



Education, Training and Development Practices Sector Education and Training Authority

Final Report: Public Higher Education Institutions Subsector Skills Plan **2020 - 2021**

AT THE CUTTING EDGE OF SKILLS DEVELOPMENT



higher education
& training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

EXECUTIVE SUMMARY

Methodology

A mixed methods approach was employed incorporating qualitative methods (which consisted of a desktop literature review and eleven key stakeholder interviews), and quantitative methods (an analysis of Workplace Skills Plan and a survey of respondents from 22 public HEIs).

Sector Profile

There are 26 public universities in South Africa with at least one in each province. The largest concentration of HEIs is in the three larger metropolitan centres of KwaZulu-Natal, Gauteng, and the Western Cape. In 2018, the student headcount for public HEIs reached 1 036 984. There has also been a substantial increase in provision of state funding for disadvantaged students through NSFAS. State funding is the largest proportion on income for public universities, followed by tuition fees and third-stream funding (corporate and commercial activities, investments, and donations. Notwithstanding substantial increases in state funding to HEIs, government subsidies to universities declined in real terms. The university system in South Africa is poorly funded compared to other university systems.

2018 data indicates that 69 901 people were employed in the 26 public HEIs, with females constituting 53.98% and Males 46.02%. 58% of all employees were African, (African Males at 28.63% and African Females at 28.59%). However, racial and gender bias is still evident in occupations categories. For example, in the 'instruction and research' category, men still account for the greater proportion of employees in terms of gender, and white female constitute the largest group followed by African males, White males, and then African females, with the 'coloured' population group reporting the lowest number of males and females in this category. A gender bias is still evident in OFO major groups with men dominating plant and machine operators, skilled agricultural, forestry, fishery, craft and related trades and service and sales, whilst Females dominated clerical support workers, elementary occupations'; and technicians and associate professional categories.

Key Skills Drivers

Key skills change drivers identified include i) economic and financial issues (the impact of slow economic growth, the mismatch between skills and the economy, educational supply and demand mismatch and qualification and job mismatch); ii) poor equality of education outcomes due to the schooling system and impact on student's performance at HEIs (it is noteworthy that notwithstanding increases in enrolment rates, completion rates remain low); iii) technological factors including the impact of technology and learning methods on learning and the concern that HEIs were not abreast of technological advances, or producing students equipped to handle the challenges and opportunities arising from the 4th Industrial Revolution; iv) transformation and equity remain a challenge with poor progress on race and gender transformation both among employees profiles, and in addressing gender stereotypes in students fields of study; v) socio-cultural challenges were noted in terms of curriculum content, teaching styles, and conflict at universities; vi) legislative and policy issues were mentioned in the context of additional burdens on HEIs in terms of compliance, and the extent to which policy was responsive to market demands by generating appropriate skills development.

Key national development strategies addressing skills requirements include the Human Resource Development Strategy for South Africa 2010 to 2030, the Industrial Policy Action Plan, the Medium-Term Strategic Framework, the National Development Plan and, New Growth Path. It was noted that the skill sector planning process needed to facilitate a more cooperative relationship between educational and training institutions, policy makers and the workplace.

Occupational Shortages and Skills Gaps

A total of 96 HTFVs were identified in 2018 WSPRs and 125 in 2019 WSPRs. The vast majority of these are found within OFO Major Group '2017-2 Professionals', followed by '2017-1 Managers'. No HTFVs reported in OFO Major Groups '2017-5 Service and Sales workers' for both years.

The most widespread HTFV is '2017-231101 University Lecturer' followed by '2017-112101 Director (Enterprise/Organisation)'. This finding is supported by input from surveys with public HEIs which reported a need for lecturers/professors/associate professors across various disciplines. Other HTFV noted were in the ICT sector. Lack of qualifications and experience, as well as poor remuneration, are the primary reasons these occupations were considered 'hard-to-fill' among survey respondents.

The same occupational codes are dominant in the skills gap analysis. Reasons cited for skills gaps were primarily 'Job Specific Competency'; 'Sector Specific Competency'; and, 'Organisation Specific Competency' as reported in 2018 WSPRs. 'Job Specific Competency' was the most cited reason for skills gaps in WSPRs for 2018 and 2019.

Sector Partnerships

Areas identified where the ETDP SETA could better support skills development within the HE sector through partnerships included: by addressing the gap between place of learning and place of work; by increasing funding; and by improving the relationship between SETA and HE sector.

New partnerships and partnerships that should be strengthened with the SETA identified included: between the SETA, public HEIs and other SETAs; between the SETA, public HEIs and DBE; between the SETA, public HEIs and DHET; between the SETA, public HEIs and Community Organisations; between the SETA and public HEIs (and private HEs and TVETs); between the SETA, public HEIs and small businesses; between the SETA, Professional Bodies and NPOs; and between the SETA and HEIs.

SETA Strategic Skills Priority Actions

Key skills development interventions and initiatives that should be prioritised to address the current skills gaps within the HE sector included: i) Improving access to HEIs, (rural communities; addressing equity and transformation in fields of study and employment). ii) Addressing factors impacting on HEIs ability to deliver appropriately skilled graduates to meet the demands of the economy (equipping graduates with appropriate technological skills and addressing mismatch between demand and educational supply); financial challenges in terms of insufficient funds for staff skills development, limited access to HEIs to accommodate demand; inadequate student funding; financial sustainability of HEIs; institutional challenges (i.e. addressing employment equity and transformation deficits, effective governance, leadership, high staff turnover, impact of student protests; effectiveness of transformation strategies; relationship between ETDP ZETA and HEIs; and improving ETDP efficiency. iii) Addressing priority skills gaps (lecturers' skills gaps; technology skills, staff development, integrated learning methods, support staff development; and improving youth development and support services. iv) Building on current skills development interventions. v)

Developing and strengthening partnerships to enhance skills development. vi) adopting a systemic approach to address transformation and equity. vi) Improving the skills planning process.

ACRONYMS

ABET	Adult Basic Education and Training
CHE	Council on Higher Education
CHET	Centre for Higher Education Transformation
DBE	Department of Basic Education
DED	Department of Economic Development
DHET	Department of Higher Education and Training
ETD	Education, Training and Development
ETDP	Education, Training and Development Practices SETA
FET	Further Education and Training
GDP	Gross Domestic Product
GET	General Education and Training
HEI	Higher Education Institution
HEMIS	Higher Education Information Management System
HEQC	Higher Education Quality Committee
HESA	Higher Education South Africa
HET	Higher Education and Training
HTFV	Hard-To-Fill-Vacancies
LMIP	Labour Market Intelligence Partnership
NDP	National Development Plan
NQF	National Qualifications Framework
NSF	National Skills Fund
NSFAS	National Student Financial Aid Scheme
PSET	Post School Education and Training
SAQA	South African Qualifications Authority
SET	Science, Engineering and Technology
SETA	Sector Education and Training Authority
SSP	Sector Skills Plan
TOR	Terms of Reference
USAf	Universities South Africa
WSP	Work Skills Plan
WSPR	Workplace Skills Plan and Reports

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RESEARCH SCOPE AND DESIGN

Research Scope

The Department of Higher Education and Training (DHET) is responsible for the management and regulation of Higher Education and Vocational Institutions, Adult and Community Education and Training (ACET), and Technical and Vocational Education and Training (TVET) systems.

As recognised by the National Qualifications Framework (NQF), South Africa's education system contains three bands, namely:

- The General Education and Training (GET) phase;
- The Further Education and Training (FET) phase; and
- The Higher Education and Training (HET) phase.

This focus of this research report is on Public Higher Education Institutions (HEIs) in South Africa. The report will inform the development of the Education, Training and Development Practices SETA Sector Skills Plan (SSP) for the period 2020/21.

The research process involved the gathering, analysing and validating of short, medium and long-term empirical data relating to the subsector profile; the identification of key skills change drivers, occupational shortages and skills gaps, and partnerships in the HEI sector. The report concludes by providing recommendations on the skills priorities for public HEIs in South Africa.

Research design and Methodology

The research design employed a mixed methods approach.

- Qualitative methods included:
 - A Desktop Literature Review: the literature review consisted of an examination of reports and key documents on the sector and an analysis of the regulatory framework impacting on the sector. This assessment assisted in identifying trends and gaps which informed the development of research tools for the stakeholder interviews and survey.
 - Eleven Key Stakeholder Interviews: key stakeholders were interviewed to solicit information on the skills needs, opportunities and constraints on employment growth within the HEI subsector. Stakeholders included professionals from: DHET, ETDP SETA, Council on Higher Education (CHE), Universities South Africa (USAf), South Africa Qualifications Authority (SAQA); and other key stakeholders with insights on issues that drive change which has effect on skills such as Hard-To-Fill-Vacancies (HTFVs) and skills gaps within the sector.
- Quantitative Methods included:
 - An analysis of Workplace Skills Plan and Reports (WSPRs) – An analysis the 2019 and 2018 WSPRs data to identify HTFVs and skills gaps within the subsector.
 - A Survey of 22 public HEIs - A survey with Skills Development Facilitators and relevant professionals at public HEIs was conducted to verify findings that emerged from 2019 WSPRs data analysis.

Research Limitations

The following limitations affected the research process:

- **Inconsistent data sets** – Inconsistencies in how WSPRs templates are populated and differences in formats between 2018 and 2019 WSPRs data sets. This impacted on ability to conduct comparative analysis on some indicators and raises questions regarding the reliability and accuracy of some of the data particularly in poorly populated submissions.

CHAPTER 1: SECTOR PROFILE

1.1 Scope of Coverage

Public universities are primarily funded by the Department of Higher Education and Training (DHET) and can be classified into three categories:

1. Traditional universities – institutions which provide a theoretically-oriented university degree programmes, at both undergraduate and postgraduate levels. There are eleven (11) such institutions in South Africa currently.
2. Comprehensive universities – which provide both theoretical and vocational oriented programmes, at both undergraduate and postgraduate levels. Currently there are nine (9) such institutions in South Africa.
3. Universities of Technology – which provide vocationally-oriented diploma and degree programmes, primarily at undergraduate level. There are currently six (6) universities of technology (previously termed “Technikons”) in South Africa.

The table below lists all 26 public universities according to each of the abovementioned categories, and provides an indication of types of course of study offered by each institution:¹

Table 1: List of Public Universities by Type of Institution

TYPE OF INSTITUTION	COURSE OF STUDY OFFERED	UNIVERSITY NAME
Traditional Universities	<ul style="list-style-type: none"> - Basic formative degrees: e.g. BA & BS; - Professional undergraduate degrees e.g. Bachelor of Science-Engineering (BSc Eng) and Bachelor of Medicine and 	University of Cape Town
		University of Fort Hare
		University of the Free State
		University of KwaZulu-Natal
		University of Limpopo
		North-West University
		University of Pretoria
		Rhodes University
		Stellenbosch University
		University of the Western Cape

¹ CHE, VitalStats 2016, pg. 99.

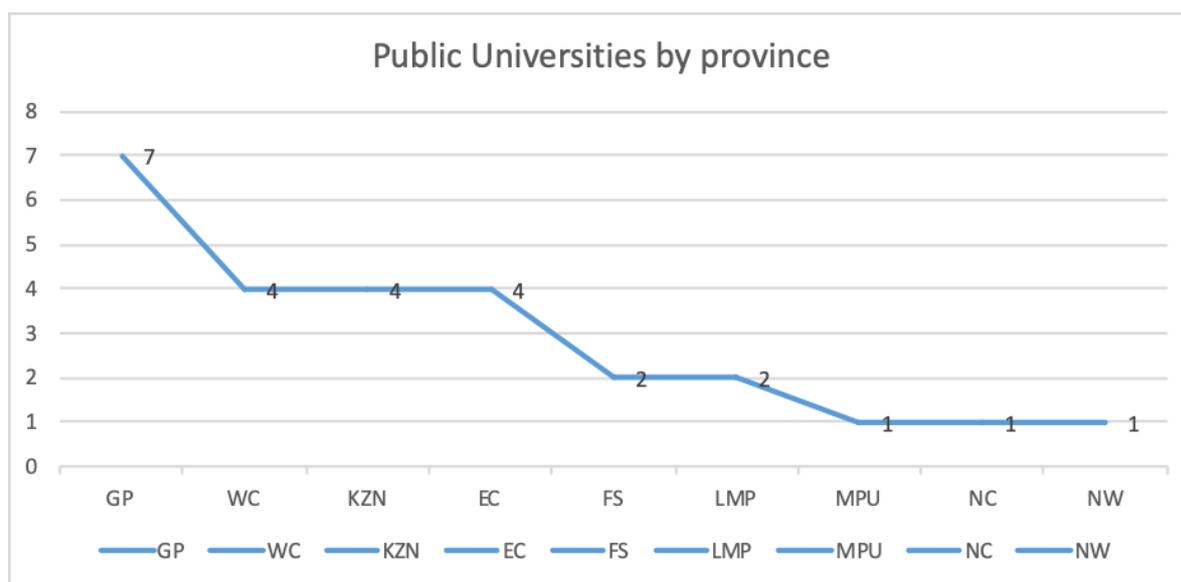
	Bachelor of Surgery (MBChB); - Postgraduate level: honours degrees, and range of masters and doctoral degrees.	University of the Witwatersrand
Comprehensive Universities	- Programmes typical of Traditional Universities and Universities of Technology.	University of Johannesburg
		Nelson Mandela University
		University of South Africa
		University of Venda
		Walter Sisulu University
		Sol Plaatje University
		University of Mpumalanga
		University of Zululand
		Sefako Makgatho Health Sciences University
Universities of Technology	- Primarily vocational or career-focused undergraduate diplomas, and BTech which serves as a capping qualification for diploma graduates. - Limited number of masters and doctoral programmes.	Cape Peninsula University of Technology
		Central University of Technology
		Durban University of Technology
		Mangosuthu University of Technology
		Tshwane University of Technology
		Vaal University of Technology

Source: CHE, Vital Stats 2016

There is now a minimum of one public university in each province of the country. (Mpumalanga and the Northern Cape provinces acquired their own institutions in 2014/2015). However, the largest number of South Africa's 26 public universities are located in the three larger metropolitan centres of KwaZulu-Natal, Gauteng,² and the Western Cape (with some institutions having satellite campuses in other areas). The geographical spread of public universities does raise issues of accessibility and affordability for students outside of these locations which has skills implications for those areas and provinces not in proximity to universities. Figure 1 below shows the provincial breakdown of the location of these institutions.

² UNISA was included under Gauteng as the main campus is in Pretoria, Gauteng.

Figure 1: Provincial location of public universities in SA



In 2018, South Africa’s public universities reached a student headcount of 1 036 984.³ The table below demonstrates levels of access and success in enrolment for 2018.

Table 2: Access and Success Rate in 2018

Performance Indicators	2018/19 Actual	2019/20 Targets	5 year Target (2015-2020)
Access			
1. Number of students enrolled in public higher education studies (universities)	1 036 984	1 070 000*	1 070 000
2. Number of eligible university students obtaining financial aid (NSFAS)	332 337	300 000**	205 000
3. Number of students in foundation programmes	21 289	35 000*	36 000
4. Number of universities accredited to offer TVET College lecturer qualifications	3	10***	10
Success			
5. Number of graduates in Engineering Sciences from universities	49 869 (cumulative)	13 000*	57 000
6. Number of graduates in Human Health and Animal Health from universities	39 376 (cumulative)	11 000*	45 000

³ Department of Higher Education, Science and Technology 2019/20 Annual Performance Plan with the Minister (17 July 2019) PMG. Available at: <https://pmg.org.za/committee-meeting/28615/>

Performance Indicators	2018/19	2019/20 Targets	5 Year Target (2015-2020)
Success			
7. Number of graduates in Natural and Physical Sciences from universities	31 870 (cumulative)	9 000*	36 000
8. Number of graduates in Initial Teacher Education from universities	87 089 (cumulative)	25 900*	99 000
9. Number of Doctoral graduates from universities	10 642 (cumulative)	3 200*	12 000
10. Number of Research Masters graduates	30 524 (cumulative)	8 100*	34 000
11. Percentage of success rates at universities	77%	78%*	78%
12. Percentage of higher education undergraduate success rates (contact)	82%	82%*	81%
13. Percentage of higher education undergraduate success rates (distance)	67%	68%*	71%

Source: DHET, July 2019

The objectives of the DHET for 2019/20 are to reach key NDP 2030 targets by:

- Increasing student enrolments in Higher Education to 1.62 million per annum.
- Producing and retaining a new generation of university academics, transforming the historical and social composition of the academic work force:
 - 75% of academics at public universities should have PhDs (current figure is 46%); and
 - 100 additional young (black and/or women) entrants to workforce per annum (current figure is 549).
- Increasing the number of doctoral graduates from universities to 100 PhDs per million per annum i.e. 5 000 per annum.⁴

The issue of funding for higher education came to the fore with the #FeesMustFall student-led protest movement which began in late 2015. The end result of the #FeesMustFall protest movement was a guarantee by national government of free higher education for students. To achieve this goal, a national bursary scheme for poor and working-class students administered through the National Student Financial Aid Scheme (NSFAS).⁵ In the 2018 academic year all registered university students from South African households with gross annual incomes of R350 000 or less could qualify to receive bursaries. The policy was phased in over a period of five years starting with first time entry students in 2018. Returning existing NSFAS funded university students in 2018 loans were converted

⁴ Department of Higher Education, Science and Technology 2019/20 Annual Performance Plan with the Minister (17 July 2019) PMG Available at: <https://pmg.org.za/committee-meeting/28615/>

⁵ Previously, NSFAS disbursed loans but now (since new bursary scheme introduced in 2018) it provides bursaries.

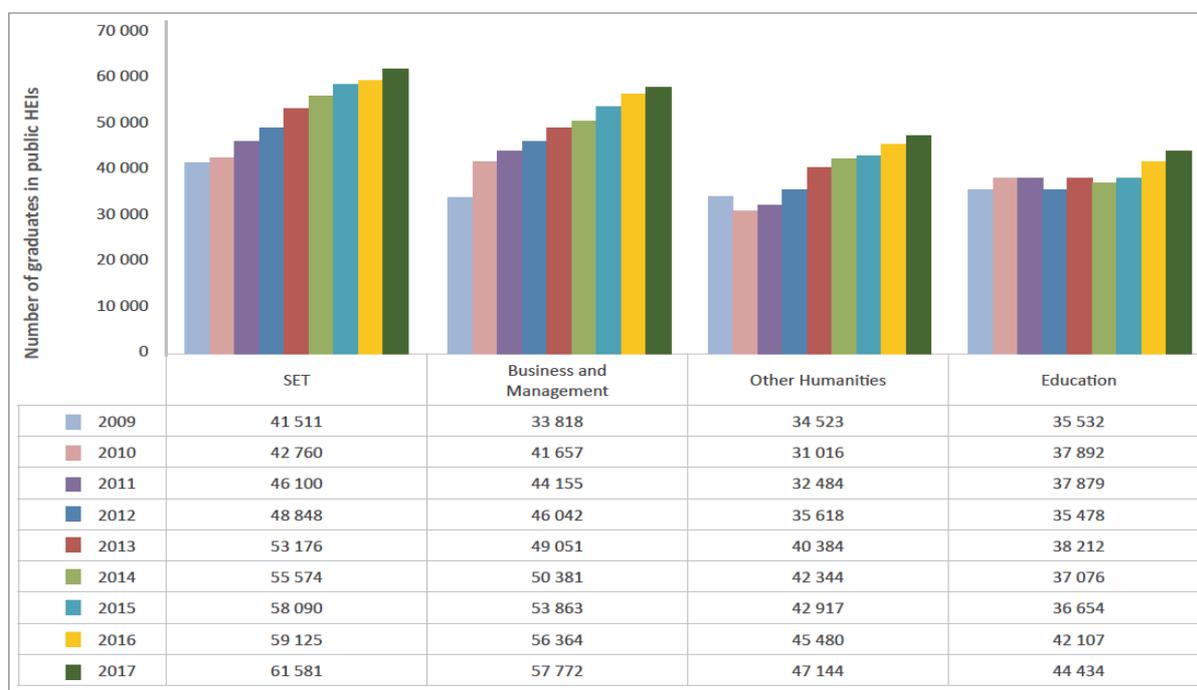
into full bursaries.⁶ The allocations to NSFAS have increased from R9,849 billion in 2017/18 to R35,321 billion in 2020/21.⁷

The total number of students who have been supported by the government each year at universities is as follows:⁸

- 2013 — 194 923;
- 2014 — 186 150;
- 2015 — 178 961; and
- 2016 — 244 488⁹

The figure below presents the major fields of study that new students are enrolling at public HEIs which indicates an increase across all fields of study between 2016 and 2017.¹⁰

Figure 2: Student enrolments by major field of study, 2009-2017



Sources:
 Statistics on Post-School Education and Training in South Africa, 2016.
 2017 HEMIS database. data extracted in November 2018.

⁶ Ministerial Statement on University Funding: 2019/20 AND 2020/21 (November 2018)

<http://www.dhet.gov.za/SiteAssets/18%2012%2007%20Ministerial%20Statement.pdf>

⁷ DHET Briefing on the allocation of funds to Universities and TVET Colleges in 2018 (28 February 2018) Available pmg.org.za

https://webcache.googleusercontent.com/search?q=cache:rSyBp4_x3WAI:https://pmg.org.za/files/180228DHET.pptx+&cd=1&hl=en&ct=clnk&gl=za&client=safari

⁸ Higher Education and Training Budget Vote 15 2019

<http://www.treasury.gov.za/documents/National%20Budget/2019/ene/Vote%2015%20Higher%20Education%20and%20Training.pdf>

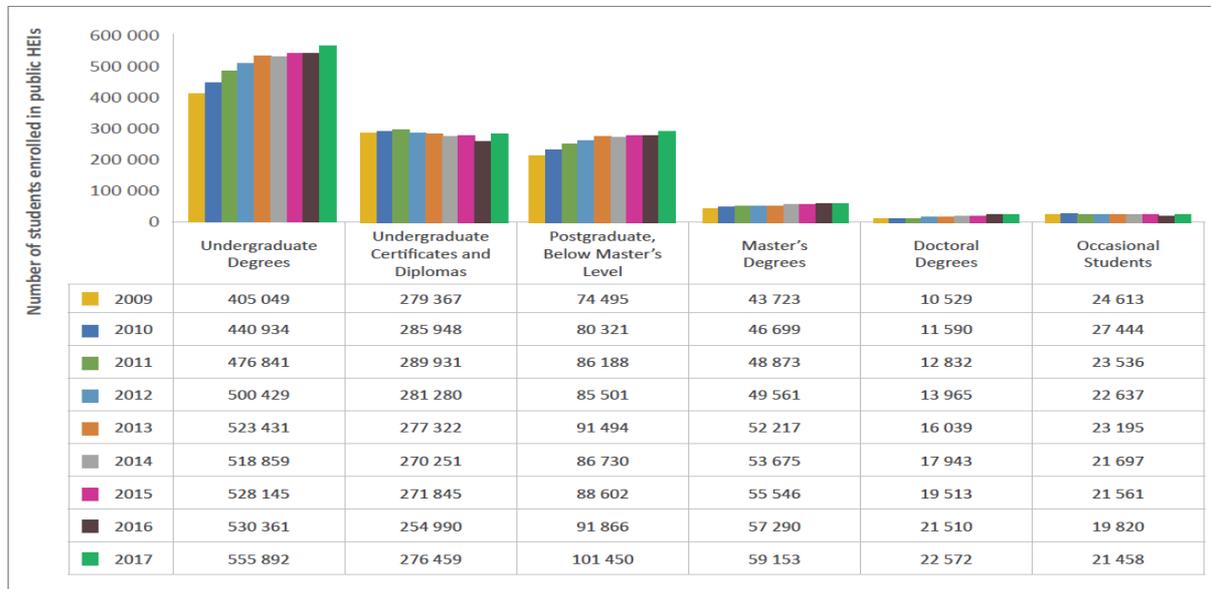
⁹ Media Statement 'Two Million NSFAS Students funded by Govt since 2013' (24 April 2017). Available at:

<http://www.dhet.gov.za/SiteAssets/Media/Statements/210417%20NSFAS%20Beneficiaries%20Since%202013.pdf>

¹⁰ pg. 19 DHET, 'Statistics on Post-School education and training in South Africa 2017'.

Trends over the 2009 -2017 period show a continued increase in doctoral degrees which has almost doubled over 2009-2017 period; an increase in undergraduate degrees and postgraduate but a decline in occasional students and undergraduate certificates and diplomas .¹¹

Figure 3: Student Enrolments by Type of Degree, 2009-2017

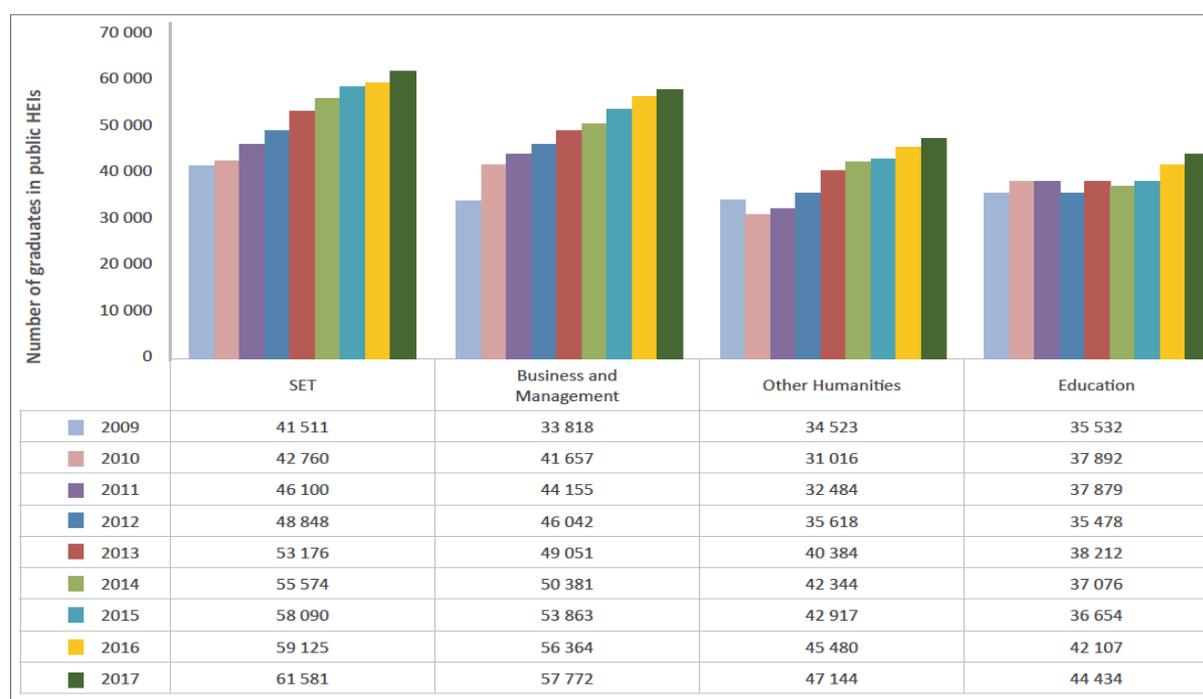


Sources:
 Statistics on Post-School Education and Training in South Africa, 2016.
 2017 HEMIS database, data extracted in November 2018.

The number of graduates in public HEIs was 210 931 in 2017, with the highest numbers in SET (61 581/ 29.2%) followed by Business and Management (57 772/ 27.4%), Other Humanities (47 144 or 22.4%) and Education which recorded lowest number of graduates (44 434 or 21.1%). Business and Management recorded the highest increase over the whole recorded period.¹²

¹¹ Ibid. pg.13
¹² Ibid. pg. 19.

Figure 4: Graduates by Major Field of Study, 2017



Sources:
 Statistics on Post-School Education and Training in South Africa, 2016.
 2017 HEMIS database, data extracted in November 2018.

1.2 Key Role-Players

The public university sector in South Africa is supported by three (3) steering mechanisms:

- Planning
- Funding
- Quality Assurance

The Department of Higher Education and Training (DHET) which is mandated to steer the sector through Planning and Funding; the NSFAS which provides funding to financially disadvantaged and academically qualifying students; and the Council on Higher Education (CHE).¹³ There are, however, a number of other key role players in the sector, as highlighted in the table below.

Table 3: Role Players in the HE Sector

INSTITUTION	ROLE
<u>Department of Higher Education and Training (DHET)</u>	The Department of Higher Education is responsible for universities, vocational education, community education and skills development. Its mandate on universities is to provide strategic development of an effective higher education system and manage government regulation thereof. Core functions include academic planning, monitoring and evaluation.

¹³ DHET Annual Report 2016/17, pg. 33.

INSTITUTION	ROLE
<u>National Student Financial Aid Scheme (NSFAS)</u>	The main priority and mandate of NSFAS is to efficiently and effectively provide financial aid to students from poor, working class in order to promote access to and success in, higher, and further education. National Student Financial Aid Scheme (NSFAS) is established in terms of the National Student Financial Aid Scheme (Act 56 of 1999).
<u>Council of Higher Education (CHE)</u>	<p>The Council on Higher Education is responsible for the accreditation of public higher education institutions' learning programmes.</p> <p>The Council on Higher Education (CHE) is an independent statutory body established in terms of the Higher Education Act (Act No 101 of 1997) (as amended). Its functions as the Quality Council for Higher Education are set out in the National Qualifications Framework Act (Act No 67 Of 2008).</p> <p>This responsibility is discharged through its permanent sub-committee, the Higher Education Quality Committee (HEQC).</p>
<u>South African Qualifications Authority (SAQA)</u>	SAQA is responsible for the development and implementation of the National Qualifications Framework (NQF). It has overall responsibility for overseeing standard setting and quality assurance in support of the National Qualifications Framework (NQF) which includes the Higher Education Qualifications Sub-Framework (HEQSF).
<u>Universities South Africa (USAf)</u>	Universities South Africa (USAf), formerly known as Higher Education South Africa (HESA), is a membership organisation representing South Africa's universities. It is a representative body of South Africa's public universities, that aims to promote a more inclusive, responsive and equitable national system of higher education.
Labour Organisations	Labour organisations representing interests of employees of the HEI.
Student Representative Councils	Section 26 and 35 of the Higher Education Act requires every public HEI to establish a SRC (to be determined by the public higher education institutions institutional rules. The Act also makes provision for the representation of the SRC on various governance bodies .
Student Organisations	Student organisations which represent students in higher education institutions.

1.3 Economic Performance

An analysis of government budget expenditure shows increased spending in the higher education sector, which includes provision for bursaries since 2018 (in response to the #FeesMustFall protests). The DHET budget (Voted Funds) increased at an average annual rate of 12.6% over the 2019 MTEF increasing from R73 billion in 2018/19 to reach R104.4 billion in 2021/22.¹⁴

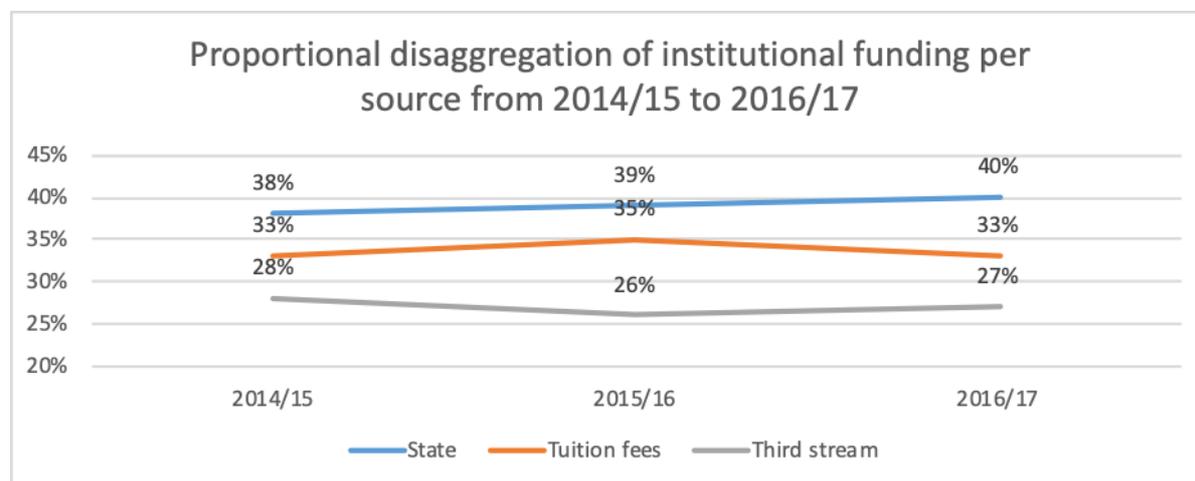
Table 4: Allocation of funds and Projections to Universities and NSFAS 2018/19 – 2020/21

R million	2018/19	2019/20	2020/21	MTEF
Universities: zero per cent fee increase for 2018 and subsidy funding	2 445	4 050	4 814	11 309
Universities: NSFAS student funding	4 581	8 124	10 315	23 020

Source: DHET Briefing on the allocation of funds to Universities and TVET Colleges in 2018 (28 February 2018)

Figure 5 below highlights the relative consistency of state funding as a source of income to public universities, with government transfers still accounting for the lion’s share, followed by tuition fees. Third stream funding is derived from corporate and commercial activities, investments, and donations.

Figure 5: Proportional disaggregation of institutional funding source, 2014/15 - 2016/17



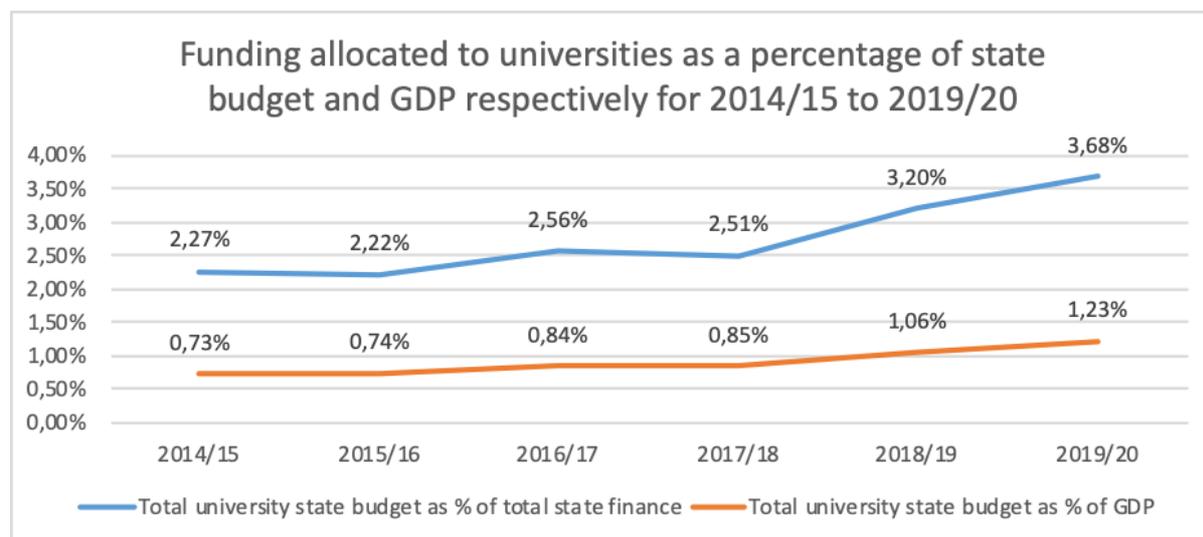
Note: Third stream funding refers to income generated from sources other than government subsidies and tuition or student fees.

Source: National Treasury Budget Highlight cards for 2015-2019.

¹⁴ Department of Higher Education, Science and Technology 2019/20 Annual Performance Plan with the Minister (17 July 2019) PMG Available at: <https://pmg.org.za/committee-meeting/28615/>.

An analysis of the DHET university state budgets report from March 2018¹⁵ shows the increase in state funding to public universities since 2018, and more importantly the increase in proportion of state funding as a percentage of the national GDP. Although a significant increase is on the rise, South Africa’s spend on university education (as percentage of GDP) is still much lower than in other countries.

Figure 6: Funding allocated to universities as % of GDP & state budget, 2014/15 - 2016/17



Source: DHET University State Budgets March 2018

According to Universities South Africa (USAf), government subsidies to universities have been declining in real terms.¹⁶ Underfunding, it says, is considerable. Even though the education sector in South Africa receives the largest proportion of overall state budget, when benchmarked against other countries, it is evident that the university system in South Africa is poorly funded compared to other university systems. According to USAf, not only is the university sector in South Africa underfunded, but it is also dependent on tuition fees to remain sustainable. If free higher education were to be provided, taking away the second most important income stream to universities, this could negatively affect the sector: “If tuition fees dried up – as would be the case if a fee-free higher education policy were to be adopted prematurely, the country would suffer severe consequences”.¹⁷ If universities produce both public and private goods, as USAf believes they do, then the funding for higher education should be sourced from both public (i.e. state) and private (i.e. corporate and/or tuition fees) spheres.¹⁸

Spending on the education sector in the ‘Learning and Culture’ band constitutes the second highest average growth rate, after Social Development (as shown in Table 6 below).¹⁹

¹⁵ DHET University State Budgets March 2018. Available at: <http://www.dhet.gov.za/layouts/15/xlviewer.aspx?id=/Financial%20and%20Physical%20Planning/University%20State%200budgets%20march%202018.xlsx>

¹⁶ USAf University Funding Fact Sheet 2016, pg.3, http://www.uct.ac.za/usr/news/downloads/2016/UniversitiesFundingSouthAfrica_FactSheet.pdf

¹⁷ Ibid, pg. 4.

¹⁸ Ibid., pg.1.

¹⁹ National Treasury 2018 budget Review, pg. 9, <http://www.treasury.gov.za/documents/national%20budget/2018/review/FullBR.pdf>

Table 5: Comparative Consolidated Government Expenditure by Function

CONSOLIDATED GOVERNMENT EXPENDITURE BY FUNCTION			
R billion	2017/18 Revised estimate	2018/19 Budget estimate	Average Growth 2017/18 to 2020/21
Learning & Culture (Education)	323.1	351.1	8.5%
Health	191.7	205.4	7.8%
Social Development	234.9	259.4	9.2%
Community Development*	183.5	196.3	7.4%
Economic Development	183.5	200.1	7.4%
Peace & security	195.7	200.8	5.2%
General public services	62.1	64.0	4.3%

*Consists of: Municipal equitable share, Human settlements, water and electrification programmes, public transport, other human settlements and municipal infrastructure.

Source: National Treasury 2018 Budget Review

Out of the 'Learning and Culture' allocation, the 'post-school education and training' category accounts for 27,5% of the budget, with basic education taking the lion's share at 69,4%.²⁰

Figure 7: Learning and Culture Budget for 2019

R million	2018/19 Revised estimate	2019/20 2020/21 2021/22 Medium-term estimates			Percentage of total MTEF allocation	Average annual MTEF growth
Learning and culture	354 826	386 398	415 186	442 618	24.1%	7.6%
Basic education	246 593	262 355	282 303	302 813	16.4%	7.1%
Post-school education and training	97 652	112 695	121 333	127 590	7.0%	9.3%
Arts, culture, sport and recreation	10 581	11 349	11 550	12 215	0.7%	4.9%

Source: National Treasury 2019 Budget Review

A closer examination of 2019 Budget for post-school education and training provides a detailed breakdown of how the budget is allocated with university subsidies still accounting for the largest portion of this budget but with an estimated lower than average MTEF growth rate.²¹

²⁰ pg. 54 National Treasury 2019 Budget Review.

²¹ pg. 55 National Treasury 2019 Budget Review.

Figure 8: Breakdown of Post-school education and Training Expenditure 2019

R million	2018/19 Revised estimate	2019/20 2020/21 2021/22 Medium-term estimates			Percentage of total MTEF allocation	Average annual MTEF growth
Post-school education and training	97 652	112 695	121 333	127 590	29.1%	9.3%
<i>of which:</i>						
<i>University subsidies</i>	33 737	36 984	39 461	41 649	9.5%	7.3%
<i>of which:</i>						
<i>University infrastructure</i>	4 351	4 672	4 894	5 145	1.2%	5.7%
<i>National student financial aid scheme³</i>	27 078	33 290	37 902	39 986	8.9%	13.9%
<i>Technical and vocational education and training</i>	10 694	12 698	14 422	15 409	3.4%	12.9%
<i>of which:</i>						
<i>Compensation of employees</i>	6 258	6 735	7 217	7 702	1.7%	7.2%
<i>Subsidies</i>	4 288	5 569	6 737	7 213	1.6%	18.9%
<i>Community education and training</i>	2 358	2 527	2 699	2 877	0.7%	6.9%
<i>of which:</i>						
<i>Compensation of employees</i>	2 114	2 274	2 416	2 573	0.6%	6.8%
<i>Skills development levy institutions⁴</i>	19 442	21 748	21 103	21 613	5.2%	3.6%

Source: National Treasury 2019 Budget Review

A quarter of the amount allocated to public HEIs during the 2017/18 financial year (R31.6 billion) was allocated to three institutions: UNISA (R3.3 billion or 10.5%), followed by University of Pretoria (R2.4 billion or 7.6%) and University of KwaZulu-Natal (R2.0 billion or 6.3%). Rhodes University received the lowest allocation (R476.5 million or 1.5%).²²

1.4 Employer Profile

The latest official data (as at 2017) indicates the total number of staff employed in public HEI was 61 242.²³ UNISA is the largest employer of permanent staff members (9.6%) followed by University of Cape Town (8%) and University of Witwatersrand (7.5%) and University of Johannesburg (7.4%).²⁴ Half (50%) of South Africa's 26 public HEIs have a staff complement of over 2000 employees (up from 47% in 2016), with just less than 20% of public HEIs employing less than 1000 people (down from 27% in 2016).²⁵

See below the number of employees per institution.²⁶

²² pg.73 Statistics on post education and training in South Africa, 2017 DHET released March 2019.

²³ Ibid. 24

²⁴ Ibid.

²⁵ Ibid.

²⁶ Ibid. 93.

Figure 9: Number of Employees Per HEI

Institution	Total Permanent Staff			% of Black Staff in Total			% of Female Staff in Total		
	Instruction and Research Staff	Administrative Staff	Service Staff	Instruction and Research Staff	Administrative Staff	Service Staff	Instruction and Research Staff	Administrative Staff	Service Staff
Cape Peninsula University of Technology	843	1 038	1 095	67	87	100	43	59	52
University of Cape Town	1 208	2 741	959	36	80	99	47	59	65
Central University of Technology, Free State	305	417	81	52	77	96	46	60	42
Durban University of Technology	581	835	55	74	93	100	48	51	16
University of Fort Hare	365	559	19	74	92	100	39	59	11
University of the Free State	1 000	1 376	231	27	49	98	53	68	47
University of Johannesburg	1 234	2 051	1 225	55	76	99	47	52	50
University of KwaZulu-Natal	1 341	1 830	1 112	62	87	100	48	62	55
University of Limpopo	565	490	73	92	93	100	37	56	36
Mangosuthu University of Technology	205	314	60	92	98	100	39	50	42
University of Mpumalanga	90	184	86	82	92	100	44	55	50
Nelson Mandela University	607	1 190	314	38	64	97	50	65	41
North West University	1 510	2 051	346	34	40	95	49	64	45
University of Pretoria	1 236	1 921	903	27	54	97	52	64	46
Rhodes University	322	546	441	33	67	100	43	61	52
Sefako Makgatho Health Science University	610	386	493	85	84	100	54	63	54
Sol Plaatje University, Northern Cape	86	85	8	77	79	100	38	54	38
University of South Africa	1 796	3 725	350	57	81	100	51	55	79
University of Stellenbosch	1 152	2 249	255	24	54	96	47	65	42
Tshwane University of Technology	969	1 685	622	62	77	100	44	54	53
University of Venda	455	422	102	95	99	100	37	49	58
Vaal University of Technology	402	525	209	67	81	99	45	60	62
Walter Sisulu University	580	606	169	91	96	100	45	56	47
University of Western Cape	658	926	31	54	94	100	50	58	13
University of Witwatersrand	1 195	2 419	1 006	44	86	100	50	62	36
University of Zululand	316	622	173	85	96	100	44	57	39
Total	19 631	31 193	10 418	53	75	99	47	59	51

Source: 2017 HEMIS database, data extracted in November 2018.

Note 1: A permanent staff member is defined as an employee who contributes to an institutional pension or retirement fund.

Note 2: Instruction/research staff (also referred to as academic staff) are those who spend more than 50% of their official time on duty on instruction and research activities.

Note 3: The category "administrative staff" includes all executive and professional staff who spend less than 50% of their official time on duty on instruction and research activities, as well as all technical and office staff.

Note 4: The category "service staff" includes all staff, such as cleaners, gardeners, security guards and messengers, who are not engaged in supervisory or administrative functions linked to an office.

Note 5: Black staff, for the purpose of this summary table, includes all African, Coloured and Indian/Asian staff employed on a permanent contract.

Note 6: As a result of rounding off, numbers and percentages may not necessarily add up to totals.

The following five universities recorded the lowest number of black (African, Coloured and Indian/Asian) employees in the category of 'Instruction and Research':

- University of Stellenbosch 24%,
- University of Free state 27%,
- Rhodes 33%,
- North West 34%,

- University of Cape Town 36%.²⁷

1.5 Labour Market Profile

HEMIS data (2017) indicates that fifty-four (54%) percent of permanent employees at public HEIs are female. With more than half being African (54%). However, in the 'instruction and research' category, men still account for the greater proportion of employees in terms of gender, and white female constitute the largest group followed by African males, White males, and then African females. The 'coloured' population group reported the lowest number of males and females in this category.²⁸

Figure 10: Number of permanent employees in public HEIs by population group, gender and function (2017)

Population group	Instruction and research			Administrative			Services			Total		
	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
African	3 058	4 453	7 511	8 813	7 645	16 458	4 717	4 568	9 285	16 588	16 666	33 254
Coloured	712	635	1 347	3 193	1 874	5 067	500	473	973	4 405	2 982	7 387
Indian/Asian	863	756	1 619	1 117	710	1 827	11	47	58	1 991	1 513	3 504
White	4 596	4 149	8 745	5 334	2 425	7 759	46	48	94	9 976	6 622	16 598
No information	93	316	409	40	42	82	6	2	8	139	360	499
Total	9 322	10 309	19 631	18 497	12 696	31 193	5 280	5 138	10 418	33 099	28 143	61 242

Source: 2017 HEMIS database, data extracted in November 2018.

These trends are borne out from the analysis of 2018 WSPR data below.

The data indicates that there were **69 901** people employed by the 26 public HEIs. Females constituted the largest proportion (n= 37 731 or 53.98%) than Males (n=32 170 or 46.02%). In terms of race almost 58% of all employees were African, with lightly more African Males (n=20 016 or 28.63%) than African Females (n=19 983 or 28.59%). Females, however, dominate the other Race categories as indicated below.

Table 6: Number of Permanent employees in Public HEIs by population group, Gender and Function (WSPR 2018)

AFRICAN		COLOURED		INDIAN/ASIAN		WHITE	
Male	Female	Male	Female	Male	Female	Male	Female
20016	19983	3138	4545	1629	2145	7387	11058
28,63%	28.59%	4,49%	6,5%	2,33%	3,07%	10,57%	15,82%

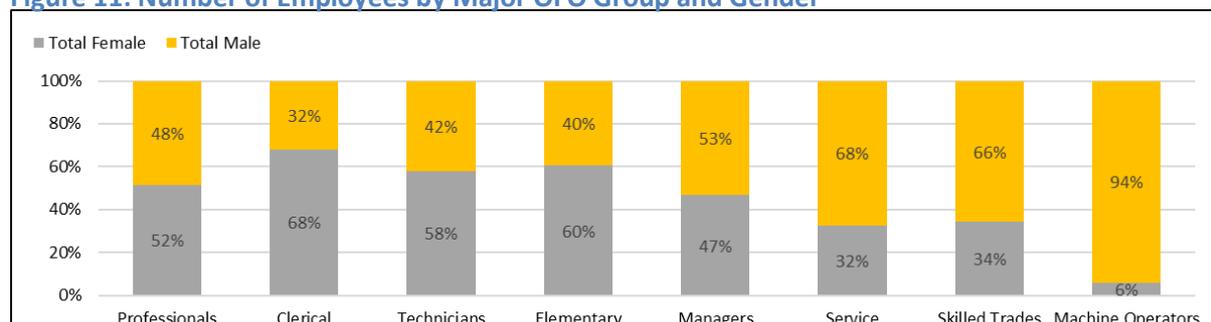
In terms of the age of employees at public HEIs, just under half (n=49.88%) fall within the 35-55-year age group, followed by the under 35-year age group (n=30.21%) and the over 55-year age group (n=19.91%), as shown in the Figure below.

²⁷ Ibid.

²⁸ Ibid. 24

In terms of OFO Major Groups occupied by these nearly 70 000 employees, more than two fifths are in group '2017-2 Professionals' (n=30 277), followed by the group '2017-4 Clerical Support Workers' (n=14 795). Figure 10 below provides a breakdown of total number of employees by the Major groups and Gender. It highlights that certain groups are Male-dominated (e.g. '2017-7 Plant and machine operators and assemblers'; '2017-6 Skilled agricultural, forestry, fishery, craft and related trades workers'; and, '2017-5 Service and Sales workers') whilst others are Female-dominated (e.g. '2017-4 Clerical support workers'; '2017-8 Elementary occupations'; and, '2017-3 Technicians and associate professionals'). Major OFO Groups '2017-2 Professionals' and '2017-1 Managers' are relatively equitable in terms of Gender.

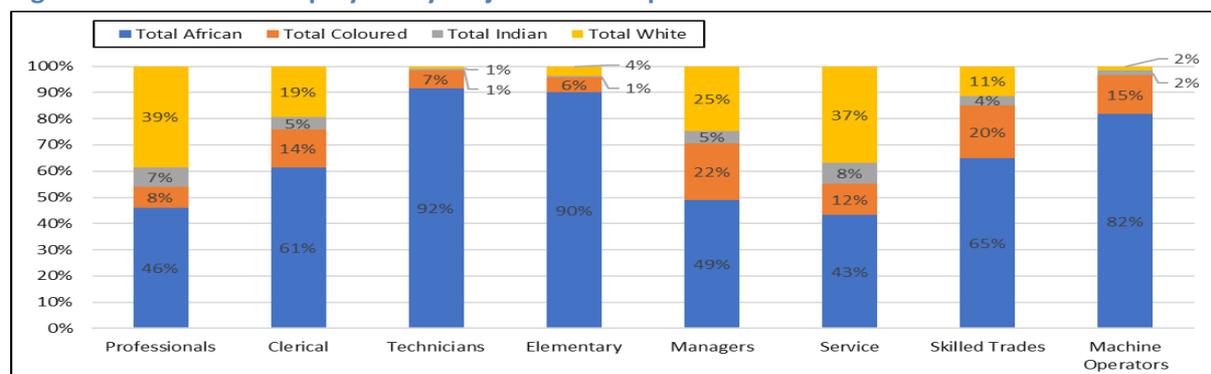
Figure 11: Number of Employees by Major OFO Group and Gender



Major Groups	Total Female	Total Male
Professionals	15636	14651
Clerical	10060	4735
Technicians	4079	2964
Elementary	3540	2316
Managers	2233	2556
Service	1729	3596
Skilled Trades	432	834
Machine Operators	32	518

Figure 12 below provides an analysis of total number of employees by race. It highlights that the vast majority of employees within the major groups '2017-8 Elementary occupations'; '2017-5 Service and sales workers'; and, '2017-7 Plant machine operators and assemblers' are African. White employees (proportionally) tend to occupy the more professional groups – i.e. '2017-2 Professionals', and '2017-1 Managers'.

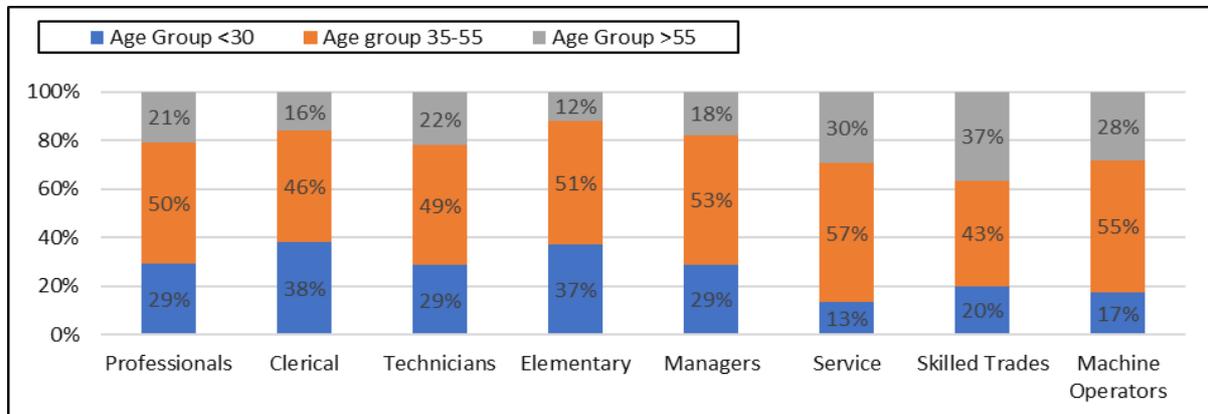
Figure 12: Number of Employees by Major OFO Group and Race



Major Groups	Total African	Total Coloured	Total Indian	Total White
Professionals	13959	2429	2209	11680
Clerical	9073	2141	737	2844
Technicians	5371	387	30	68
Elementary	4796	301	28	200
Managers	3453	1517	342	1731
Service	2074	573	372	1770
Skilled Trades	823	254	46	143
Machine Operators	450	81	10	9

An analysis of total number of employees by age category is provided in the Figure below and shows us that the group with the highest proportion of employees close to retirement age (i.e. over 55 years of age) is '2017-6 Skilled agricultural, forestry, fishery, craft and related trades workers. This may indicate a deficit of these skills in which requires further investigation.

Figure 13: Number of employees by Major OFO Group and Age Group



Major groups	Age Group <30	Age group 35-55	Age Group >55
Professionals	8845	15171	6261
Clerical	5598	6819	2378
Technicians	2009	3475	1555
Elementary	1982	2705	638
Managers	1692	3112	1052
Service	642	2732	1415
Skilled Trades	253	550	463
Machine Operators	95	300	155

1.6 Conclusion

There are 26 public universities in South Africa with a minimum of one in each province. However, the largest number are concentrated in the three larger metropolitan centres of KwaZulu-Natal, Gauteng, and the Western Cape. The geographical spread of public universities does raise issues of accessibility and affordability for students outside of these locations which has skills implications for those areas and provinces not in proximity to universities.

In 2018, South Africa's public universities reached a student headcount of 1 036 984. The allocations to NSFAS have increased from R9 849 billion in 2017/18 to R35 321 billion in 2020/21. However trends over the 2009 -2017 period show a continued increase in doctoral degrees which has almost doubled over 2009-2017 period; an increase in undergraduate degrees and postgraduate but a decline in occasional students and under-graduate certificates and diplomas. The number of graduates in public HEIs was 210 931 in 2017, with the highest numbers in SET (61 581/ 29.2%) followed by Business and Management (57 772/ 27.4%), Other Humanities (47 144 or 22.4%) and Education which recorded lowest number of graduates (44 434 or 21.1%). Business and Management recorded the highest increase over the whole recorded period.

Key stakeholders in the sector are the Department of Higher Education and Training (DHET), Council on Higher Education (CHE), National Student Financial Aid Scheme (NSFAS), the South African Qualifications Authority (SAQA), Universities of South Africa (USAf), Labour organisations, Student Representative Councils and Student Organisations.

An analysis of government budget expenditure shows increased spending in the higher education sector. Government transfers still accounting for the lion's share of income for HEIs, followed by tuition fees. Third stream funding is derived from corporate and commercial activities, investments, and donations. The University State Budgets Report from March 2018 shows an increase in state funding to public universities since 2018, and an increase in the proportion of state funding as a percentage of the national GDP. Although a significant increase is on the rise, South Africa's spend on university education (as percentage of GDP) is still much lower than in other countries. Even though the education sector in South Africa receives the largest proportion of the post education and learning allocation, when benchmarked against other countries, it is evident that the university system in South Africa is poorly funded compared to other university systems. According to Universities South Africa (USAf), government subsidies to universities have been declining in real terms. According to USAf, the university sector in South Africa underfunded, and is dependent on tuition fees to remain sustainable.

A quarter of the amount allocated to public HEIs during the 2017/18 financial year (R31.6 billion) was allocated to three institutions: UNISA (10.5%), followed by University of Pretoria (7.6%) (Gauteng) and University of KwaZulu-Natal (6.3%). Rhodes University (Eastern Cape) received the lowest allocation (1.5%).

The latest official data (as at 2017) indicates the total number of staff employed in public HEI was 61 242. UNISA is the largest employer of permanent staff members (9.6%) followed by University of Cape Town (8%) and University of Witwatersrand (7.5%) and University of Johannesburg (7,4%). Half

(50%) of South Africa's 26 public HEIs have a staff complement of over 2000 employees (up from 47% in 2016), with just less than 20% of public HEIs employing less than 1000 people (down from 27% in 2016).

The following five universities recorded the lowest number of black (African, Coloured and Indian/Asian) employees in the category of Instruction and Research:

- University of Stellenbosch 24%,
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HEMIS data (2017) indicates that 54% of permanent employees at public HEIs are female with more than half being African (54%). However, in the 'instruction and research' category, men still account for the greater proportion of employees in terms of gender, and white female constitute the largest group in terms of race and gender. The 'coloured' population group reported the lowest number of males and females in this category.

These trends are borne out in the analysis of 2018 WSPR data which indicates that there were 69 901 people employed by the 26 public HEIs. Females constituted the largest proportion (53.98%) than Males (46.02%). In terms of race almost 58% of all employees were African, with slightly more African Males (28.63%) than African Females (28.59%).

In terms of the age of employees at public HEIs, just under half (n49.88%) fall within the 35-55 years of age group, followed by the under 35-year age group (30.21%) and the over 55 years of age group (19.91%). The group with the highest proportion of employees close to retirement age (i.e. over 55 years of age) is '2017-6 Skilled agricultural, forestry, fishery, craft and related trades workers. This may indicate a deficit of these skills in which requires further investigation.

In terms of OFO Major Groups occupied by these nearly 70 000 employees, more than two fifths are in group '2017-2 Professionals' (n=30 277), followed by the group '2017-4 Clerical Support Workers' (n=14 795). Certain groups are male-dominated (e.g. '2017-7 Plant and machine operators and assemblers'; '2017-6 Skilled agricultural, forestry, fishery, craft and related trades workers'; and, '2017-5 Service and Sales workers') whilst others are Female-dominated (e.g. '2017-4 Clerical support workers'; '2017-8 Elementary occupations'; and, '2017-3 Technicians and associate professionals'). It highlights that the vast majority of employees within the major groups '2017-8 Elementary occupations'; '2017-5 Service and sales workers'; and, '2017-7 Plant machine operators and assemblers' are African. White employees (proportionally) tend to occupy the more professional groups – i.e. '2017-2 Professionals', and '2017-1 Managers'.

CHAPTER 2: KEY SKILLS CHANGE DRIVERS

2.1 Change Drivers

There is a myriad of factors that contribute to the development of a sector including political; economic; socio-cultural; technological; and to some extent also legal/legislative, and environmental. This section sets out the major factors impacting on skills development in the HE sector.

The Labour Market Intelligence Partnership (LMIP) Study, published in 2016, identified the following areas contributing to skills shortages, the nature and extent of skills shortages and mismatches in South Africa:

- **Slow Economic Growth**

Since 1994, the South African economy has been characterised by low growth rates, which means that the economy cannot absorb the growing labour force and so leading to persistent high unemployment rates and rising inequality.

- **The Quality of Education**

The level of education in South Africa is lower than in most economically productive countries. Although access to education has been expanded, the new challenge is completion levels and quality outcomes. Poor-quality outcomes in the schooling system create significant problems for those entering universities. Notwithstanding increases in enrolment levels at universities, completion rates remain low as indicated in graduation rates below.

HEMIS data shows graduation rates of 1 in 5 in 2017²⁹

Table 7: Graduation rate, 2015 -2017

YEAR	2015	2016	2017
Graduation rate	19.4%	20.8%	20.3%

A closer examination by degree for 2017 data shows the number of students who graduate by qualification type. pg. 90 PSET, 2017

Figure 14: Graduation Rate, 2017, by Degree Type

Institution	Undergraduate Certificates and Diplomas (%)	Undergraduate Degrees (%)	Postgraduate below Master's Level	Master's Degrees (%)	Doctoral Degrees (%)
Average percentage	20.0	17.3	42.8	21.9	13.5

²⁹ CHET SAHE Open Data.

The low progression and success rates mean that there is an even smaller pool of graduates to form the future highly skilled workforce.

- **Progress on race and gender transformation**

An analysis of university completers shows that qualification differences support gender stereotypes, in that males are likely to study science, technology, and engineering-based subjects (the more “masculine” subjects), whereas females are focused on health, education, and social sciences (more “feminine” subjects). Thus, a reformed skills policy must focus on re-ordering this gender bias in higher educational outcomes.”³⁰

- **Mismatches between skills and the economy**

The report classifies three (3) types of mismatches related to skills and the economy:

Table 8: Mismatches between Skills and the Economy

TYPE	DESCRIPTION	FINDING
Demand mismatch	Examines the shape and trajectory of the economy, the types of jobs that are being created, and the skills set and expectations of the working-age population.	There is a structural mismatch between labour demand and supply, in that the South African economy and labour market is characterised as one where there is a demand for high skill, but a surplus of low-skilled workers.
Educational-supply mismatch	Examines how supply responds to areas of skills demand	The need to enrol and graduate higher numbers of STEM graduates at both universities and TVET colleges. Further, there is a need for more higher enrolments and completions in the building and construction, metal, machinery and related trades programmes.
Qualification-job mismatch	Examines the qualification gaps for skilled jobs and then traces the sectors and occupations that the educational qualifications are absorbed into.	There is a qualification gap in that less than half of managers, senior officials, technicians and associate professionals had a tertiary level qualification. Secondly, the evidence highlights the sectors and occupations workers with tertiary qualifications enter.

The ETDP SETA also identified five (5) key issues within and across the ETD sector³¹:

- Addressing transformation within and across educational institutions;
- Developing relevant quality qualification programmes;
- Ensuring adequate supply of teachers and lecturers for specific specialisations, phases and geo-specific location;

³⁰ LMIP pg. 88.

³¹ Final Draft ETD Sector Skills Plan 2019-2020 update, 2018.

- Professionalization of educator workforce; and,
- Increasing the use of technology to improve teaching and learning.

An analysis of stakeholder interviews and surveys conducted for this research project indicate these challenges remain relevant for HEIs.

Below is a summary of the key change drivers and implications for the HEIs identified by survey participants and key stakeholders interviewed.

Table 9: Change Drivers affecting the HE Sector

CHANGE DRIVER	CHALLENGES/ EFFECT ON SECTOR	IMPLICATIONS FOR SKILLS DEVELOPMENT
Technological factors <i>(The most frequently cited change driver affecting institutions currently.)</i>	<ul style="list-style-type: none"> - The impact of technology on learning methodologies and the concern that lecturers were not abreast with technological advances. - The concern that rural students were at a disadvantage due to lack of exposure and access to technology compared to their urban counterparts. - The 4th Industrial Revolution demands continuous investment in new technologies; training; etc. - The concern that there was a lack of skills to meet the demands of the 4th Industrial Revolution. - That the benefits of e-learning had not been not sufficiently recognised or employed. 	<p>These challenges indicate the need for HEIs to:</p> <ul style="list-style-type: none"> - Invest more in ICT training for both instructors and students and integrate it into learning methodologies to take advantage of the benefits of e-learning; - Equip students for new occupations the 4th Industrial Revolution is creating/ and to be flexible to adapt to new demands of the 4th Industrial Revolution. - Move away from traditional delivery, multi layered and bureaucratic structures to flat, agile and ICT led structures. Requires ‘reinvention’ of the traditional academic model and clever use of ICT as enabler to delivery dynamic, real-time learning to more diverse audiences around the globe

CHANGE DRIVER	CHALLENGES/ EFFECT ON SECTOR	IMPLICATIONS FOR SKILLS DEVELOPMENT
Economic	<ul style="list-style-type: none"> ▪ Budget cutbacks and demands for restructuring and reorganisation and its impact on performance. ▪ Reduced funding limits capacity to train current staff; offer competitive remuneration to attract top academics; etc. ▪ Current economic instability/ low growth and its impact on graduate employability. ▪ The mismatch between demand and skills provided. 	<p>These challenges require HEIs to</p> <ul style="list-style-type: none"> - Continuously assess skills required by the labour market and review institutional offerings. - Need for a more entrepreneurial approach to the HEI as a “business”; vital for Universities to explore incubator projects, cutting-edge community-oriented research, and innovative business partnerships. - All staff – irrespective of academic or support staff – to adopt cutting costs measures and initiatives to generate revenue.
Political	<ul style="list-style-type: none"> - Transformation: Insufficient output of Black Academics from HEIs; historical injustices not sufficiently addressed. - Non- payment of fees and implications on universities - “The missing middle” who do not receive funding - Inefficiency - late payments by NSFAS resulting in students not being able to register. - Labour issues i.e. differences in opinion between institutions and unions regarding how funds should be spent. 	<p>These indicate that HEIs still need to:</p> <ul style="list-style-type: none"> - Address transformation – be innovative; - Respond to increasing diversity within the University community – both students and staff. This requires a proactive approach to nurturing positive institutional climates and appreciation for diversity –culturally, generationally etc.; and - Consider alternative routes to deliver the academic programme. The protests of Fees must Fall highlight the need for institutions need to review contingency plans regarding the academic calendar and look at alternative routes to deliver academic programmes (i.e. remote learning, which highlights the importance of ICT skills for e-learning).

CHANGE DRIVER	CHALLENGES/ EFFECT ON SECTOR	IMPLICATIONS FOR SKILLS DEVELOPMENT
Socio-cultural	<ul style="list-style-type: none"> - Student needs: the changing nature of student demographics. - Cultural conflicts at some institutions. - Unethical behaviour and fraud a concern at some institutions – staff and students. Technology also opens loopholes for unethical behaviour. 	<p>These indicate the challenges HEIs need to respond to:</p> <ul style="list-style-type: none"> - The need to address student needs in curriculum i.e. language. - The need to adapt old teaching styles to attract students to courses. - Building good relationships and partnerships such as collaborating with other partnerships to send learners to TVET colleges. - Learning needs of for disadvantaged workers. - Giving opportunities to matriculants to do internships.
Legislative factors	<ul style="list-style-type: none"> - Legislative changes and the need to remain compliant. - Key policies and strategies. 	<p>How HEIs respond and engage with these legal and policy directives, and the extent to which they address/ are responsive to the demands of market so graduate skills meet market demand.</p>

The issue of the 4th Industrial Revolution appears to be the most pressing issue to emerge from the fieldwork analysis. According to one stakeholder:

“Currently, there is a lack of research work done on the 4th industrial revolution that reflects the South African context. Much of what we know derives from international theories and research that do not reflect the unique situation in SA.”

2.2 Alignment with National Strategies and Plans

The table below highlights a few key government policies relevant to the higher education sector:

Table 10:Key Policy Instruments Affecting the HE Sector

POLICY/ACT	DESCRIPTION
Higher Education Act 101 of 1997	Provides for the establishment, governance, funding and quality assurance of public higher education institutions.
Education White Paper 3: A Programme for the Transformation of Higher Education	Provides a comprehensive set of initiatives for the transformation of higher education through the development of a single co-ordinated system with new planning, governing and funding arrangements.
National Qualifications Framework Act 67 of 2008.	Provides for the and National Qualifications Framework (a system for the classification, registration of quality-assured national qualifications system) and the South African Qualifications Authority responsible for its development and implementation.
White Paper for Post-	The White Paper sets out strategies to improve the capacity of the post-

POLICY/ACT	DESCRIPTION
School Education and Training.	<p>school education and training system to meet South Africa’s needs. It provides policy directions to the DHET and its institutions. Key objectives are:</p> <ul style="list-style-type: none"> - A post-school system that can assist in building a fair, equitable, non-racial, non-sexist and democratic South Africa; - A single, coordinated post-school education and training system; - Expanded access, improved quality and increased diversity of provision; - A stronger and more cooperative relationship between education and training institutions and the workplace; and - A post-school education and training system that is responsive to the needs of individual citizens, employers in both public and private sectors, as well as broader societal and developmental objectives.

The extent to which the skill sector planning processes facilitates ‘more cooperative relationship between education and training institutions and the workplace’ and ‘is responsive to the needs of individual citizens, employers in both public and private sectors, as well as broader societal and developmental objectives’ has been raised in stakeholder and survey responses. These concerns and issues highlighted in the findings of Labour Market Intelligence Partnership (LMIP) Study (on mismatches between skills and the economy) raise important questions about how the HE sector is engaging with factors of demand mismatch, educational supply mismatch and qualification job mismatch, in its planning processes.

The table below sets out the skills requirements set out in key national development strategies:³²

Table 11: National Policy Instruments Skills Requirements

POLICY DOCUMENT	TYPE OF SKILLS REQUIRED	SKILLS CATEGORY	SKILLS REQUIREMENTS
Human Resource Development Strategy for South Africa (HRD-SA) 2010 to 2030.	Design, engineering and artisanship, particularly skills critical to the manufacturing, construction and cultural industries	High	Unspecified
Industrial Policy Action Plan.	Technical and high-level design skills for manufacturing Skills across the plastics value chain, Broad-based skills within the saw- milling industry	High, medium, low	Unspecified
Medium-Term Strategic Framework.	<ul style="list-style-type: none"> - Artisans - PhD Graduates 	<ul style="list-style-type: none"> - Medium - High 	<ul style="list-style-type: none"> - 18 110 in 2013 to 24 000 per annum by 2019. - From 1 870 per year in

³² pg. 98-99 LIMP.

POLICY DOCUMENT	TYPE OF SKILLS REQUIRED	SKILLS CATEGORY	SKILLS REQUIREMENTS
	<ul style="list-style-type: none"> - Engineering science human and animal health - Natural and physical sciences - Teacher Graduates 	<ul style="list-style-type: none"> - High - High - Medium 	<ul style="list-style-type: none"> - 2013 to 2 400 per year by 2019. - 57 000 over the five-year period – 9 974 were produced in 2012. - 45 000 over the five-year period – 8 015 were produced in 2012. - 36 000 over the five-year period – 6 366 were produced in 2012 20 000 by 2019, an increase from 13 740 in 2012.
National Development Plan	Labour-intensive services and industry.	Predominantly low, but also some medium and high skills.	- 5.9 million jobs by 2020 and 11 million jobs by 2030
New Growth Path	<ul style="list-style-type: none"> - Positions within the manufacturing industry; - Demand in the services sector for finance, public administration, and business management skills. 	High, medium, low.	<ul style="list-style-type: none"> ▪ 13 000 highly skilled openings ▪ 860 000 medium skilled ▪ 330 000 low skilled

2.3 Conclusion

This chapter identified the following change drivers:

- Economic/Financial Issues arising from slow economic growth which impacts on the ability of economy to absorb growing labour force; the mismatch between skills and the economy : demand mismatch, educational supply mismatch, and qualification job mismatch; the non-payment of fees and implications on universities; inefficiencies in NSFAS payments impacting on registration of students.

These challenges require HE sector to continuously assess skills required by the labour market and review institutional offerings; adopt a more entrepreneurial approach to the HEI; importance of Universities to explore incubator projects, cutting-edge community-oriented research, and innovative business partnerships and for staff to adopt cost cutting measures and generate revenue.

- The Quality of Education due to the poor outcomes in the schooling system impacts on students performance. Further notwithstanding increases in enrolment rates at universities completion rates remain low (indicated by graduation rates) HEMIS data shows graduate rates of 1 in 7 in

2017. The low progression and success rates mean that there is an even smaller pool of graduates to form the future highly skilled workforce.

These challenges require HE sector and DBE to interrogate effectiveness of current strategies.

- Technological factors: the impact of technology on learning methodologies and the concern that lecturers were not abreast with technological advances were noted. A further concern was the disadvantage rural students faced due to lack of exposure and access to technology. The demands of the 4th Industrial Revolution requires a continuous investment in new technologies; training. The concern was noted that there was a lack of skills to meet the demands of the 4th Industrial Revolution.

These challenges indicate the need for HEIs to invest more in ICT training for both instructors and students and integrate technology into learning methodologies; to equip students for new occupations the 4th Industrial Revolution is creating, and to provide skills to be flexible and able adapt to new demands of the 4th Industrial Revolution; to move away from traditional-delivery, multi layered and bureaucratic structures to flat, agile and ICT led structures. This requires 'reinvention' of the traditional academic model and clever use of ICT as enabler to delivery dynamic, real-time learning to more diverse audiences around the globe.

- Political: Transformation and Equity were high-lighted as key issues alongside labour issues in the political space. The poor progress on race and gender transformation remains a challenge noted in the inadequate production of Black academics from HEIs; which indicated historical injustices not sufficiently addressed. This lack of transformation was also indicative in the difference in qualifications supporting gender stereotypes that males tend to study science, technology, and engineering-based subjects and females' health, education, and social sciences; and racial bias in success (graduation rates). Similar concerns are evident in an examination of employee profiles which indicate a racial bias with more white persons proportionally occupying 'Instruction and Research' category and black employees accounting for majority in non-professional categories.

Labour issues cited included the differences in opinion between institutions and unions regarding how funds should be spent.

These political challenges indicate that HEIs still need to be committed and innovative in addressing transformation; be responsive to increasing diversity within the University community (both students and staff); and to consider alternative routes to deliver the academic programme. The protests of #FeesMustFall highlighted the need for institutions to review contingency plans regarding the academic calendar and look at alternative routes to deliver academic programmes (i.e. remote learning, which highlights the importance of ICT skills for e-learning).

- Socio-cultural drivers cited included the need to be responsive to student needs; the changing nature of student demographics; challenges affecting students. Cultural conflicts were cited at

some institutions and unethical behaviour and fraud a concern at some institutions – staff and students.

These issues indicate the need for HEIs to be in a position to address student needs in the curriculum e.g. language; by adapting old teaching styles to attract students to courses; by building good relationships and partnerships such as collaborating with other partnerships to send learners to TVET colleges; by supporting staff i.e. assisting disadvantaged workers to matriculate; and providing linkages and opportunities to graduates to do internships.

- Legislative and policy environment: Legislative changes and the need to remain compliant to policy changes were cited another driver. This poses challenges for how HEIs respond/ inform and engage with these legal and policy directives, and the extent to which these address/ are responsive to the demands of market so graduate skills meet market demand.

Alignment with national strategies and plans and skills requirements set out in key national development strategies

Key policies instruments affecting the HE Sector include: the Higher Education Act 101 of 1997, Education White Paper 3: A Programme for the Transformation of Higher Education, National Qualifications Framework Act 67 of 2008, the White Paper for Post-School Education and Training.

Key skills requirements set out in key national development strategies include: Human Resource Development Strategy for South Africa (HRD-SA) 2010 to 2030. Industrial Policy Action Plan, Medium-Term Strategic Framework, National Development Plan, New Growth Path.

Table 12: National Development Strategies

Strategy/Policy/Plan	Overview	Implications for Skills
Education White Paper 3 ³³	<p>The White Paper sets out initiatives for the transformation of higher education. It provides for the development of a single co-ordinated system to address planning, governing and funding.</p> <p>The need to redress past inequalities and meet national needs, and respond to new realities and opportunities are identified as key priorities.</p>	<ul style="list-style-type: none"> - The need to address racial and gender inequities require HEIs implement effective strategies to ensure a more representative demographic profile (including employees, student intake, and graduates) - In order to address national needs, new challenges and opportunities HEIs need to be abreast and responsive to these issues by generating appropriate skills to respond to national needs, challenges and new opportunities i.e. the Fourth Industrial Revolution.
Human Resource	The Strategy identifies design,	HEIs need to be responsive to the

³³ Available at https://www.che.ac.za/sites/default/files/publications/White_Paper3.pdf

Development Strategy for South Africa.	engineering and artisanship, particularly skills critical to the manufacturing, construction and cultural industries.	deficits identified in the Strategy.
Industrial Policy Action Plan,	The Plan identifies technical and high-level design skills for manufacturing Skills across the plastics value chain, Broad-based skills within the saw- milling industry	HEIs need to be responsive to the deficits identified by providing for specialisation in the key sectors and industries identified. Incentives such as scholarships and bursaries should be offered to attract graduates to these areas. Facilitating internships in these sectors will also expose students to these sectors.
Medium-Term Strategic Framework	The MTSF identifies the following key skills relevant to HEI sector: <ul style="list-style-type: none"> - PhD Graduates - Engineering science human and animal health - Natural and physical sciences - Teacher graduates 	Identified graduate requirements and disciplines should be integrated into HEIs priority areas. Incentives such as scholarships and bursaries should be offered to attract graduates to these areas.
National Development Plan	The NDP highlights labour-intensive services and industry sectors.	HEIs need to interrogate what disciplines contribute to these sector. Incentives such as scholarships and bursaries should be offered to attract graduates to these areas. Facilitating internships in these sectors will also expose students to these sectors.
New Growth Path	The NGP identifies positions within the manufacturing industry; and demand in the services sector for finance, public administration, and business management skills.	HEIs need to ensure that curriculums integrate these competency requirements in relevant fields of undergraduate and post graduate study. Incentives such as scholarships and bursaries should be offered to attract graduates to these areas.

The extent to which the skill sector planning processes facilitates ‘more cooperative relationship between education and training institutions and the workplace’ and ‘is responsive to the needs of individual citizens, employers in both public and private sectors, as well as broader societal and developmental objectives’ has been raised in stakeholder and survey responses. These concerns

and issues highlighted in the findings of Labour Market Intelligence Partnership (LMIP) Study (on mismatches between skills and the economy) raise important questions about how the HE sector is engaging with factors of demand mismatch, educational supply mismatch and qualification job mismatch, in its planning processes.

CHAPTER 3: OCCUPATIONAL SHORTAGES AND SKILLS GAPS

3.1 Introduction

This chapter focuses on occupation shortages and skills gaps in the HE sector. The discussion is based on an analysis of 2018 and 2019 WSPR data, survey results and key stakeholder interviews. As noted previously in this report, 2019 WSPR data received was limited and thus comparative analysis is only available for some indicators. The large difference in the number of responses between 2018 and 2019 data regarding skills gaps, is noteworthy.

3.2 Hard to Fill Vacancies

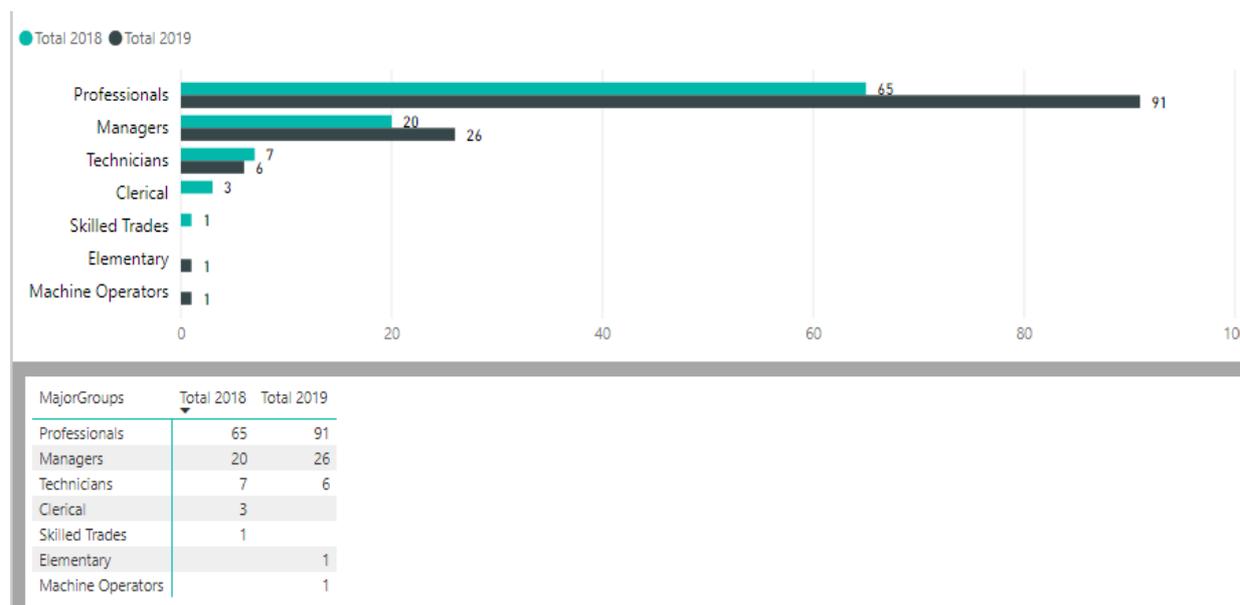
Occupational shortages occur when the demand for workers in specific occupations exceed the supply of workers who are qualified, available and willing to work – it refers – to excess demand for workers in specific occupations. The strongest indicator or unit to measure occupational shortages is Hard-To-Fill Vacancies.

A Hard-To-Fill Vacancy is a vacancy (occupation) that an employer was unable to fill within 12 months, or it took longer than 12 months for the employer to find a suitably qualified and experienced candidate.³⁴

A total of 96 HTFVs were identified in 2018 WSPRs, and this number increased to 125 in 2019 WSPRs. As shown by the Figure below, the vast majority of these HTFVs are to be found within OFO Major Group '2017-2 Professionals', followed by '2017-1 Managers'. Both these groups also experienced an increase in demand between 2018 and 2019 (as shown in the Figure below). No HTFVs reported in OFO Major Groups '2017-5 Service and Sales workers' over both years.

³⁴ DHET SSP Framework and guidelines, pg. 27.

Figure 15:HTFVs by Major OFO Group



The most widespread HTFV is ‘2017-231101 University Lecturer’. This is followed by ‘2017-112101 Director (Enterprise/Organisation)’.³⁵This analysis is supported by surveys with public HEIs, which strongly support the finding that lecturers/professors/associate professors are in need, across various disciplines. Other areas which were prominent were ICT sector.

The table below lists HTFVs relevant to HE sector, reported in WSPRs submitted in 2018 and 2019.

Table 13: HTFVs 2018 & 2019

OFO CODE	2018		2019
	NO OF RESPON SES	REASON	NO OF RESPON SES
2017-121104 - Internal Audit Manager	1	Poor remuneration	1
2017-112101 - Director (Enterprise / Organisation)	9	- Lack of relevant qualifications - Equity Considerations (3) - Lack of relevant qualification (2) - Lack of Relevant experience (3)	7
2017-121101 - Finance Manager	-	-	1
2017-121201 - Human Resource Manager	-	-	1
2017-121203 - Compensation and Benefits	-	-	1

³⁵ Note: not all submissions included reasons.

OFO CODE	2018		2019
Manager			
2017-121901 - Corporate General Manager	-	-	2
2017-121905 - Programme or Project Manager	-	-	1
2017-122301 - Research and Development Manager	-	-	2
2017-132301 - Construction Project Manager	-	-	1
2017-133101 - Chief Information Officer	-	-	1
2017-134505 - Educational Rector	-	-	2
2017-134904 - Office Manager	-	-	1
2017-134907 - Archives Manager	-	-	1
2017-143101 - Vetting Agency Manager	-	-	1
2017-121206 - Health and Safety Manager	1	Lack of Relevant experience	-
2017-133103 - Data Management Manager	1	Lack of relevant qualifications	-
2017-134503 - Faculty Head	1	Challenges facing deans in higher education	2
2017-143105 - Sports Administrator	1	Lack of relevant qualifications	-
2017-211101 - Physicist	1	unsuitable working hours	-
2017-212103 - Statistician	1	Lack of Relevant experience	-
2017-211301 - Chemist	-	-	1
2017-211401 - Geologist	-	-	2
2017-213106 - Botanist	-	-	1
2017-213110 - Medical Scientist	-	-	1
2017-213306 - Water Quality Analyst	-	-	1
2017-214904 - Quantity Surveyor	-	-	1
2017-215303 - Telecommunications Network Engineer	-	-	1
2017-216603 - Multimedia Designer	-	-	1
2017-222108 - Registered Nurse (Medical)	-	-	1
2017-213110 - Medical Scientist	1	Lack of Relevant experience	-
2017-216101 - Architect	1	Lack of relevant qualifications	-
2017-222104 - Registered Nurse (Community Health)	1	unknown	-
2017-226602 - Speech Pathologist	1	Lack of Relevant experience	-
2017-231101 - University Lecturer	36	- Equity (5) - Poor remuneration (3) - Lack of qualifications (15) - Lack of experience (8) - Poor remuneration (1) - Scarce skills (1)	57
2017-235101 - Education or Training Advisor	3	- Lack of relevant qualifications (2)	2

OFO CODE		2018	2019
		- Unknown	
2017-241301 - Financial Investment Advisor	1	Poor remuneration	-
2017-242101 - Management Consultant	1	Lack of relevant qualifications	-
2017-242102 - Organisation and Methods Analyst	2	Lack of relevant qualifications (2)	1
2017-241201 - Investment Analyst	-	-	1
2017-242208 - Organisational Risk Manager	-	-	1
2017-242211 - Internal Auditor	-	-	1
2017-242303 - Human Resource Advisor	-	-	1
2017-243105 - Business Development Officer	-	-	1
2017-251101 - ICT Systems Analyst	-	-	3
2017-251201 - Software Developer	1	Poor remuneration	1
2017-251302 - Web Developer	-	-	1
2017-251301 - Multimedia Specialist	1	Lack of relevant qualifications	-
2017-252201 - Systems Administrator	1	Poor remuneration	-
2017-252302 - Network Analyst	1	Equity Considerations	1
2017-263407 - Counselling Psychologist	1	Lack of relevant qualifications	1
2017-263505 - Student Counsellor	1	unknown	4
2017-311301 - Electrical Engineering Technician	2	- Poor remuneration - Lack of relevant experience	-
2017-325705 - Safety Inspector	1	Lack of relevant qualification	-
2017-351201 - ICT Communications Assistant	-		1
2017-351301 - Computer Network Technician	1	Lack of relevant qualification	1
2017-441502 - Office Machine Operator	1	Lack of Relevant experience	-
2017-441603 - Compensation and Benefits Clerk	1	Poor remuneration	-
2017-441903 - Program or Project Administrators	1	Lack of relevant qualifications	-
2017-211401 - Geologist Structural Geologist	1	Poor remuneration	-
2017-213302 - Environmental Scientist /Advisor	1	Unsuitable job location	-
2017-263401 - Clinical Psychologist	-	-	2
2017-263402 - Educational Psychologist	-	-	1
2017-263405 - Research Psychologist	-	-	1

Surveys conducted with public HEIs support the above finding that suggests that lack of qualifications and experience, as well as poor remuneration, are the primary reasons these occupations are hard-to-fill.

3.3 Skills Gaps

“Skills gaps refers to skills deficiencies in employees or lack of specific competencies by employees to undertake job tasks successfully to required industry standards. The term “top up skills” also refers to skills gaps. It usually requires a short training intervention. Skills gaps may arise due to lack of training, new job tasks, technological changes, or new production processes, to list a few. Skills gaps need to be addressed. For example, a medical specialist (occupation) may require training in robotics (skills gap) to conduct surgery, or bank manager (occupation) may require training in customer care (skills gap) to manage clients effectively.”³⁶

An analysis of skills gaps indicates that the same occupational codes are dominant as in identified HTFVs above with university lecturers dominating this category across responses received from HEIs.³⁷ The table below sets out most cited skills gaps for the dominant categories across HEIs from the WSPR data.

³⁶ Ibid. 26-27.

³⁷ Note: there is a major divergence with respect to the number of responses received in 2018 (n=2 240 responses) and those received in 2019 (n=225 responses), concerning skills gaps indicators.

Table 14: Most cited Skills Gaps identified in WSPRs Submitted for 2018 & 2019

OFO CODES & OCCUPATION	SPECIALISATION	SKILLS GAPS 2019	No	PROPOSED LEARNING PROGRAMME 2019	SKILLS GAPS 2018 ³⁸
2017-231101 - University Lecturer	Lecturer	<ul style="list-style-type: none"> - Advanced Excel and Microsoft 10 - Assessment of Learning Material - Aural rehabilitation and cochlear implant skills - Business Objects - Computer Skills - Connectivity with students - curriculum, research, project management - Data Analysis 		<ul style="list-style-type: none"> - Advanced Excel and Microsoft 10 - Assessor - On the job training - On the job training - End User Computing - RU Connect - Curriculum design, research writing, project management - SPSS - Diversity studies - Diagnostic Audiology - Doctor in Public Health - Doctor of Philosophy (Audiology) - Doctoral - Doctoral 	<ul style="list-style-type: none"> - MPhil - Doctor of Philosophy in Nutrition - PHD Chemistry Education - PHD Occupational Therapy - Doctor of Literature - Philosophy in Health Sciences - Master of Dental Surgery - PHD Anatomy - BSC Computing - Masters in information technology - PHD in statistics - PHD in computer science - PHDF Speech Language

³⁸ There were huge inconsistencies in population of skills gaps (terminology used in 2018 WSPRs ‘critical skills’) with some HEI don’t submitting information in this category.

Table 15: List of Skills Gaps

OFO CODES & OCCUPATI ON	SPECIALISATI ON	SKILLS GAPS 2019	N o	PROPOSED LEARNING PROGRAMME 2019	SKILLS GAPS 2018 ³⁹
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³⁹ There were huge inconsistencies in population of skills gaps (terminology used in 2018 WSPRs 'critical skills') with some HEI don't submitting information in this category.

2017-231101 - University Lecturer	Lecturer	<ul style="list-style-type: none"> - Dealing with emotional and mental vulnerability of students - Diagnostic Audiology - Doctor in Public Health - Doctor of Philosophy in Audiology - Doctoral in Physiology - Doctoral Philosophy - E-Learning - Editing Theses - Engineering (Civil, Electrical, Mechanical and Building), - Accounting, Medicine, Law - Facilitation and Teaching Skills - Incorporation into the University - Knowledge improvement - Leadership - Linguistic diversity - MA in Education in Higher Education - Teaching and Learning - MA in English - MA in Human Rehab studies - MA in Occupational Therapy - MA in Public Health - MA Occupational Therapy - Mathematics, Physics and Languages - Mentoring of delegates in the Accelerated Academic Development Programme - MSC in physics - Neuroscientific research techniques - Online platform digital skills - PHDs - PHD in Speech Language Pathology - PHD in Anatomy - PHD in Audiology 	70	<ul style="list-style-type: none"> - Engineering (Civil, Electrical, Mechanical and Building), Accounting, Medicine, Law - Facilitation - Academic induction - Formal studies - Leadership programme 9C - On the job training - isiZulu and SiSotho - Masters - Masters in English - Masters - Masters in Occupational Therapy - Masters - Masters - nGAP - Mentoring - Masters - Neuroscientific research techniques - PHD - PHD in Speech Language Pathology - PHD - PHD in Audiology - PHD - PHD - PHD in Occupational Therapy - PHD in Physics 	<ul style="list-style-type: none"> - Masters in Human Rehabilitation Studies - PHD in Physics - Masters in Higher Education - PHD Nursing - PHD in Humanities - PHD Pharmacology - B Tech in Business Administration - PHD Physiotherapy - PHD Dietetics - PHD Science and Technology - PHD Health Sciences - Master's in Public Health - PHD AAC - Masters of Occupational Therapy - M-Tech in Radiography - PHD Education - Biotechnology and Food technology - knowledge improvement - Teaching ability - Incorporation into the university - Connectivity with students - Professional programmes - Managing multi-cultural department - Collect, analyse and critically evaluate
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2017-231101 - University Lecturer	Lecturer	<ul style="list-style-type: none"> - PHD in Physics - PHD in Physiotherapy (2) - PHD in Public Health (2) - PHD in Science - Post Graduate Diploma in Higher Education - Research and Scientific Writing - Research as well as teaching and learning - Research in Agricultural Economics - Research in Animal Health - Research Skills (2) - Research Techniques - Research Writing - Research; Publications; Teaching & Learning; Assessments; Moderations; Curriculum Development - Sexual Harassment in the Workplace - Skills in Neuropsychology and Neuroscience - Statistical Analysis of Research - Working Ethically - Teaching & Learning, Community Engagement, Entrepreneurship - Teaching ability - Teaching and learning - Teaching and Learning as well as Research - Teaching in Higher Education; Supervision; data management; curriculum design; writing a research proposal 	<ul style="list-style-type: none"> - Research and Scientific Writing - Postgraduate Supervision - PhD in Agricultural Economics - PhD in Veterinary science - Science - PhD in Health Studies - Post Graduate Diploma in Higher Education; - Proposal Writing; - Data Management; - Time Management; - Curriculum Design - Skills in Neuropsychology and Neuroscience - Knowledge of Ethical Principles - Teaching & Learning assessments, Moderator Course, Facilitation Workshop, Community Engagement, Entrepreneurship programmes - Teaching Development - Portfolio development 	<ul style="list-style-type: none"> - Programme Development, - Designing Study Guide, Marking of Exam Papers - Research, Publications, Teaching, Curriculum Development - Induction - Drama and Production Leadership, Program Development skills, Research Programs - Academic Programmes (Includes Degrees, Diplomas, Certificates) - Technological platform for teaching and learning - Lecturing large classes, supervision of postgraduate students, subject expertise - Assessor and Moderator Skills - Build capacity and research output - Specialised knowledge of the job - Performance management - Teaching skills - Studies - Economics - Hospitality - Engineering: Civil,
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	Associate Professor	<ul style="list-style-type: none"> - African Languages, Heritage and Archaeology Studies; - Pedagogical skills; - Research Capacity; - Leadership (2); - Budgeting and Financial Management; - Advanced Management Skills; - Mentoring skills for staff; - Statistics 	7	<ul style="list-style-type: none"> - Academic and Staff Development Support - Postgrad Diploma in Higher Education - Research Capacity Building Programmes - On the job training - Advanced Management Diploma - Advanced Management Diploma - Statistical training 	<ul style="list-style-type: none"> - How to teach a diverse group of students? - Collect, analyse and critically evaluate information - How to manage a multi-cultural environment? - Holistic understanding of the Business Environment - Lecturing large classes, supervision of postgraduate students, subject expertise - Mentorship - Writing skills - Dealing with various blended learning opportunities - Research/Publication skills - Specialised knowledge of the job.
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	Professor	<ul style="list-style-type: none"> - Research Capacity, Research Outputs - Research as well as teaching and learning - Research as well as teaching and learning - Management /Administration/Leadership - Budgeting and Financial Management; Advanced Management Skills; Mentorship 	5	<ul style="list-style-type: none"> - Research Capacity Building Programmes & Research Output programmes - PhD in Accounting Sciences - PhD in Health Studies - On the job training - Advanced Management Diploma 	<ul style="list-style-type: none"> - Leadership, Program Development, Research Programs - Specialised knowledge of the job - Collect, analyse and critically evaluate information - How to manage a multi-cultural department? - How to teach a diverse group of students? - Academic Programmes (Includes Degrees, Diplomas, Certificates) - Lecturing large classes, supervision of postgraduate students, subject expertise - Mentorship - Writing skills - Dealing with various blended learning opportunities - Research/Publication skills - Holistic understanding of the Business Environment - Leadership, Program Development, Research Programs
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	Tertiary Educator	<ul style="list-style-type: none"> - Skills Programme - Electrophysiology assessment - Academic writing for journals 	3	<ul style="list-style-type: none"> - ITS - Electrophysiology assessment - Writing Skills Workshop 	-
	Assessment Advisor and/or Internal	<ul style="list-style-type: none"> - Project Management - Mentoring 	2	<ul style="list-style-type: none"> - Project Management training - Mentoring Training 	-

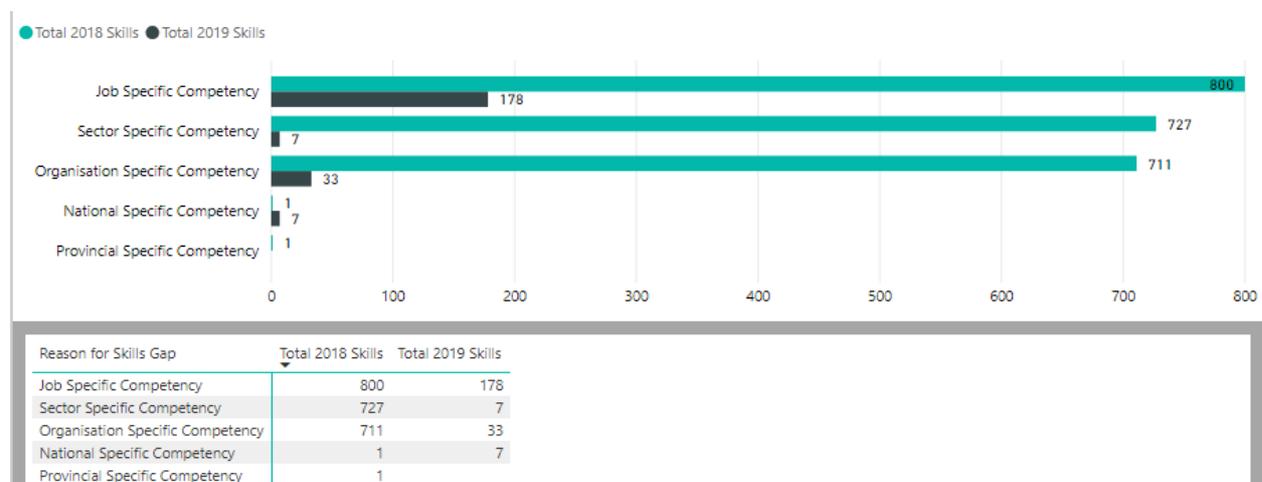
2017-112101 - Director (Enterprise / Organisation)	Managing Director/ Executive Director	<ul style="list-style-type: none"> - People management, leadership, performance management - Strategic planning, management skills, problem solving, conflict management - Leadership Development - Leadership & Management Skills, Mentoring & Coaching; Project Management Skills, Performance Management Skills, Wellness Culture Management Skills, Employment Equity & Diversity Management, Conflict Management - Doctoral Finance P Dip 2019 - PHD in Leadership and Complexity - Catalysis/Technical/Managerial 	7	<ul style="list-style-type: none"> - Leadership, performance management, diversity and inclusive training - Leadership training - Customised Leadership programme - Leadership & Management Skills Programmes, Mentoring & Coaching Programmes; - Project Management , - Performance Management Skills Programme, - Wellness Culture Programme - Employment Equity & Diversity Management Programme, - Conflict Management Programme - PHD in Leadership and Complexity - On the job training 	<ul style="list-style-type: none"> - Leadership, ITS, Project Management - Leadership development - Leaderships and Management, Mentoring and Coaching - Leadership and Management Development - Induction - Leadership - IT Support services -
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2017-213110 - Medical Scientist		<ul style="list-style-type: none"> - Medical Scientific Officer - Medical Scientific Officer - Medical Technologist (2) 	4	<ul style="list-style-type: none"> - PHD in Pharmacology - MSc in Pharmacology - PHD in Health Sciences - MSC Medicine 	-
2017-134503 - Faculty Head		Dean of Faculty	3	<ul style="list-style-type: none"> - Performance management , leadership training - Leadership & Management Skills Programmes, Mentoring & Coaching Programmes; Project Management Skills Programmes, Performance Management Skills Programmes, Wellness Culture Management Skills Programmes, Employment Equity & Diversity Management Programme, Conflict Management Programme - TUT LEAD programme 	<ul style="list-style-type: none"> - Senior Management & Leadership Programme; - Transformation & Equity - Mentoring & Coaching - Diversity Training - Project Management

An analysis of survey responses from public HEIs also identify ‘Interpersonal skills’ and ‘Emotional intelligence’ (for managerial staff e.g. HODs and Directors in particular) as key additional skills gaps that need to be addressed. Stakeholder interviews identified ‘Leadership and Managerial Skills’ as well as ‘soft-skills’ at leadership level as immediate priority skills development required.

The reasons for skills gaps fall into three main categories: ‘Job Specific Competency’; Sector Specific Competency’; and, ‘Organisation Specific Competency’ as reported in 2018 WSPRs. ‘Job Specific Competency’ was the most cited reasons for skills gap in WPSRs for 2018 and 2019.

Figure 16: Reason for Skills Gaps



3.4 Conclusion

A total of 96 HTFVs were identified in 2018 WSPRs, and this number increased to 125 in 2019 WSPRs. The vast majority of these HTFVs are to be found within OFO Major Group ‘2017-2 Professionals’, followed by ‘2017-1 Managers’. Both these groups also experienced an increase in demand between 2018 and 2019 (as shown in the Figure below). No HTFVs reported in OFO Major Groups ‘2017-5 Service and Sales workers’ over both years.

The most widespread HTFV is ‘2017-231101 University Lecturer’. This is followed by ‘2017-112101 Director (Enterprise/Organisation)’. This analysis is supported by surveys with public HEIs, which strongly support the finding that lecturers/professors/associate professors are in need, across various disciplines. Other areas which were prominent were ICT sector. Surveys conducted with public HEIs support the above finding that suggests that lack of qualifications and experience, as well as poor remuneration, are the primary reasons these occupations are hard-to-fill.

An analysis of skills gaps indicates that the same occupational codes are dominant as in identified ‘hard to fill vacancies’ above with university lecturers (including professors and associate professors across disciplines) dominating this category across responses received from HEIs. There is a major divergence with respect to the number of responses received in 2018 (n=2 240 responses) and those received in 2019 (n=225 responses), concerning skills gaps indicators. An analysis of survey

responses from public HEIs also identify 'Interpersonal skills' and 'Emotional intelligence' (for managerial staff e.g. HODs and Directors in particular) as key additional skills gaps that need to be addressed. Stakeholder interviews identified 'Leadership and Managerial Skills' as well as 'soft-skills' at leadership level as immediate priority skills development required.

The reasons for skills gaps fall into three main categories: 'Job Specific Competency'; Sector Specific Competency'; and, 'Organisation Specific Competency' as reported in 2018 WSPRs. 'Job Specific Competency' was the most cited reasons for skills gap in WPSRs for 2018 and 2019.

CHAPTER 4: SECTOR PARTNERSHIPS

4.1 Introduction

The National Skills Development Plan (NSDP) sets out the role of SETAs as *intermediaries* playing a key role in linking the worlds work and education noting that SETAs have the key role of ‘facilitating and brokering the linkages between the labour market, employers and sectors with the education and training institutional supply.’⁴⁰

The National Development Strategy (NSDS 111) promotes partnerships as a key strategy to ensure ‘education and training becomes a reality experienced by all South Africans’.⁴¹

As one respondent indicated:

“SETAs are key in linking the work environment with education through funding of training interventions for the employed and unemployed, and also supporting placement of graduate interns in the labour market to enhance chances of their employability.”⁴²

4.2 Analysis of existing partnerships

The ETDP SETA reports the following partnerships for the 2017/18 period.

- 50 SETA/TVET Partnerships
- 26 SETA/University Partnerships
- 11 SETA/Employer Partnerships⁴³

Key partnerships impacting on skills development in the HEI Sector include the following.

Table 16: Partnerships

Name of Partnerships	Success/Outcome of Partnership in 2018
USAf ⁴⁴	<p>The Transformation Strategy Group (TSG)</p> <ul style="list-style-type: none">- Established a project team of sector specialists and members to conceptualise a project on the reconstitution of institutional culture.- Implemented the transformation barometer (a diagnostic and self-measuring tool for the university sector) in collaboration with the Transformation Managers’ Forum.- Promoted the role of the Institutional Forum at higher education institutions. <p>The Transformation Management Forum</p> <ul style="list-style-type: none">- Hosted a Transformation Colloquium on “Social cohesion and

⁴⁰ ETDP SETA ‘Revised SSP Framework’.

⁴¹ Pg.31. ETDP SSP Update 2019-2020. Available at <http://www.etdpseta.org.za/education/sites/default/files/2018-08/ETDP-SETA-SSP-Update-2019-20-Statutory-Bodies.pdf>

⁴² Survey respondent.

⁴³ pg. 85. ETDP SETA Annual Report 2017-2018. Available at <http://www.etdpseta.org.za/education/sites/default/files/2017-10/ETDP%20SETA%20Annual%20Report%202017-18.pdf>

⁴⁴ Pg. 17-21 USAf Annual Report 2018. Available at <https://www.usaf.ac.za/wp-content/uploads/2019/08/USAF-ANNUAL-REP-2018.pdf>

	<p>transformation in SA HEIs – Collective reflections”.</p> <ul style="list-style-type: none"> - Established an Employment Equity Network of specialists to deal with equity issues. <p>The Teaching and Learning of Mathematics Community of Practice and Community of Practice for African Languages held regular engagements with HEIs.</p> <p>The Human Resource Directors’ (HRD) Forum: addressed Sectoral workforce planning including the anticipated impact of the 4th Industrial Revolution on the university sector’s workforce; and remuneration practices in the university sector.</p> <p>Skills Development Facilitators’ (SDF) Forum: a memorandum of agreement was signed between the ETDP SETA and the Safety and Security Sector SETA (SASSETA) for funding the training of security staff over a three-year period.</p>
NSAF	<p>NSAF provides financial aid to eligible public university and TVET college students.</p> <p>In 2018, 260,002 students were assisted at the 26 public universities receiving 86% the funding allocation (R12,1 bn).⁴⁵</p>
<p>PUBLIC-PRIVATE PARTNERSHIPS</p> <ul style="list-style-type: none"> - The Ikusasa Student Financial Aid Programme ⁴⁶ 	<p>A public-private partnership current offering funding for families with income of less than R600 000.00 per annum currently in 15 universities.</p>
<p>DHET and HEIs</p> <ul style="list-style-type: none"> - The University Capacity Development Programme (UCDP) - University Staff Doctoral Programme - New Generation Academic Programme (nGAP). 	<ul style="list-style-type: none"> - In 2018, R934 million was allocated to the University Capacity Development Programme for all 26 universities. The Programme focuses on three key development areas: student development towards enhancing student access; staff development, particularly with regards to teaching, research and leadership, and management and curriculum development. - In 2019, 20 collaboration grants have been awarded to 16 lead universities through support from the British Council.⁴⁷ - The nGAP involves the recruitment of highly capable scholars as new academics, against carefully designed and balanced equity considerations and in light of the disciplinary areas of greatest need. successful applicants are appointed into permanent posts

⁴⁵Pg. 8 NSAF Annual Report 2017/2018. Available at <http://www.nsfas.org.za/content/reports/AnnualReport2018.pdf>

⁴⁶ <https://www.isfap.co.za/frequently-asked-questions/#.XbCpYS2B3m0>

⁴⁷ <https://www.gov.za/speeches/united-kingdom-higher-education-partnerships-11-mar-2019-0000>

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Examples of successful partnerships cited between a HEI and the SETA, was the training of 271 Gauteng intermediate phase Geography teachers to undertake short courses in Basic Map Work Skills, Advanced Map Work Skills and Geographical Information Systems (GIS) in 2018-2019.⁴⁸ The partnership was mutually beneficial. The SETA provided the necessary funds, thereby contributing to the development and improvement of teacher skills. The University of Johannesburg's benefited by realising its vision – 'to actively engage with external communities to facilitate and harness mutually beneficial relationships and partnership'. The University, broader community, teachers and learners also benefited from this partnership.

Another example of a successful partnership included the NSF, NRF and NSFAS in the 2018/19 financial year, which provided funding of 59 101 learners for scarce and critical skills at both for undergraduate and postgraduate level for university students enrolled in scarce and critical skills areas.⁴⁹ Through this collaboration the National Student Financial Aid Scheme (NSFAS) and the National Research Foundation (NRF), sought to drive key skills strategies, promote equity targets of race and access to higher education

4.3 Proposed New Partnerships

Stakeholders and survey respondents suggested the following partnerships the ETDP SETA should enable to deliver more effectively on its mandate. Findings are categorised and discussed below:

Table 15: Proposed Partnerships

Name of Partnerships	Description of Partnership
SETA, public HEIs and Other SETAs	<ul style="list-style-type: none"> - Assistance with funding models, etc. in specific sectors; and - Sharing best practice in how other SETAs use public HEIs for delivery of their mandate.
SETA, public HEIs and DBE	<ul style="list-style-type: none"> - Strengthening teacher education and development programmes and practice platforms using universities' programmes.
SETA, public HEIs and DHET	<ul style="list-style-type: none"> - Benchmarking international best practice for monitoring and evaluation of skills development interventions. - Bolstering university programmes; and - Supporting work integrated learning platforms.
SETA, public HEIs and Community Organisations:	<ul style="list-style-type: none"> - Providing assistance in the workplace through internships.

⁴⁸ Ibid. pg.60.

⁴⁹ pg. 11 NSF Annual Report Available at <http://www.dhet.gov.za/NSF%20DOCUMENTS/NSF%202018-19%20Annual%20Report.pdf>

SETA and public HEIs (and private HEs and TVETs):	<ul style="list-style-type: none"> - To improving research capacity. - By supporting imperatives such as transformation in the public HEI as a subsector. - By providing funding for insourced staff members to continue their studies. - By facilitating collaboration amongst universities for the purpose of sharing best practice and skills development for the TVET sector. <p>The need to develop a formalised collaborative system terms of policy and implementation guidelines on how to make it work, and a monitoring systems to evaluate the system identifying strengths and weaknesses in current processes, was also identified.</p>
SETA, public HEIs and Small businesses:	<ul style="list-style-type: none"> - Supporting incubation programmes using public HEIs; - Providing shadowing opportunities for students for real-workplace experiences; and - To building entrepreneurship skills among students
SETAs, Professional Bodies and NPOs	<ul style="list-style-type: none"> - Engagement with Professional bodies and NPOs to develop better understanding of supply and demand issues.
SETA and HEIs	<ul style="list-style-type: none"> - Establishment of a skills development forum to engage various stakeholders on an ongoing basis to: <ul style="list-style-type: none"> o Improve responsiveness to country’s skills shortages; and o Improve engagement with skills planning process (which should not be a technical exercise but be more inclusive with active participation).

4.4 Conclusion

It significant that the majority of stakeholders and survey respondents did not identify the role of the SETA as intermediary as its key role. The majority of respondents saw the ETDPT SETA’s primarily roles as one of compliance, distributing levies and grants; and quality assurance.

Areas identified where the ETDPT SETA could better support skills development within the HE sector through partnerships included:

- By addressing the gap between place of learning and place of work by providing opportunities/funding for continuous learning and integrated learning i.e. internships and to improve identification of skills needed in the labour market to inform SETA interventions.
- By increasing funding i.e. increasing the mandatory grant and the more proactive use of funds for programmes and skills needed in the labour market.

- By improving the relationship between SETA and HE sector i.e. in terms of systems of the SETA (i.e. administration, financial management, streamlining paperwork and procedures, improving staff interaction with HEIs).⁵⁰
- Through longer-term planning and longer-term partnership agreements to improve outcomes of initiatives.

The above chapter proposes new partnerships and measures to address existing partnerships to address these challenges.

⁵⁰ “As an ultimate facilitator, [ETDP SETA] will need to make its funding more accessible, streamlining the bureaucratic procedures; in terms of academic development, it needs to control the quality of data and understand the agendas that data reveals.” Survey respondent.

CHAPTER 5: SETA STRATEGIC SKILLS PRIORITY ACTIONS

5.1 Introduction

This section discusses the key skills development interventions and initiatives that should be prioritised to address the current skills gaps within the HE sector. The following proposals are drawn from the findings in the preceding chapters of this report.

The growth of public HEIs is evident in the increase in the number of institutions (now 26 and in every province of the country), and the increasing number of students enrolled in these institutions. Whilst these developments demonstrate greater accessibility to institutions of higher learning, which have been further enhanced by the increase in funding for bursaries for working class students (through NSFAS and other funding sources), much work still needs to be done to address the skills deficit and occupational shortages as well as transformation imperatives at public HEIs to enable them to effectively deliver appropriately skilled graduates to meet demands of the economy.

5.2 Improving access to HEI

- Rural Communities Access to Public Universities

The geographical spread of public universities does raise issues of accessibility (both in terms of distance and affordability) for students outside of these locations which has skills implications for those areas not in proximity to universities. Interventions should ensure rural constituencies and students are adequately catered for in terms of funding but also in terms of admission criteria. This will benefit not only both rural students but rural communities.

- Addressing Equity and Transformation in Fields of Study and Employment

Addressing equity and transformation is an ongoing challenge for HEIs. Notwithstanding increase in student headcount and NSFAS funding to disadvantaged students, success rates (graduation) and gender bias remain evident in different fields of study. This challenge also exists in employee profiles with racial and gender stereotypes persisting in terms of different occupations and seniority.

5.3 Addressing Factors Impacting on HEIs

A range of factors impacting on the success of HEIs ability to deliver on this mandate are discussed in this report. These require attention to enable HEIs to deliver appropriately skilled graduates to meet the demands of the economy.

- **Factors impacting on skills gaps and skills planning:**

The need to ensure interventions prepare graduates with appropriate technological skills and address the mismatch between demand and educational supply, and qualifications and jobs, demonstrate the need to develop a clear skills development strategy or programme which

addresses non-alignment of discretionary fund with skills agenda, and the lack of skills and lack of experience of new staff and graduates. Mechanisms proposed to achieve this included improving the quality of data in WSPRs and development of a system that captures learning and needs; and to improve the relationship between ETDP SETA and HEIs in skills planning processes.

- **Financial Challenges:**

Challenges of insufficient funds for skills programmes, staff development and research; limited access to HEIs due to insufficient spaces to accommodate demand/ qualifying matriculants; and inadequate student funding - are cited as key constraints which require redress.

Proposals advanced to address these challenges included: increasing funding and improving processing of funds; increasing the Mandatory Grant to 50%; addressing the mismanagement of, and late receipt of grants, and non-payment of student fees; addressing discrepancies between academic and financial calendars in financial planning; and ensuring public HEIs remain competitive with private education sector.

- **Financial Sustainability of HEIs**

Whilst the education sector in South Africa receives the largest proportion of the post education and learning allocation, compared to other countries HEIs are poorly funded compared to other university systems with government subsidies to universities have been declining in real terms with universities being underfunded and dependent on tuition fees to remain sustainable (according to USAF). This area requires further interrogation.

- **Institutional Challenges:**

The need to address employment equity and transformation deficits; effective governance, leaderships and management; willingness and lack of time to attend training/ interventions (more prevalent among senior, high level staff); high staff turnover; impact of student protests were highlighted as impacting on the HE sector.

The need to review effectiveness of transformation strategies and ensure HEIs are adequately equipped and supported to manage these challenges, is critical. Further, interventions and programmes addressing ongoing staff training need to consider staff challenges and look at innovative means and incentives to address time constraints and lack of interest by staff.

- **Relationship between ETDP SETA and HEIs**

The report highlights the need to address challenges between ETDP SETA and HEIs both at an administrative level but also in the skills planning process and when critical decisions are taken impacting on HEIs. Measures to address these challenges are cited below under 'partnerships'.

- **Improving ETDP SETA's efficiency:**

The challenges administration, payment delays, paperwork and bureaucracy have an impact on relationship between HEIs and SETA. The need to strengthening existing forums and develop new ones is identified and clarify the role of the Skills Development Facilitator will could ameliorate some of these challenges. Other proposals to include the need to adopt longer-term planning cycles and longer-term partnership agreements.

5.4 Addressing Priority Skills Gaps

What is evident in the skills gaps analysis is that key skills gaps and HTFVs reflected across HEI submissions are primarily located within the professional and management occupations (2017-2 Professionals', and '2017-1 Managers')

The following priority skills development areas were cited as necessary to address the skills gaps:

- Lecturer Skills Gaps (lecturer, associate professor and professor) (Most prominent)
 - Areas of specialisation (disciplines) identified as scarce.
 - Lecturer development - included degree advancement (PhDs), teaching and research skills.
 - Strategies need to address other cited reasons i.e. lack of experience by providing opportunities for experiential learning, and lateral entries with support programmes.
- Technology skills
 - Provision of skills to respond to the 4th Industrial Revolution;
 - Technological integration into curriculum;
 - Training in ICT for teaching and learning (academics and graduates); e-learning; ICT skills.
 - Additional research on impact of 4th industrial revolution for South Africa, and skills development in HEI, in particular.
- Staff development: (academics, faculty and department heads and senior managers).
 - Leadership and management development and training;
 - Transformation and diversity training, Change Management, Conflict and People Management.
 - Emotional Intelligence (EQ)
- Integrated learning methods: Addressing the gap between place of learning and place of work; providing opportunities/funding for continuous learning; integrating experiential learning and Internship programmes.
- Training for support staff: ABET / Matric for lower level staff.
- Youth Development and Support Services (holistic wellness, gender-based violence, mental health etc.); training for student leadership.

- Training SETA staff on HEI policies and HEI environment.
- Other areas identified for training included: Project Management, Business Process Mapping, Business administration; Succession planning, training for administrators.

5.5 Building on current skills development interventions

Positive skills development interventions cited by participants that are ongoing, should be built on/strengthened namely:

- Interventions to ensure quality in the HE sector.
- Addressing equity issues in the HE sector.
- Improving ETDP SETA understanding of skills gaps.
- Training interventions for academic staff.
- The development of programmes that target the demands of the labour market, ensuring successful employment of recent graduates.
- Recognition of soft skills in skills development interventions.
- Engagement with research organisations.

5.6 Developing and strengthening partnerships to enhance skills development.

The report identifies areas where partnerships need to be strengthened and/ or developed. These include:

- Addressing the gap between place of learning and place of work through provision of opportunities/funding for continuous and integrated learning i.e. through partnerships that offer internships; engagements and collaborations that assist in improving the identification of skills needed in the labour market to inform SETA interventions.
- Addressing the funding deficit. In addition to increasing mandatory grant, by exploring partnerships that proactively attract funds or provide programmes and skills needed in the labour market.
- Improving the relationship between SETA and HE sector i.e. in terms of systems of the SETA (i.e. administration, financial management, streamlining paperwork and procedures, improving staff interaction with HEIs)⁵¹; and longer-term planning and longer-term partnership agreements to improve outcomes of initiatives.

The following partnerships were identified:

SETA, public HEIs and Other SETAs

- Assistance with funding models, etc. in specific sectors; and

⁵¹ “As an ultimate facilitator, [ETDP SETA] will need to make its funding more accessible, streamlining the bureaucratic procedures; in terms of academic development, it needs to control the quality of data and understand the agendas that data reveals.” Survey respondent.

- Sharing best practice in how other SETAs use public HEIs for delivery of their mandate.

SETA, public HEIs and DBE

- Strengthening teacher education and development programmes and practice platforms using universities' programmes.

SETA, public HEIs and DHET

- Benchmarking international best practice for monitoring and evaluation of skills development interventions.
- Bolstering university programmes; and
- Supporting work integrated learning platforms.

SETA, public HEIs and Community Organisations:

- Providing assistance in the workplace through internships.

SETA and public HEIs (and private HEs and TVETs):

- To improving research capacity.
- By supporting imperatives such as transformation in the public HEI as a subsector.
- By providing funding for insourced staff members to continue their studies.
- By facilitating collaboration amongst universities for the purpose of sharing best practice and skills development for the TVET sector.

(The need to develop a formalised collaborative system terms of policy and implementation guidelines, and a monitoring systems was also identified.)

SETA, public HEIs and Small businesses:

- Supporting incubation programmes;
- Providing shadowing opportunities for students for real-workplace experiences; and
- Building entrepreneurship skills among students.

SETAs, Professional Bodies and NPOs

- Engagement with Professional bodies and NPOs to develop better understanding of supply and demand issues.

SETA and HEIs

- Establishment of a skills development forum to engage various stakeholders to:
 - o Improve responsiveness to country's skills shortages; and
 - o Improve engagement with skills planning process (which should not be a technical exercise but be more inclusive with active participation).

In term of university financial sustainability, another partnership which requires strengthening is that of 'third stream funding', namely donor, private sector and other sources of funding.

5.7 Adopting a Systemic Approach to address Transformation and Equity

- The need to ensure transformation interventions are integrated and comprehensive addressing inherent and structural factors underpinning racism, gender discrimination, white privilege and other forms of discrimination against certain categories of people/ groups.
- Skills development policy/s must focus on re-ordering the gender and racial bias in higher educational outcomes.
- The need to develop and employ strategies to address recruitment criteria which inhibits attempts to address equity.

HEIs need to be equipped with skills to address these challenges more innovatively be more effective. The ETDP SETA could play a role in facilitating training and interventions to improve capacity of HEIs in this area.

5.8 Improving the skills planning process

The need for a more inclusive, rigorous skill planning process.

Various proposals were cited to address this including:

- Improving communication and engagement with HEIs in skills planning, which this project intended to achieve.
- Improving coordination of policies and strategies relating to skills development between SETA and universities.
- Conducting more research.
- Establishing provincial skills development forums on a quarterly basis, which will bring together people of the common interest, challenges and find solutions together to address the skills gaps in the province;
- Establishing a formal forum structure or strengthening existing structures, that includes all university stakeholders and SETA representatives participate on an ongoing basis.
- Establishing a provincial forum for other institutions that do not have direct contact with SETA to improve engagement and input on provincial specific needs and challenges and improve coordination with initiatives of other stakeholders.

LIST OF SOURCES

CHE 'VitalStats' 2016.
CHET SAHE Open Data.
DED New Growth Path.
DTI 'Industrial Policy Action Plan 2018/19– 2020/21'
DHET 'Annual Report 2016/17'
DHET 'NSF Annual Report 2018/10'
DHET 'Budget Vote 15, 2019 '
DHET, Science and Technology 2019/20 'Annual Performance Plan Presentation' 17 July 2019.
DHET 'Ministerial Statement on University Funding: 2019/20 and 2020/21, November 2018.
DHET 'Statistics on Post-School education and training in South Africa 2017'.
DHET 'Briefing on the allocation of funds to Universities and TVET Colleges, 2018 '
DHET, 'Statistics on Post-School education and training in South Africa 2017'.
DHET 'Statistics on post education and training in South Africa, 2017' (released March 2019).
DHET 'SSP Framework and Guidelines'
DHET, Science and Technology 2019/20 'Annual Performance Plan with the Minister (17 July 2019)'.
DHET University State Budgets March 2018
DHET White Paper 3: A Programme for the Transformation of Higher Education.
DHET White Paper for Post School Education and Training 2013.
ETDP SETA 'Revised SSP Framework'.
ETDP SETA 'Annual Report 2017-2018'.
ETDP "Final Draft ETD Sector Skills Plan 2019-2020 Update"
HSRC Labour Market Intelligence Partnership Study, 2016.
DHET and DoL 'Human Resource Development Strategy for South Africa,2030'.
Presidency, 'Medium Term Strategic Framework'.
National Treasury '2018 Budget Review'.
National Treasury '2019 Budget Review'.
NPC 'National Development Plan ,2030'.
NSAF 'Annual Report 2017/2018'.
USAf 'Annual Report 2018'.
USAf 'University Funding Fact Sheet (2016)'

Media Reports

Media Statement' Two Million NSFAS Students funded by Govt since 2013' (24 April 2017).

Websites:

<https://www.isfap.co.za/frequently-asked-questions/#.XbCpYS2B3m0>

<https://www.gov.za/speeches/united-kingdom-higher-education-partnerships-11-mar-2019-0000>

ANNEXURE 1

List of Stakeholders Interviewed

INSTITUTION	PROVINCE	NAME OF RESPONDENT	POSITION
Cape Peninsula University of Technology	Western Cape	Shahieda Hendricks	Training Manager
Council of Higher Education: Monitoring Evaluation and Quality Assurance	Gauteng	Ntokozo Bhengu	Researcher
DHET: University Education Unit	Gauteng	Dr Diane Parker	Deputy DG
Durban University of Technology	KwaZulu-Natal	Manoshni Perumal	Human Resource Development
ETDP SETA	Gauteng	Gerrard Francis	SETA Gauteng Provincial Manager
ETDP SETA	Gauteng	Mr Khanyiso Dube	Managing facilities & HR
ETDP SETA	Western Cape	Fikile Machimane	Provincial Manager
National School of Government	Gauteng	Dr Shamrita Devi Bhikha	Retired public servant, (former chair of accreditation and quality assurance unit at the National School of Government)

ANNEXURE 2

List of Institutions Surveyed

NAME OF INSTITUTION	PROVINCE	NAME OF RESPONDENT	POSITION OF RESPONDENT
Walter Sisulu University	Eastern Cape	Maria Kuboni	Human Resource General
Fort Hare University	Eastern Cape	Brenda Matsiliza	Skills Development Facilitator
University of the Free State	Free state	Juanita Burjins	Manager Staff Learning
Central University of Technology	Free State	Kelebogile Sebudi	Talent Management Specialist
Tshwane University of Technology	Gauteng	Lindiwe Radebe	Manager Planning & Development
UNISA	Gauteng	Kereeditse Modisane	Skills development Practitioner
Sefako Makgato Health Sciences University	Gauteng	Nancy Matlakala	Skills Development Facilitator
University of Johannesburg	Gauteng	Winnie Mosito	Skills development Facilitator
Universiteit Van Pretoria	Gauteng	Basiami Disipi	Specialist skills development facilitator
University of Zululand	KwaZulu-Natal	Nhlanhla Nsele	Skills Development Facilitator
Mangosuthu University of Technology	Kwazulu-Natal	Bathabile Wella	Organizational Development Manager
Durban University of Technology	KwaZulu-Natal	Manoshni Perumal	Head of Human Resource Department
University of Venda	Limpopo	Louisa Mariba	Skills Development Facilitator
University of Limpopo	Limpopo	Pheladi Maria Raboshakga	Training and Development Officer / SDF
North West University	North West	Stephen Tsebela	Training Manager
Sol Plaatje University	Northern Cape	Kirstin Pophaim	Manager in Operations
University of Cape Town	Western Cape	Karin Smit	Manager staff learning
University of Western Cape	Western Cape	Genevieve Southgate	Consultant: Staff and Organisational Development
Stellenbosch University	Western Cape	Jan Knight	Head of Staff Development
Cape Peninsula University of Technology	Western Cape	Shahieda Hendricks	Training Manager