higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

REPORT OF THE MINISTERIAL TASK TEAM ON THE RECRUITMENT, RETENTION AND PROGRESSION OF BLACK SOUTH AFRICAN ACADEMICS

Report of the Ministerial Task Team on the Recruitment, Retention and Progression of Black South African Academics

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ABBREVIATIONS AND **ACRONYMS**

CPUT	Cape Peninsula University of Technology
CREST	Centre for Research on Evaluation, Science and Technology
CUT	Central University of Technology
DHET	Department of Higher Education and Training
DoL	Department of Labour
DST	Department of Science and Technology
DUT	Durban University of Technology
EACEP	Existing Academics Capacity Enhancement Programme
FCS	Full Cost of Study
FPP	Future Professors Programme
GDP	Gross Domestic Product
HDI	Historically Disadvantaged Institution
HELMP	Higher Education Leadership and Management Programme
HEMIS	Higher Education Management Information System
MTT	Ministerial Task Team
MUT	Mangosuthu University of Technology
NESP	Nurturing Emerging Scholars Programme
nGAP	New Generation of Academics Programme
NMU	Nelson Mandela University
NPHE	National Plan for Higher Education
NRF	National Research Foundation
NWU	North-West University
RU	Rhodes University
SADC	Southern African Development Community
SMU	Sefako Makgatho Health Sciences University
SPU	Sol Plaatje University
SSAU-DP	Staffing South Africa's Universities Development Programme
SSAUF	Staffing South Africa's Universities Framework
SSEP	Supplementary Staff Employment Programme
SU or SUN	Stellenbosch University
ToR	Terms of Reference
TUT	Tshwane University of Technology
UCDP	University Capacity Development Programme
UCT	University of Cape Town
UFH	University of Fort Hare
UFS	University of Free State
UJ	University of Johannesburg
UKZN	University of KwaZulu-Natal
UL	University of Limpopo
UMP	University of Mpumalanga
Unisa	University of South Africa
Univen	University of Venda
UniZulu	University of Zululand
UoT	University of Technology
UP	University of Pretoria
USAf	Universities South Africa
USDP	University Staff Development Programme
UWC	University of the Western Cape
VUT	Vaal University of Technology
Wits	University of the Witwatersrand
WSU	Walter Sisulu University

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1

Executive Summary

The Minister of Higher Education and Training announced in the 2016/17 budget speech that a ministerial task team would be established to 'look into and propose solutions to the obstacles to the production of South African black academics'.

Subsequently, the Minister approved the appointment of the Ministerial Task Team on the Recruitment, Retention and Progression of Black Academics at South African Universities, hereafter referred to as the Ministerial Task Team (MTT), in September 2017, and also approved its Terms of Reference (ToR). The Minister appointed the following members to the MTT:

- Professor David Mosoma as chairperson
- Dr Bulumko Msengana
- Dr Thandi Mgwebi
- Professor Sarah Mosoetsa
- Professor Ahmed Bawa

Representatives from the Department of Science and Technology (Dr Thomas Auf Der Hyde and Ms Rose Msiza) and the National Research Foundation (Dr Gansen Pillay) also participated on the MTT. The Department of Higher Education and Training (DHET) provided resource and secretariat support and were represented by Dr Diane Parker, Dr Whitfield Green and Ms M Cakwe.

The ToR for the MTT are attached as Annexure A, and they confirmed that, 'The main purpose of the Task Team will be to carry out an investigation into the blockages that prevent effective recruitment, retention and progression of South African black academics at universities in the country, to assess the effectiveness of initiatives that have been developed to address these and to make recommendations to the Minister and the Department on how these blockages can be decisively addressed.'

Specifically, the MTT was required to:

a) Conduct desktop reviews that will:
   - Review other studies that have investigated this phenomenon in South Africa and in other African countries.
   - Review updated data on the current situation with respect to the participation of black South African academics at various levels of the South African university system.

b) Use the desktop reviews to develop a concept document that accurately describes the current situation regarding the participation of black South African academics in the university system and which highlights the issues that require further investigation.

c) Undertake a range of qualitative studies to understand and document the barriers that act against the effective recruitment, retention and progression of black academics at South African universities.
d) Review the efficacy of institutional (university) and national department strategies that have been put in place to address the problem.
e) Compile a report for the Minister that presents the findings from the investigation, and that makes recommendations on what different role-players, including the national departments, need to do to more decisively address the blockages that exist.

The MTT met seven times over a period of 18 months to undertake its work. The minutes of the MTT meetings are attached as Annexure B. At its first meeting, the MTT familiarised itself with the ToR, the broad task to be undertaken, and decided on a process towards the formulation of a workplan. The second meeting confirmed the workplan, roles and responsibilities and processes to be followed in undertaking the work. The third, fourth and fifth meetings engaged with the findings that were highlighted through the work undertaken, and the sixth and seventh meetings engaged with the draft report and finalised it for submission to the Minister.

The MTT decided on several workstreams that would generate the information that it needed to formulate its report and recommendations. All the workstreams would result in a report with which the MTT could engage, and which would help to inform its recommendations.

Workstream 1 was led by Professor Bawa and its task was to undertake a comprehensive desktop review of quantitative and qualitative studies and the latest available data regarding participation of black South African academics in the university system. The information gathered was to be used to construct a report which accurately describes the current situation and which highlights the issues that require further investigation. The workstream report, titled *A Desktop Review of the Literature on the Recruitment, Retention and Progression of Black Academics*, is attached as Annexure C.

Workstream 2 was led by Professor Mosoetsa and its task was to undertake new primary qualitative research in the form of consultations, interviews and focus group interviews with key informants to more deeply understand the nature of the problem and what the potential solutions could be. The workstream report, titled '*From Being the Only One to Being a Critical Mass': An Exploration of the Accounts of Black Academics in Relation to Their Recruitment, Retention and Progression in Higher Education*, is attached as Annexure D.

Workstream 3 was led by Dr Mgwebi and its task was to undertake a review/assessment of current institutional (university) and national department strategies and policies that have been put in place to respond to the problem. This included document analysis as well as interviews with key informants at a range of institutions. The workstream report, titled *The Recruitment, Retention and Progression of South African Academics – University Policy and Strategy Review*, is attached as Annexure E.

Workstream 4, undertaken by the Department, sought to highlight the issues related to the postgraduate pipeline and the staffing profile at universities through quantitative data drawn from Higher Education Information Management System (HEMIS) data, in effect engaging with the question: 'What do the data say?' A report titled *The Postgraduate Pipeline in South Africa* is attached as Annexure F, and a report titled *The Demographic Profile of Instructional/Research Professional Staff at Public Universities in South Africa, and Staff Development Initiatives that Are Being Implemented to Transform* It is attached as Annexure G.

In addition to the specific reports that were developed for the MTT, there are a number of other recent studies and reports that address the issues that the MTT was requested to engage with, and which provided important insights for the MTT. The various reports are:

- The Department of Science and Technology (DST) and Universities South Africa (USAf) commissioned a study that was undertaken by the Centre for Research on Evaluation, Science and Technology (CREST) at Stellenbosch University, and a report titled *A Study on Building a Cadre of Emerging Scholars for Higher Education in South Africa* was released in 2018. The report is attached as Annexure H.
- The DST commissioned *A Study on the Retention, Completion and Progress Rates of South African Postgraduate Student*s (2015) that was also conducted by CREST. The report is attached as Annexure I.
- The National Research Foundation (NRF) commissioned a study to comprehensively assess the state of the South African research enterprise. A report titled *The State of the South African Research Enterprise* was published by the DST-NRF Centre of Excellence in Scientometrics and Science, Technology and Innovation Policy in 2019. The report is attached as Annexure J.

The sections that follow engage with this range of reports. They record the observations made through the MTTs engagement with the reports, without repeating the full discussion and the data contained in them. The reports should be read in combination with this report. The reports can be accessed via the following Dropbox link: **https://www.dropbox.com/sh/6p3cxmj3bwfr6qf/AAChPqIl6DtYEGRa-zIVy8Mza?dl=0**.

Recommendations are made based on the observations of the MTT derived from its engagement with the reports and the research.

This report considers issues that impact on the recruitment, retention and progression of black South African academics along the full academic career trajectory, as illustrated in Figure 1.

FIGURE 1: The academic staff career pathway at universities

It should be noted that the postgraduate pipeline is the traditional/main pathway into a career as an academic. However, there are also academic staff flows into universities from the public and private sectors. The extent of these flows will require a separate study and is not considered in this report.

In terms of its brief, the MTT defined the terms below as follows:

Academics: Instructional and research staff at universities, including those that occupy formal posts as junior lecturers, lecturers, senior lecturers, associate professors and professors.
Black academics: African, coloured and Indian academics at universities.
Black South African academics: African, coloured and Indian academics who hold South African citizenship.
Recruitment: The process of attracting and appointing academics into posts at universities.
Retention: The ability of universities to keep academic staff in their employ.
Progression: Movement upwards through the academic ranks in universities.

Summary of recommendations

Based on a number of observations, the MTT makes the following recommendations.

Recommendation 1

Ambitious but achievable targets should be set for the ideal overall postgraduate enrolment share in the public university system, and the equitable proportionate enrolment share of black South Africans in postgraduate programmes. State steering mechanisms must be directed towards achieving these enrolment targets.

Recommendation 2

Student funding for postgraduate studies must be enhanced to attract high-achieving students to continue to doctoral and postdoctoral programmes and into the academy. Recruitment strategies must take equity issues into account. This will require 'fit-for-purpose' financial packages that respond to the challenges that prevent students, especially South African black and female students, from progressing effectively along this pathway.

Recommendation 3

Sustained attention must be paid to improving undergraduate and postgraduate student success in order to create a bigger pool of undergraduates who meet the admission requirements for postgraduate studies, and postgraduates who can be considered for academic positions.

Recommendation 4

Universities should ensure greater numbers of South African masters and doctoral graduates, specifically African and female South African doctoral graduates, and especially in fields where participation patterns remain inequitable. This should be addressed through the DHET university enrolment planning process.

Recommendation 5

Universities must develop and implement staff transformation plans that have specific time-bound targets regarding the recruitment and the progression of black South African academics. Such plans must be consolidated into one National Staff Transformation Plan for South African Universities. The implementation of the plans should be monitored by the National University Transformation Oversight Committee. National steering mechanisms must be directed towards the achievement of these targets and national and institutional strategies must be implemented to achieve the targets.

Recommendation 6

In working towards the National Development Plan goal of 75% of the academic staff at universities holding doctorates, national strategies must prioritise support for doctoral studies for woman, African and coloured academics, with a specific focus on academics at historically disadvantaged universities and at universities of technology.

Recommendation 7

Support programmes must be made available that comprise sustained programmatic activities that are nuanced to address specific and real needs of new academics generally, and first-generation academics specifically. All universities must implement formal and dynamic mentoring programmes, possibly tied into a national mentoring network, to assist new academics to navigate the first few years of academic life, and to develop a career advancement plan.

Recommendation 8

Many of the new and early-career academics who do not yet hold doctoral degrees are likely to be enrolled and already working towards a doctorate. A concerted effort should be made to identify these academics in the system, understand where they are in the doctoral study trajectory and provide individualised structured support to assist them towards completion in an agreed period.

Recommendation 9

Workload models that enable early-career academics to develop as teachers and researchers must be implemented, and concerted efforts must be made to ensure early-career academics are able to participate in research teams.

Recommendation 10

Universities should ensure that performance appraisal systems and promotion criteria are clearly understood and implemented in a consistent and transparent manner, and that they consider differentiated performance across the range of academic functions.

Recommendation 11

Perhaps the most important recommendation to be made in this report is the need to tackle institutional and individual racism and sexism in direct and visible ways, including through penalising perpetrators, but also in ways that assist to build institutional cultures that embrace diversity and that are anti-racist and anti-sexist. This means moving from hoping that this will happen naturally to actually putting measures in place to ensure it happens. Universities must interrogate how institutional cultures and traditional practices may be creating alienating environments that intentionally or unintentionally work to exclude, and put proactive measures in place to address this. University leadership and management must lead in this regard and must receive training in how to do so where this is needed.

Recommendation 12

A system-wide appraisal of the conditions of service of lecturers and junior lecturers, including levels of remuneration across the university system, must be undertaken, with a view to improving conditions of service where necessary so that the best young graduates can be attracted to an academic career.

Recommendation 13

A broad definition of the concept of transformation should be developed that could apply generally in higher education, and specifically to staff transformation. Qualitative and quantitative transformation indicators aligned to the broad definition should be put in place, and national and institutional strategies synergistically implemented towards the achievement of the indicators, with achievement towards the targets subjected to consistent and effective monitoring and evaluation through the National University Transformation Oversight Committee.

Recommendation 14

Universities must critically review their existing policies to ensure that issues of transformation generally, and specifically with reference to the recruitment, retention and progression of black South African academics, are explicitly addressed in the primary policies, and implemented consistently across the institution. Progress towards the achievement of equity targets should be built into the performance agreements of senior management at the universities.

Recommendation 15

The DHET and the Department of Labour (DoL) must collaborate to review the extent to which universities comply with employment equity legislation, especially the Employment Equity Act. Any issues that come to the fore must be addressed through the range of DHET steering mechanisms.

Recommendation 16

The mandate of the National University Transformation Oversight Committee must be expanded where necessary to enable it to take forward the actions required of it in this report, and it must be adequately and effectively resourced to enable it to deliver on its mandate.

Recommendation 17

The NRF's rating system and funding model must be reviewed in line with national priorities and transformation agenda of the country. This will mean a refocus of the NRF's strategy that prioritises all higher education institutions and black South Africans. The NRF should put in place strategies of building capacity and expertise at historically disadvantaged universities in the areas of science, technology and innovation. The implementation of the recommendation should be monitored by the National University Transformation Oversight Committee.

Recommendation 18

There are support initiatives in place, specifically designed to strengthen and transform the postgraduate pipeline and the academic staffing profile. Sufficient human and financial resources should be allocated to these initiatives, and they should be more finely tuned towards addressing staff transformation imperatives to enable them to be implemented at a scale that will enable rapid progress to be made in transforming and developing the postgraduate pipeline and academic and professional staff at universities.

Recommendation 19

The DHET should work more closely and collaboratively with universities to align academic staff capacity development initiatives and enable joined-up funding for seamless and continuous support of postgraduate students and academics across the academic career pipeline.

Recommendation 20

Strong monitoring and evaluation processes must be implemented by the DHET to determine whether the range of staff capacity development programmes are having the desired transformation impact in the system, and the evaluation must inform reshaping of programmes as necessary. This includes initiatives being implementedat national and institutional levels. The DHET should work closely with other government departments and entities such as the DoL and the Employment and Gender Commission to ensure that universities implement transformation plans.

Structure of report

The report is structured as follows:

- **Section 2** deals with the postgraduate pipeline.
- **Section 3** discusses academic staff participation and progression patterns at universities.
- **Section 4** examines how entrenched institutional cultures and practices can play a role in excluding black and female academics.
- **Section 5** reports what steps are being taken by universities to advance the recruitment, retention and progression of black academics.
- **Section 6** describes interventions at the national level.
- **Section 7** presents the overall conclusions of the MTT, as well as points to further research that should be undertaken.

2

The postgraduate pipeline in South African universities

The masters and doctoral graduates pool of South African black Africans and coloureds, and females in particular, from which new academics can be recruited remains small and is growing at a low rate.

Observation 1: An inadequate, inefficient, diminishing and inequitable postgraduate pipeline

The inequitable participation in postgraduate programmes, more pronounced at the doctoral level, is a significant factor that impacts on the pace of change in the academic staff profile at universities. Information presented in Annexure F and below shows that a high percentage of the masters and doctoral graduates produced by South African universities are non-South Africans, mostly from the Southern African Development Community (SADC) and other African countries. This issue is explored later in this report. That data also show that the profile of South African graduates from postgraduate programmes still reflects inequitable participation of black Africans and coloureds. In relation to gender, in 2017 there were a greater number of female South African masters and PhD graduates. The graduate gender ratio is closely aligned to the ratio in the general South African population.

POSTGRADUATE PIPELINE
IN 2017 (HEMIS)

MASTERS GRADUATE WERE:
- 12 951 in number
- 78.7% (10 186) South African
- 21.3% (2 765) international

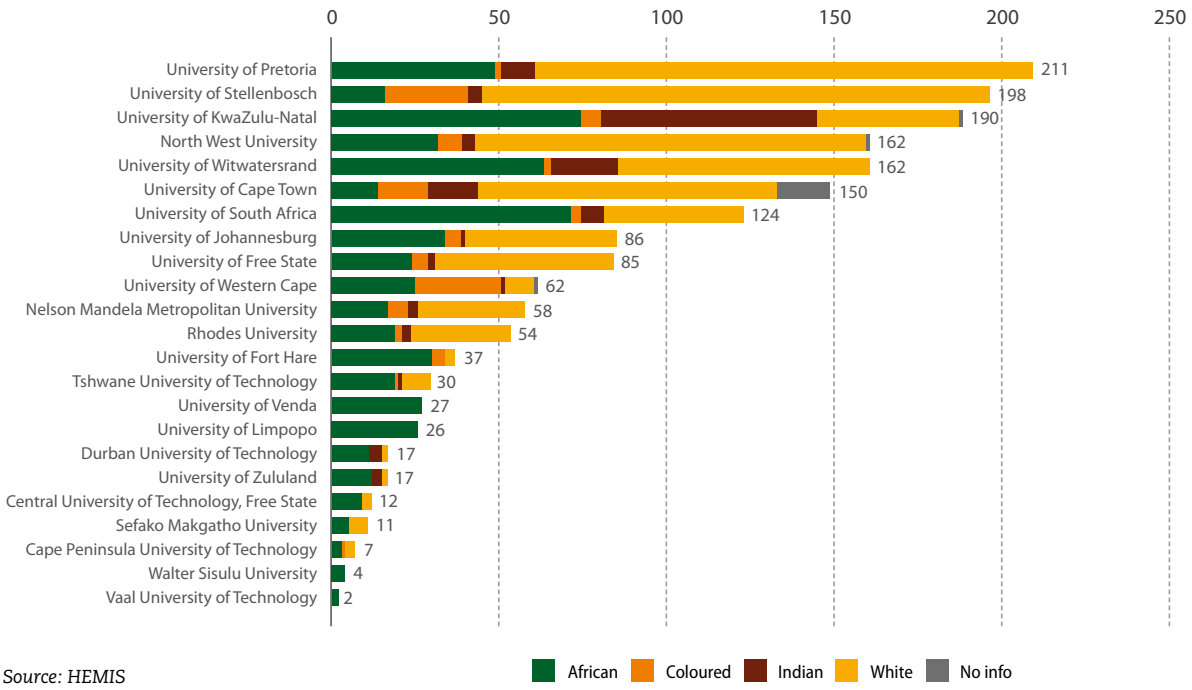
For the 10 186 South African masters graduates, the population group profile is:
- 4 693 (46.1%) African
- 3 835 (37.6%) white
- 893 (8.8%) Indian
- 633 (6.2%) coloured
- 132 (1.3%) undefined population group
- 4 684 (46%) male
- 5 502 (54%) female

DOCTORAL GRADUATES WERE:
- 3 057 in number
- 56.7% (1 732) South African
- 43.3% (1 287) international

For the 1 732 South African doctoral graduates, the population group profile is:
- 589 (34%) African
- 871 (50.3%) white
- 143 (8.3%) Indian
- 110 (6.4%) coloured
- 19 (1.1%) undefined population group
- 815 (47%) male
- 917 (53%) female

The population group profile of the 1 732 South African doctoral graduates from individual South African universities in 2017 is shown in Figure 2.

FIGURE 2: The population group profile of South African doctoral graduates at universities



Source: HEMIS

The figure shows that:

- The bulk of the doctoral graduates are produced by 12 universities, which had 50 or more doctoral graduates in 2017.
- With the exception of Unisa (58.1%), the percentage of black African graduates at these universities in 2017 was less than 50%: UP (23.2%), SUN (8.1%), UKZN (39.5%), Wits (39.5%), NWU (19.8%), UCT (9.3%), UJ (39.5%), UWC (40.3%), NMU (29.3%) and RU (35.2%).

The extent to which the profile of the doctoral pipeline can be transformed is fundamentally dependent on transformation of the pipeline at these universities.

The Study on the Retention, Completion and Progress Rates of South African Postgraduate Students (2015), attached as Annexure I, using HEMIS data, shows the pipeline decreases as students progress from undergraduate to post-graduate studies, and through the various levels of postgraduate studies programmes.

In terms of progression, using 2008 as a snapshot year, the following illustrative data can be lifted from the study:

- For the 2008 bachelors graduate cohort (57 591), 19% enter honours studies within one year of graduating. This grows to 27% within four years of graduating.
- For the 2008 honours graduate cohort (16 661), 15% enter masters studies within one year of graduating. This grows to 25% within four years of graduating.
- For the 2008 masters graduate cohort (7 492), 6% enter doctoral studies within one year of graduating. This grows to 14% within four years of graduating.

The data illustrate that the pipeline size decreases substantially from bachelor studies to doctoral studies, with small numbers of graduates from the previous level entering the next level. Also, significant numbers of graduates enter the next level of study some years after they have graduated from the previous level, thus interrupting their studies.

Comprehensive analyses for doctoral cohorts have been undertaken for the DHET for 2006 to 2008 (Table 1), but have not yet been updated to include later cohorts.

The minimum time for a doctoral programme taken full-time would be three years. However, the 2015 DST study (Annexure I) has shown that the majority of students work while completing their doctorates, and are therefore part-time. Therefore, the year of comparison in the following data is taken at five years.

TABLE 1: Doctoral graduate cohorts for 2006 to 2008, all graduates						
Cohort	Number registered in Year 1	% graduated within 3 years	% graduated within 4 years	% graduated within 5 years	% graduated within 6 years	% graduated within 7 years
2006	3 175	15.7	26.6	**35.7**	42.6	**47.5**
2007	2 913	16.1	27.1	**36.4**	43.2	
2008	2 877	16.4	27.9	**38.5**		

It is noted that there is a small improvement in the throughput of doctoral graduates within the five-year period, from 35.7% in 2006 to 38.5% in 2008. Considering the data for the 2006 and 2007 cohorts, it is clear that after the five-year period, significant numbers of doctoral candidates continue to graduate – by year seven of the 2006 cohort, 47.5% of the cohort has graduated.

The cohort analysis has been broken down to reveal gender differences, as shown in Table 2. There is very little difference in the throughput rate between males and females.

TABLE 2: Doctoral graduate cohorts for 2006 to 2008, by gender						
Cohort	Number registered in Year 1	% graduated within 3 years	% graduated within 4 years	% graduated within 5 years	% graduated within 6 years	% graduated within 7 years
Female						
2006	1 339	15.2	25.9	36.0	42.7	47.8
2007	1 193	15.9	26.4	35.3	43.5	
2008	1 169	15.1	26.8	38.8		
Male						
2006	1 836	16.0	27.0	35.6	42.6	47.3
2007	1 720	16.2	27.5	37.2	42.9	
2008	1 708	17.3	28.7	38.3		

Table 3 provides a cohort analysis for doctoral students based on population group.

TABLE 3: Doctoral cohorts 2006 to 2008, disaggregated according to population group						
Cohort	Number registered in Year 1	% graduated within 3 years	% graduated within 4 years	% graduated within 5 years	% graduated within 6 years	% graduated within 7 years
African						
2006	1 362	11.5	22.4	31.0	37.4	42.0
2007	1 364	13.1	24.0	33.7	39.7	
2008	1 289	14.0	25.2	34.6		
Coloured						
2006	143	11.9	21.0	32.9	37.8	44.8
2007	138	13.8	26.8	37.7	45.7	
2008	164	12.8	22.6	34.8		
Indian						
2006	252	17.1	25.4	32.9	41.7	46.8
2007	192	10.9	19.8	26.0	36.5	
2008	211	16.1	27.5	38.4		
White						
2006	1 418	19.7	31.3	41.1	48.4	53.2
2007	1 219	20.4	31.7	40.9	47.8	
2008	1 213	19.4	31.7	43.3		

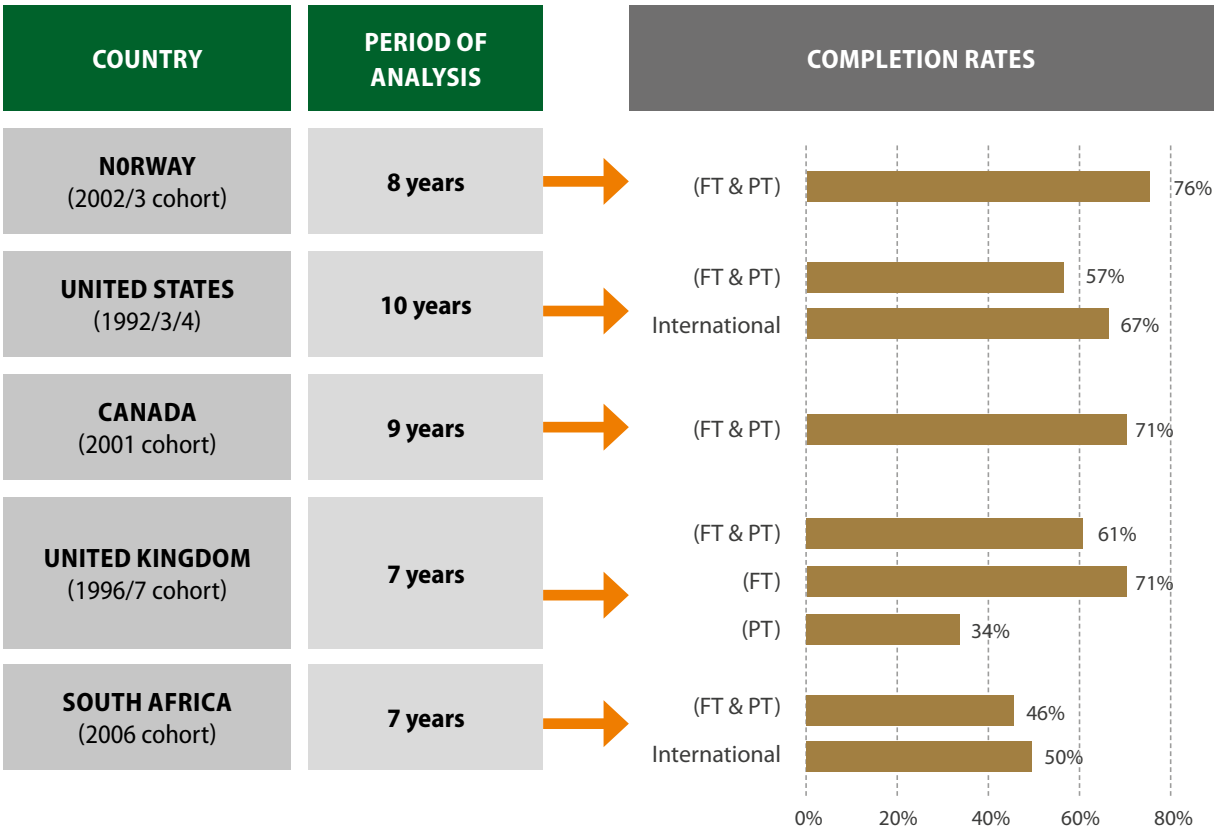
Looking at year five as the comparison year, it can be seen that African and coloured students have the lowest throughput rates followed by Indians, with white student throughput being highest.

Annexure I also presents international comparative data on doctoral completion (throughput) rates, as seen in Figure 3. The figure shows that the seven-year throughput rate for the 2006 South African doctoral cohort is 46% and this compares somewhat favourably with an international average of 50%. However, when compared to the throughput rates for developed countries and for much earlier cohorts in these countries, the comparison is substantially less favourable.

In terms of absolute numbers of doctorates that are produced, Annexure I presents data that show that 'South Africa performs poorly when compared to OECD [Organisation for Economic Co-operation and Development] countries of similar size and GDP [gross domestic product] ranking, and even when compared to much smaller countries with lower GDP rankings, but considerably worse when compared to top-ranked GDP countries'.

In 2017, 3 057 doctoral graduates were produced by South African universities. In 2018, the number of doctoral graduates increased to 3 344 graduates. While good progress is being made in the production of doctoral graduates, we are still some way off the National Development Plan target of 5 000 doctoral graduates annually. A 100% increase is required between 2016 and 2030 if this target is to be achieved. There are, however, indications that it can be achieved.

FIGURE 3: International comparison of doctoral completion rates



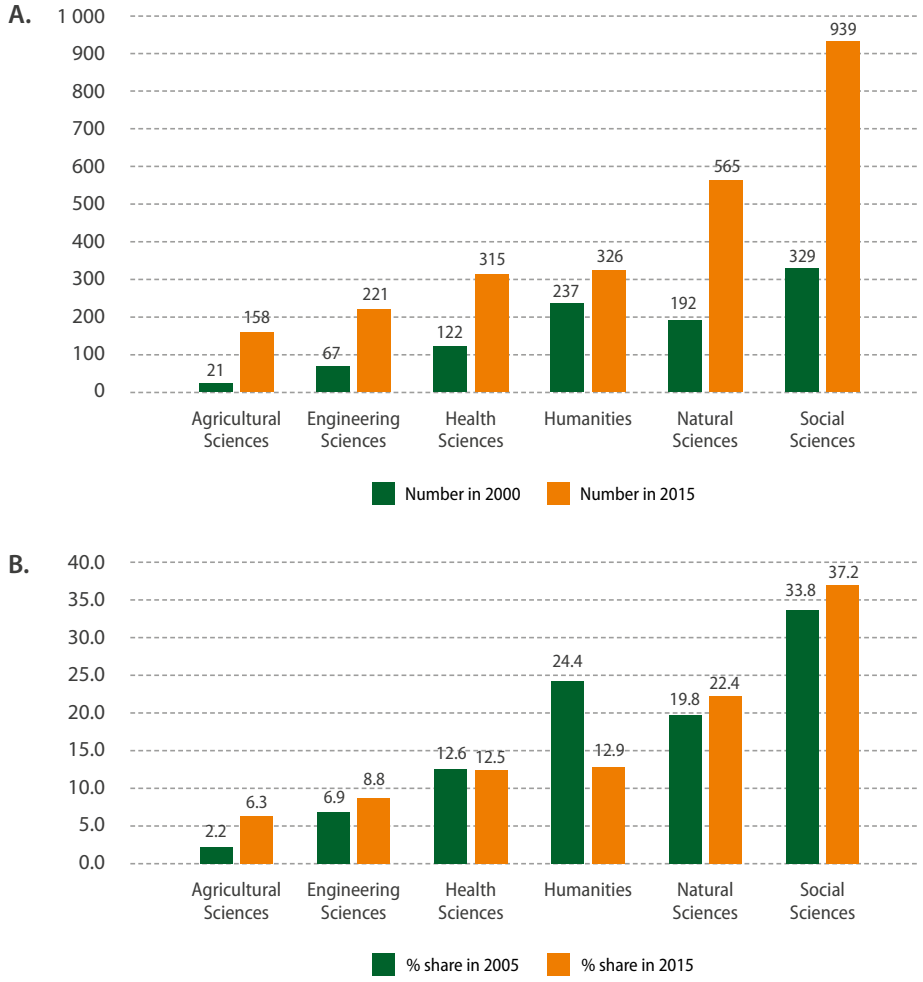
Source: Council of Graduate Schools (2008), DHET and CHE Cohort Analysis (2014), Higher Education Funding Council for England (2005), Studies in Higher Education (2013), Tamburri (2013).

Observation 2: Inequitable demography of doctoral graduates across fields of study

The report titled *The State of the South African Research Enterprise*, attached as Annexure J, illustrates how the profile of doctoral graduates has changed.

Figure 4 shows how the number and proportion of doctoral graduates in various fields of study has changed between 2000 and 2015.

FIGURE 4: (a) Overall growth in numbers and (b) change in proportion of PhD graduates in various fields of study at South African universities between 2000 and 2015



Source: Annexure J

All fields have grown in terms of absolute numbers of doctoral graduate outputs. However, in terms of proportional growth, the humanities have decreased substantially, health sciences has stayed the same, and the other fields have all increased.

Table 4 shows the proportional shifts of female doctoral graduates.

TABLE 4: Change in proportion of female doctoral graduates overall, and by field of study, between 2000 and 2015

Field	2000 (%)	2015 (%)	Change (%)
All fields	41	44	3
Health Sciences	62	59	-3
Agricultural Sciences	19	49	+30
Social Sciences	46	47	+1
Natural Sciences	44	42	-2
Humanities	30	39	+9
Engineering	18	21	+3

Source: Annexure J

With regard to the various fields of study, and by 2015, females were still underrepresented in all except for the Health Sciences, with highest underrepresentation in Engineering. It is a concern that the proportion of female graduates in the Natural Sciences actually decreased between 2000 and 2015.

The shifts in proportion of black doctoral graduates are illustrated in Table 5.

TABLE 5: Change in proportion of black doctoral graduates overall, and by field of study, between 2000 and 2015

Field	2000 (%)	2015 (%)	Change (%)
All fields	25	47	22
Health Sciences	25	48	23
Agricultural Sciences	8	45	37
Social Sciences	32	55	23
Natural Sciences	18	47	29
Humanities	25	39	14
Engineering	5	27	22

Source: Annexure J

Significant growth in the output of black doctoral graduates has occurred across all fields of study, and the system appears to be moving in the right direction. However, despite the growth, black doctoral graduates are still significantly underrepresented in relation to the general population demographic. Only 27% of Engineering doctoral graduates are black.

Observation 3: A high number of international doctoral graduates at South African universities

TABLE 6: Doctoral graduate production by South African universities in 2017, ranked in order of the proportion of South African doctoral graduates produced

University*	South Africa	%	International	%	No Info.	%	Grand total
UL	26	89.7	3	10.3	0	0.0	**29**
SMU	11	73.3	4	26.7	0	0.0	**15**
NWU	162	68.9	73	31.1	0	0.0	**235**
UJ	86	68.3	40	31.7	0	0.0	**126**
UFS	85	66.9	41	32.3	1	2.6	**127**
SUN	198	64.9	100	32.8	7	18.4	**305**
UniVen	27	64.3	15	35.7	0	0.0	**42**
NNMU	58	63.0	34	37.0	0	0.0	**92**
RU	54	62.1	32	36.8	1	2.6	**87**
CUT	12	60.0	8	40.0	0	0.0	**20**
UP	211	59.6	143	40.4	0	0.0	**354**
Wits	162	57.2	121	42.8	0	0.0	**283**
UCT	150	54.2	119	43.0	8	21.1	**277**
UniZulu	17	53.1	14	43.8	1	2.6	**32**
TUT	30	54.5	25	45.5	0	0.0	**55**
UWC	62	51.7	55	45.8	3	7.9	**120**
DUT	17	51.5	16	48.5	0	0.0	**33**
UKZN	190	49.0	186	47.9	12	31.6	**388**
WSU	4	44.4	5	55.6	0	0.0	**9**
Unisa	124	42.9	164	56.7	1	2.6	**289**
CPUT	7	41.2	10	58.8	0	0.0	**17**
VUT	2	40.0	3	60.0	0	0.0	**5**
UFH	37	31.6	76	65.0	4	10.5	**117**
Grand total	**1 732**	56.7	**1 287**	42.1	**38**	1.2	**3 057**

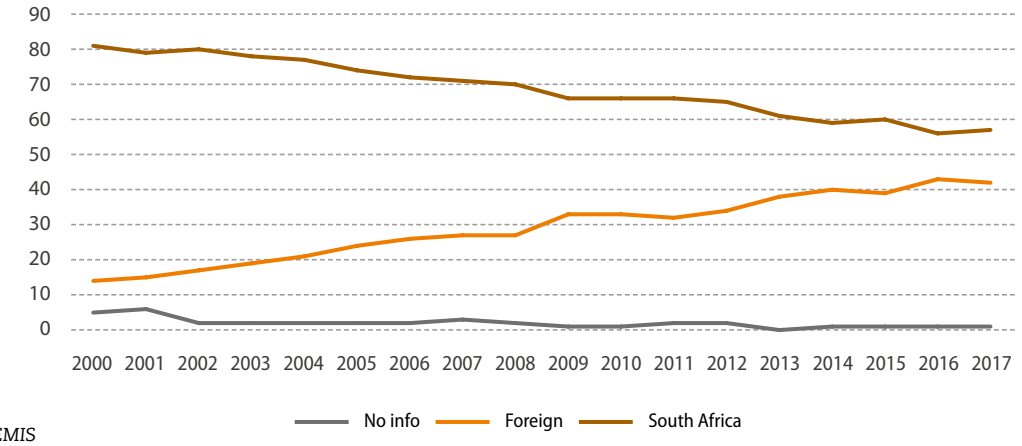
**MUT, SMU and SPU did not have any doctoral graduates in 2017*
Source: HEMIS

Some observations can be made from Table 6:

- 42.1% of the doctoral graduates from South African universities in 2017 were international citizens.
- At 21 of the 23 doctorate-producing universities in 2017, 31% or more of the doctoral graduates were international citizens.
- The top doctorate-producing university is UKZN, and almost half (48%) of its graduates are international citizens.
- Universities where more than half the doctoral graduates were international citizens include WSU, Unisa, CPUT, VUT and UFH.
- UFH has the highest proportion of international doctoral graduates (65%), while UL has the lowest (10.3%).

Figure 5 shows how the nationality proportion of doctoral graduates is changing over time.

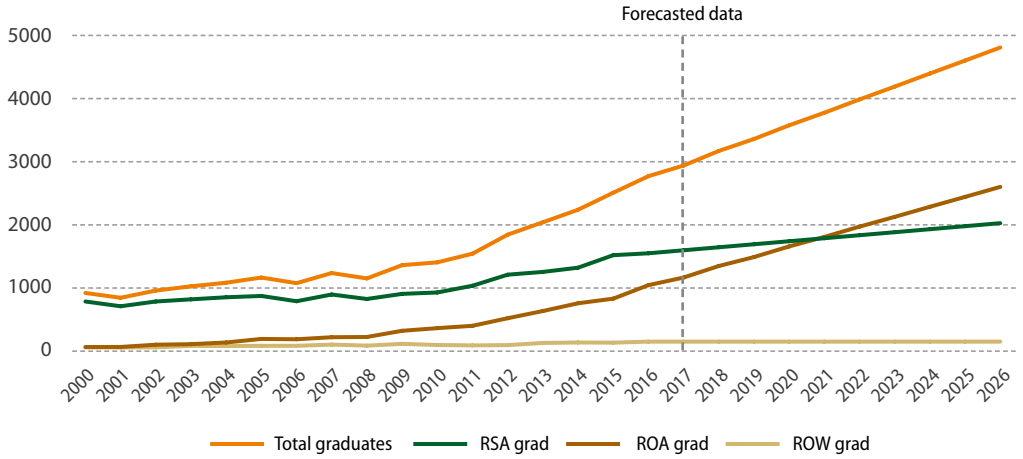
FIGURE 5: Changes in the nationality profile of doctoral graduates from South African universities, 2000 to 2017



Source: HEMIS

The report *The State of the South African Research Enterprise* (Annexure J) projects South African doctoral production up to 2026. The projection, illustrated in Figure 6, indicates that by 2021, the number of doctoral graduates from the rest of Africa (ROA) will surpass the number of South African (RSA) doctoral graduates, while the number of doctoral graduates from the rest of the world (ROW) will remain very small.

FIGURE 6: ARIMA forecasting of doctoral graduates by nationality, 2000–2026



Source: Annexure J

It is highly concerning that while the number of doctoral graduates is steadily increasing, the proportion of South African doctoral graduates has decreased steadily, from 81% in 2000 to 57% in 2017. International participation in postgraduate programmes is not the main challenge. Rather, the main challenge is the inability of the system to recruit and retain South African students, particularly black South African students. The spaces are there, but are not

being taken up in sufficient numbers by black South African students. This worrying trend needs to change urgently. It is also a significant barrier to the recruitment of South African black academics, as the pool from which to recruit is decreasing proportionally over time. Concrete strategies must be implemented to increase both the numbers and the proportion of South African doctoral graduates.

Observation 4: Multiple factors combine to create a small and inequitable postgraduate pipeline

There are multiple compounding factors that result in an inadequate, diminishing and inequitable postgraduate pipeline in South Africa. The reports attached as Annexures C, D, G and J point to the following factors:

- High dropout rates across all levels of the education system that result in small numbers of students that are able to register for and complete postgraduate qualifications.
- A gruelling and sometimes opaque application and selection process for postgraduate studies, coupled with limited advisement opportunities.
- Postgraduate student success initiatives are limited across universities.
- High levels of competition for the small pool of high-achieving graduates and more attractive opportunities outside of postgraduate study.
- Inadequate funding for postgraduate study, which is compounded for many first-generation black postgraduate students who carry the expectations and aspirations of, and obligations to, immediate and extended families and communities. Postgraduate students mitigate funding challenges by working and studying part-time, and/or by deferring studies until sufficient funds can be accumulated to support studies. For part-time students, balancing work and study responsibilities is reported as a difficulty. Funding challenges impact on access, retention and progression in postgraduate programmes.
- Quantitatively and qualitatively constrained mentorship and supervisory capacity in universities limits the number of students that can be enrolled for masters and doctoral programmes and poor-quality supervision impacts on success and quality of graduates.

Based on Observations 1 to 4 about the postgraduate pipeline, and to address the blockages in the pipeline, the MTT makes the following recommendations.

Recommendation 1

Ambitious but achievable targets should be set for the ideal overall postgraduate enrolment share in the public university system, and the equitable proportionate enrolment share of black South Africans in postgraduate programmes. State steering mechanisms must be directed towards achieving these enrolment targets.

Recommendation 2

Student funding for postgraduate studies must be enhanced to attract high-achieving students to continue to doctoral and postdoctoral programmes and into the academy. Recruitment strategies must take equity issues into account. This will require 'fit-for-purpose' financial packages that respond to the challenges that prevent students, especially South African black and female students, from progressing effectively along this pathway.

Recommendation 3

Sustained attention must be paid to improving undergraduate and postgraduate student success in order to create a bigger pool of undergraduates who meet the admission requirements for postgraduate studies, and postgraduates who can be considered for academic positions.

Recommendation 4

Universities should ensure greater numbers of South African masters and doctoral graduates, specifically African and female South African doctoral graduates, and especially in fields where participation patterns remain inequitable. This should be addressed through the DHET university enrolment planning process.

3

Academic staff participation and progression patterns at South African universities

Staff matters. It matters who is leading the knowledge project, who is teaching, who is researching, who is making decisions about the nature of the curriculum and how it is delivered, what is being researched and how, who the academic role models and mentors are, what voices carry weight and whose world views are a respected part of the higher education system in South Africa.

Outcome 8 of the National Plan for Higher Education (NPHE, 2001) targeted improved staff equity and required 'that more urgent attention should be given to increasing and retaining the pool of qualified black and female staff, as well as to changing the disabled profile.'

Universities were advised in the NPHE (2001) to develop and implement employment equity plans that would result in a changed staff profile as a medium-term measure, and in the short term to recruit African academics from the rest of the continent, while the long-term strategy would be to grow and transform the postgraduate pipeline to ensure the availability of a big enough recruitment pool of talented black and female graduates.

Observation 5: Significant participation of international instructional/research staff in South African universities

HEMIS data show that the university system has taken the NPHE recommendation on board, and from 2000 to 2017, HEMIS data show relatively consistent participation of international staff as permanent academics at universities, at 10.5% in 2000 and 11.2% in 2017. A decrease from 13.2% to 11.2% is noted between 2016 and 2017 (Table 7).

TABLE 7: South African and international permanent instructional/research staff in 2000, 2016 and 2017

	2000	2016	2017
South African %	89.5	86.8	88.4
International %	10.5	13.2	11.2
Total number	**14 632**	**19 214**	**19 361**

STATS AT A GLANCE
IN 2017 (HEMIS)

There were 19 361 permanent instructional/research staff employed in South African universities, of whom:

88.4% were South African citizens.
11.2% were international citizens, of whom 6.3% were citizens from other African countries.

The participation of international citizens as academics in South African universities bodes well for the system, as this enables a global perspective for South African higher education. An international representation of 11.2% in university permanent academic staffing is something that must be positively acknowledged and is not undesirable. However, when the reliance on international recruits is a result of inability or reluctance to recruit and retain South African academics, then this has to be addressed.

Table 8 shows that the South African/international staff ratios vary significantly across the university system.

TABLE 8: The percentage of international permanent instructional/research staff at each South African university in 2017

University	South African	International	Total	International %
SMU	596	13	609	2.1
NMU	592	15	607	2.5
UFS	955	29	984	2.9
NWU	1 456	53	1 509	3.5
WSU	550	30	580	5.2
DUT	548	33	581	5.7
TUT	906	63	969	6.5
Unisa	1 646	116	1 762	6.6
UL	515	50	565	8.8
CPUT	765	78	843	9.3
SUN	1 040	112	1 152	9.7
UniZulu	283	33	316	10.4
UMP	80	10	90	11.1
CUT	269	36	305	11.8
RU	283	39	322	12.1
UWC	576	80	656	12.2
UP	1 084	152	1 236	12.3
MUT	179	26	205	12.7
UKZN	1 152	172	1 324	13.0
UJ	1 041	193	1 234	15.6
VUT	337	65	402	16.2
SPU	71	15	86	17.4
Univen	365	90	455	19.8
UFH	279	85	364	23.4
UCT	915	293	1 208	24.3
Wits	894	300	1 194	25.1
TOTAL*	**17 377**	**2 181**	**19 558**	**11.2**

**Total excludes unknown nationality of 73.*

While the national average for international academic staff across the 26 universities was 11.2% in 2017, the percentage varied from a low of 2.1% at SMU, to a high of 25.1% at Wits. Clearly, the universities at the bottom of the table are drawing more extensively on the use of international staff, with four universities recording international staff employment percentages of very close to or above 20%: Univen, UFH, UCT and Wits.

Table 9 provides a nationality breakdown of the international permanent instruction/research staff at South African universities in 2017.

The table shows that 34% of the international academic staff in South African universities are from Zimbabwe and Nigeria, with Zimbabweans accounting for 25%.

For UFH and Univen, large numbers of the international academics are from Zimbabwe and Nigeria, while UCT and Wits appear to be able to attract academic staff from a much wider range of countries.

TABLE 9: The distribution of international permanent instructional/research staff at South African universities in 2017

Nationality	CPUT	UCT	CUT	DUT	UFH	UFS	UJ	UKZN	UL	NMU	NWU	UP	RU	UNISA	SUN	TUT	UNIVEN	VUT	WSU	UWC	WITS	UNIZULU	SPU	UMP	MUT	SMU	TOTAL	%
Zimbabwe	24	24	9	7	40	15	43	45	23	2	14	29	9	54	11	15	52	18	12	13	52	12	10	6	14	3	556	25
Nigeria	12	13	7	7	15		15	13	6		7	8	1	18	5	13	7	15		6	25	7	1	1	5		207	9
UK & N Ireland		58			2	5	8	7		2	1	9	1	2	7	2				3	27						134	6
Kenya	2	7	4	2	3		8	14	1	1		10	1	7	3	8	12	4	2	5	13	1			1	1	110	5
Germany	2	26					5	7	1	1	2	13	4		17	1				4	16						99	5
India	3	9	4	7	1		10	15	1	1	1	4	2	1	2	3		1	5	5	9	1			2		87	4
Usa		20			1		10	2			1	5	1		6	1				2	28						77	4
Cameroon	5	3		3	2		11	3	1		2	2		5	2	2	2	5	1	3	7					4	63	3
Zambia	3	13	1	2			6	6	1	2	3	2		2			3		3	2	11	1					61	3
Lesotho	3	2	2	1	2	5	1	2	1	2		3	1	5			2	8	2		6	2				2	52	2
Dem Rep Congo	4	2	1		1		11				1	2		10	2	4		4		2	6				1		51	2
Italy		13					3	4	1	1	1	6	1		2		1			2	9						44	2
Malawi	1	4					4	3		1	5	4	2	2	1		2			4	8						41	2
Ethiopia					3		5	8	6			3			2	2		1		6	3					1	40	2
Uganda	3	4			3		3	1			4	2	1	3		1	2	2		1	5	3	1				39	2
Netherlands		13					2		2		1	3			6					2	5						34	2
Ghana	4	1	1		1		3	2	2			1		1	2		3	1	3	1	5						31	1
Swaziland		1			1		5		1		2		1	3	1	1	1	2			4	2	1	3	1	1	31	1
Canada		10		1	1		1	1					5	1	1						7						28	1
China	1	1			1		2	2			1	2			4	2				2	5						23	1
France		7					1			1		1	1		5	1					5						22	1
Australia	1	4					2			1		2			3	1					4						18	1
Botswana	1	2	3				2				1	1		2		1		2			1		2				18	1
Spain		4			2	1	1	2					1		1	1				1	3						17	1
Tanzania	1	2			2				1			2			1		2	1		2	2						16	1
Belgium		6					1	2				1			4					1							15	1
Congo		1		1			1	3				1	1			1		1		1		2			2		15	1
Mauritius		6						4				4															14	1

TABLE 9: The distribution of international permanent instructional/research staff at South African universities in 2017

Nationality	CPUT	UCT	CUT	DUT	UFH	UFS	UJ	UKZN	UL	NMU	NWU	UP	RU	UNISA	SUN	TUT	UNIVEN	VUT	WSU	UWC	WITS	UNIZULU	SPU	UMP	MUT	SMU	TOTAL	%
Russian Federation	1						2	3				3			1						2						12	1
Namibia	2	1			1		1					2			1	1					1					1	11	1
Rwanda			1				4	1					1							4							11	1
Switzerland		2			1										4						3						10	0
Greece		3					1	1				3	1								1						10	0
Iran		1						3				4	1								1						10	0
Austria		2						1			1				3						1	1					9	0
Ukraine		1									1	2								1	2						7	0
Bulgaria		2						1				2				1											6	0
Japan		1			1			1			1										2						6	0
Mozambique							1					3									2						6	0
Portugal								1							4						1						6	0
Argentina		1						1				1	1							1							5	0
Benin				1			2														2						5	0
Bangladesh	1							2				1									1						5	0
Eritrea					1		1	2	1																		5	0
Gabon							1	1				1					1			1							5	0
Ireland		3						2																			5	0
Poland		2					1				1	1															5	0
Combined others less than 5	4	18	3	1		3	15	6	1		2	9	2		11	1			2	5	16	1				1	101	5
International Total	**78**	**293**	**36**	**33**	**85**	**29**	**193**	**172**	**50**	**15**	**53**	**152**	**39**	**116**	**112**	**63**	**90**	**65**	**30**	**80**	**301**	**33**	**15**	**10**	**26**	**14**	**2,183**	**100**
South Africa Total	**765**	**915**	**269**	**548**	**279**	**955**	**1 041**	**1 152**	**515**	**592**	**1 456**	**1 084**	**283**	**1 646**	**1 040**	**906**	**365**	**337**	**550**	**576**	**894**	**283**	**71**	**80**	**179**	**596**	**17 377**	
No Information					**1**	**16**		**17**			**1**			**34**						**2**							**71**	
Grand Total	**843**	**1 208**	**305**	**581**	**365**	**1 000**	**1 234**	**1 341**	**565**	**607**	**1 510**	**1 236**	**322**	**1 796**	**1 152**	**969**	**455**	**402**	**580**	**658**	**1 195**	**316**	**86**	**90**	**205**	**610**	**19 631**	
International %	**9**	**24**	**12**	**6**	**23**	**3**	**16**	**13**	**9**	**2**	**4**	**12**	**12**	**6**	**10**	**7**	**20**	**16**	**5**	**12**	**25**	**10**	**17**	**11**	**13**	**2**	**11.1**	

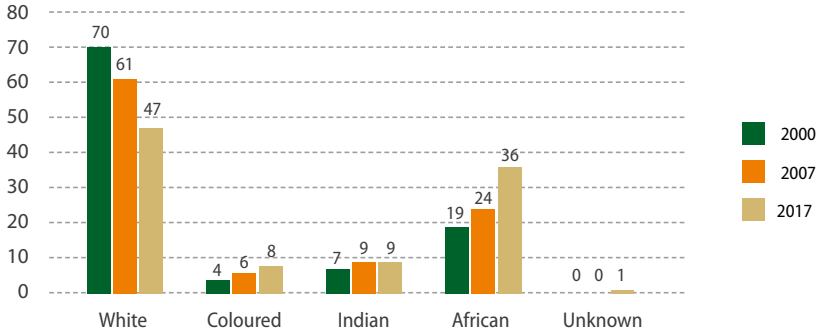
By definition, universities cannot be inward-looking, and international staff representation adds immense value to the academic enterprise. In the international higher education arena, international staff representation of up to 25% is not uncommon, and is a valued attribute in many university systems. However, for this to be true, the international representation needs to be truly international, rather than predominantly from a few countries, as appears to be the case in South Africa.

When the main reason for international staff recruitment is not a purposeful and reasonable internationalisation agenda, but rather a result of an inability to attract, recruit or develop local academics, then the challenges need to be fully understood and addressed.

Observation 6: An inequitable South African academic staff profile

Figure 7 illustrates how the population group profile of South African academic staff at universities has changed since 1994.

FIGURE 7: The population group distribution of permanent South African instructional/research staff at universities in 2000 (n = 13 099), 2007 (n = 14 423) and 2017 (n = 17 337)



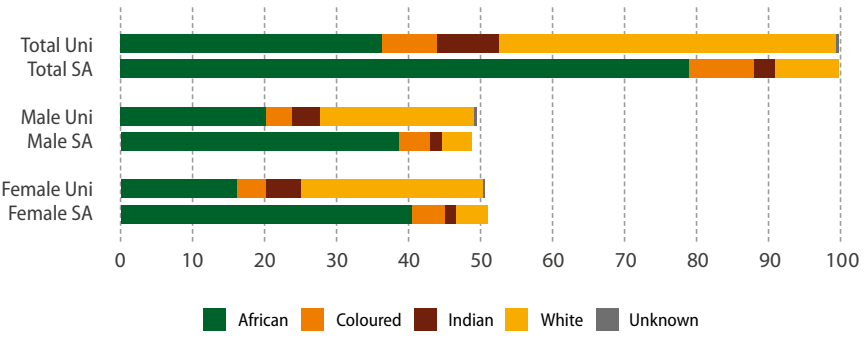
Source: HEMIS

While significant improvement in the representation of black academics in the academic staff complement of universities is noted, the population profile of academic staff at universities remains inequitable in comparison to the general population demographic.

A related challenge is that the overall size of the permanent instructional/research staff complement at universities has not kept pace with the significant increases in student enrolment, and with staff attrition through retirement and other causes. The staff complement will need to grow to meet existing demands as well as to meet the student enrolment targets projected in the National Development Plan. This growth will need to be managed carefully as an opportunity to address staff transformation imperatives.

Figure 8 compares the profile of permanent South African instructional/research staff at universities in 2017, to the 25–64 age cohort in the general South African population, as captured in Statistics South Africa's 2018 mid-year population estimates.

FIGURE 8: The demographic distribution of permanent instructional/research staff at universities (HEMIS) compared to the demographic distribution of the 25–64 cohort in the general South African population (Statistics South Africa 2018 mid-year population estimates)



The figure highlights the following:

- White and Indian males and females are still overrepresented in university instructional and research staff, while African and coloured males and females remain underrepresented.
- White females are the most overrepresented group, making up 25.3% of the academic staff compared to a 4.5% general population share.
- African females are the most underrepresented group, reflected by a 40.4% representation in the general population cohort and a 16.1% representation in universities.

Table 10 provides disaggregated data on academic staff population group demographics at each university.

TABLE 10: The proportion of permanent South African instructional/research staff at universities by population group in 2017

CAPE PENINSULA UNIVERSITY OF TECHNOLOGY					
	2007	2007 %	2017	2017 %	% change
African	63	9.9	199	26.0	**16.1**
Coloured	231	36.3	255	33.3	**-2.9**
Indian	24	3.8	39	5.1	**1.3**
White	319	50.1	271	35.4	**-14.7**
No Info	0.0	0.0	1	0.1	**0.1**
Total	**637**	**100.0**	**765**	**100.0**	**0.0**

UNIVERSITY OF CAPE TOWN					
	2007	2007 %	2017	2017 %	% change
African	40	6.0	103	11.3	**5.3**
Coloured	76	11.4	145	15.8	**4.5**
Indian	48	7.2	83	9.1	**1.9**
White	487	73.0	566	61.9	**-11.2**
No Info	16	2.4	18	2.0	**-0.4**
Total	**667**	**100.0**	**915**	**100.0**	**0.0**

CENTRAL UNIVERSITY OF TECHNOLOGY					
	2007	2007 %	2017	2017 %	% change
African	51	24.3	110	40.9	**16.6**
Coloured	8	3.8	11	4.1	**0.3**
Indian	2	1.0	5	1.9	**0.9**
White	149	71.0	143	53.2	**-17.8**
No Info	0	0.0	0	0.0	**0.0**
Total	**210**	**100.0**	**269**	**100.0**	**0.0**

DURBAN UNIVERSITY OF TECHNOLOGY					
	2007	2007 %	2017	2017 %	% change
African	123	21.5	171	31.2	**9.7**
Coloured	12	2.1	17	3.1	**1.0**
Indian	240	42.0	228	41.6	**-0.4**
White	196	34.3	121	22.1	**-12.2**
No Info	0	0.0	11	2.0	**2.0**
Total	**571**	**100.0**	**548**	**100.0**	**0.0**

UNIVERSITY OF FORT HARE					
	2007	2007 %	2017	2017 %	% change
African	146	58.4	168	60.2	**1.8**
Coloured	3	1.2	15	5.4	**4.2**
Indian	12	4.8	9	3.2	**-1.6**
White	88	35.2	87	31.2	**-4.0**
No Info	1	0.4		0.0	**-0.4**
Total	**250**	**100.0**	**279**	**100.0**	**0.0**

UNIVERSITY OF THE FREE STATE					
	2007	2007 %	2017	2017 %	% change
African	97	14.0	179	18.7	**4.8**
Coloured	17	2.4	39	4.1	**1.6**
Indian	7	1.0	15	1.6	**0.6**
White	573	82.6	722	75.6	**-7.0**
No Info	0	0.0	0	0.0	**0.0**
Total	**694**	**100.0**	**955**	**100.0**	**0.0**

UNIVERSITY OF JOHANNESBURG					
	2007	2007 %	2017	2017 %	% change
African	142	16.9	333	32.0	**15.1**
Coloured	26	3.1	56	5.4	**2.3**
Indian	53	6.3	128	12.3	**6.0**
White	619	73.7	524	50.3	**-23.4**
No Info	0	0.0	0	0.0	**0.0**
Total	**840**	**100.0**	**1041**	**100.0**	**0.0**

UNIVERSITY OF KWAZULU-NATAL					
	2007	2007 %	2017	2017 %	% change
African	279	19.4	423	36.7	**17.3**
Coloured	33	2.3	32	2.8	**0.5**
Indian	464	32.3	380	33.0	**0.7**
White	653	45.4	278	24.1	**-21.3**
No Info	8	0.6	39	3.4	**2.8**
Total	**1 437**	**100.0**	**1 152**	**100.0**	**0.0**

UNIVERSITY OF LIMPOPO					
	2007	2007 %	2017	2017 %	% change
African	484	66.8	455	88.3	**21.6**
Coloured	7	1.0	5	1.0	**0.0**
Indian	53	7.3	10	1.9	**-5.4**
White	181	25.0	45	8.7	**-16.2**
No Info	0	0.0	0	0.0	**0.0**
Total	**725**	**100.0**	**515**	**100.0**	**0.0**

NELSON MANDELA UNIVERSITY					
	2007	2007 %	2017	2017 %	% change
African	52	10.0	220	25.4	**15.4**
Coloured	30	5.8	19	2.2	**-3.6**
Indian	18	3.5	11	1.3	**-2.2**
White	420	80.8	617	71.2	**-9.6**
No Info	0	0.0	0	0.0	**0.0**
Total	**520**	**100.0**	**867**	**100.0**	**0.0**

NORTH WEST UNIVERSITY					
	2007	2007 %	2017	2017 %	% change
African	220	25.4	384	26.4	**1.0**
Coloured	19	2.2	54	3.7	**1.5**
Indian	11	1.3	24	1.6	**0.4**
White	617	71.2	994	68.3	**-2.9**
No Info	0	0.0	0	0.0	**0.0**
Total	**867**	**100.0**	**1456**	**100.0**	**0.0**

UNIVERSITY OF PRETORIA					
	2007	2007 %	2017	2017 %	% change
African	170	11.0	170	15.7	**4.7**
Coloured	26	1.7	27	2.5	**0.8**
Indian	70	4.5	60	5.5	**1.0**
White	1 271	82.5	827	76.3	**-6.2**
No Info	4	0.3	0	0.0	**-0.3**
Total	**1 541**	**100.0**	**1 084**	**100.0**	**0.0**

RHODES UNIVERSITY					
	2007	2007 %	2017	2017 %	% change
African	19	7.9	47	16.6	**8.7**
Coloured	7	2.9	21	7.4	**4.5**
Indian	7	2.9	15	5.3	**2.4**
White	207	86.3	200	70.7	**-15.6**
No Info	0	0.0	0	0.0	**0.0**
Total	**240**	**100.0**	**283**	**100.0**	**0.0**

UNIVERSITY OF SOUTH AFRICA					
	2007	2007 %	2017	2017 %	% change
African	227	22.6	755	45.9	**23.2**
Coloured	30	3.0	46	2.8	**-0.2**
Indian	34	3.4	93	5.7	**2.3**
White	712	71.0	752	45.7	**-25.3**
No Info	0	0.0	0	0.0	**0.0**
Total	**1 003**	**100.0**	**1 646**	**100.0**	**0.0**

UNIVERSITY OF STELLENBOSCH					
	2007	2007 %	2017	2017 %	% change
African	20	2.5	53	5.1	**2.6**
Coloured	85	10.7	155	14.9	**4.2**
Indian	13	1.6	31	3.0	**1.3**
White	674	85.1	801	77.0	**-8.1**
No Info	0	0.0	0	0.0	**0.0**
Total	**792**	**100.0**	**1 040**	**100.0**	**0.0**

Source: HEMIS

TABLE 10: The proportion of permanent South African instructional/research staff at universities by population group in 2017 (continued)

TSHWANE UNIVERSITY OF TECHNOLOGY					
	2007	2007 %	2017	2017 %	% change
African	263	33.2	490	54.1	**20.8**
Coloured	11	1.4	15	1.7	**0.3**
Indian	30	3.8	36	4.0	**0.2**
White	487	61.6	365	40.3	**-21.3**
No Info	0	0.0	0	0.0	**0.0**
Total	**791**	**100.0**	**906**	**100.0**	**0.0**

UNIVERSITY OF VENDA					
	2007	2007 %	2017	2017 %	% change
African	198	85.7	338	92.6	**6.9**
Coloured	1	0.4	2	0.5	**0.1**
Indian	4	1.7	4	1.1	**-0.6**
White	28	12.1	21	5.8	**-6.4**
No Info	0	0.0	0	0.0	**0.0**
Total	**231**	**100.0**	**365**	**100.0**	**0.0**

VAAL UNIVERSITY OF TECHNOLOGY					
	2007	2007 %	2017	2017 %	% change
African	91	32.3	184	54.6	**22.3**
Coloured	3	1.1	5	1.5	**0.4**
Indian	16	5.7	15	4.5	**-1.2**
White	172	61.0	133	39.5	**-21.5**
No Info	0	0.0	0	0.0	**0.0**
Total	**282**	**100.0**	**337**	**100.0**	**0.0**

WALTER SISULU UNIVERSITY					
	2007	2007 %	2017	2017 %	% change
African	386	74.4	458	83.3	**8.9**
Coloured	9	1.7	8	1.5	**-0.3**
Indian	40	7.7	34	6.2	**-1.5**
White	84	16.2	50	9.1	**-7.1**
No Info	0	0.0	0	0.0	**0.0**
Total	**519**	**100.0**	**550**	**100.0**	**0.0**

UNIVERISTY OF THE WESTERN CAPE					
	2007	2007 %	2017	2017 %	% change
African	53	11.0	53	9.2	**-1.8**
Coloured	203	42.3	255	44.3	**2.0**
Indian	34	7.1	47	8.2	**1.1**
White	190	39.6	188	32.6	**-6.9**
No Info	0	0.0	33	5.7	**5.7**
Total	**480**	**100.0**	**576**	**100.0**	**0.0**

UNIVERSITY OF THE WITWATERSRAND					
	2007	2007 %	2017	2017 %	% change
African	101	13.0	189	21.1	**8.2**
Coloured	25	3.2	55	6.2	**2.9**
Indian	71	9.1	107	12.0	**2.8**
White	581	74.7	543	60.7	**-13.9**
No Info	0	0.0	0	0.0	**0.0**
Total	**778**	**100.0**	**894**	**100.0**	**0.0**

UNIVERSITY OF ZULULAND					
	2007	2007 %	2017	2017 %	% change
African	136	61.5	205	72.4	**10.9**
Coloured	2	0.9	1	0.4	**-0.6**
Indian	19	8.6	31	11.0	**2.4**
White	64	29.0	45	15.9	**-13.1**
No Info	0	0.0	1	0.4	**0.4**
Total	**221**	**100.0**	**283**	**100.0**	**0.0**

SOL PLAATJE UNIVERSITY					
	2007	2007 %	2017	2017 %	% change
African	0	0.0	38	53.5	**53.5**
Coloured	0	0.0	10	14.1	**14.1**
Indian	0	0.0	3	4.2	**4.2**
White	0	0.0	20	28.2	**28.2**
No Info	0	0.0	0	0.0	**0.0**
Total	**0**	**0.0**	**71**	**100.0**	**100.0**

UNIVERSITY OF MPUMULANGA					
	2007	2007 %	2017	2017 %	% change
African	0	0.0	60	75.0	**75.0**
Coloured	0	0.0	0	0.0	**0.0**
Indian	0	0.0	4	5.0	**5.0**
White	0	0.0	16	20.0	**20.0**
No Info	0	0.0	0	0.0	**0.0**
Total	**0**	**0.0**	**80**	**100.0**	**100.0**

MANGOSUTHU UNIVERSITY OF TECHNOLOGY					
	2007	2007 %	2017	2017 %	% change
African	78	61.4	125	69.8	**8.4**
Coloured	1	0.8	2	1.1	**0.3**
Indian	23	18.1	36	20.1	**2.0**
White	25	19.7	16	8.9	**-10.7**
No Info	0	0.0	0	0.0	**0.0**
Total	**127**	**100.0**	**179**	**100.0**	**0.0**

SEFAKO MAKGATHO UNIVERSITY					
	2007	2007 %	2017	2017 %	% change
African	0	0.0	456	76.5	**76.5**
Coloured	0	0.0	4	0.7	**0.7**
Indian	0	0.0	47	7.9	**7.9**
White	0	0.0	89	14.9	**14.9**
No Info	0	0.0	0	0.0	**0.0**
Total	**0**	**0.0**	**596**	**100.0**	**100.0**

ALL UNIVERSITIES					
	2007	2007 %	2017	2017 %	% change
African	3 439	23.8	6 260	36.0	**12.2**
Coloured	865	6.0	1 320	7.6	**1.6**
Indian	1 293	9.0	1 506	8.7	**-0.3**
White	8 797	61.0	8 188	47.1	**-13.9**
No Info	29	0.2	103	0.6	**0.4**
Total	**14 423**	**100.0**	**17 377**	**100.0**	**0.0**

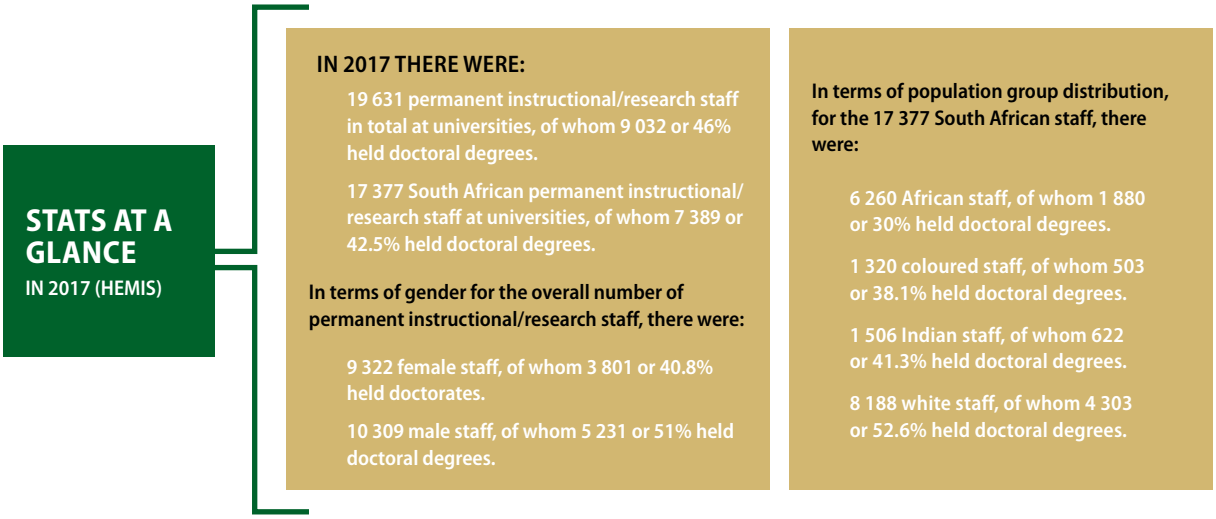
The table shows that:

- Overall, for all universities, the proportion of African staff increased by 12.2% between 2007 and 2017, coloured staff by 1.6%, Indian staff declined by 0.3% and white staff decreased by 13.9%. Despite these changes, as already noted, African and coloured staff remain significantly underrepresented.
- Proportional representation across the university system varies widely. For example, in 2017, Univen had the greatest proportion of African staff (92.6%) and SUN the lowest (5.1%).
- Even though the national average of 36% African representation is way below the proportional share of Africans in the general South African population, universities that had African representation lower than the national average in 2017 included SUN (5.1%), UWC (9.2%), UCT (11.3%), UP (15.7%), RU (16.6%), UFS (18.7%), Wits (21.1%), NMU (25.4%), CPUT (26%), NWU (26.4%), DUT (31.2%) and UJ (32%).
- These universities generally recorded a lower than 10% growth in African staff between 2007 and 2017, as follows: UWC (-1.8%), NWU (1%), SUN (2.6%), UP (4.7%), UFS (4.8%), UCT (5.3%), Wits (8.2%), RU (8.7%) and DUT (9.7%).

While the demographic profile of instructional/research staff is transforming at universities, it is not happening at the desired pace and is transforming particularly slowly at some universities. Generally the previously advantaged universities, especially those that historically catered for the Afrikaans population group, show the slowest rate of

transformation when it comes to the employment of black African academics. If the pace of transformation is to be accelerated in the system overall, it must be at these universities.

Observation 7: Inequitable qualification profile of academics



The data alongside show that by 2017, 46% of university permanent instructional/research staff held doctoral degrees. If only the South African staff are considered, the percentage drops to 42.5%.

In terms of gender, male staff hold a greater proportion of the doctoral degrees than female staff.

In terms of population group, for the South African staff, more than half the white staff hold doctoral degrees, and for the other population groups, the greater proportion do not possess doctoral degrees.

Table 11 (see page 28) provides a population group breakdown by university to show how doctoral degrees are distributed among the permanent South African instructional/research staff at each university.

The table shows that:

- If only the South African permanent instructional/research staff are considered, then the percentage that held doctoral degrees in 2017 is 42.5%, lower than the 46% if all the permanent instructional/research staff are taken considered.
- The percentage of permanent South African instructional/research staff that hold doctoral degrees varies from a low of 12.8% at MUT to a high of 62.7% at UP.
- Except for UWC and UniZulu, all the other historically disadvantaged institutions (HDIs) and all the universities of technology (UoTs) have a South African staff doctoral percentage lower than 40%. Except for CUT, all the UoTs have a South African staff doctoral percentage lower than 30%.
- Those that have a staff doctoral percentage lower than 25% include MUT, WSU, VUT, SMU, DUT and CPUT.

The positive relationship between holding a doctorate, research output including postgraduate supervision opportunities, and progression in the higher education system is well documented. Therefore, not holding a doctorate is a barrier to progression in the university system. The fact that much larger proportions of African, coloured and female academics do not hold doctoral degrees is an impediment to progression for many individuals in these groups.

In order to increase the proportion of permanent South African instructional/research staff at universities that hold doctoral degrees, targeted support will need to be provided to the HDIs and the UoTs, and to black and female academic staff.

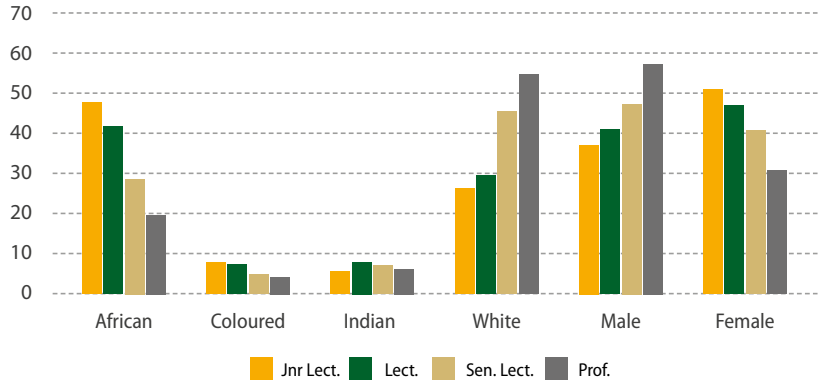
TABLE 11: Number and percentage of permanent South African instructional/research staff in universities that held doctoral degrees in 2017, by university and population group

	African			Coloured			Indian			White			No Information		University		
	Doctorate	Total	Doctorate %	Doctorate	Total	Doctorate %	Doctorate	Total	Doctorate %	Doctorate	Total	Doctorate %	Doctorate	Total	Doctorate	Total	Doctorate %
MUT	13	125	10.4	0	2	0.0	9	36	25.0	1	16	6.3	0	0	23	179	12.8
WSU	56	458	12.2	1	8	12.5	7	34	20.6	7	50	14.0	0	0	71	550	12.9
VUT	29	184	15.8	1	5	20.0	3	15	20.0	25	133	18.8	0	0	58	337	17.2
SMU	66	456	14.5	3	4	75.0	8	47	17.0	26	89	29.2	0	0	103	596	17.3
DUT	27	171	15.8	5	17	29.4	58	228	25.4	27	121	22.3	9	11	126	548	23.0
CPUT	55	199	27.6	34	255	13.3	15	39	38.5	71	271	26.2	1	1	176	765	23.0
TUT	110	490	22.4	4	15	26.7	15	36	41.7	116	365	31.8	0	0	245	906	27.0
UMP	17	60	28.3	0	0	0.0	0	4	0.0	7	16	43.8	0	0	24	80	30.0
UL	136	455	29.9	0	5	0.0	8	10	80.0	19	45	42.2	0	0	163	515	31.7
SPU	10	38	26.3	3	10	30.0	1	3	33.3	9	20	45.0	0	0	23	71	32.4
UNIVEN	108	338	32.0	0	2	0.0	3	4	75.0	9	21	42.9	0	0	120	365	32.9
CUT	34	110	30.9	3	11	27.3	1	5	20.0	56	143	39.2	0	0	94	269	34.9
UFH	51	168	30.4	7	15	46.7	5	9	55.6	42	87	48.3	0	0	105	279	37.6
UJ	78	333	23.4	18	56	32.1	47	128	36.7	298	524	56.9	0	0	441	1 041	42.4
UFS	58	179	32.4	15	39	38.5	4	15	26.7	331	722	45.8	0	0	408	955	42.7
NMU	51	114	44.7	26	85	30.6	14	22	63.6	179	371	48.2	0	0	270	592	45.6
UKZN	132	423	31.2	14	32	43.8	197	380	51.8	151	278	54.3	33	39	527	1 152	45.7
UNIZULU	91	205	44.4	0	1	0.0	17	31	54.8	21	45	46.7	1	1	130	283	45.9
UNISA	325	755	43.0	30	46	65.2	32	93	34.4	392	752	52.1	0	0	779	1 646	47.3
RU	12	47	25.5	9	21	42.9	5	15	33.3	111	200	55.5	0	0	137	283	48.4
NWU	152	384	39.6	25	54	46.3	8	24	33.3	563	994	56.6	0	0	748	1 456	51.4
UWC	27	53	50.9	113	255	44.3	22	47	46.8	125	188	66.5	26	33	313	576	54.3
SUN	17	53	32.1	75	155	48.4	12	31	38.7	468	801	58.4	0	0	572	1 040	55.0
UCT	55	103	53.4	64	145	44.1	49	83	59.0	352	566	62.2	11	18	531	915	58.0
Wits	87	189	46.0	39	55	70.9	51	107	47.7	345	543	63.5	0	0	522	894	58.4
UP	83	170	48.8	14	27	51.9	31	60	51.7	552	827	66.7	0	0	680	1 084	62.7
Totals	**1 880**	**6 260**	**30.0**	**503**	**1 320**	**38.1**	**622**	**1 506**	**41.3**	**4 303**	**8 188**	**52.6**	**81**	**103**	**7 389**	**17 377**	**42.5**

Observation 8: Inequitable academic rank profile

The population group and gender profiles of permanent instructional/ research staff at universities still clearly demonstrate apartheid-era patterns. Black academics are in the majority in lower-level posts such as junior lecturer and lecturer, while white academics are in the majority in senior posts such as senior lecturer and professor. Male staff are dominant in senior posts and female staff are dominant in junior posts. Academic leadership at universities is still dominated by white and male academics (Figure 9).

FIGURE 9: The rank profile of permanent instructional/research staff at universities by population group and gender in 2017



Source: HEMIS

The MTT also explored the extent to which instructional/research posts at the different ranks were occupied by South African and international staff, illustrated in Table 12.

TABLE 12: Number and percentage of international instructional/research staff by rank in 2017

	No. of international staff	Total no. of staff	% international staff
Below junior lecturer	13	212	6.1
Junior lecturer	19	1 031	1.8
Lecturer	711	8 598	8.3
Senior lecturer	672	5 050	13.3
Associate professor	406	2 199	18.5
Professor	398	2 285	17.4
Associate director	6	73	8.2
Director	0	4	0.0
Other instructional/research professionals	29	179	16.2
	2 254	**19 631**	**11.5**

While the overall percentage of international permanent instructional/research staff at South African universities is 11.5%, the percentage varies across the ranks, with the highest percentages occurring at senior lecturer (13.3%), associate professor (18.5%) and professor (17.4%) levels.

Concerns have anecdotally been raised regarding recruitment practices that result in disproportionate representation of international staff from one country in specific departments at some universities, and student enrolments at the postgraduate level in those departments following the same pattern, particularly when the leadership positions in the department are occupied by international staff from that country. It will be important to conduct further investigation that refutes or supports this notion, and to address problems if/where they exist. This will require disaggregated data to the level of faculties, departments and schools within institutions.

Based on Observations 5 to 8, the MTT makes the following recommendations.

Recommendation 5

Universities must develop and implement staff transformation plans that have specific time-bound targets regarding the recruitment and progression of black South African academics. Such plans must be

consolidated into one National Staff Transformation Plan for South African Universities. The implementation of the plans should be monitored by the National University Transformation Oversight Committee. National steering mechanisms must be directed towards the achievement of these targets and national and institutional strategies implemented to achieve them.

Recommendation 6

In working towards the National Development Plan goal of 75% of the academic staff at universities holding doctorates, national strategies must prioritise support for doctoral studies for women, African and coloured academics, with a specific focus on academics at HDIs and UoTs.

4

Alienating and exclusionary institutional cultures and practices

Studies, including those undertaken specifically for the MTT, show that institutional cultures, policies and practices have a direct and very often negative effect on the recruitment, retention and progression of black academics. The discussion that follows provides a summary of the observations that were made by the MTT from the studies, and references the relevant annexures to this document as evidence sources.

Observation 9: New recruits report receiving little or no academic support

Young academics point to a lack of support as a debilitating factor in advancing their academic careers, and to the need for mentors with whom they can identify and who have successfully navigated and challenged the barriers that they too are facing. The role of mentors and supervisors as positive and identity-confirming role models is a very important mechanism for enabling the effective recruitment, retention and progression of young academics.

Observation 10: Black and female academics experience overt and covert racism, sexism and patriarchy in universities

While the numbers of black and female academics are growing in universities, albeit at a slower rate than is needed, in the institutions overall, and particularly in the micro-ecology of some departmental spaces, black and/or female academics may be 'the only one' or part of a small minority, and 'experience their identities as misaligned with the hegemonic culture' (Annexure D). The situation is exacerbated for black female academics in departments such as Engineering and the Natural Sciences, where they are a stark minority.

Racism and sexism are experienced both blatantly and covertly, for example in how discourses relating to excellence, quality and tradition are couched, often with underpinning insinuations that people are not recruited or are not progressing in the system because they do not meet a particular standard, or that they were recruited for demographic rather than academic reasons.

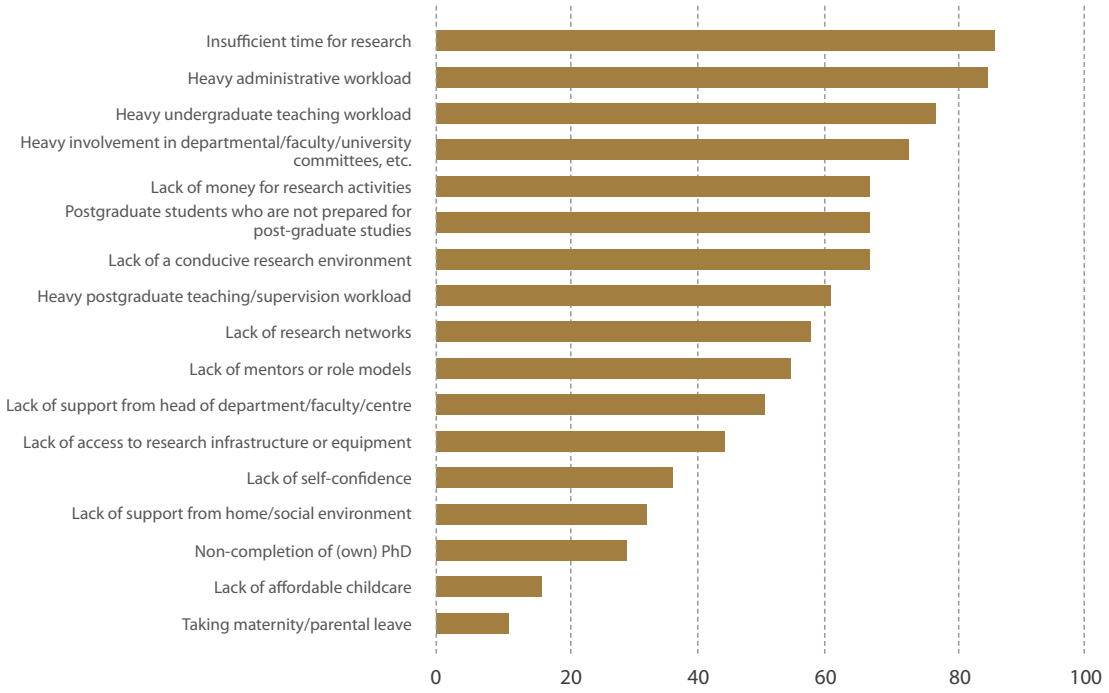
South Africa as a whole remains a largely patriarchal society where the responsibilities of caregiving and homemaking are disproportionately carried by females. In university settings, female academics bear the brunt of patriarchal institutional policies which do not take account of, or challenge, the broader social inequalities relating to gender identity and gender roles that still prevail in South African society.

The compounding negative lived experiences of black and female academics in universities drive academics to leave the institution/find employment in a more identity-affirming environment, and the demographic status quo of institutions and/or departments is perpetuated through this kind of exclusion.

Observation 11: Research barriers are de facto academic career progression barriers

Given the importance afforded to research output in the system, the barriers that prevent academics from pursuing research activity are also the barriers that prevent career progression of academics in universities. The report *Building a Cadre of Emerging Scholars for Higher Education in South Africa* (Annexure H) explored this issue in some depth and identified a set of barriers, ranked in order of importance as shown in Figure 10.

FIGURE 10: Research barriers experienced by academics at South African universities (Annexure H)



Heavy administrative and teaching workloads are the biggest barriers, especially for younger staff who carry much of the responsibility for undergraduate teaching. Lack of funding, underpreparedness for research, and a non-supportive research environment are other important barriers.

The research funding challenge is a significant challenge for many academics. There are a few funding opportunities that specifically target black academics and academics in HDIs. Academics who are knowledgeable about the opportunities and proactively put themselves forward appear to be able to take advantage of these opportunities. However, many academics report difficulties in obtaining funding, possibly because of a lack of transparency in funding opportunities, lack of knowledge about funding opportunities and lack of expertise to access funding opportunities.

The progression of academics in the system also appears to be hampered by institutional performance appraisal systems that do not adequately take career stage into account. Performance appraisal systems at universities tend to be biased towards research performance over other aspects of the academic role, for example, teaching. Academics who view their role as teachers as being equally or even more important are disadvantaged.

In the *Building a Cadre of Emerging Scholars for Higher Education in South Africa* study (Annexure H), 29% of the survey respondents indicated that non-completion of a PhD was a barrier. Holding a PhD provides access to research networks, holders have a better chance of accessing research funding and of being invited to join research project collaborations, and PhD holders are able to supervise postgraduate students and so build their research profile in that way. Generally, PhD holders are held in higher esteem at universities. As indicated in Section 3, there is an inequitable demographic distribution of doctorates among academics in the South African university system.

Involvement in joint research enables collaboration across internal and external institutional boundaries. It enables the creation of supportive networks that may not be available in the immediate context in which the academic finds himself/herself working. Young academics who participate in research teams and in collaborative research projects stand a much greater chance of successfully developing a research niche for themselves and moving towards independence as a researcher.

Based on Observations 9 to 11, the following recommendations are made.

Recommendation 7

Support programmes must be made available that comprise sustained programmatic activities that are nuanced to address specific and real needs of new academics generally, and first-generation academics specifically. All universities must implement formal and dynamic mentoring programmes, possibly tied into a national mentoring network, to assist new academics to navigate the first few years of academic life, and to develop a career advancement plan.

Recommendation 8

Many of the new and early-career academics who do not yet hold doctoral degrees are likely to be enrolled and already working towards a doctorate. A concerted effort should be made to identify these academics in the system, understand where they are in the doctoral study trajectory and provide individualised structured support to assist them towards completion in an agreed period.

Recommendation 9

Workload models that enable early-career academics to develop as teachers and researchers must be implemented, and concerted efforts made to ensure early-career academics are able to participate in research teams.

Recommendation 10

Universities should ensure that performance appraisal systems and promotion criteria are clearly understood and implemented in a consistent and transparent manner, and that they consider differentiated performance across the range of academic functions.

Recommendation 11

Perhaps the most important recommendation to be made in this report is the need to tackle institutional and individual racism and sexism in direct and visible ways, including through penalising perpetrators, but also in ways that assist to build institutional cultures that embrace diversity and that are anti-racist and anti-sexist. This means moving from hoping that this will happen naturally to actually putting measures in place to ensure it happens. Universities must interrogate how institutional cultures and traditional practices may be creating alienating environments that intentionally or unintentionally work to exclude, and put proactive measures in place to address this. University leadership and management must lead in this regard and must receive training in how to do so where this is needed.

5

Are universities addressing the imperative regarding the recruitment, retention and progression of black South African academics?

In the final analysis, the extent to which the recruitment, retention and progression of black South African academics can be advanced depends mostly on practices at the individual university level, encapsulated in the policies that are in place, and the strategies that are implemented to give effect to the policies.

Workstream 3 investigated this issue and its findings are documented in Annexure E. The observations and recommendations in this section are largely drawn from this work. It should also be noted that a number of the findings of Workstream 3 concur with observations made in other sections of this report, and the concurrence is noted in those sections. Further observations are recorded here.

Observation 12: Conditions of service for entry-level academics are unattractive, uncompetitive and non-supportive

A study titled *Remuneration of Academic Staff at South African Universities*, conducted by Higher Education South Africa/USAf (2014) based on 2012 data, found that while senior academics within professoriate ranks earned better salaries than their peers in the public and private sectors, and mid-level academics earned salaries equivalent to peers in the public and private sectors, new/junior academics earned significantly less than their peers in the public and private sectors (see Annexure D).

The study also noted that the salary gap between those in leadership and management positions and those at junior lecturer/lecturer level was very wide.

Low salaries at the beginner academic level make it very difficult for universities to compete with the private sector to recruit high-achieving young postgraduates into an academic career. The challenge is magnified for rural universities, where location is also a deterring factor.

Salaries also varied widely across the system, and this results in significant movement of academics for salary improvement more than academic or other reasons.

As noted, beginner academics at the start of their careers generally carry most of the responsibility for undergraduate teaching, with senior academics and professors choosing to focus on postgraduate teaching and on research. This makes it very difficult for early-career academics to also focus on their own development, including the completion of doctorates, and on building a research profile.

Observation 13: Employment and staff-related institutional policies do not specifically address the recruitment, retention and progression of black South African academics

Despite the availability of broad policies relating to recruitment, progression and retention of academics, the policies are in most instances silent with regards to demographic transformation, and issues specific to recruitment, progression and retention of black academics in particular. The policies are generalised and do not directly reflect issues relating to black academics. The few institutional policies that make specific mention of black academics only go as far as defining designated groups and black staff as being African, Indian or coloured.

The MTT notes that institutional autonomy cannot supersede prevailing legislation in the country. There is a raft of employment equity legislation in the country and universities must be held accountable for the extent to which they comply with these policies. This requires collaboration between the DoL and the DHET on the extent to which there is university compliance with employment equity legislation, and where this is lacking, steps must be taken to address it.

Observation 14: Despite policy silence, institutions have a diverse range of strategies, plans and activities in place for the recruitment, retention and progression of black South African academics

While institutional policies may not be specifically focused or contain sufficient detail on the recruitment, retention and progression of black academics, the institutions reviewed nevertheless have such initiatives, plans and strategies, although they vary widely in nature and extent. Staff transformation issues, therefore, tend not to be addressed in primary management instruments such as policies, but in secondary management instruments such as plan and strategy documents.

The implications of a policy–strategy disjuncture need to be carefully considered. If strategic intention is not defined specifically in policy, then it could be that strategies are implemented on an ad hoc basis and inconsistently across the various facets of university operations, dependent on the will and interests of individuals, and on resource variance. In light of the broad findings that emerged from the work undertaken in Workstream 3, the MTT makes the following recommendations.

Recommendation 12

A system-wide appraisal of the conditions of service of lecturers and junior lecturers, including levels of remuneration across the university system, must be undertaken, with a view to improving conditions of service where necessary so that the best young graduates can be attracted to an academic career.

Recommendation 13

A broad definition of the concept of transformation should be developed that could apply generally in higher education, and specifically to staff transformation. Qualitative and quantitative transformation indicators aligned to the broad definition should be put in place, and national and institutional strategies synergistically implemented towards achieving the indicators, with achievement towards the targets subjected to consistent and effective monitoring and evaluation through the National University Transformation Oversight Committee.

Recommendation 14

Universities must critically review their existing policies, to ensure that issues of transformation generally, and specifically with reference to the recruitment, retention and progression of black South African academics, are explicitly addressed in the primary policies and implemented consistently across the institution. Progress towards the achievement of equity targets should be built into the performance agreements of senior management at the universities.

Recommendation 15

The DHET and the DoL must collaborate to review the extent to which universities comply with employment equity legislation, especially the Employment Equity Act. Any issues that come to the fore must be addressed through the range of DHET steering mechanisms.

Recommendation 16

The mandate of the National University Transformation Oversight Committee must be expanded where necessary to enable it to take forward the actions required of it in this report, and it must be adequately and effectively resourced to enable it to deliver on its mandate.

6

Are national bodies addressing the imperative regarding the recruitment, retention and progression of black South African academics?

The DHET and the DST (now the Department of Science and Innovation), through the NRF, play a role to support the development of academic staff capacity in universities as part of their overall mandate.

The MTT was required to review the efficacy of national department strategies that have been put in place to address the problem. The representatives of the DHET and the DST/NRF who participated in the MTT provided information on the range of strategies that the departments are implementing, summarised below.

Observation 15: The Staffing South Africa's Universities Framework is the DHET's key instrument to support staff transformation at universities

The DHET is implementing the Staffing South Africa's Universities' Framework (SSAUF) as part of its broader University Capacity Development Programme (UCDP). The SSAUF is positioned as the primary instrument to contribute to addressing staffing challenges at universities, including through the recruitment of academics and supporting their development and progression in ways that transform the staff demographic. The SSAUF is illustrated in Figure 11.

Progress in implementing the academic staff development components of the SSAUF is summarised below:

- The NESP is still at a conceptualisation stage. It is envisaged that it will take the form of a postgraduate scholarship and internship programme that recruits high-achieving postgraduates into an academic career. Like all the SSAUF sub-programmes, transformation imperatives will inform the selection of students. The NESP will form a postgraduate feeder pool for the nGAP.

- The nGAP is well underway in the system. To date, 373 nGAP lecturer posts have been allocated to universities and 326 lecturers have thus far been recruited into permanent posts with recruitment processes underway to recruit the balance. Table 13 shows the demographic breakdown of the appointed nGAP lecturers.

TABLE 13: Demographic profile of appointed nGAP lecturers

	Total	African	Coloured	Indian	White	Male	Female
Number	326	263	36	19	8	136	190
%	100	80	11	6	2	42	58

FIGURE 11: The SSAUF is made up of four core sub-programmes and two support sub-programmes

THE STAFFING SOUTH AFRICA'S UNIVERSITIES FRAMEWORK (SSAUF)

The SSAUF consists of 4 core programmes implemented at national level by the Department of Higher Education and Training (DHET) and 2 support programmes implemented at institutional level to support the development of university academic and professional staff at various points along their career pathways.

1 NURTURING EMERGING SCHOLARS PROGRAMME (NESP)

The NESP recruits postgraduate students with demonstrated academic ability who are interested in following an academic career and provide them with attractive, structured study and development opportunities which will prepare them to apply for academic positions at universities.

2 NEW GENERATION OF ACADEMICS PROGRAMME (nGAP)

The nGAP recruits new academics against carefully designed and balanced equity considerations and disciplinary areas of greatest need into permanent posts at universities and support them through an intensive development programme.

3 EXISTING STAFF CAPACITY ENHANCEMENT PROGRAMME (ESCEP)

The ESCEP supports the development of existing academics and professional staff, for example through support to complete formal qualifications, or to develop specific competences through participation in structured and targeted development programmes, short courses, workshops, seminars etc.

3a UNIVERSITY STAFF DOCTORAL PROGRAMME (USDP)

The USDP will support existing permanent academics and professional staff at universities to achieve doctoral degrees.

3b FUTURE PROFESSORS PROGRAMME (FPP)

The FPP involves an innovative approach to growing a representative professoriate, through the implementation of a coherent, structured, adequately supported programme that will target talented individuals at universities and that will support them towards being eligible for professoriate positions.

4 HIGHER EDUCATION LEADERSHIP AND MANAGEMENT PROGRAMME (HELMP)

The HELMP focuses on identifying and responding to the leadership and management development needs in the university system and on developing future academic and administrative leaders.

5 | STAFFING SOUTH AFRICA'S UNIVERSITIES DEVELOPMENT PROGRAMME (SSAU-DP)

The SSAU-DP is the collection of staff development activities implemented by universities as part of their University Capacity Development Programme (UCDP) Plans funded by the DHET.

6 | SUPPLEMENTARY STAFF EMPLOYMENT PROGRAMME (SSEP)

The SSEP enables universities to recruit specific skills on a needs basis, in a temporary contract capacity to support the implementation of the UCDP and the SSAUF at university level.

The nGAP appears to be meeting its transformation goals, and is enabling the employment of academics in ways that will contribute to more rapid staff transformation at universities, if it is implemented on a sufficient scale.

- The priorities for the EACEP are to support existing university academics who do not have doctorates to obtain these, and to support academics who show ability towards professoriate positions.
  - » The University Staff Doctoral Programme (USDP) is currently supporting 12 projects in which 124 university academics are being supported to achieve doctoral degrees in a four-year period. USDP scholars must be permanently employed at a South African university, 45 years or younger, and 80% must be black and/or female. Further USDP projects will be implemented during 2019.
  - » Future Professors Programme (FPP) is being implemented for the first time in 2019. Phase 1 involves the recruitment of three consecutive annual cohorts of 28 promising senior lecturers onto a two-year programme that provides strong mentoring, specialised courses and an extended international mobility opportunity. Black and female senior lecturers are being prioritised for recruitment into this programme. Provided that the FPP can be implemented on a sufficient scale over the next few years, it can assist to significantly transform the professoriate at South African universities.

The SSAUF is a new programme that is showing promise and can make a positive contribution to staff transformation in the sector. However, in order for it to do this, it will need to be implemented on a sufficient scale, and this means that adequate resources must be dedicated to it. The inadequate scale of the SSAUF as a DHET staff transformation initiative in the system was also highlighted in the findings of Workstream 3 (Annexure E).

Observation 16: The NRF support staff capacity development and staff transformation in universities

The range of NRF staff capacity development-related initiatives are described below.

- Postgraduate and postdoctoral scholarships and fellowships
  The NRF offers a wide range of scholarship and fellowship opportunities for postgraduate students, from honours to doctorate, and for postdoctoral fellows. Scholarships and fellowships are awarded on a competitive merit basis, and in line with the Ministerial Guidelines on Bursaries and Fellowships to facilitate racial and gender transformation by setting targets, i.e. 80% for blacks, 55% for females and 4% for people with disabilities. A demographic breakdown of the scholarships that were awarded in 2018 is shown in Table 14.

TABLE 14: Postgraduate and postdoctoral scholarships awarded by the NRF in 2018

Level	African Female	African Male	Coloured Female	Coloured Male	Indian Female	Indian Male	White Female	White Male	Grand Total
Honours/B Tech	1 994	1 380	116	68	98	51	126	98	3 931
Masters	1 348	966	126	60	139	43	261	147	3 090
Doctoral	617	639	77	46	131	48	255	135	1 948
Postdoctoral	88	88	11	18	31	15	56	39	346
Total	**4 047**	**3 073**	**330**	**192**	**399**	**157**	**698**	**419**	**9 315**
%	**43.4**	**33**	**3.5**	**2**	**4.3**	**1.7**	**7.5**	**4.5**	
%	**76.4**		**5.5**		**6**		**12**		

The NRF is the main postgraduate scholarship funding agency in the country. It is worth noting that the NRF allocated 9 315 postgraduate scholarships in 2018. In 2017, there were 148 949 headcount enrolments in honours, masters and doctorate programmes (HEMIS) in universities. If this enrolment figure is used (which would be an underestimation), then the NRF-supported students only amount to 6.3% of the total. While there are other ways in which postgraduate students are funded, including by other organisations, postgraduate student funding is woefully inadequate in the South African university system.

- Competitive support for unrated researchers
  The aim of this funding instrument is to provide research support to researchers working in any research field who do not, for a variety of reasons, hold a current NRF rating and who are not participating in any of the NRF capacity development funding instruments (Table 15).

TABLE 15: Unrated researchers supported by the NRF in 2018

	African Female	African Male	Coloured Female	Coloured Male	Indian Female	Indian Male	White Female	White Male	Grand Total
Number	17	52	15	13	10	11	52	44	214
%	7.9	24.3	7	6.1	4.7	5.1	24.3	20.6	
%	32.2		13.1		9.8		44.9		

- Research career advancement fellowships
  These fellowships are aimed at supporting the training of individuals for research leadership in all areas of Science, Technology, Engineering and Mathematical Sciences (STEM) at public universities (Table 16).

TABLE 16: Research career advancement fellowships awarded by the NRF in 2018

	African Female	African Male	Coloured Female	Coloured Male	Indian Female	Indian Male	White Female	White Male	Grand Total
Number	7	5	3	1	1	2	21	11	51
%	13.7	9.8	5.9	2	2	3.9	41.2	21.6	
%	23.5		7.9		5.9		62.8		

- Sabbatical grants for completion of doctoral degrees
  This is a special intervention aimed at addressing the decline in the number of full-time university academic staff with a doctoral degree and the inadequate supervisory capacity that currently characterises the South African academic landscape. It seeks to accelerate the training of doctoral candidates in order to improve the qualifications of employed academics and enhance their research and supervisory capacity. It is aimed at addressing this problem for individuals in the final stages of their doctoral studies (Table 17).

TABLE 17: Doctoral degree completion sabbatical grants awarded by the NRF in 2018

	African Female	African Male	Coloured Female	Coloured Male	Indian Female	Indian Male	White Female	White Male	Grand Total
Number	12	8	7	3	9	4	9	5	57
%	21.1	14	12.3	5.3	15.8	7	15.8	8.8	
%	35.1		17.6		22.8		24.6		

- **Thuthuka funding instrument**
  Thuthuka aims to develop human capital and to improve the research capacities of designated researchers (black African, Indian or coloured, female or persons with disabilities) with the ultimate aim of redressing historical imbalances (Table 18).

Thuthuka has three tracks:

» PhD track: for applicants wanting to obtain a doctoral degree within the funding period;
» Post-PhD track: for applicants wanting to become established researchers, by strengthening their research capabilities; and
» NRF rating track: for applicants wanting to apply for an NRF rating within the six-year funding period.

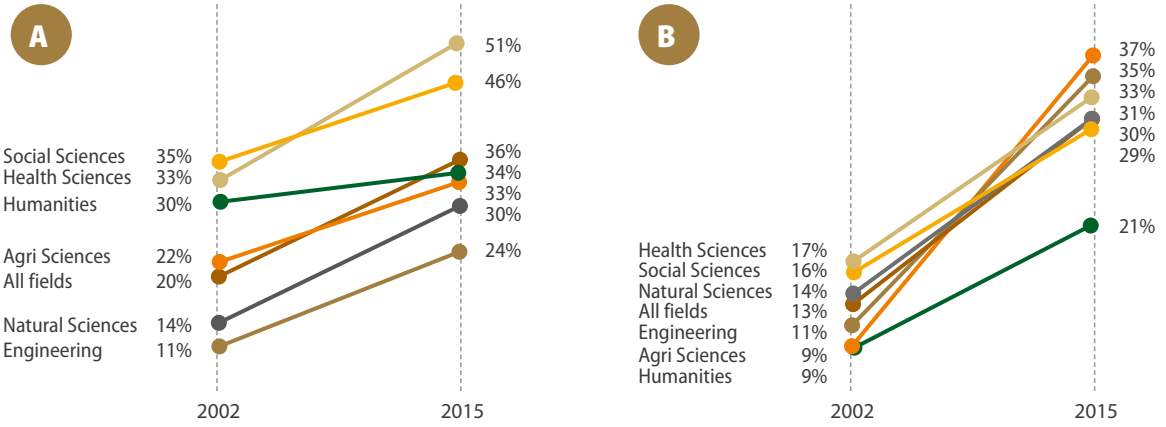
TABLE 18: Thuthuka grants awarded by the NRF in 2018

	African Female	African Male	Coloured Female	Coloured Male	Indian Female	Indian Male	White Female	White Male	Grand Total
Number	163	121	58	36	64	20	70	21	553
%	29.5	21.9	10.5	6.5	11.6	3.6	12.7	3.8	
%	51.4		17		15.2		16.5		

The NRF funding instruments that prioritise equity considerations benefit greater proportions of black academics. However, those that prioritise competitiveness disproportionally favour white applicants.

Figure 12, drawn from Annexure J, shows the extent to which NRF research grant allocations to females and black South Africans by field have changed over time.

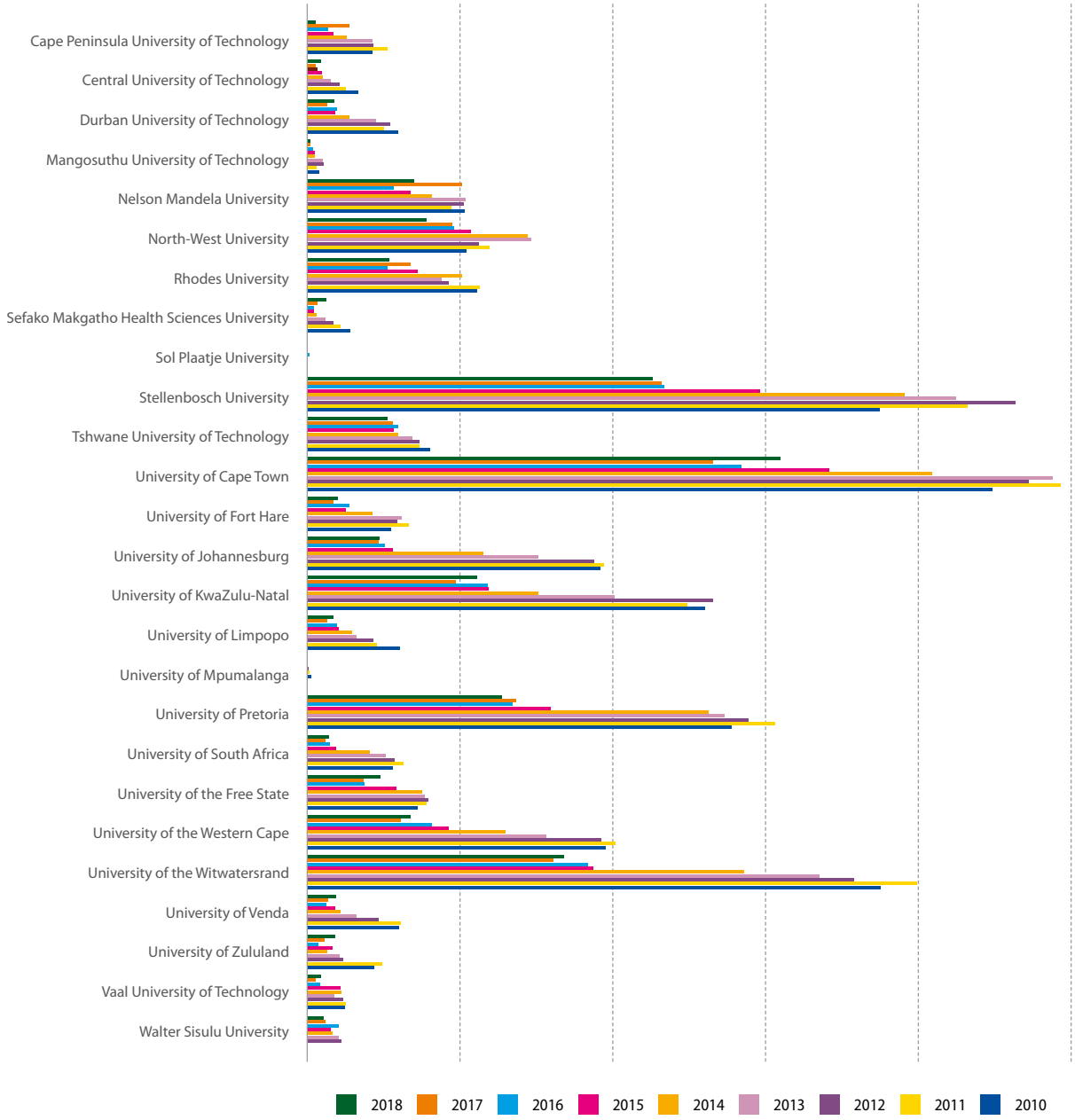
FIGURE 12: Proportion of (A) female grant holders and (B) black South African grant holders as a share of all grant holders, 2002 and 2015 compared *(Annexure J)*



The graphs show that progress is being made in relation to meeting transformation goals in awarding grants. The percentage of grants allocated to female applicants increased overall from 20% in 2002 to 36% in 2015 and increased across all fields of study. Similarly, the percentage of grants allocated to black South African applicants increased overall from 13% in 2002 to 31% in 2015, and increased across all fields of study. However, grant allocations are still some way from being aligned to actual representation in the university system at present, where females accounted for 47% of the permanent instructional/research staff in 2017, and black academics for 53.5%.

The figure below shows the overall funding awarded by the NRF to universities between 2010 and 2018.

FIGURE 13: Proportion of funding awarded by the NRF to universities from 2010 to 2018



The graph shows that a select group of universities, largely the historically advantaged universities, have consistently received the biggest shares of NRF funding over the years. With the exception of UWC, all the universities of technology and the historically disadvantaged universities fall in the lower half of the graph, reflecting their funding share.

The implementation of the NRF rating system also affords important insights into the extent to which researcher transformation goals are being addressed in the system.

According to https://www.nrf.ac.za/rating, accessed 2 August 2019:

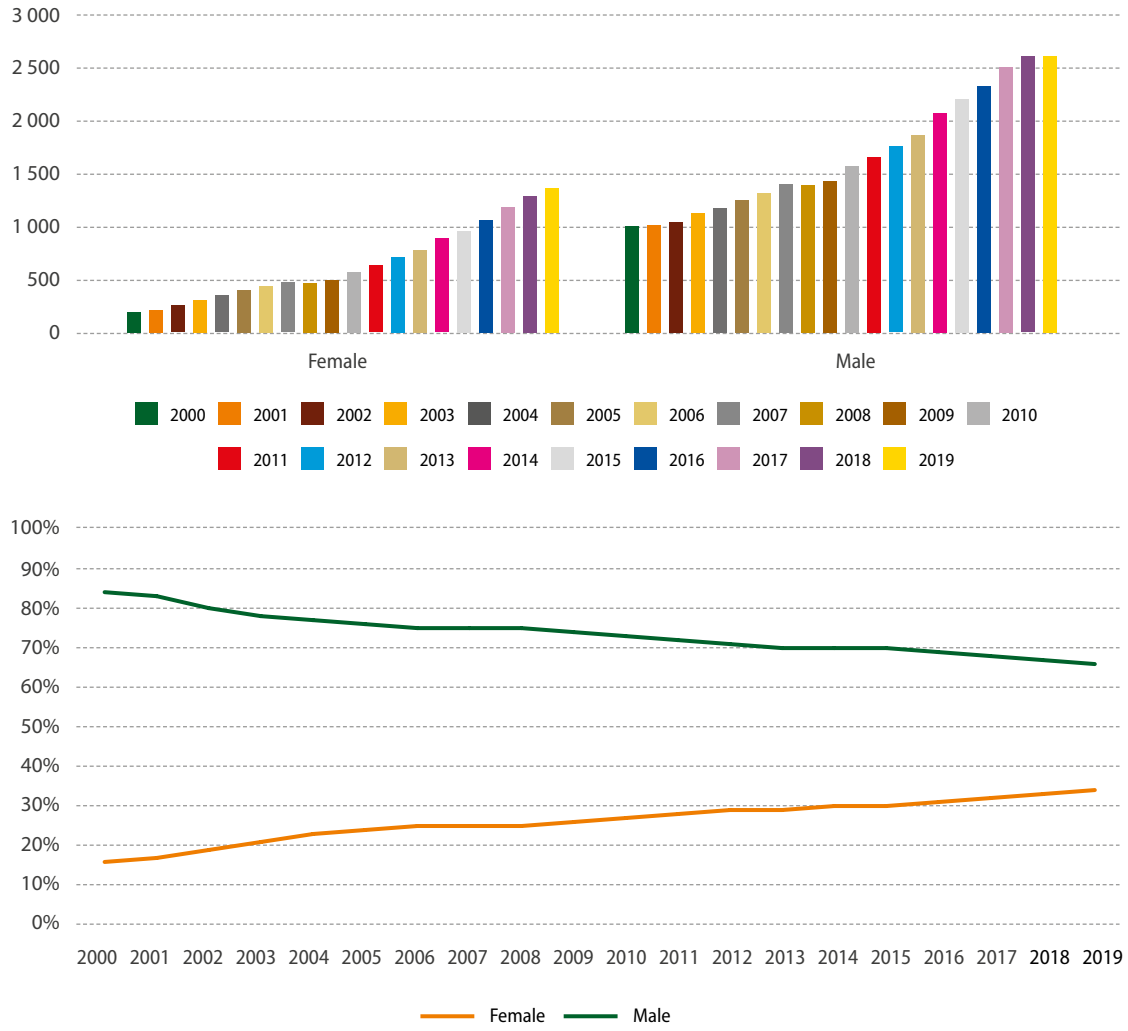
> The NRF rating system is a key driver in the NRF's aim to build a globally competitive science system inSouth Africa. It is a valuable tool for benchmarking the quality of our researchers against the best in the world. NRF ratings are allocated based on a researcher's recent research outputs and impact as perceived by international peer reviewers. The rating system encourages researchers to publish high-quality outputs in high-impact journals/outlets. Rated researchers as supervisors will impart cutting-edge skills to the next generation of researchers.

The ratings that are awarded fall within the following categories:

A – Leading international researchers
B – Internationally acclaimed researchers
C – Established researchers
P – Prestigious Awards
Y – Promising young researchers

Figure 14 shows how the gender profile of rated researchers changed between 2000 and 2019, by number and proportion.

FIGURE 14: The gender profile of NRF-rated researchers from 2000 to 2019, by number and proportion



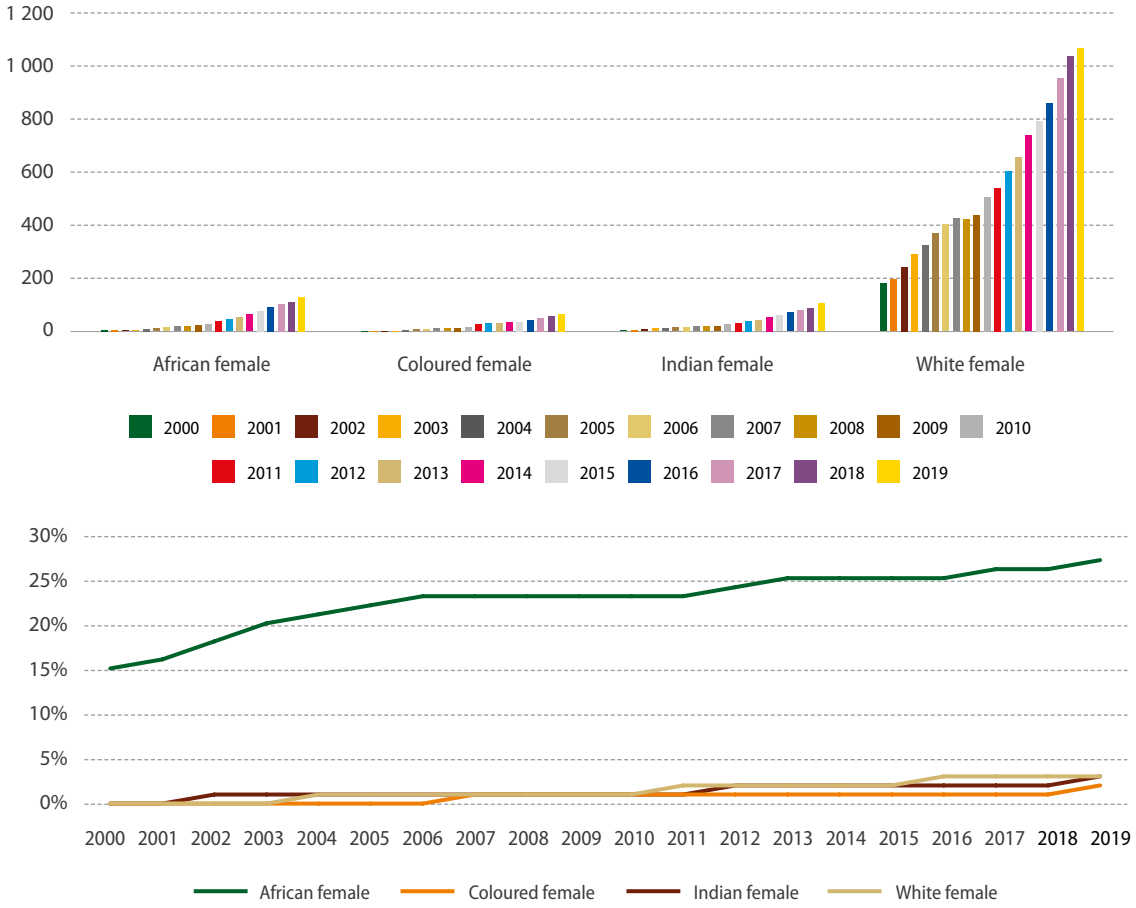
The analysis shows that:

- The number of rated researchers grew substantially between 2000 and 2019.
- The number and proportion of female rated researchers also grew and is on an upward trajectory. The proportion of female rated researchers in 2000 was 16%, and 34% in 2019.

While the growth in the proportion of female rated researchers is commendable, females still remain underrepresented in the cohort of rated researchers.

It is also important to disaggregate the data according to population group as the figure below shows.

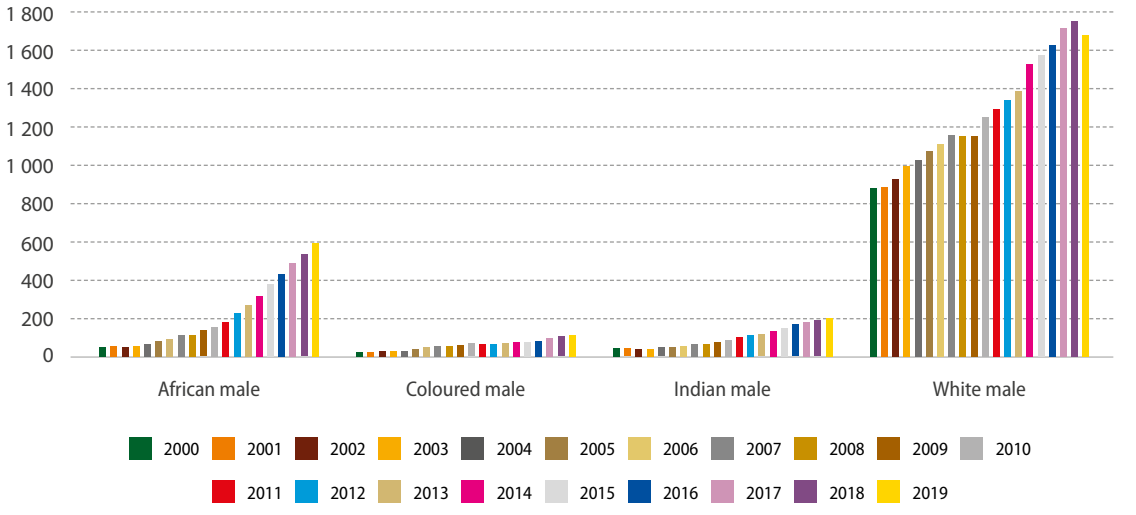
FIGURE 15: The population group profile of female NRF-rated researchers from 2000 to 2019, by number and proportion

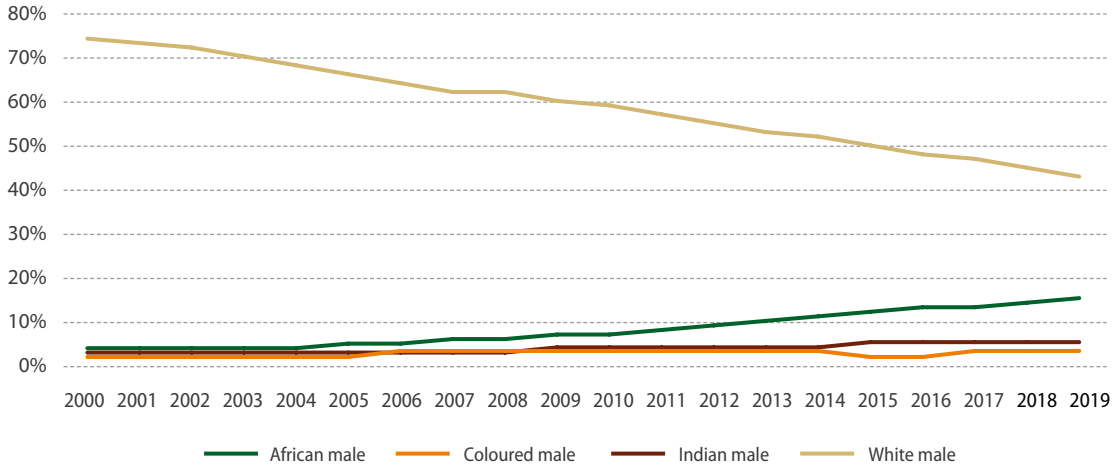


The figure shows that the real growth in female ratings has been for white female researchers. There has been very little proportional growth for black females.

The situation for black male researchers is slightly but not much better, although the upward trajectory is happening at a faster rate, as shown in Figure 16.

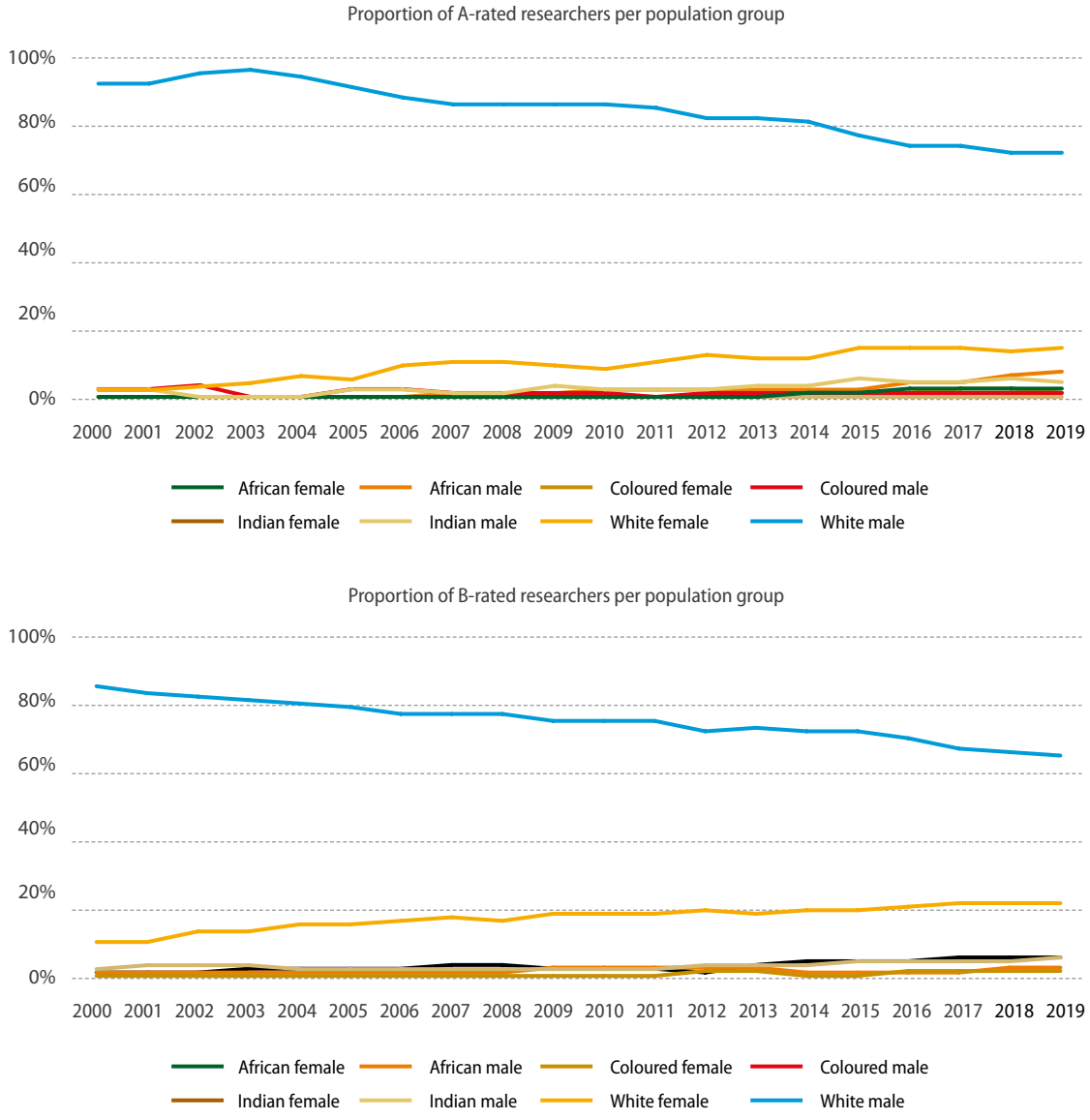
FIGURE 16: The population group profile of male NRF-rated researchers from 2000 to 2019, by number and proportion

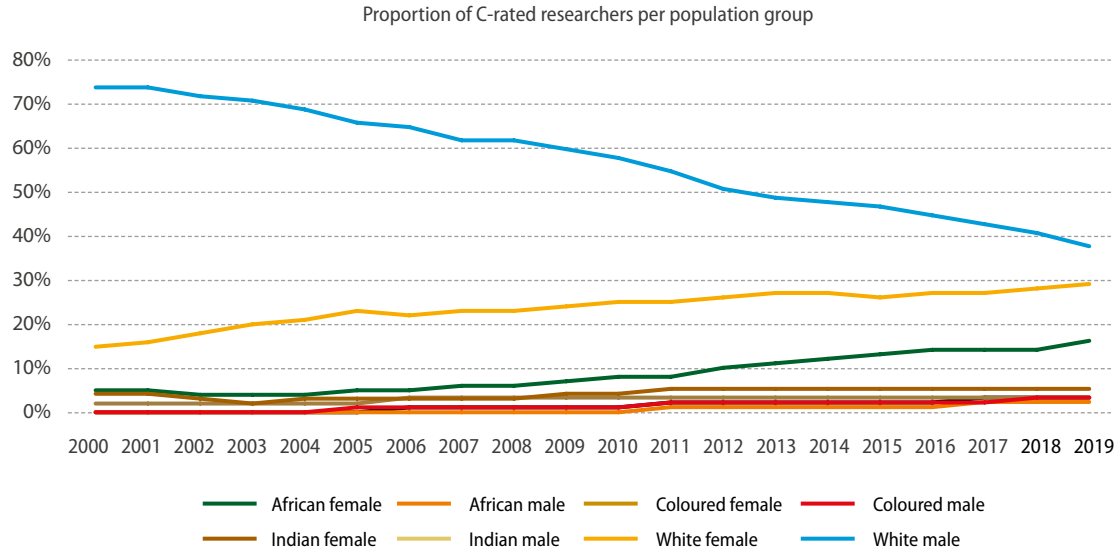


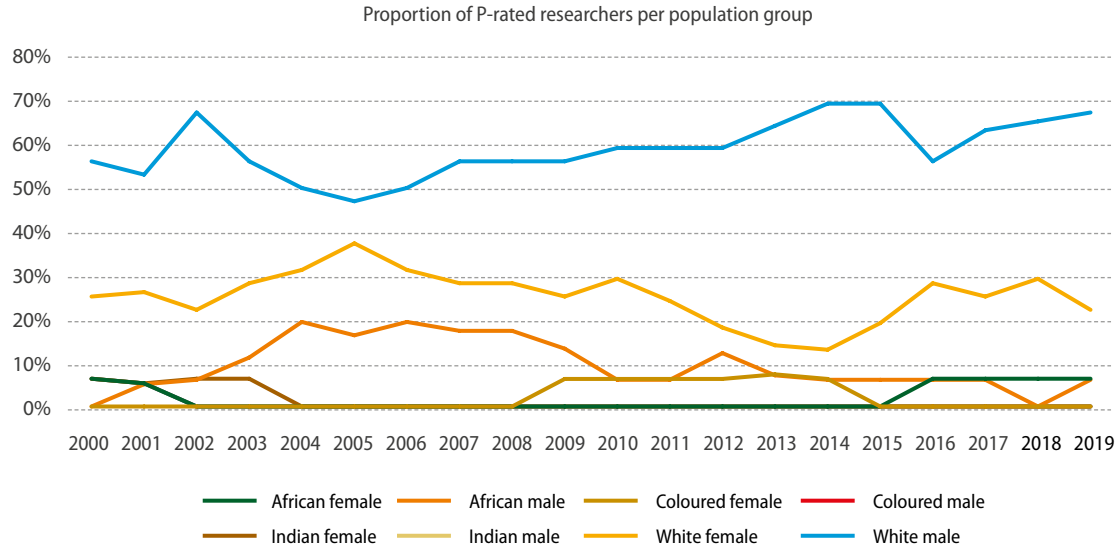


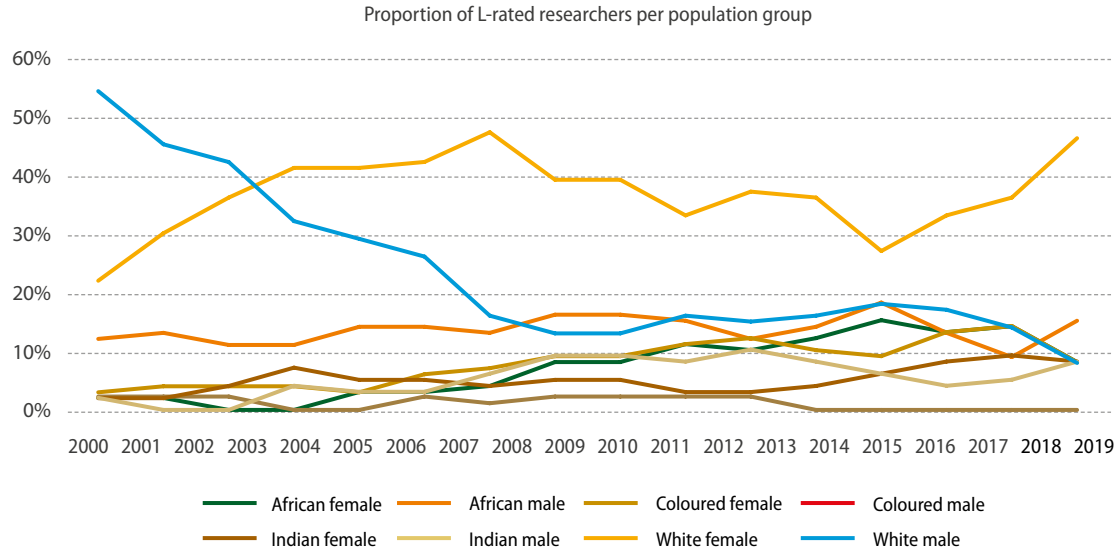
A further useful comparison is to look at the profile of the rated researchers across the rating categories (Figure 16).

FIGURE 17: The population group profile of rated researchers from 2000 to 2019, by proportion across the rating categories




Proportion of C-rated researchers per population group
80%
70%
60%
50%
40%
30%
20%
10%
0%
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
African female
African male
Coloured female
Coloured male
Indian female
Indian male
White female
White male


Proportion of P-rated researchers per population group
80%
70%
60%
50%
40%
30%
20%
10%
0%
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
African female
African male
Coloured female
Coloured male
Indian female
Indian male
White female
White male


Proportion of L-rated researchers per population group
60%
50%
40%
30%
20%
10%
0%
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019
African female
African male
Coloured female
Coloured male
Indian female
Indian male
White female
White male

Similar trends occur across all rating categories. White males and females dominate across the categories. Where white male proportions are decreasing, the most significant increases are for white female researchers. This is true even for the category that recognises researchers that are showing promise.

The rating awards trends mirror the academic staffing profiles already highlighted earlier in the report where white males and then white females dominate in terms of senior academic positions, for example, associate professor and professor. These trends confirm that there is still much work to be done to transform the academic staff profile at South African universities. Transformation efforts and instruments implemented at national and institutional levels to date are not translating rapidly enough to impact significantly on the progression and success patterns of academics in South African universities.

Recommendation 17

The NRF's rating system and funding model must be reviewed in line with national priorities and transformation agenda of the country. This will mean a refocus of the NRF's strategy that prioritizes all higher education institutions and black South Africans. The NRF should put in place strategies of building capacity and expertise at historically disadvantaged universities in the areas of science, technology, and innovation. The implementation of the recommendation should be monitored by the National University Transformation Oversight Committee.

Observation 17: There is limited collaboration between the DHET and the DST/NRF and with universities on academic staff capacity development initiatives

To date, the two institutions have worked independently of each other and this needs to change. There have recently been moves to work more closely together, including through the establishment of a bilateral forum that enables the sharing of information and planning for collaboration on support initiatives.

While there are clear synergies between DHET and NRF academic staff capacity development initiatives, collaboration between the two organisations to synergise efforts is limited. The initiatives, while seeking to support the same audience in universities, are implemented independently of each other. The only academic staff development collaboration at present happens within the context of the nGAP, where the NRF has made research support grants available to qualifying nGAP lecturers.

Some of the universities sampled in Workstream 3 also pointed to limited consultation on the design and roll-out of national interventions (Annexure E).

Based on the observations in this section of the report, the MTT makes the following recommendations.

Recommendation 18

There are support initiatives in place specifically designed to strengthen and transform the postgraduate pipeline and the academic staffing profile. Sufficient human and financial resources should be allocated to these initiatives, and they should be more finely tuned towards addressing staff transformation imperatives to enable them to be implemented at a scale that will enable rapid progress to be made in transforming and developing the postgraduate pipeline and academic and professional staff at universities.

Recommendation 19

The DHET should work more closely and collaboratively with universities to align academic staff capacity development initiatives and enable joined-up funding to allow for seamless and continuous support for postgraduate students and academics across the academic career pipeline.

Recommendation 20

Strong monitoring and evaluation processes must be implemented by the DHET to determine whether the range of staff capacity development programmes are having the desired transformation impact in the system, and the evaluation must inform reshaping of programmes as necessary. This includes initiatives being implemented at national and institutional levels. The DHET should work closely with other government departments and entities such as the DoL and the Employment and Gender Commission to ensure that universities implement transformation plans.

7

Conclusion

The MTT confirms that while some progress has been made towards academic staff demographic transformation generally, and specifically in relation to the recruitment, progression and retention of black South African academics, progress is slow, particularly in some institutions. Significant barriers still exist in the South African university system, and black South African and female academics remain underrepresented.

The barriers can be grouped into five broad areas.

Postgraduate pipeline impediments

These include but are not limited to an inadequately sized postgraduate pipeline, inequitable participation and success of South African black and female students in the pipeline, especially at the previously advantaged universities which produce the majority of postgraduates, low and slow throughput rates in the pipeline, disproportionate enrolment of international students in postgraduate programmes and disproportionate participation of black and female postgraduate students in some areas of study.

The declining proportion of South African students in postgraduate cohorts requires urgent attention. Even though the pipeline is small, South Africans have a disproportionately smaller and declining share. The reasons for this bear deeper investigation. The lack of adequate funding for postgraduate students is one factor. There may be others. For example, to what extent are universities intentionally recruiting international black students to meet equity targets? Are universities establishing adequate recruitment and support strategies to ensure strong participation and success of South African students? Are there practices in some institutions at faculty and department levels that work to exclude South African students, as has been anecdotally reported?

If black South African participation and progression in postgraduate programmes is not addressed, it becomes more difficult to address the inequitable participation of black South Africans in the academic staff cohort at universities.

Recommendations 1 to 4 are proposed to address these barriers.

Staff participation and progression impediments

Despite some gains, black academics, specifically African and coloured academics, and female academics remain underrepresented in the academy. Underrepresentation is more pronounced at senior levels and at specific universities, typically the historically advantaged universities and especially at the previously Afrikaans institutions. It appears that some universities may be seeking to address staff transformation imperatives through the recruitment

of black academics from the continent. The progression impediments are multiple, with factors relating to research participation highlighted as particularly important.

Recommendations 5 and 6 are proposed to address these barriers.

Institutional culture and practice impediments

Institutional cultures that work in overtly and covertly racist and sexist ways to maintain the postgraduate student profile and/or the staffing status quo in certain spaces, competing academic responsibilities, the lack of appropriate role models and mentors, and inability to embark on a research trajectory are significant barriers that work against the recruitment, retention and progression of black academics.

To address the institutional culture and practice impediments, recommendations 7 to 11 are proposed.

Policy and strategy impediments

In regard to staff transformation at universities, a policy–strategy disjuncture appears to exist. While universities are implementing a number of strategies to transform the staff profile, these appear to be executed in the absence of clear, well-defined policy, and in the absence of time-bound staff transformation plans that seek to achieve specific targets.

Recommendations 12 to 16 are proposed to address these barriers.

Resource impediments

The MTT noted the raft of instruments that the NRF and the DHET were implementing to support staff capacity development and transformation at universities. The MTT, without endorsing the instruments in the absence of clear evidence about impact, noted the paucity of resources allocated for these instruments, and the lack of synergy between NRF and DHET strategies that appeared to have similar goals. Postgraduate student funding, in particular, is extremely limited.

Recommendations 17 to 20 are proposed to address these issues.

These recommendations, if accepted, must be taken forward through a multifaceted strategy which works at all levels of the system, from the localised spaces in which academics engage up to national strategies and responses, and which involves all role-players.

Further research

The MTT also recommends that the following additional research is undertaken to further inform postgraduate and academic staff recruitment, retention and progression strategies:

- What is the range of factors resulting in the declining proportion of black South Africans in postgraduate programmes?
- What postgraduate student success and participation interventions are proving to be effective and how can the lessons from these be shared across the system?
- Postgraduate destination studies: What career pathways are postgraduates, especially doctoral graduates, following and what informs their selection of pathways? What pathways do international masters and doctoral graduates follow?
- What staff recruitment, retention and progression strategies are being effectively applied at institutional level, and how can the lessons from these be shared across the system?
- Is there any validity in the claims that international leadership at department level in some universities is influencing the student and staff profile in those departments in favour of staff and students from the same country as the leadership?
- How are institutional cultures acting as a barrier to the recruitment, retention and progression of black academics and what can be done to mitigate this?
- What are the academic staffing flow patterns between universities and the public and private sectors, and how do these impact on the recruitment and retention of academics?
- What role can the science councils play to increase the number of black academics in universities, and to enable their accelerated development?

NOTES

NOTES

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