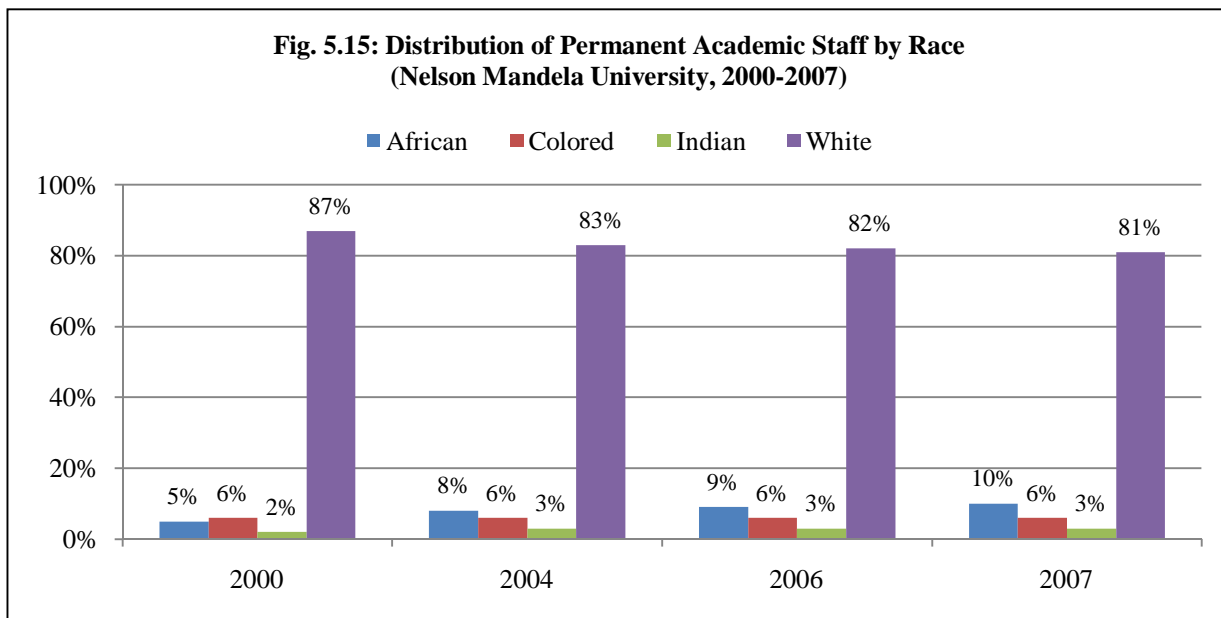
- Academic Staff -

Distribution of Academic Staff by Gender and Race

While the exact number of permanent staff is not available, Figs. 5.14 and 5.15 provide insight into the gender distribution of academic staff and the relative proportions of different racial groups. Between 2000 and 2007 female staff numbers moved from 39% to 43%, while still lagging behind their male counterparts.

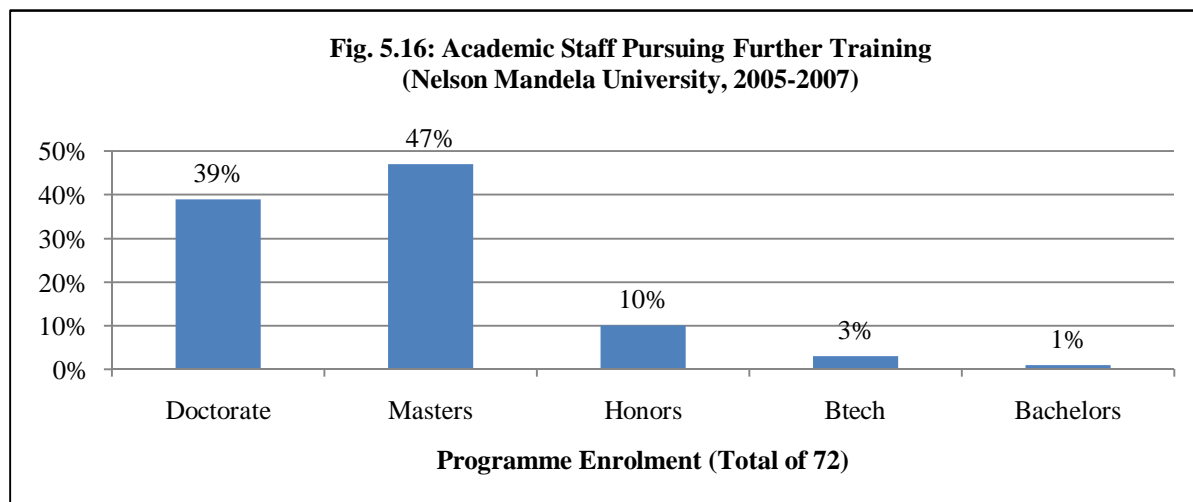


White staff made up an overwhelming majority of the total staff complement in each of the four years for which data are available, albeit decreasing from 87% in 2000 to 81% in 2007 (Fig. 5.15). The proportion of African staff increased from five to ten percent during the same period, while the percentage of coloured staff was stable at six percent. The proportion of Indian staff was also relatively stable, between 2004 and 2007, at about three percent. Hopefully, the racial distribution of academic staff will change once some of the non-white students presently enrolled in postgraduate programmes at NMMU and across the country enter the academic job market.



Professional Development

Between 2005 and 2007, a total of 72 staff members pursued various higher qualifications.²¹ 39% of this group were enrolled in doctoral programmes while 47% pursued master's degrees (Fig. 5.16). In the absence of data showing the qualifications of current staff, however, it is difficult to tell what the impact of these staff development programmes is, or will be over the course of the next few years in terms of strengthening the quality of the institution's professoriate.



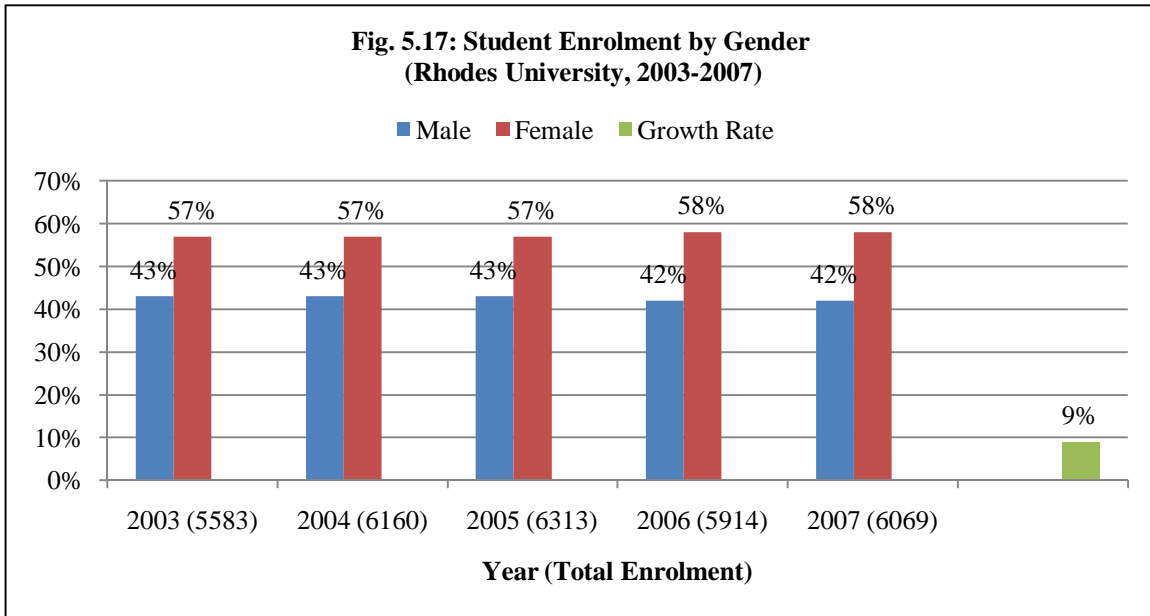
²¹ Lack of data prevents determination of the percentage of academic staff enrolled in such programmes.

- Rhodes University -

- Students -

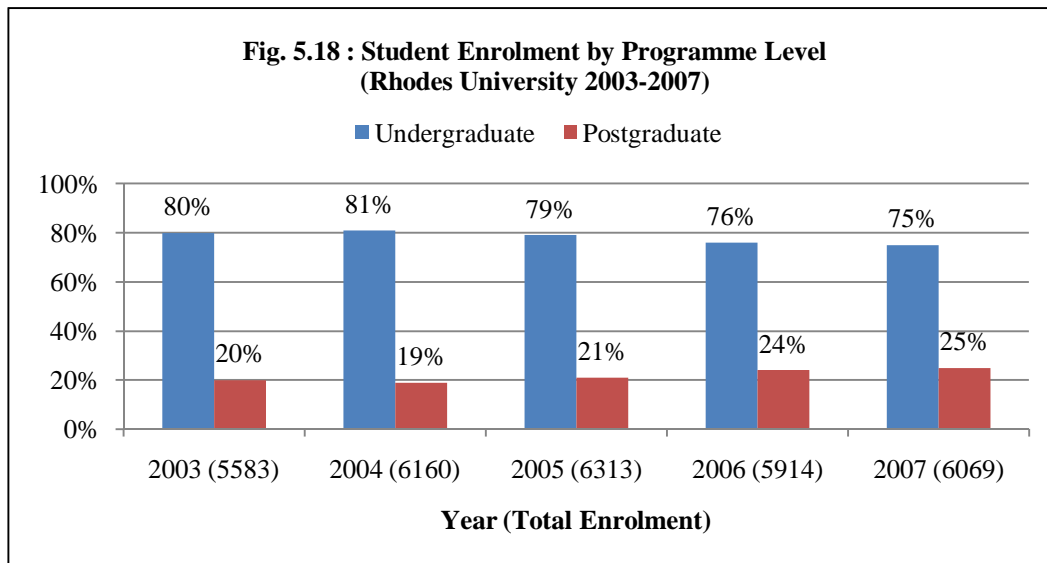
Total Student Enrolment by Gender

The total student population at Rhodes University increased by nine percent over the five years from 2003 to 2007. Females outnumbered their male counterparts throughout the period constituting between 57% and 58% of enrollees (Fig. 5.17).²²



Distribution of Student Enrolment by Programme Level

Undergraduate enrolments dominated student numbers, although they dropped from 80% of the total population in 2003 to 75% in 2007. Postgraduate enrolments increased from 20% to 25% during the same period (Fig. 5.18), thereby increasing the potential to cultivate the next generation of academics.

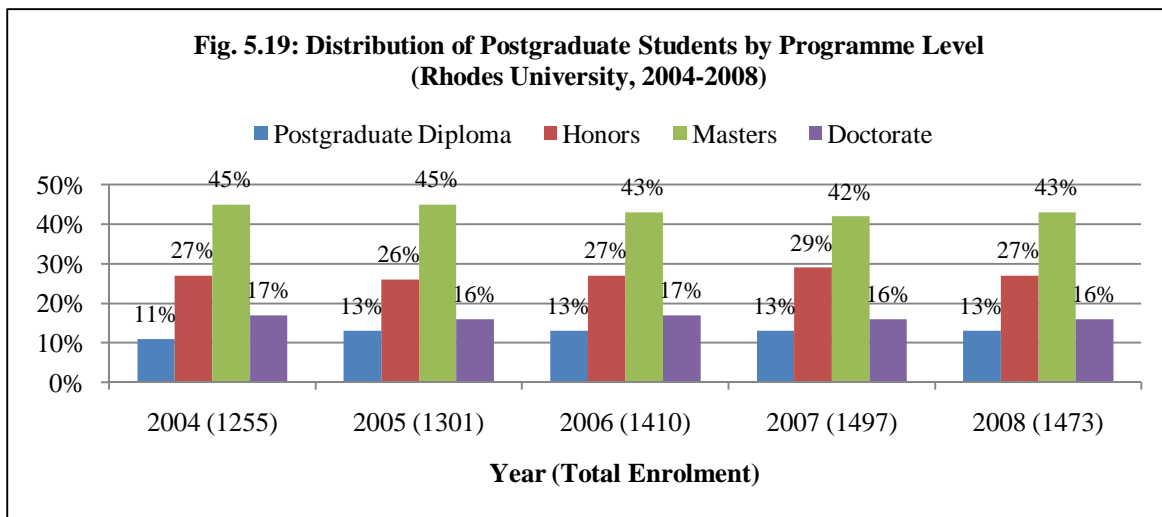


²² The sources for Figures 5.17 through 5.26 are Rhodes University (2005, 2008a, 2008b).

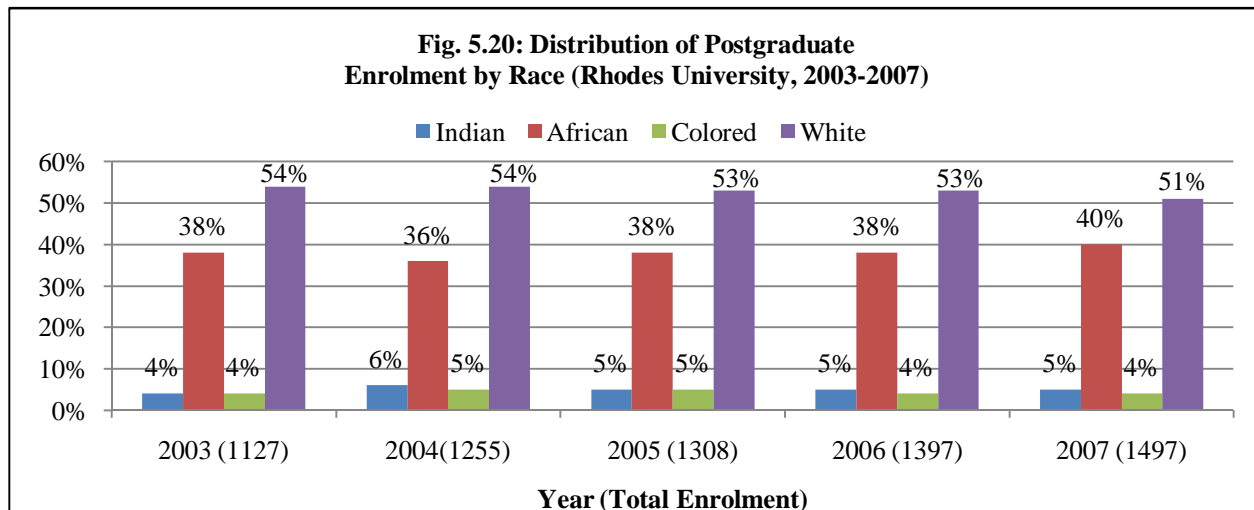
Distribution of Postgraduate Students by Gender, Programme Level and Race

The only year for which sex-disaggregated postgraduate enrolment data is available is 2007. In that year, male and female enrolment was at parity (Rhodes University, 2008b). This is a positive sign for its potential to increase the female complement of the next generation of academics. To be certain about the extent to which these female students are on the path to an academic career, further information is needed on what programmes and at what levels they are enrolled. Unfortunately, those data are not available.

As shown in Fig. 5.19, a significant majority of postgraduate students were enrolled in master’s programmes, with the proportion dipping slightly from 45% in 2004 to 43% in 2008. Doctoral enrolments were quite healthy, ending the period at 16%. Overall, programmes with the potential to generate the next generation of academics are doing well at Rhodes. More data are needed on those master’s programmes that have a professional rather than an academic orientation to determine more fully their potential for the production of new academics.



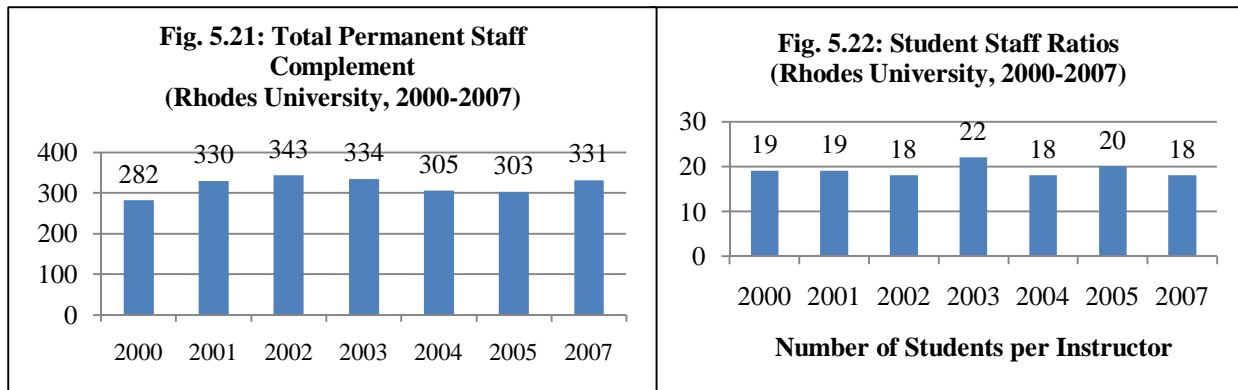
The majority of postgraduate students at Rhodes were white, with their proportion going down slightly from 54% in 2003 to 51% in 2007. African students constituted the second largest group, increasing from 38% of the total in 2003 to 40% in 2007. Indian and coloured students together made up about 1/10 of the total postgraduate population over the period (Fig. 5.20). In order to grow the next generation of academics that represents the diversity of South Africa and take advantages of the total human resources potential of the country, efforts need to be redoubled at Rhodes University to increase representation from all the non-white groups.



- Academic Staff -

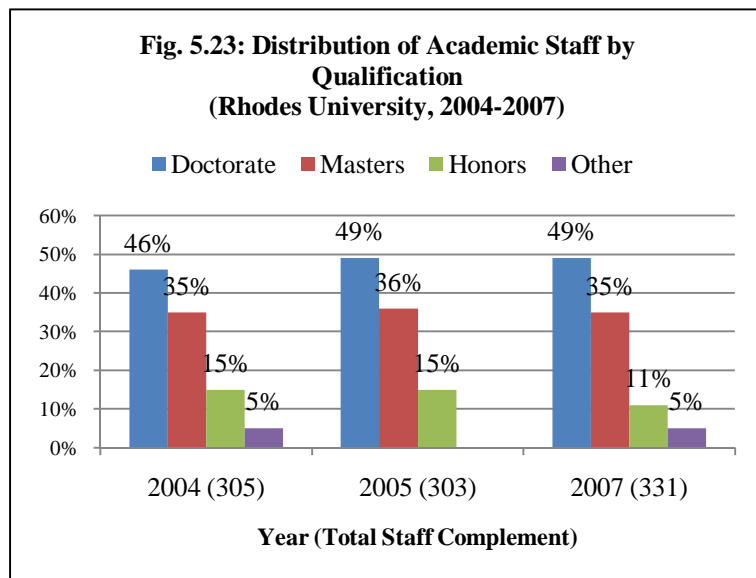
Academic Staff Capacity and Enrolment Pressures

Academic staff increased by 17% between 2000 and 2007. While there was a significant drop in staff numbers between 2002 and 2005 (Fig. 5.21), the university managed to bring staff growth and enrolment growth almost into alignment (Rhodes University, 2005, 2008a, 2008b). This allowed enrolment pressures to be contained as student-staff ratios remained relatively steady, between 18/19:1, except between 2003 and 2005 when increased enrolments took place in tandem with a decreased staff complement, Fig. 5.22.



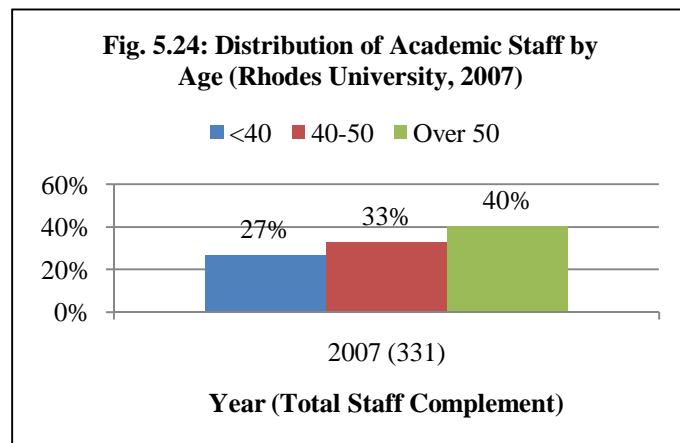
Distribution of Academic Staff by Qualification

Forty-six percent of Rhodes University staff in 2004 had doctoral degrees, while 35% and 15% had master's and honour's degrees, respectively. By 2007, the proportion of doctorate holders had gone up to 49% while master's holders remained at 35% of the staff complement. Despite the large percentage of high degree holders, staff with qualifications below the master's level still constituted a significant portion (16%) of the professoriate in 2007 (Fig 5.23).



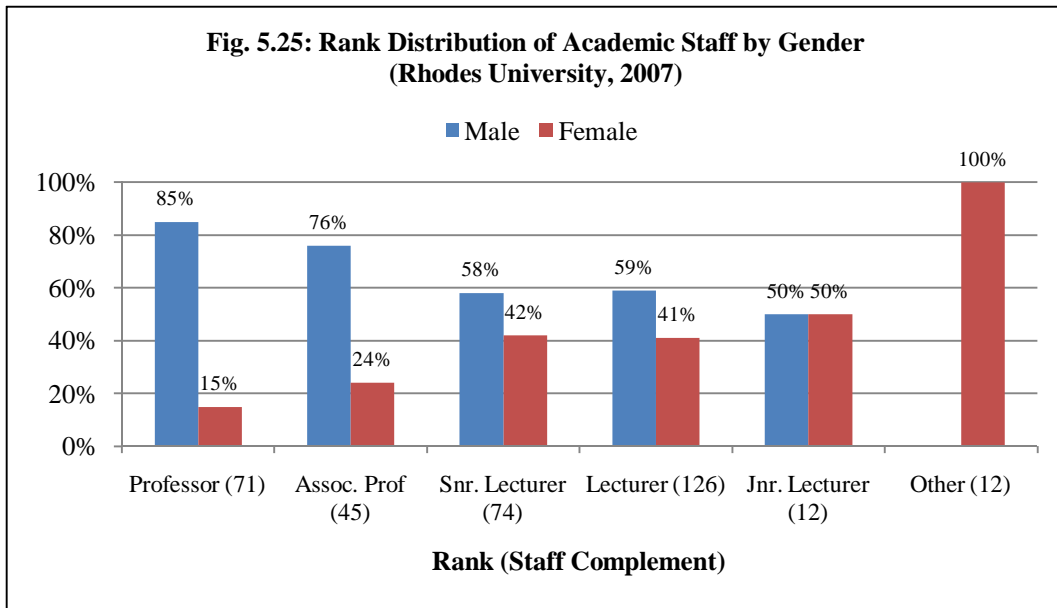
Distribution of Academic Staff by Age

The largest group of academic staff in 2007 was the over-50 age category, comprising 40% of staff, compared to 33% for the 40-50 year group and 27% for those below 40 years of age (Fig. 5.24). With almost 2/3 of the over-50 group at 55 years of age or over and approaching retirement in the next five years, it is important for the university to pursue efforts seriously that will replenish the stock with new academics.

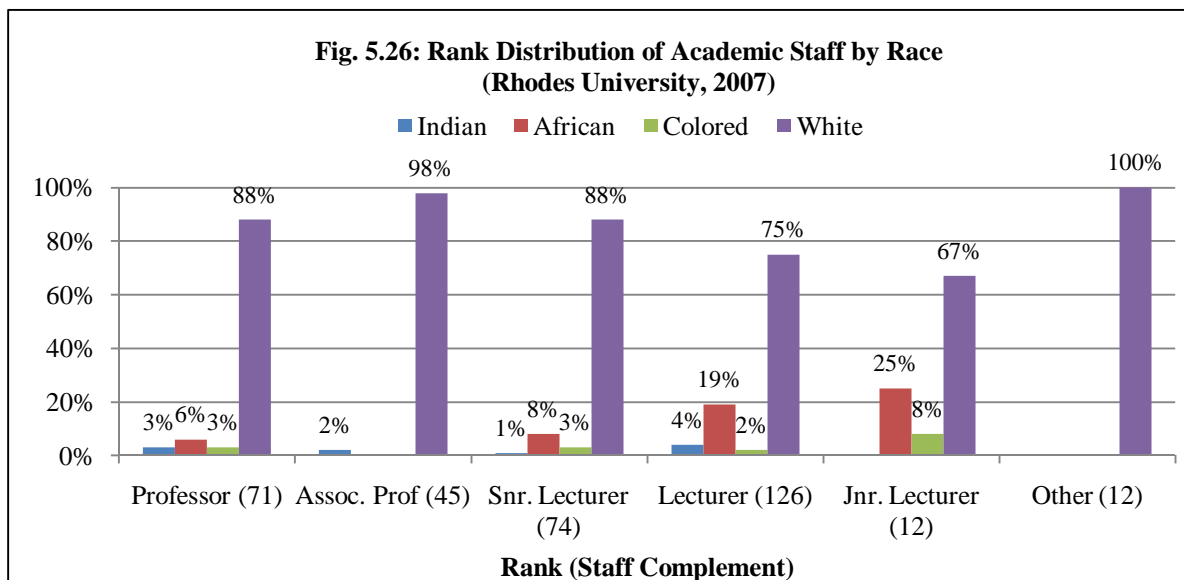


Rank Distribution of Academic Staff by Gender and Race

In 2007, the academic staff composition stood at 36% female and 64% male, with men dominating the two most-senior ranks of full and associate professor (Fig. 5.25). The gender gap, however, narrows noticeably at the senior lecturer and lecturer levels — a positive sign that the university is employing more females than in past years who, hopefully, will not be constrained in their career progress to the professorial ranks. It is also noteworthy that, although the numbers are small, the preparatory rank of junior lecturer shows parity between males and females.



As seen in Fig. 5.26, whites dominated all ranks in the professoriate in 2007. This dominance was particularly stark at the three highest ranks. Not a single African or coloured staff appears within the associate professor rank, showing that Rhodes University has some ways to go to bring its academic staff composition anywhere close to its postgraduate student population. Minority postgraduate students, in particular, are likely to have their educational experience and career goals enhanced by seeing and being mentored by academic staff who share backgrounds similar to their own.

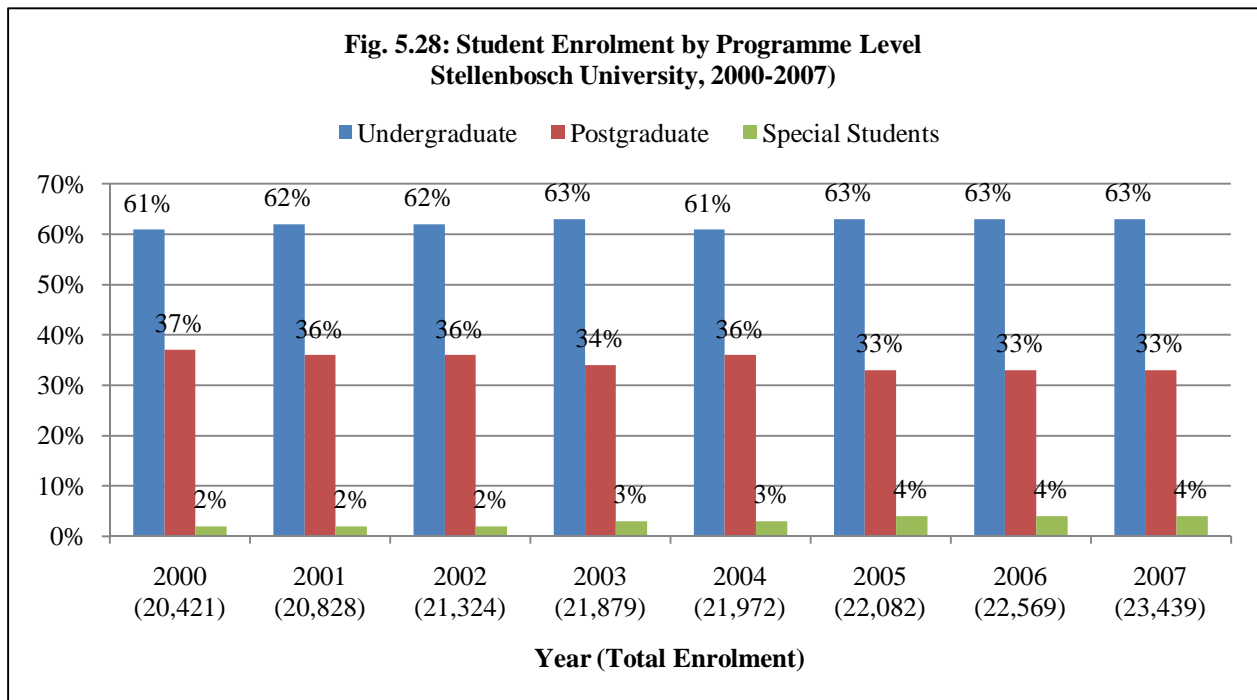
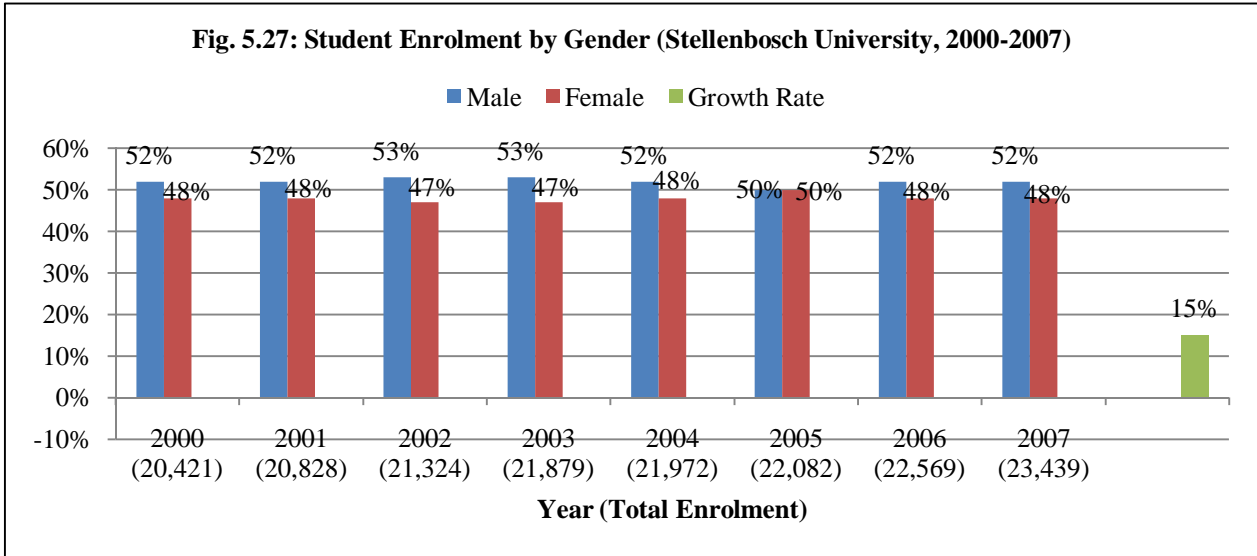


- Stellenbosch University -

- Students -

Total Student Enrolment by Gender and Programme Level

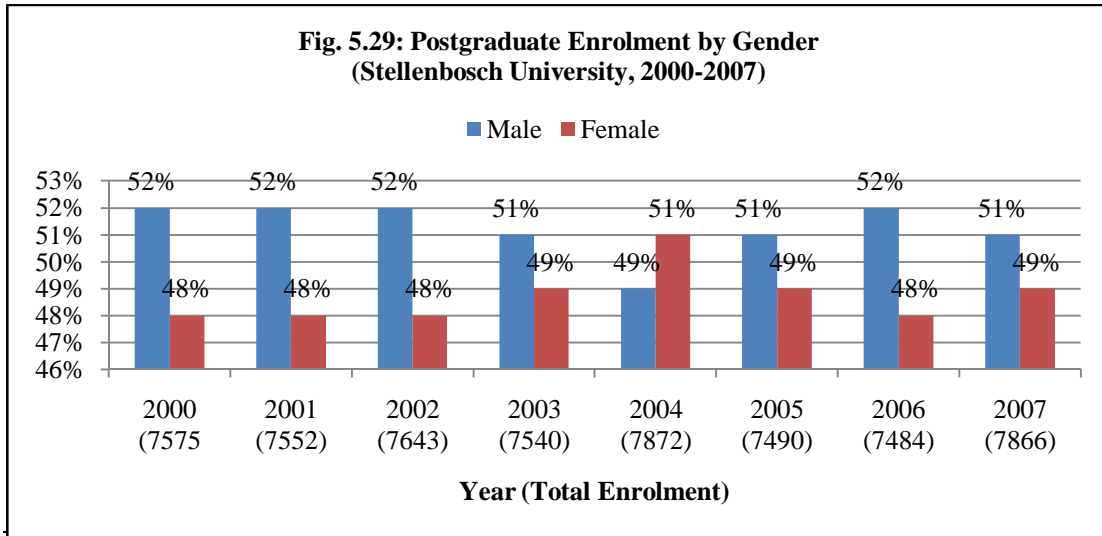
The total student population at Stellenbosch University increased to nearly 23,500 in 2007, representing a 15% increase over seven years. Female enrolment trailed male enrolment each year, remaining at 48% for much of the period except in 2005 when it achieved parity (Fig. 5.27). Undergraduate students constituted the bulk of the student body over the period, constituting over 60% each year. Postgraduate enrolments were at commendable levels, but decreased from 37% in 2000 to 33% in 2007 (Fig. 5.28).²³



²³ The source for Figures 5.27 through 5.36 is Stellenbosch University (2008).

Distribution of Postgraduate Enrolment by Gender and Race

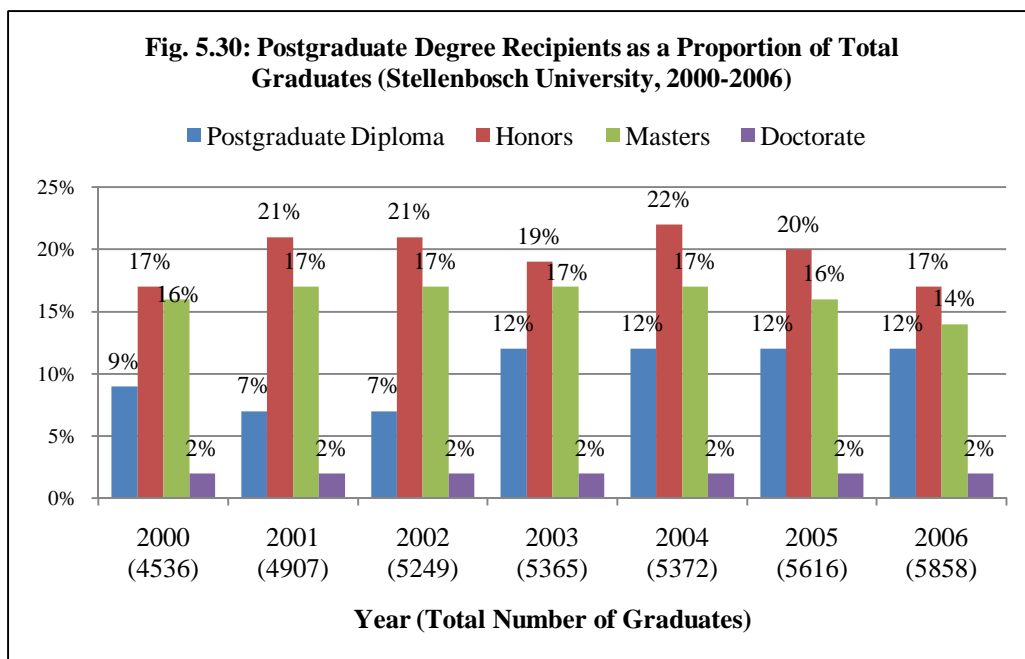
The number of female postgraduates, while not a majority, remained near parity with male enrolment, an encouraging sign for gender balance in the future professoriate (Fig. 5.29).



Between 2003 and 2007, a majority of postgraduate students were enrolled in the Faculty of Economics and Management, with the proportion of students in that faculty rising from 23% to 33% of the total population (Stellenbosch University, 2008). Thus, the commendable postgraduate proportions noted in Fig. 5.30 may be skewed by students enrolled in professional business programmes that generally do not lead to careers in academia.

Postgraduate Degrees Awarded

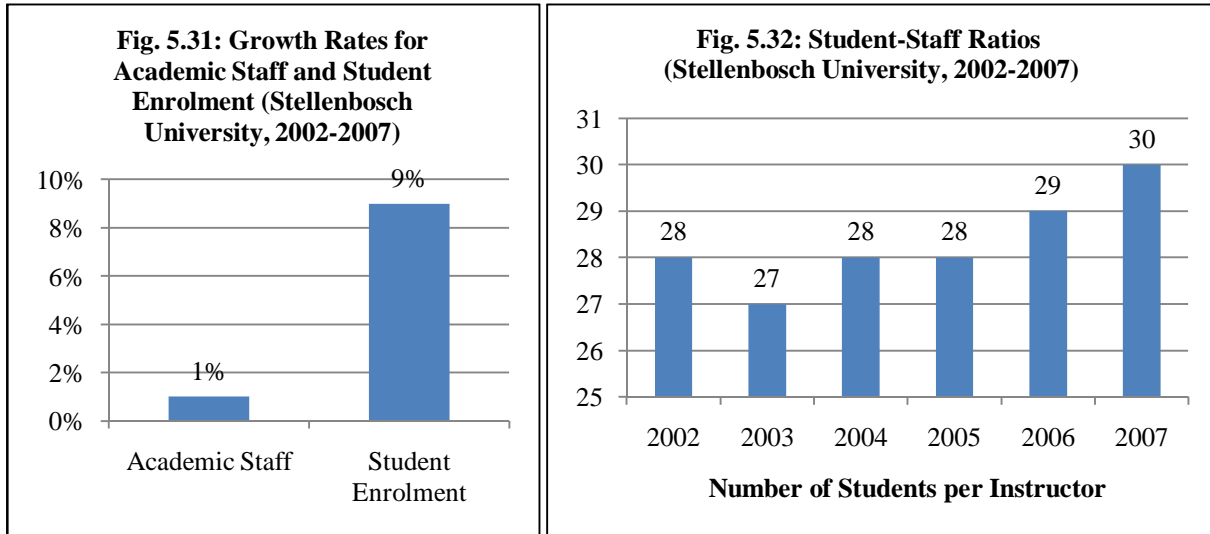
For most of the period 2000-2006, master’s graduates ranged between 16% and 17% of all graduates. Doctoral graduates remained constant, at two percent a year. The majority of postgraduate degrees went to those enrolled in programmes below the master’s level (Fig. 5.30).



- Academic Staff -

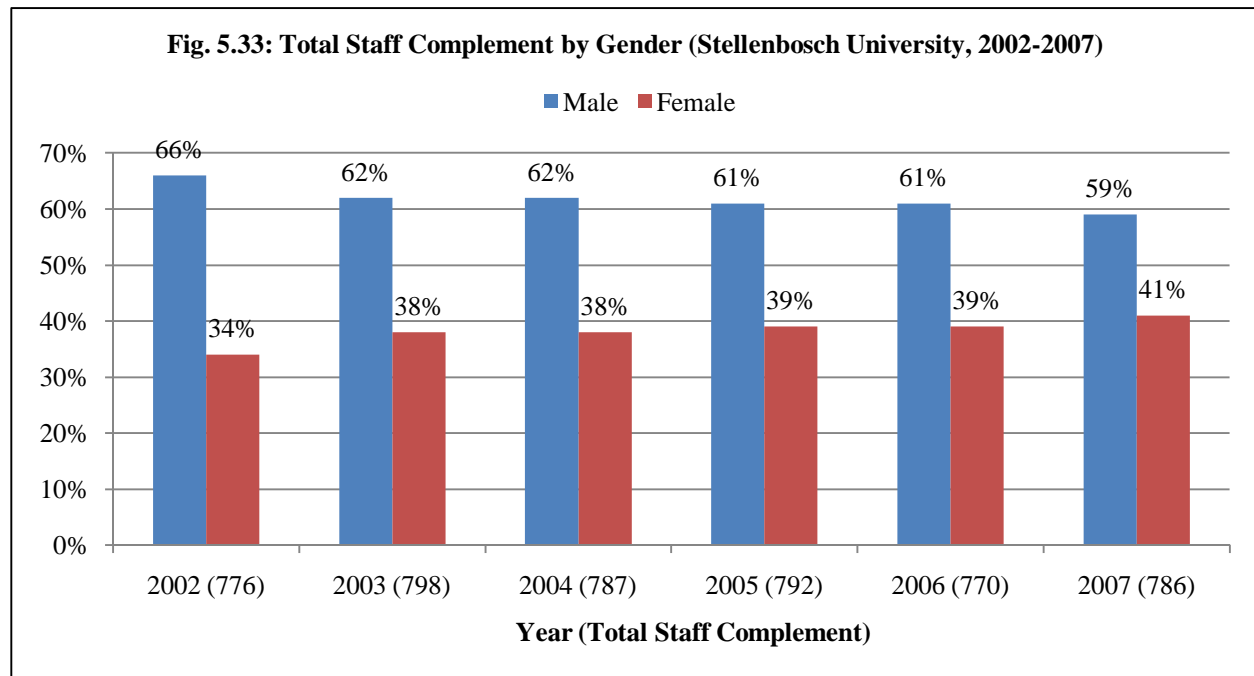
Academic Staff Capacity and Enrolment Pressures

Permanent academic staff members increased marginally by one percent between 2006 and 2007, compared to a nine percent expansion in student enrolment (Fig. 5.31). The lack of growth in staff numbers at the same time that student enrolments rose put extra burdens on staff, as evidenced by student-staff ratios which went from 28:1 in 2002 to 30:1 in 2007 (Fig. 5.32).

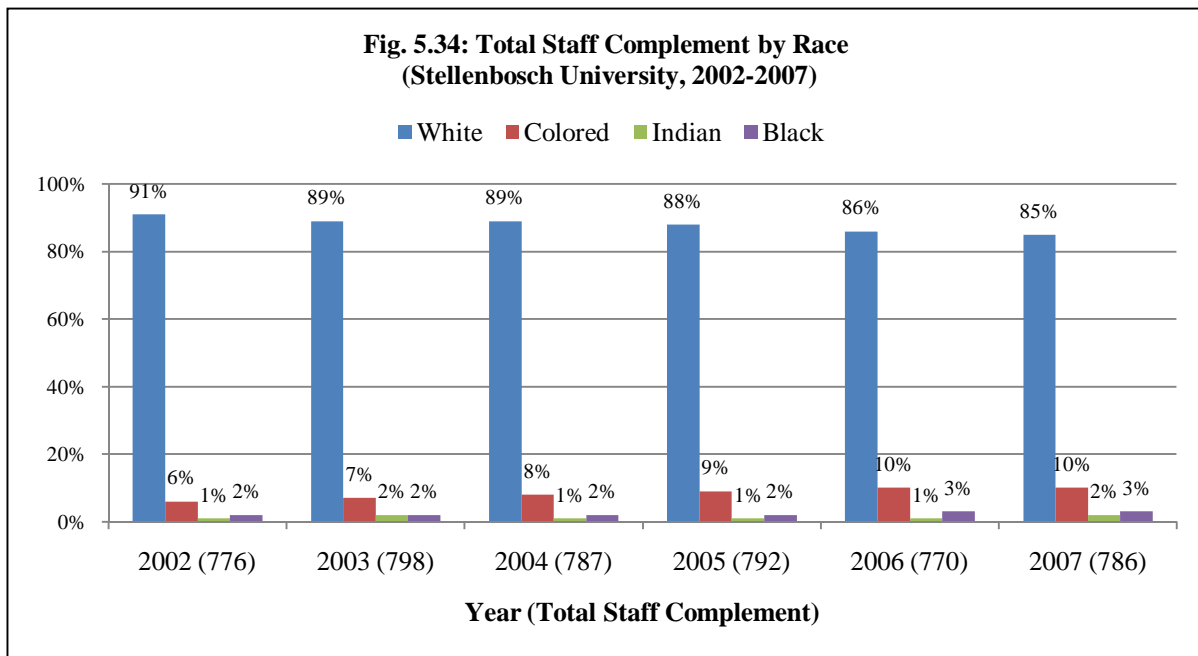


Distribution of Academic Staff by Gender and Race

Male staff made up the majority at Stellenbosch University between 2002 and 2007, although the proportion of female staff went up gradually over the period, increasing from 34% in 2002 to 41% in 2007 (Fig. 5.33). In absolute terms, male permanent academic staff numbers decreased 10% during this period, while their female counterparts rose by 25%.

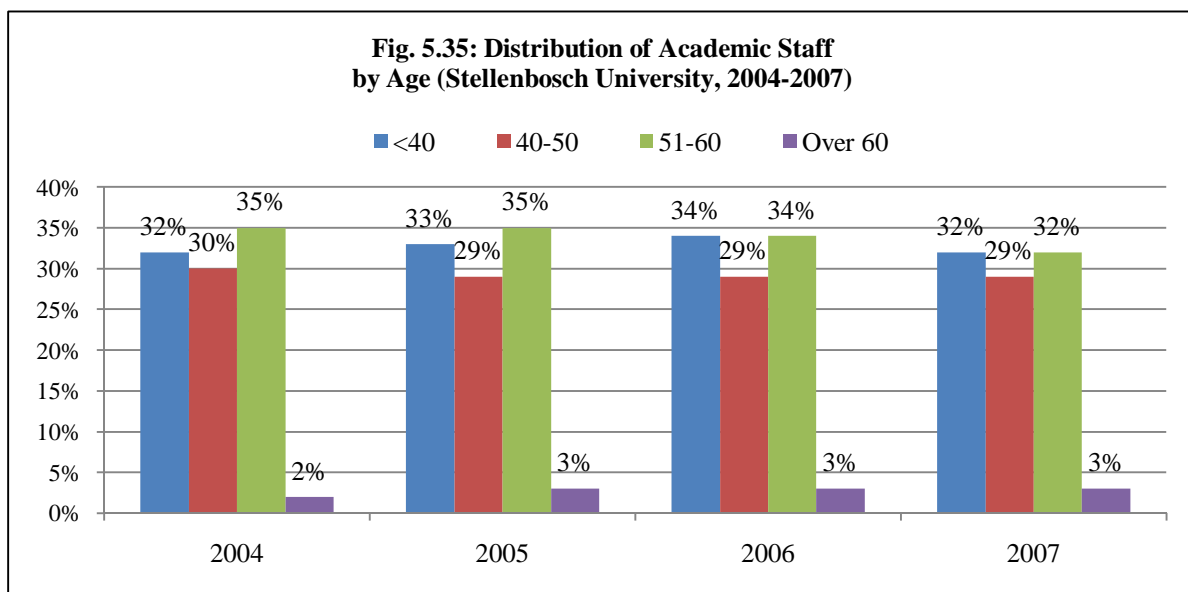


Whites constituted the overwhelming majority of staff, even though their proportion dropped from 91% in 2002 to 85% in 2007. Coloured staff constituted the second largest group, rising from single digits to 10% by 2006 and 2007 (Fig. 5.34). In order to make Stellenbosch University a welcoming place for students and academics from racially marginalized communities who could potentially populate the next generation of the South African professoriate, the trend towards increasing the proportion of non-white staff will need to be sustained and enhanced.



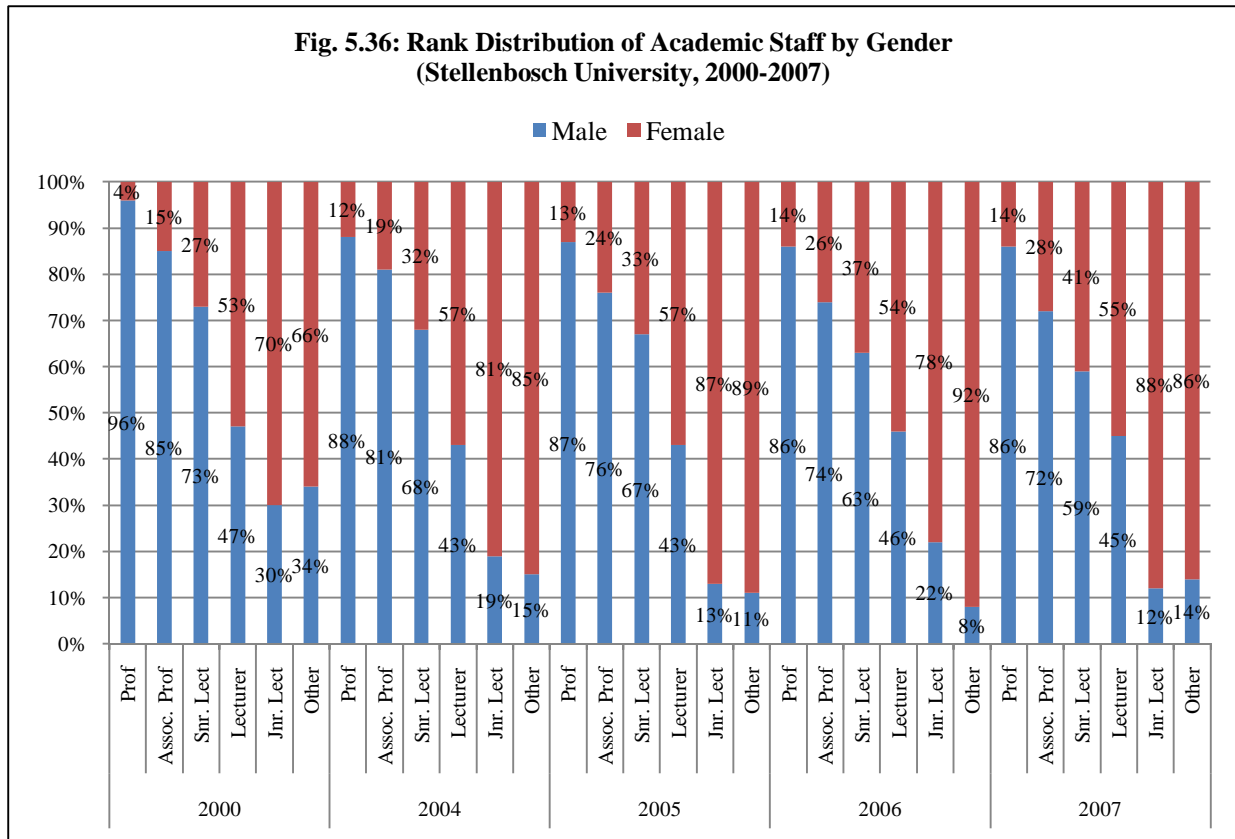
Distribution of Academic Staff by Age

As illustrated in Fig. 5.35, the various age groupings of staff were all roughly equal in size, hovering around 30%, with those in the 50-60 year old category slightly larger than the others.



Rank Distribution of Academic Staff by Gender

While men dominate the senior ranks of academic staff (from senior lecturer to full professor), women are a majority of the junior ranks. This is a positive indicator for gender balance in the next generation of academics. Over the years there have also been improvements in the proportions of females in the senior ranks. Whereas only four percent of full professors were female in 2000, by 2007 women comprised 14% of the highest academic rank. The proportion of women associate professors also went up from 15% in 2000 to 28% in 2007, while women senior lecturers increased proportionately from 27% in 2000 to 41% in 2007 (Fig. 5.36). These changes are all encouraging trends that need to be sustained and enhanced in order to increase the number of female role models and mentors, thereby dispelling notions of academia as a difficult terrain for women to navigate.

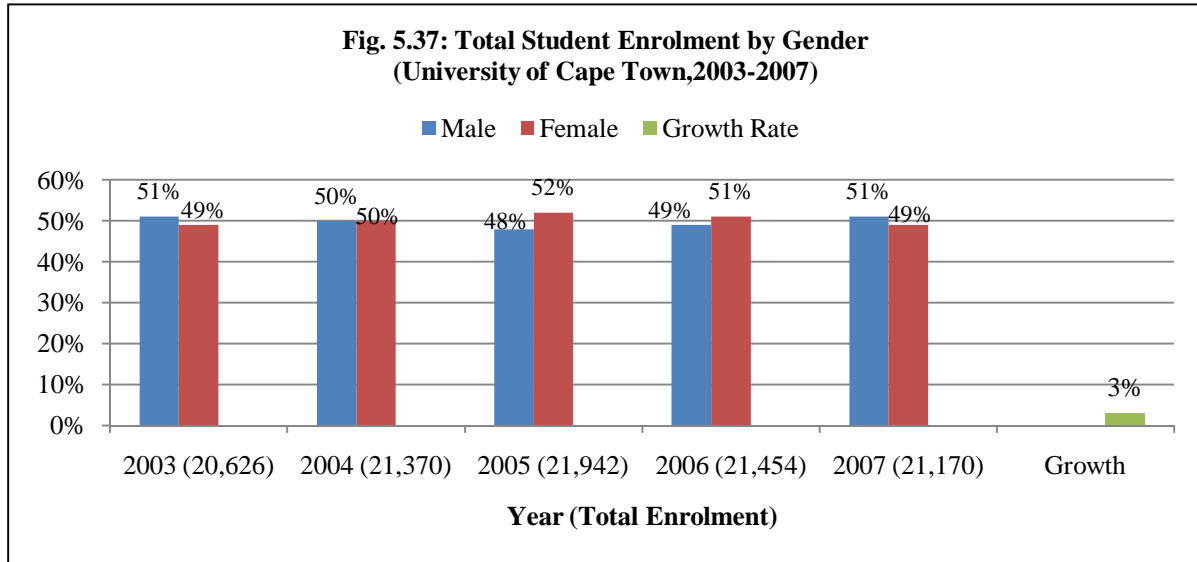


- University of Cape Town -

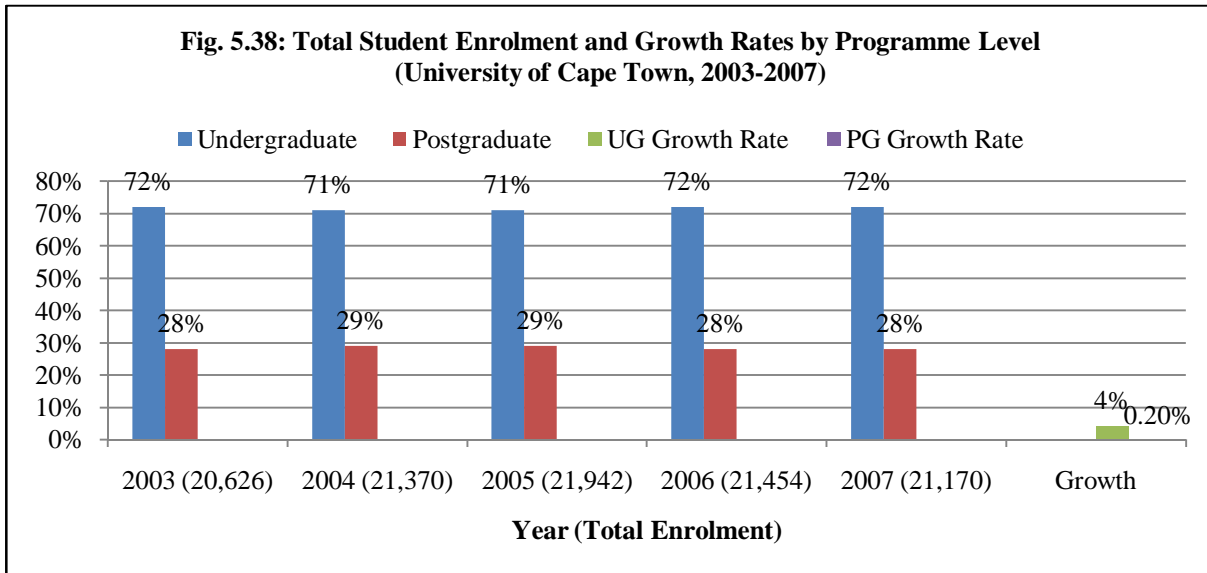
- Students -

Total Student Enrolment by Gender and Programme Level

Total student enrolment increased by three percent to just over 21,000 over the period 2003 to 2007 (Fig 5.37).²⁴ The proportion of male and female enrolments was almost even throughout.



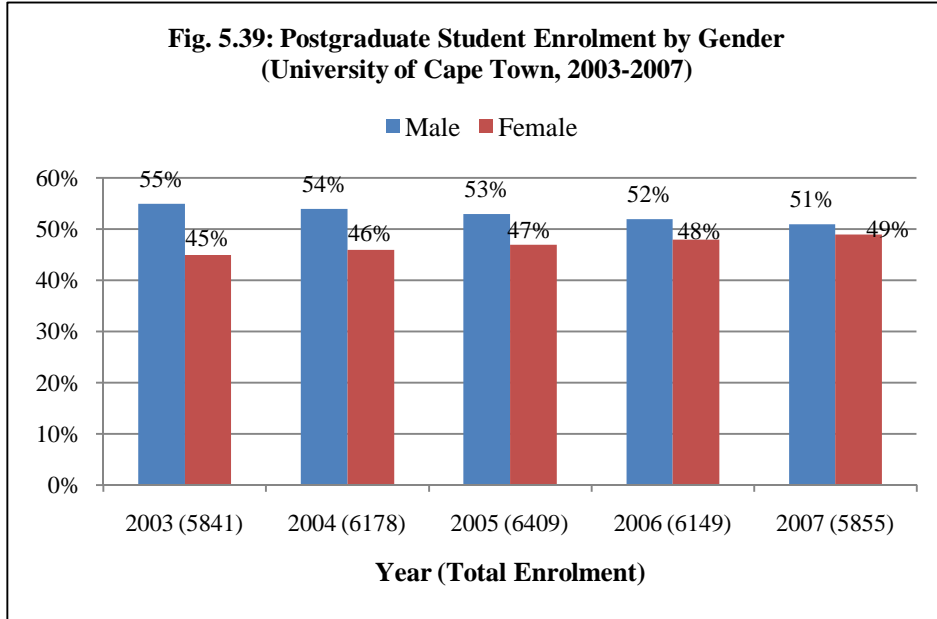
During this time, undergraduate students made up close to three-quarters of the total enrolment, growing by four percent to slightly over 15,000. The proportion of postgraduate students stayed healthy and steady throughout, going up imperceptibly by only 0.2% (Fig. 5.38).



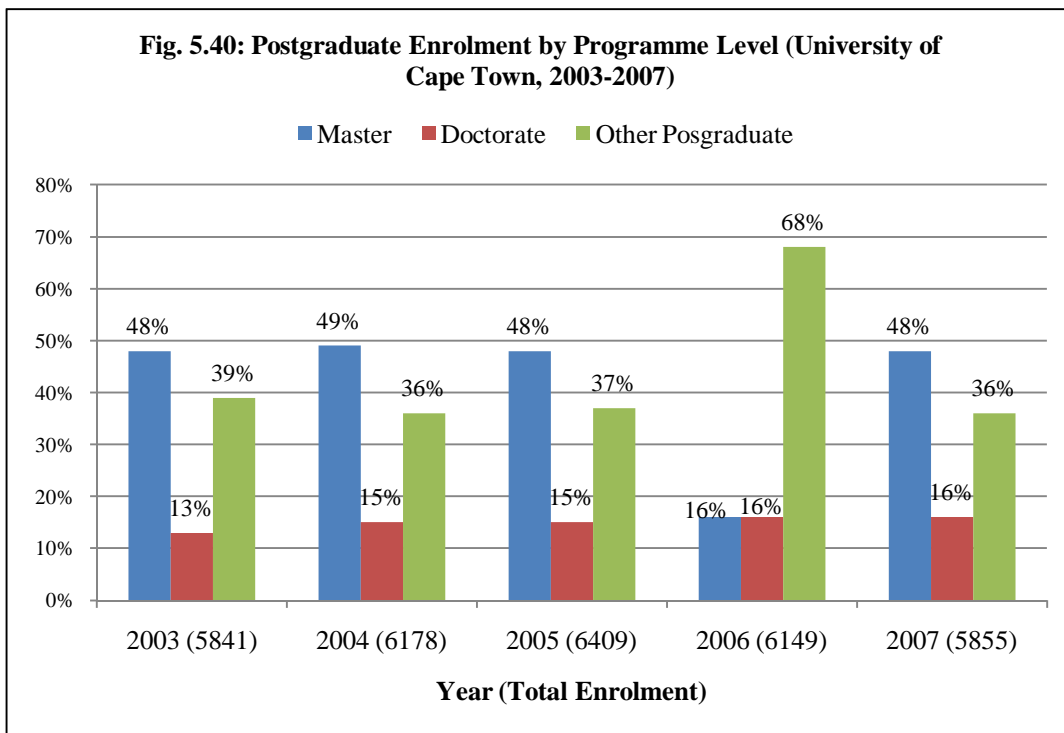
²⁴ The sources for Figures 5.37 through 5.44 are University of Cape Town (2004, 2005, 2006).

Distribution of Postgraduate Enrolments by Gender and Programme Level

The female proportion of postgraduate enrolments increased steadily from 2003 to 2007, arriving at near parity in 2007 (Fig. 5.39). The potential for this to increase female representation in the South African professoriate is a welcome prospect, especially in view of UCT’s excellent quality reputation.

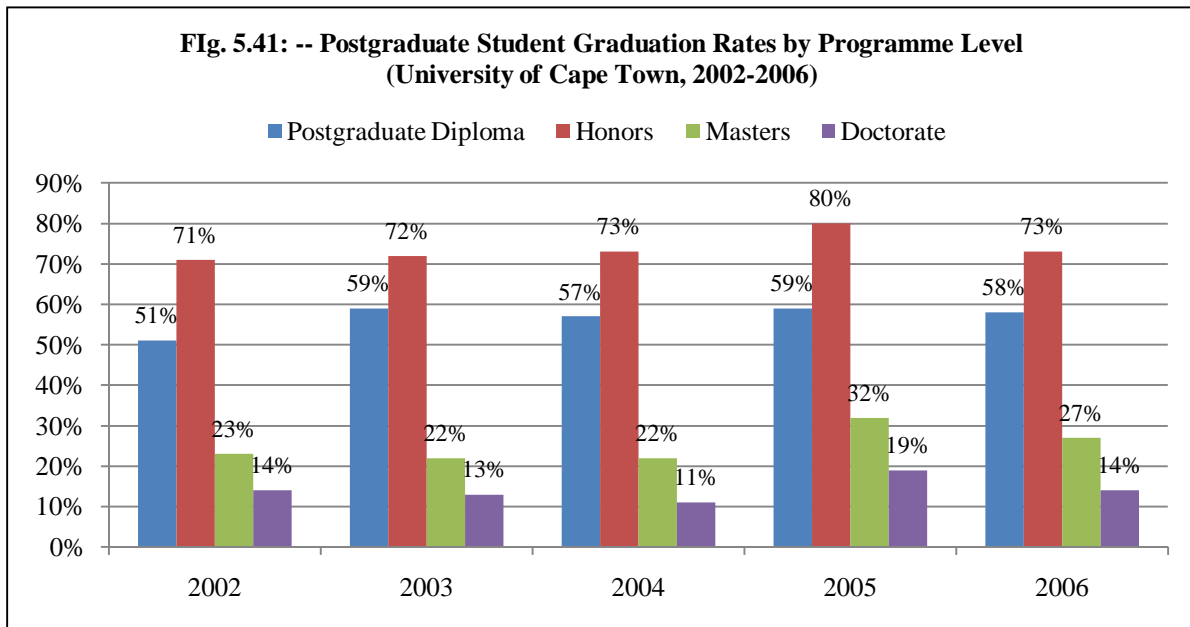


While the proportion of postgraduates to undergraduates is healthy at UCT, that picture does not necessarily improve prospects for training the next generation of academics because a significant proportion of the postgraduate cohort is enrolled in programmes that may not lead to academic careers (Fig. 5.40). It is notable that the proportion of master’s students went down significantly in 2006, when it represented only 16% of the total, for reasons that are not clear.



Postgraduate Graduation Rates by Programme Level

The highest graduation rates were among honours students — 71% in 2002 and 73% in 2006 (Fig. 5.41). Graduation rates among master's students went up from 23% in 2002 to 32% in 2005, before sliding to 27% in 2006. Doctoral graduation rates ended the period at the same rate as they started (14%). Overall graduation rates of both master's and doctoral students were very low, which raises questions about the capacity of the institution to produce the next generation of academics and correct the staff capacity deficit that the country's tertiary institutions are facing.



- Academic Staff -

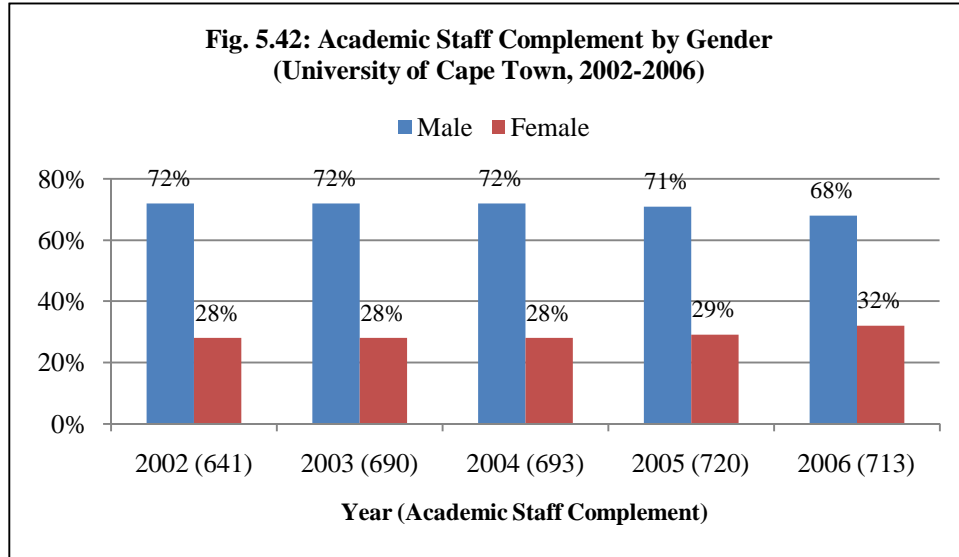
Academic Staff Capacity and Enrolment Pressures

Academic staff numbers increased by 11% from 2002 to 2006, a noteworthy growth rate as it outstripped the four percent student enrolment growth for the same period (University of Cape Town, 2004, 2005, 2006). This represents a development unique among the institutions covered in this study and puts UCT in a favourable position in comparison to all the other institutions battling to keep up with expanded student enrolments.

As a result of the increasing in staffing, overall student-staff ratios improved slightly from 32:1 in 2003 to 30:1 in 2006. The increase was not distributed equally across faculties, and some faculties exceeded the institutional average by large margins. The figures for the Faculty of Commerce in 2002 and 2006 were about 63:1 and 62:1, respectively, while the ratios for the Faculty of Law were about 60:1 in 2002 and 50:1 in 2006.

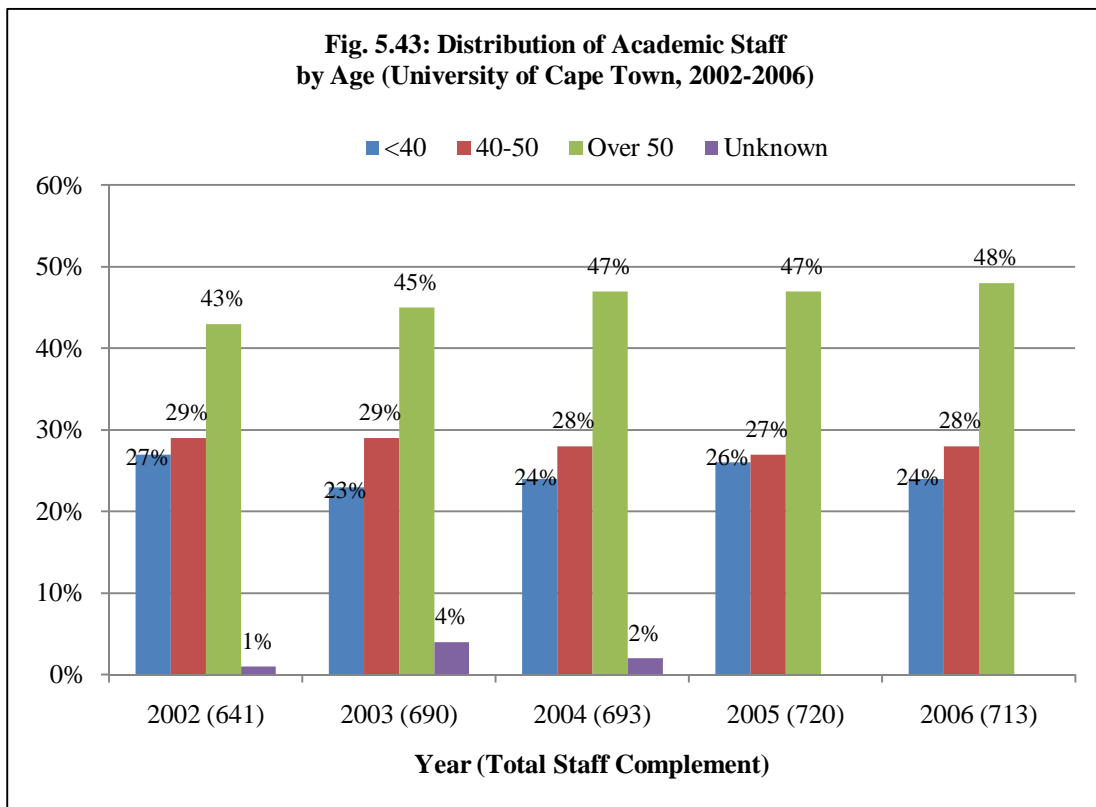
Distribution of Academic Staff by Gender

While male staff continued to constitute a large majority, their numbers declined from 72% in 2002 to 68% in 2006 (Fig. 5.42). While progress is being made as the proportion of female staff inches up (to 32% in 2006), more efforts need to be made to sustain and enhance the incremental progress by opening up opportunities for a new generation of female academics.



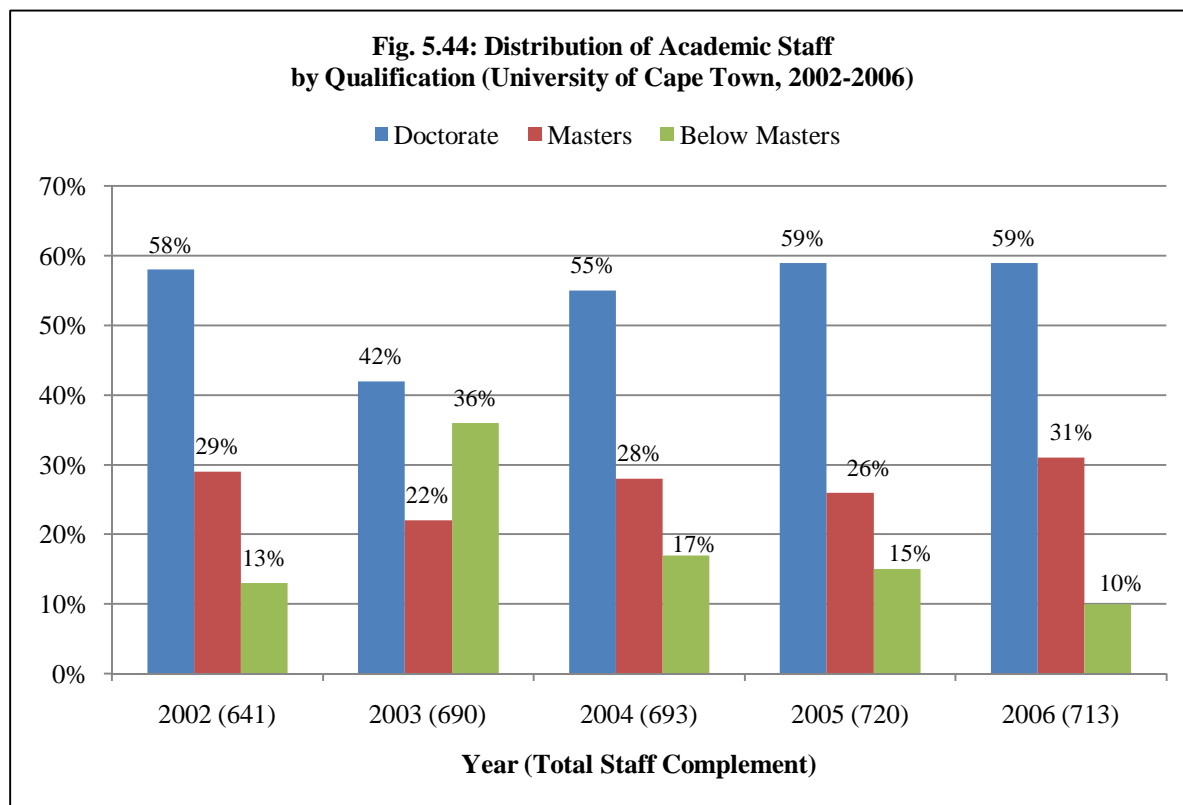
Distribution of Academic Staff by Age

During the 2002-2006 period, the University of Cape Town had a significant and growing proportion of academic staff in the over-50 age range, which increased from 43% in 2002 to 48% in 2006 (Fig. 5.43).



Distribution of Academic Staff by Qualification

Between 2002 and 2006, the majority of academic staff held doctoral degrees, with their proportion generally hovering between 58% and 59% (Fig. 5.44).²⁵ Master's holders increased from 29% in 2002 to 31% in 2006. At the same time, the fact that a tenth of staff members had either an honour's or lower qualification is worrisome and needs to be addressed.



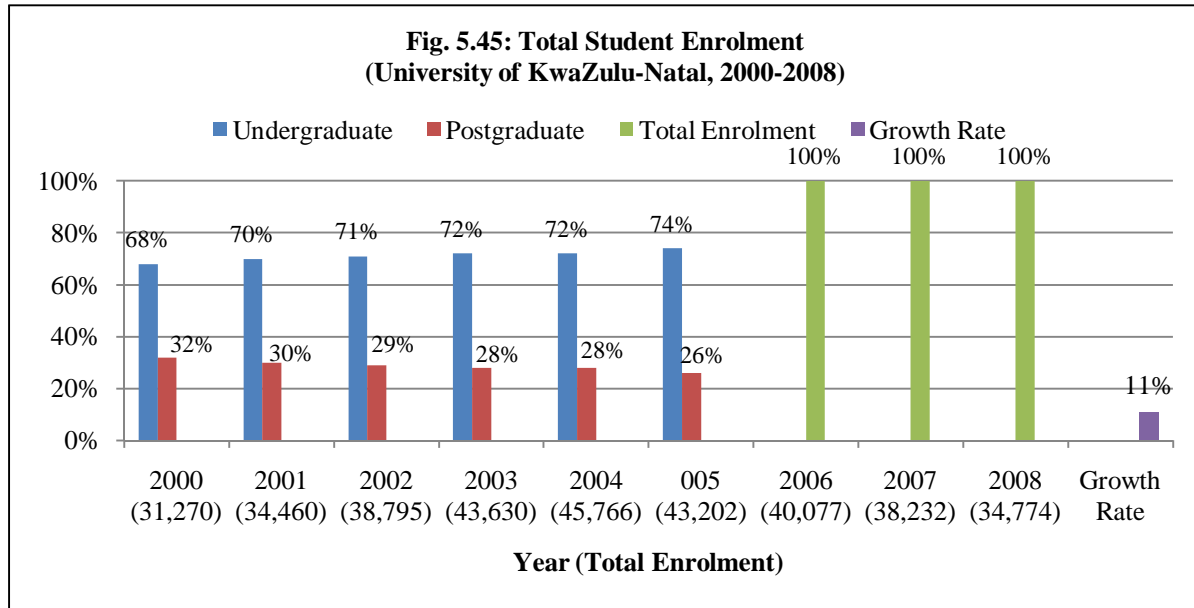
²⁵ The bubble of doctoral degree holders dropping from 58% in 2002 to 42% in 2003 raises the question of whether the data for 2003 are accurate. The huge jump from 13% to 36% for staff with less than a master's degree in that year also leaves the data's accuracy open to question.

- University of KwaZulu-Natal -

- Students -

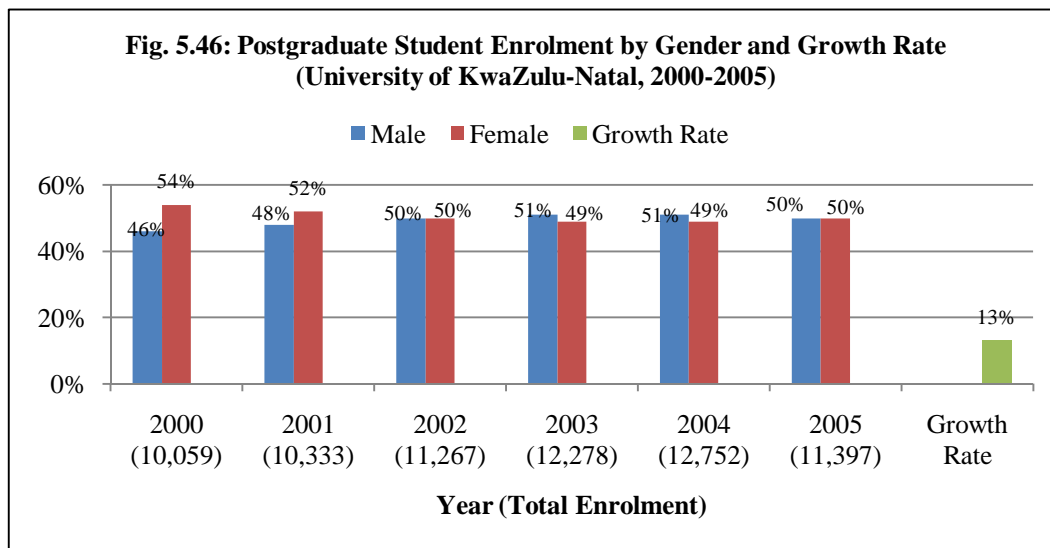
Total Student Enrolment by Programme Level

Student enrolments increased to near 35,000 in 2008, representing an 11% growth rate since 2000. The university had healthy, though declining (from 32% to 26% in 2005), proportions of postgraduate students (Fig. 5.45).²⁶



Postgraduate Student Enrolment by Gender

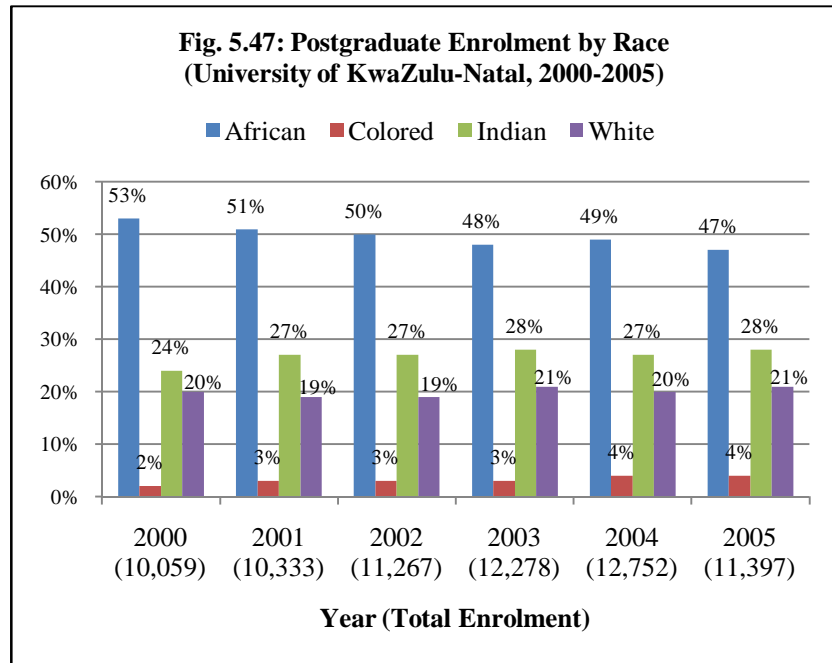
Postgraduate student enrolments increased by 13% from 2000 to 2005, with women either in the majority or at/near parity throughout the period (Fig. 5.46). As in the other cases in South Africa, it will be useful to explore how the significant number of females in postgraduate enrolments maps onto their future representation in the professoriate.



²⁶ The source for Figures 5.45 through 5.55 is University of KwaZulu-Natal (2008).

Postgraduate Student Enrolment by Race

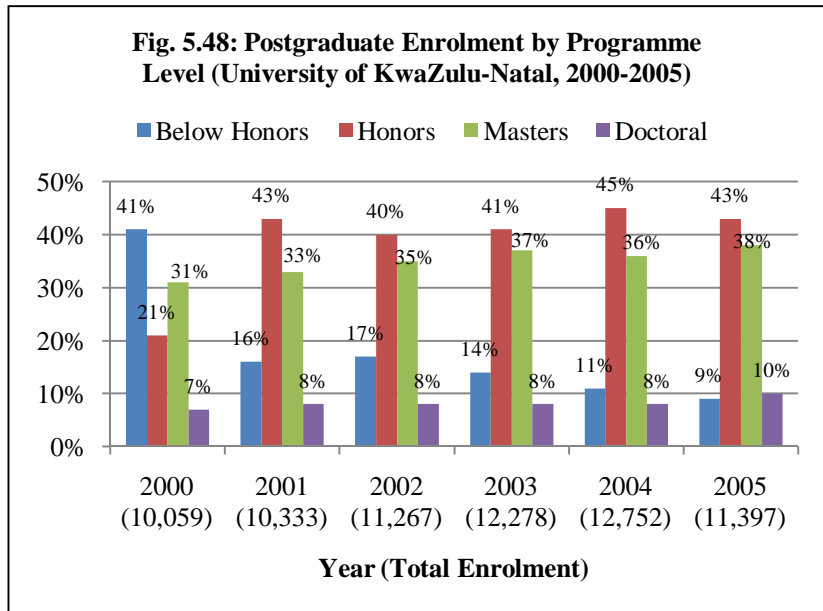
The majority of postgraduate students during 2000-2005 were African (Fig. 5.47), even though their proportion of the total enrolment went down by six percent during this time. The proportion of Indian students increased over the period, from 24% to 28%, while the percentage of whites held steady at about 20%. Coloured students were the least represented group, with about two percent of postgraduate enrolments in 2000 and four percent in 2005. While the University of KwaZulu-Natal postgraduate enrolment figures appear more racially diverse than other South African universities, the enrolment



figures should be seen in the context of the population breakdown of the province, with 85% of its population being black African, eight percent Asian (predominantly Indian), five percent white and two percent coloured (Statistics South Africa, 2006). Similarly, enrolment figures at all the South African universities must be viewed in terms of the representation of all racial groups in the population.

Postgraduate Student Enrolment by Programme Level

In 2000, only seven percent of postgraduate students were registered in doctoral programmes and about 31% at the master's level. By 2005, the proportion of doctoral students had increased to about 10% of postgraduate enrolments, while master's enrolments stood at about 38%. The corresponding growth in absolute numbers was 58% and 38%, respectively. These are clearly positive trends; however, the vast majority of postgraduate students were registered in honours programmes during this period, leaving the proportion of postgraduate students constituting



the potential pool from which to attract the next generation of academics (i.e., doctoral and master's students) at less than half of the total postgraduate student complement (Fig. 5.48).

Postgraduate Completion and Dropout Rates

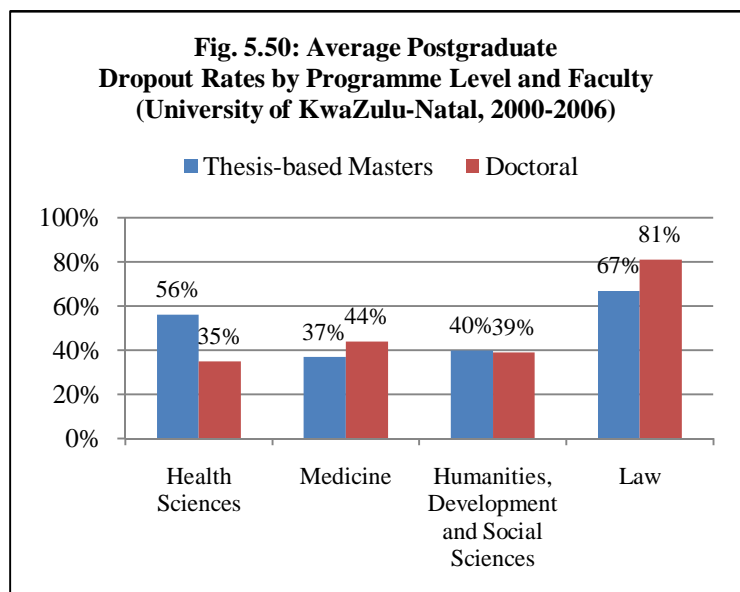
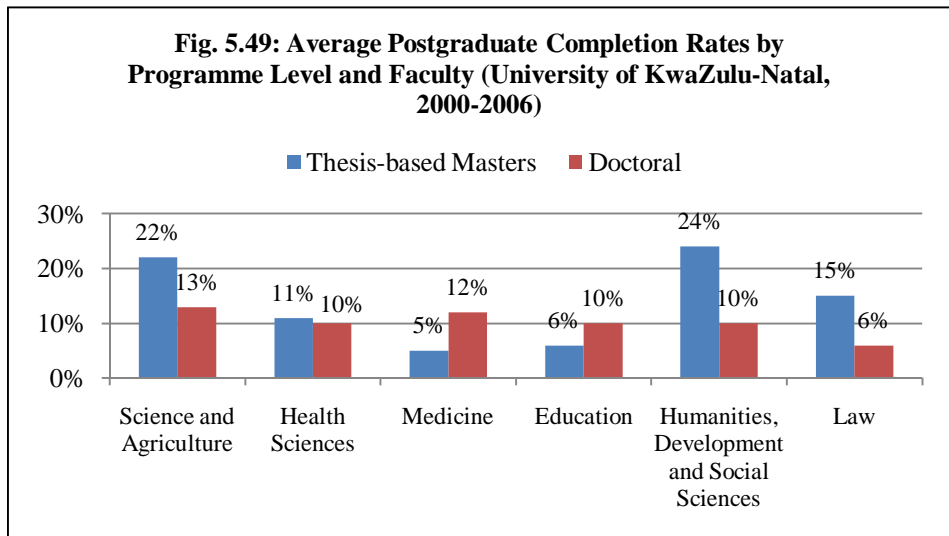
While postgraduate enrolments are useful for determining the potential pool of future academics, even more crucial are the percentage of enrolees who complete their programmes within designated periods or drop out (Figs. 5.49, 5.50). Analysis of the completion rates in the Faculty of Science and Agriculture shows that the average completion rate for the two programmes most likely to produce future academics — thesis-based

master's and doctoral programmes — stood at low rates of 22% and 13% respectively.

In the Faculty of Health Sciences, the average dropout rate for thesis-based master's students was about 56%, while the corresponding figure for their doctoral counterparts was about 35%. More than half of master's students and

over a third of doctoral students dropping out of their programmes has a significantly negative impact on the potential pool of the next generation of academics. The statistics for the faculty are even more worrisome when the indicator of completion rates is assessed. The rates for thesis-based master's and doctoral students averaged about 11% and 10% respectively. With only a tenth of the cohorts completing their programmes on schedule, there is a huge disconnect between intake and output, with serious implications for replenishing the professoriate with requisite numbers and appropriate levels of training.

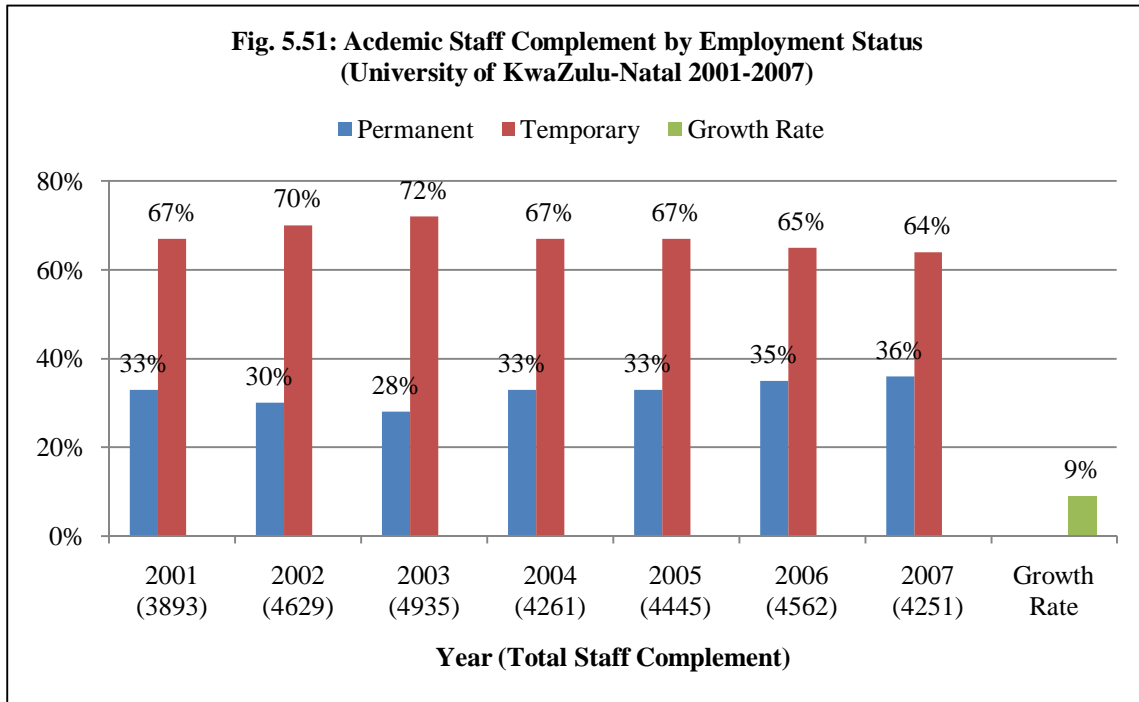
The trend to drop out was similar in the Faculty of Medicine where about 37% of thesis-based master's students and 44% of doctoral students abandoned their programmes. The completion rates are even more astonishing as only about five percent of thesis-based master's students and 12% of doctoral students completed their programmes on schedule. Dropout rates for thesis-based master's and doctoral students in Humanities, Development and Social Sciences were also relatively high at 40% and 39% respectively while completion rates for the two programmes were 24% and 10%. In the Faculty of Law, dropout rates were high at 67% for thesis-based master's programmes and 81% for doctoral programmes. The corresponding averages for completion rates for the two groups were fifteen and six percent.



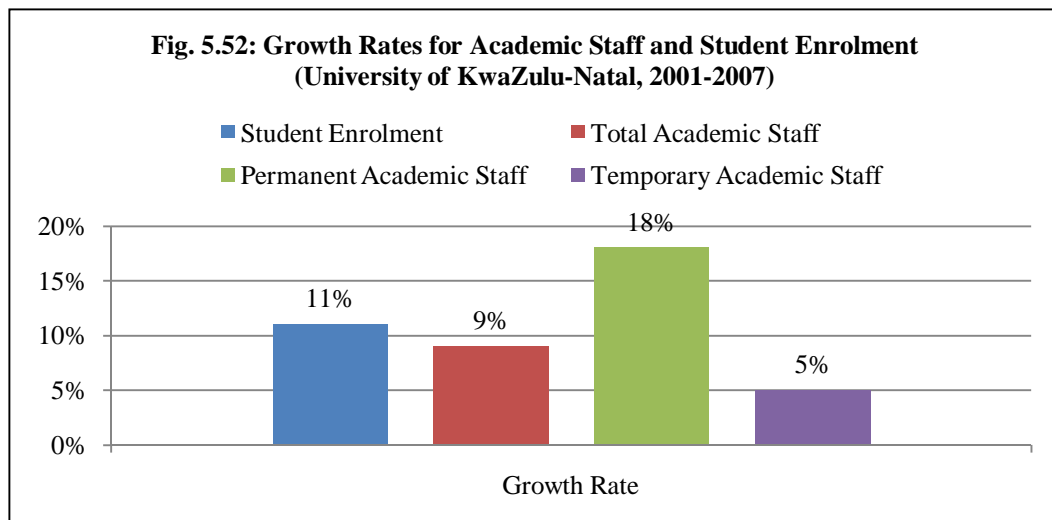
- Academic Staff -

Academic Staff Capacity and Enrolment Pressures

Between 2001 and 2007, total staff numbers grew by nine percent (Fig. 5.51), slightly behind the student enrolment growth rate of 11% (Fig. 5.52). The university had a significant number of temporary academic staff relative to permanent staff, with 64% of them on temporary contacts in 2007 (Fig. 5.51). The trend at the university, however, is towards increased numbers of permanent staff, which grew by 18% between 2001 and 2007 (Fig. 5.52).

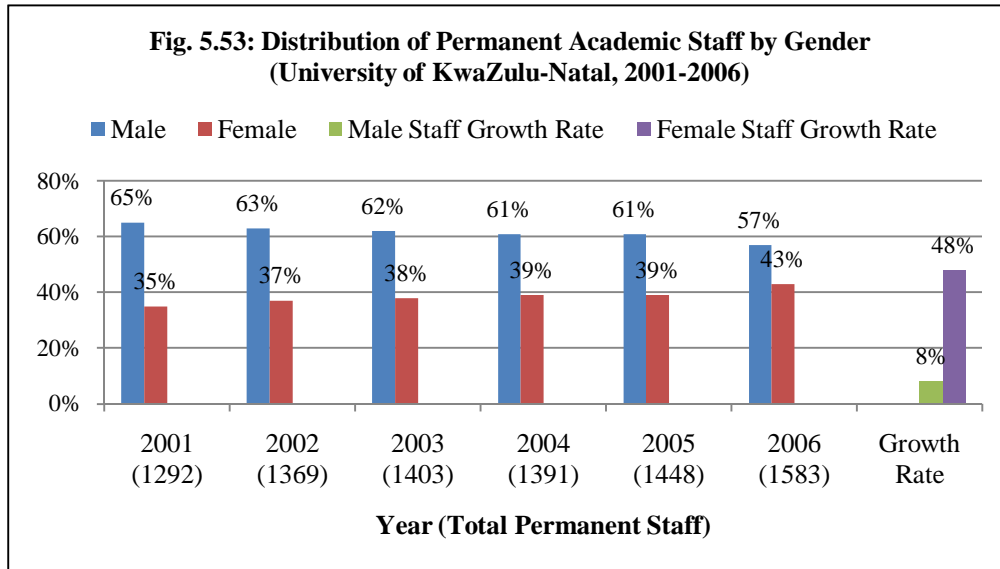


Notwithstanding these developments, the fact that the university still depends on temporary staff for nearly two-thirds of its teaching staff indicates that the need for an expanded and sustainable pool of permanent staff is far from being addressed. A huge temporary staff complement may provide fleeting relief from enrolment pressures, but is not a panacea for developing the overall capacity of the institution to deliver its teaching and research mandates.

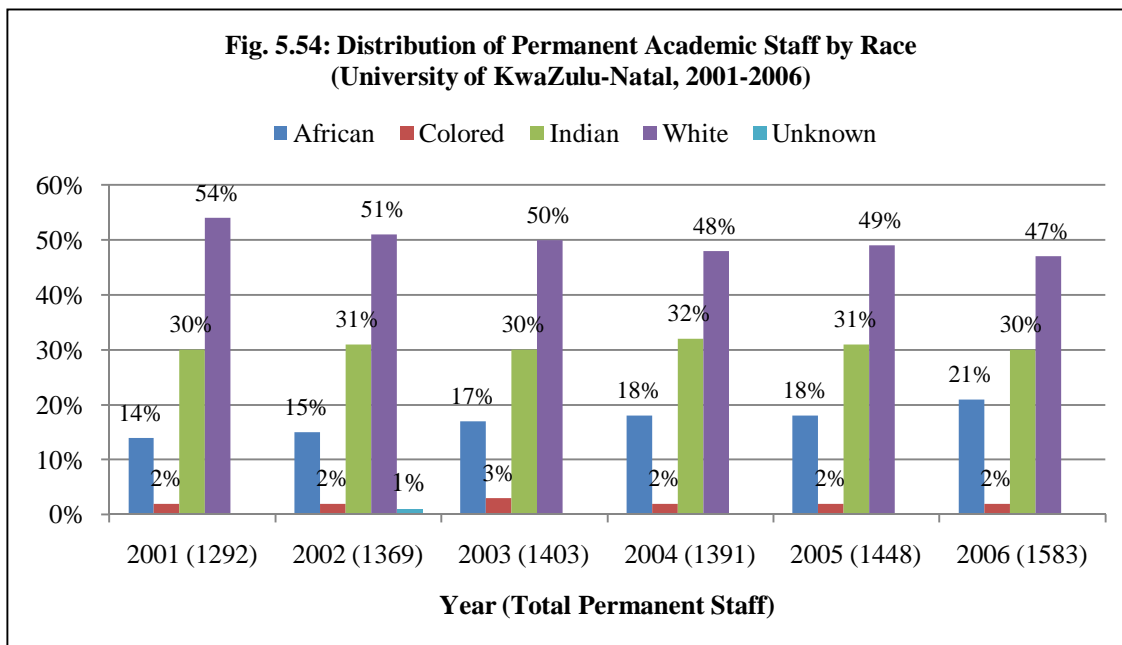


Distribution of Academic Staff by Gender and Race

While the number of male academic staff on permanent appointments has consistently outstripped that of their female counterparts, the numbers of women academic staff has been growing. The gap has steadily decreased over the 2001-2006 period, with the proportion of females increasing from 35% in 2001 to 43% in 2006. This was clearly the result of gender awareness in hiring new staff, as permanent male academic staff increased by eight percent, while the female staff complement increased by 48% during the period (Fig. 5.53).

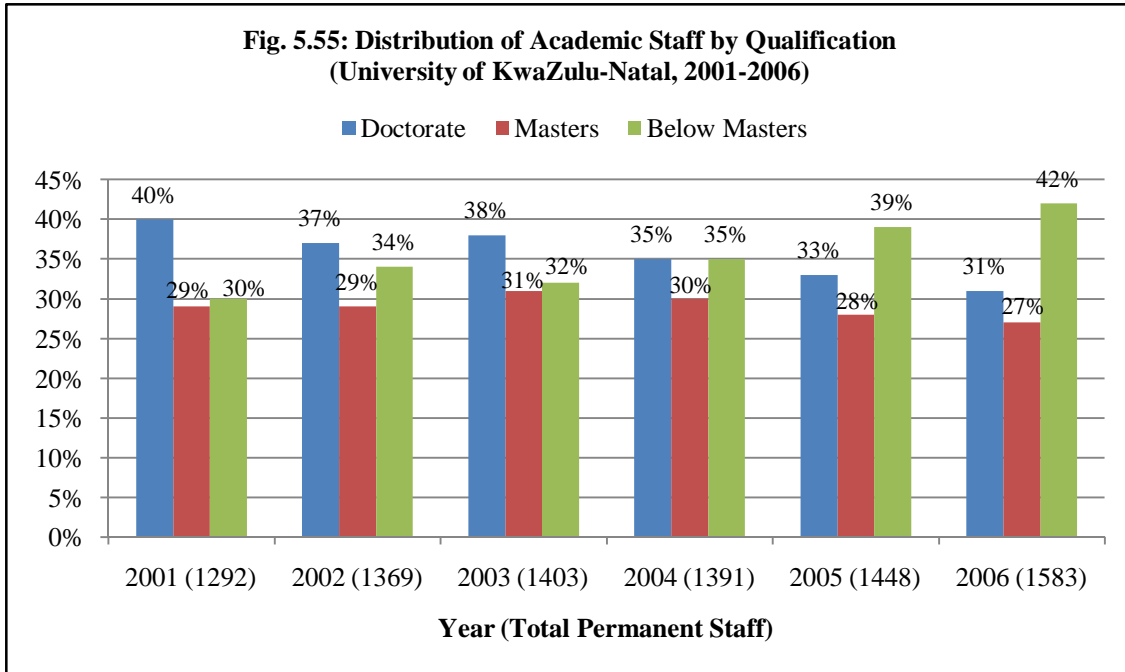


White staff, comprising close to half the staff complement over the period 2001 to 2006, have traditionally been the majority group, a reality that has continued to endure. Their numbers, however, decreased over the period from 54% to 47%. Indian staff, the next largest group, maintained a steady proportion of around 30% over the period. The most significant increase occurred among African staff, who experienced 81% growth over the period and constituted 21% of staff in 2006, compared to 14% in 2001 (Fig. 5.54). While coloured staff increased by 38% between 2001 and 2006, they remained the smallest group, at two percent for the duration of the period.



Distribution of Academic Staff by Qualification

The university registered a decreasing proportion of doctoral and master's degree holders, with doctorate holders falling from 40% in 2001 to 31% in 2006 and master's from 29% in 2001 to 27% in 2006 (Fig. 5.55). At the same time, the proportion of staff with qualifications below the master's level increased from 30% in 2001 to 42% in 2006. The troubling nature of these trends is underlined by the fact that master's and doctorate holders, who comprised almost 70% of academic staff in 2001, dwindled to 58% in 2006. The fact that 42% of academic staff have less than a master's level qualification requires urgent attention and redress if the institution's academic profile is to be maintained, let alone enhanced, and its scholarly capacity strengthened.



Distribution of Academic Staff by Age

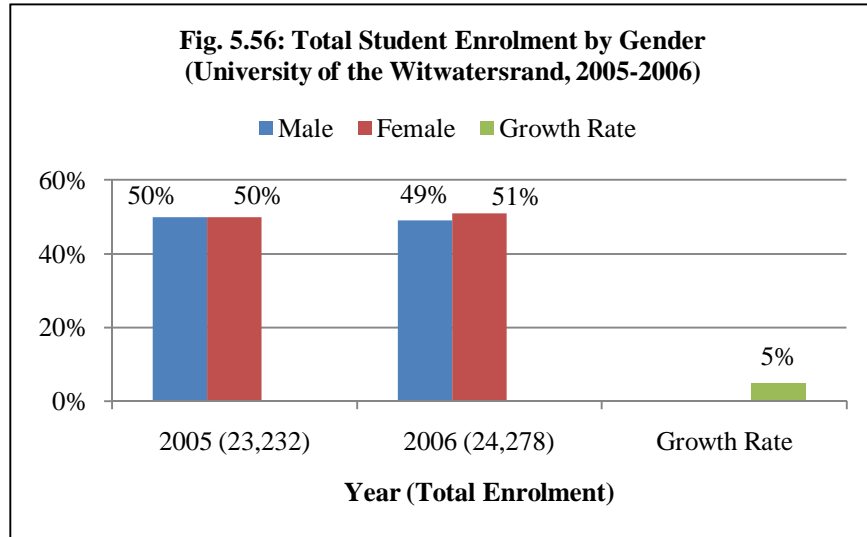
Between 2001 and 2006, academic staff between the ages of 20 and 40 represented about 20% of the total number. This number, together with their counterparts in the 41-50 year bracket, constituted about 73% of academic staff in 2001 and 70% in 2006 (University of KwaZulu-Natal, 2008). This suggests that UKZN has a healthy population of young academics to sustain it as long as efforts are made to ensure that the increased numbers of younger staff with lower qualifications are provided with opportunities for further study.

- University of the Witwatersrand -

-Students -

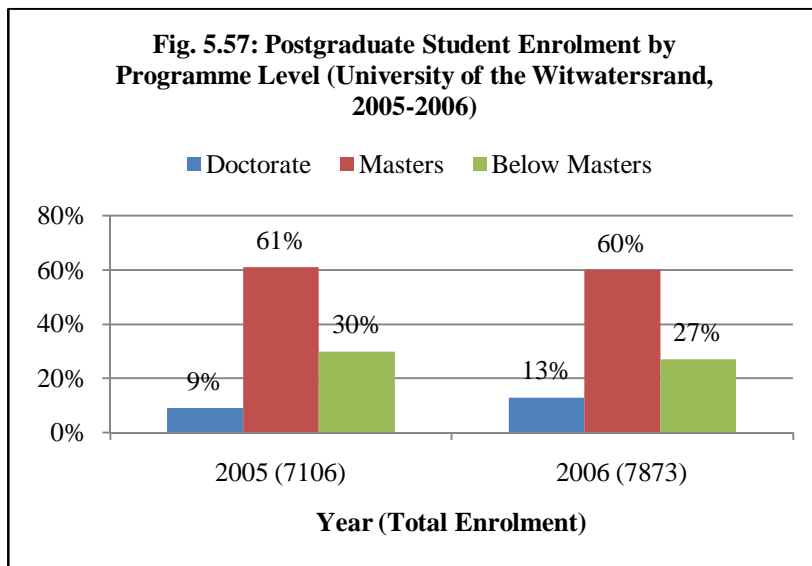
Total Student Enrolment by Gender and Programme Level

Overall student enrolment increased to slightly over 24,000 in 2006, representing a five percent rise over one year, while male-female distribution was at or near parity (Fig. 5.56).²⁷ In 2005 and 2006, postgraduate students represented 31% and 32%, respectively, of the total student body (University of the Witwatersrand, 2007).



Postgraduate Student Enrolment

Postgraduate student enrolments increased by 10% between 2005 and 2006. The majority of postgraduate students (hovering around 60%) were enrolled at the master’s level (Fig. 5.57). Doctoral students made up nine percent of the postgraduate student body in 2005, a figure that increased to 13% in 2006.



²⁷The sources for Figures 5.56 through 5.62 are University of the Witwatersrand (2007) and other data provided by the university to the author.

- Academic Staff -

Academic Staff Capacity and Enrolment Pressures

Academic staff decreased by 1.5% at a time when student enrolments increased by five percent, putting additional stress on staff capacity.

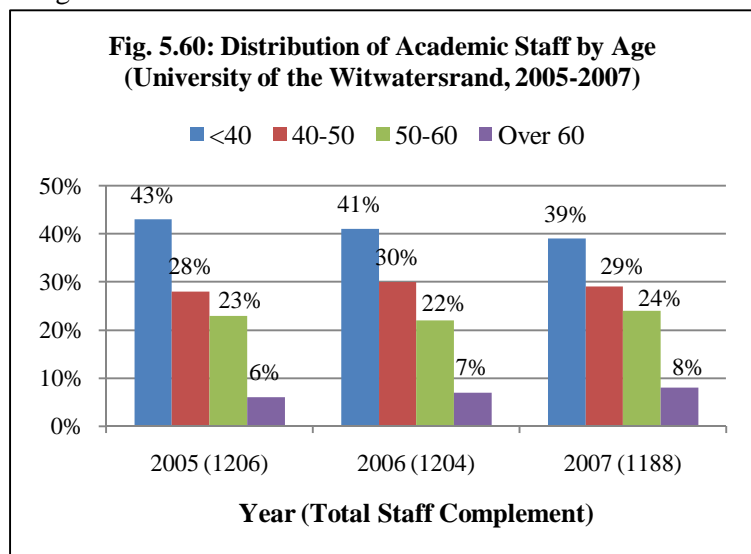
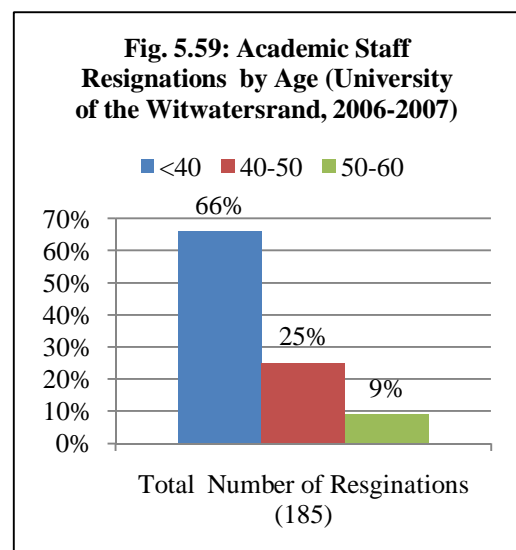
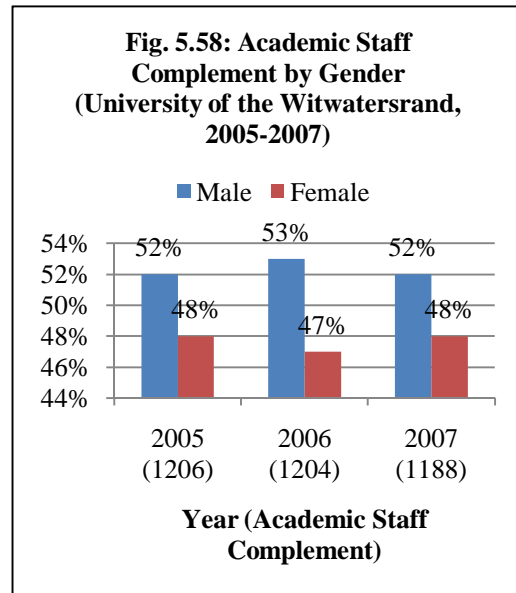
Distribution of Academic Staff by Gender

As shown in Fig. 5.58, there were more male than female staff each year from 2005 to 2007, with female staff averaging 48%. This relatively high ratio of women academic staff is commendable in comparison to most other institutions that were part of this study. The prospects for closing the gap further are good if trends in the gender composition of new hires in 2007, of which women constituted 59%, are indicative of future trends.

Distribution of Academic Staff by Age

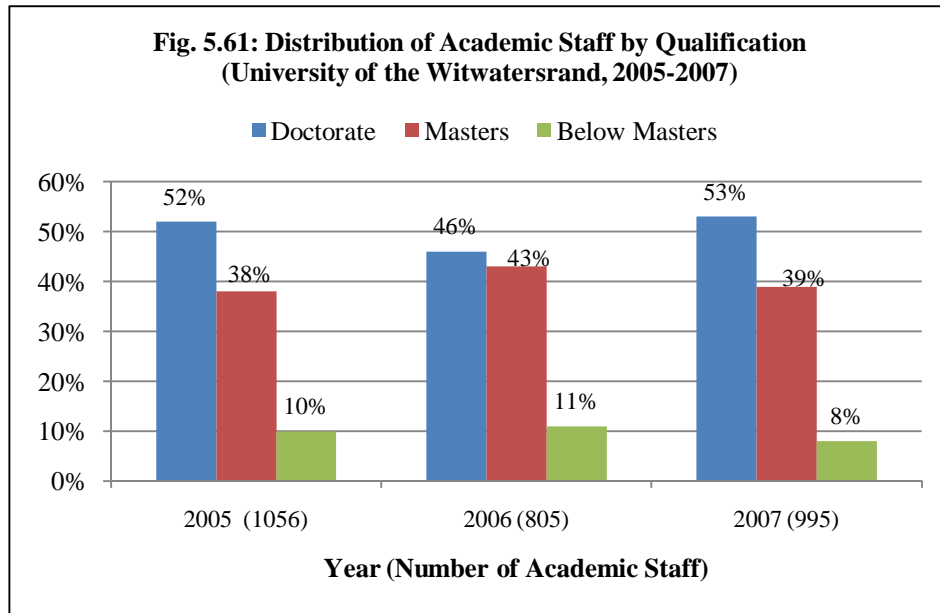
Academic staff below the age of 40 constituted the largest proportion of the total complement between 2005 and 2007, although their proportion decreased at the same time that the proportion of staff above 50 years crept up from 29% to 32% (Fig. 5.60). The trend suggests a gradually ageing professoriate, even though the overall distribution gives no cause for alarm in the short-term. The strategic hiring direction that the institution is pursuing needs to be sustained to ensure that as the number of those in the 50+ group grows, there are enough people at the other end of the age pipeline ready to replace them as they retire. It is noteworthy that roughly three-quarters of the new hires in 2006 and 2007 were under 40 years of age.

A disturbing trend is the high number of resignations on the part of staff under 40 years of age in 2006-2007. Two-thirds of those who resigned from the teaching staff were in the youngest age group; if this group is combined with resignations of those between the ages 41-50, the figure adds up to a colossal 91% of resignations (Fig. 5.59). One can probably surmise that those who have chosen to leave employment at perhaps the highest regarded university in the country are receiving more attractive offers in non-academic positions or may be leaving the country entirely. In any case, it is disturbing that many staff members who could contribute to the institution for many years are choosing to leave. The institution needs to reflect on this trend and devise strategies to contend with it.



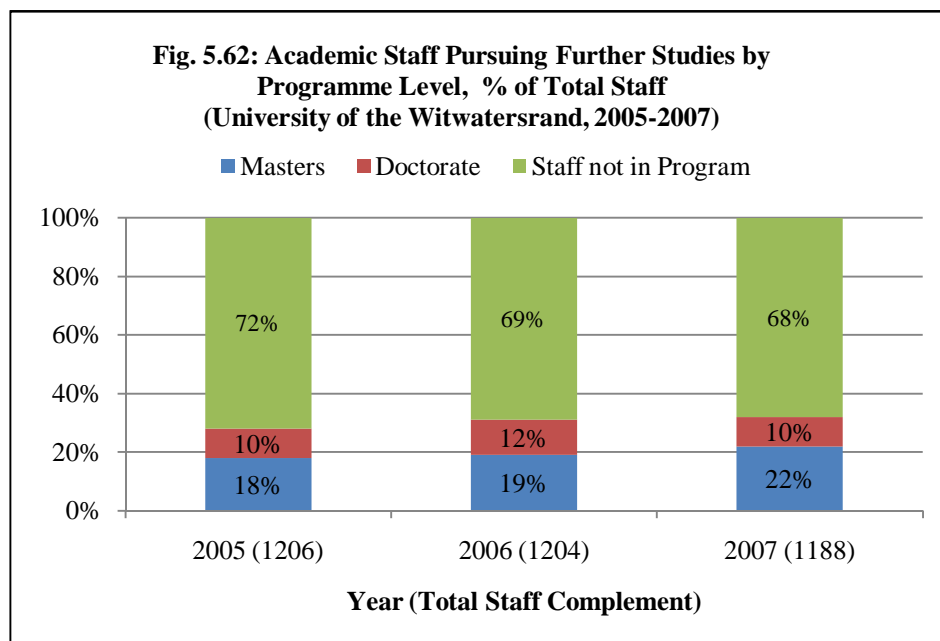
Distribution of Academic Staff by Qualification

Between 2005 and 2007 doctorate holders averaged half of academic staff, with master’s at 40% and those with less than master’s degrees about 10% (Fig. 5.61). Data show that the university was able to stem a brief decline in the number of doctoral degree holders and increase their proportion of the total staff complement by 2007. This success is partly due to the professional development activities outlined below.



Professional Development

Between 2005 and 2007, an average of 11% of all staff was undertaking doctoral programmes (Fig. 5.62). This effort at professional development strengthens the quality of the academic staff at the same time as it helps to develop the next generation of academics. The fact that slightly over a fifth of staff is pursuing master’s programmes illustrates that a large proportion of staff members have not obtained the minimum recognised qualification for university teaching.



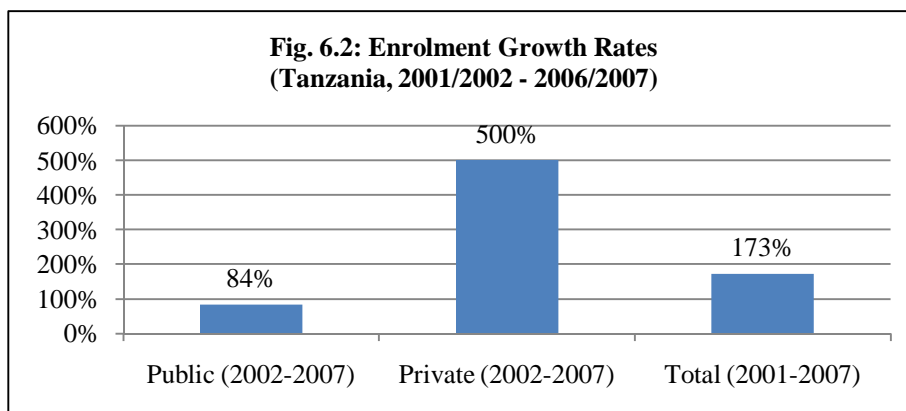
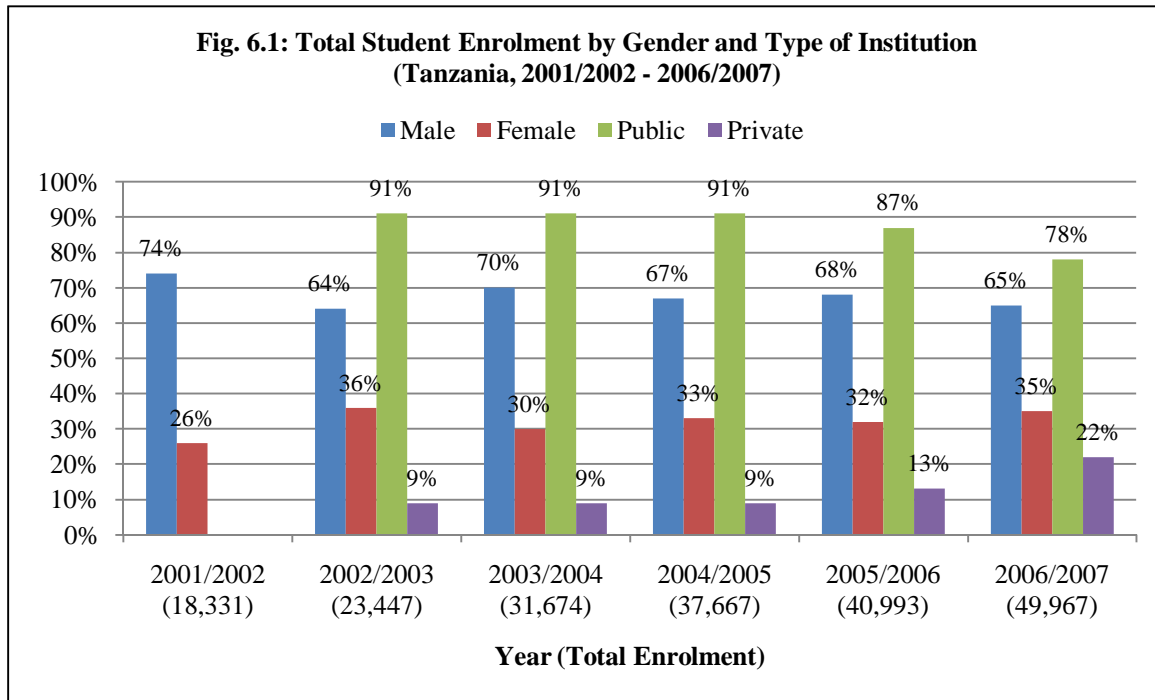
6. TANZANIA

National Profile

- Students -

Total Student Enrolment and Distribution by Gender

Total university enrolment increased from about 18,000 students in 2001 to nearly 50,000 in 2006, an enormous increase of 173% (Fig. 6.1). While males constituted the majority of the student population, the female population went up from 26% to 35% (Ministry of Higher Education, 2008). A majority of students were enrolled in public universities but private university enrolments took a huge leap of 500%, raising the proportion of students in private universities from nine to 22% (Figs. 6.1 and 6.2).²⁸

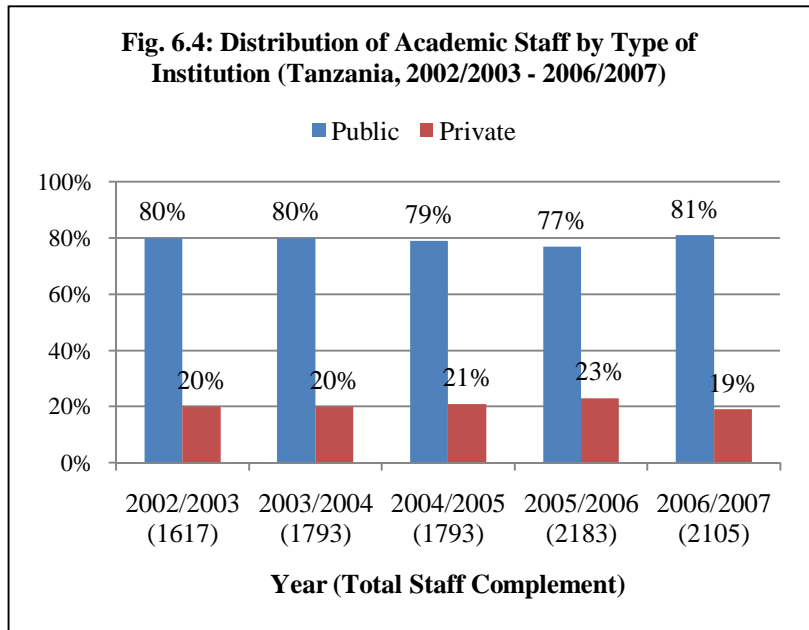
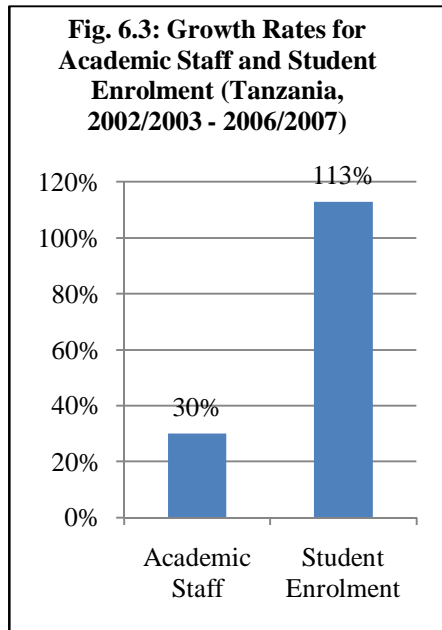


²⁸ The sources for Figures 6.1 through 6.11 are Tanzania Commission for Universities (2008) and Ministry of Higher Education, Science and Technology (2008).

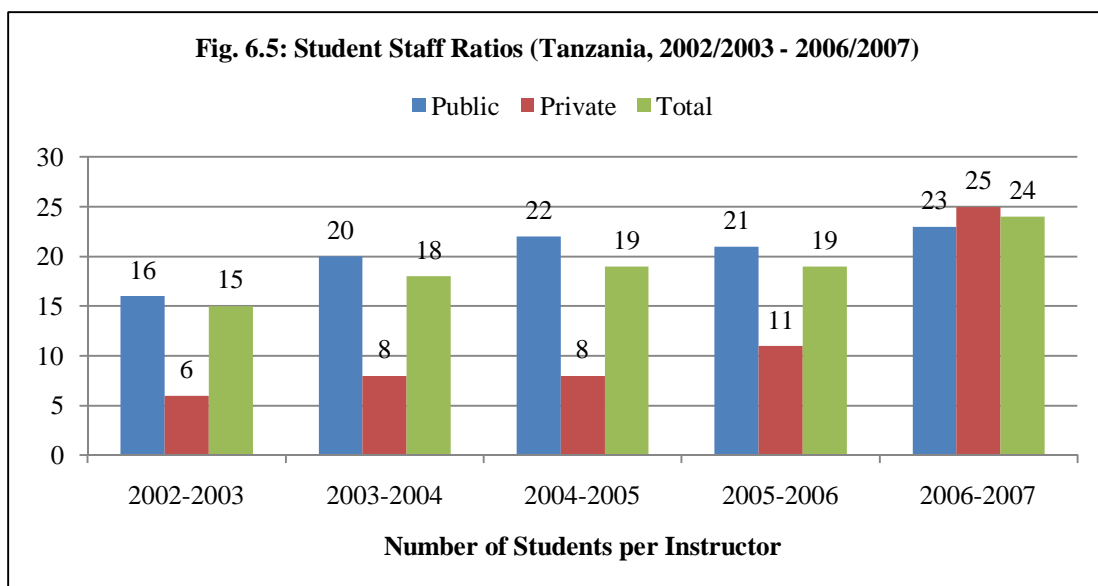
- Academic Staff -

Academic Staff Capacity and Enrolment Pressures

The number of academic staff grew by 30% between 2002 and 2007 as compared to 113% growth in student enrolment during the same period (Fig. 6.3). Most staff were employed in public universities, which also shouldered the biggest burden of enrolments, as indicated in Fig. 6.1 above. The proportion of staff in private institutions hovered around 80% (Fig. 6.4).

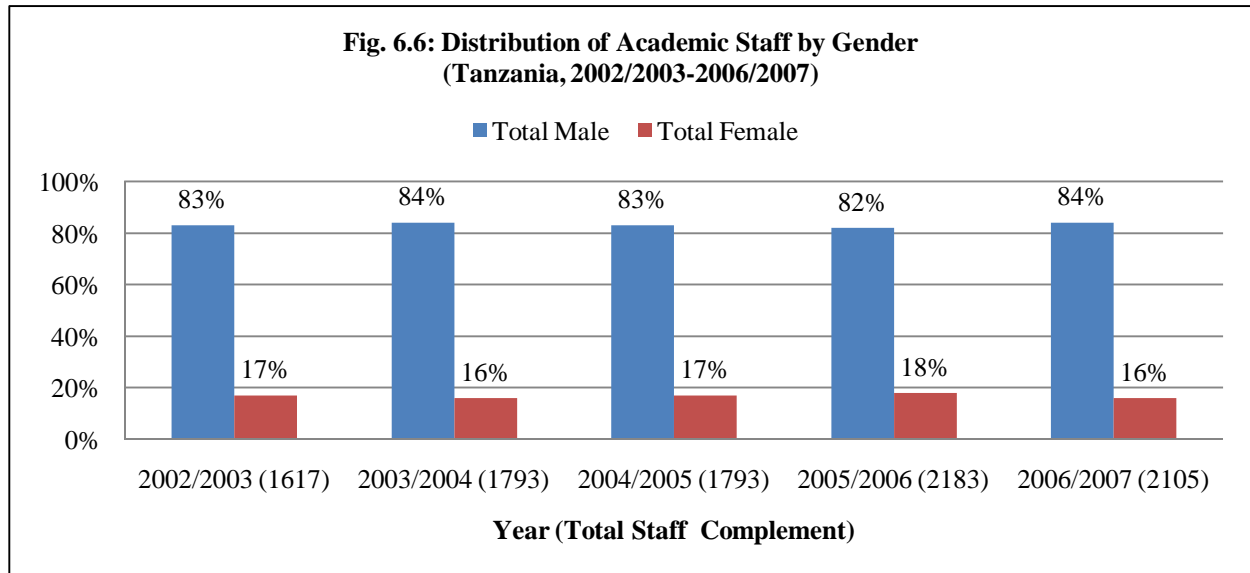


Student-staff ratios significantly increased for all institutions during the period from 15:1 to 24:1. At public institutions ratios increased from 16:1 to 23:1, whereas their private counterparts registered a whopping increase from 6:1 to 25:1 (Fig. 6.5). The high student-staff ratios at the private institutions show that while they help absorb the increasing demand for tertiary education, they do so with mounting pressure on their academic staff.



Academic Staff Distribution by Gender

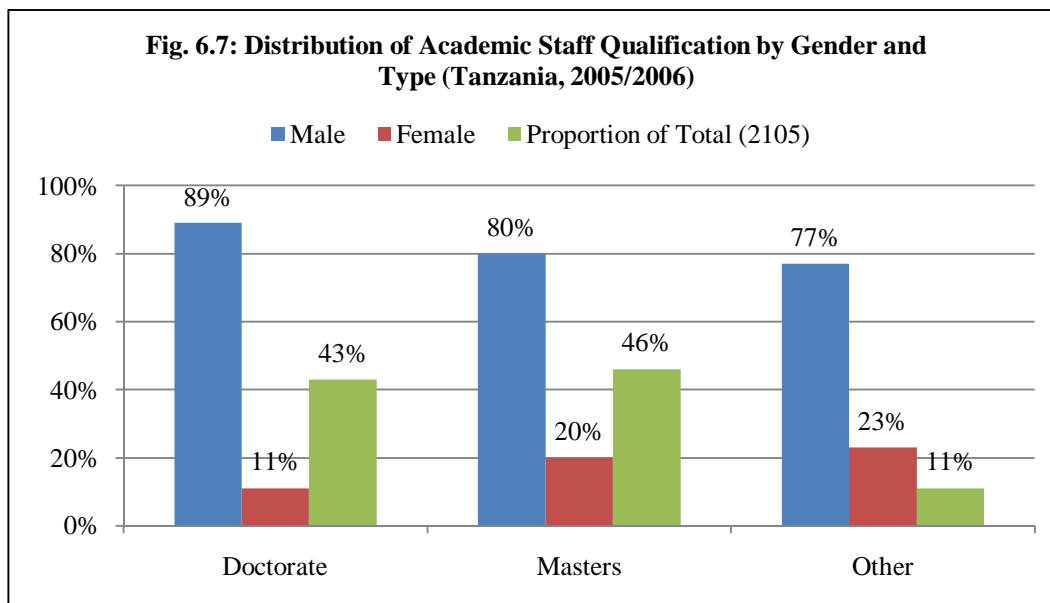
More than four-fifths of academic staff members were male (Fig. 6.6).



Academic Staff Distribution by Qualification

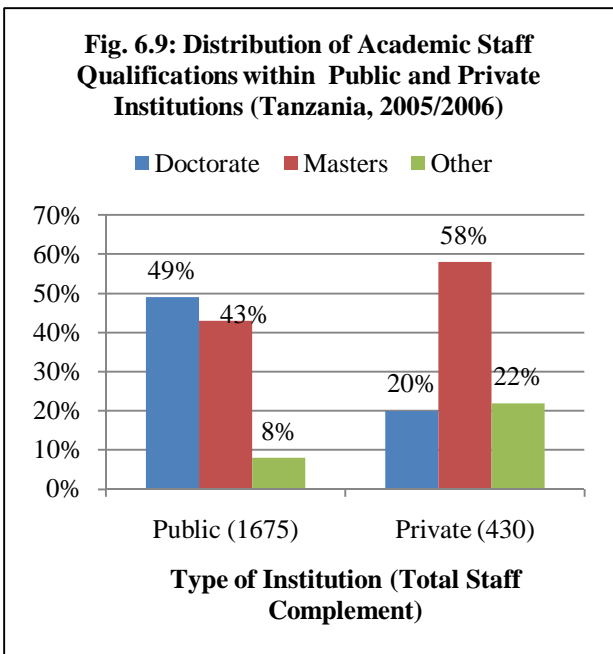
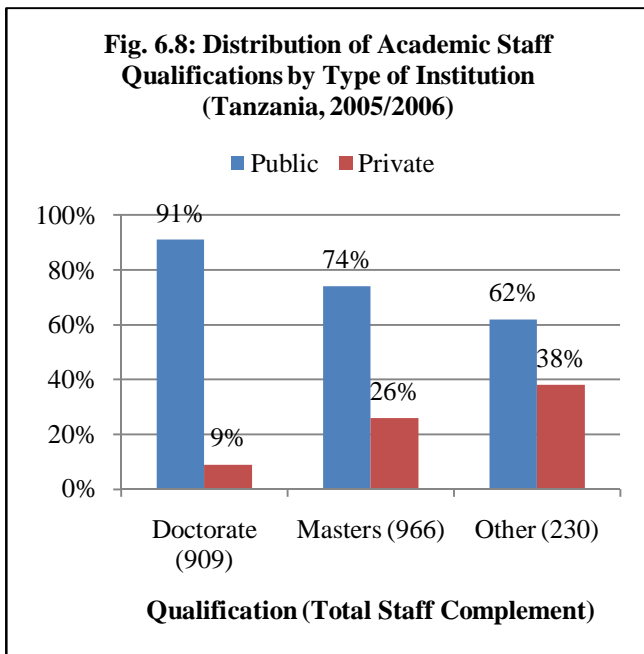
In 2005/2006, 43% of all staff in Tanzanian universities had doctorate degrees, compared to 46% with master's degrees and 11% with less than a master's degree (Fig. 6.7). The extent to which those with less than a master's degree, along with the large proportion of master's holders, constitute a significant part of the overall professoriate is a clear indication that the country needs more qualified staff if the teaching and research mandates of universities are to be enhanced. The shortage of doctoral degree holders also limits the extent to which high-quality doctorate students can be trained.

It is significant to note that only 11% of doctoral degree holders were female (Fig. 6.7).



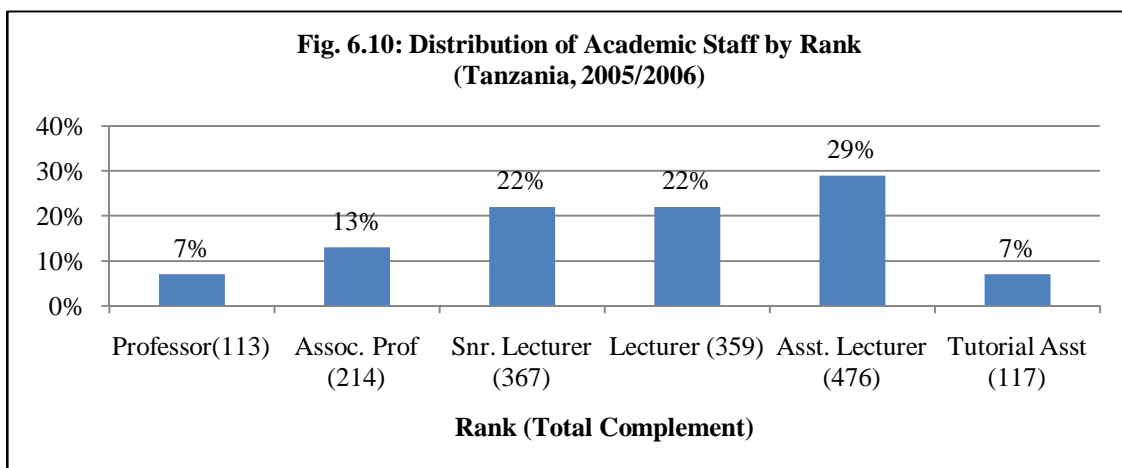
Only nine percent of doctoral degree holders in the country's institutions work at private institutions (see Fig. 6.8). The very low proportion of doctorate degree holders severely limits the ability of these fast-expanding institutions to contribute to the development of the next generation of academics in the country.

While an analysis of the distribution of staff qualifications in public universities reveals more doctoral degree holders — at 49%, among the highest percentages of the universities in this study — than master's degree holders (43%), it remains troubling for the standards of African universities that the proportion of the former is less than half the professoriate (Fig. 6.9). The proportion of doctoral degree holders within private universities, at only 20%, leaves much more to be desired. The fact that more than a fifth of staff in these institutions had less than a master's degree is even more worrisome (Fig. 6.9).

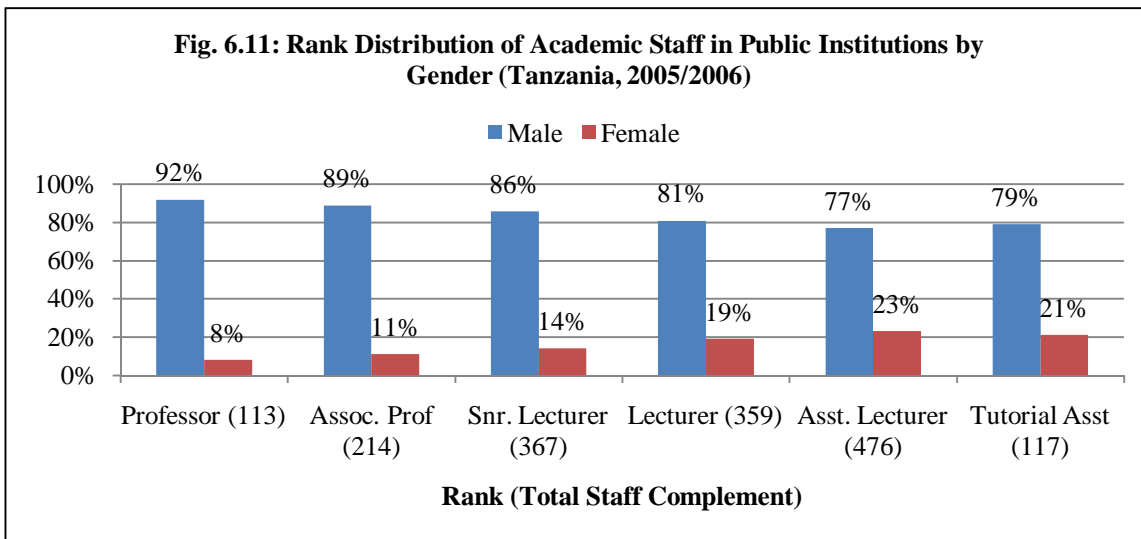


Distribution of Academic Staff by Rank

Fig. 6.10 shows that assistant lecturers made up 29% of academic staff in public institutions in 2005/2006 while tutorial assistants constituted seven percent of the total. Since staff appointed to those ranks normally do not have postgraduate degrees, it can be reasonably asserted that 36% of staff have only undergraduate qualifications — a worrisome scenario for these institutions.



Male staff dominate all the ranks in public institutions. Only 8 and 11 percent of full professors and associate professors, respectively, were female. The proportion of females is relatively higher at the junior ranks — they comprise 19% of lecturers, 23% of assistant lecturers and 21% of tutorial assistants (Fig. 6.11). Such a skewed distribution in favour of males raises questions about why females are a small proportion of academic staff, particularly at the senior ranks.



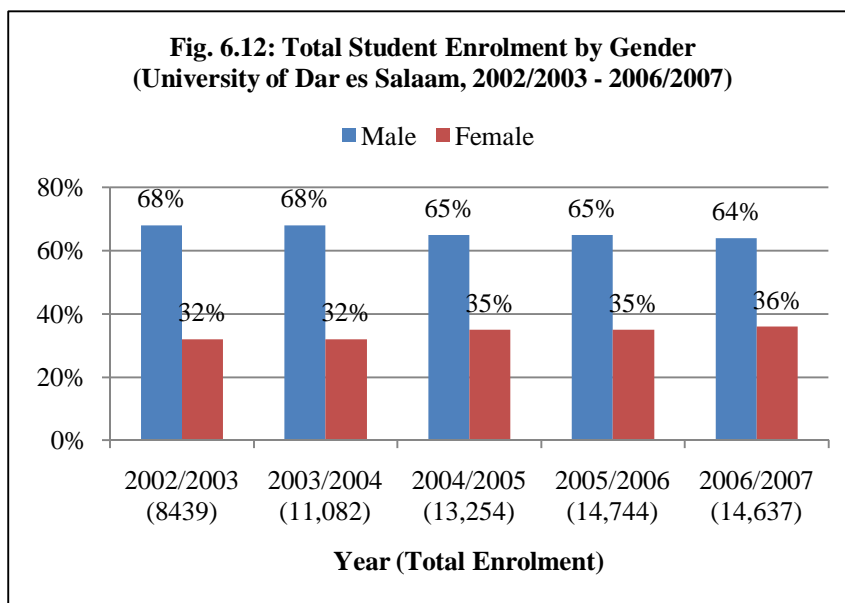
Institutional Profile

- University of Dar es Salaam (UDSM) -

- Students -

Total Student Enrolment and Distribution by Gender

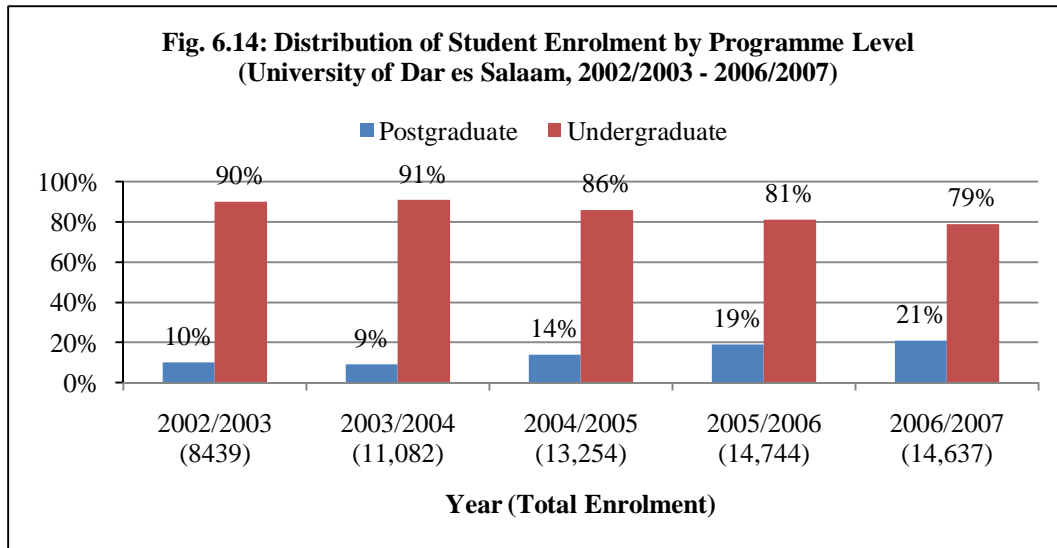
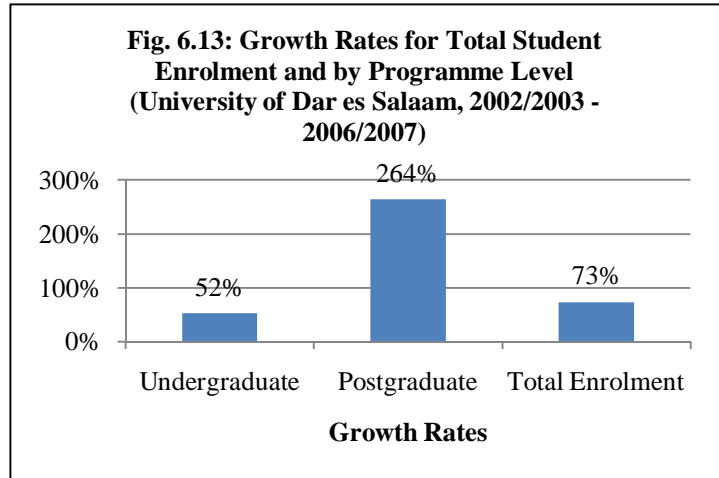
Total student enrolment increased by 73% between 2002 and 2007. Male students constituted the majority of the total student population, even though the proportion of females increased slightly from 32% to 36% (Fig. 6.12).²⁹



²⁹ The source for Figures 6.12 through 6.24 is University of Dar es Salaam (2007).

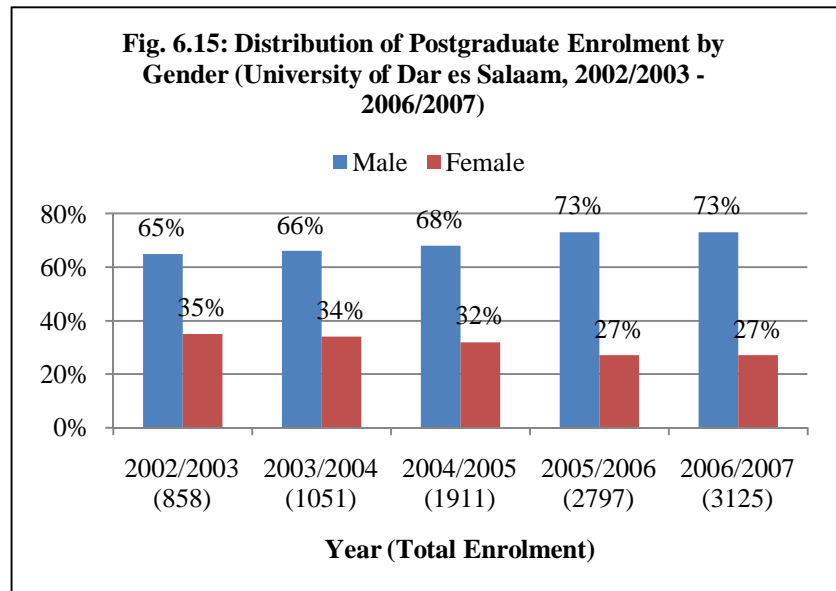
Distribution of Student Enrolment by Programme Level

The proportion of postgraduate students in the total student population increased from 10% to 21% between 2002 and 2007 (Fig. 6.14). While total undergraduate enrolment increased by 52%, postgraduate enrolments jumped a phenomenal 264% (Fig. 6.1). On the surface, this is an encouraging trend, but in the absence of enrolment data on specific programmes it is difficult to say whether this increase is likely to be reflected in a concomitant increase in the pool of potential academics.



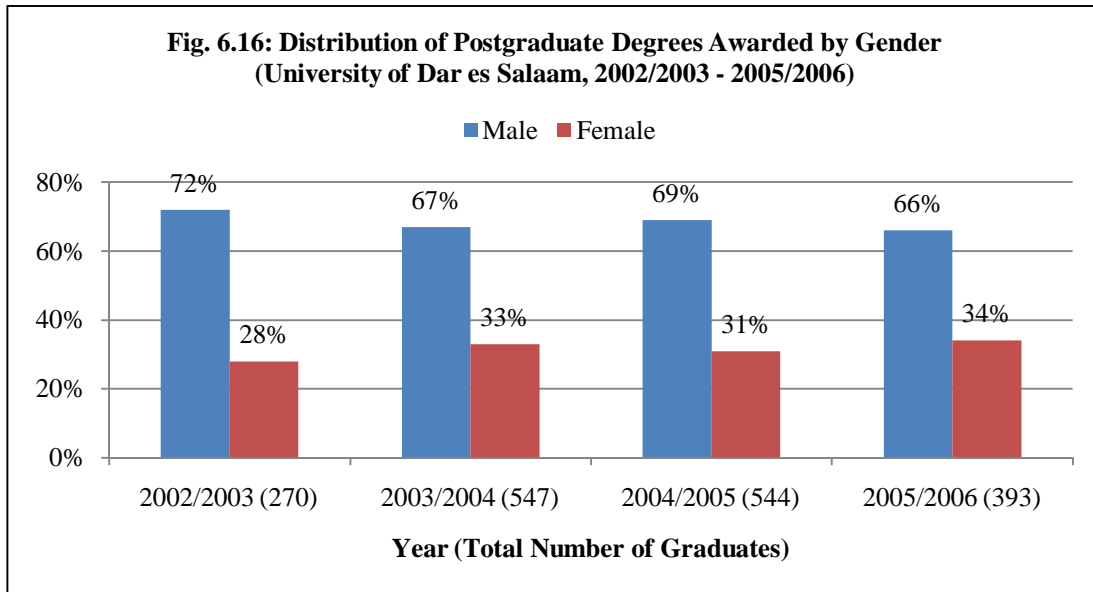
Distribution of Postgraduate Students by Gender

Although the number of female postgraduate students increased over the 2002-2007 period, in the face of growing enrolments their proportion of the total postgraduate population decreased from 35 to 27% (Fig. 6.15).



Distribution of Postgraduate Degrees Awarded by Gender

The number of students graduating with postgraduate degrees increased dramatically between 2003 and 2005, but fell again in 2006. Over the period, the proportion of females receiving postgraduate degrees generally hovered around a third of the total (Fig. 6.16).



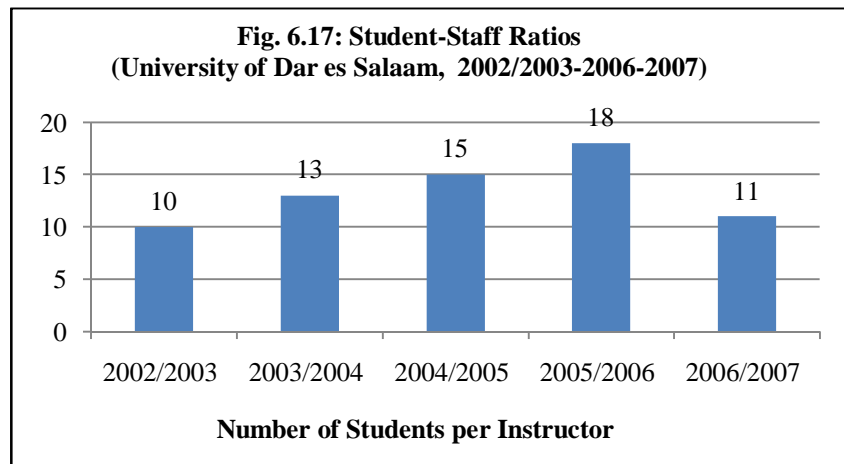
- Academic Staff -

Unfortunately, there were major discrepancies in the University of Dar es Salaam for different indicators relating to its academic staff, resulting in difficulties in analysis.

Academic Staff Capacity and Enrolment Pressures

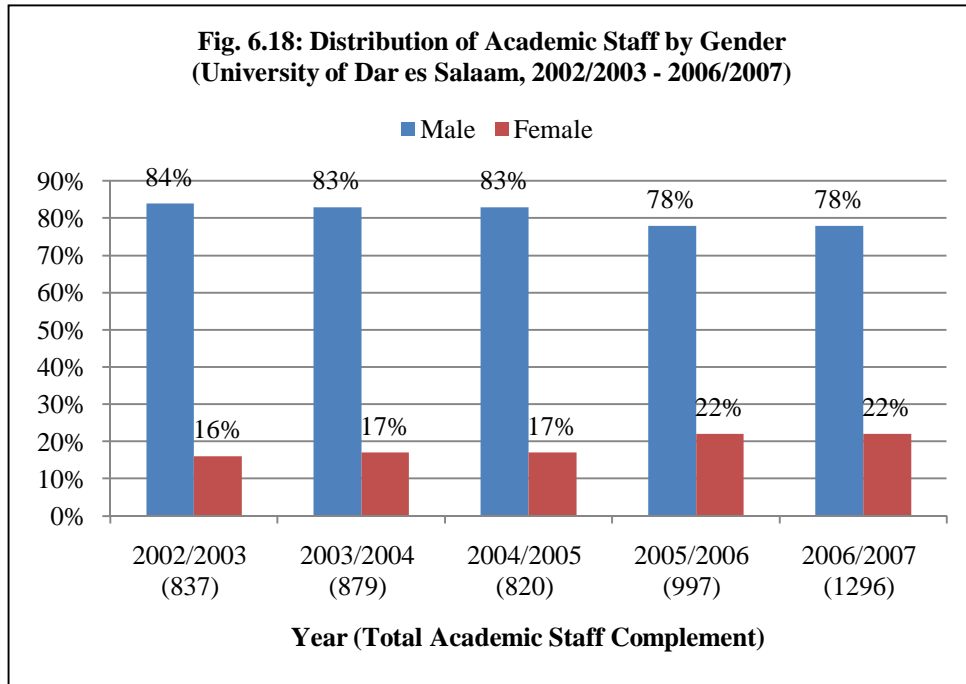
Between 2002 and 2007, academic staff numbers went up by 25%, an increase that pales in comparison to the 75% rate at which student enrolments expanded over the same period (University of Dar es Salaam, 2007).

At the same time, student-staff ratios also rose from 10:1 in 2002/2003 to 18:1 in 2005/2006, before falling back to 11:1 in 2006/2007 (Fig. 6.17). While the significant drop in 2006/2007 looks like a positive reversal of the growing pressure on staff, the reality is that the improvement in the ratio is accounted for mainly by the infusion of a significant number of first-degree holders into the teaching staff, a move that raises quality issues.

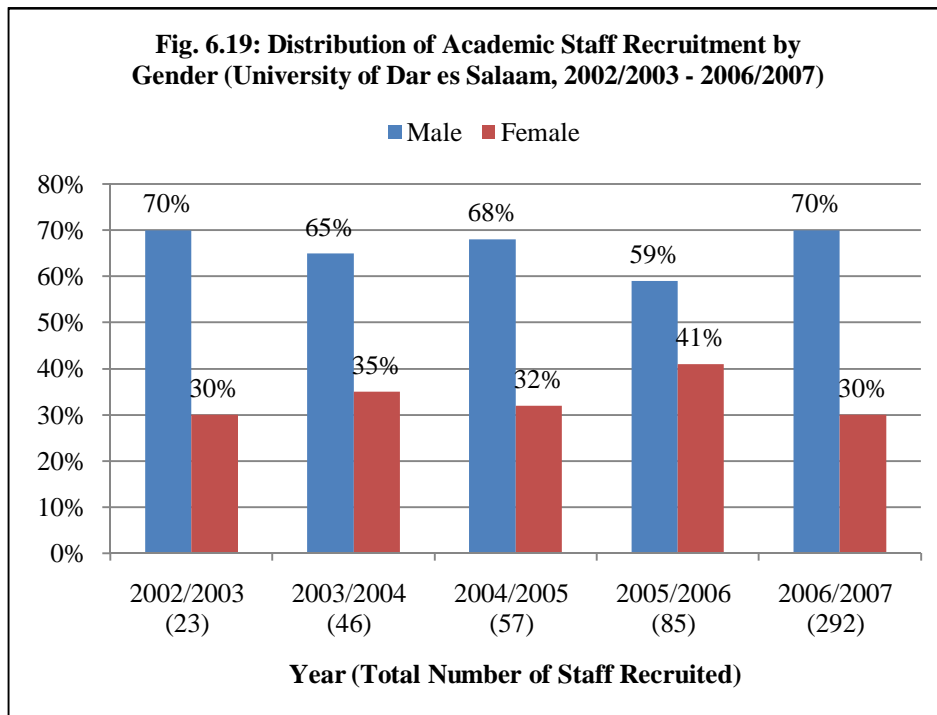


Distribution of Academic Staff by Gender

Male staff made up the majority of academic staff over the five-year period under review, constituting over 80% of all academic staff through 2004/2005. The number of female staff increased slightly after that date, growing to 22% of the total in 2005/06 and 2006/2007 (Fig. 6.18).



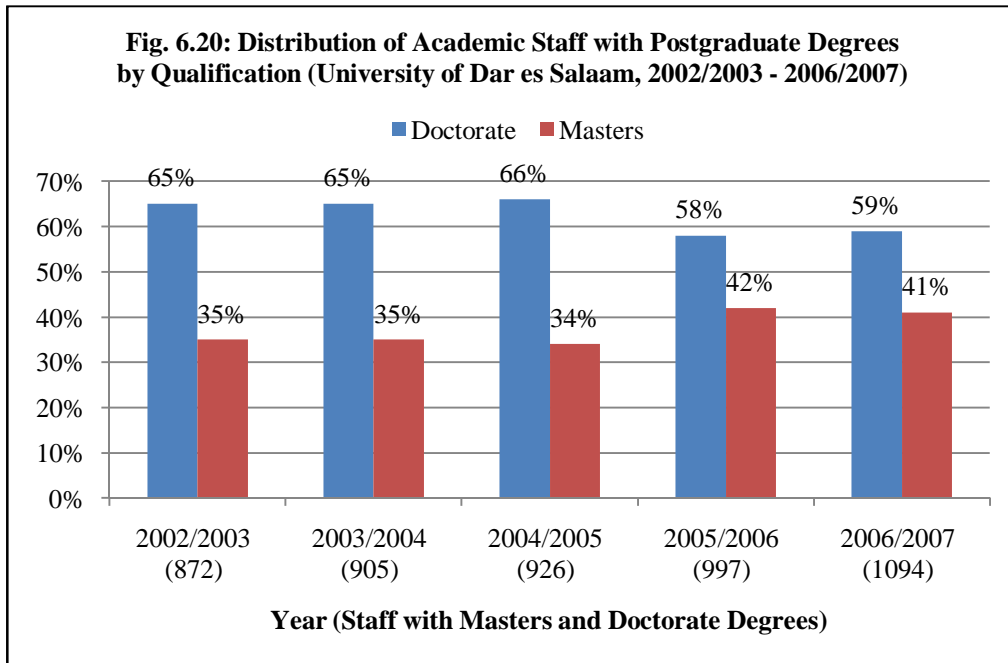
Analyses of recruitment trends (Fig. 6.19) show that the gap between male and female staff may not be closed any time soon. Even though the increasing proportion of males recruited showed some promise, particularly in 2005/2006, the return in 2006/2007 of relative proportions to the 2002/2003 level of 30% poses questions about the sustainability of the gains.



Distribution of Academic Staff by Qualification

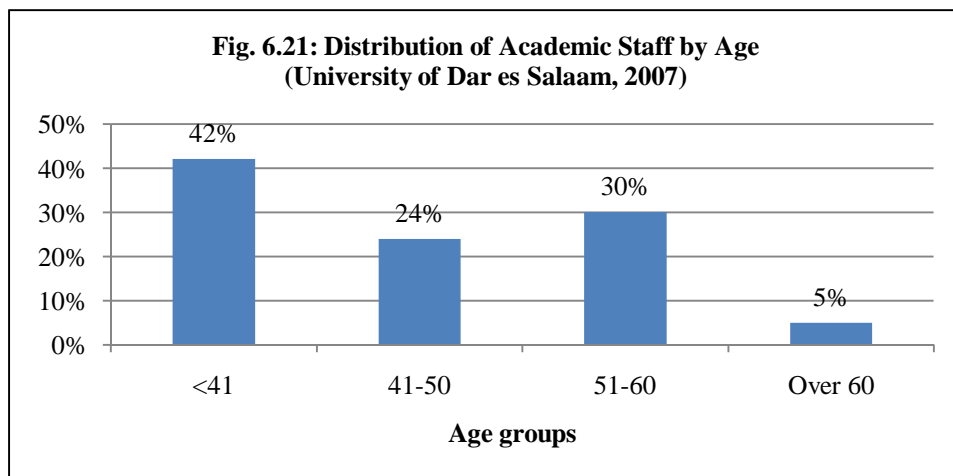
Available data from UDSM provides information only on academic staff with doctorate and master's degrees. This analysis of staff qualifications is based on that information even though it is clear that there is a large complement of staff with lower qualifications.

In 2002/2003, those with master's degrees made up 35% of the postgraduate degree holders among the academic staff, while those with doctorate degrees comprised 65% of the number. By 2006/2007, doctoral degree holders had decreased to 59%, while their counterparts with master's degrees had climbed to 41% (Fig. 6.20).



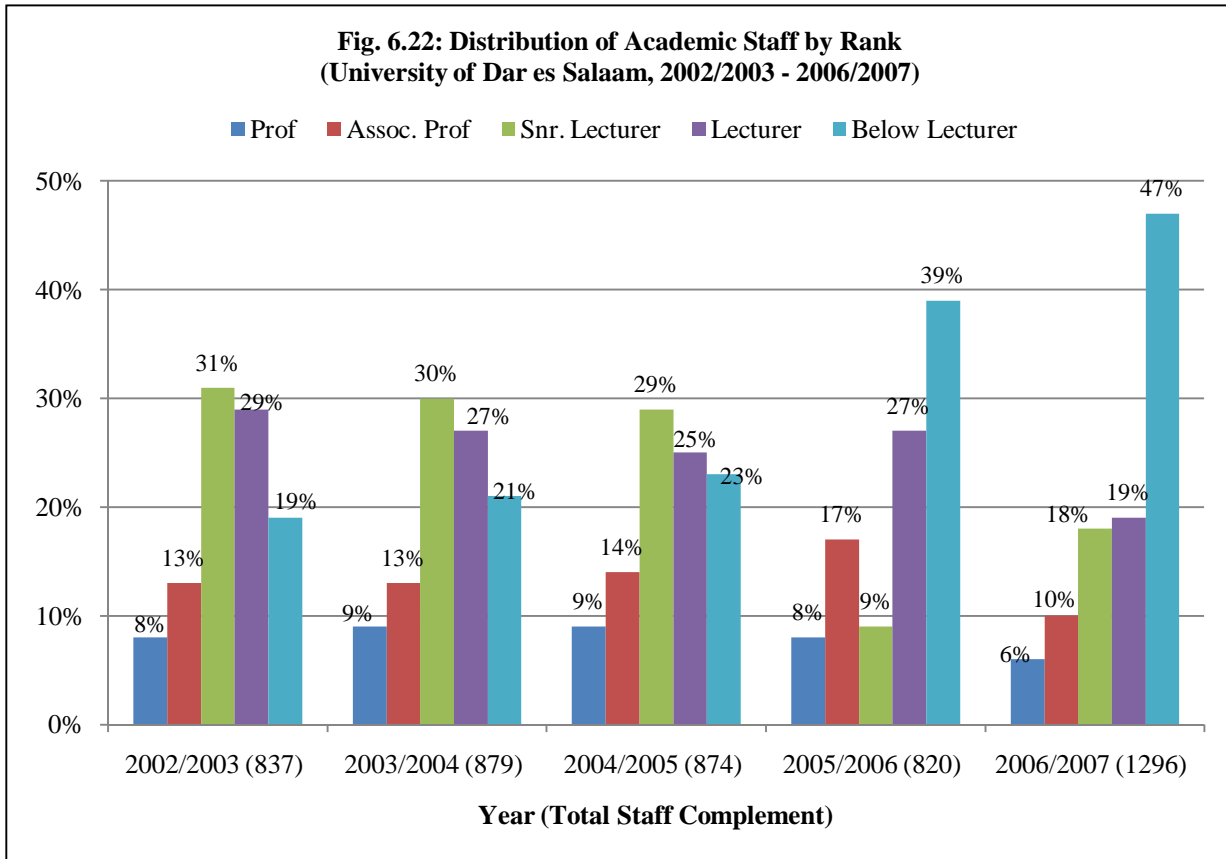
Distribution of Academic Staff by Age

In 2007, 42% of staff were below 41 years of age, presenting a very positive picture of a young professoriate (Fig. 6.21). At the same time, a third of academic staff were over 50 years old, making it necessary to contemplate their replacement within the coming decade. It will be important to critically review the qualification of staff members in the under-41 age category to examine whether shortfalls in academic staff complement are being addressed by bringing in large numbers of young people without the requisite qualifications.



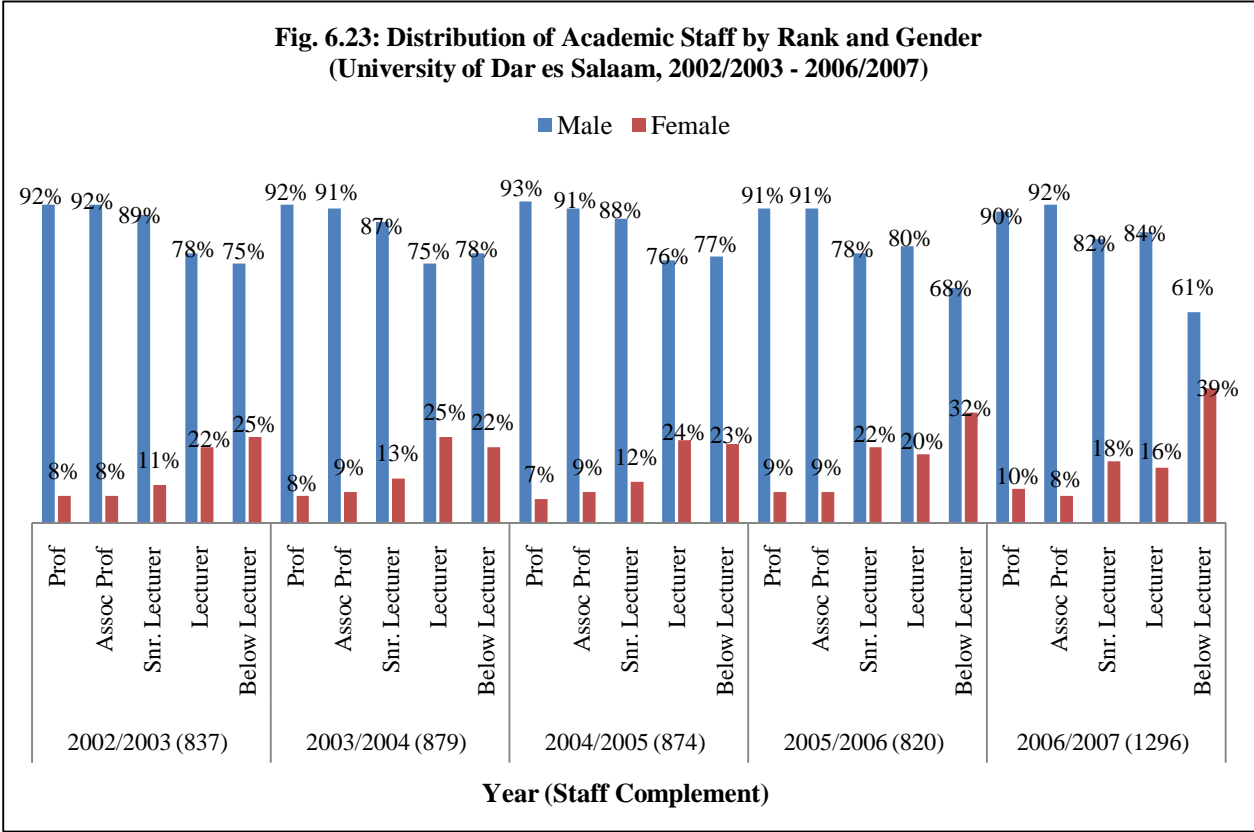
Distribution of Academic Staff by Rank

Over the years the proportion of staff below the rank of lecturer has increased significantly, going from 19% in 2002/2003 to 47% in 2006/2007 and becoming the most numerous rank (Fig. 6.22). On this basis UDSM seems to be trying to cope with increasing student enrolment by filling its staff ranks with first-degree holders. While this may constitute part of the institution’s strategy to recruit new and younger staff, the fact that almost half of staff in 2006/2007 were at ranks below lecturer does not augur well for the quality of instruction.



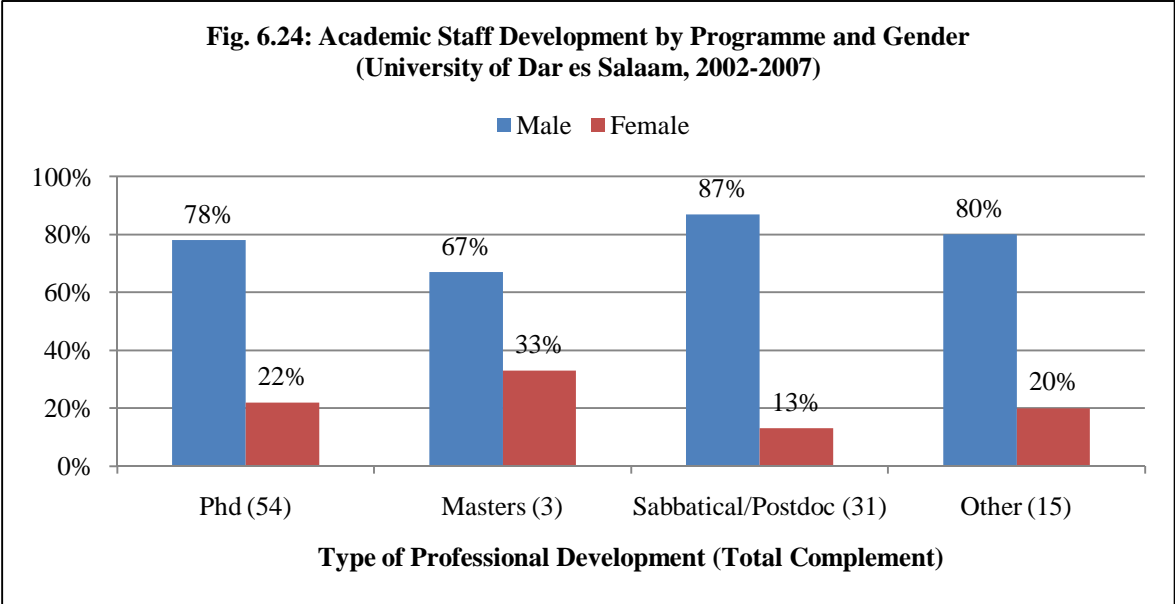
It is significant to note that females were under-represented at all ranks, especially from the levels of lecturer to full professor. In 2006/2007, they represented only 10% of full professors, eight percent of associate professors, 18% of senior lecturers and 16% of lecturers (Fig. 6.23), figures that changed only marginally from 2002/2003.

The proportion of female staff went up significantly among those with ranks below lecturer, where they constituted 39% of the total in 2006/2007. Over the five-year period from 2002-2007 there have been only 33 female full professors, as compared to 372 males; 53 female associate professors out of a total of 615; and 155 senior lecturers out of 1097. These statistics raise questions about why females are proportionately less represented in Tanzanian academia and why they seem confined to the lower rungs when they do become academic staff.



Academic Staff Development

Between 2002-2007, 54 UDSM staff members, including 12 women, obtained doctoral degrees (Fig. 6.24). Over the same period only three staff members obtained master’s degrees. This indicates a lack of success in getting the many staff hired without postgraduate degrees to obtain advanced degrees.



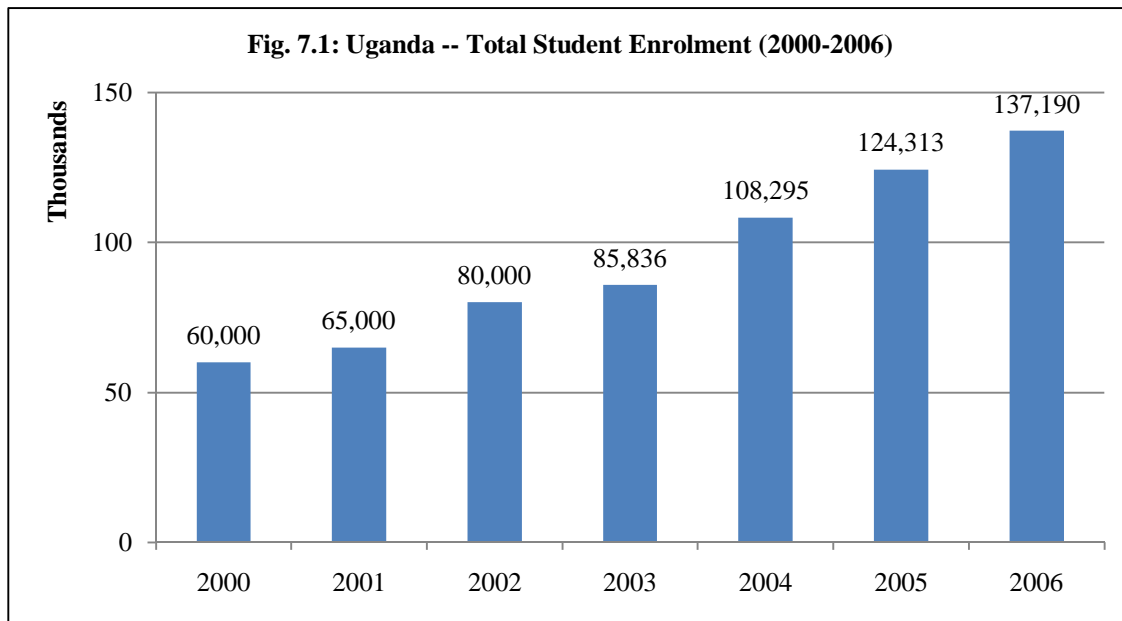
7. UGANDA

National Profile

- Students -

Total Student Enrolment

Enrolment in Uganda's institutions of higher education increased every year between 2000 and 2006, growing by 129% over the period (Fig. 7.1).³⁰



- Academic Staff -

Academic Staff Capacity and Enrolment Pressures

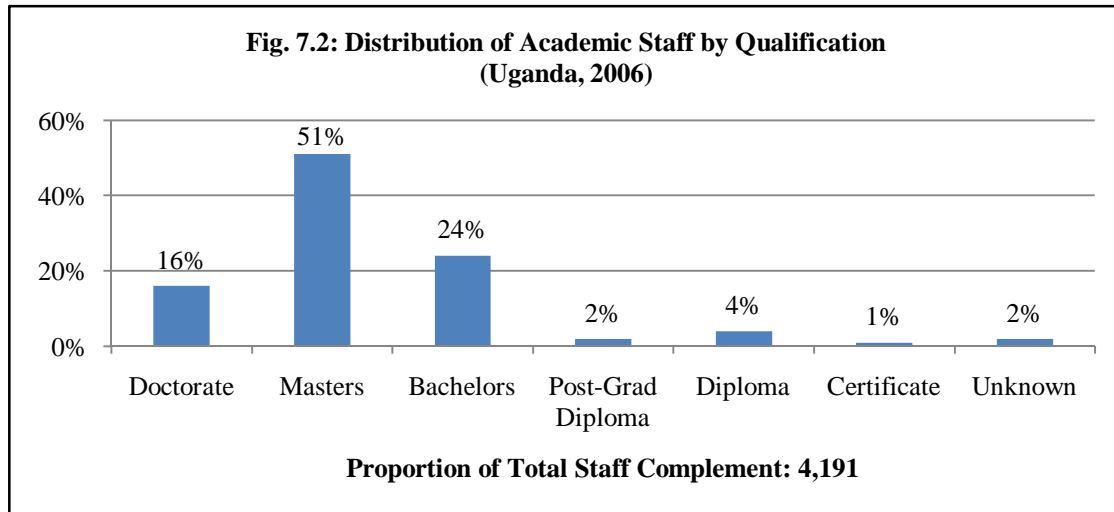
In 2006, there were nearly 4,000 academic staff in universities and affiliated colleges in Uganda, the majority of them male and full-time. At least one-fifth of academic staff, though, were employed only part-time (National Council for Higher Education, 2007), a statistic that illustrates the struggle of tertiary education institutions to attract dedicated staff complements to meet their teaching and scholarly needs.

The student-staff ratio in 2006 for universities and affiliated colleges was 49:1, when measured on the basis of full-time academic staff but improving to 24:1 when part-time instructors are included. Clearly, full-time staff are under pressure to cope with expansion in enrolments, and institutions are depending on part-time staff to ease the burden.

³⁰ The source for Figures 7.1 through 7.3 is National Council for Higher Education [Uganda] (2007).

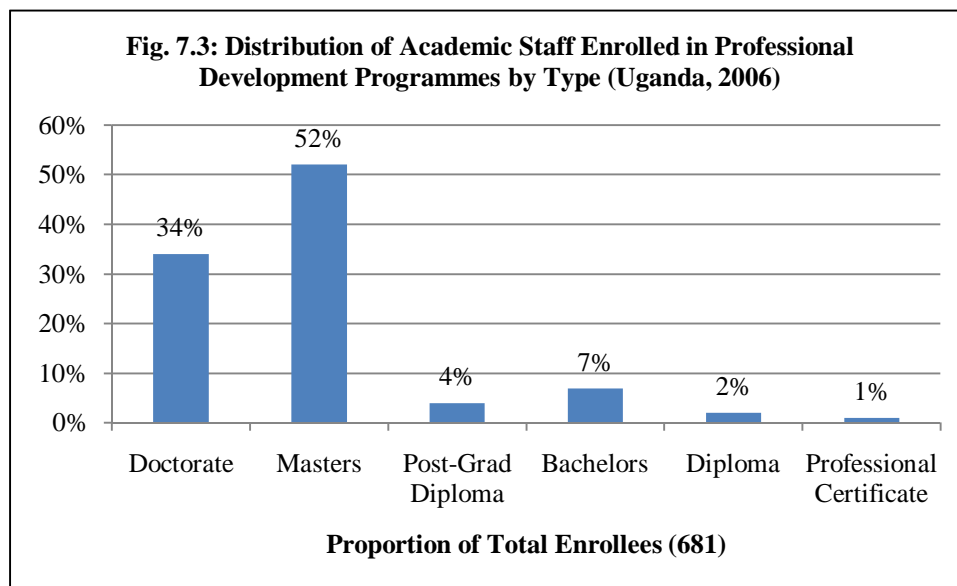
Distribution of Academic Staff by Qualification

Based on data from the Uganda National Council for Higher Education, the proportion of doctoral degree holders was 16%, compared to 51% for those with master's degrees.³¹ Nearly a quarter of staff had only bachelor's degrees (Fig. 7.2). The large percentage of staff holding bachelor's degrees suggests that the country is facing a significant shortage of staff with the requisite qualifications needed to run credible programmes. In fact, a third of the professoriate had qualifications below the master's level in 2006.



Professional Development

In efforts to address this shortage of qualified staff, professional development opportunities have encouraged staff to enrol in programmes from the professional certificate level to the doctoral level. In 2006, 34% of those benefiting from professional development initiatives were in doctoral programmes while 52% were enrolled in master's programmes (Fig. 7.3).



³¹ Regrettably the data furnished by the National Council for Higher Education was not internally consistent with regard to employment status, gender and total staff numbers. Thus, the statistics in this section must be treated as illustrative, not definitive.

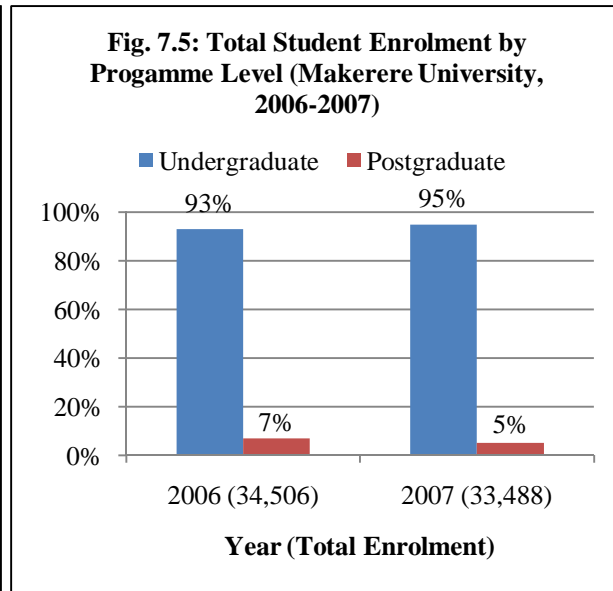
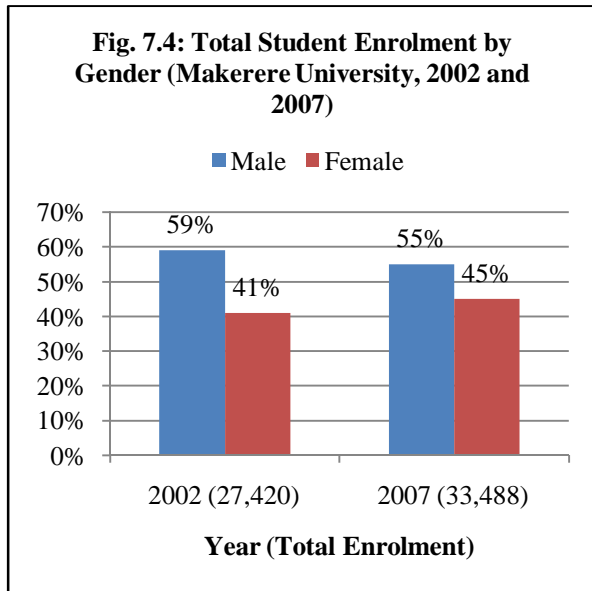
Institutional Profile

- Makerere University -

- Students -

Total Student Enrolment and Distribution by Gender and Programme Levels

Enrolment at Makerere increased by 22% between 2002 and 2007 to a total of over 33,000 students, while the number of women students increased from 41% to 45% (Fig. 7.4). Postgraduate enrolment dropped by two percent from 2006 to 2007 (Fig. 7.5).³²

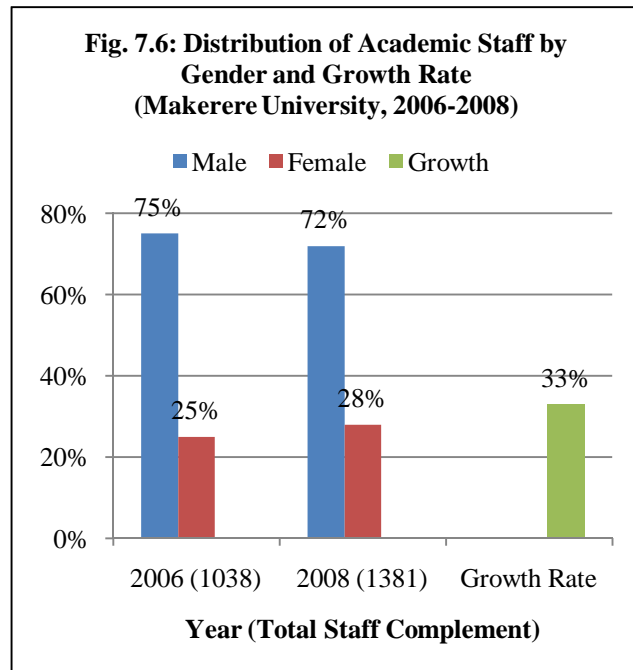


- Academic Staff -

Academic Staff Capacity and Enrolment Pressures

In 2006, out of slightly over 1000 academic staff, 75% were male. By 2008, the total staff complement grew by 33% and female staff increased to 28% (Fig. 7.6).

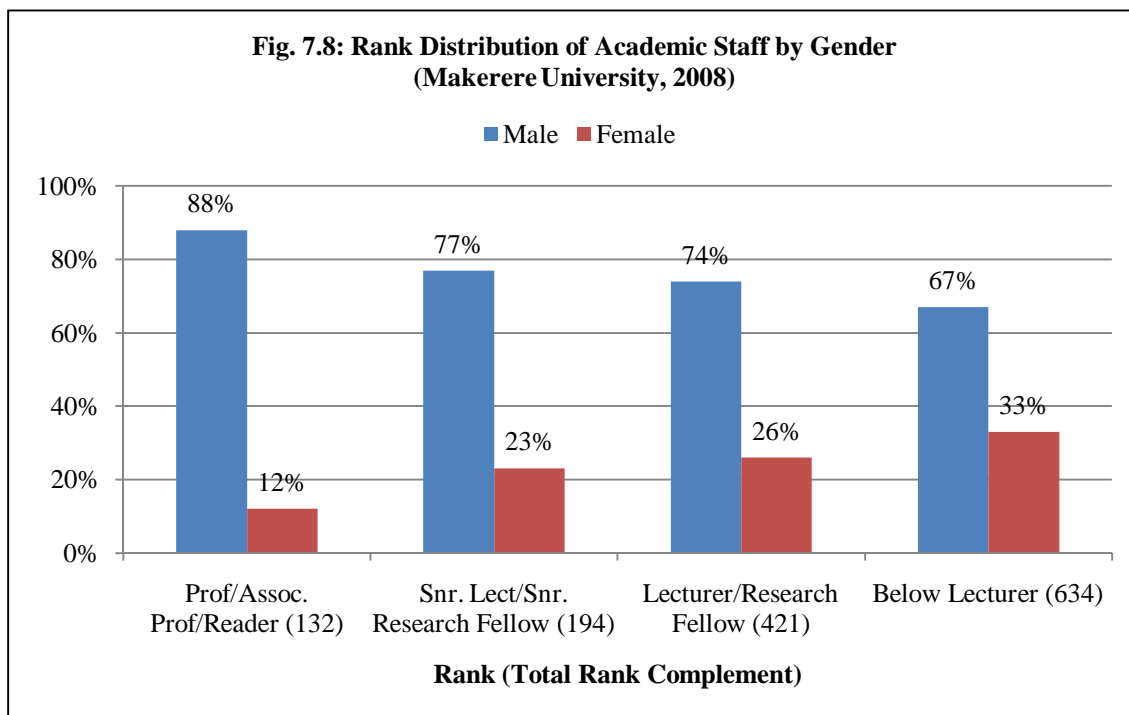
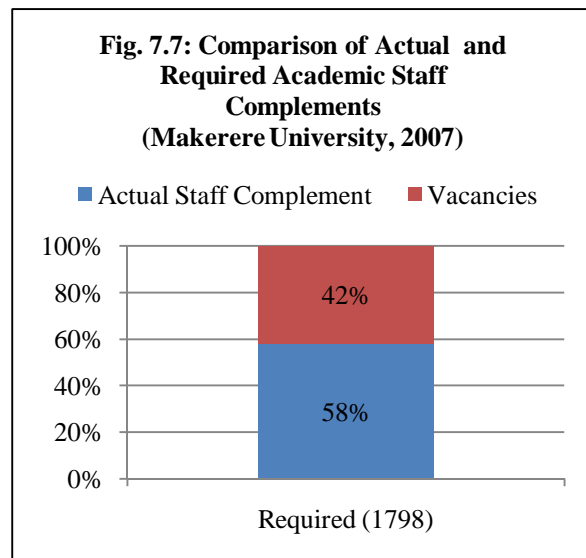
Unfortunately, data were not available to compare student and staff growth rates in order to determine if staff growth kept up with increases in student enrolment. However, the National Council for Higher Education (2007) considered an overall student-staff ratio of 32:1 'acceptable'.



³² The source for Figures 7.4 through 7.7 is Makerere University (2007).

The high vacancy rates at Makerere — 42% for academic staff positions across the university in 2007 — suggest that the staff complement fell short of what was required to effectively run programmes at the university (Fig. 7.7).

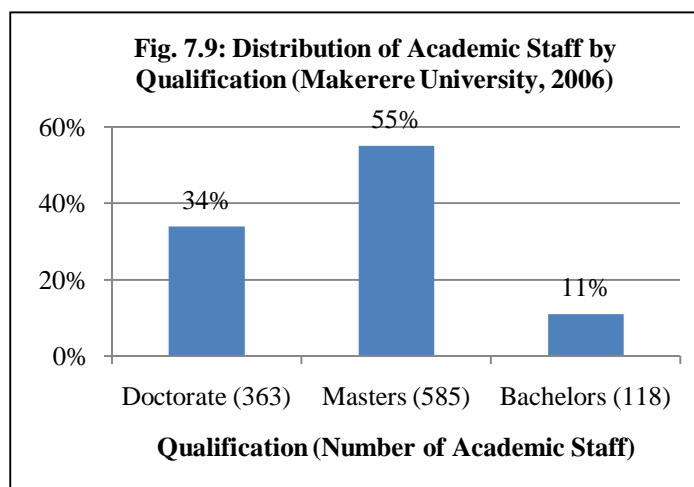
Distribution of Academic Staff Rank by Gender
 Male staff dominate the senior ranks at Makerere. Women comprised only 12% of staff in the professorial rank and 23% of senior lecturer/senior research fellow rank (Fig. 7.8).³³ This skewed rank distribution, as well as the relatively small proportion of female staff overall, raises questions about whether women will be attracted to professorial careers at Makerere, given the apparent difficulty for them to advance on the academic ladder.



³³ The source for Figure 7.8 is Tibatemwa-Ekirikubinza (2008).

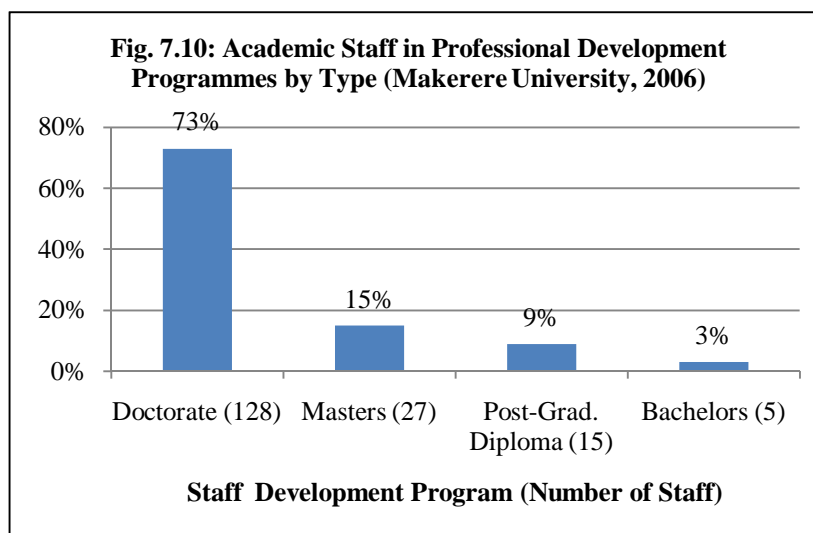
Distribution of Academic Staff by Qualification

Master's degree holders constituted a significant majority of staff at Makerere in 2006, accounting for 55% of the total as compared to 34% with doctoral degrees. It is worth noting that 11% of staff had only bachelor's degrees (Fig. 7.9).³⁴ The fact that 46% of staff in 2008 were at a rank below lecturer indicates that the proportion of staff with less than a master's degree grew significantly between 2006 and 2008.³⁵



Staff Development

The institution has been making efforts to enhance the qualifications of its staff, with the emphasis on doctoral training, as illustrated in Fig. 7.10.³⁶ In 2006, of the 175 academic staff members taking advantage of staff development opportunities, 73% were enrolled in doctoral programmes, 15% in master's programmes and three percent in bachelor's programmes.



³⁴ The source for Figure 7.9 is National Council for Higher Education [Uganda] (2007).

³⁵ Staff who hold master's or doctoral degrees are generally not appointed to a level below lecturer.

³⁶ The source for Figure 7.10 is Makerere University (2007).