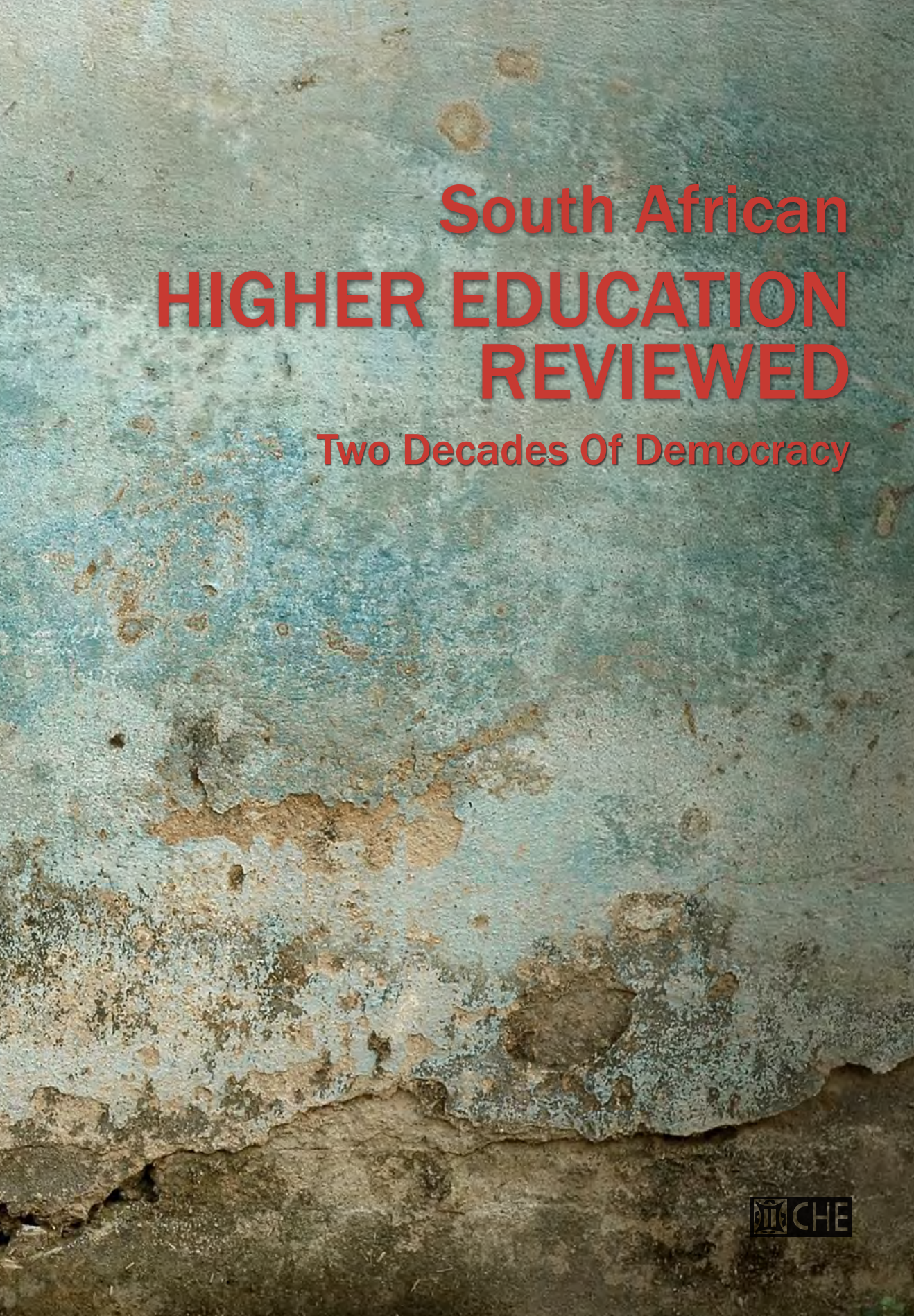




South African **HIGHER EDUCATION REVIEWED**

Two Decades Of Democracy

The CHE is an independent statutory body established by the Higher Education Act, no. 101 of 1997. The CHE is the Quality Council for Higher Education, advises the Minister of Higher Education and Training on all higher education issues and is responsible for quality assurance and promotion through the Higher Education Quality Committee.

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1 Quintin Brand Street
Persequor Technopark
Brummeria
Pretoria
South Africa
+27 12 349 3840
www.che.ac.za

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South African higher education reviewed:

Two decades of democracy

Eight task team reports



Contents

Foreword

A word from the CEO

Acronyms

1	Overview	5
	Task team members: Colin Bundy, Jon File & Mala Singh Writers and editors: Denyse Webbstock with Glen Fisher	
2	Regulation	63
	Task team leader: Felicity Coughlan Members/contributors: Trish Gibbon, Brenda Leibowitz, Luke Mlilo & Martin Oosthuizen Writers and editors: Yunus Ballim with Ian Scott, Genevieve Simpson & Denyse Webbstock CHE research assistant: Michael Gordon	
3	Governance	105
	Task team leader: Jairam Reddy Members/contributors: Bennie Anderson, Magda Fourie-Malherbe, Tembile Kulati, Thami Ledwaba & Anthony Staak Writers and editors: Lis Lange & Thierry Luescher-Mamashela CHE research assistant: Ntokozo Bhengu	
4	Teaching and Learning	143
	Task team leader: Matete Madiba Members/contributors: Gerry Bokana, Vivienne Bozalek, Siyabulela Sabata, Ian Scott & Yusef Waghid Writers and editors: Sioux McKenna CHE research assistant: Precious Sipuka	

5 Research 193

Task team leader: Prins Nevhutalu

Members/contributors: Rishidaw Balkaran, Robin Crewe,
Pamela Dube, Andrew Kaniki,
Steve Madue & Susan Veldsman

Writers and editors: Genevieve Simpson with Wieland Gevers

6 Community engagement 241

Task team leader: Brian O'Connell

Members/contributors: Samuel Fongwa, Glenda Kruss,
Sonwabo Ngcelwane, Jerome Slamat & Jayshree Thakrar

Writers and editors: Judy Favish with Genevieve Simpson

CHE research assistant: Neo Ramoupi

7 Academic Staffing 279

Task team leader: John Higgins

Members/contributors: Raphael de Kadt, Thandi Lewin,
Sean Muller & Chris Winberg

Writers and editors: Denyse Webbstock with Chika Sehoole

CHE research assistant: Mosa Phadi

8 Funding 321

Task team leader: Jenny Glennie

Members/contributors: Glen Barnes, Gerald Ouma &
Charles Sheppard

Writers and editors: Charles Simkins with Ian Scott,
Rolf Stumpf & Denyse Webbstock

CHE research assistant: Michael Gordon & Genevieve Simpson

Foreword

Two decades ago, South Africa entered a new era of democracy. The initial euphoria has been tempered by the hard work that followed in transforming and rebuilding the major social institutions of the country to address the vast challenges of inequality, poverty and the need for economic growth. Higher education remains, as it was then, central to the projects of modernisation, transformation and renewal in the country, just as it too is subject to those same forces. In that propitious year of 1994, Beck wrote that, “the more societies are modernised, the more agents acquire the ability to reflect on the social conditions of their existence and to change them in that way”.¹ What he was pointing to is the importance in a democracy of developing the ability to reflect on and analyse policy, and to influence the interventions that are designed to bring about a healthy and productive society. Not only is higher education important in and of itself, but it is a barometer of societal content or discontent, as academics and students are perhaps the freest agents in democratic societies to think, reflect and act. It is apposite at this juncture, therefore, to take stock of higher education in South Africa; to reflect on its achievements, its shortcomings, its contradictions and its various roles and purposes, and to apply the wisdom of hindsight, such that we may look forward more clearly to a re-imagined future.

The contributors to this volume share a commitment and a passion for higher education. They have reflected and analysed the higher education sector from different vantage points, and brought their collective wisdom to bear on the intractable problems that beset the sector, as well as pointed out the milestones reached in the long journey towards a more equitable sector that “draws on the full range of human capacities for knowing, teaching and learning”, and “that forges stronger links between knowing the world and living creatively in it, in solitude and community”.² Their insights and detailed analyses of data, documents and events serve to enrich our understanding of higher education, and provide a solid basis from which the CHE can draw in formulating future policy-impelling advice. It is also hoped that this volume will generate further discussion and research among academics and officials working in the higher education sphere, and that a broader readership will find it a useful overview of the developments in higher education since 1994.

*Professor Themba Mosia
Chair of Council*

¹ U. Beck (1994) ‘The reinvention of politics: towards a theory of reflexive modernisation’ in U. Beck, A. Giddens & S. Lash, *Reflexive modernisation: Politics, tradition and aesthetics in the modern social order*, Polity Press, Oxford.

² P. Palmer & A. Zajonc (2010) *The heart of higher education: A call to renewal*, Jossey-Bass, San Francisco.

A word from the CEO

Higher education in South Africa in the post-apartheid era has never been more volatile than it is currently, some two decades into democracy, yet it is, contradictorily, perhaps the part of the entire education sector that has advanced most in terms of achieving national goals of quality, equity and transformation. There is much that higher education can claim to have achieved: integration as a system from its fragmented past; an established quality assurance and advisory body; a single dedicated national department; a fundamentally altered institutional landscape; greater access and a radical change in the demography of its students, with an 80% growth in the number of African students; higher research output and international recognition through large research projects, more attention paid to teaching and learning, to curriculum and to student support; the implementation of a governing framework for its educational offerings; the allocation of financial aid to many more students than twenty years ago; and having nationally coordinated projects and grants to address some of the identified areas for improvement.

Despite the many advances and achievements of higher education outlined in this review, however, the student protests of 2015 and early 2016 have given expression to underlying faultlines in quite a dramatic way. The pressures of worsening underfunding in the context of enrolment growth, and increasing student expectations and frustrations with respect to access and financial aid, have led to widening fissures in the system. This review has identified, in addition to under-funding, the limits of academic staff capacity as a further crack in the foundations that threatens to widen and have a detrimental impact on the quality of provision. Immediate solutions to the particular crisis that higher education finds itself in need to be found, but it is important that any future courses of action are informed both by rational analysis of empirical data, and reflection on and understanding of the directions, trends and trajectories of the system in the past. The successes and limitations of policy in steering the system, the responses of the system to global trends to which it is vulnerable, and the agency of institutions in shaping the system, are all aspects which lend themselves to careful unpacking from various perspectives, in order that the past may inform the future.

The Council on Higher Education, as part of the mandate bestowed on it by the Higher Education Act 101 of 1997, as amended, to “publish information regarding developments in higher education, including reports on the state of higher education, on a regular basis” (5.1.d), has thus undertaken a comprehensive review of higher education in South Africa in the last two decades, resulting in this publication. This has followed past CHE-led reviews of higher education.

The first of these was published in 2004, entitled South African higher education in the first decade of democracy. It noted that, “The tenth anniversary of South Africa’s democracy is a timely opportunity to reflect on a decade of policy-making and policy implementation aimed at transforming South African higher education. The 2004 review describes and analyses contemporary conditions within South African higher education and the changes that have occurred during the past decade, with particular reference to what we inherited in 1994.” It was a comprehensive compilation and analysis, through commissioned research, of the policy development undertaken in that period. The second, in 2007, a Review of higher education in South Africa: Selected themes, was an edited collection of commissioned research papers that analysed six major issues in the process of transformation and restructuring of the higher education system: public funding, governance, information and communication technologies, institutional culture, access, and change. The state of higher education report of 2009 proceeded differently, and attempted to assess, on the basis of empirical data in the main, to what extent the goals identified in the 2001 National Plan for Higher Education had been fulfilled. This review, two decades into democracy, aims to be reasonably comprehensive in its coverage, to include empirical data where necessary, and to provide analysis of and insight into the key areas of higher education against the backdrop of the intentions of the post-apartheid state, the trends that affected higher education and the factors that will influence its possible futures. While it covers many issues, inevitably there are aspects that could have received more attention, and reference is made in the text to areas in which further research is needed.

A reference group of higher education experts that had been established to help conceptualise the project¹ suggested a task team approach which would include different academic perspectives, so that the resultant group reports were based on extensive discussion and debate. The format of this review is thus most like an academic journal in that the chapters are separate papers produced by different groups of both academic experts and emerging researchers.² Some events or issues are hence discussed more than once, but from differing perspectives. There is, thus, no overarching CHE view or conclusion on issues in this document: the intention is that such a view, and official advice, from the CHE will be distilled from the contributions in this volume.

The eight task teams met several times over the period of a year; the first draft reports were presented at a national colloquium, and thereafter revised in the light of the discussion and comments received. The revised papers were then blind peer-reviewed, and edited on the basis of reviewers’ comments. This volume

¹ Saleem Badat, Ahmed Bawa, Trevor Coombe, Brenda Gourley, Molapo Qhobela, Barney Pityana and Rolf Stumpf are thanked for their role in guiding this project.

² The CHE put out a general call for papers ahead of the review and some of the emerging researchers were identified in this process.

is thus the product of the efforts of many people. The guidance of the reference group, the work of the over 50 researchers and writers involved in the task teams who gave so freely of their time and expertise, and the many peer reviewers who added their insights to the drafts, is gratefully acknowledged. A final thank you goes to the CHE staff members, led by Dr Denyse Webbstock and assisted by Dr Genevieve Simpson, who edited the publication, provided research assistance, and arranged all logistics. Their various contributions have enriched the process.

We trust that this publication provides the reader with a broad overview of the main trends and developments in different aspects of higher education since 1994, and will stimulate further debate and research, and inform future policy developments to continue the projects of transformation and quality enhancement of our higher education system.

Narend Bajinath
CEO

Acronyms

ANC	African National Congress
APPETD	Association of Private Providers of Education, Training and Development
ARHAP	African Religious Health Assets Programme
ASAHDI	Association of Vice-Chancellors of Historically Disadvantaged Institutions
ASGISA	Accelerated and Shared Growth Initiative – South Africa
ASSAf	Academy of Science of South Africa
CAO	Central Applications Office
CEPD	Centre for Education and Policy Development
CeSTII	Centre for Science, Technology and Innovation Indicators
CHE	Council on Higher Education
CHEC	Cape Higher Education Consortium
CHESP	Community Higher Education Service Partnership
CHET	Centre for Higher Education Transformation
CPUT	Cape Peninsula University of Technology
CSD	Centre for Science Development
CSIR	Council for Scientific and Industrial Research
CTP	Committee of Technikon Principals
DACST	Department of Arts, Culture, Science and Technology
DBE	Department of Basic Education
DEA	Department of Environmental Affairs
DHET	Department of Higher Education and Training
DoE	Department of Education
DST	Department of Science and Technology
DTI	Department of Trade and Industry
DUT	Durban University of Technology
DVC	Deputy Vice-Chancellor
ETQA	Education and Training Quality Assurer
FET	Further Education and Training
FRD	Foundation for Research Development

GDP	Gross Domestic Product
GEAR	Growth, Employment and Redistribution
GER	Gross Enrolment Ratio
GERD	Gross Expenditure on Research and Development
GUNi	Global University Network for Innovation
HDI	Historically Disadvantaged Institution
HEIAAF	Higher Education, Institutional Autonomy and Academic Freedom
HELTASA	Higher Education Learning and Teaching Association of Southern Africa
HEMIS	Higher Education Management Information System
HEQC	Higher Education Quality Committee
HEQCIS	Higher Education Quality Committee Information System
HEQF	Higher Education Qualifications Framework
HEQSF	Higher Education Qualifications Sub-Framework
HESA	Higher Education South Africa (now Universities South Africa)
HSRC	Human Sciences Research Council
ICSU	International Council for Science
ICT	Information and Communications Technology
IF	Institutional Forum
IMF	International Monetary Fund
JET	Joint Education Trust
JIPSA	Joint Initiative on Priority Skills Acquisition
LIASA	Library and Information Association of South Africa
LMS	Learning Management System
MBA	Master of Business Administration
MEDUNSA	Medical University of South Africa
MOOC	Massive Open Online Course
NACI	National Advisory Council on Innovation
NBT	National Benchmark Test
NCHE	National Commission on Higher Education
NDP	National Development Plan
NEPI	National Education Policy Initiative

NIHSS	National Institute for the Humanities and the Social Sciences
NMMU	Nelson Mandela Metropolitan University
NPC	National Planning Commission
NPHE	National Plan for Higher Education
NQF	National Qualifications Framework
NRF	National Research Foundation
NSC	National Senior Certificate
NSFAS	National Student Financial Aid Scheme
NSI	National System of Innovation
NWU	North-West University
OBE	Outcomes-Based Education
OECD	Organisation for Economic Co-operation and Development
OPR	Open Educational Resources
PIRLS	Progress in International Reading Literacy Study
PQM	Programme and Qualifications Mix
QCTO	Quality Council for Trades and Occupations
QEP	Quality Enhancement Project
R&D	Research and Development
RSA	Republic of South Africa
RU	Rhodes University
SAHECEF	South African Higher Education Community Engagement Forum
SANREN	South African National Research Network
SANTED	South Africa Norway Tertiary Education Development Programme
SAPSE	South African Post-Secondary Education
SAQA	South African Qualifications Authority
SARChi	South African Research Chairs Initiative
SARIMA	Southern African Research and Innovation Management Association
SASCO	South African Students' Congress
SAYAS	South African Young Academy of Science
SETA	Sector Education and Training Authority
SIP	Strategic Infrastructure Project

SOTL	Scholarship of Teaching and Learning
SRC	Students' Representative Council
SU	Stellenbosch University
TDG	Teaching Development Grant
TEFSA	Tertiary Education Fund for South Africa
TENET	Tertiary Education and Research Network of South Africa
THRIP	Technology and Human Resources for Industry Programme
TIMSS	Trends in International Mathematics and Science Study
TOC	Transformation Oversight Committee
TUT	Tshwane University of Technology
TVET	Technical and Vocational Education and Training
UCCF-SA	University Council Chairs' Forum South Africa
UDUSA	Union of Democratic University Staff Associations
UFH	University of Fort Hare
UFS	University of the Free State
UJ	University of Johannesburg
UKZN	University of KwaZulu-Natal
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNISA	University of South Africa
UNIVEN	University of Venda
UoT	University of Technology
UP	University of Pretoria
UV	University of Venda
UWC	University of the Western Cape
UZ	University of Zululand
WIL	Work Integrated Learning
WITS	University of the Witwatersrand
WSU	Walter Sisulu University

Overview

Writer: Denyse Webbstock

There is much written about the ‘crisis in higher education’ internationally in research and popular media, suggesting that in some way, higher education is standing on a precipice – whether to disappear into the abyss of irrelevance or to take off soaring to new heights in an ICT revolution is not necessarily clear. What is clear is that universities, as a particular institution of higher education, have endured since the middle ages, yet, chameleon-like, they have adapted in form and function to changing realities and social forces. As major social institutions, universities both embody their times, and produce the people who collectively act as catalysts for social change. They are subject to many forces – social, political and economic, whether international or local – to which they are slowly responsive, and simultaneously they lead the way to imagining and enacting new futures. The question of what higher education is for is an especially loaded one, with the answer dependent on time and place, ideological and individual perspective.

The higher education system in South Africa is shaped and understood according to many different narratives – the story of higher education globally, and the fundamental changes it has undergone, its own particular history and legacy told from many perspectives, and the deliberate steering of the system through the application of policy drivers to reach particular goals. Intricately interwoven with the society in which it is embedded, the higher education sector in South Africa today is as much a creature of its past as it is a creature of sustained effort, through policy, legislation and institutional restructuring, to redirect and transform it. Just as important to the narrative of South African higher education, however, are the responses of the system and the institutions to forces and challenges in the realms of economics, social and political change, and changes in the substantive heart of higher education, that is, the knowledge that it preserves, produces, cherishes, disseminates and that is fundamental to its very identity.

In the CHE’s review of higher education twenty years into the post-apartheid era, the emphasis is on critically analysing the system in its current form from a variety of perspectives and with different lenses, focusing on particular aspects of the system, the better to understand the whole, to assess its strengths and weaknesses and to provide guidance to inform the hard choices that need to be made towards realising its imagined future.

The higher education sector in South Africa in 2015 is in many ways profoundly different from its fragmented, insular, elite and uneven apartheid inheritance and much has been achieved; however, the legacy continues to shape and influence the sector in less desirable ways, and the stresses exerted by a challenging socio-

economic context are having a far-reaching effect on the quality of the system as a whole. A major restructuring of the institutional landscape has seen the creation of new institutions through mergers, and the disappearance of old ones such that there are now 26 public universities and over a hundred private higher education institutions. The shape of the sector is thus very different from the stratified and fragmented 36 public institutions of different types that had been governed by a range of regimes pre-1994, and the over 300 private institutions that in many ways had been unregulated, resulting in varying levels of public confidence in their quality. Within this shifting field the individual institutions – the traditional universities, the universities of technology and the new comprehensive universities – with their inherited strengths and disadvantages, have sought actively and often competitively to position themselves, adding a further, and perhaps insufficiently acknowledged dimension, to the processes of system change and transformation.

Much has been achieved in the twenty-year period under review. The higher education sector is now more unified in terms of governance arrangements, quality assurance processes, qualification types, funding arrangements and enrolment planning processes. Its offerings are organised on a single qualifications framework designed to create clarity with respect to degree and diploma purposes and to bring coherence to the pathways between them. As much as the sector is becoming more cohesive, however, it finds itself in 2015 in a new and fluid post-school landscape that questions higher education's boundaries. Its position in relation to a vastly underdeveloped vocational education and training sector, as well as schooling, which has been characterised by extensive changes at curriculum and organisation levels, is in flux. The sector's cohesiveness also masks continuing levels of inequality for students and differences in quality of education within the sector, with some institutions focused on climbing the international rankings while others have been placed under administration as government intervenes to rescue them from particular governance and management crises. The cohesion and integration have also left unresolved the question of potential institutional differentiation, with continuing contestation about the nature and identity of higher education and its fundamental purpose – or whether there are multiple purposes to be achieved in different ways.

In terms of size, the differences from 1994 are marked. There are now almost a million students in the public sector, which represents an exponential growth from the half million in 1994, as well as some 90 000 in private higher education.¹ Similarly, student demographics at institutions of higher learning have changed dramatically in the last twenty years, with a significant increase in access for black students. This must count as one the most obvious achievements in the post-apartheid era, particularly as most higher education institutions now have a majority of black students in their student complements. Yet participation rates for black and white students still differ significantly – 55% for whites and 16% for African students in 2013 – while overall the national participation rate, currently around 19%, has changed only marginally from the reported 17% of 1996, albeit

¹ CHE (2015) *VitalStats: Public higher education 2013*, p. 3.

in the context of population growth from 40.5 million to almost 52 million over the period.² Student success rates likewise remain sharply skewed by race and prior education; higher education in South Africa was, and still is, as acknowledged in the 2013 White Paper, a low participation system with high attrition. On the other hand, part of the doubling of those holding a post-Grade 12 qualification, from 6.2% of the population over twenty years old in 1996 to 12.1% in 2011, can be attributed to the growth of higher education.³

There has been slow and modest improvement in the representation of black academics at faculty and senior leadership levels of universities, but inequalities persist, with 17 753 black academic staff members in 2013 compared with 26 847 whites.⁴ Despite an increase in the number of African postgraduate enrolments from 64 396 to 97 294 over a five-year period, i.e. from 2008 to 2013, and an increase in postgraduate qualifications awarded to Africans in the same period from 14 242 to 27 030, the pipeline of black postgraduates, from whom the ranks of the next generation of scholars and academics will be filled, remains small.⁵ Many reasons have been posited for this, but the wealth of other opportunities available in a society that is lacking in high-level skills is a major factor.

While the growth in student enrolment has been considerable, the growth in the academic staff complement has not kept pace, such that the student to staff ratio, always less than desirable, has worsened over the two decades.⁶ Indeed, the South African institutions that feature on any of the international rankings systems of universities may compare reasonably on other criteria, but with respect to the staff to student ratio, they are not even in the same league.⁷

The recognition of the important role played by higher education is generally given concrete expression through the levels of funding accorded it. Unlike a number of other countries in sub-Saharan Africa that have responded to UNESCO's Millennium Goals by concentrating funding on the primary school sector, higher education in South Africa has been regarded as key to social and economic development. Nonetheless, the recent review of the funding formula found that although South Africa spends a considerable amount on education, its expenditure on higher education is much lower than desirable or needed. With the budget for universities at 0.75% of GDP (2011), this compares well with

² DoE (2001) *National Plan for Higher Education*, p. 16; Statistics South Africa, Census 1996 and 2011 from <http://www.statssa.gov.za>. The use of UNESCO's indicator of participation, the Gross Enrolment Rate or GER, i.e. the total headcount enrolled in some form of higher education over the national population of 20-24 year-olds of the population, has become widespread. CHE (2015) *VitalStats* p. iii.

³ Statistics South Africa, Census 1996 and 2011 from <http://www.statssa.gov.za>. The numbers increased from 1 294 720 in 1996, to 3 750 112 in 2011.

⁴ CHE (2015) *VitalStats*, p. 47. The Statistics SA population categories are used in *VitalStats* – thus African is distinguished from Indian and Coloured groups. Black in this instance refers to the number of African staff or students.

⁵ *Ibid.*, pp. 20-21.

⁶ In 1994 the FTE student to staff ratio was 24; in 2014, it was 27. Based on HEMIS data.

⁷ This is discussed further in the Research chapter. As an example, on the QS rankings for BRICS countries, UCT is ranked no. 2 in terms of citations per paper, but (like all South African universities listed) lower than 101 on staff to student ratio, which counts 20% of the total score (<http://www.topuniversities.com/university-rankings/brics-rankings>).

Africa as a whole (0.78%), but not with the OECD (1.21%) or the rest of the world (0.84%). The review estimated the proportion of the entire education budget that is spent on higher education to be 12%, whereas the figure for the rest of Africa was 20%, the OECD 23.4% and the rest of the world 19.8%. The average growth rates show that in real terms, government funding per enrolled student (full-time equivalent) fell by 1.1% annually between 2000 and 2010, while student tuition fees per FTE increased by 2.5% per year, which is not a trend that is likely to be sustainable.⁸ In recognition of the need of a growing proportion of students for financial aid to be able to participate in higher education, the government-funded student loan scheme (NSFAS) has grown exponentially, from R1.3 billion in 1996 to approximately R9 billion in 2014; however, the average amount per student remains well below the real cost of study.⁹ Costly and disruptive student protests, mostly relating to financial aid issues, have become an enduring feature of the higher education landscape and are likely to increase in frequency and intensity.

The financial constraints are clear, and while South Africa has been relatively shielded from the worst effects of the 2007 global recession, the budget deficit has remained high since 2009 and government departments are starting to feel the pressure of cutbacks. The first quarter of 2014 saw negative growth in the South African economy and the International Monetary Fund predicted a 1.7% growth rate for 2014 as opposed to the 2.7% that was indicated in the 2014 national Budget Review. The indications are that growth will continue to slow. The fiscal environment is changing as a result of new global conditions: the terms of trade boom that supported South Africa through the global economic crisis is coming to an end, with new challenges being faced. Rising global interest rates are pushing up the cost of servicing government debt, weaker commodity prices are contributing to lower tax buoyancy and the depreciation of the Rand is increasing cost pressures. Along with rising unemployment, underperforming exports, rising inflation and rising public debt, the economic outlook is one of increasing austerity.¹⁰

While the South African higher education system has experienced considerable growth, this growth has not been met with sufficient funding to enable the national goals of higher education to be fully met, and the prospects of a sustainable increase in funding are negligible.¹¹ As a result of the imperative to increase access, student numbers have grown, but the academic staff complement has not grown concomitantly. Institutional managements and staff have to deliver on sometimes competing objectives. The higher education system in South Africa is undoubtedly under pressure, with a number of institutions struggling to keep the higher education project alive.

⁸ DHET (2013) *Report of the Ministerial Committee for the Review of Funding*.

⁹ The average grant (although this differs per institution) was approximately R30 000 in 2012 and R34 000 in 2013, while the average full cost of study was over R60 000. Derived from CHE (2015) *VitalStats*, p. 94 and NSFAS (2015) *Annual report 2014*, p. 53.

¹⁰ J. De Bruyn (2014) 'Overview of the current economic and fiscal climate – The national budget process and the implications for the higher education sector' (presentation).

¹¹ The projected average increase in funding for the post-school sector for the next three is 7.7%. Inflation, however, for June 2014 over June 2013 was 6.7%. The total allocation for universities for 2012-2013, including NSFAS funding, was in the region of R24 billion.

Despite the pressure, however, there are pockets of excellence in all parts of the sector. In some parts this is evidenced in increasing research output at both institutions with an established research culture and those relatively new to it. Some institutions have, with perspicacious and visionary leadership and commitment from staff and students, forged respectable academic identities from apartheid-engineered roots, or successfully navigated the exigencies of mergers to become more responsive and vibrant and attuned to the realities of the needs of a developing South Africa. Considerable experience and expertise has been developed among a growing proportion of academic staff and education specialists over the last twenty to thirty years in dealing with the teaching and learning challenges of a diversifying student body. While there is room for improvement, a greater recognition of the importance of the teaching and learning function is developing in reward systems and promotion criteria for academic staff. There has been a general trend to make curriculum information and assessment criteria and demands more transparent to students and to design more appropriate and relevant curricula. Foundation programmes to assist in dealing with academic under-preparedness have been funded since 2004, and government initiatives to improve teaching and learning across the system through the Teaching Development Grant are beginning to take hold.¹²

The system as a whole has managed to navigate two decades of fundamental transition, unparalleled growth, extensive restructuring, funding constraints, greater reporting and compliance demands from an increasingly complex regulatory system, leadership challenges, governance concerns, student protests and more. It has demonstrated its robustness under extreme pressure and is arguably the strongest sector of the South African education system as a whole.

2. Broad context

2.1. International trends – massification and globalisation

In the larger context, higher education internationally has undergone significant shifts in form and identity over its lifetime. Indeed, ‘higher education’ as a concept is a relatively recent phenomenon, suggesting the deliberate conceptualisation of higher education institutions and their different purposes in relation to each other in some crafted system, rather than as discrete universities following their own trajectories. The identity and purpose of higher education has undergone radical shifts in emphasis: first from the medieval institutions focusing on theology and philosophy, to the Humboldtian research university that was integral to the modernisation of Europe and that formed the basis of the great American universities; then from institutions that served to reproduce the higher administrative classes to manage colonial interests, to institutions that democratised knowledge post the 1968 protests that had challenged the prevailing order in many Western countries. More recently, the shifts have been from the institutions of the 1990s that served to educate greater and greater numbers of young people in both conceptual knowledge and skills in the furtherance of

¹² T. Lewin & M. Mawoyo (2014) ‘Student access and success: Issues and interventions in South African universities’ (report).

economic development and competition, to a current reality of a diversity of system configurations and purposes – many attempting to offer mass or universal higher education in different institutional types, and to play in national and global leagues of universities at the same time.

In discussing the South African higher education system in 2015, it is necessary to situate it within recent global trends, as well as to elucidate the stories of its own particular trajectory. The first of the major global trends that has an obvious bearing on the South African situation is the trend in the late twentieth and early 21st century to provide higher education to many more people than was hitherto the case. In defining higher education systems, a pervasive characterisation has been based on the extent of coverage of the youth of a society, often in terms coined by Trow back in 1974, of ‘elite’, ‘mass’ and ‘universal’ systems.¹³ In many parts of the world, the development and growth of higher education systems in terms of participation rates has been very rapid, with many of the most developed countries now reaching 70-80% (89% for the United States in 2009) participation rates, the BRICs averaging 37.5% and Africa lagging at around 6%. In terms of enrolment numbers, there were almost 30 million students in China in 2009, 19 million in India, 6 million in Brazil, 9 million in Russia and over 19 million in the United States.¹⁴ The global inequities are obvious; in the belief that an educated populace leads to both economic success and social goods such as a strong civil society, countries able to compete in the global marketplace have invested heavily in the so-called ‘massification’ of higher education while others are struggling to keep pace. The skewed consequences of this are clear: extensive shifts of academic knowledge and students to the countries of the global north, and new areas in the east, with a further widening of the gap between the haves and the have-nots, as well as the homogenisation of the knowledge base in favour of certain types of knowledge. The character of higher education too, has changed, with far more emphasis on the utilitarian purposes of higher education: the development of skills useful for economic advancement, rather than generic broad education preparing an elite class for governance; more business and management courses; a greater emphasis on science and technology and a consequent perceived loss of esteem for the humanities.

The trend to ‘massification’ has spawned changes in organisational structures, the size and shape of systems, in curriculum (from particular canons of knowledge to curricula that are considered relevant and useful for economic purposes), in pedagogy (from knowledge transmission to competency-based approaches, generic skills transfer, and outcomes-based approaches), in modes of delivery (from pure classroom-based approaches to open learning or blended approaches), in research (from shifts in valuing pure research to so-called Mode 2 or applied research) and in the relationship of institutions with external communities (from town-and-gown approaches to community engagement).¹⁵

¹³ M. Trow (1974) ‘Problems in transition from elite to mass higher education’, pp. 51-101.

¹⁴ P.G. Altbach, G. Androushchak, Y. Kuzminov, M. Yudkevich & L. Reisburg (eds.) (2013) *The global future of higher education and the academic profession*, p. 5.

¹⁵ The term Mode 2 knowledge production was popularised in M. Gibbons, C. Limoges, H. Nowotny, S. Schwartzman, P. Scott & M. Trow (eds.) (1994) *The new production of knowledge: The dynamics of science and research in contemporary societies*.

The unprecedented growth in the numbers of students enrolled in higher education is arguably a major factor in ushering in an era in which external regulation and external quality assurance have become widespread phenomena; as the number of institutions, institutional types, educational offerings and knowledge areas covered have grown, so too has the need for some means of checking and comparing to sift through the complexities and offer some level of assurance to students, parents, employers, publics and governments that the expanding investment in higher education is resulting in both merit and worth, and that higher education is achieving its purpose. Benchmarking processes, external reviews or audits, accreditation processes, qualifications frameworks to equate qualifications earned in different contexts to facilitate student mobility (as in the Bologna process), and the more recent predominance of a whole range of institutional rankings systems have spawned a major area of activity that would have been unrecognisable fifty, or even thirty, years ago.¹⁶

Given that purpose is of course contested, this has led to somewhat antithetical forces acting upon higher education and pulling it in different ways simultaneously. At its simplest level, governments are generally concerned with productivity and efficiency in meeting the human resource and other economic challenges of their countries, particularly where the largest portion of funding still comes from the public purse. Yet as the numbers have grown, the ability of governments to utilise taxpayers' contributions to fully cover the need has been stretched to breaking point, putting pressure on student fees, necessitating a much higher reliance on institutions' capacities to raise third-stream income, and increasing private sector investment considerably. This has brought with it different interests and ideas of purpose – in the area of research, for instance, the research agenda is in the most affluent societies becoming somewhat determined by the big business interests that fund them. It has also led to the unprecedented growth of private higher education provision in many parts of the world to accommodate the growing demand for higher education. In Brazil, for instance, the private sector has grown rapidly such that 78% of the 6 million students enrolled are in private institutions that cater mostly for undergraduate courses, with the large majority of the 150 000 postgraduate students being concentrated in the public sector.¹⁷ The growth of private higher education in the rest of Africa has also been significant, and it includes major initiatives in online learning environments as well, with the most recent being an online university in Rwanda that utilises Massive Open Online Courses (MOOCs) in addition to local tuition. Where such growth has occurred, the private sector has generally been indirectly supported by governments through tax incentives, land grants or funding schemes that facilitate student choice of institution rather than funding being directed to institutions themselves.

An additional implication of changing funding patterns is that, given that parents

¹⁶ The Bologna process aims to improve transparency between European higher education systems, as well as to facilitate recognition of degrees and academic qualifications, mobility, and exchanges between institutions.

¹⁷ In 2009, there were 2 314 higher education institutions in Brazil, 90% of which were private, and of which 186 had university status. See T. Schwartzman (2013) 'Higher education, the academic profession and economic development in Brazil' in Altbach *et al.* (eds.) (2013) *The global future of higher education and the academic profession*, p. 35.

are generally paying more in fees in many countries (the UK, USA are cases in point), and incurring huge debts, the relationship of students to institutions has changed.¹⁸ No longer privileged apprentices being inducted into an academy of knowledge, students are often conceived of as clients, choosing offerings that enhance their individual life chances – often more directly vocational or professional ones. The growth of the private sector, mentioned above, has also altered many higher education landscapes towards the offering of programmes designed to serve particular markets or market niches, and which are less resource-intensive to offer, and away from a concentration on pure scientific or social sciences research.

The tension between education as a private right or a public good is writ large in debates on the purpose of higher education. At the same time that the private right idea is playing a major role in determining the character and purpose of higher education, conceptions of higher education as a public good are widely held; indeed, the impetus to increase student numbers is often predicated on notions of equity, fairness and social redress, with access to higher education being regarded as the *sine qua non* of a healthy democracy and economic and social development. In many contexts there have been policy drivers such as quotas, differential funding or deliberate campaigns to increase access to higher education from lower socio-economic groups (as in the UK), or ethnic minorities (as in the US). In these latter conceptions, higher education is regarded as having a value that transcends the utilitarian; it is fundamentally about transformation, enhancement and growth – of the individuals being educated as well as the institutions and societies in which they live and work.

Given the increase in student numbers, including ‘non-traditional students’, e.g. first-generation entrants, mature students and students from disadvantaged communities, the last few decades have seen the introduction on a large scale of bridging and foundational programmes, student support programmes, more sophisticated admissions and placement processes, more career guidance and counselling, different pedagogies, more explicit and transparent expectations and criteria for assessment and a much wider range of modes of delivery facilitated by the developments in information and communications technology. Higher education has become more complex.

Along with its more complex nature, and the more extensive scale of activities carried out in higher education, has emerged a greater emphasis on managing intricate systems and a wider variety of people, as well as calls for more reporting and greater public accountability. At its worst, this is sometimes described as embodying a new ideology of managerialism, based on neo-liberal market principles; more neutrally it describes an empirically observable phenomenon of increasingly robust management systems based on ever-more detailed data collection and production of evidence; at best, it advances the case for the importance of good, well-informed management and leadership of complex

¹⁸ UK graduate debt is £27 000 on average. Total graduate debt in the USA was estimated to have risen by 51% between 2008 and 2012, and in 2013 was nearly \$1 trillion (R. Simon & R.L. Ensign (2013) ‘Student-loan delinquencies among the young soar – UK graduates starting life with debt’, *Wall Street Journal*).

organisations through a sea of competing interests in the advancement of the knowledge project. There is little doubt, however, that an observable trend world-wide has been a change in the relationship between those who carry out teaching and research, and those who manage institutions. It is more often the case than not that the leadership at all levels of the academy is no longer based on a system of first among equals, leading a department or faculty on a rotating basis, but a system of appointed executives on short-term performance contracts, with mandates to drive a system to reach particular targets. Again, what higher education is for can have deeply different interpretations, even within an institution.

A related observable trend globally, is an academic profession under great stress. The demands on academics and the variety of functions required of them have set up new tensions and competing priorities. Pressures to perform in terms of measurable research output coexist with larger numbers of more diverse students to teach in ways that demand increasingly specialist skills, more complex and transparent assessment procedures, more attention to the development of responsive and appropriate curricula, and more administration and compliance with reporting and accountability demands. As noted above, this is sometimes accompanied by less authority in academic decision-making and a more subservient role in the leadership and management of institutions. A counter-trend, however, is that of academics increasingly being able to pursue their individual research careers on the basis of funding external to an institution and effectively commanding their price and moving between institutions eager to move up the rankings tables; and of academics in professional fields straddling the divide between institution and profession through their consulting activities.

Like ‘massification’, ‘globalisation’ is another catch-all term to describe a multiplicity of trends. As economies have become more inter-dependent, and information and communications technologies have developed and opened up new possibilities for access to knowledge and sharing data and research; as the use of English as a communication tool has become ubiquitous on the internet and elsewhere, so has higher education become firmly part of a global context. Disciplinary communities are now more properly global than national; institutions at the apex of national systems find themselves competing in international ‘champions’ leagues; internationalisation involving the movement of large numbers of staff and students to different contexts is one of the responses to the globalisation of higher education. Top research universities set out to recruit the most promising students from across the globe and the dissemination of research findings and the sharing of data sets is more possible than ever before.¹⁹ And yet higher education systems are also called on to organise themselves in the most optimal ways to pursue national goals, whether these are motivated by narrow political interests, competitive strategies or social justice agendas. The tension between aligning institutional missions with national goals and the harnessing of

¹⁹ More than 80% of students from China and India who study abroad do not return home after obtaining their degree, while 30% of highly educated Ghanaians and Sierra Leoneans live abroad (See Altbach *et al.* (2010) *Trends in global higher education*, pp. 26-35).

the energies of an increasingly mobile, changing and outward-looking academic population that seeks its validation in international communities of practice, lends an element of further stress to higher education systems.

2.2. Knowledge

Beliefs about what higher education is for tend to shape higher education systems, determine institutional identities and influence what they do. The second major trend globally that affects all systems, is the fundamental shift in the way knowledge is defined and understood, and how this affects purpose. There are two main narratives here (and many sub-interpretations); in the dominant one, knowledge is seen to be no longer residing in particular institutions and contained within specific content to which only a few gain access. Knowledge as the embodiment of truth has become contested; knowledge has instead become widely understood as constructed and partial and hence more egalitarian. The change in the status of knowledge in this narrative has a direct implication in changing the role of the university as an autonomous institution that furthers the pursuit of what is understood to be truth to, on the one hand, a much more functional institution concerned with increasing its performance, or, on the other, an institution that is embedded in its communities and becoming more engaged with real-world problems and concerns in both its practices and its scholarship. The democratisation of knowledge has been enhanced through the rapid development in information and communications technology, different modes of delivery and different sites of production. In this narrative different knowledge types gain parity of esteem; theoretical knowledge and practical knowledge, for example, no matter where and how they are acquired become equally important, and this has implications not only for pedagogy but for the size and shape of higher education systems and the diversity of institutional types that constitute them.

In the second narrative, knowledge is seen to have become ‘commodified’; it has become one product among many in a market-dominated consumer society that influence the learning individual. Knowledge is packaged and sold; it becomes necessary for the realisation of predominantly instrumentalist ends. An implication of this view is that maximum output, minimum input models of knowledge production become increasingly applicable at the expense of long-term resource-intensive scientific knowledge development. Knowledge becomes the organisation of data for immediate problem-solving, with the ultimate goal being an increase in the overall efficiency of the social system. This plays itself out in the way in which institutions are organised and in how they are managed and funded. The trend in organising internal university structures appears to be toward compartmentalising divisions or faculties in such a way that they can be run on business lines, with an emphasis on income-generation and future sustainability, which is assured through market forces. The consequence of this has been a threatened existence for areas of study that lack immediate practical application and employability, such as the humanities and the pure sciences.

A corollary of this view is that the skills indispensable to the furtherance and maintenance of the economic and social systems become core to the academic

project. On the one hand, it is necessary to develop skills designed to tackle world competition, which implies a growth in the management sciences and in the number of high level technologists. On the other hand, skills are needed to fulfil society's own need for internal cohesion, since the role of the university is no longer to educate elites capable of leading nations towards their emancipation, but to develop doctors, teachers, engineers and other professionals to meet pragmatic ends. Most often, this is experienced as increasing vocationalism and a trend towards more utilitarian emphases in government policies.

In the South African context, debates about knowledge have also shaped questions relating to curriculum in profound ways, with local relevance and global recognition often being seen as the poles of a debate about what should be taught. This has deep resonance with ideas of what a university is for, and this debate is by no means settled in South African universities. There have been many projects focusing on African scholarship, or what it means to be a university in South Africa and what knowledge is appropriate for this context, yet there are also strident calls for a transformation of the curriculum that berate Eurocentricism, some of which appear to endorse a fairly narrow view of what is appropriate in a local context. Others, however, in challenging what has become orthodox, are catalytic in re-imagining what possibilities exist for developing curricula that are simultaneously relevant to current South African students and which lead to extending the boundaries of current knowledge in a way that transcends the local. Deep divisions about values, and also about language, still characterise the debate. Simultaneously, discipline boundaries, where disciplines have traditionally been the organising precepts of knowledge domains, are becoming more porous, with interdisciplinary studies becoming more commonplace – particularly in professional areas where knowledge from across many disciplines is called for to solve particular problems. What counts as knowledge is in rapid flux, and this has major implications for how higher education is organised, for curriculum, for research and for teaching and learning.

2.3. ICT and higher education

The rapid growth in information and communications technology that has changed the way research is conducted, and how teaching and learning is undertaken, is a third major feature of the global higher education landscape and is arguably poised to change its very nature. A number of recent reports posit that the combination of the forces of technology and globalisation are set to transform higher education as a set of traditional 20th century institutions in which the pursuit of knowledge in a multiplicity of fields is located, to entirely new models of institution that seek to exploit these changed circumstances to become globally competitive entities focused on particular niche areas.²⁰ While online learning is not new, the advent of MOOCs has seen an improved quality online learning

²⁰ M. Barber, K. Donnelly & S. Rizvi (2013) 'An avalanche is coming: Higher education and the revolution ahead' (report).

experience providing a global audience free access to prestigious institutions, with the recognition of such credits by other institutions becoming more widespread.²¹ The impact of such developments is still uncertain, particularly as completion rates in MOOCs appear to be very low, but it could signal what Barber *et al.* refer to as the “unbundling” of the traditional bricks-and-mortar university to networks of dispersed learning centres utilising standardised curricula for basic courses (Economics 101; Calculus 101) while facilitating the development of content in niche areas to ensure the relevance of curricula to local contexts, needs and languages. The potential implications for curriculum, for teaching and learning (such as the experimentation with the so-called ‘flipped classroom’ in which professors become facilitators rather than lecturers and lectures are accessed online in students’ own time), for assessment (which can be modelled on gaming conventions – earning badges, or passing levels), for degree structures (challenging the norm of a three or four-year full-time degree in favour of a combination of work and study) and for institutional types, are far-reaching. Barber *et al.* speculate about the emergence of a diversity of institutional types, including a small number of elite universities focused on research, mass universities providing good education for a rapidly growing global middle class mostly through blended approaches, niche universities focusing on particular areas such as law, local universities that provide for the development of skills for local and regional economic development, and the lifelong learning institution offering short courses to supplement workplace experiential learning.²² Whatever the merits of this speculation, a clear trend towards an increasing diversity of institutional types is observable.

The New Media Consortium’s 2014 Horizon Report lists six short to medium-term (i.e. next five years) trends in the use of technology in teaching and learning, all of which have policy implications at institutional level.²³ Among these are the ubiquity of social media and their increasing use in education for enabling collaboration between educators and students and for creating virtual professional communities of practice across institutions; online learning environments providing opportunities for group problem-solving and peer-to-peer collaboration and for making personalised learning scalable; the emergence of data-informed learning analytics for monitoring student learning at a personalised level and identifying students at risk of failing in order to improve student success; and shifting students from consumers to creators through the use of dedicated spaces equipped with video equipment, 3D printers and other technology that allows students to bring their assignments to production and to create entrepreneurial start-ups.²⁴ Despite the new opportunities, there are,

²¹ As examples, Coursera is linked to Stanford University, EdX to MIT and Harvard, and Udacity, started by an ex-Stanford professor, uses 4500 exam centres around the world to administer assessment.

²² Barber *et al.* (2013) ‘An avalanche is coming: Higher education and the revolution ahead’ (report).

²³ L. Johnson, S. Adams, S. Becker, V. Estrada, A. Freeman (2014) *NMC Horizon Report: 2014 higher education edition*.

²⁴ See, for examples of professional communities of practice, SCIENTIX; e-Twinning; and WIDE World from the Harvard Graduate School of Education.

however, many challenges to the full realisation of the potential afforded by digital technology even in the most developed countries, including the lack of digital literacy among academic staff, the relative lack of rewards for innovation in teaching and learning and the need to develop effective and pedagogically sophisticated models of online courses. There is also a growing digital divide in terms of access to technology; particularly in a context in which the global drive to increase participation rates in higher education increases the number of students who may not have the background to be successful without additional support.

Whatever the possibilities and limits of digital developments, the notion of a knowledge economy, which sees knowledge production as the most important determinant of a society's development, has become commonplace. The positive relationship between levels of education and economic and social development has become a new orthodoxy. A contribution to the development of South Africa's National Development Plan (2011) puts this as follows:

Universities play three main functions in modern society. Firstly, they are responsible for the education and training of professionals and high level human resources for the wide range of employment needs of the public and private sectors of the economy. The second function of higher education is to produce new knowledge and find new applications for existing knowledge. In a country such as South Africa this knowledge task is about innovation and application, local and global, and about knowledge that equips people for a society in constant social change. Thirdly, higher education provides opportunities for social mobility and simultaneously strengthens equity, social justice and democracy. In the globalising knowledge society, higher education becomes increasingly important.²⁵

Far from being in a crisis of relevance as suggested at the beginning of this chapter, in this view higher education is considered absolutely integral to development in a modern economy. For South Africa, as a developing and modernising economy, higher education is one of the major vehicles to spur on development, yet it is well-recognised that, twenty years ago, the system was not well-placed to do so, or to fulfil the other roles suggested in the quotation above. A fundamental question that must be asked in a review process is whether, twenty years later, the South African higher education system is better placed to fulfil these functions effectively.

3. The South African context

3.1. Themes and issues

What is understood as the process of modernisation, and what that means, has evolved in the South African context over the twenty-year period in question. In the early years of policy development in higher education, the emphasis nationally in all spheres was on achieving social justice through redress – a massive reconstruction and development programme was envisaged to right the

²⁵ N. Badsha & N. Cloete (2011) 'Higher Education: Contribution for the NPC's National Development Plan' (unpublished paper).

skewed ways in which all aspects of South African society had developed as a result of social engineering according to race on a grand scale. The disjuncture between higher education in its fragmented form and the needs of a developing society was the main issue that needed to be addressed to achieve the goals of the Reconstruction and Development Plan (RDP): growth in the economy through a shift from mining to manufacturing, which would require high-level skills development; reconstruction through addressing the challenges of poverty such as the provision of housing, electricity, sanitation and health services to the poor; and the building of a robust civil society to increase participation in the fledgling democracy.²⁶ It was relatively comfortable at the time for universities to align themselves with the national project of building what was understood as a developmental state. In this paradigm, skills development was not viewed in a technicist or utilitarian way, but as part of a project of transformation and enrichment of a society and its people. However, another strand of more hard-headed economic thinking soon emerged that, faced with the realities of developing an economic policy to deal with unemployment, emphasised the need for fiscal restraint and an approach to macro-economic policy that was more in line with the international trend of neoliberalism and structural adjustment to develop the economy on more market-oriented lines. The shift from RDP to GEAR is one of the major context factors influencing the way in which higher education policy was to develop, from the early consensus and alignment of higher education with the new ideals of reconstruction and development in a relationship with government that was to be characterised by mutual trust, to a more complex environment in which higher education has come to be seen as a vehicle for the advancement of a knowledge economy, and in which the relationship of higher education and government was to undergo some repositioning.²⁷ The strands of this story are interwoven in the discussions that follow, but are teased out more comprehensively in Section 6.

Given that there are multiple roles for South African higher education, there are at least three major themes explored in this chapter, and indeed in the review as a whole. The first concerns South African higher education over the last twenty years having had to be fundamentally reimagined and reorganised from its fractured, inequitable and isolated apartheid legacy in order to meet the human resource needs and the national goals of a modernising economy. The first theme underlying this review is thus that of the modernising state: it includes the narrative of policy intentionality – the policies, processes and mechanisms employed to steer a deeply divided sector into a new era characterised by integration, a more rational institutional landscape and the achievement of national goals such as greater equity of access and success for students from all population groups of South Africa in order to further the economic and social development of the country.

²⁶ A.C. Bawa (2012) 'South African higher education: At the center of a cauldron of national imaginations' in *Social Research*, 79(3), p. 673.

²⁷ The Growth, Employment and Redistribution (GEAR) strategy's aim was to stimulate faster economic growth which was required to provide resources to meet social investment needs by reducing fiscal deficits, lowering inflation, maintaining exchange rate stability, decreasing barriers to trade and liberalising capital flows.

The second is the social justice and democratic imperative – the need for the fundamental transformation of the system and the institutions within it to create a more equitable platform in which all races and classes have equal opportunities to realise their potential as part of the democratisation project and in which past inequities were redressed. As much as changes and achievements in higher education in South Africa have been brought about through deliberate policy efforts on the part of the national departments concerned with education, individual institutions as agents, other national departments focused on science and technology or health or agriculture, particular individual leaders, national bodies such as the South African Qualifications Authority (SAQA), professional bodies, the Council on Higher Education (CHE), staff and student unions and their activities have each had some level of impact on the development trajectory of the system. A common preoccupation and focus of activity of all of these has been the achievement of a social justice agenda, and thus the second theme of this chapter is transformation, including the shifting nuances and differences of meaning of the concept as a particularly South African one, and how it has manifested in a variety of goals and activities in different parts of the system.

A third theme underlying this chapter is the global context and internationalisation and the extent to which higher education has successfully been fashioned or been proactively responsive to position itself securely in the globalising knowledge society. From relative isolation for most parts of the system twenty years ago, the modernisation agenda has also entailed a reinsertion into a global environment with an accompanying openness to the influence of massive world-wide shifts in higher education. These include, as introduced above, changes in organisational culture, pedagogy, research and funding brought about by massification; the rise and influence of a neo-liberal orthodoxy that has arguably led to a phenomenon of increasing managerialism; the extensive use of external quality assurance, international benchmarking processes and rankings tables; the ICT revolution; as well as an increase in staff and student mobility.

3.2. Continuities and changes from the CHE's 2004 review

These themes are not new, yet the current manifestations of these suggest both continuities and changes from their initial framing. This review covers two decades of post-apartheid South Africa. However, the CHE undertook a comprehensive review of the system in 2004, after the first decade of democracy, as well as two others, and this section of the chapter recalls the themes, issues and conclusions of the 2004 review, partly to map the continuities but also to indicate how and where the debates have shifted.²⁸ In 2004, the decade captured in the CHE review was characterised by intensive policy development which had set up the goals for a reconfigured system, established new institutions (such as the CHE), and provided the frameworks for new processes, such as national planning and external quality assurance, that were to begin in earnest. By 2004, the debates that shaped, and that continue to shape, the discourse around higher education – for example,

²⁸ CHE (2004) *South African higher education in the first decade of democracy*; CHE (2007) *Review of higher education in South Africa: selected themes*; CHE (2009) 'The state of higher education report' in *Higher Education Monitor*, 8.

the equity versus development debate; the transformation agenda, a distinctly South African conceptualisation that continues to shape thinking about higher education; and the so-called differentiation debate, were well-established.²⁹ As in the quote that informed the National Development Plan above, the 2004 review asserts the important role of higher education in enhancing national economic competitiveness within a global knowledge-driven economy, although, unlike in many other countries, it situates that role in the context of transformative goals as put forward in the White Paper of 1997. That review foregrounds the social and public value of higher education, placing on it the responsibility for “providing equitable opportunities for learning and (self-) development; to be responsive to societal needs, producing relevant knowledge and socially committed graduates to contribute positively to the development of the country and to be publicly accountable for the manner in which it applies resources in the fulfilment of these roles”.³⁰ It is predicated on the assumption of a strong link between knowledge production and economic and social development, and hence a focus on the need for South Africa, post-apartheid, to ‘catch up’ in developing high-level skills to increase its international or global competitiveness. There is also a sense that the digital divide, in what Castells termed the ‘network society’, would be considerably widened were the purpose of higher education, i.e. to further South Africa’s economic competitiveness, not to be fulfilled.³¹ At the same time, there was an understanding of higher education as a catalyst for the advancement of a more equitable, engaged and democratic society through fostering critical intellectual debate, developing public intellectuals and a new intelligentsia, and contributing to a ‘vibrant and engaged civil society’ – evident in the theme of social responsibility.

In short, the major themes encompass many of the concerns that were evident in other higher education contexts at the time – seeing higher education in the context of the knowledge economy, the focus on high level skills development, the need to demonstrate quality and greater accountability for the way in which public monies were being used, a concern to further economic growth – as well as the need for redress and transformation relating to the peculiarities of South Africa’s apartheid past.

This last is the most definitive of the concerns in the 2004 review. Under this rubric were the issues of equity, social justice, the need to renew civil society and the need for engagement with emerging social policies. An extrapolation of this was the attention paid to increasing student access. Underlying the equity-development tension lay not only ideological and political contestation, but the hard realities of limited resources, and a gap between the high expectations that followed from the end of apartheid, the difficulties of accommodating competing priorities and demands – not only in higher education – and limited government and institutional capacity.

All of these concerns endure in the current context. The difference is that the

²⁹ See Section 5.2.

³⁰ CHE (2004) *South African higher education in the first decade of democracy*, p. 15.

³¹ M. Castells (2009) *The rise of the network society: The information age: Economy, society, and culture, Volume 1*.

policy intentions and drivers that were announced or foregrounded in that review have been implemented to greater or lesser extents in the last decade, with varying levels of success. If the 2004 review was characterised by discussions of policy development and intentionality relating to such concerns, this one focuses on the analysis and assessment of the implementation of those policies in three different domains. The first is that of the purposes and nature of higher education as a whole, its transformation and pursuit of demographic goals, and how it has been planned and funded. The second domain considers structural and systemic matters – the reorganisation of the higher education system and the institutional landscape – including its situation in the new territory of post-school provision. A third domain is that of organisational matters – how management and governance at system and institutional level have been affected both by policy implementation and other factors and how matters of accountability through regulation and quality assurance have had an impact on constituencies within organisations, such as academic staffing. Embedded in these domains are discussions of processes i.e. the main activities of higher education – teaching and learning, research and community engagement to consider how these have changed, not only through policy implementation, but how they have been affected by broader factors such as the rapid development of information and communications technologies, and what their future directions might be.

In its review of the first decade of policy development and implementation in the post-apartheid era, the CHE observed that:

Given the complexities and constraints inherent in the South African higher education policy process (and probably in any policy process), it is not possible currently to predict with certainty the implications, future effects and long-term impact of policy development as it has unfolded to this point. In the flux which characterises the current South African higher education system, the effects of policies are likely to be co-produced by the state, the higher education sector, individual HEIs, and other social actors – in cooperation, in conflict and in competition.³²

At the end of a second decade, some of those implications, effects and impacts are somewhat clearer, and more readily unpacked, while the long-term implications remain uncertain. This review focuses thus on what has been achieved in the second decade, continuing the thematic stories begun in the first, and looks forward in order to outline the constraints and opportunities likely to affect that uncertain future.

4. Achieving purposes at a system level

4.1 Policy intentions

4.1.1 Modernisation

This section examines implementation of the policy and legislative drivers of the higher education system as a whole in the post-apartheid era, an era in which deliberate efforts were made to develop a more appropriate system

³² CHE (2004) *South African higher education in the first decade of democracy*, p. 37.

for a modernising state. These foundations had been laid in the midst of an epochal political transition, a critical period where the reintegration of the country into the global economy, and the rebuilding of academic linkages that had become attenuated under the impact of the academic boycott and the isolation of the apartheid regime were shifting the economic and political as well as the higher education policy discourses. In the post-apartheid era, higher education faced a problem of trust, especially amongst the disenfranchised majority, and a perception that it remained fixed in its apartheid past. Consequently, the call for higher education to contribute to the transformation of society became at the same time a call for the sector to transform itself. At the same time, the post-apartheid imperatives of access, equity and redress stood starkly alongside the imperatives of economic as well as social inclusion, and the call for a new growth path to address the challenges of widespread poverty and unemployment. This tension was cast in the higher education debates and policy documents of the time as a tension between 'equity and development' – the form of that development, and the 'development path' was left rather vague – and much discussion centred on the question, whether it was possible to achieve both. Indeed, the question was whether the path to development might not lie through a more inclusive and equitable higher education sector, from which the (black) managers, technicians, scientists and professionals which a growing economy would require would emerge.

4.1.2 Transformation

The radical alteration of the size and shape of the higher education system and the introduction of the policy drivers to steer the system towards particular goals discussed above, were motivated by the need to achieve a state of affairs that was qualitatively different from that which preceded it. Breaking with the inequalities of the apartheid past, a transformed higher education system would play a critical role in an emerging, non-racial, progressive democracy, in producing critical, independent citizens as well as skilled and socially-committed graduates who would be capable of contributing to social and economic development. In short, the vision and goals of the founding post-apartheid policy statements related not simply to the achievement of an equitable demographic composition of the student body in terms of access and success, the achievement of equity in the staff body and improvement in research outputs and the production of high-level skills for the economy, but to a higher education system that would play a significant role in helping to build an open, democratic, post-apartheid society and an informed, critical, and socially aware citizenry.

While an imprecise concept, transformation was understood to be the broad organising precept for taking the system forward. From the very early policy debates on, it was recognised that transformation would imply the need to make hard choices between sometimes competing ends – the achievement of equity in a system that had been inherently inequitable by design, while at the same time bringing about the socio-economic development of a newly democratic society. A similar tension that underlay the goal of transformation was that between equity and efficiency. These tensions manifested in the policy choices made, and in the way individual institutions responded to perceived, or real, external stimuli. At

the same time, the terrain on which the struggle over transformation in higher education would take place, and on which an equity-development tension would be played out, was wider than that of higher education institutions and the new Ministry of Education alone. It was the terrain of a larger, and still more complex, transition from apartheid to democracy.

One of the recommendations of the National Commission on Higher Education (NCHE) of 1996 for taking the system forward to achieve greater equity was to 'massify' the system; in other words, to grow the numbers radically to achieve a much higher participation rate of the age cohort, thereby increasing the proportion of previously disadvantaged students as well as delivering on the high-level skills and knowledge necessary for development. The concern was, however, that rapid massification in a situation in which school preparation was unequal and in which the staff to student ratio would deteriorate could result in an overall reduction in quality and a further skewing of the intake away from the science, engineering and technology (SET) area that was most needed. A massified system also implied differentiation, although this was not explicitly stated, given concerns from some of the historically disadvantaged institutions that inherited hierarchies would remain unchanged. It would not be feasible to grow a system that included only research universities – other types of institution serving different higher education purposes would be needed.

The actual policy choice made, as in the White Paper of 1997 and the Higher Education Plan of 2001, was for 'planned growth' towards achieving both the equity and efficiency goals of transformation, to be managed towards the achievement of the transformation objectives through the policy drivers discussed above, with arguably the efficiency imperative uppermost. After 2005, following mergers and incorporations of several colleges, the higher education system comprised universities (albeit some to be focused on technology) only, and remained an 'elite' one, in terms of the definition outlined earlier. The vocational and technical college sector was largely disestablished, such that while the higher education sector continued to grow, it was unable to provide for all the school-leavers seeking some form of post-school education and training. A diversified system came to mean differences within the narrow band of universities, rather than across an entire post-school landscape.

A decade later, and the issue of increasing participation rates in post-school education, largely through expanding the college sector exponentially, is again firmly on the table. The National Development Plan (NDP) of 2012 set a new, and radically different, target of 30% by 2030 for participation in higher education to be achieved through increased enrolments; while the White Paper for Post-School Education and Training of 2013 modified this to 25% by 2030, (i.e. a growth from 937 000 students in 2012 to 1 600 000). The vocational and training enrolments in the post-school sector were to expand from the 345 000 of 2010 to 2.5 million by 2030, while the 2011 figure of 265 00 enrolments in adult learning centres was to increase to 1 million learners in new community colleges. The targets for growth in the whole post-school sector are ambitious; the White Paper, however, offers little in the way of definite plans to achieve them. With respect to the higher education part of the post-school sector, while the enrolment plans of individual universities together currently indicate a proposed growth of 2-3% per annum, it is evident that rapid and extensive growth in the existing universities, given

staffing, funding and other resource constraints, is not sustainable, and this is demonstrated in the Chapter 8 of this review. In addition, the work undertaken for the CHE Task Team's *Proposal for Undergraduate Curriculum Reform* indicated that growing the number of students, for example from an intake of 42 000 to 58 000 in order to achieve even 15 000 more graduates than the 21 000 that could be expected, given current cohort flows and throughput rates, would be a very costly option. Indeed, it was calculated that the amount of unproductive subsidy i.e. subsidy not resulting in graduates, would rise by 50%.³³ The rebuild of the vocational education and training college sector will also rely heavily on the universities to provide the teaching capacity needed. Part of the solution mooted in the NDP and the 2013 White Paper is, as the NCHE had suggested almost twenty years ago, to increase enrolments through different modes such as a growth in distance education offerings. A new distance education policy has thus been deemed necessary, partly to remove the prohibition on the offering of distance education by contact institutions that was imposed in the wake of unregulated growth in the early 90s. The motivation for increasing the participation rate is both to bring about transformation through increasing access, and a developmental one in that the need for high and mid-level skills in the economy is acute.

As much as transformation has been a broad concept, it has also engendered the monitoring of numbers and trends in a narrow interpretation that foregrounds demographics. Race has been the major preoccupation, but gender, age and disability are also categories for redress. In a pervasive discourse, transformation has become equated with equity, and equity with race. Twenty years into democracy, the student composition of the universities is radically different from its apartheid inheritance, albeit in a relatively small system with low participation rates, yet the issue of race is becoming even more emotive and volatile. Ways of measuring transformation/equity are quite divergent: on one hand, some institutions are reassessing their admissions policies, arguing that with the development of a substantial black middle class, many of whose children attend private schools, race is no longer an accurate proxy for disadvantage, and that other indicators of disadvantage, such as quintile of school, would be more equitable.³⁴ On the other hand, attempts have been made to measure equity on an index that equates equity with race as a singular indicator of transformation, and while there has been vociferous critique of the index, (its methodology, assumptions etc.) it has gained some traction in national fora and reignited the 'transformation debate', to some extent returning to the understanding evident in the initial application of the Employment Equity Act of transformation being defined in terms of changes in proportions of so-called designated population groups.³⁵

³³ CHE (2013) *Proposal for undergraduate curriculum reform in South Africa: The case for a flexible curriculum structure*, p. 134.

³⁴ J. Etheridge (2014) 'UCT admissions: Race will still be considered' in *Mail and Guardian*, 29 May.

³⁵ K.S. Govinder & M.W. Makgoba (2013) 'An equity index for South Africa' in 109(5/6), p. 109; K.S. Govinder, N.P. Zondo & M.W. Makgoba (2013) 'A new look at demographic transformation for universities in South Africa' in *South African Journal of Science*, 109(11/12); T. Dunne (2014) 'Mathematical errors, smoke and mirrors in pursuit of an illusion: Comments on Govinder *et al.* (2013)' in *South African Journal of Science*, 110(1/2); T. A. Moultrie & R. E. Dorrington (2014) 'Flaws in the approach and application of the Equity Index: Comments on Govinder *et al.* (2013)' in *South African Journal of Science*, 110(1/2); and V. Borden (2014) 'Anything but simple: Inappropriate use of Euclidean distance in Govinder *et al.* (2013)' in *South African Journal of Science*, 110(5/6).

While transformation in South African higher education discourse has more often than not been associated with demographic changes in student and staff complements, a further dimension to the ‘transformation debate’ that takes it beyond numbers is institutional culture. The aspect of student integration across race groups and integrated institutional cultures is still an issue, particularly in a few historically advantaged institutions. Despite conscious efforts having been made to find institutional solutions to the issue, a few high-profile cases have led to the call for transformation charters for all institutions to “defeat racism and patriarchy” at South African universities which is believed to be “rife”.³⁶ These incidents have illustrated that change in terms of numbers without a transformation of institutional culture and practices is not conducive to harmony and cannot be considered to have created an equitable climate for higher education.³⁷

The Ministerial Committee Report on Transformation and Social Cohesion of 2008 served to place the issue of the transformation of institutional cultures firmly on the agenda, and led to the development of a recent draft national policy on social cohesion in the post-school sector.³⁸ In 2013, Higher Education South Africa (HESA) initiated a project facilitating the development of institutional Integrated Transformation Plans in which institutions put forward their understandings of the challenges of transformation and how they planned to address them. A considerably more complex and nuanced understanding of transformation emerged from this process which incorporates change in institutional culture, inclusiveness, diversity and redress and many other dimensions. Indeed, some institutions have transformation charters in which the notion of transformation has become so broad as to be conflated with the overall mission, vision and goals of an institution. Nevertheless, it is clear that effecting profound change in the demographics of academic staffing, which remains predominantly white and male, is a shared challenge that has no easy solutions.

4.1.3 Integration

Perhaps the most obvious policy consideration in pursuing the goal of transformation in the first decade post-apartheid was the need for integration to overcome past fragmentation (different departments responsible for higher education, different national bodies for different sectors, different types of institution managed differently, and a split between education and training and between science and technology).

In a wider context, this is sometimes conceived of as a major impetus of recent times towards ‘de-differentiation’, i.e. the democratisation of knowledge that seeks to achieve equal status between different kinds of institution and equivalence between different kinds of learning as evidenced in a number of countries in

³⁶ B. Phakathi (2014) ‘Nzimande punts social inclusion policy after spate of racial incidents’ in *Business Day*, 22 August; DHET (2014) ‘Draft Social Inclusion Policy Framework for Public Post-School Education & Training Institutions’.

³⁷ For example, the 2008 Reitz incident at the University of the Free State and the investigation into initiation practices at North-West University.

³⁸ DoE (2008) *Report of the Ministerial Committee on Transformation and Social Cohesion and the Elimination of Discrimination in Public Higher Education Institutions*.

the rise of comprehensive qualifications frameworks with an emphasis on seamless articulation and the abolition of binary divides between institutional types.³⁹ In the South African context, this was expressed in White Paper 3 of 1997 as the intention to “transform higher education through the development of a programme-based higher education system, planned, funded and governed as a single coordinated system”.⁴⁰ The various early policy processes had led to the major focus for the future of higher education – that is, redress and quality, expressed as ‘equity, effectiveness and efficiency’.⁴¹ The White Paper had outlined three major policy intentions and steering mechanisms:

1. Planned expansion of the higher education system to increase participation (which gave rise to the need for external **quality** assurance and qualifications frameworks)
2. to achieve greater responsiveness through **planning** (a national plan and three-year rolling plans for institutions) and
3. goal-directed, performance-related **funding** to steer the system towards transformation.

This was to be achieved through a system of cooperative governance, with the state playing a steering and coordinating role through the funding and planning levers, autonomous institutions managing their resources but being publicly accountable, and an intermediary body (the CHE) having both policy advisory and quality assurance functions.

4.2. Funding

The first decade post-apartheid saw the imperative to integration being driven by the development of a new funding framework that included institutional restructuring grants, earmarked funding, block grants, research output grants and institutional factor grants. The previous SAPSE funding formula had been perceived to be inimical to the achievement of the policy goals in its bluntness as an instrument of steering, and the move was thus to a greater specification of the uses to which public funding could be put in pursuance of the public good ends of higher education.⁴² Indeed, the SAPSE formula was a mathematically-based system of resource allocation, predicated on a relatively homogenous system (i.e. the previously advantaged institutions for which it had been developed) in which market forces rather than political predilections would play a role in achieving a fair distribution among them. The post-apartheid reality of a diversity of institutions that had been governed by different funding regimes, from the

³⁹ M. Young (2010) ‘Alternative educational futures for a knowledge society’ in *European Educational Research Journal*, 9(1). By de-differentiation, he is referring to the idea that in a networked society historically distinct institutions and activities are becoming more alike.

⁴⁰ DoE (1997) *White Paper 3: A programme for the transformation of higher education*.

⁴¹ Examples include the National Education Policy Initiative (NEPI) 1993; Union of Democratic University Staff Associations (UDUSA) policy work in the 1990s; the Centre for Education and Policy Development (CEPD); and the National Commission on Higher Education (NCHE) 1996.

⁴² DHET (2013) Report of the *Ministerial Committee for the Review of Funding*.

different ‘bantustans’ or different national departments that had engineered huge distortions in funding allocations, did not, however, display sufficient homogeneity for such a system to be equitable. The 2003 funding framework, which was fully implemented only from 2007 onwards, was based on the principle of shared costs between government and students. It was conceived of as a goal-oriented mechanism for the distribution of government grants to individual institutions in accordance with national planning priorities, the quantum of funds available and the approved enrolment plans of individual institutions.⁴³ Essentially, it was a mechanism to steer the system towards achieving the modernising goals of the system on a more equitable basis between institutions; that is, using one set of rules across all institutions. Some allowance was, however, built into the formula to take account of the need for redress funding for those institutions that had been disadvantaged in the apartheid era, although the quantum of actual redress funding awarded remains an issue of contention; at the same time, it rewarded those activities thought desirable to attain national goals, such as research output. In terms of the grant’s major component, the teaching input portion, it funded enrolments based on the number of places available (through negotiation with the Department of Higher Education and Training) in particular cells of a subject area/qualification level matrix on a weighted basis. In this way, funding and planning in terms of in which areas it would be more advantageous for institutions to offer qualifications, were linked. Planning was enhanced through the introduction of the “programme and qualification mix” or PQM approval process, in which all programmes offered by an institution needed to be approved by the Department on the basis of their importance to the country’s needs and in terms of the institution’s capacity to offer them, and on the basis of whether they met the requisite minimum standards in terms of quality determined through an accreditation function undertaken by the Higher Education Quality Committee (HEQC) of the Council on Higher Education.

Not only was there a funding/planning driver at the level of programme offerings designed to steer the system towards producing graduates in the more resource-intensive disciplines necessary to build a modernising economy, but there was also an attempt to apply a greater rationality to determining the overall size and shape of the system through the introduction of institutional three-year rolling plans, and more recently, of a much more intensive process of enrolment planning on the basis of negotiations between the DHET and institutions in which attempts are made to match growth to available resources.

The funding driver has been met with mixed success; indeed, a comprehensive review of the funding formula and its efficacy and effectiveness as a mechanism to achieve its intended goals, particularly in the midst of the continued existence and exacerbation of wide disparities between institutions and their output and performance was called for and undertaken in 2012-2013. From some perspectives, the critique was that the use of a funding system in which a decreasing proportion is formula-based in favour of earmarked funding renders a system less transparent and more open to political influence; on the other hand,

⁴³ DoE (2004) *New Funding Framework: How government grants are allocated to public higher education institutions*.

a contrary critique was that the funding formula had not delivered sufficiently on the redress promises or fulfilled the expectations of those institutions that had been disadvantaged in the past such that one set of rules is inherently inequitable.⁴⁴ Amid wide expectations that the entire funding system would be overhauled, the review in effect recommended a continuation of the use of the current formula, albeit with some modifications, and some recommendations for improvement.

For universities, the pressure for access combined with a tight funding environment has, as in other parts of the world, led to upward pressure on fees, and the need to increase third-stream income. Although it differs quite widely across the system, the average ratio of subsidy:fees:third-stream income for universities in South Africa is roughly 40:30:30.⁴⁵ It is evident that the funding driver is the most plausible explanation for the significant increase in research output in journal and publication units by South African universities since 2005; it has, however, been less successful in stimulating a growth in the numbers of doctoral graduates, where supervision capacity is a key constraint.⁴⁶ This may be a result of individual academics and institutions focusing limited amounts of energy and capacity where the rewards are greatest, and it supports the widely-held thesis that it is difficult for a circumscribed academic staff complement to carry out all demands on them equally well – research, teaching, postgraduate supervision, community engagement, administration and contributing to the raising of third-stream income on which a number of universities are becoming reliant. For a few institutions, third-stream income constitutes almost half their income, which requires a considerable time investment. With subsidy income unlikely to grow to any great extent in the context of fiscal austerity, it is student fee income that is the only really elastic element in the overall funding scenario, but upward pressure on fees leads to fewer financial aid packages and hence affects access both for fee-paying students and those eligible for financial aid.

At an individual student level, access to higher education by students from low socio-economic backgrounds has been facilitated by the government national student financial aid scheme (NSFAS), which works through a combination of loans and bursaries to students who qualify in terms of a means test. A number of institutions also subvent the student financial aid allocations from NSFAS with their own financial aid packages. The scheme was reviewed in 2010. The NSFAS review counts among the significant achievements of the scheme that in the past decade, 659 000 students had been assisted with over R12 billion in loans and bursaries.⁴⁷ On the other hand, significant constraints undermine the ability of the scheme to meet the increasing need for financial assistance, and for it to achieve its full potential. In the context of a situation in which there are an estimated 2.8 million (or over 40%) 20-24 year olds who are not in employment, education or training, relative to just under a million places in higher education

⁴⁴ Lewin & M. Mawoyo (2014) 'Student access and success: Issues and interventions in South African universities' (report).

⁴⁵ CHE (2014) *VitalStats: Public higher education 2012*, p. 95.

⁴⁶ DHET (2013) *Report of the Ministerial Committee for the Review of Funding*, p. 297.

⁴⁷ DHET (2010) *Report of the Ministerial Committee on the National Student Financial Aid Scheme*, p. xiii.

and roughly 400 000 in colleges, the pressures on the government financial aid scheme are daunting; despite rapid increases in the allocation of funding to the scheme, demand far outstrips supply. The review found that the quantum of funding available was sufficient only to meet the needs of less than half the qualifying applicants in the current situation, without taking into account the extensive growth in participation envisaged in the vocational college sector.⁴⁸

The NSFAS review also noted that 2010 data indicated that 48% of NSFAS-funded students had dropped out or otherwise not completed their studies. Among the reasons advanced are that the funds in some institutions are diluted among greater numbers of students to ensure wider access, resulting in funded students being required to make up a shortfall, which they are mostly not in a position to do. There are concerns too that the means test system is open to abuse, while many poor school matriculants who qualify academically but fall just above the minimum income levels (the so-called ‘missing middle’) remain excluded from accessing funding and hence from higher education studies altogether. It is also the case that some institutions have disproportionate numbers of NSFAS-funded students, and carry the burden of increasing debt caused by underfunding. In addition, the scheme exhibits a poor rate of recovery – the review estimated this to be at 26% of funds dispersed – which is exacerbated by the high number of students who do not complete their studies and who do not earn enough to become liable for repayment.⁴⁹ In response to concerns relating to poor efficiency in the allocation of funding, the NSFAS scheme is piloting a process of centralised online allocations, rather than allocations being carried out by university financial aid offices, with voucher payments for food, accommodation and books being made directly to students. The pilot is yet in early days; and owing to some problems having been experienced, it is likely to be extended before full implementation takes place. In the meanwhile, student protests continue unabated.

In this context, the government’s espoused policy of pursuing ‘fee-free education for the poor’ has led to widespread misunderstanding of what is intended, and added fuel to the many student protests related to demands for government ‘to open its coffers’ to increase NSFAS funding.⁵⁰ The student protests are often volatile and some have led to violence and damage to property.⁵¹ Indeed, this and the harder edge to charges of racism and calls for institutional transformation have contributed to potential instability in the system twenty years after the change to democracy. The combination of limited financial assistance, poor throughput rates and pressure to increase participation has created arguably the most difficult challenge for the higher education system to manage.

⁴⁸ Ibid. pp. i – xx.

⁴⁹ Ibid.

⁵⁰ A special study group was requested by the DHET in 2012 to explore the feasibility of fee-free higher education for the poor; DHET (2012) *Report of the Working Group on Fee Free University Education for the Poor in South Africa*. The White Paper of 2013 supports the principle, but finds that sustainable additional funding would be needed to make this feasible.

⁵¹ A Vice-Chancellor is quoted as saying, for instance, that “There is this notion of free education being thrown around and therefore students will demand, and this demand will be on universities, not the Department or Parliament” in B. Phakati (2014) ‘State’s student funding scheme unable to meet demand’ in *Business Day*, 11 September.

4.3 Quality assurance

The last decade saw the implementation of a comprehensive system of external quality assurance. The principle of quality as a key element in the relationship between the state and higher education, in the context of institutional autonomy, was highlighted, and the need for a coordinated external quality assurance system for a newly-integrated sector was realised in the establishment through the Higher Education Act of 1997 of the Council on Higher Education and its permanent committee, the Higher Education Quality Committee, at one remove from government, to carry out programme accreditation, institutional audits and quality promotion. Quality assurance as the third driver to steer a system, along with planning and funding, was intended to be the guarantor of rationality in the application of the drivers, protecting against arbitrariness or the apportioning of scarce resources to programmes of poor quality, and assisting to increase levels of public trust in the higher education system as a whole. In the early policy debates (NCHE etc.), an independent Council as a non-political distributor of funding related to performance and quality, much like funding councils in some other systems, had been mooted; in the event, the White Paper of 1997 and the Higher Education Act ensured that the funding responsibility stayed with the national department, while the CHE that it established became responsible for quality assurance but without the direct link to funding allocation, as well as for providing advice on higher education matters to the Minister of Education (or Higher Education and Training as from 2009).

There are, however, two main players in the narrative of external quality assurance, with somewhat differing underlying philosophies and ideas regarding the primary purpose of higher education, and a range of others that had an impact on specific parts of the higher education system. On the one hand, the Council on Higher Education, through its Higher Education Quality Committee (HEQC), conducted a series of external quality audits of all public institutions, and some of the larger private ones, in a cycle that began in 2004 and which is currently nearing its conclusion. The keywords characterising external quality assurance through the HEQC were ‘fitness for purpose’, a balance between development and accountability purposes, alignment of quality assurance with strategic planning and resource allocation, quality and equity to be realised concurrently, deliberate quality management, a particular emphasis on the quality of teaching and learning and the institutionalisation of a quality culture.

The approach to audits was an avowedly developmental one; the purpose was to stimulate the development of comprehensive institutional processes and policies to assess the quality of three core functions of higher education, those being teaching and learning, research and community engagement. The methodology stressed the need for institutional self-evaluation, as well as peer review, in an effort to develop capacity in the system to improve and demonstrate that institutions were fit for their purposes as defined in their missions. A second major principle guiding the audits was that institutional purposes could also be interrogated; the fitness of an institution’s purpose in the context of a changing South Africa was a major consideration. Perhaps the overarching concern of the

audit process was the transformation agenda; the yoking together of both quality and equity in a bid to improve the social justice ends of higher education. While the origins of external quality assurance processes in other parts of the world had lain in the neo-liberal agendas of competitive governments in the 1990s, and their need to measure and demonstrate the quality of their higher education institutions, the CHE's approach was instead to use tools with conservative origins for progressive ends.⁵²

The audit reports on each of the institutions, while paying attention to their achievements, also provided recommendations for improvement and required progress reports and monitoring of their implementation. This aspect of external quality assurance was not directly linked to funding, as noted above, being conducted by a different agency from the national department. In some interpretations, this was important for the success of the enterprise, as mutual trust between institutions and the HEQC was considered a determining factor in allowing for a greater engagement with institutional concerns than had they been concerned their revelation of difficulties would lead directly to funding consequences. In other interpretations, the lack of a direct connection to funding weakened the impact that the three steering mechanisms – funding, planning and quality assurance – might have had in responding more quickly and comprehensively to institutions that found themselves in governance or management crises that impacted on the quality of their core functions. The impact on institutions of external quality assurance was nonetheless considerable, with many developing much more robust internal quality assurance systems than they had previously enjoyed. The audits also focused attention on improving the quality of teaching and learning which was placed at the centre of the higher education enterprise, with an emphasis on the need for curricula to be contextually relevant and related to institutional missions. They also provided comprehensive accounts on the extent to which individual institutions were responding to the national transformation goals. The analyses of teaching and learning problems across the sector have led to a new phase of external quality activity in the HEQC's Quality Enhancement Project (QEP) which is designed to bring about improvements in the actual quality of teaching and learning activities at institutional level.

Other aspects of ongoing external quality assurance carried out by the HEQC were focused on the programme level, rather than the institutional. National reviews of particular programmes – the MBA, teacher education qualifications and more recently social work programmes – and the accreditation of new programmes have been concerned to ensure that minimum standards across the system are met. The combined quality assurance efforts have arguably contributed to the external pressures on institutions, fuelling the trend towards greater regulation and accountability, but they have also assisted on focusing attention on the analysis and potential resolution of quality concerns in the system. In all the activities of the HEQC, a broad view of transformation pertained; the various processes underscored a broader purpose for higher education than the utilitarian, with transformation applying as much to the nature and conduct

⁵² L. Lange (2006) 'Symbolic policy and "performativity": South African higher education between the devil and the deep blue sea' in *Kagisano*, 4, p. 40.

of institutions, the design and delivery of their curricula as to the changing demographics and inclusion of women and people with disabilities.

A second major player in the external quality assurance sphere was the South African Qualifications Authority (SAQA), which was predicated on a somewhat different ideas base. Emanating initially from concerns in the Labour Department about the poor skills base for human resource development in South Africa, the major activity was the development of a National Qualifications Framework on which all education and training offerings would be registered. A common currency of credits and unit standards was established in the late 1990s in an attempt to create access and articulation opportunities in a seamless way across the entire spectrum of educational and training qualifications, no matter where the learning had taken place. A complicated architecture of standards generating and quality assuring bodies in different economic sectors was erected. The trend towards ‘de-differentiation’ noted above was uppermost in a system based on applied competence and generic skills acquisition and that viewed the main purpose of higher education being to provide the high level skills necessary for economic growth. The growth of external monitoring was also evident in the establishment of the Sectoral Education and Training Authorities (SETAs) which were accredited by SAQA as Education and Training Quality Assurers (ETQAs) comprising a range of mostly external stakeholders, with responsibility for qualifications in a particular economic sector, some of which overlapped with those whose quality was assured by the HEQC. Along with a growing number of professional councils, both statutory and otherwise, many of which understood their role as the registration of professionals to include programme accreditation – there was, what the 2004 CHE Review terms, “a burgeoning complexity in the realm of quality assurance jurisdiction”.⁵³

Indeed, the period until 2004 was characterised by the growth in external regulation through SAQA policy and regulations, against which higher education had chafed – particularly against a unit standards methodology. Contestation from higher education was instrumental in leading to a protracted review of the NQF and the external quality assurance bodies culminating in 2001, which focused on the creation of three so-called bands of the learning system (general education, FET and higher education) in which context-relevant qualifications frameworks would be developed. The NQF Act of 2008 saw a major reorganisation of the external quality and regulatory environment, with the intended streamlining of the SETA environment and the ETQAs, and the establishment of three Quality Councils, one for each area – general and further education, trades and occupations and higher education.

The last decade has seen a repositioning of the roles of the various agencies, with, for higher education, the major focus of activity being the development, and subsequent revision, of the Higher Education Qualifications Sub-Framework (HEQSF) within the NQF and the beginning of a process of aligning existing programmes with it, requiring major curriculum development by some institutions in order to ensure the integration of higher education offerings on a single framework. In the preoccupation with creating a single system with one set of rules, the reorganisation of higher education offerings onto a single

⁵³ CHE (2004) *South African higher education in the first decade of democracy*.

qualifications framework, the Higher Education Qualifications Framework of 2007 had perhaps inadvertently fuelled the ‘mission drift’ in universities of technology that had earlier been considered undesirable – as discussed in 5.2 below. While the Framework was successful in bringing some coherence to the system through creating a set of parameters for all higher education offerings to adhere to no matter where they were offered, the original version tended to downplay professional qualifications in restricting the qualification pathways, particularly into the postgraduate level. While the Framework gave some weight to the main qualification type offered by universities of technology by recognising only a 360-credit diploma amidst a plethora of offerings of various sorts that had all purported to be diplomas, it also arguably privileged pure academic research over professional or applied emphases in its specifications for Masters and Doctoral qualifications. The revisions of the latest version, the HEQSF, signal more opportunities and pathways for qualifications with a professional focus at all levels, bringing it more in line with the international trends towards a greater diversity in qualification types.

A recent trend has been the shift in the discourse from offerings being defined mainly in terms of credits and levels to the foregrounding of the purpose of a qualification and a greater understanding of how different knowledge types influence curriculum. The seamless articulation originally imagined had fed a view that all credits at a particular NQF level were equal and exchangeable, regardless of the curriculum in which they had been designed, which perhaps created unrealistic expectations of access to a higher education system that, already growing rapidly, were difficult to realise. A major shift in thinking, evident early on but intensified from about 2009, has been the general realisation that the education aspirations of the youth cannot all be met by the higher education system, and that the expansion of the further education and training system offering vocationally-oriented qualifications as well as artisanal training, is a major imperative. One of the current major concerns is that the so-called ‘inverted pyramid’ of South Africa’s education system, with the most students in higher education, fewer in FET, and even fewer at artisan level, identified as a peculiarity to be overcome in the early policy processes, has not changed significantly in the twenty-year period under discussion.⁵⁴

As the bringing together of disparate types of offerings in higher education is being undertaken and contributing to a new cohesiveness, so are large questions about the boundaries of higher education being raised. With the creation of a separate Department of Higher Education and Training (DHET) in 2009 into which aspects of the education system that had formerly been under the auspices of the Department of Labour (the SETAs etc.) and other national Departments (Agricultural colleges) were brought, the canvas has expanded beyond universities to include vocational training and the provision of all types of post-school offerings. The changed landscape has brought to the fore the issue of the nature

⁵⁴ NCHE (1996) *A Framework for Transformation*. In 2013, there were 983 698 enrolments in public higher education institutions; 639 618 in Further Education and Training colleges, and 249 507 in Adult Education Centres (DHET (2015) *Statistics on post-school education and training in South Africa 2013*, p. 3).

of the relationship between the HEQSF and the other frameworks, and the extent to which it is possible for students to move between workplace-based vocational study and formal higher education qualifications. The tension between integration and differentiation is evident, with somewhat different meanings and definitions being applied. Within the higher education system as currently defined, the trend has been to attempt to integrate education and training in the kinds and nature of qualifications offered, particularly in the comprehensive universities and the universities of technology (although this has sometimes been precluded by the incompatibility of different knowledge types);⁵⁵ the question now, as put forward for example in the 2013 White Paper, is how to integrate the three frameworks and at the same time ensure a differentiated set of offerings straddling the whole post-school landscape. In terms of technological and vocational training, the impetus is for comprehensives and universities of technology in particular to prioritise the establishment of closer relationships with the FET sector and industry, whereas in the past decade, developing the critical attributes of traditional universities had arguably been uppermost in their activities.

4.4. Planning

As noted above, a major preoccupation in terms of redefining the purposes of higher education was the need to integrate a fragmented system, and to give expression to changing purposes through different institutional forms and a reconfigured higher education landscape. Diversity in higher educational offerings was to be achieved through planning at the programme level through the introduction of state steering of the offerings of higher education institutions through the Programme and Qualifications Mix (PQM) exercise noted above, the additional purposes of which were to give effect to decisions about the restructuring of the system, to curb the growth of distance education programmes at contact institutions, to halt the proliferation of satellite campuses and to reduce regional duplication of offerings. The theme of integration applied also to the private sector, which was considered to be under-regulated, and thus it too became subject to new legislative and external quality assurance regimes, as described in Chapter 2 of this review.

The intended rational steering of the system through planning has become more complex given the wide-scale restructuring through mergers and incorporations, discussed in Section 5 below, that has left in its wake some institutions redefining themselves and their missions – which has implications for their programme mix and their research output – with other institutions simply trying to manage in the aftermath of great upheaval and thus not necessarily being responsive to the change stimuli as intended, and yet others continuing in terms of already established identities and offerings. In many senses, the post-merger period has been one of consolidation and an attempt to re-establish stability for the most part, but with a number of institutions coming under great stress such that reappraisals of particular mergers have had to be undertaken.

⁵⁵ See, for example, SANTED (2010) 'Differentiation, knowledge and curriculum' (conference report).

4.5. Other drivers – towards an integrated system of innovation

The higher education system has not only been steered through the national Department of Higher Education and Training (and its predecessor), but by drivers emanating from other parts of the system that are more directly concerned with the goals of modernisation, primarily through the channelling of energies in science and technology development. The 2004 review described the inherited science and technology system as uncoordinated, non-transparent, operating in silos, focused largely on state security issues, racially skewed, with an under-production of science, engineering and technology graduates; the question thus was how to develop an integrated, coordinated and responsive science and technology system answering to the demands of a modern economy. Almost all research production in higher education institutions had been concentrated in about five traditional universities and was skewed towards social sciences and humanities rather than natural sciences. The policy emphasis through the then Department of Arts, Culture, Science and Technology (DACST) was on developing a nationally coordinated strategy to promote synergy between the different sectoral, infrastructural and institutional elements of the system, to promote innovation and to develop a research framework in line with national priorities through a National System of Innovation (NSI) and a national research plan. These were underpinned by the three ‘pillars’ of innovation, an increase in investment in the science base and the changing of its demography, and the creation of a fully-integrated science and technology system.

Higher education policy was, a decade ago, somewhat separate from the overall science and technology developments, but was also subject to the introduction of targeted funding. There was the introduction of competitive-bid funding through the National Research Foundation (NRF) and thus a channelling of funding to high-priority research areas; a new focus on industry collaboration and public-private partnerships through THRIP funding and an Innovation Fund to fund the development of products in strategic areas determined by the National Advisory Council on Innovation (NACI).⁵⁶

In this relation, the 2004 Review raised three challenges in relation to a system of innovation:

1. The tension between science and technology policy processes which emphasise instrumentalist notions of research and the higher education research policy process – managed by different government departments.
2. The impact of targeted funding drivers on basic research at higher education institutions in favour of the strategic and applied ends of the research spectrum.
3. The apparent lack of success by 2004 in increasing research output and the goal of developing young, black and women researchers, and the continuation of existing patterns of which institutions produce the majority of the research output.

⁵⁶ The Technology and Human Resources for Industry Programme (THRIP) is a research and development programme of the DTI and NRF and supports an average of 235 projects per year.

In the last decade, there has been some success in increasing research output, as discussed in the Research chapter of this review, and much of the success must be ascribed to national policies that have elevated the value of research at both a national and an institutional level. It is also clear that, despite the drive to de-differentiate which saw all institutions required to undertake research as part of their missions, the production of research is still concentrated in a few institutions, mostly those that were not merged with others in the overall restructuring of the institutional landscape. Some high-level successes, such as the awarding in 2012 of the SKA telescope project jointly to South Africa and Australia, have raised the research profile of the country. Some South African institutions compete favourably with institutions in like countries on the various ranking systems. The production of science, engineering and technology graduates has, however, increased only marginally as a proportion of the whole, and not in line with the original policy intentions. The impact of a schooling system in which science and mathematics appear to be weak, has been the subject of many a popular article on the higher education system and its perceived poor production of graduates ready to advance the knowledge economy.

There have been unintended consequences: among them, the impact on academic staff, particularly in institutions originally set up as primarily teaching institutions, whose aspirations and activities are now shaped by different requirements and incentives and the need for them to pursue research qualifications. To some extent, there has been a polarising of staff between teachers and researchers within some institutions, as discussed in Chapters 4, 5 and 7 of this review, with differential rewards systems; at the very least, there has been a wider range of expectations of all staff members. There has arguably been an inadvertent devaluing of the humanities (some have argued there is little empirical evidence to support this statement as the humanities have been included in external funding systems such as the NRF), leading to the controversial establishment of a national institute of the humanities mandated to stimulate the humanities from outside the institutions.⁵⁷ There has been an intensification of the 'differentiation debate', in which proponents for advancing the purpose of higher education and knowledge production as a key stimulus to the development of a modern economy argue for the concentration of resources in research-active institutions, while others argue for the development of research in all institutions as a matter of equity, whatever their current infrastructure and staffing capacities.

In terms of the questions regarding the modernisation agenda of an intended national innovation system posed in the 2004 review, the first still pertains. As discussed in Chapter 5, previous reviews have found that the achievement of a national system of innovation was still compromised by being differently driven from different parts of government. The 2013 White Paper for Post-School Education and Training acknowledges that more needs to be done to align the visions and steering mechanisms of the DST, DHET and funding agencies such as the NRF. Beyond research and innovation, however, there is a larger national

⁵⁷ J. Mouton (2011) 'The humanities and social sciences in South Africa: Crisis or cause for concern' in *South African Journal of Science*, 102(11/12), p. 961.

development context that views higher education very much in the instrumentalist terms noted in 2004; indeed, higher education in this view is conceived of as the instrument necessary to deliver high-level skills and human resources useful in the advancement of the so-called developmental state. The National Development Plan of 2011, while acknowledging other roles for higher education, is most concerned with increasing its efficiency for knowledge production and national development through focusing on reaching particular targets. Having remarked that the system is a low participation one with high rates of attrition, that the curriculum is not always responsive to context, and that the knowledge production is not well-linked into a system of innovation, it concludes that “massive investments in higher education have not produced better outcomes in academic performance or graduation rates”. It thus focuses on the need to reinvigorate universities through increasing participation rates to 30% by 2030, particularly in mathematics, science and engineering disciplines, producing more scientists to improve the research and innovation system – graduation rates to rise by 25%, to increase the number of PhD holders drastically both to increase the qualification levels of staff (37% permanent academic staff holding PhDs in 2011 compared with 48% in Brazilian public universities); and to drive the knowledge production necessary for a modern economy.⁵⁸ While recognising the need for redress and support for struggling higher education institutions, the NDP is clearly in favour of focusing resources and energies on the areas of the system that will deliver the outputs necessary for the entire education system to flourish, and thus it advocates purposeful differentiation. Detectable in the NDP is a frustration with a higher education system that, while displaying some pockets of excellence, it finds wanting in terms of being fit for the modernising purpose envisaged. The discourse has become harder; the targets set are ambitious. It must be said thus, that despite some gains, the three challenges in the 2004 review listed above with respect to modernisation through a system of innovation are as pertinent as ever.

5. The higher education system - size and shape

5.1 Mergers

While Section 4 above explored the policy drivers that were employed to achieve the national goals for the system of modernisation, transformation and integration, another means of achieving such ends was the restructuring of the system to overcome the worst manifestations of apartheid engineering, and to increase efficiency and diversity in the system. The issue of how to create a single, but diverse and coordinated system was accompanied by the politics of restructuring. The restructuring of the landscape and the reduction in the number of institutions from 36 to 23 through mergers was an extensive undertaking and

⁵⁸ Schwartzman, S. (2013) ‘Higher education, the academic profession, and economic development in Brazil’ in Altbach *et al.* *The global future of higher education and the academic profession*, p. 40. In addition, ASSAf’s PhD Study (2010) notes that despite positive growth in the production rate, South Africa continues to produce a very small number of doctorates per million of the total population (26 doctorates per million in 2007). This compares very unfavourably with other countries such as Portugal (569 per million), Australia (264 per million), Korea (187 per million, and Turkey (48 per million).

was accompanied by intensive political debate and negotiation, as well as logistical upheaval on a grand scale. The incorporations of colleges, and the consolidation of institutions in particular regions through mergers mostly took place in the 2002-2005 period, following the development of the National Plan for Higher Education in 2001, and the formal announcement of new institutions and their names late in 2003. In this review, a decade later, there is thus some reflection on the merger project in the various chapters, its implications for institutions and its consequences, although it is still too soon to evaluate it fully.

There were arguably three main rationales behind the mergers that took place: transformation, efficiency and diversification. The main impetus for the major restructuring of the system as imagined in the National Commission of Higher Education in 1996 was largely to overcome the legacies of an apartheid-engineered landscape as quickly as possible. Inspired by a vision of transformed institutions for a new equitable and vibrant democracy formed from the merger of historically advantaged institutions with historically disadvantaged ones, particularly where they had been set up separately in close proximity, the policy and political terrain in the first decade post-apartheid was focused on how this was to be achieved. Three years' of negotiation and bargaining led in 2003 to the eventual framework for the size and shape of the system, and while energies in the decade since have been concentrated on the actual implementation, in evaluating the impact and effect of the mergers, the intentions and origins are worth revisiting in hindsight.

A major priority for the new post-apartheid administration was how to give expression to the principles of the new Constitution of equal access to education and to redress the consequences of a higher education system that had been premised and built on segregationist philosophies and discriminatory practices. The early policy processes had all recognised the need for a substantial reorganisation of a fragmented and unequal higher education system.⁵⁹ The CHE's commissioned report *Towards a new higher education landscape*, released in 2000, had made a case for higher education as a public good, and had argued that in order to address past inequalities in the context of the changing demographic composition of universities, social redress required the creation of a diverse and differentiated higher education system and a reduction in the number of institutions through mergers to ensure the system's sustainability. The intention was to create well-managed institutions of different types, with expanded access, offering opportunities and financial assistance to all South Africans – the transformation agenda was uppermost.

Differentiation implied different purposes or missions for institutions with some institutions focusing on high-end research and others on teaching. In the event, however, the CHE's proposals for a differentiated system were rejected by a sector that argued that, rather than this resulting in new institutions with a diversity of missions for all South Africans, past inequalities on racial grounds would in fact be perpetuated, with historically black institutions and technikons being relegated to a second-class status – in the then Minister's words, the CHE's proposals for a differentiation of institutions according to function were "lost

⁵⁹ National Education Policy Initiative (NEPI), and the National Commission on Higher Education (NCHE).

in the fog of racial essentialism”.⁶⁰ Ultimately, however, a compromise position was reached in which there were to be three loosely-categorised institutional types: universities; universities of technology and comprehensive universities; the difference residing in the so-called mix of purely academic and vocationally-oriented programmes that they would offer. Which institutions were to be merged was the next hurdle; a National Working Group devised a set of proposals in 2001, some of which were contested and altered in a political negotiation process in the two years following. The new institutions thus, were all formed on the basis of the principle of transformation, but the actual size and shape of the system was as much a product of rational data-based planning as the advancing and protecting of individual institutional interests.

A second, but perhaps less publicly expressed rationale was to increase efficiency across the system. Given that a number of institutions were experiencing both financial and leadership challenges, and that experienced university leadership was in short supply, it must have seemed sensible to merge institutions in such a way that economies of scale, more coherent management capacity, and the rationalising of duplication of programmes in particular regions would be achieved.

While the third rationale behind the mergers as expressed from the 1997 White Paper on was the need to create a system with a diversity of institutions serving different purposes, how they actually unfolded, however, was contradictorily also influenced by the spirit of the times moving towards de-differentiation, as mentioned earlier. Much of the political energy and some of the policy drivers had worked somewhat against differentiation, such that integration and diversity pulled in different directions. In the National Plan of 2001, a concern had been voiced that “the programme distinction between technikons and universities has been eroded in line with the White Paper’s suggestion of a ‘loosening of boundaries’ between institutional types... which has resulted in a slow, but sure, move towards uniformity...”.⁶¹ Yet in a political concession (as described by the Minister at the time) as part of the merger negotiations, technikons in 2003 were granted the right to become universities of technology, with the associated honorifics of universities as well as a new focus on research.⁶² There were concerns voiced in the sector that they, and the comprehensive universities, might lack a clear academic project tied to their particular institutional type and be vulnerable to academic drift away from offering the diplomas that were much-needed for economic advancement. Mission drift, however, was intended to be managed and steered through the funding and planning drivers at a programme level, as outlined in Section 4 above.

In assessing the impact of the mergers as a whole, the major considerations must be related to the intention to bring about more rapid transformation than might otherwise have been the case through reorganising the apartheid-engineered existing configuration, as well as the intention to create a diversity of new institutional types that would be suited for different purposes in line with the

⁶⁰ A. Hadland (2011) *Kader Asmal: Politics in my blood*, p. 276.

⁶¹ DoE (2001) *National Plan for Higher Education*.

⁶² Hadland (2011) *Kader Asmal: Politics in my blood*.

imperatives of a modernising state, or a developmental state as was the discourse at the time. In terms of the transformation imperative, while some mergers have arguably led to the emergence of institutions that embody the transformation ideal, there remains a division between historically advantaged and historically disadvantaged institutions with respect to both physical resources and cultural capital.⁶³ This can be identified in, *inter alia*, differences in the school results of the entering student body, the throughput of students, the qualifications of academic staff and the ability of institutions to manage their resources in the interests of quality teaching and learning.⁶⁴ Indeed, the 2013 White Paper takes as its point of departure that there are continue to exist huge disparities between institutions as a result of both historical legacies and institutional capacity to use resources effectively despite the policy drivers to create institutions of different types through the merger process.⁶⁵

Twelve institutions currently continue in much the same form as in the pre-merger period, having undergone only some or no smaller incorporations. Two former universities, though not undergoing a merger process, were to become comprehensives, but it is unclear to what extent they have been able to overcome internal resistance to shift their missions and identities. Eleven new institutions resulted from more extensive merger processes; four comprehensives were formed through the merger of a former technikon and a previous university; four new universities resulted from the merger of previous universities, and three new universities of technology resulted from the merger of former technikons. In one of the first studies on the impact of the merger process as a whole ten years after the initiation of the process, it was concluded that, on the basis of the evidence from external quality audit reports and Ministerial Committee reports on individual institutions, and the findings of the Merger Study Group that had been formed to monitor the progress of implementation, there have been three broad outcomes for merged institutions. Some have managed to integrate their academic functions to a large extent and have successfully created a new organisational culture for themselves.⁶⁶ These are generally institutions that embraced the merger project fully, spending much energy on the practicalities of merging such as aligning conditions of service and managing pipeline students in a very short space of time, as well as undertaking fundamental internal institutional restructuring processes to better fulfil new visions and strategic directions. Arguably, these were the institutions in which at least one of the merger partners had better resources and more capacity to undertake such far-reaching processes in the first place.

⁶³ V. Bozalek & C. Boughey (2012) '(Mis)framing higher education in South Africa' in *Social Policy and Administration*, 46(6), p. 689.

⁶⁴ C. Boughey & S. McKenna (2011) 'A meta-analysis of teaching and learning at four comprehensive universities' (unpublished paper).

⁶⁵ DHET (2013) *White Paper for Post-school Education and Training: Building an expanded, effective and integrated post-school system*.

⁶⁶ M. Hall (2015) 'Institutional culture of mergers and alliances in South Africa' in A. Curaj, L. Georgiou, L.J.C. Harper & E. Egron-Polak (eds.) *Mergers and alliances in higher education: International practice and emerging opportunities*.

A number of other institutions have found the merger process much more difficult to negotiate. Governance and leadership challenges, the practical difficulties associated with managing multi-campus institutions spread over large geographic distances, the existence of multiple traditions, organisational structures and group and individual allegiances that have led to factional differences, are some of the factors that have made the path to the creation of an integrated academic project and a sustainable and settled new institutional culture and identity more challenging for this group.

For at least two institutions, the merger project can be said to have failed to create the vibrant new institutions intended; one de-merger process is already underway. In the post-merger period, four merged institutions have found themselves under administration as a result of governance or management crises; whether this can be attributed to the merger process itself is not clear, however, given that there have also been external interventions in four non-merged institutions since 2005, for similar reasons.⁶⁷

At a system level, three things are clear. The higher education landscape is fundamentally altered, yet the pattern of historical inequalities across the system persists. Some higher education institutions remain mono-cultural in terms of race and particularly class, with poorer students continuing to attend institutions still thought of as historically disadvantaged. It is at these institutions that student debt and backlogs in infrastructural funding are most severe, which leads to the view that an undifferentiated funding formula fails to take such contextual realities sufficiently into account.⁶⁸ Other institutions that were not merged are taking longer to change their demographics than some of their merged counterparts. It has been calculated that currently only a quarter of total headcount enrolments are at institutions that can be considered to be successfully merged, suggesting that the merger process was not sufficiently extensive to achieve more fully the transformation goals envisaged by the NCHE in 2001.⁶⁹

A second pervasive characteristic of the higher education system is that, despite overall growth, and the fundamental restructuring of the landscape, the throughput rates and graduation rates across the system have not improved significantly from the 2001 figures to the present.⁷⁰ The CHE's 2013 task team on undergraduate curriculum structure concluded that, "the output of higher education is not meeting the country's needs ... the system has low internal efficiency in utilising human and material resources (and consequently does not provide a sound basis for growth), and ... the scale of the failure and dropout occurring within a small and selected student body points to substantial systemic

⁶⁷ Administration means that the Minister of Higher Education and Training appoints an administrator to take over the governance powers of the council or the executive management (including the Vice-Chancellor), or both.

⁶⁸ M. Letseka & S. Maile (2008) 'High university drop-out rates: A threat to South Africa's future' (policy brief).

⁶⁹ Hall (2015) 'Institutional culture of mergers and alliances in South Africa' in Curaj *et al.* (eds.) *Mergers and alliances in higher education*.

⁷⁰ I. Scott, N. Yeld, & J. Hendry (2007) 'A case for improving teaching and learning in South African higher education' in *Higher Education Monitor*, 6.

problems that require systemic responses”.⁷¹ While that report was concentrating on curriculum structure, its conclusions imply that the restructuring of the institutional landscape as a systemic intervention has had little overall effect on improving the quality of the educational process. In terms of efficiency too, the poor throughput rates indicate a system in which public resources are not being used to their fullest effect. The financial scenarios in that report indicate that, based on 2010 data, the ‘unproductive use of subsidy’, i.e. subsidy that did not result in student graduations, was in the order of R1 116 000.00 – more than a quarter of the total. It also calculated that if a 28% growth in graduates was to be achieved through increasing student intake, that amount would rise by 50%.⁷²

Part of the argument of that report is that there exists an articulation gap between school and university, and that persistent poor throughput rates, which may have many other contributory causes such as lack of funding, can in the main be ascribed to the academic underpreparedness of students entering higher education. The responses from universities to the proposal put forward for a change in the curriculum structure to allow extra funded curriculum space to ameliorate the worst effects of this underpreparedness, indicate a widespread perception and frustration that the secondary school system is failing to prepare its learners adequately for study at higher education level.⁷³ There is a general recognition that many extensive curriculum changes at secondary level have exacerbated the problem of a system already weak in preparing its learners in the basics of academic literacy and numeracy, despite ongoing incremental increases in the pass rate.⁷⁴ This is illustrated in the report on *Skills through and for SIPs (Strategic Infrastructure Projects)* wherein experts in a variety of occupational areas found that the lack of communication skills and basic numeracy in school-leavers was hindering the development of professionals and technicians needed to support the strategic development projects of the country.⁷⁵ The CHE task team calculated the extent of the concern, noting that on the basis of current rates of completion of a first degree or diploma in regulation time, which is roughly 27%, only about 40 000 students of an intake of 150 000 could be considered to be adequately prepared. To ensure a cohort with a reasonable chance of the majority passing in regulation time, the school system would need to produce another 100 000 or so well-prepared high achievers per annum. This, clearly, is a

⁷¹ CHE (2013) *Proposal for undergraduate curriculum reform in South Africa*.

⁷² Ibid. p. 137.

⁷³ CHE (2014) ‘Report on responses from institutions on the proposal for undergraduate curriculum reform’ (unpublished).

⁷⁴ The National Senior Certificate pass rate in 2013 was 78%, the highest since 1994. The number of passes allowing access to a Bachelor’s degree increased by 60% and overall passes by 32%. The increasing pass rate is increasing the pressure on higher and further education for access, while the lack of preparedness is not being ameliorated.

⁷⁵ The DHET ‘Skills for and through SIPs’ report (2014) notes “there are only some 37 000 matriculants who achieve 60+ (%) for mathematics and of those only 5 000 to 6 000 currently are African. This severely limits the numbers who can enter many professions required for the delivery of the SIPs and is a challenge in terms of transformation of the professions.” It also notes that there are insufficient numbers of matriculants who qualify for entry to many of the diploma programmes that require mathematics and that the literacy and numeracy skills of those who do qualify for entry to higher education leave much to be desired.

very tall order for a school system in which many assessment surveys undertaken indicate its major difficulties in achieving the fundamental building blocks of learning.⁷⁶ It also is indicative of a systemic problem with the education system overall which impacts not only on throughput rates in higher education, but on the development of the human capacity to realise the development goals of the country as a whole.⁷⁷

5.2. Differentiation

A third issue is that of an inconclusive and somewhat messy debate about differentiation, and the lack of a clear direction on which to move forward. As mentioned above, one of the rationales for the mergers was the need to create a diversity of institutions to serve a multiplicity of purposes in a modern developing economy. Underlying the differentiation debate are contested understandings of what differentiation means and what it is for, with implications for the hard questions of how scarce resources should be allocated. Internationally the expansion of higher education systems has entailed an increasing diversity of institutions serving different purposes – a horizontal differentiation of institutions of equal value, but serving different functions.⁷⁸ This idea overlaid onto a South African institutional landscape, however, engenders a more complex matrix in the face of existing vertical differentiation on the axis of historical advantage or disadvantage, between those institutions with a research function that find themselves at the apex of a system measured on research output, (and that are generally also historically advantaged), and those established for different purposes – the development of technological skills for example – and both horizontal and vertical differentiation within institutional type categories. The poles of the debate focus on historical advantage/research versus redress, but also on the valuing of research as the defining characteristic of an institutional type versus teaching-orientation or technological skills development. Given this complexity, it is understandable that fundamental contestation exists around whether, and how, differentiation should take place. There have been significant contributions to the debate, mainly by the Centre for Higher Education Transformation (CHET), that have ‘clustered’ institutions, first according to research and research-related indicators, and later according to a broader set of performance indicators, demonstrating that while the top cluster has remained much the same as pre-merger, there are new players moving into the top cluster, suggesting that the time is right to make the difficult decision to drive a differentiated landscape through differentiated funding.⁷⁹ The work by CHET uses a range of measures to argue that institutional type, and movement between sub-categories and even main categories of such types, should be on the grounds of evidence-based criteria and not simply on the ‘analysis of institutional missions

⁷⁶ As an example, the World Economic Forum’s *Global Competitiveness Report 2014-2015* places South Africa 144 out of 144 countries on the indicator concerning the quality of science and mathematics education at school level. Higher education as a whole is placed 86th of 144.

⁷⁷ CHE (2013) *Proposal for undergraduate curriculum reform in South Africa*.

⁷⁸ U. Teichler (2008) ‘Diversification? Trends and explanations of the shape and size of higher education’ in *Journal of Higher Education* (56), p. 352.

⁷⁹ CHET (2010) ‘Institutional clusters in higher education in South Africa’ (presentation).

and strategic plans, and negotiations between government and institutional representatives’.

There have been sector-wide forums and discussions in which there appears to be a greater movement towards the acceptance of the idea of differentiation, but as yet no clear plan on how to achieve it. The 2013 White Paper, while suggesting that differentiation is desirable, both endorses the current categorisation of institutions into universities, universities of technology and comprehensives, and argues for a continuum of institution types based on the negotiation of missions with the DHET, without expressly clarifying what the priorities – for example, between research and redress – would be. This lack of clarity, and the definition of institutional types in terms of the proportion of ‘vocational-type’ programmes they offer, has had implications for the identity and teaching and learning practices of the new types of institution that came into being in the post-merger phase.

The six universities of technology have, in the past decade, been confronted by forces pulling in different directions. In terms of creating an identity for themselves, some are moulding themselves in the patterns of traditional universities in their nomenclature, their activities and in the exhortation to enter the research arena on similar terms, as well as in the qualifications required of their staffing complement. Their educational offerings too are changing, in that it appears that more new degrees are being offered at the expense of diplomas, which has national implications as diplomas are much needed for the development of mid-level skills.⁸⁰ Conversely, however, they are also attempting to create a different and unique identity through their focus on technology with implications for staffing complements and curriculum, albeit at a greater remove from industry than once was the case. Despite the drive to integrate education and training, the vocational mandate of the erstwhile technikons has in some cases been relatively weakened, exacerbated by two decades’ experimentation with training becoming the preserve of Sector Education and Training Authorities. This is evidenced in the apparent devaluing of industry experience in favour of academic qualifications in the appointment of staff, in the move away from work integrated learning in many programmes in the face of tougher external quality assurance demands and the lesser role of the Advisory Boards comprising academic and industry partners that had helped to shape their curricula, particularly when programmes were ‘convened’ and developed nationally.⁸¹

The new institutional type, the comprehensive university, was generally described as that which would offer both degrees and diplomas, but the concept and identity of such a type of institution was more or less left to evolve over time. A complicating factor in forging a common identity for this type of institution is the roots of their formation: some were formed through the merger of a university and a technikon, while others, unmerged, were to change their programme offerings to become ‘comprehensive’. Despite being somewhat differentiated in

⁸⁰ A. Kraak (2004) ‘Human resources development and the skills crisis in South Africa: The need for a multi-pronged strategy’ in *Journal of Education & Work*, 20(4), p. 123.

⁸¹ S. Shay, M. Oosthuizen, P. Paxton & R. van der Merwe (2011) ‘Towards a principled basis for curriculum differentiation’ in E. Bitzer & N. Botha (2011) *Curriculum inquiry in South African education*.

terms of the mix of programme types, the three institutional types i.e. traditional universities, universities of technology and comprehensives were not based on clearly differentiated purposes, focus areas, curriculum types or pedagogies, which was arguably most difficult for the comprehensives which were both part-university and part-technikon.

Both institutional type and programme purpose have significant effects on teaching and learning, as different kinds of knowledge require specific ways of being taught and learnt, how curriculum is organised and what attitudes, values and practices are cultivated. The definition of a comprehensive in terms of its offering both university and 'technikon-type' qualifications, steered through the mechanism of PQM approval, belied the difficulties of translating different knowledge structures into curricula, particularly as they are associated with more than just their vocational or formative nature and include issues of pedagogical approach, academic identity, extent and type of research and links to industry. Indeed, detailed work on curriculum development in two comprehensives in the last decade concluded that teaching and learning practices, knowledge structures and curriculum logics differed according to the purpose of a programme and were not easily translatable across knowledge domains.⁸² This implies different pedagogies, curricula and staffing for diploma and degree programmes, even in the same discipline, making the achievement of an integrated identity for a comprehensive very difficult to achieve. At the same time, the blurring of the boundaries between institutional and knowledge types promoted a move towards homogeneity rather than differentiation.⁸³

Altbach *et al.* note that, "the need for differentiated systems with diverse institutional missions is universally accepted as a response to massification. Yet, the pressure for academic institutions to copy one another – the tendency toward isomorphism – and to rise in the academic hierarchy is very strong. While this trend has a long history, it has intensified in the era of rankings and global competition." They go on to say, "The essential problem of isomorphism involves unbridled competition among academic institutions pursuing the same goals. This trend may undermine efforts to develop a system of institutions that is appropriately differentiated, based on the specific needs of a given system – with different goals and responsibilities, patterns of funding, admissions policies, and other characteristics."⁸⁴ They suggest further, that to counteract this trend, governments need to steer systems appropriately to keep academic systems diversified in the interests of achieving larger national goals.

The differentiation debate is one that needs a resolution in order to ensure that the variety of institutions fulfilling somewhat different roles which enable a system to grow beyond an 'elitist' one becomes a reality, without all institutions tending towards the 'isomorphism' that is seen as an impediment to the realisation of the full potential of massified higher education systems.⁸⁵

⁸² Ibid.

⁸³ J. Muller & N. Cloete (2004) *Playing fast and loose with knowledge boundaries*.

⁸⁴ P.G. Altbach, L. Reisberg & L.E. Rumbley (2009) 'Trends in global higher education: Tracking an academic revolution' (report).

⁸⁵ Ibid.

6. Organisational and relationship matters – institutions

6.1. Governance and management

If the purpose and new goals of higher education in a new dispensation were given expression through the reconfiguration of the higher education landscape and the steering mechanisms of government to stimulate movement towards the achievement of desired changes, its characteristics and nature were also influenced by the changing ways in which the system and the institutions have been governed and managed. Two main contextual factors influenced the choices individual institutions made in their own development trajectories. On the one hand, the national context of deliberate efforts to bring about social and economic transformation shaped behaviour and determined relationships between the sector and government in certain ways; on the other, the greater openness of South Africa post-apartheid to the outside world saw South African higher education responding in various ways to the imperatives of globalisation and the possible trend to greater managerialism that many have argued accompanied it.

In terms of the first of these contextual matters; in the CHE's 2004 Review, a shift had been noted from the original intended cooperative governance model between higher education and the state recommended by the NCHE of 1996, to stronger state steering in later years through national planning, funding and in the amendments to the Higher Education Act (1997) that introduced mechanisms which allowed the Minister to intervene in troubled institutions and to appoint an Administrator to take over the function of a university Council. The NCHE had envisaged the transformation of higher education within the context of a new, democratic project, the economic challenges facing the country as it sought to reintegrate itself into the global economy, and the realities of a deeply unequal and uneven education system. The Commission had argued that the transformation of higher education needed to be located within an understanding of the political transition in South Africa and a need for 'a new approach' to the role of the state and to the relationship between the state and civil society in which, it was anticipated, there would be a shift away from traditionally conflictual relations towards 'negotiated co-operation arrangements'. It argued that, "the government needs to create appropriate incentives for institutional initiatives and activity, that is, appropriate organisational environments that will be conducive to and result in institutional transformation and diversity."⁸⁶ In hindsight, there has been some debate about what was actually intended by 'cooperative governance' – whether it was really feasible to expect institutions and government jointly to manage a system where it became clear that that system itself needed such extensive restructuring that vested institutional interests would need to be compromised.⁸⁷ Nonetheless, it is clear that in the post-apartheid euphoria of the early policy development phase, government and institutions saw themselves working together to reach the same goals, in a relationship based on mutual trust.

⁸⁶ NCHE (1996) *A Framework for Transformation*.

⁸⁷ A. du Toit (2014) *Revisiting co-operative governance in higher education*.

In the White Paper of 1997, however, notwithstanding its reaffirmation of the need for transformation, its support for equity and redress, and its acceptance of the principles of institutional autonomy and cooperative governance, a shift to a harder reality is discernible. In at least three important respects – the alignment with government’s economic framework, and of a view of higher education which linked it firmly to the wider processes of globalisation and the knowledge economy; the location of planning and allocative functions, not in an ‘arms-length’ Council (as had been proposed in the NCHE) but within the Department of Education; and the rejection of massification as a strategy for increasing access, equity and redress in favour of controlled growth – it also arguably marked a change in the governance relationship with institutions.

A number of factors had influenced that intended relationship of trust. In the early years of the new democracy i.e. until 2001, despite large-scale agreement on the values and ends of transformation, policy implementation was relatively slow, such that institutions, second-guessing the steering parameters, developed in their own terms. As an example, some institutions responded to the transformation imperative by opening up satellite campuses at some distance from their main one to accommodate black students without fundamental change to the institution itself; others began large telematic or distance enterprises or established partnerships with private institutions in an unregulated environment for similar reasons. In a system in which the change from RDP to GEAR saw the logic of the market entering higher education, students voted with their feet to attend previously advantaged universities, leaving others in financial and management disarray. The first decade also saw the collapse of governance systems in six institutions, and the use of the administrator mechanism in three or four to fulfil the governance roles of disbanded councils.

The Higher Education Plan of 2001, and the various steering mechanisms – quality, planning, funding that became fully operational after 2004 – were an answer to redirecting the system towards the achievement of national goals in a more coherent way. Coupled with the extensive restructuring of the institutional landscape in the 2004-2005 period in which decisions were made regarding particular mergers that were inimical to some participants, a much harder system of state steering was ushered in. To some extent, efficiency and effectiveness for a period became the dominant values in the ongoing struggle with realising social justice goals, although, at the same time, one of the steering mechanisms, i.e. external quality assurance, foregrounded the social justice agenda in the way it carried out its institutional audits, as discussed in Section 4 above.

The period from 2001 to 2008 is characterised in Chapter 3 of this review as one of state steering on the whole, albeit nuanced in the ways in which the steering mechanisms were utilised by different Ministries. Institutions were responding to external drivers in a variety of ways, and with rebuilding identities and repositioning themselves in the post-merger landscape. In 2009, a number of contingencies cohered to mark something of a change. In the post-Polokwane political landscape, a new urgency and consideration with delivery, and an emphasis on performance, along with the creation of a separate Department for Higher Education and Training not only responsible for the universities, but the entire post-school terrain,

signalled a different relationship between higher education and the state. With a renewed emphasis on the need to revitalise the colleges and vocational sector given the growing number of youth not in employment, education or training and a policy focus on articulation into higher education, higher education came to be seen to some extent as the recalcitrant part of a post-school sector, defending historical privilege and baulking against an agenda that prioritised skills development and vocational training. At the same time, in a new and perhaps more reductionist understanding of transformation from the broad concept that had inhered in the early years, higher education was seen to be too slow in bringing about demographic change, and too slow in improving its performance indicators. Given a sector that also continued to be marked by institutional governance and management crises, the way was clear to lean towards greater government intervention and less of a relationship of co-determination than had originally been envisaged. The Amendments to the Higher Education Act of 2012, which potentially allowed a Minister to intervene in institutional governance matters on much broader grounds than before, the establishment of the controversial Transformation Oversight Committee to monitor institutions in this respect, of new institutions such as the NHISS alongside existing ones that had similar functions, were interpreted by many in the sector, albeit one struggling to cohere and to speak with one voice, to be road signs to a different, more edgy, relationship with government.⁸⁸

Simultaneously, government itself in this period has been facing many pressures and problems that are not easily resolved. Expectations and demands on the system are numerous and difficult to fulfil: the National Development Plan has argued for unprecedented growth in access to universities in a relatively short time span; the national system of innovation requires the production of many more doctoral graduates; the economy requires the production of more high-level skills to fulfil human resource development needs; research production needs to be stimulated and supported to respond to the demands of the knowledge economy; growing numbers of students require financial assistance; the next generation of academics needs to be developed while transformation goals are being attended to; the crises in governance, management and funding at many institutions continue to require sustained attention; the issue of redress funding for disadvantaged institutions needs a definitive solution; articulation across the post-school terrain and the revitalisation of the entire vocational education sector needs spearheading; the training environment needs to be both rationalised in terms of offerings and massively expanded in terms of student numbers; the quality of student life and housing needs improvement; student protests and institutional culture issues that occupy newspaper headlines need to be attended to – and this is to be achieved in a climate of fiscal austerity. Managing the demands of different stakeholders while fostering the independence of a healthy higher education sector focused on quality in teaching, increasing knowledge production and increasing relevance to a developing African country requires extensive skill in negotiation and prioritisation and careful leadership towards a clear vision of the future for the system.

⁸⁸ HESA's comment on the Amendments at the time noted that "the provisions in the current Act provides (sic) sufficient safeguards for both the objectives of institutional autonomy and public accountability to be pursued," implying that the Amendments were unnecessary and were too "wide-ranging and vague", and thus allow for potentially inconsistent application.

6.2 Governance structures and institutional crises

In terms of governance and management at institutional level, the emphasis in the early years of the period under review was on the creation of relevant structures (Council, Senate, Institutional Forum) to support the governance principles of democratisation, effectiveness and efficiency. The roles of these bodies were laid down in the Higher Education Act of 1997; the years since have seen more participatory governance models in institutions, but also significant differences in the way institutions have coped in the face of increasing external demands for accountability leading to more overt management through evidence-based decision-making, as well as the greater mobilising of different constituencies in support of particular interests in their governance structures.

In institutions without strong traditions in self-governance and for whom Councils were new phenomena, and for those in which strong internal and external constituents have vested interests in the governing of an institution, the challenges at governance level have been such that a number of institutions have been rendered almost dysfunctional at different times over the twenty-year period in question. The government's response has been to intervene more often, and to appoint administrators for longer periods. There were 14 instances of external intervention between 1998 and 2012 (with some still in progress), sometimes more than once at the same institution. The governance crises have sometimes been marked by schisms between executive management and Council; sometimes by corrupt relationships between members of Council and other constituencies such as student or staff unions; almost always by a failure by one or more constituents to understand the governance role as one that should place the interests of the institution before others. The Governance and Management chapter of this review refers to the increasing 'stakeholderisation' of higher education, that is the tendency of groups with vested interests to pursue those exclusively and for different such groups to come into conflict with each other. While it is difficult to ascertain the extent of it, there appears to be inappropriate activity relating to tenders in some institutions, or other fraudulent activities such as misrepresenting CVs, nepotism and inappropriate uses of power, including sexual harassment and so-called sex-for-marks practices. These challenges undermine the system, yet they are difficult to surface, and even more difficult to eradicate. The audit reports of the CHE contain qualitative data on some of these, as do the reports of government-appointed assessors and administrators of institutions in crisis. The Governance and Management chapter of this review argues that among the government responses to these crises has been the intention to impose more reporting requirements on all institutions on the one hand, and to intervene directly to manage particular crises, while the structural conditions that give rise to such concerns remain largely unaddressed. The efficacy of increased reporting requirements remains to be seen – arguably in institutions that are already functioning well they will do little more than add to the already intensive administrative load; and in less-well functioning institutions, a lack of internal capacity will lead to the increasing outsourcing of carrying out reporting

requirements with little effect on ameliorating the fundamental problems. A concern with the direct intervention route is the sustainability of the reforms brought about, given that administrators are appointed only for relatively short periods of time: this is evidenced in the number of institutions that have required more than one intervention.

The role of the Senate too, has, in a number of institutions, changed in character. In some instances, as evidenced in a number of CHE audit reports, the robust academic debate on issues, argued on matters of academic principle, has given way to acquiescence with management decisions, or to stakeholder-based negotiation around competing group interests. Part of the explanation may lie in what has been perceived to be increasing managerialism at institutional level, or in the sheer volume of policy-driven requirements placed on institutions in the implementation period that have monopolised attention, or on changing leadership styles, particularly where leaders have not gained extensive experience of academic processes and cultures, or where they have felt challenged by a resistant academic culture. The Institutional Forums (IFs) established by legislation in the post-apartheid universities have largely not functioned in the way intended. One of the more plausible explanations is that, with the representation of stakeholder groups in the main decision-making bodies of a university, i.e. Senate and Council, the role of an IF as a forum in which different interests can be played out, but without decision-making consequences, has become superfluous in most institutions; in some assessor reports, however, different interests represented in the IF have become mirrored in Council structures and factionalism has taken root.

If factionalism is evident in some institutions, this is reflected too in student political governance, particularly in those institutions in which there are governance challenges. While there are many instances of good democratic student governance, current empirical work being undertaken by the CHE has indicated that there are also instances in which external politics play an inordinate role, and of external pressures acting upon student activities and protests. The rationales for student participation in university governance in the scholarly literature include political-realist ones (in which students are seen as collective political actors or stakeholders who must be accommodated in formal structures for negotiation), a consumerist case (students are clients who need to be satisfied), a communitarian case (students are integral members of a community), and a democratic case (the university is a microcosm of the external society and thus student governance is part of the democratic socialisation of students).⁸⁹ In the South African case, as part of the emergence of a new democracy, the Higher Education Act of 1997 required student representation in university governance to be provided for in each institution's statute. In many instances, students are represented in all committees – Faculty committees, Senate, Council – except the Executive, and are thus able to influence decision-making on matters that affect them. They also have direct roles in processes such as the allocation of residence places – on the political-realist assumption (sometimes challenged in practice) that if student representatives are part of such processes, this will minimise

⁸⁹ T. M. Luescher-Mamashela (2013) 'Student representation in university decision making: Good reasons, a new lens?' in *Studies in Higher Education*, 38(10), pp. 1442–1444.

potential student protests. In many instances, student representative councils' constitutions allow for the contestation of seats on the basis of political party affiliation. In other, quite controversial instances, student representation has been delinked from political organisations. In the latter scenario, it has been observed that a 'de-politicisation' of the SRC "provided for the re-conceptualisation of the student representative who negotiates on behalf of his/her constituency to one where individual student leaders performed services in exchange for material rewards dispensed by the university administration."⁹⁰ It has been argued that there was a movement from the emancipatory fervour of student politics of the early 90s to the superseding of the social justice agenda and democracy as the primary principles underpinning student demands in the post-apartheid university to a preoccupation with consumerist issues and a value for money approach which mirrored the managerialist approach to university governance that had been ushered in around the turn of the millennium.

Provisional insights arising from the CHE's empirical work indicate that in some instances, there are potential linkages between the student representation process, the influence of external forces and the outcomes of decision-making processes, including the awarding of tenders. In many cases, as in Councils, 'stakeholderisation' is evident, with representatives advancing the interests of their particular groups in competitive mode, rather than the interests of the student body as a whole. In general, evidence suggests that in many instances, a lack of trust characterises relationships of SRCs and managements; among the explanations are a history of student leaders reneging on agreements made with representatives from the previous year's SRC (especially where fee increases are concerned), a culture of embarking on protests without due process having been followed, management stifling political activity on campus, and sometimes student support services being seen as attempts by management to control students rather than to assist them. As with Councils, it appears that role confusion is evident, and that student representatives are sometimes caught between competing interests. In addition, the legitimacy of SRC representatives is often widely questioned in a student culture in which, on the one hand, there is widespread political apathy and non-involvement in election procedures, and on the other, smaller groups of increasingly radicalised students, whether these represent forces for change or for resistance to change. Student governance is an area in which much further research is needed in order to monitor and understand the changing dynamics and to determine possible futures in which students can play a full and constructive role in improving the quality of their academic experience.

6.2.1 Student experience

One of the implications of increasing numbers and diversity of students in higher education internationally has been the need to increase student development activities and to offer more specialised student services. The trend towards diversifying academic advising and counselling, admissions services, student organisations, health services that was observable globally in the 20th

⁹⁰ Ibid.

century but mushrooming since the late 1990s is observable in South Africa too, albeit in less extensive and developed formats than in western universities.⁹¹ The professionalisation of student affairs has been advanced by three factors: increasingly more reliable available data (on student cohorts etc.) that can influence institutional responses to enhancing student success; secondly, the focus on the integration of students with institutional cultures, both at the level of peer-group interaction and staff-student relationships, and thirdly, greater inter-organisational cooperation through the formation of a national federation of student affairs associations.⁹² In addition to these, the focus areas in the first phase of the CHE's Quality Enhancement Project emphasise the importance of providing an enabling environment for students to have the possibility of succeeding, and the project thus seeks to improve course and programme enrolment and placement procedures and to focus attention on the importance of academic advising, student support and appropriate ways of improving the learning environment.

7. The review chapters

The questions that run through this review as whole include whether the various policy mechanisms have achieved the desired outcomes of modernisation, transformation and integration. To what extent have the challenges identified been overcome or unintended consequences exacerbated them? Has the use of planning, funding and quality levers given effect to the cooperative governance intentions of the policy foundations in the way intended? To what extent have these mechanisms fuelled the effects of a wider global trend towards increasing levels of bureaucracy and a greater emphasis on management? The responses to these questions are implicit in different chapters of this review, and they are not all the same, depending on the focus and the interests of the task teams that engaged with them. Inevitably there is repetition of discussion of some key events and processes, such as mergers, albeit viewed with different lenses. The same phenomena will have had an impact on more than one domain, whether this is research, or teaching and learning or academic staffing, for instance, and thus each discussion is framed with a somewhat different lens. What is interesting is the similarity of conclusions from very different discussions and vantage points.

Chapter 2 on Regulation reflects that task team's discussions on the effectiveness of the state steering of public and private higher education provision. It starts with an overview of the history of the policy process, noting that the system has been in a state of dynamic flux with respect to policy implementation. It discusses the various policy steering mechanisms, the reconfiguration of the higher education landscape and the pressures on the system. Among this last it identifies increasing enrolment as a major pressure, and discusses the ways in which this might be achieved, i.e. through introducing new institutions, through increasing the graduate rate or through increasing offerings through distance education. In all

⁹¹ T. Moja, B. Schreiber & T.M. Luescher-Mamashela (2014) 'Contextualising student affairs in Africa: The past, present and future' in *Journal of Student Affairs in Africa*, 1(1), pp. 2-3.

⁹² Ibid.

of these, it flags academic staffing capacity as a constraint to achieving this policy goal, particularly in a situation in which the funding of higher education has not kept pace with the demands on it. The chapter ends with a discussion on the use of regulation to achieve policy goals, and cautions against using regulation in an undifferentiated way across a very diverse system in order to avoid unintentional consequences such as a loss of efficiency and effectiveness. It makes a case for a greater use of “negotiated self-regulation” to take the system forward.

The task team that worked on Chapter 3 focused on the governance of the higher education system. While it draws some general conclusions about leadership and management at institutional level, the analysis pertains mostly to system-level concerns. The chapter provides a theoretical analysis of the two decades reviewed and puts forward two periodisations; one in terms of changes at the system level of governance, and another at the level of the governance of institutions. It incorporates matters of student governance to some extent, which is explored in more depth in another CHE project. Using a sample of the HEQC’s institutional audit reports and reports of assessors appointed by the Minister to various institutions, as well as understandings of the global forces affecting management and governance to which South Africa was not immune, it makes the case that the most recent period has been characterised by increasing state managerialism. Ironically, the period was also characterised by a weakening of state capacity to utilise the greater knowledge developed about the system, as well as by the weakening of democratic advisory structures in the shaping of policy. It puts forward a post-managerial knowledge-based governance, leadership and management model for South African higher education in the third decade of democracy.

Chapter 4 traces developments and changes in teaching and learning in higher education, and thus delves more deeply into one of the core functions of higher education. The task team identified the achievement of greater student success with wider access as one of the most enduring and intractable challenges in higher education in South Africa. The chapter analyses the effects of various policy changes such as mergers and the emergence of different institutional types on teaching and learning. It also looks at how teaching and learning has been influenced by the introduction of qualifications frameworks, external quality assurance and national teaching and learning development initiatives. The various initiatives and approaches to improving teaching and learning over the years, from foundation and extended programmes to staff development initiatives, are also covered, as is the nascent field of the scholarship of teaching and learning, the use of technology in teaching and learning, and issues relating to language in higher education. The chapter concludes that with the current system and capacity, massive student growth is untenable. A strong argument is put forward for the rethinking, based on a strong foundation of scholarship, of current curriculum structures and teaching and learning approaches to achieve greater student success.

The fifth chapter details research in higher education over the last two decades. It looks at contextual factors and reviews the funding drivers and the performance of the system. It too analyses the effects of mergers and differentiation on its

area of concern, i.e. the research environment and research production. It traces changes in the way in which research is conducted internationally amid the rise of open access to data, and the greater sharing of resources. It looks in detail at the rise and effects of rankings systems on higher education in South Africa. While the national policy drivers and incentives appeared to have played a major role in increasing research output in South Africa, there are many factors influencing the fluidity of the system, and many constraints, such as declining funding. The chapter ends by analysing some trends and strategies that will influence research production in the coming decades, and which could help to develop South Africa as a competitive global knowledge producer.

Community engagement as a core function of higher education was the subject of the discussions of the sixth task team. The chapter that has emerged from their work sees community engagement activity undergoing different phases of development in the period under review, from developing conceptual frameworks to a realisation and recognition of the need to institutionalise it and integrate it with different forms of scholarship. The task team delineates what has been achieved in community engagement activity, but bemoans the lack of national policy and funding to stimulate it. The dilemma of community engagement activity is one that is common to much that is worthy of pursuit: separate it out for emphasis and funding, and it risks becoming an add-on activity carried out by individuals on a voluntary basis rather than a core one; integrate it with other forms of scholarship and it risks losing its identity. The chapter argues for a concept of engaged scholarship which lies at the intersection of teaching and learning, research and service, and which harnesses better the intellectual resources at the country's disposal to enable the generation of solutions to problems in the socio-economic and political context in a way that advances the public good.

Chapter 7 brings together the work of the task team on academic staffing. It outlines changes in academic staffing over the years, and presents a picture of the current reality. It makes a strong case that the demands on and of academic staffing have until recently not been at the forefront of policy development, while it is a constituency that has been profoundly affected by trends such as massification and changes in management and governance. The chapter argues that the reproducibility and the transformation of academic staffing are highly dependent on the value ascribed to it, and that much needs to be done to avoid a potential looming crisis in academia which could have a detrimental effect on teaching and learning, research and community engagement, and ultimately for future generations of students. Core to the argument of this chapter is that the funding of universities and the provision of staffing, particularly permanent academic staffing, has not kept pace with growth in enrolments. The chapter also points to the need for more extensive qualitative research to be undertaken in South Africa with a view to understanding the current realities of the academic profession and what would increase its appeal.

The last chapter focuses on funding. This chapter is fundamental to all the others in that it contextualises the current realities, as well as the recommendations and future activities advocated in specific areas. The funding task team was careful not to replicate work that had already been undertaken in other fora and

commissions, but having drawn on such work to sketch the current situation, the chapter models three possible future scenarios, based on demographic trends and policy targets, to ascertain what is, and what is not, possible to achieve. Its conclusions are sobering. At base, the implications are that growth targets cannot be achieved within the current funding envelope, and that to achieve even modest growth, a much improved funding environment would be required. The chapter concludes with some suggestions as to what strategies might be employed to achieve this and looks at the key conditions for implementing planned but modest growth in higher education over the next decade. The outlook according to this analysis is severely constrained, and it will require imaginative and far-reaching strategies to ensure that policy goals are achieved.

8. Conclusion

The chapters outlined above have collectively given rise to a number of difficult policy choices to be made in the next decade. The work of the task teams of diverse experts in higher education that has informed the analyses, conclusions and recommendations in the chapters of this review is yet to be distilled into policy advice of the CHE. The task teams have had their own sets of concerns and particular lenses that they have brought to bear on their particular domains of focus. Nevertheless, some common themes have emerged that inform the tough policy choices ahead.

The most obvious of these are the dilemmas and trade-offs involved in achieving growth at the same time as improving students' chances of success. The original equity versus quality debate still lives in recast form. Each of the chapters in their own way has considered the possible unintended consequences of the drive to reach growth targets without sufficient due diligence having been carried out on all related areas. Securing sufficient and sustainable funding is the major prerequisite to achieving many of the policy goals, while efficiencies will need to be brought about simultaneously within the system as a whole. The enduring problem of poor throughput rates will require a variety of systemic interventions to alleviate, and these will need to be implemented at the same time that growth is being brought about. There are clear tensions here between increasing access and improving quality, and the balance will be difficult to achieve.

Many of the chapters have pointed to the major pressure points in the system that will require urgent and thoughtful attention: the funding of the system, including student funding, is the most prominent of these. The declining subsidy in real terms in a context of growth has had, and will continue to have, knock-on effects on key aspects that determine the health of the higher education system. Declining funding has led to pressures on institutions to pursue third-stream income, which arguably takes academic staff attention away from the teaching and learning, research and community engagement functions. Student fees have risen over the period and continue to rise in order for institutions to maintain the quality of their educational offerings in terms of infrastructure, staffing and other resources, which has had a deleterious effect on student access and retention. Some of the chapters have argued that while students have been affected by

financial aid and funding issues, academic staffing has felt the constraints equally keenly, such that the profession itself will need far-reaching intervention to increase its appeal, both to bring about more rapid demographic change, and to avoid a looming capacity crisis.

This chapter began with a rhetorical question about higher education in crisis globally. The work of the task teams in this review has traced the many achievements in South African higher education over the past two decades, and noted that it is much improved from its apartheid-engineered roots. The pressures on the system as outlined above are, however, serious, and threaten to destabilise a relatively stable system if not collectively managed carefully, and with attention to how discrete policy or programme choices affect the achievement of others and the health and future of the system as a whole.⁹³

⁹³ In the early stages of the review, advice was received from Colin Bundy, Ahmed Essop, Jon File and Mala Singh, and a written contribution from Glen Fisher.

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Regulation

2

Writers and editors: Yunus Ballim with Ian Scott, Genevieve Simpson & Denyse Webbstock

Task team leader: Felicity Coughlan

Members/contributors: Trish Gibbon, Brenda Leibowitz, Luke Mlilo & Martin Oosthuizen

CHE research assistant: Michael Gordon

Formal regulation, deriving from legislation, is a manifestation of the intended relationship between a state and its social institutions. In many ways, regulatory measures are a reflection of priorities identified by the state, together with the resources that it has chosen to allocate in pursuit of those priorities to deliver on the promises made to its society. Such regulation is also dynamic, in the sense that it is meant to respond to the changing internal and external contexts of society and its institutions. There may be a first-principle question, particularly in thinking about higher education institutions, about the need for and value of regulation, but this would be outside the scope of our present review. Rather, the more useful question, and one that is frequently raised in reflections on the relationship between the state and higher education in post-apartheid South Africa, relates to the nature, extent and effectiveness of state steering of higher education. Stated differently, the broad theme of this chapter is to consider both the development and effectiveness of legislation and policy as instruments for regulating the higher education sector.

In reviewing the nature and effects of the restructuring and realignment of higher education over the first twenty years of democracy in South Africa, this section focuses specifically on changes and developments in policy and legislation aimed at steering the activities of public and private higher education provision. The framework for the principles that would guide a future higher education sector was largely established by the report of the National Commission on Higher Education (NCHE).¹ In both the nature and tone of the proposals presented by this Commission, there was a strong recognition and acknowledgement of the delicate and difficult task that faced a future restructuring of the higher education sector – some sections needing support, others defence, some pruning and still others needing serious internal restructuring. All of this was to be done while maintaining the provision of higher education programmes and qualifications, without disruption and at the best level of quality possible at the time.

Over the past twenty years, there has been extensive development of policy, legislation and regulations aimed at steering the higher education sector, largely in the direction intended by principles of the NCHE, including Education White Paper 3 and the Higher Education Act, both of 1997, which were followed by the National Plan for Higher Education (NPHE) in 2001.² These documents established the legal and policy framework for the future direction of higher education and the development of related policies that guided implementation. The Higher Education

¹ NCHE (1996) *A framework for transformation*.

² DoE (1997) *Higher Education Act 101 (as amended)*; DoE (1997) *White Paper 3: A programme for the transformation of higher education*; DoE (2001) *National Plan for Higher Education*.

Act of 1997 has been amended a number of times and the period 2000 to 2014 saw formal adoption of legislated frameworks including the Language Policy, the National Qualifications Framework (NQF) and the Higher Education Qualifications Sub-Framework (HEQSF).³ This period also saw a clarification of the role and functions of the South African Qualifications Authority (SAQA) through the passing of the National Qualifications Framework Act 67 of 2008, as well as a regularisation of the roles, functions and inter-relationships of the three quality councils, the Council on Higher Education (CHE), the Council for the Quality Assurance of General and Further Education and Training (Umalusi), and the Quality Council for Trades and Occupations (QCTO), for the different sections of the education sector.

While policy development was rapid, policy implementation has been more difficult and much has yet to be completed. As is inevitable, the implementation of each of these legislative and regulatory instruments produced desired but also unintended consequences. Some of the unintended consequences were driven by the effects of the planning, policy and regulatory instruments themselves, while others were a consequence of voluntary responses by higher education institutions either to mitigate what were perceived as possible negative consequences, or indeed to maximise the perceived benefits of the regulations. As an example, the sudden growth in distance learning programmes at contact institutions in the initial years of the period under review, often through partnerships between public and private providers, was in many cases a response to the emphasis that the NCHE and Education White Paper 3 had placed on distance learning as a strategy for increasing access to higher education. So too was the unregulated growth in partnership arrangements between local public institutions and universities abroad for offering joint or shared degree programmes as a strategy for enhancing competitiveness. In part, much of the state's amendments or adjustments to policies and regulations have been motivated by the need to attend to such unintended consequences.

The first twenty years of post-apartheid higher education may well be characterised as having been in a state of dynamic flux, with different segments, separately but sometimes aligned, working hard to correct non-equilibrium conditions while at the same time trying to ensure that students received an education of the requisite quality. Such corrections were not always possible or successful and the latter decade saw a number of institutions being placed under curatorship or 'administration' for a range of failures.⁴ While these were mostly described as failures of governance, they certainly raised questions about the effectiveness of 'steering' instruments in the hands of the then Department of Education (DoE) and from 2009, the Department of Higher Education and Training (DHET).

This chapter considers the effects of regulatory developments over the past twenty years in enabling progress towards the achievement of a more effective and responsive higher education sector. Equally, the chapter raises questions about the extent to which such developments hampered institutions by limiting

³ DHET (2008) *National Qualifications Framework Act 67*; CHE (2012) *Higher Education Qualifications Sub-Framework*.

⁴ CHE (2013) 'The Independent Assessor Reports (1978 – 2012): An Overview and Analysis' (unpublished paper); Parliamentary Monitoring Group (2013) 'Universities under administration: Update by Department of Higher Education and Training' (report).

their capacity for agile and innovative responses to higher education needs in South Africa. The chapter concludes with a forward-looking section which expresses views and recommendations on areas of regulation in higher education that require a particular focus of attention over the next decade.

2. The inheritance of 1994 and the initial challenges of higher education post-apartheid

Much has been written on the subject of the inefficiency, dysfunction and inequality of the apartheid education system before 1994 and that commentary is not reproduced here.⁵ Nevertheless, it is worth bearing in mind that the South African education system had a racially- and ethnically-based system of governance, with nineteen operating departments, under fourteen different cabinets, implementing their own regulations in terms of at least twelve Education Acts.⁶ Not only was the system complex with overlapping mandates, but it was predicated on inequality. Similarly, in higher education, different institutions were designated for specific racial groups. Indeed, it has been described as follows:

The introduction of the 1984 constitution in the RSA, with its distinction between 'general' and 'own affairs', entrenched the apartheid divisions in education in South Africa. A direct consequence was that higher education institutions had to be designated as being for the exclusive use of one of the four race groups: African, coloured, Indian and white. By the beginning of 1985, a total of 19 higher education institutions had been designated as being 'for the exclusive use of whites', two as being 'for the exclusive use of coloureds', two 'for the exclusive use of Indians', and six as being 'for the exclusive use of Africans'. The six institutions for Africans did not include the seven institutions in the TBVC countries [Bantustans], even though it was expected that the latter would be used almost entirely by the African citizens of the four 'independent republics'.⁷

Necessarily, and particularly because of the glaring internal contradictions that emerged at each step, such an approach to regulation and organisation of higher education produced a complex network of policy, legislation and makeshift practice that was both wasteful and highly authoritarian.

In early 1994, South African higher education was characterised by deep, racially-based physical and intellectual divisions; a wide range of quality of teaching, learning and research with very distinct extremes; individual

⁵ For more information on universities under apartheid see I. Bunting (1994) A legacy of inequality – Higher education in South Africa; I. Bunting (2002) 'The higher education landscape under apartheid' in N. Cloete, R. Fehnel, P. Maassen, T. Moja, H. Perold & T. Gibbon (eds.) *Transformation in higher education: Global pressures and local realities in South Africa*; D. Massey (2010) *Under protest: The rise of student resistance at the University of Fort Hare*; R. Omar, & B. Figaji (2000) 'Governance arrangements in South African higher education' in E.F. Beckham (ed.) *Diversity, democracy, and higher education: A view from three nations – India, South Africa, the United States*.

⁶ ANC (1994) 'A policy framework for education and training'.

⁷ Bunting (2002) 'The higher education landscape under apartheid' in Cloete *et al.* (eds.) *Transformation in higher education*, p.36.

institutional cultures and postures that varied from active and often violent opposition to apartheid, across to compliant or active support for apartheid's approach to higher education and social development; and a small number of universities (or sections of universities) with strong and ambitious international engagements while the rest were more insular and inward-looking.⁸

Entering an already globalised world, and with the recognition of the importance of higher education for competing in this space, a post-1994 South Africa was obliged to deal with the restructuring and transformation of this sector early in the life of the new democratic state.

Aligning the higher education system with the social development intentions of a post-apartheid South Africa clearly required significant reform of the foundation and superstructure of the sector to achieve single, coordinated and equitable higher education as envisaged in the White Paper of 1997. While opinions varied on how this reform was to be achieved, in the event a relatively conservative approach to the extent and speed of reform was taken. With hindsight, the National Plan pointed out that while the "vision of the White Paper continues to remain compelling ... [and] [i]ts underlying assumptions have passed muster and continue to receive widespread support ... [t]he goal, however, remains unachieved ... largely due to the fact that the Ministry adopted an incremental approach".⁹ The document goes on to explain that the reasons for an incremental approach were the lack of systemic capacity, a lack of information in terms of institutional and system trends and "the need to develop a consultative and interactive planning process... to underpin the principle of co-operation and partnership".¹⁰ There was acknowledgement that, as this reform was taking place, policy-makers were to avoid the danger of simply rearranging the framework and creating a system that became as over-regulated and rigid as the previous apartheid approach had been.¹¹ Importantly, it was recognised that, in reforming the sector, the regulatory framework should encourage institutions to pursue innovative approaches within a rapidly changing global higher education environment.

3. Important developments in the regulatory framework for higher education over the past 20 years

Key areas of development in the regulatory environment of post-1994 higher education dealt with in this chapter are:

- Developing the higher education sector as a coordinated system
- Reconfiguring the institutional landscape
- Regulating qualifications in a new framework
- Enrolment planning
- Regulating private higher education provision

⁸ Bunting (1994) *A legacy of inequality*; NCHE (1996) *A framework for transformation*.

⁹ DoE (2001) *National Plan for Higher Education*, section 1.2.

¹⁰ Ibid., section 2.1.

¹¹ DoE (1997) *White Paper 3*, section 2.9.

- Equity, redress and transformation
- Institutional differentiation
- Regulating the quality of higher education provision
- Regulating different modes of offering qualifications
- Regulation in a shifting post-school landscape

The funding of public higher education institutions intersects with all of these areas. As set out in the White Paper of 1997, the main ‘steering mechanisms’ at the disposal of the minister responsible for higher education were to be funding, planning, and quality assurance. This section will discuss the principal regulating initiatives in the areas mentioned above. While some reference will be made to the impact of funding, this aspect is covered in greater depth in Chapters 1 and 8.

3.1 The context of policy implementation in higher education

The general social and political context within which higher education development took place from 1994 to 2014 had significant influence on the impact and effectiveness of policy implementation in the sector. For example, policies aimed at achieving racial equity in the student population had to encounter and deal with the reality of the poor level of academic preparedness of school-leavers for existing university education. The White Paper foresaw this challenge and emphasised that “increased access must not lead to a ‘revolving door’ syndrome for students with high failure and drop-out rates”.¹² The National Plan went a step further to state that the Ministry was “reluctant to introduce equity quotas as it recognises the difficulties involved in setting realistic targets, given the state of the school system and the low numbers of students matriculating with the necessary qualifications and competencies to pursue higher education”.¹³ While the number of learners receiving school-leaving certificates which allow access to higher education has increased, the larger problem of throughput has continued into the second decade of democracy as evident in the various cohort studies published by the CHE in *VitalStats*.¹⁴ The CHE Task Team’s report, *A proposal for undergraduate curriculum reform in South Africa: The case for a flexible curriculum structure*, interrogates the issue of underpreparedness and the articulation gap between school and higher education in some detail.¹⁵

The levels of student preparedness varied, and continue to vary, by social factors such as race, class, language and geography according to the arrangements of privilege that had been set by apartheid. Participation rates continue to be skewed along racial lines as seen in Figure 1 below. The continued racial disparities are also evident in the cohort throughput rates in Figure 2. These realities highlight tensions between different components of policy implementation. For example, satisfying the need for improved learning quality and graduation rates could be

¹² Ibid., section 2.29.

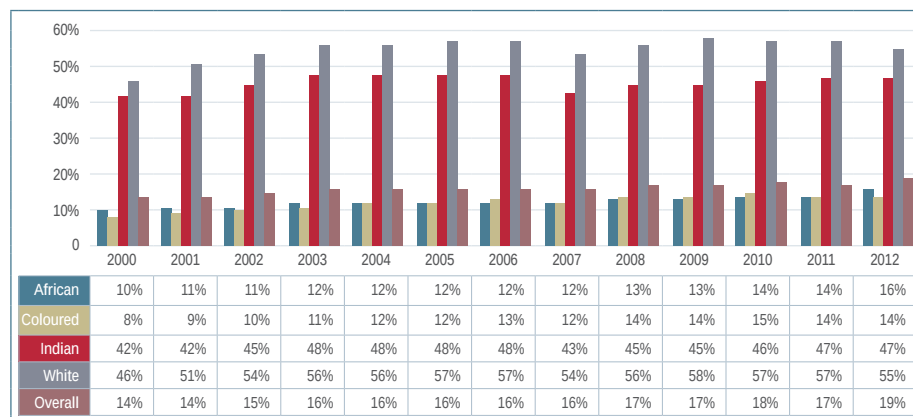
¹³ DoE (2001) *National Plan for Higher Education*, section 3.2.

¹⁴ CHE (2012) *VitalStats: Public higher education 2010*; CHE (2013) *VitalStats: Public higher education 2011*; CHE (2014) *VitalStats: Public higher education 2012*.

¹⁵ CHE (2013) *A proposal for undergraduate curriculum reform in South Africa: The case for a flexible curriculum structure*.

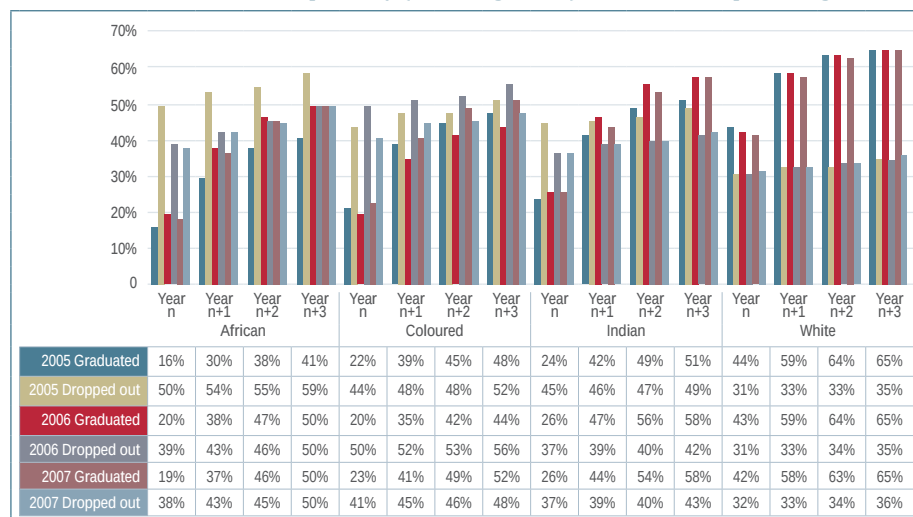
addressed by admitting better-prepared students from the schooling system, but this could result in the exclusion of largely poor, rural and black students – the intended beneficiaries of a policy aimed at equity and redress.

Figure 1: Participation rates by race, 2000 to 2012¹⁶



Source: HEMIS 2000 - 2012 and Stats SA population data 2000 - 2012, extracted annually

Figure 2: Throughput rates by race for 3-year degrees with first year of enrolment in 2005, 2006 and 2007 respectively (excluding UNISA) – accumulative percentages¹⁷



Source: Based on a cohort analysis done by Dr Charles Sheppard for the CHE

¹⁶ The participation rate or gross enrolment ratio (GER) is total headcount enrolment over the national population of 20-24-year olds, calculated as a percentage. The term used by the Department of Higher Education and Training is *participation rate*. The National Plan for Higher Education (2001) explains that: “The participation rate is calculated using the UNESCO standard, as the percentage of 20–24-year olds of the general population enrolled in higher education”.

¹⁷ Potential graduates remain in the system after year n+3, meaning that the number of dropouts may be lower than indicated.

The geographical location of individual universities also overlapped with unequal income distribution patterns across the country. Many universities in largely rural areas that drew students from the immediate surrounds had significant proportions of students who struggled to pay fees, with serious impacts on budgets. This was compounded by the apartheid legacy as many of these rural institutions were also historically disadvantaged. This then led to the circular problem of constrained budgets not allowing for the developments necessary for improved quality of teaching, learning and research, thus compromising universities' ability to attract the most academically prepared students in their regions.¹⁸

Another important contextual factor that influenced the effectiveness of policy implementation was the political environment in which these developments took place. In 1994, the distribution of the quality of academic and intellectual engagement across higher education institutions was clearly divided along racial lines. Apartheid's influence on the management and funding of the so-called historically black universities was designed to limit the levels of these universities' academic engagement to the purely utilitarian needs of black intellectual capacity, as apartheid planners imagined it should be. As Bunting put it, "They were instrumental institutions in the sense of having been set up to train black people who would be useful to the apartheid state, and political in the sense that their existence played a role in the maintenance of the overall apartheid socio-political agenda".¹⁹ Given this, any post-1994 policy that was seen to be disproportionately punitive to the historically black universities, or that appeared to reinforce the conceptual association between black universities and low-level engagement, would be politically unpopular and detractors found it easy to appeal to general political support or sentiment to resist such policy intentions. The tensions surrounding the issue of institutional redress and the need for individual redress were acknowledged and addressed in the National Plan:

The White Paper makes a clear distinction between social (i.e. individual) redress and institutional redress. As the Council on Higher Education argues, although the two are connected, 'the former is not reducible to the latter'. This does not imply that institutional redress is no longer relevant. On the contrary, the continued role of the historically black institutions as integral components of a transformed higher education system requires that institutional redress be addressed. However, it suggests that the focus of institutional redress must shift from current notions of redress, which are narrowly focused on the levelling of the playing fields between the historically black and historically white institutions.²⁰

Across the sector, there was no shortage of political supporters or pressure groups, both within institutions and from interested components of their

¹⁸ J. Jansen (2003) 'The state of higher education in South Africa: From massification to mergers' in J. Daniel, A. Habib & R. Southall (eds.) *State of the nation: South Africa 2003-2004*, p. 305; DHET (2013) *Report of the Ministerial Committee for the Review of the Funding of Universities*, p. 174.

¹⁹ Bunting (2002) 'The higher education landscape under apartheid' in Cloete *et al.* (eds.) *Transformation in higher education*, p. 43.

²⁰ DoE (2001) *National Plan for Higher Education*, section 1.4.

communities that were concerned with the immediate interests of particular institutions. External interests, organised along political, ethnic, language or even local community lines, exerted pressure through influence on governance structures such as the university council or the student representative council, as well as through operational structures such as the university residence management. This aspect of the distortion of governance processes at universities led to various amendments to the Higher Education Act, which were aimed at preventing such responses. The most significant of these amendments were those passed in 2011 which, *inter alia*, required that all council members “must participate in the deliberations of the council in the best interests of the public higher education institution concerned”, “must ... declare any business, commercial or financial activities ... that may raise a conflict or possible conflict of interest” and that a council member “may not place himself or herself under any financial or other obligations to any individual or organisation that might seek to influence the performance of any function of the council...”²¹ Tensions of various kinds, including the willingness of all institutions to address the major national challenges of equity, have been a dominant feature in developing regulation within higher education policy in the last twenty years, as is evidenced in the topics discussed below.

3.2 Developing the higher education sector as a coordinated system

Given the state of higher education at the end of apartheid in 1994, it is not surprising that most of the regulatory attention over the past twenty years has been in restructuring and developing higher education as a system. The main focus of this attention, as clarified in both the White Paper and National Plan, was to unify the entire system, bring rationality and coherence to the range and levels of qualifications offered and to align the system, in its character and practice, to the social, institutional and developmental principles expressed in the new constitution of the country. A particular challenge within this extensive canvas was the dismantling of the web of apartheid legislation in favour of an appropriate legislative infrastructure for a new dispensation while ensuring the continuity of the higher education project. This section discusses some of the more important features of regulation of higher education, recognised as an essential system in the development of South Africa as a young and emerging democracy.

There were two important moments in 1996 which set the tone and path for the future development of higher education in South Africa. The first was the formal adoption of the Constitution of the country, which confirmed ‘tertiary education’ as a national competence, while the rest of the education system was to be a joint national and provincial responsibility.²² In particular, the Constitution included in its Bill of Rights the right to “academic freedom and freedom of scientific research”.²³ The Constitution also protected the right to offer and receive private education, with no specification of the level of such provision, as long as private

²¹ DoE (1997) *Higher Education Act 101 (as amended)*, section 27(7).

²² South African Government (1996) *South African Constitution*, Schedule 4, Part A.

²³ *Ibid.*, section 16 (1) d.

institutions registered with the state and that they did not offer education of inferior quality to that offered by state institutions.²⁴ The second important moment was the 1996 publication of the report by the National Commission on Higher Education, which gave expression to the broad principles for social transformation established by the Constitution, in the particular context of higher education.

The CHE document, *South African higher education in the first decade of democracy* presents a comprehensive review of the NCHE report and its intentions for the higher education sector.²⁵ The NCHE report argued for an integrated and transformed higher education system with unprecedented growth in access and participation, particularly by young South Africans in their immediate post-Grade twelve years. This was a seminal document in a continuing discourse on the need for the massification of the higher education sector. This discourse continued in both the White Paper and the National Plan, although it was there emphasised that what was needed was the rather more limited notion of ‘planned expansion’ to meet the skills needs of the country.²⁶ The White Paper highlighted the need for planning to ensure that “the expansion of the system is responsibly managed and balanced in terms of the demand for access, the need for redress and diversification, the human resource requirements ... and the limits of affordability and sustainability”.²⁷ It went further to add that, “[W]hile it is possible to achieve rapid enrolment growth without extra expenditure, the penalties for doing so are harsh. Experience ... shows that expansion without new investment results in overcrowded facilities, low morale of academic staff, poor quality programmes, a fall in research output and quality, and ... devalued products of higher education”.²⁸ The idea of increased participation in higher education was – and continues to be – attractive because it has the potential to address simultaneously the need to increase participation by women, black students and students with disabilities; and provide the high-level intellectual capacity necessary for economic and social development.

With its strong focus on access, massification and transformation at the level of students, the NCHE report paid little attention to changes to the academic staff profile, curriculum structure and the institutional culture of higher education institutions. Given the enormity of the task of transforming the sector, the initial focus was on student-related issues because of the higher rates of change that could be achieved by changing the nature of the relatively rapid flow of students through the system. In contrast, the much slower flow of academic staff and the recognised resilience of institutional cultures would make these more difficult and longer-term transformation tasks. Nevertheless, the lack of decisive pronouncement on these aspects of transformation allowed an interpretation to emerge that these were to be left unchanged or at least deferred, thus creating

²⁴ Ibid., section 29 (2).

²⁵ CHE (2004) *South African higher education in the first decade of democracy*.

²⁶ DoE (1997) *White Paper 3*, section 2.23; DoE (2001) *National Plan for Higher Education*, section 2.1.1.

²⁷ DoE (1997) *White Paper 3*, section 2.6.

²⁸ Ibid., section 4.4.

space for alternative and perhaps more opportunistic strategies for resisting change where it was considered undesirable.

The emphasis on legislative change thus had the effect that the fabric of institutions i.e. the human and social issues and resources, seemed to be less immediate priorities. The later policies were, however, not silent on these issues. The White Paper highlighted the fact that staff demographics were not changing while student demographics were, and required human resource development plans as part of three-year institutional plans.²⁹ The National Plan recognised that it is difficult to change staff profiles rapidly but expressed concern that “many higher education institutions have not yet developed employment equity plans”.³⁰ The White Paper also commented on the “evidence of institutionalised forms of racism and sexism” and the need for institutions to develop mechanisms to change institutional cultures.³¹ The National Plan also lamented the fact that policy had, up until that point, “largely ignored ... the need to change institutional cultures”.³²

Bringing about radical changes in the legislative context of the system in order to unify it, however, also required a next phase of changing the institutional landscape to give effect to removing historical divides.

3.3 Reconfiguring the institutional landscape

The 1997 White Paper recognised the need to assess the optimal number and type of institutions needed to meet the goals of a transformed higher education system and in January 2000 the Minister requested that the CHE undertake initial investigation into the most appropriate institutional landscape.³³ In response, the CHE established the Size and Shape Task Team, and in June 2000 the task team report was published under the title, *Towards a new higher education landscape: Meeting the equity, quality and social development imperatives of South Africa in the 21st century*.³⁴ In this report the task team recommended, among other things, stratified differentiation between institutions, the formation of a dedicated distance education institution, and a reduction in the number of institutions through combining institutions without any being closed down completely.

In the National Plan, the Ministry gave its in-principle support to the CHE’s proposal for a reduction in the number of institutions through mergers. It also supported other forms of reorganisation, but it did not agree with the view that these should be essentially self-driven, but stated rather that the “Minister will have to exercise the full regulatory powers at his disposal in terms of the Higher Education Act”.³⁵ The National Plan called for further investigation by a National Working Group into what would constitute an appropriate institutional landscape for South African higher education.³⁶

²⁹ Ibid., sections 2.94 and 2.96.

³⁰ DoE (2001) *National Plan for Higher Education*, section 3.3.

³¹ DoE (1997) *White Paper 3*, sections 3.41 and 3.42.

³² DoE (2001) *National Plan for Higher Education*, section 3.3.

³³ DoE (1997) *White Paper 3*, section 2.45.

³⁴ CHE (2000) *Towards a new higher education landscape: Meeting the equity, quality and social development imperatives of South Africa in the 21st century*.

³⁵ DoE (2001) *National Plan for Higher Education*, section 6.4.

³⁶ Ibid.

Based on the findings of its report, the Minister announced at the end of 2002 that a number of institutions were to be merged to reduce the number of universities and technikons from 36 to 23. The central purpose of the reconfiguration of the landscape was to replace the informal race-based categorisation of institutions (historically white and historically black institutions) as well as the formal binary divide between universities and technikons. A new institutional categorisation arose from this process. The category of traditional university was retained while former technikons became universities of technology (UoT) or were merged with traditional universities in a new institutional form, the comprehensive university, which offered both degrees and diplomas. Yet others were to change missions to become comprehensive universities.

Other factors underlay the merger initiative. According to Jansen, “The first factor was the dramatic decline in student enrolments in higher education. This decline impacted directly on the already vulnerable historically black institutions, struggling with financial deficits, high failure rates, managerial ineffectiveness and poor students unable to pay for higher education”.³⁷ If the absolute decline in high-school graduates was a reality for all institutions, it was a disaster for black universities in that, increasingly, middle-class and above-average black students were drawn to the former white institutions. The net effect of this shift was to place already weak and fragile black universities in a precarious position in terms of funding and, as it turns out, future survival. The second factor was the dramatic increase in institutional instability during the mid- to late-1990s. Black institutions were embroiled in a vortex of student revolt, staffing conflicts, managerial ineptitude, unstable councils and senates, and a general failure of the leadership of universities and technikons to effectively manage this instability. In the meantime, as Habib notes, deficits soared and education quality nosedived even further. Under a post-apartheid government this was not only a political embarrassment but a development crisis.³⁸

Not surprisingly, there was much disagreement with both the principle and the strategy of the merger initiative. For instance, the Association of Vice-Chancellors of Historically Disadvantaged Institutions (ASAHI) saw the mergers as an attack on historically black universities and on poor and rural students.³⁹ Nevertheless, formal implementation of the merging of institutions started in 2004, with a special allocation of R3 billion in 2003 to carry the initial costs of mergers.⁴⁰

The experience and effectiveness of the merger process have certainly been varied. In some instances, such as the University of Johannesburg (UJ), the University of KwaZulu-Natal (UKZN) and Nelson Mandela Metropolitan University (NMMU), the mergers are regarded as having been generally successful as operational arrangements of the merged institutions have largely been settled and the universities appear to be on track for further positive development.⁴¹ In contrast,

³⁷ Jansen (2003) ‘The state of higher education in South Africa: From massification to mergers’ in Daniel *et al.* Habib & Southall (eds.) *State of the nation: South Africa 2003-2004*, p. 305.

³⁸ *Ibid.*, p.305.

³⁹ *Ibid.*

⁴⁰ Parliamentary Monitoring Group (2003) ‘Meeting report information: Restructuring of higher education; DHET (2004) *Statement on higher education funding: 2004/05 to 2006/7*.

⁴¹ E. Gillard, S. Saunders, J. Terblanche & M. Sukel (2012) ‘A review of four case studies in restructuring the South African higher education system’ (unpublished paper).

the merger leading to the formation of the University of Limpopo (UL) has been dissolved and a new configuration established.⁴² Moreover, complex issues continue to trouble other merged institutions where, for a range of reasons and despite one or more cycles of governance and management administration imposed by the Minister, problems persist to the serious detriment of their staff and students. Even where mergers have been a success, it seems that staff members generally see the merger as not having attained the goals as set out by the Department of Higher Education and Training and increased workload is a concern. Despite this, other positive outcomes have been identified by the same staff members.⁴³

Where there were difficulties with the merger process, the problems appear to have been at three levels. The first has been the perhaps underestimated difficulty of the operational issues such as managing satellite campuses at a distance, ensuring appropriately directed flows of funding to attend to priority activities, and aligning normal operational issues such as financial management and employment practices. Secondly, there has been substantial difficulty in merging institutional cultures and academic practices. While the merger process was intended as a coming together of equals, in some cases it was perceived as an incorporation of one institution into another that was larger or stronger in its academic 'prestige'. Contestations arose around issues such as output expectations in teaching, learning and research, programme offering or academic orientation of the merged institution, approaches to management and governance, and language issues, and fundamental matters such as collegiality and academic freedom. It is also worth noting that at some of the merged institutions where the operational alignment has largely been settled, much work has yet to be done to achieve a merger of cultures so that all the components of the institution can reasonably be said to operate within a shared identity.⁴⁴

A third difficulty arose from the inability of the policies and regulations that drove the merger process to deal with the influence of internal and external political and social pressures. While, in the interests of institutional autonomy, this aspect was left to the merged institution to address, it may well have been unreasonable to expect that the institutional capacity would be sufficiently mature to respond to such pressures appropriately. In institutions where the merger process was particularly difficult, it often appeared that leadership was struggling with the institutional and operational imperatives of the merger itself while at the same time dealing with disruptive activity from students, staff or sections of its external community.⁴⁵

There were considerable costs associated with the implementation of the mergers. Hall (2015) notes that:

⁴² G. Khumalo (2013) 'New university incorporating Medunsa campus on track' in sanews.gov.za.

⁴³ C.A. Arnolds, R.N. Stofile & R. Lillah (2013) 'Assessing the outcomes of the higher education mergers in South Africa: Implications for strategic management' in *Acta Commercii*, 13(1).

⁴⁴ Gillard *et al.* (2012) 'A review of four case studies in restructuring the South African higher education system' (unpublished paper).

⁴⁵ M. Hall, A. Symes & T.M. Luescher (2004) *The governance of merger in South African higher education*.

.... there were significant anxieties about the financing of the merger process and the extent of the capacity for change. National budget provision was seen as too little and too late. Independent estimates had put the sectoral costs of the merger exercise at between ZAR4.8bn and ZAR5.7bn (\$600 m to \$710 m at the prevailing rate of exchange). In December 2002, the government was reported to have set aside ZAR3.1bn (\$380 m), and the national budget for 2003 allocated only ZAR800m (\$100 m) for each of the following 3 years ...⁴⁶

In the event, case studies of particular mergers have concluded that the budget allocated was not adequate and that the costs were considerably higher than anticipated.⁴⁷

This inability to settle all of the institutional mergers has led to some rethinking on the part of government. In addition to the Limpopo demerger, it has been unofficially mooted that the merger arrangements at some of the other institutions may be unworkable and should be reconsidered.⁴⁸ On the other hand, it can be argued that the larger part of the institutional size and shape intentions of the NCHE report in 1996 have been achieved and that most of the higher education institutions concerned have found new operational and academic equilibrium levels. Another phase of change in the landscape of the sector started with the Minister announcing in 2012 the establishment of two new universities – one in the Northern Cape and one in Mpumalanga. Both universities enrolled their first students, even if in modest numbers, at the beginning of 2014.⁴⁹ Whether the establishment of new universities is a sufficient response to increasing demand for higher education, and whether they will be in a position to meet expectations on them, remains to be seen.

3.3.1 Colleges within the higher education sector

Specialised public colleges offering qualifications at higher education level – such as teacher education, agriculture, nursing and police colleges – have been in existence for decades but have not had a settled place as a distinct sector within the national higher education landscape, with some colleges having been responsible to, and funded by, state and provincial bodies outside of the Education ministries.

It was an expectation of the 1997 Higher Education Act that individual colleges of this kind (offering diploma- and certificate-level qualifications in specific occupations or professions) would either be incorporated into existing higher education institutions or be established as autonomous institutions in their own right. When it came to implementation of this policy, it was decided to deal with the colleges one category at a time. The teacher education category came first, and the then-Colleges of Education were all incorporated into existing higher

⁴⁶ M. Hall (2015) 'Institutional culture of mergers and alliances in South Africa' in Curaj *et al.* (eds.) *Mergers and alliances in higher education*, p. 151.

⁴⁷ Gillard *et al.* (2012) 'A review of four case studies in restructuring the South African Higher Education System' (unpublished paper).

⁴⁸ M. Dibetle (2008) 'Untangling the merger mess' in *Mail and Guardian*, 16 September 2008; Arnolds *et al.* (2013) 'Assessing the outcomes of the higher education mergers in South Africa: Implications for strategic management' in *Acta Commercii*, 13(1).

⁴⁹ SAPA reporter (2013) 'Zuma names two new universities' in *Mail and Guardian*, 25 July.

education institutions in 2001.⁵⁰ The next groups were to be the nursing and agricultural colleges. However, although recommendation reports had been submitted in 2000, the plans were not implemented, and the re-alignment of the full range of colleges as envisaged in the Higher Education Act was not realised.

The position of the colleges operating in the higher education band was not addressed in the reconfiguration of the institutional landscape of 2002 to 2004. While the colleges of education had by this time been incorporated into universities or technikons, the colleges offering tertiary qualifications in areas such as nursing and related health care, agriculture, policing and defence were not drawn into the new national higher education structure, and many of them continue to fall under national or provincial ministries other than the DHET.⁵¹

There has recently been considerable debate about the wisdom of incorporating colleges offering higher education qualifications into existing universities or universities of technology. Some have called for the re-establishment of independent colleges of education in response to concerns over the number and quality of teachers graduating from the university sector.⁵²

There is some debate about the location and status of nursing colleges and which national Department carries responsibility for them, with focused attention on their institutional capacity development. However this issue may be resolved, the new arrangement should recognise the CHE as the Quality Council for all higher education qualifications, including those of the specialist colleges. It is also evident that improving articulation opportunities between college qualifications and others in the higher education sector will depend considerably on integration of the colleges and avoiding multiple lines of accountability.

3.3.2 Implications of the establishment of the post-school sector

The 2002 to 2005 institutional restructuring project was more focused on the structure of the higher education system, consisting of universities and technikons, than on the broader post-secondary system. As a result, the restructuring project did not address the relationship between colleges and universities and provide clarity on the quality assurance of qualifications at a higher education level that were offered outside of universities. There was wisdom in deferring the complexities and sensitivities associated with the college sector to a separate and later initiative. However, when the Department of Education was split into the Department of Higher Education and Training and the Department of Basic Education in 2009, the definition of a post-school landscape incorporating universities and other institutions surfaced. Officials in the new DHET were

⁵⁰ Jansen (2003) 'The state of higher education in South Africa: From massification to mergers' in Daniel *et al.* (eds.) *State of the nation*; DBE & DHET (2011) *Integrated Strategic Planning Framework for Teacher Education and Development in South Africa, 2011–2025*.

⁵¹ It is noteworthy that the 2013 White Paper states that the 'government decision to shift responsibility for the agricultural colleges from the Department of Agriculture to the DHET will be effected in the near future' (DHET (2013) *White Paper for Post-school Education and Training: Building an expanded, effective and integrated post-school system*, p. xiii).

⁵² See, for example, CHE (2013) 'Advice to the Minister of Higher Education and Training on the status and location of public colleges' from www.che.ac.za; S. Mkhwanazi (2008) 'Pandor confirms plans to reopen colleges' in *IOL*, 25 April.

then obliged to turn their attention to the problems of the ‘post-schooling’ education sector, with an attendant imperative to consider all qualifications at NQF levels 5 and above and to determine new dispensations for their offering and the quality assurance thereof. This qualification level approach to organising the terrain had been reinforced by the 2008 National Qualifications Framework Act’s establishment of three Quality Councils for Education, and the Higher Education Amendment Act which confirmed the CHE as the principal authority of quality and approval for provision of qualifications at the levels deemed to be higher education, as separate from Further Education or Trades and Occupations qualifications.⁵³

3.4 Enrolment planning and control

3.4.1 The rationale for enrolment planning

While the NCHE had predicted and endorsed massification of the system, the early policy documents, as discussed above, called for a planned growth in the system. In the event, the massification did not materialise for some years and by the time the National Plan was formulated, a new problem, a decline in enrolments in some institutions, needed to be addressed. Thereafter, significant growth did in fact begin to occur. This growth was influenced by a number of factors.

The logic of the funding arrangements for public higher education favoured increased enrolments, even if such an increase did not result in a proportional increase in the number of graduates. Many institutions justified rapid growth as a means to provide access, with the possibility of success, to the most marginalised in society, even if the schooling system struggled to prepare students for the rigours of higher education studies.⁵⁴ High failure and drop-out rates indicate that institutions may well have been motivated by the financial advantage of increased enrolments, even when registering students who were likely to drop out at the end of the first year of study.⁵⁵

A second factor was that traditionally contact institutions were attracted by the apparent profitability of offering distance learning programmes. According to the National Plan, distance education headcount enrolments in contact institutions grew by 492% between 1993 and 1999, i.e. from 14 000 to 69 000 students.⁵⁶

⁵³ DoE (1997) *Higher Education Act 101 (as amended)*; DHET (2008) *National Qualifications Framework Act 67*; DHET (2013) *White Paper for Post-School Education and Training*.

⁵⁴ I. Scott, N. Yeld & J. Hendry (2007) ‘A case for improving teaching and learning in South African higher education’ in *Higher Education Monitor*, 6.

⁵⁵ The teaching input subsidy, earned from enrolments, makes up approximately 70% of the teaching component of block grant subsidy earned by an institution. Furthermore, a student enrolled in the first year of study, year n , generates input subsidy in year $n+2$. In contrast, if the institution’s costs are increased by expending time and resources on ensuring that the student graduates in minimum time, the output subsidy is generated only in year $n+5$. The teaching output subsidy is relatively small. If driven only by financial considerations, it is easy to see the logic of registering a student and then spending only the minimum on teaching and learning development. The value of the fees (earned in year n) and the input subsidy (earned in year $n+2$) is greater than the marginal cost of one more student in the class. Hence, there is no real penalty to the institution if the student is unsuccessful, since the loss of fees after the first year is generally small by comparison with the subsidy income.

⁵⁶ DoE (2001) *National Plan for Higher Education*, section 2.1.2.

The Department of Education responded by placing a moratorium on new distance learning programmes in February 2000 at contact institutions and on public-private partnerships.⁵⁷ The moratorium was lifted with the publication of the *National Plan for Higher Education*, but under the condition that, “the Ministry will not fund new student places in current and new distance education programmes in contact institutions from 2002 unless the programmes have been approved as part of the institution’s three-year rolling plans” which also reinforced the status of UNISA as the dedicated distance education provider.⁵⁸ The initial growth in distance education had partly been stimulated by the fact that the NCHE report and Education White Paper 3 noted a blurring in the distinction between contact and distance education institutions and encouraged institutions to provide effective and flexible learning environments using the educational methods and technologies that were most appropriate to their educational purposes and their student needs.⁵⁹ It may also have been stimulated by the inaccurate perception that distance modes of programme delivery were financially more efficient and allowed for greater economies of scale in the short term. In addition, a number of traditional contact public institutions responded to the emerging policy environment by entering into partnership agreements with private providers to offer distance education programmes.⁶⁰ The National Plan reported that, “The current developments have, if anything, intensified concerns about quality and efficiency”. As the CHE stated, “some institutions appear to have embarked on large-scale distance programmes primarily for financial gain. This has generated concern about the quality of provision” and that, “these programmes do not appear to relate to the social or educational goals of the country”.⁶¹

An additional factor was the opportunity for growth at existing universities through the establishment of satellite campuses, with attendant quality problems related to under-resourcing, and the continued separation of races according to geography. The problems associated with this development led to severe regulatory restrictions being placed on the growth of satellite campuses.

There was concern about uncontrolled enrolments making unpredictable demands on subsidy allocations in what appeared to be an expectation of an open-ended share of the national budget allocation.⁶² The concern was exacerbated by unacceptably low throughput rates which indicated that such growth was insufficiently productive. This led to two responses by the (then) DoE. The first

⁵⁷ CHE (2000) *Towards a new higher education landscape. Meeting the equity, quality and social development imperatives of South Africa in the 21st century*, pp. 41-2, 59.

⁵⁸ DoE (2001) *National Plan for Higher Education*, section 4.4.1.

⁵⁹ NCHE (1996) *A Framework for Transformation*; DoE (1997) *White Paper 3*; DoE (2001) *National Plan for Higher Education*, section 4.6.1.

⁶⁰ Bunting (2002) ‘The higher education landscape under apartheid’ in Cloete *et al.* (eds.) *Transformation in higher education*; R. Fehnel (2002) ‘Private higher education’ in Cloete *et al.* (eds.) *Transformation in higher education*; DoE (2001) *National Plan for Higher Education*, section 4.6.1.

⁶¹ DoE (2001) *National Plan for Higher Education*, section 4.4; CHE (2000) *Towards a new higher education landscape*, p. 41.

⁶² G. Wangenge-Ouma (2012) ‘Tuition fees and the challenge of making higher education a popular commodity in South Africa’ in *Higher Education* 64, pp. 831 - 844.

was to restrict enrolments through capping teaching input units.⁶³ Since this was recognised to be a rather blunt and short-term measure, the second response was the development of a more coherent and rational approach to enrolment planning.

The Minister's intended approach to managing enrolment planning was expressed in a report entitled *Student Enrolment Planning in Public Higher Education*, which was followed by the *Ministerial Statement on Student Enrolment Planning*.⁶⁴ These documents saw the DoE's role in planning for higher education to "include the sustainable management of student enrolments, the development of three-year institutional rolling plans, and the approval of programme and qualification mixes for each institution".⁶⁵ The motivation for introducing enrolment planning was stated as follows:

The emphasis on planning is informed by the fact that if the higher education system is to respond to the national development agenda in terms of access, redress and human resource development needs, the size and shape of the system cannot be left to the vagaries of the market, in particular, uncoordinated institutional decisions on student enrolments and programme offerings... The size and shape of the higher education system must be determined in the context of the available resources...

...the higher education system has grown more rapidly than the available resources. The resultant short-fall in funding has put severe pressure on institutional infrastructure and personnel, thus compromising the ability of higher education institutions to discharge their teaching and research mandate. This cannot continue if the higher education system is to contribute to the national development agenda through its role in the generation, transmission and application of knowledge in general and human resource development in particular.⁶⁶

3.4.2 A 'negotiated self-regulation' approach to enrolment and infrastructure planning

The DoE embarked on an innovative approach to the process of enrolment planning, which was formally implemented from 2006 onwards. This approach required each institution to propose a three-year enrolment plan to the DoE, based on parameters such as projected total enrolments, progression and graduation rates, race, disability and gender profiles, subdivided by qualification level and disciplinary or Classification of Educational Subject Matter (CESM) category. This information was submitted in templates prepared by the DoE according to the performance parameters to be monitored.

The appropriate executive leadership of each institution then entered into discussion or negotiation with the DoE on the appropriateness and suitability of the proposed enrolment plan in relation to the institution's mission and to the DoE's planning intentions at the national level. Based on these discussions, the

⁶³ In April 2004 the Minister announced enrolment caps at 2002 enrolment levels plus 5% for contact students and 2002 plus 3% for distance students (DoE (2005) *Student Enrolment Planning in Public Higher Education*).

⁶⁴ DoE (2005) *Student Enrolment Planning in Public Higher Education*; DoE (2005) *Ministerial Statement on Student Enrolment Planning*.

⁶⁵ DoE (2005) *Ministerial Statement on Student Enrolment Planning*.

⁶⁶ DoE (2005) *Student Enrolment Planning in Public Higher Education*, p.3.

DoE (or the DHET, from the second planning cycle, 2009-2011) issued a proposed final enrolment plan for each institution. At this stage, the institutional Council was asked to approve the proposed final enrolment plan. In cases where Council was unhappy with the revisions to the enrolment plan, there was an opportunity for Council to engage directly with the DoE. Once accepted, the final plan formed the basis on which the institution was to be funded, and monitored for enrolments, student demography, transformation and student success rates. An important effect of the adoption of this 'negotiated self-regulation' approach to enrolment planning is that it gave the higher education sector (the Ministry included) an opportunity to make a case for greater investment by government to expand infrastructure at existing institutions. The provision of adequate infrastructure was critical to responsible growth. Government responded by allocating three cycles of additional but earmarked funding starting in the 2006/07 financial year and continuing until 2014/15. The total amount of money allocated over the three cycles was almost R12.5 billion. This allocation was in addition to other state funding of universities.⁶⁷

The negotiated self-regulation approach was also used in the allocation of funding and approval of institutional infrastructure development plans. The allocations were based on an assessment of the plans submitted by an institution, following guidelines and criteria that had been pre-set by the DoE.⁶⁸ The plans were revised by the Department based on factors including feasibility, fit with intentions at the national level and the limits of available funding. The revised plans were tabled for the Council of the institution to endorse. To varying extents, all institutions received funds from this grant, although the guidelines suggest that the Department could deem institutions ineligible for the infrastructure grant.⁶⁹

While additional capacity was created through this initiative, much of the funding was used to address a backlog of infrastructure development needs because the growth in enrolments between 1994 and 2006 had largely been absorbed into existing infrastructure. In many cases, the funding was used for modernisation and renewal of existing infrastructure, which had deteriorated as a result of excessive use and inadequate maintenance over the years. Student housing was also an important category for infrastructure grants and emphasis was placed on supporting historically disadvantaged universities.⁷⁰

3.4.3 Tensions attendant upon increasing enrolment

By 2012, there were concerns that enrolment in the existing institutions was close to capacity and that investment in infrastructure expansion would bring only marginal increases in enrolments. However, the 2013 White Paper indicates that:

[p]articipation in universities must increase from the current rate of 17.3 per cent to 25 per cent; by 2030 there should be a total enrolment of approximately 1.6 million. This expansion will be at a slightly slower rate than that between 1994 and the

⁶⁷ DHET (2011) *Guidelines for Infrastructure and Efficiency Funding*.

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ Ibid; DHET (2013) *Report of the Ministerial Committee for the Review of the Funding of Universities*.

present... DHET will intervene to encourage expansion in specific areas as required by national needs, including teacher education, health, particular areas of engineering and technology, and others that may be identified.⁷¹

The net effect has been that pressure for access has not diminished and many institutions have had to revise their admission requirements in order to contain unmanageable growth of enrolments.

This situation has had three important consequences. First, the view of government is that expansion of enrolments will have to be achieved partly through the development of new institutions, the result of which has been the establishment of the two new universities in the Northern Cape and Mpumalanga as mentioned above. The 2013 White Paper indicates that, “additional universities will eventually be required in the context of meeting our enrolment targets... Increasing university enrolments will occur in a measured and planned fashion, thus providing time for universities to recruit skilled personnel, develop new programmes and build new infrastructure”.⁷²

The second consequence has been a shift in the focus of enrolment planning away from enrolments towards increasing the number of graduates. Pressure through external monitoring of progression and graduation rates is now being brought on institutions to improve teaching and learning strategies. The 2013 White Paper states that:

[w]hile some expansion is needed in the university sector, the DHET’s main focus will be on improving quality and building appropriate diversity within the sector. The aim is to ensure that a wide range of high-quality options is provided throughout the system, as well as improving articulation between higher education institutions and between universities and other post-school institutions.⁷³

The impetus to improve teaching and learning is evident also in the CHE’s proposal for undergraduate curriculum reform, its decision to focus on teaching and learning in the Quality Enhancement Project and the DHET’s Teaching Development Grants.⁷⁴

The third consequence has been a renewed recognition of and emphasis on distance learning as a strategy for increasing participation because of its perceived cost-efficiency to both institutions and students. This is being influenced by the increasing sophistication of information technology systems, the decreasing costs of bandwidth and the increasing availability of the devices necessary for student learning. The 2013 White Paper signalled this change in focus indicating that, “a particularly important role must be played by the expansion of distance education at both UNISA and mainly contact universities”.⁷⁵ A draft policy framework on

⁷¹ DHET (2013) *White Paper for Post-school Education and Training*, section 4.3.

⁷² *Ibid.*, section 2.4.

⁷³ *Ibid.*, section 4.1

⁷⁴ CHE (2013) *A proposal for undergraduate curriculum reform in South Africa*; CHE (2014) *Framework for institutional quality enhancement in the second period of quality assurance*; DHET (2013) *Report of the Ministerial Committee for the Review of the Funding of Universities*.

⁷⁵ DHET (2013) *White Paper for Post-school Education and Training*, section 2.4.

distance education provision was published in 2012.⁷⁶

The renewed pressure to improve graduation rates has highlighted an important area of neglect in the approach to enrolment planning and infrastructure development, namely, academic staff capacity. As indicated in Chapter 7, HEMIS data indicate that enrolments in the higher education sector grew by 65% between 2000 and 2012, while the academic staff complement grew by 35% over the same period. Added to this have been the many calls from bodies such as the Department of Science and Technology and the Academy of Science for South Africa, for increased postgraduate enrolments, particularly at doctoral level.⁷⁷ This has resulted in a demand for increased numbers of academic staff, with an increased proportion holding doctoral degrees to allow them to supervise postgraduate students. The task of responding to the increased need has largely been left to individual institutions, many of which have found it difficult in the face of constrained resources. The general response has been to introduce one or more of the following approaches:

- Increasing class sizes in contact mode teaching to improve financial efficiency. Cases have been reported of classes with more than 1000 students facing a single lecturer, seriously compromising opportunities for what would be considered normal classroom engagement between students and lecturers.
- Dispensing with contact-based, small tutorials in favour of electronic or blended learning strategies that are considered to be financially more efficient, often without the necessary academic support or pedagogical expertise.
- Increasingly relying on short-term contract staff to undertake teaching tasks on the grounds of financial efficiency. This approach has significantly increased concern about the casualisation of academic staffing at universities (see Chapter 7).

A consequence has been increasing competition for high-level and research-active academic staff, which has resulted in a circulation of such staff within the sector rather than developing approaches to grow available capacity.

The approaches taken have been pragmatic, but they have arguably given universities the character of corporate-style production processes, driven primarily by financial considerations. This reflects an international trend and commentators inside and outside the higher education sector have warned that this 'corporatisation' may compromise academic freedom and the development of high-level, critical intellectual development.⁷⁸

⁷⁶ DHET (2012) *Draft Policy Framework for the Provision of Distance Education in South African Universities*.

⁷⁷ DST (2008) *Innovation towards a knowledge-based economy. Ten-year plan for South Africa – 2008-2018*; ASSAf (2010) *The PhD study. An evidence-based study on how to meet the demands for high-level skills in an emerging economy*.

⁷⁸ CHE (2006) *Academic freedom, institutional autonomy and the corporatised university in contemporary South Africa*; J. Duncan (2007) 'Rise of the disciplinary university' in *Mail and Guardian*, 22 May; M.B. Marklein (2015) 'Corporatisation threatens academic freedom' in *University World News*, 13 March; S. Morrow, K. Bentley, A. Habib (2006) *Academic freedom, institutional autonomy and the corporatised university in contemporary South Africa*.

Enrolment planning has also been used by government to steer changes in levels of engagement in different academic disciplines. There has been a strong emphasis on developing science, engineering and technology (SET) disciplines and enrolments. While the emphasis on SET disciplines has not diminished, additional priorities have emerged, including a focus on teacher education, indigenous knowledge systems and African languages.

Furthermore, concern about an apparent decline in enrolments and intellectual engagement in disciplines in the humanities led to studies on the state of the humanities by both the Academy of Science and the Ministry.⁷⁹ These reports are discussed in some detail in Chapter 5 of this report which focuses on research. Driven by this concern, the Minister legislated the establishment of a National Institute for the Humanities and Social Sciences.⁸⁰ The establishment of such an institute has been the subject of debate, and unease has been expressed at the idea of so direct an intervention by government in trying to steer higher education, through legislation and a separate structural instrument, at the level of particular disciplines.⁸¹

3.5 Regulating private higher education provision

It is estimated that, by 1994, there were approximately 330 South African private education institutions offering qualifications at the further and higher education levels, principally up to diploma level. Tladi and Mabizela note that the earliest example of private higher education providers in South Africa dates back to 1829 with the formation of the *South African College*, later to become the University of Cape Town in 1918.⁸² A different development vein manifests in several of the current private providers tracing their history back to the 1940s (such as Damelin which is now part of Educor and Rosebank College which is now part of The Independent Institute of Education). The sector has thus had a long and established presence in South Africa. However, until 1994, the private sector showed no direct aspirations to compete with, or even directly complement, public higher education. Indeed, prior to the 1990s, private post-school education was focused predominantly on certificate and diploma-level vocationally-directed training.⁸³

Growth in private higher education provision appears to have accelerated in the 1990s. The reasons for this growth are not fully understood but Tladi suggests that it

⁷⁹ ASSAf (2010) *Consensus study on the state of the humanities in South Africa: Status, prospects and strategies*; DHET (2011) *Report Commissioned by the Minister of Higher Education and Training for the Charter for Humanities and Social Sciences*.

⁸⁰ DHET (2013) *The Regulations for the Establishment of a National Institute for the Humanities and Social Sciences*.

⁸¹ ASSAf (2013) 'Comments on the Draft Regulations for the Establishment of a National Institute for the Humanities and Social Sciences (NIHSS)'; CHE (2013) 'CHE Comment on the Draft Regulations for the Establishment of a National Institute for the Humanities and Social Sciences'.

⁸² L. S. Tladi (2010) *A profile of the private higher education landscape*; M. Mabizela (2002) 'The evolution of private provision of higher education in South Africa' in *Perspectives in Education*, 20(4).

⁸³ Mabizela (2002) 'The evolution of private provision of higher education in South Africa' in *Perspectives in Education*, 20(4).

was related to an expectation of growth in demand and investment from an increasingly liberalised economy.⁸⁴ There was little regulation of the private higher education sector proposed during the first decade after 1994 which created opportunities for rapid growth.⁸⁵ The end of apartheid saw the beginning of rapid growth in the presence of international private higher education institutions in South Africa. While many operated as private institutions in their home countries, some international public institutions, such as Monash University in Australia, also established a presence in South Africa. Many such institutions established and operated independent campuses while others recruited students through partnerships with local private and public institutions. The arrival of international private higher education was met with both scepticism and concern on the part of government and the public higher education sector and even some in the local private education institutions.⁸⁶

The concerns expressed ranged from issues of quality – an expectation that standards lower than those used in the ‘home’ countries would be applied to South African students as well as concerns about the quality of the institutions themselves in some instances – to concerns about how to protect students from unscrupulous providers. There was also a seemingly contradictory concern that these providers would compete with public universities for top-performing high school leavers who would traditionally have gone into the public university sector. This was thought to be of greatest concern in relation to ‘low-cost’ undergraduate programmes such as the humanities and business and management disciplines, where the private institutions could conceivably benefit most from the fees of students without significant investment in more expensive disciplines.⁸⁷ In particular, the proliferation of MBA programmes in the late 1990s raised serious quality concerns. Indeed, negative perceptions of the quality of private higher education provision were reinforced when the Higher Education Quality Committee’s (HEQC) review of MBA programmes in 2004 resulted in the withdrawal of accreditation from some private institutions.⁸⁸ Although this was only one programme review and a number of private institutions received positive assessments, it did perhaps fuel the popular perception that the entire private education sector was of poor quality and needed regulation.

Nevertheless, the arrival of international private higher education stimulated national debate – certainly at the level of the Ministry and the public universities – about potential risk associated with an unregulated private sector. The 1999 amendment to the Higher Education Act of 1997, which designated the Director General of Education (later, Higher Education) as the Registrar of Private Higher

⁸⁴ Tladi (2010) *A profile of the private higher education landscape*.

⁸⁵ DoE (1997) *White Paper 3*.

⁸⁶ Mabizela (2002) ‘The evolution of private provision of higher education in South Africa’ in *Perspectives in Education*, 20(4); M. Mabizela (2006) ‘Recounting the state of private higher education in South Africa’ in N.V. Varghese (ed.) *New trends in higher education. Growth and expansion of private higher education in Africa*.

⁸⁷ Mabizela (2002) ‘The evolution of private provision of higher education in South Africa’ in *Perspectives in Education*, 20(4); Mabizela (2006) ‘Recounting the state of private higher education in South Africa’ in N.V. Varghese (ed.) *New trends in higher education. Growth and expansion of private higher education in Africa*.

⁸⁸ CHE (2004) *The state of the provision of the MBA in South Africa*.

Education, signalled the start of formal regulation of the sector. By the mid-2000s, private higher education providers were required to be fully compliant in terms of registration and accreditation. In the longer term, formal regulation had the effect of improving public confidence in the quality of those providers that were able to meet the regulatory requirements. This was bolstered by the application of the same programme accreditation regime that was applied to public higher education institutions by the CHE, through its HEQC.⁸⁹

By 2004, there were extensive legislative, regulatory and quality assurance mechanisms in place to regulate the private sector. Public-private partnerships were restricted by approval and funding mechanisms, except in some key areas such as the partnerships with private institutions that offered supplementary tuition to students registered with UNISA. While there were (and still are) formal agreements and recognition of these private tuition centres with UNISA, they did not initially fall under the scrutiny of the regulators as they were considered supplementary to the provision of UNISA's qualifications. For many of the existing, larger private education providers, it was these first relationships with UNISA that laid the foundation for their later development into degree-conferring institutions in their own right.⁹⁰

A concern from some private providers has been that they were insufficiently involved in the initial quality assurance processes which seemed to apply more directly to public providers. This resulted in an evolution of processes in response to individual cases and arguably led to inconsistencies of application.

The collection of data on the private sector is less extensive and systematic than for the public sector. While annual reporting to the DHET is not yet done online, and the HEQC Information System (HEQCIS) that collects data on enrolments and achievement in private higher education qualification offerings is not yet completely populated, the development of systems for the collection of more extensive data is in an advanced stage. Nevertheless, the lack of audited data has hindered the development of a more comprehensive understanding of the private sector that would facilitate the maximising of its contribution to education and skills development.

For some time there was uncertainty about the number of institutions in the private higher education sector. Estimates ranged from 323 private and transnational providers operating in 2000 in South Africa, to 89 that were accredited with SAQA at that time.⁹¹ By the end of 2007, mandatory registration requirements for higher education provision were in place, and programme accreditation was already a well-established process, and this allowed for better

⁸⁹ DoE (1997) *Higher Education Act 101 (as amended)*; CHE (2001) *Higher Education Quality Committee founding document*; CHE (2004) *Framework for programme accreditation*; Mabizela (2006) 'Recounting the state of private higher education in South Africa' in Varghese (ed.) *New trends in higher education*.

⁹⁰ Mabizela (2002) 'The evolution of private provision of higher education in South Africa' in *Perspectives in Education*, 20(4); Mabizela (2006) 'Recounting the state of private higher education in South Africa' in Varghese (ed.) *New trends in higher education*.

⁹¹ The CHE's Monitor (No. 1) says that approximately 117 private providers were operating in South Africa and between 1998 and May 2002 SAQA accredited 348 programmes of 89 providers (CHE (2003) *The State of Private Higher Education in South Africa*).

monitoring of the size and shape of the sector. The DHET register of 2013 listed 115 institutions and all their registered programme offerings, while that of December 2014 listed 124 institutions (96 registered and 28 with provisional registration). This suggests that regulation has led to some consolidation of the sector. The number of enrolments in the sector is estimated, on the basis of data submitted in Annual Reports, to be over 90 000.⁹²

A further complicating factor in terms of understanding the sector is that several of the institutions offer qualifications at both the higher and further education levels and may therefore not, technically, view themselves in the first instance as higher education providers, although they may carry higher education registration. Prior to 2004, some institutions that had offered qualifications at both levels were unable to meet the requirements of registering as a private higher education provider and thus stopped operating, while others refocused their provision on further education. It was not mandatory to register as a private further education provider until late in 2008, and while the Sector Education and Training Authorities (SETAs) were the key bodies with which programmes at this level were to be registered, there were also some programmes accredited directly by Umalusi and others by SAQA. Thus, while there was an attempt at greater regulatory clarity within the higher education part of the private sector, regulation in the further education space remained complex. Some institutions have tried to deal with this complexity by seeking accreditation for their programmes through the HEQC so as to make a more complete transition into purely higher education provision. Stated differently, this response appears to be driven by the need for regulatory stability rather than by considerations of institutional mission and capacity which has the potential to create imbalances in the system.

New challenges are also emerging. As the sector has matured, the nature and identity of a private higher education institution has become contested in some quarters in light of the apparent prohibition on the use of terms such as ‘university’ or ‘professor’. This is felt to be constraining to growth and to quality as it becomes harder for them to attract academics or to position themselves clearly in relation to public institutions in the choices available to students. In the absence of clear regulations and legislation on distance provision hitherto, weak practices may have emerged during the growth in distance education offerings in the private sector. A new policy on distance education and specific criteria for the accreditation of distance education offerings have since been developed which are designed to address this issue.⁹³

It is unclear whether there is intended to be a directed and coordinated approach to stimulating the growth of private higher education. The White Paper of 2013 reinforces the message that private provision is a valuable part of the higher education sector, yet there appears not to be a clear strategy to stimulate it. Better data and understanding of the sector will assist in including it meaningfully in national planning processes.

⁹² DHET (2014) *Statistics on post-school education and training: 2012*.

⁹³ DHET (2012) *Draft Policy Framework for the Provision of Distance Education in South African Universities*; CHE (2014) *Distance higher education programmes in a digital era: Good practice guide*.

For its part, the private sector itself has not responded in an integrated or coordinated way to the national higher education challenges. There are two self-regulating representative structures. The larger and older, the Association of Private Providers of Education, Training and Development (APPETD), formed in 1997, serves both the further and higher education parts of the private provision sector. The second, the Private Higher Education Institution Group (PHEIG), comprises only a small number of higher education providers.⁹⁴ Neither is able to represent a very small private sector effectively in the larger post-school context. In order to maximise its contribution to meeting higher education needs, better sectoral coordination and more focused engagement with regulatory and quality assurance authorities will be needed, as well as concerted and deliberate means found of shaping the future of the sector.

3.6 Equity, redress and social transformation in higher education

After 1994, the need for participation by all sectors of society appeared as a guiding principle in the mission and strategy statements of many higher education institutions as well as in the regulation and policy documents emerging from government, particularly in the White Paper of 1997. Initially, this goal was intended to be achieved in higher education through self rather than direct regulation. However, by the time of the National Plan it had become clear that some regulatory impetus was needed. The National Plan envisaged that the “planning process in conjunction with funding and an appropriate regulatory framework will be the main levers through which the Ministry will ensure that targets and goals of this National Plan are realised” and that the “Ministry will not, however, allow institutional autonomy to be used as a weapon to prevent change and transformation”.⁹⁵

The National Plan advocated the transformation of the student body and saw the role of government in this transformation process as facilitative and supportive, to assist higher education institutions to achieve equity in student enrolment. The proposed instruments to support and facilitate increased access were to take the form of initiatives such as the establishment of a National Higher Education Information and Applications Service and the National Student Financial Aid Scheme (NSFAS).⁹⁶ However, the plan also indicated that if institutions do not develop their own race, gender and disability equity targets and put in place clear strategies for achieving them, the Ministry “will have no hesitation in introducing quotas in the future”.⁹⁷

The plan also made the important point that, with increased access of students from diverse social and learning backgrounds, institutions were to ensure that graduation rates improved.⁹⁸ An incentive for improving graduation rates was

⁹⁴ A small number of members offer one or two further education programmes but these are peripheral to their principal higher education offerings.

⁹⁵ DoE (2001) *National Plan for Higher Education*, sections 1.5 & 1.5.1.

⁹⁶ *Ibid.*, sections 2.3 & 3.2.

⁹⁷ *Ibid.*, section 3.2.

⁹⁸ *Ibid.*, section 2.3.

that graduate outputs would be a component of the new funding formula.⁹⁹ It therefore acknowledged that the responsibility for teaching and learning quality should be placed at the level of the individual institution.

Within the system of ‘negotiated self-regulation’, the main levers to bring about equity and access were enrolment planning, as discussed above, and funding. The main funding mechanisms have been the establishment of a student financial aid system and earmarked funding such as for foundation programmes. The third lever, which focused on the teaching and learning process in achieving equity of outcomes, was quality assurance. A direct expression of the transformation imperative appeared in the CHE’s approach to quality assurance, where social transformation of a higher education institution was directly linked to the quality of its academic and intellectual activities. This was stated in the foreword to the Framework for Institutional Audit as follows:

The HEQC’s approach to institutional audit is strongly shaped by the complex challenges facing higher education institutions in an era of radical restructuring within South African higher education. The audit system seeks to be responsive to as well as proactive in advancing the objectives of higher education transformation, as reflected in various policy and legislative documents that have been published since 1994. Ensuring that improved and sustainable quality is part of the transformation objectives of higher education institutions is, therefore, a fundamental premise of the HEQC’s approach to quality assurance in general and to institutional audits in particular.¹⁰⁰

In the area of staff equity and transformation, the National Plan took a similar view of largely leaving this to self-regulation by institutions. It acknowledged the complexity of the problem of changing staff profiles as a result of the low number of black and female postgraduate students; the lack of funding for postgraduate students; and the inability of universities to compete with the public and private sectors in terms of salaries. However, the plan also expressed concern that many institutions had not developed either the necessary employment equity plans as required by the Department of Labour nor set specific race, gender and disability targets.¹⁰¹ Nonetheless, the government’s approach over the next decade to achieving equity in staffing has remained one of monitoring and stimulation, rather than direct regulation.¹⁰²

This approach further reinforced government’s acknowledgement that transformation of institutional culture was as important as transformation of the demography of staff and students at the institution. The enormity of the barrier that an exclusionary institutional culture can represent has been recognised since the 1997 White Paper.¹⁰³

While there has been contestation on strategy, rate and extent of transformation, this negotiated self-regulation approach to transformation remained largely in place over the past twenty years. However, the Reitz incident which occurred

⁹⁹ Ibid., section 2.3.1.

¹⁰⁰ CHE (2004) *Framework for institutional audits*, p.1.

¹⁰¹ DoE (2001) *National Plan for Higher Education*, section 3.3.

¹⁰² See Chapter 7.

¹⁰³ DoE (1997) *White Paper 3*, section 2.4.3.

early in 2008 at the University of the Free State (UFS) led to a revision of the approach to higher education transformation on the part of government.¹⁰⁴ This incident, which was a crude expression of racism on the part of a group of white students at a university residence, led to the Minister appointing a committee which produced a report on *Progress Towards Transformation and Social Cohesion and the Elimination of Discrimination in Public Higher Education Institutions* in March 2008 to investigate discrimination at public higher education institutions, with a focus on racism, and to make recommendations on how to promote social cohesion. This Commission produced a report in late 2008 which became commonly known as the Soudien Report, which reported significant incidents of discrimination based on race, class, language, gender, sexuality and national identity across higher education institutions.¹⁰⁵ The Committee acknowledged the presence of generally suitable institutional policies for transformation but often found implementation and practice wanting, particularly at the level of institutional culture. The report places much of the responsibility for this at the doors of the governance and senior management structures of institutions. It contains recommendations that later led to the Minister convening the Ministerial Oversight Committee on Transformation in the South African Public Universities which was formally established in April 2013.¹⁰⁶ The establishment of this Oversight Committee, and attempts to create equity monitoring mechanisms (see Chapter 7), seem to have marked a new and more directive approach to transformation of higher education institutions in South Africa.¹⁰⁷

3.7 Diversity and differentiation of the sector

The differentiation of the higher education sector has been a difficult matter and much has been written and said in support of – or opposition to – different conceptions of a differentiated system. What follows is a section that aims to point only to the broad parameters and areas of contestation that have influenced approaches and thinking on the nature of a differentiated sector. While a discussion document on differentiation was produced in 2012, there has been little progress since.¹⁰⁸

Government's approach to the arrangement of higher education institutions after 1994 espoused the principle of developing a single, coordinated system that is diversified in its qualification offerings and differentiated in its institutional

¹⁰⁴ In February 2008 a video made by four white male students of the Reitz Residence at the University of the Free State (UFS) became public. The video showed the students giving food, into which one of the students had apparently urinated, to a group of black cleaning workers – four women and one man. The video was made for a cultural event at the hostel, where it won first prize. It was reported to portray an initiation ceremony, but was actually a response to the University's new policy to integrate the residences. Public outrage at the video ensued.

¹⁰⁵ DoE (2008) *Report of the Ministerial Committee on Transformation and Social Cohesion and the Elimination of Discrimination in Public Higher Education Institutions*.

¹⁰⁶ DHET (2013) *Ministerial Oversight Committee on Transformation in the South African Public Universities*.

¹⁰⁷ K.S. Govinder & M.W. Makgoba (2013) 'An Equity Index for South Africa' in *South African Journal of Science*, (109)5/6.

¹⁰⁸ HESA (2012) *Differentiation in higher education*.

missions.¹⁰⁹ Differentiation has, therefore, been a topic of discussion throughout policy development post-1994. The Higher Education Act indicated that the “Minister must... allocate public funds to public higher education on a fair and transparent basis... [but] may, subject to the policy determined in terms of subsection (1), impose... different conditions in respect of different public higher education institutions, different instructional programmes or different allocations, if there is a reasonable basis for such differentiation.”¹¹⁰ The possibility for differentiated funding for different missions was thus established in law. The CHE’s Size and Shape task team recommended possible differentiation of the sector which led to some debate.¹¹¹ The National Plan (2001) commented that:

The Ministry agrees with the Council on Higher Education that a differentiated and diverse higher education system is essential to meet the transformation goals of the White Paper. It also agrees that if diversity is to be achieved, a clear regulatory and planning framework is required. The Ministry does not, however, support the CHE’s proposal that differentiation and diversity should be achieved through structural differentiation between different institutional types based on a distinction between teaching and research institutions....The Ministry believes, however, that it would not be consistent with a programme-based approach if the mission and programme mix of institutions is defined by a predetermined regulatory framework based on structural differentiation between different institutional types. The danger with structural differentiation is that it introduces an element of rigidity, which will preclude institutions from building on their strengths and responding to social and economic needs, including labour market needs, in a rapidly changing regional, national and global context. At the same time, the Ministry does not favour an open-ended institutional framework, which leads to academic and mission drift and uniformity based on the values, priorities and practices of the major research universities.¹¹²

Despite early policy discussions, little progress with regard to differentiation was made. In 2012, the DHET reiterated its support for differentiation first in the Green and then the White Paper for Post-School Education and Training.¹¹³ While discussing differentiation of the post-school sector as a whole, the White Paper also indicated that “[t]here is broad agreement that South Africa needs a diverse university sector which is purposefully differentiated in order to meet a range of social, economic and educational requirements”.¹¹⁴ The document goes on to discuss how the current diversity in the system is largely the result of historical legacy and inequality, although some differentiation has been policy driven. Differentiation could assist in providing a range of educational opportunities which could increase participation and improve success rates. The document goes on to explain some principles for differentiation; including maintaining the

¹⁰⁹ NCHE (1996) *A Framework for Transformation*; DoE (2001) *National Plan for Higher Education*.

¹¹⁰ DoE (1997) *Higher Education Act 101 (as amended)*, section 39.

¹¹¹ CHE (2000) *Towards a new higher education landscape. Meeting the equity, quality and social development imperatives of South Africa in the 21st century*.

¹¹² DoE (2001) *National Plan for Higher Education*, section 4.2.

¹¹³ DHET (2012) *Green Paper for Post-school Education and Training*; DHET (2013) *White Paper for Post-school Education and Training*.

¹¹⁴ DHET (2013) *White Paper for Post-school Education and Training*, section 4.2.

current three institutional types; allowing for flexibility with regard to programme mix and level; ensuring that all institutions carry out undergraduate teaching; and the provision of appropriate funding.

From a legislative point of view, coordination and diversification have largely been the focus of developments such as the Higher Education Qualifications Framework (2007) and the National Qualifications Act (2008) that formalised the distinctive roles of the three Quality Councils. This required the development of separate qualifications frameworks for higher education and occupational or vocational ones. The approach in these developments has generally been accepted by higher education institutions, mainly because it provides the regulatory basis for rationalising qualification offerings and creating learning articulation pathways to significant potential benefit for students and collaborating institutions. Such a rationalisation allows the possibility of differentiating the post-schooling system on the basis of qualifications and thereby creating a useful framework for dealing with the new understanding of a post-school system, of which higher education is an integral component.

Achieving a functionally differentiated higher education system has been more complex and difficult. The institutional merger process (discussed above) brought with it a new taxonomy of higher education institutional types:

- Universities – in the more traditional character of teaching and research, offering qualifications from the three-year Bachelor's degree to doctoral level qualifications with a strong focus on postgraduate and research activities,
- Comprehensive universities – offering qualifications from the higher certificate to doctoral levels with some related research activity,
- Universities of technology – offering predominantly undergraduate qualifications with some postgraduate and research activity, all with a strong focus on industrial and technological disciplines.

This was essentially a compromise after the political implications of the CHE proposal for mission differentiation had become evident. This consideration of mission differentiation of institutions had placed mainly historically white institutions in the 'research intensive' group (as indicated above) and the historically black institutions in the so-called 'bedrock' group – an arrangement that would inevitably have been very difficult to defend.¹¹⁵

While public institutions were all placed in one of these categories after the merger process, no formal policies or regulations were adopted to prescribe their mandate and mission to ensure that their activities were contained within the limits of their classifications. Where institutions have remained largely within their existing areas of establishment, this has been more by context and circumstance than by formal regulation. In effect, all institutions are able to offer all levels of qualification, although this is subject to PQM approval. It has also not been clear that, in considering PQM restrictions for an individual institution, the DHET has been using institutional differentiation in a structured and transparent manner.

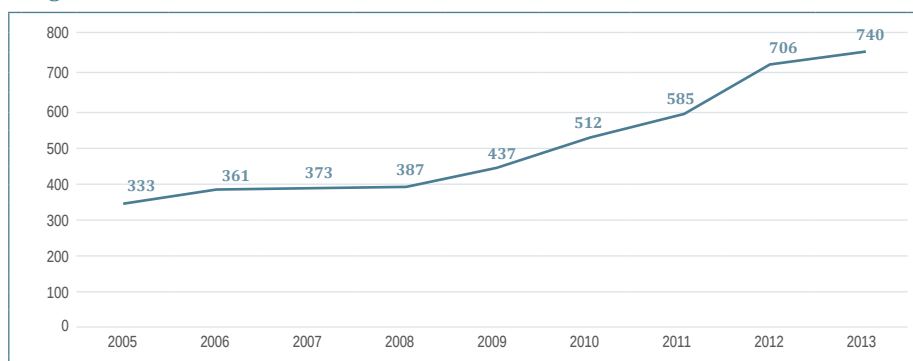
¹¹⁵ CHE (2000) *Towards a new higher education landscape*.

An important difficulty in attempts to differentiate the sector structurally lay in the perception, real or imagined, that differentiation also carried funding and 'prestige' implications that could well reinforce or consolidate apartheid divisions in higher education. As an example, the handful of existing research-intensive universities may have presented an argument for differentiation on the basis that preferential funding for research support should flow in their directions. However, the research-intensive universities are also generally the historically white universities and the funding flow argument was countered by the historically black universities on the basis that they too intend to be research-intensive institutions, and require additional funding to achieve this and should not be disadvantaged because of apartheid's neglect of their intellectual engagements. The difficulty clearly lay in the need for a functional differentiation framework that has to be overlaid onto a still largely racially differentiated sector, with the attendant apartheid arrangements of power relations and access to resources.

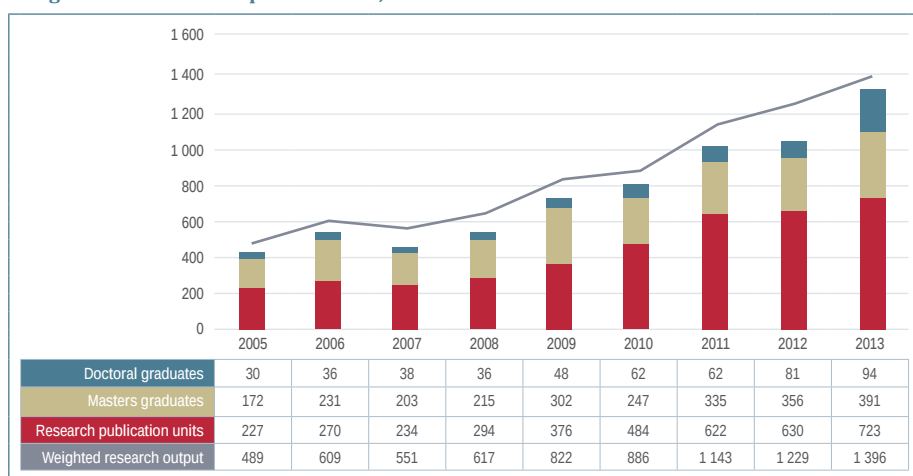
It has been argued that the early period of post-1994 restructuring of higher education represented a 'de-differentiation' of the sector in the sense that the approach was for all institutions to be treated as having equal potential for development.¹¹⁶ Prior to 1994, there were essentially two regulatory systems for higher education, one for universities and one for the then technikons. Indeed, there were two legislated sectoral coordinating structures – the Committee of University Principals and the Committee of Technikon Principals (CTP). Driven by pressure for the old technikons to be treated at the same level as universities, the act of merging these two into a single higher education sector after 1994 was in effect a process of de-differentiation. While this has certainly had broader and longer-term impacts on conceptions of differentiation of higher education, at the time it was largely a compromise approach to develop a single qualifications framework that was thought necessary to facilitate the proposed institutional merger arrangements.

Institutional differentiation at the merger stage was coupled with a programme-based differentiation as discussed above. However, the alignment of institutions with particular types through their programme offerings has not proceeded as planned since there has been significant 'mission drift' by institutions as they pursue opportunities perceived to be more beneficial. Some have moved to offering distance learning programmes because of the perceived financial benefit; universities of technology have pushed for greater participation in research and doctoral degree programmes (as shown below), in part driven by the idea of research as an essential characteristic of a university, with the attendant flow of funding, but also by the sense that the teaching-only institution is disadvantaged in the competition for third-stream income which is increasingly necessary to augment the operational income of an institution. This may well have shifted the attention of some institutions away from their intended principal mission – to provide high quality, critical teaching and learning with significant improvements in graduation rates.

¹¹⁶ M.Young (2013) 'The future of post school education: Differentiation and collaboration not a seamless web' (presentation).

Figure 3: Doctoral enrolments at UoTs 2005 - 2013

Source: HEMIS 2005 - 2013, extracted annually

Figure 4: Research outputs for UoTs, 2005 - 2013

Source: Annual Ministerial Research Output Reports and HEMIS 2005-2013, extracted annually

3.8 Regulating the quality of higher education provision

In pursuit of its legal mandate according to the Higher Education Act (101 of 1997) as having primary responsibility for quality assurance and development in higher education, the CHE, through its permanent sub-committee, the Higher Education Quality Committee (HEQC), adopted the Frameworks for Institutional Audits and for Accreditation, as well as criteria documents for institutional audits and for programme accreditation in 2004.¹¹⁷ The implementation of a range of quality assurance processes, audit, accreditation and national reviews followed. An intensive first-cycle of institutional quality audits of each of the 23 public higher education institutions as well as eleven private higher education institutions was undertaken. This first cycle of audits for all but one of the public institutions was completed in 2012.¹¹⁸

¹¹⁷ CHE (2004) *Framework for programme accreditation*; CHE (2004) *Criteria for institutional audits*; CHE (2004) *Framework for institutional audits*.

¹¹⁸ Owing to a dispute about the process and substance, the institutional audit report on the University of KwaZulu-Natal was not released and the audit process was closed.

The institutional quality audits were structured to allow individual institutions to undertake an internal process of self-reflection about their own practices and ambitions in relation to 19 criteria that were focused at the high level of quality management and processes at the institution. As an important deviation from international higher education quality assessment practice, the CHE included staff and student transformation as part of the quality assessment criteria and institutions were required to assess themselves against this aspect of institutional development. Learning from negative experiences internationally, the CHE approach was to avoid allocating a quality score or ranking to the institution and to rather take a developmental as opposed to a compliance approach to quality assurance. This was generally well appreciated by the higher education sector.

Most institutions (both public and private) found the audit process valuable, both from the internal self-reflection experience and from the external scrutiny of their peers.¹¹⁹ Importantly, the process relied on a relationship of trust in which the CHE undertook not to release the detailed audit report to any other party without the permission of the institution involved. It was strongly felt that this assurance allowed for more honest and enthusiastic participation by the higher education institutions. An often repeated criticism of the process was its intensity and duration – many institutions found the process taxing on people and financial resources and some found that the time span from first preparation for the audit visit to the delivery of the final audit report was approximately three years.¹²⁰ This largely derived from the understandable focus of the institutional audits of the first cycle, which was to establish a broad set of parameters for quality management of core academic activities at all institutions. This required particular attention to the balance between quality assurance and quality enhancement in a manner that made the process necessarily onerous.

In 2004, the CHE started national reviews of certain specific existing programmes offered at higher education institutions as a mechanism for re-accreditation of the programmes based on a proper quality assessment. Whereas the institutional audits were focused on individual institutions, the national reviews focused at the programme level and the quality of offerings within a specific field (e.g. MBA) or a range of programmes within a specific discipline or field (e.g. teacher education qualifications) across the country. The main intentions of the programme reviews were to establish acceptable quality benchmarks based on local and international practice and to formally re-accredit the offering of targeted programmes at the relevant institutions. The CHE completed programme reviews for the MBA in 2005 and for Education programmes in 2007. Both these reviews resulted in the withdrawal of accreditation from a few institutions that were considered incapable of offering such programmes at an acceptable level of quality.¹²¹ The CHE has subsequently reviewed programmes in Social Work, with similar outcomes, and undergraduate education in Physics and is currently reviewing the LLB degree.

¹¹⁹ CHE (2009) 'External evaluation report of the Higher Education Quality Committee (HEQC) of the Council on Higher Education, South Africa' (report).

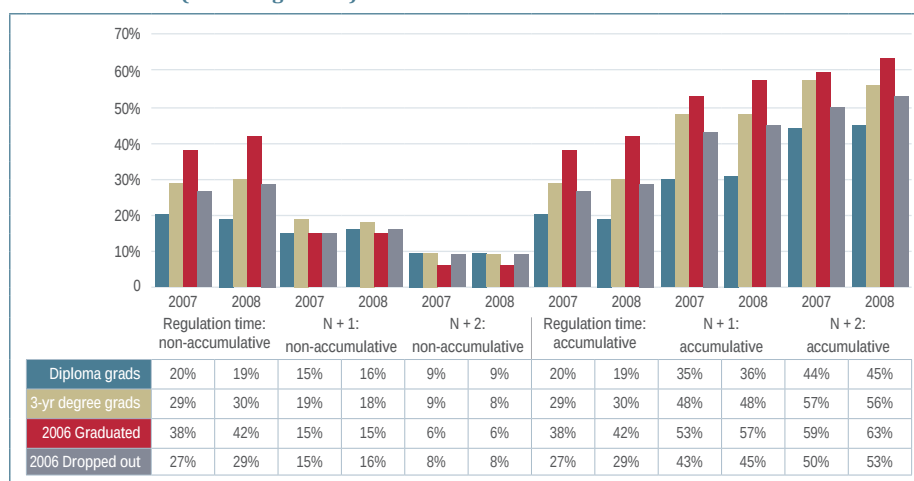
¹²⁰ Ibid.

¹²¹ CHE (2004) *The state of provision of the MBA*; L. Lange & P. Naidoo (2004) *From minimum standards to excellence: Next steps in the MBA review*; for more details see <http://www.che.ac.za/content/master-business-administration-mba-programme-review-2004-2005>.

Some complication emerged during the implementation of external quality assurance regarding the accreditation role of legislated professional bodies with respect to professional qualifications. While such professional bodies are charged with the responsibility for accreditation of particular higher education programmes for the specific purpose of allowing for the professional registration of individuals, this responsibility was to align with the mandate of the CHE as the principal Quality Council for higher education, but there was no clear legal means for this alignment. The problem was largely resolved with the publication of the NQF Act of 2008, which removed the status of a professional body as an Education and Training Quality Assurer (ETQA) and reinforced the primary status of the CHE as the single Quality Council for higher education. While the actual detail of the implementation relationships between the CHE and professional bodies has still to be completed for all professional qualifications, constructive conversations about the policy pathways and respective roles are underway.

A resilient problem in higher education is low student throughput rates. An often quoted statistic, which has remained relatively static over the last decade, is that around 50% of students who enter higher education studies will leave with a completed qualification and that only around 30% of graduates complete their studies in minimum time (see Figure 3 below). This has led to a renewed focus by the CHE on the quality of teaching and learning at higher education institutions. The CHE has initiated a Quality Enhancement Project (QEP) for 2014-2019 that focuses exclusively on teaching and learning at institutions, with a view to developing the capacity and practice at individual institutions as well as sharing existing good practice across them. The CHE has also provided advice to the Minister of Higher Education on reforming the undergraduate curriculum structure to allow for extended curricula as the norm to address the matter of poor throughputs in higher education.¹²²

Figure 5: Throughput within regulation time up to n+2 years for 360-credit diplomas, 3-year degrees, 4-year degrees and weighted national rate with first enrolment in 2007 & 2008 (excluding UNISA)



Source: Adapted from Figure 125, p.78 of CHE VitalStats 2013

¹²² CHE (2013) *A proposal for undergraduate curriculum reform in South Africa*; CHE (2014) *Framework for institutional quality enhancement in the second period of quality assurance (QEP)*.

4. Overall reflections on the experience of the regulatory environment

A characteristic feature of the development of public policy, especially when social change as radical as the end of apartheid occurs, is the possibility of unintended consequences when the policies are implemented. This has certainly been a feature in the development of a regulatory environment for higher education in South Africa over the past twenty years. Legislation and policy have often had to be incrementally amended as responses from the sector became apparent.

It can be argued that government regulation has helped to point higher education in a direction that better aligns the sector with the principles of the South African Constitution, following the transformation framework envisioned in the 1996 NCHE report. Such positive developments as have been achieved also came about because of the efforts of higher education institutions that supported the transformation of the sector. A question to be asked is about the extent to which government regulation has acted to facilitate and stimulate the transformation efforts of higher education institutions.

The government's approach to regulating and steering the sector has sometimes been experienced as contrary to its espoused purpose. For instance, one view is that there has been a tendency to treat all institutions with the same regulatory instruments which are often too blunt to deal with localised problems that occur in only a few institutions, at the same time creating an unnecessary hindrance in institutions where the problem does not manifest as seriously. An example of this approach has been the allocation of teaching and research development grants on the basis of the measured research and teaching output performance of an individual institution. Both the task teams appointed in 2008 to review the basis for these allocations and the institutions in their input to the Ministerial Committee for the Review of the Funding of Universities pointed out that, on the one hand, the institutions at the high end of research and teaching performance received little to no development grant funding to further develop their capacity. On the other hand, many of the very poorly performing institutions received large development grants which they were unable to utilise for research and teaching development because of a lack of the internal capacity or the necessary skills for such development. As such, it has been suggested that all universities should qualify for development grants but that these should be earmarked and based on approved plans.¹²³

Similarly, some institutions have raised concerns in regard to the approach to quality assurance. Despite known and clear differences in institutional capacities and processes for the management of academic quality, all institutions are required to follow the same external processes for programme accreditation and institutional audits, to the distraction of those institutions who believe the necessary internal capacity for such processes exists.

There are widespread views that external reporting requirements have become over-bureaucratised. With government's increasing use of earmarked funding,

¹²³ DHET (2013) *Report of the Ministerial Committee for the Review of the Funding of Universities*.

each category with its own conditions and administrative requirements, the reporting requirements have become onerous and have forced a growth in the administrative functions and expenses of institutions, possibly at the expense of principal academic activities.¹²⁴ While the improved quality of higher education data available has been a positive development, there is a perception that much of the reporting requirements are formalistic and make little contribution to government's understanding of the institutions' strategies and activities. There are also complaints that different regulations or conditions call for similar information to be presented to different monitoring units and this could be better arranged to reduce the administrative burden on institutions.

An important manifestation of concern about regulation as a steering mechanism has been the use by the government of the Administrator mechanism in the Higher Education Act for increasingly undefined reasons to deal with lapses of management and governance at institutions in crisis. The extent to which this mechanism has had to be employed points to the possibility that the general regulatory instruments and the approach to their implementation have not been sufficiently focused to deal with developmental issues at institutions where they were most needed.

The government's responses to institutional crises have elicited much concern. The amendments to the Higher Education Act (2012) were written in such a way that they appeared to give the Minister the power to intervene in institutions that are considered to be dysfunctional on grounds that appeared to be too open-ended.¹²⁵ The appointment of a Ministerial Transformation Oversight Committee in response to the apparently slow transformation in higher education institutions elicited similar concerns from the higher education sector. Such developments suggest an over-reliance by the government on regulation which applies across the board as the main vehicle for dealing with particular challenges in higher education in South Africa.

As is argued in Chapter 3, there is significant concern that the reach of government policy and regulation into the detail of institutional operation has been too deep. Such views argue that this approach has not produced the desired outcomes in terms of student access and success, quality of academic activities, governance effectiveness and transformation. A further aspect of the critique is that in response to unresolved problems in the system, there has been a tendency for the government to resort to increasing the reach of regulation. At the end of two decades of experience with regulatory steering, the appropriateness of such an approach could be questioned. Consideration should be given to combining appropriately focused regulation with more engaged advocacy and negotiation with the higher education sector around particular challenges. At the same time, however, there are strident calls for government to intervene more decisively to bring about more rapid transformation in individual institutions through greater legislation; a difficult balancing act lies ahead.

¹²⁴ A. Du Toit (2013) 'Policy and regulatory changes in higher education: A historical and comparative academic freedom perspective' (report); A. Du Toit (2014) *Revisiting 'co-operative governance' in higher education – A discussion document*.

¹²⁵ C. Pretorius (2012) 'Universities may take minister to court over autonomy' in *University World News*, 14 December.

5. Closing comments – Looking forward

From many perspectives, the regulation of higher education over the past twenty years has had mixed success. The student enrolments in higher education that have almost doubled over the two decades, and the significant demographic transformation in the student profile that has occurred, have fulfilled some of the aspirations in the policy documents of the immediate post-apartheid era. Around two-thirds of enrolled students are black African, compared with under one-third in 1990.¹²⁶ The quality assurance processes have become embedded and have contributed to enhancing the quality of academic offerings at most universities and private higher education institutions. Many universities have found innovative ways to deal with the pressures experienced by the higher education system and have actively sought ways in which to balance the tensions between increasing enrolments and pursuing the academic project. The engaged and directed approach to enrolment planning and infrastructure development on the part of the DHET has provided a particularly significant contribution to the development of the sector.

It is clear, however, that the effective functioning of successful universities and quality in educational offerings cannot be managed by the government through legislation and regulation alone. The persistence of dysfunction at some universities that requires ministerial intervention and administration indicates that this instrument has not been effective in ensuring the sustainability of good governance at all universities. Directive regulation, together with funding as a steering instrument, have not been effective in addressing the problem of integrating and positively developing institutional cultures after the operational mergers in some institutional contexts. Similarly, the problems of persistently low throughput and graduation rates of students, and of transformation, have not been sufficiently resolved. It is in areas like these where regulation should aim to be supportive rather than directive. A supportive approach depends on a comprehensive alignment of strategies and sufficient resourcing. For example, growth in student enrolments needs to be supported both by funding for additional infrastructure, but also by funding for the additional academic staff required. The latter, in particular, has been lacking. To quote from the National Development Plan, “Enrolments have almost doubled in 18 years yet the funding has not kept up.”¹²⁷

Private higher education institutions are viewed by the NDP as an important component of successful higher education provision. This is an important signal that consolidation of the approach to private higher education institutions is necessary for expansion of capacity and access to higher education. This acknowledgement of the role of private higher education means that the current regulatory and funding arrangements for this sector may need to be fundamentally reconsidered to enable it to become an integral component of an expanding higher education sector. In addition, possibilities for the positive stimulation of

¹²⁶ NPC (2011) *National Development Plan: 2030. Our future – make it work*; CHE (2012) *VitalStats. Public Higher Education 2010*; CHE (2013) *VitalStats. Public Higher Education 2011*; CHE (2014) *VitalStats. Public Higher Education 2012*.

¹²⁷ NPC (2011) *National Development Plan*, p. 317.

the sector will need to be sought. The private higher education sector will also have to demonstrate that it has the will and the wherewithal to manage suitable levels of self-regulation within individual institutions in order to assure greater confidence in the quality of their education provision.

The NDP has set ambitious targets for the higher education sector. By 2030, it foresees a 70% growth in enrolments (from 953 373 students in 2012 to 1.62m students); 75% of academic staff holding doctoral degrees (compared to 20% in 2012); 25% of enrolments to be at the postgraduate level (compared to 16% in 2012, which would mean an increase from 149 026 postgraduate students to 400 000); significant growth in distance learning programmes as well as growth in the general use of ICT in teaching and learning at contact programmes; universities clearly differentiated along lines of research intensity and an actively contributing college sector that is properly aligned with the higher education sector, and with a university student graduation rate of 75% (compared to 50% of the 2007 cohort completing by 2012). Each of these target expectations has significant implications for the way in which the state chooses to steer and regulate the higher education sector. They also raise the question of the suitability of the present legislative and regulatory arrangements to stimulate and support the achievement of these targets.¹²⁸

The Higher Education Act and its attendant regulatory framework may consequently now be in need of a fundamental reconsideration. The current framework has done much to make positive shifts away from apartheid's imagination of the form, structure and operation of higher education. Twenty years after 1994, there are new and important challenges in both the internal and external environments in which universities operate, as outlined in Chapter 1. These challenges to the context and the currents that higher education has to navigate will require fresh mechanisms and approaches to directing and steering on the part of the DHET, and innovation and creativity on the part of higher education institutions.

In the process of re-thinking the way in which legislation and regulations are to be used as a means of directing the activities and performance of higher education institutions, prudent use of the negotiated self-regulation approach would be most likely to render positive results. Such an approach would have the benefit of ensuring institutional support for the intended outcomes of planning. There is sufficient positive experience of the negotiated self-regulation approach to managing the relationship between the state and the higher education sector to strongly support an argument that this approach should be broadened and deepened. The success of such an approach requires agile and sophisticated use and analysis of good quality data about the performance of individual and clustered higher education institutions, both public and private.

¹²⁸ Ibid.

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Governance

3

Writers and editors: Lis Lange & Thierry Luescher-Mamashela

Task team leader: Jairam Reddy

Members/contributors: Bennie Anderson, Magda Fourie-Malherbe,

Tembile Kulati, Thami Ledwaba & Anthony Staak

CHE research assistant: Ntokozo Bhengu

In framing the analysis in this chapter, we are taking as our point of departure the Council on Higher Education's (CHE) analysis and assessment of the South African higher education policy framework, and governance for the period 1994 to 2004.¹ We believe that both analyses are deeply connected, not only because the different role-players of the system of higher education governance (from national department to individual higher education institutions) were expected to implement policy, but because governance itself was expected to reflect the change in policy brought about by the process of democratisation that started in 1994. At the same time, we believe that what we will call, for now, 'changes' in policy and in the modes of governance at system level between 1994 and 2014 reflect an evolution in the understanding of the process of policy development and implementation on the part of the new democratic government. Given all of this, it is not possible to talk about governance without making reference to the legislative and policy framework that constituted and shaped the higher education system and its individual components. In a similar vein, we believe that there is a dynamic relationship between system-level governance and institutional governance. In looking at higher education policy development and implementation from the hindsight of 2004, the CHE's ten-year review examined three themes: the extent to which the policy process unfolded in unpredictable ways; the extent to which policy had achieved its objectives; and the extent to which policy was used to provide a blueprint for transformation.² One of the main arguments put across in the 2004 CHE analysis was that policy implementation turned out to be non-linear and much more complex in terms of unexpected outcomes and impacts than the conceptualisation of policy development and implementation held at the time had allowed for in the early days of the democratic government. The 2001 government-led restructuring of the public higher education system through mergers and incorporations was, according to the CHE, a response to these unforeseen developments of policy implementation or, put differently, to the lack of an 'acceptable' response from institutions to national policy until 2001. Having explored these issues, the CHE arrived at two conclusions: that the outcomes of policy were going to be 'co-produced' by government, the higher education sector, individual institutions and other social actors, and that this process was bound to be characterised by cooperation and conflict; and that the intricacies of change and policy implementation required close monitoring and a review of "system-level governance dynamics" in order to understand the system and systemic change.³

¹ CHE (2004) *South Africa Higher Education in the First Decade of Democracy*, pp. 173-186.

² In developing the argument of this chapter we will engage with the notion of transformation in higher education policy, but for now we are taking it as a common sense notion.

³ CHE (2004) *South African higher education in the first decade of democracy*, p. 37.

The analysis of higher education governance presented in the same publication was largely based on the CHE's own work on governance, but it argued more forcefully a point that other analysts had raised before,⁴ that while at the beginning of the democratic dispensation, transformation was driven by stakeholder participation, the publication of the National Plan for Higher Education in 2001 altered the model of governance in practice "from a comparatively loose system of state steering" to a system where "the state exercises increasing control".⁵ This conclusion prompted the CHE to propose a revision of the notion of cooperative governance, enunciated in the 1996 Report of the National Commission on Higher Education, to ensure that it was adapted to the 'new realities' of the higher education system.⁶ The analysis went on to suggest that in 2004, three main system-level questions needed answering:

- What were the appropriate nature and modes of government involvement in higher education?
- What was the appropriate relationship between government and higher education institutions (HEIs)?
- What were the most appropriate conceptions of institutional autonomy, academic freedom and public accountability in the context of South African higher education transformation?

By then, the CHE had already appointed a task team to conduct an investigation into higher education institutional autonomy and academic freedom (HEIAAF), in the midst of growing concern among HEIs of increasing regulation and government interference. The final report of the task team only came out in 2008 and, for a variety of reasons, it ended up being one of the least discussed, publicised and utilised CHE research reports ever.⁷

This chapter takes off where the CHE's previous assessment concluded, but it also engages with some of the conceptual and interpretive issues that the subsequent decade of democracy has shown to be problematic or unsatisfactory to explain the current state of higher education governance. First of all, we are proposing a different definition of governance from that used by the CHE in 2002 and 2004. This definition, we believe, allows us to think of governance in terms of both the system and individual institutions and it also allows for a complex conceptualisation of the policy process.⁸ Secondly, we believe that to arrive at a nuanced understanding of higher education governance it is necessary to work simultaneously with two periodisations. One periodisation reflects the changes experienced at the system level of governance; the other reflects changes in the

⁴ See, for example, N. Cloete, R. Fehnel, P. Maasen, T. Moja, H. Perold & T. Gibbon (eds.) (2002) *Transformation in higher education: Global pressures and local realities in South Africa*.

⁵ CHE (2004) *South African higher education in the first decade of democracy*, pp. 97-98.

⁶ NCHE (1996) *A framework for transformation*.

⁷ A. Du Toit (2013) 'Losing the academic freedom plot? The CHE and the debate on institutional autonomy and public accountability' in CHE *Academic Freedom*, pp. 28-56.

⁸ B. Lingard & J. Ozga (2007) *The RoutledgeFalmer Reader in Education Policy and Politics*.

governance of higher education institutions and the consequences that they had for the evolution of leadership and management inside institutions. We believe that this exercise might provide some conceptual space to revisit the view of 2001 as the watershed moment in which 'state intervention' replaced cooperative governance. Our argument is that from the perspective of hindsight, the developments in the last five years have changed governance relations at system level as profoundly as, if not more than, those signalled by the National Plan in 2001.

In addition, we have decided to do research on institutional governance using as our sources the reports of the Higher Education Quality Committee (HEQC) institutional audits that took place between 2004 and 2011 with a cross-section of ten public higher education institutions, and the fourteen reports of the assessors appointed by the Minister between 1994 and 2012 to deal with public higher education institutions in crisis. We believe that both sets of documents provide rich evidence that, when clustered together, can help to shed light on the complexities of institutional governance. Some of the issues that emerge from the closer investigation of institutions' governance and management structures point to several commonalities between the South African higher education system and its counterparts in other continents. In this regard, we think it is important to step out of the habit of seeing South Africa as a special case in the 'global history' of higher education. While it is true that apartheid isolation artificially protected the country from some of the crudest onslaught of Thatcherite neo-liberalism and new public management approaches in the 1980s, South Africa's international reinsertion also implied the local utilisation of a globalised higher education policy toolkit.⁹ In this sense, we will argue that many aspects of the relationship between higher education and the state and many elements of how higher education management and leadership are defined inside institutions are the result of isomorphism arising from globalisation as much as the result of local constraints.

This chapter is organised in seven sections. Sections 1 and 2 introduce the chapter and conceptualise the key terms used, including governance, leadership and management, and how we position them in relation to the CHE 2004 report. Section 3 explains the approach we have taken to periodise and analyse the evolution of South African higher education from a governance point of view. Sections 4 to 6 present an analytical narrative of the system and institutional level periodisations based on research produced since 2004. They provide an analysis of governance, leadership and management at both system and institutional level including our analyses of legislative changes, selected HEQC quality audit reports and institutional assessor reports. In the final section we reflect on a number of issues for further consideration and we propose in more detail a conceptualisation of knowledge-based leadership and management for system and institutional level governance.

⁹ B.G. Dale (2007) 'Tools and techniques: An overview' in B.G. Dale, T. Van der Wiele & J. van Iwaarden (eds.) *Managing quality*; M. Singh (2011) 'Global 'toolboxes', local 'toolmaking': The contradictions of external evaluation in South African higher education reform' in R. King, S. Marginson & R. Naidoo (eds.) *Handbook of globalization and higher education*, pp. 197-221.

2. Conceptualisation of key terms

In this review, we draw distinctions between higher education governance, leadership and management. As far as governance is concerned, we focus on the official regulatory framework, formal governance structures and informal interactions by which various higher education role-players participate in high level decision-making and oversight. We therefore define governance as the formal and informal ways of regulating higher education involving interactions between various role-players at system and institutional levels of higher education. The origins of this definition can be found in literature dealing with multilevel, pluricentric or network forms of regulation,¹⁰ which in higher education governance is particularly associated with the emergence of the evaluative state,¹¹ de-centred forms of regulation and the proliferation of intermediary regulatory bodies.¹² It is further inspired by research that examines changes in governance and their effects on the autonomy and accountability of higher education and its responsiveness to societal needs.

While there are various conceptual and operational links among them, governance is conceptually distinct from leadership and from management. Leadership is concerned with establishing and promoting the direction of the system or individual institutions of higher education, and the formulation of priorities, policy and strategy in relation to established rules. Management, on the other hand, refers to the implementation of these policies and related goals and objectives. Leadership and management, therefore, relate to the question of how rules and regulations set at governance level are initiated and applied, modified, reinterpreted and disregarded and to what effect.¹³

In the CHE's ten-year review of higher education, governance was defined as the structures and processes of policy making and oversight at system level and institutional level. A weakness of this definition is that it conceived of system-level governance as "the relationship between the state and higher education institutions".¹⁴ It is only later as part of the CHE's HEIAAF investigations that Ruth Jonathan alerted the higher education community to the dangers of conflating state and government.

To insist on a careful distinction between 'state' and 'government' is neither semantic pedantry nor fear of hegemony: that distinction has real significance for how 'transformation' – the process of substantive democratisation – is to be understood. For the building of a democratic state is not an event coinciding with the election of a democratically representative government: it is a lengthy process in which all 'organs of state' – the judiciary, government, the civil service, the health and welfare sectors

¹⁰ K. van Keersbergen & F. van Waarden (2004) 'Governance as a bridge between disciplines: Cross-disciplinary inspiration regarding shifts in governance and problems of governability, accountability and legitimacy in *European Journal of Political Research*, 43(2), p. 145.

¹¹ G. Neave (1998) 'The evaluative state reconsidered' in *European Journal of Education*, 33(3), pp. 265-284.

¹² R. King (2006) 'Analysing the higher education regulatory state'.

¹³ Eurydice European Unit (2008) *Higher education governance in Europe: Policies, structures, funding and academic staff*, p. 12.

¹⁴ CHE (2004) *South African higher education in the first decade of democracy*, p. 173.

and public education at all levels – as well as those bodies and groupings which make up civil society and cultural life, play their part.¹⁵

Part of this insistence is an acknowledgement that public higher education institutions may be deemed organs of state in that they are established and perform public functions in terms of the Higher Education Act of 1997.¹⁶ Consequently, system-level governance ought to “observe and adhere to the principles of co-operative government” as set out in Chapter 3 of the South African Constitution. The constitutional standing of the principle of co-operative governance as sector-specific ‘mechanisms and procedures’ introduced into higher education policy discourse by the National Commission on Higher Education (1996) is currently being debated.¹⁷ The debate as to whether or not higher education institutions were organs of the state was prominent in the deliberation of the HEIAAF task team and its resolution conceptually uncomfortable.¹⁸

This task team is choosing not to define system-level public higher education governance as ‘state-sector relations’ as we believe this forecloses closer scrutiny of notions that, twenty years into a democratic dispensation, need to be revisited.¹⁹

In keeping with this conceptualisation of system-level governance, the key role-players involved in higher education governance are, therefore, government in general, the Ministry and Department of Higher Education and Training and other ministries involved in certain aspects of higher education, certain sector-specific intermediary bodies such as the Council on Higher Education and its Higher Education Quality Committee, the public and private higher education institutions, and certain non-governmental organisations, including higher education research centres and think-tanks, and representative stakeholder bodies. The latter include Higher Education South Africa (HESA), i.e. the association of the Vice-Chancellors of all public universities, national student formations such as the South African Students’ Congress (SASCO), and trade unions of (non-academic) staff. With the partial exception of HESA, the role played by stakeholder formations in institutional and systemic governance has been rather marginal, inward looking and concerned with factional interests. In part as a response to this, a University Council Chairs’ Forum (UCCF-SA) was launched in 2012 to provide a unified voice for university councils at national level. Still pending is a response to repeated

¹⁵ R. Jonathan (2006) *Academic freedom, institutional autonomy and public accountability in higher education: a framework for analysis of the ‘State-Sector’ relationship in a democratic South Africa*, p. 6.

¹⁶ See, for example, South African Government (1996) *South African Constitution*, section 239.

¹⁷ Du Toit (2013) ‘Losing the academic freedom plot? The CHE and the debate on institutional autonomy and public accountability’ in *CHE Academic Freedom*; A. Du Toit (2014) *Revisiting ‘Co-operative Governance’ in higher education*.

¹⁸ CHE (2008) *Academic freedom, institutional autonomy and public accountability in South African higher education: Report of the Independent Task Team on Higher Education, Institutional Autonomy and Academic Freedom (HEIAAF)*, pp. 25–32, 71.

¹⁹ The Higher Education Laws Amendment Act of 2010 (amending Section 51 of the Higher Education Act, 1997; our emphasis) states in relation to the registration of private HEIs that: “51.(1) No person other than a public higher education institution or an organ of state may provide higher education unless [...]”. While this sets public higher education institutions on the same footing with organs of state in terms of this amendment, it does not settle the question whether public higher education institutions are indeed also organs of state or not.

calls for the establishment of a national representative body for academic staff that could give academics a collective voice as important role-players in the higher education system and in the governance of higher education.²⁰

Current research on higher education governance in South Africa does not paint the full picture of the diversity of institutional experiences, thus constraining the possibility of achieving a greater understanding of governance issues. This is not because of a lack of readily available categorisations. Besides the obvious distinction between private and public higher education institutions (HEIs), there is the classification of public HEIs into traditional universities, comprehensive universities and universities of technology on the basis of their institutional missions and programme and qualifications mix (PQM). There is also the older categorisation into historically advantaged, English or Afrikaans medium institutions (HAIs) and historically disadvantaged institutions (HDIs) that were historically designated to serve different population groups and funded and administrated unequally and separately.²¹ Lastly, a new type of institutional differentiation has emerged recently based on knowledge productivity indicators (i.e. CHET's blue, green and red institutions).²² This chapter will attempt to use some of these categories to develop an analytical matrix to identify trends in institutional governance.

In a review which spans the post-apartheid history of higher education governance at system and institutional levels, the effects of system-level governance changes on the autonomy and accountability of institutions have to be interpreted in relation to the starting points of institutions and in terms of related developmental trajectories. Too frequently has the analysis and interpretation of governance in higher education been undertaken through the lens of the experience of historically advantaged universities while the concrete governance experience of these institutions has seldom triggered system-level interventions. As we will argue below, some of the most incisive forms of system-level interventions in institutional governance have actually been prompted by the experiences of historically disadvantaged institutions and, to a lesser extent, private higher education providers.

The basic distinction between public and private providers of higher education is also especially relevant at the level of institutional governance, where the regulatory framework only prescribes a set of formal governance structures for public institutions. Most critically, this set comprises a council as the highest decision-making body, a senate which is accountable for academic affairs, an institutional forum (IF) as advisory body to council, and the students' representative council (SRC). It further includes the office of the vice-chancellor or principal, who is responsible for providing leadership and for managing the institution. While this set of structures and its basic composition has been common to all public universities since 1997, and is meant to give effect to the principle of democratisation enshrined in post-apartheid higher education

²⁰ See, for example, A. Du Toit (2007) *Autonomy as a social compact*, p. 132.

²¹ I. Bunting (2002) 'The higher education landscape under apartheid' in Cloete *et al.* *Transformation in higher education: Global pressures and local realities in South Africa*.

²² Centre for Higher Education Transformation (2012) 'South African Higher Education Open Data' from <http://chet.org.za/data/sahe-open-data>.

legislation, institutional experiences have varied greatly. They depend not only on individual institutional histories, traditions and culture. It also seems important to understand how, and to what extent, government-led regional and local development plays a role in enabling, or otherwise, institutional development and governance issues. Governance, leadership and management troubles of rural and peri-urban universities have as one of their typical components the tensions that arise when universities become a source of access to resources in impoverished or underdeveloped areas. In this sense the HEIAAF report, pointing out to government the need for accountability at both a macro and micro level, cannot be left out of the analysis. Over and above this is the way in which different institutions are affected by global trends, including but not limited to the rise of managerialism and the decline of collegiality and academic rule in higher education. The issue that seems important to investigate is what the prevailing influences in different contexts are and what consequences specific combinations of influences have for the functioning of governance, leadership and management in South Africa.

3. Periodising higher education governance

In the last decade there have been different attempts at periodising the history of South African higher education. Depending on when the periodisations were constructed and what the focus of the analysis was, different authors have organised and labelled a variety of timelines. For the purpose of our analysis we are combining three periodisations: the first one was produced by Muller, Maassen and Cloete, and looks at higher education between 1993 and 2002 from a governance point of view; the second one was proposed by Badat and looks at the intensity of the process of policy development and implementation between 1994 and 2009; the third one covers the period 1995 to 2010 and focuses on the priorities of policy implementation.²³

The periodisation we are proposing covers the period 1994 to 2014 and uses four analytical categories to examine any given period at the system level. Focus refers to the predominant object and purpose of the policy, e.g. increased access and equity. A predominant focus does not mean that other foci have been replaced or that objectives have been achieved. On the contrary, part of our argument is precisely that each new focus proceeds in an additive manner, adding as it were another layer of complexity (and area of accountability) to the already existing ones. Policy refers to the actual legislation or policy document that shaped a chosen priority. Instruments refer to the tools developed or established by the state for the purpose of policy implementation. Finally, governance structure refers to the element in the system governance architecture that is responsible for implementation and sits at the top of the accountability chain in relation to a particular policy.

²³ J. Muller, P. Maassen & N. Cloete (2006) 'Modes of governance and the limits of policy' in N. Cloete, R. Fehnel, P. Maassen, T. Moja, H. Perold & T. Gibbon (eds.) *Transformation in higher education*, pp. 289-310; S. Badat (2009) 'Theorising institutional change: Post-1994 South African higher education' in *Studies in Higher Education*, 34(4), pp. 455-467; L. Lange (2012) 'The public purposes of the university: A historical view 1995-2010' in B. Leibowitz (ed.) *Higher education for the public good: Views from the South*.

At institutional level we keep the same chronology and we use the analytical categories described below. Note that, as is evident in Table 1, at institutional level the focus does not replicate the system-level priorities straightforwardly. While institutions no doubt are attentive to ‘central’ direction, and this plays a very important role in shaping institutional policy and the allocation of internal resources, individual institutions are also involved in the management of internal challenges and specific issues of their positioning in the system. Governance structures refer to the structures established in the Higher Education Act and Institutional Statutes. Management and leadership structures refer to the positions in the senior management of universities and the ‘support offices’. By classification we refer to the grouping of HEIs according to various operative typologies current in a particular period. A new classification does not necessarily displace previous ones. And finally, intervention indicates the number and nature of direct interventions in the governance of institutions by central government.

Given the interrelation between system and institutional level governance, the proposed periodisations for the higher education system and for HEIs have to be read together. We propose that both at system and institutional level, governance, leadership and management can be periodised in three basic periods: 1994 to 2000, 2001 to 2009, and 2009 to 2014. The periodisations are characterised in Table 1.

Table 1: Periodisation of governance, leadership and management

Periodisation	System level characterisation	Institution level characterisation
1994 - 2000	Political consensus, implementation vacuum and the setting up of government	Democratisation and the unfolding of institutional governance
2001 - 2009	Policy contestation, state steering and the rise of the ‘evaluative state’	Assimilating steering mechanisms: Merger governance, the rise of managerialism and post-managerialism
2009 - 2014	State managerialism and the question of democratic accountability	Managing identity and institutional crises: Towards knowledge-based management?

As can be seen from the table above, there is no simple correspondence between the characterisation of each period at system and institutional level. While the system level sets key conditions in which all institutions participate, there are interesting and important variations in the institutional level characterisation as well as institutional specificities that will emerge with greater clarity as the analysis unfolds.

4. 1994 to 2000: Political consensus and democratisation

The period of policy formulation from 1994 to 2000 was characterised by the development of a new framework of principles, values and goals that “embodied the key principles of the new government”.²⁴ This process involved an attempt to define problems, provide diagnoses and prescribe possible solutions. The overall diagnosis was clear: South Africa’s higher education was unable to match the needs of a society in social, political and economic transition.²⁵ The detail of what this meant was not immediately available, as the state did not yet have the necessary baseline information or the tools to translate proposed solutions into actions. In many respects it can be argued that the accumulation of policy focus and priorities between 1997 and 2014 was precipitated by the development of greater capacity in the state and the higher education system to identify problems through evidence-based research as well as the growing specialisation of policy-making.

We would like to argue three points in relation to a period which can simultaneously be characterised as participative and consultative,²⁶ clearly focused on access, equity and redress,²⁷ and lacking in policy implementation.²⁸ First, it was the diagnoses of the problems of higher education, principally around the lack of access and equity and the need for redress and democratisation, that provided for continuity of popular participation between the 1990 and 1994 period and the more institutionalised processes that followed the first African National Congress (ANC) electoral victory. Secondly, the lack of policy detail and of modelling of the effects that proposed approaches (i.e. the notion of massification proposed by the National Commission on Higher Education (NCHE), the proposal of central planning of enrolments included in the White Paper 3, etc.) would have on the system and on the country’s other priorities, allowed for a greater sense of consensus than what was going to be possible in the post-2000 period.²⁹ Thirdly, hand-in-hand with instruments for the democratisation of higher education and the realisation of co-operative governance, the NCHE and the White Paper 3 introduced a suite of tools that were going to become the focus of the critique of state interference levelled against the Ministry and Department of Education in the second and third ANC governments: a new funding formula; a new management information system; planning and reporting to government; and the eventual setting up of a national system of quality assurance.

The fact that the development and implementation of the new funding formula and systems for planning and quality assurance were lengthy processes that only started

²⁴ Muller *et al.* (2006) ‘Modes of governance and the limits of policy’ in Cloete *et al.* (eds.) *Transformation in higher education*.

²⁵ Lange (2012) ‘The public purposes of the university: A historical view 1995-2010’ in Leibowitz (ed.) *Higher education for the public good*, p. 48.

²⁶ Cloete *et al.* (2002) *Transformation in higher education*.

²⁷ *Ibid.*; Lange (2012) ‘The public purposes of the university: A historical view 1995-2010’ in Leibowitz (ed.) *Higher education for the public good*.

²⁸ Badat (2009) ‘Theorising institutional change: Post-1994 South African higher education’ in *Studies in Higher Education*, 34(4), pp. 455-467.

²⁹ NCHE (1996) *A framework for transformation*; DoE (1997) *White Paper 3: A programme for the transformation of higher education*.

taking shape after 2003, created the space for institutional initiative at those higher education institutions where human, technical and financial resources were available, and paralysis sliding into overall crises when little or none of these conditions were present. Examples of the first are the growth in investments of historically advantaged universities,³⁰ the expansion of distance education programmes at contact institutions and the public-private partnerships in the offering of certain programmes. Examples of the latter are the growing debt of many historically black institutions and the need for the state to bail out institutions in financial crisis.³¹

Between 1997 and 2000, the Minister of Education appointed five assessors to deal with serious cases of governance breakdown, maladministration and near collapse of higher education institutions. By 1999, the nature of the problems that emerged in the assessors' reports must have suggested to the government that direct action was needed. The Higher Education Act was amended in 1999 for the Minister, based on the assessor's report, to appoint an administrator who could replace the council and the vice-chancellor of a given institution, or both. Like all other amendments to the Act until 2009, this amendment was sent to the newly constituted Council on Higher Education (CHE), which despite misgivings, endorsed the reform proposed by the Minister, admittedly suggesting limiting clauses. The passing of the 1999 Higher Education Amendment Act was followed by the appointment of three administrators, namely at the Vaal Triangle Technikon, the University of Transkei and the University of the North.

It is important to note that the process of creating a system of higher education in South Africa required the homogenisation of the conditions under which all public higher education institutions operated and the ability to include emerging private provision in the net of state regulation. This had political, financial, sociological and educational consequences that, in hindsight, do not seem to have been contemplated or at least sufficiently evaluated when conceptualising policy and developing policy instruments. Whether this was inexperience and lack of technical expertise or idealism, or both, is not easy to determine without detailed research.

At institutional level, the period was a mixture of great uncertainty regarding the provision of redress funding for historically black institutions, and great activity as the promulgation of the Higher Education Act of 1997 set in motion a process to harmonise institutional governance across the sector. A new architecture of institutional governance was put in place as the Higher Education Act, together with related policy and, eventually, each institution's Institutional Statute and Rules came to determine the function, responsibilities and composition of key governance structures. The Act thus settled earlier debates concerning the role of the broad transformation forums established at some institutions even before 1994, and affirmed council as the highest decision-making body within institutions. In keeping with the NCHE and White Paper 3, the legitimacy of institutional governance structures thus came to be hinged on the composition

³⁰ I. Bunting (2002) 'The higher education landscape under apartheid' in Cloete *et al.* (eds.) *Transformation in higher education*.

³¹ Ibid.; T. Barnes (2005) 'Changing discourses and meanings of redress in South African higher education: 1994–2001' in *Journal of Asian and African Studies*, 41(1/2), pp. 149–170; M. Nkomo, D. Swartz & B. Maja (2006) *Within the realm of possibility: From disadvantage to development at the University of Fort Hare and the University of the North*.

of council, senate, etc., to ensure that marginalised groups and constituencies were represented in institutional decision-making, and on their effectiveness to ensure good governance.³² The combination of 'transformed' governance structures thus put in place was meant to give effect to 'co-operative governance' at institutional level, giving public institutions a great degree of autonomy in their affairs. Institutions now had to deal with defining in practice the meaning that 'co-operative governance' had in the relationships between internal institutional role-players and between government and HEIs. Defining these relationships was going to be the most constant challenge to the development of higher education governance, management and leadership in twenty years of democracy.

Three characteristics of co-operative governance in practice at institutional level could be discerned during the period of 1994 to 2000: the predominance of transformation issues in day-to-day governance; the interdependency of governance structures; and dependence of good governance on the capacity of individuals.³³ If transformation occupied much of the governance activity of that period, institutional leadership involved anticipating and responding to the changing environment, responding to policy initiatives and mitigating unintended consequences of policy or a vacuum thereof, as well as negotiating and responding to demands arising from role-players at institution level. This put enormous pressure on institutional leadership, and particularly on the vice-chancellor, with a concomitant high turn-over at senior leadership level.³⁴ Yet the analysis of leadership and management also reveals strikingly different experiences between historically advantaged and disadvantaged institutions. On the one hand, a legitimisation of institutional management was achieved through the replacement of discredited appointees of the apartheid state and the installation in historically white institutions of black senior managers, typically as a response to prolonged student activism. On the other hand, the effect of the changing policy and market environment presented opportunities and threats. In particular, the inclusion of all public institutions into the South African Post-Secondary Education (SAPSE) funding system in a context of high student mobility and lack of confidence in the academic standards of some institutions, threw historically disadvantaged institutions from an apartheid-determined captive market into open competition in an "egalitarian democratic" market with disastrous consequences for all these institutions, but, particularly so for the administratively weaker ex-Bantustan universities.³⁵ Many historically advantaged institutions, in contrast, were able to marshal their considerable resources to reposition themselves and take advantage of the emerging higher education market. The same pattern can be observed in relation to the new demands placed on institutional leadership and management by the emerging planning regime, which required the development of unique institutional visions, missions, and three-year rolling plans starting in 1998. Governance in about a third of all institutions was thus 'contested' and the day-to-day experience was characteristic of crisis leadership; at the same time

³² T. Kulati & T. Moja (2002) 'Leadership' in N. Cloete *et al.* (eds.) *Transformation in higher education*.

³³ M. Hall, A. Symes & T.M. Luescher (2002) *Governance in South African higher education*.

³⁴ Kulati & Moja (2002) 'Leadership' in Cloete *et al.* (eds.) *Transformation in higher education*.

³⁵ Bunting (2002) 'The higher education landscape under apartheid' in Cloete *et al.* (eds.) *Transformation in higher education*.

various forms of managerialism emerged in other institutions as their response to the multiplicity of challenges at institutional level.³⁶

Our detailed analysis of the reports of assessors deployed to the four worst affected institutions, all of which were historically disadvantaged rural institutions, diagnoses a continuum of governance, leadership and management failure: factional councils that have failed to exercise their fiduciary responsibility; a lack of leadership and absence of efficient administrative systems; academic matters often involving weak, marginalised or dysfunctional senates; and maladministration, corruption and financial crises. The state of decline in which several institutions found themselves in the period between 1994 and 2000 can, therefore, not simply be explained as a legacy of colonial and apartheid underdevelopment and funding constraints.

Nonetheless, as it has been explained in several important analyses, the funding of South Africa's higher education institutions for almost the entire first decade of democracy was done through an apartheid-inherited formula based on assumptions that were inimical to the equity, redress and democratisation focus of the political consensus, let alone affordable for the country in a context of system expansion and competing developmental and political priorities.³⁷ The lack of forthcoming institutional redress,³⁸ the dip in student enrolments at black institutions as well as the post-2000 government decision to restructure the higher education system through mergers decided by the Minister of Education, help to develop the sense that the principles and goals of access, equity, redress and democratisation remained unfulfilled. Muller, Maassen and Cloete have argued convincingly that the 'public disappointment' in the face of unfulfilled transformation and participative expectations in the period from 1994 to 2000 needs to be reassessed in the light of necessary trade-offs in policy formulation and policy prioritisation; the limits that history put to different institutions' ability to respond to policy change; and the different possibilities and limits of various governance regimes.³⁹ However, not many analyses written during this period, and after it, have focused on unpacking the nature and rationale of the trade-offs, on analysing the structural constraints of institutions, or on understanding the limitations of the different governance regimes and put all of this in the 'glocal' context.

Overall, the 1994 to 2000 period focused on three main issues: the laying out of common principles and values; the achievement of the goals of access, equity and redress; and the democratisation of the system which included the implementation of cooperative governance at institutional level. The policy tools of this period were the incorporation of all HEIs into the SAPSE system, the development of the National Qualifications Framework (NQF), the production of new institutional statutes and the office of the assessor and administrator. The Higher Education Branch in

³⁶ Kulati & Moja (2002) 'Leadership' in Cloete *et al.* (eds.) *Transformation in higher education*; Hall *et al.* (2002) *Governance in South African higher education*.

³⁷ See, for example, D. Swartz (2006) 'New pathways to sustainability: African universities in globalising world' in Nkomo *et al.* (eds.) *Within the Realm of Possibility*, pp. 127-166.

³⁸ Barnes (2005) 'Changing discourses and meanings of redress in South African higher education: 1994-2001' in *Journal of Asian and African Studies*, 41(1/2), pp. 149-151.

³⁹ J. Muller, P. Maassen & N. Cloete (2006) 'Modes of Governance and the limits of policy' in Cloete *et al.* (eds.) *Transformation in higher education*, p. 289.

the Department of Education and the CHE (1998) emerged as new governance structures in the architecture of the system, with the CHE in particular trying to define its role as advisory body to the Minister and at the same time as a conduit of institutional participation in policy making. Lastly, by the end of the period the deployment of the National Student Financial Aid Scheme (NSFAS) had an effect of moderating the disappointment of progressive student leaders with the failure of the ANC-led government to provide free higher education.⁴⁰

By the end of this period it had thus become clear, as the 2004 CHE report indicated, that the policy process was not linear; that it could be derailed by political and economic conjunctures, institutional histories and sociological make-up and the role that individuals and interest groups played institutionally, regionally and nationally. Yet a sociological history of this period remains to be written. Moreover, this period already anticipated what holds, more especially, for the relationship between system and institutional governance in later periods: that system-level interventions and legislative changes tend to be generalised system-wide responses prompted by institution-specific governance and management failures. The first such intervention was the 1999 Higher Education Amendment Act which showed in no uncertain terms that ultimate responsibility for addressing institutional failure would be with government.

5. 2001 to 2008: The rise of the evaluative state and managerialism

This period comprises almost a decade of higher education policy and implementation during the second and third ANC governments, two different Ministers of Education, and some continuity in the state bureaucracy. In order to understand how change unfolded during these years it is necessary to separate out the period from the launch of the National Plan for Higher Education to the finalisation of the mergers around 2005, and therefore the Kadar Asmal Ministry, from the second phase of consolidation of the steering mechanisms between 2005/6 to 2008 under Minister Naledi Pandor.

The first part of this period has been characterised in the literature as one in which the focus of equity, access, redress and democratisation gave way to a growing concern with efficiency and effectiveness and, consequently, with a much more top-down and less participative form of governance at system level, and, at the same time, as a period of increased policy activity.⁴¹ Particularly the period 2001 to 2005 marks a moment of intense policy making and roll out of the steering mechanisms announced in the policy: funding (new funding formula, 2003), planning (PQMs and mergers, both in 2002) and quality assurance (implementation of accreditation and institutional audits on national scale, 2004). In this process, it was argued, co-operative governance at system level had

⁴⁰ M.B.G. Cele (2015) 'Student politics and the funding of higher education in South Africa: The case of the University of the Western Cape, 1995-2005' (unpublished doctoral dissertation).

⁴¹ N. Cloete *et al.* (eds.) (2006) *Transformation in higher education*; Badat (2009) 'Theorising institutional change: Post-1994 South African higher education' in *Studies in Higher Education* 34(4), p. 455-467.

given way to 'conditional autonomy',⁴² 'strong steering' or even 'interference',⁴³ and that this was now threatening institutional autonomy in the sector; while at institutional level, most authors lamented the rise of managerialism.⁴⁴

Against the backdrop of this analysis, the years from 2006 to 2008 mark a period of consolidation in which no significant policies were developed, with the exception of the beginning of the settlement of the Higher Education Qualifications Framework (HEQF), which solved, to a point, a ten-year old battle around the NQF. In general, between 2005 and 2008 government consolidated and "tweaked" existing instruments (funding formula and enrolment planning) to make them more responsive to individual institutions' circumstances, and sought to allow for the mergers to settle down.

Moreover, especially from 2005 onwards, there was a shift inward in the policy implementation gaze both at system and institutional level. The new focus of attention shifted now to the extent to which higher education institutions were delivering the numbers and types of graduates required by the South African economy. The creation of the Presidential Working Group in 2002/03 composed of all higher education institutions, the Ministry of Education and the Ministers in the economic cluster at the time the Mbeki Presidency was rolling out Joint Initiative for Priority Skills Acquisition (JIPSA) and Accelerated and Shared Growth Initiative – South Africa (ASGISA), gave the higher education system, according to Badat, a greater sense of a common purpose.⁴⁵ While the agreements between institutions and government for the 'production' of agreed upon numbers of, for example, engineers, could be read as a form of state planning and concomitant institutional managerialism, there was more to this period of policy implementation than a concern with a simplistic notion of the higher education production line and its ability to respond to the labour market.

In this section we argue that the call for efficiency and effectiveness at system level came from a critique of the failures of the higher education system to deliver on equity and redress that was possible thanks to the growing availability of information on higher education performance at system and institutional level. This was interpreted and used differently at different higher education institutions.

Given the characterisations of the period 2001 to 2005, it seems appropriate to remember how the Ministry itself introduced the National Plan in 2001:

The goal [of the White Paper], however, remains unachieved. This is largely due to the fact that the Ministry has adopted an incremental approach to the development and implementation of the key policy instruments necessary to enable the creation of a

⁴² Hall *et al.* (2002) *Governance in South African higher education*.

⁴³ CHE (2008) *Academic freedom, institutional autonomy and public accountability in South African higher education: Report of the independent task team on Higher Education, Institutional Autonomy and Academic Freedom (HEIAAF)*.

⁴⁴ A. Du Toit (2000) 'From autonomy to accountability: Academic freedom under threat in South Africa?' in *Social Dynamics* 26(1), pp. 76-133; Du Toit (2007) *Autonomy as a social compact*; E. Webster & S. Mosoetsa (2002) 'At the chalk face: Managerialism and the changing academic workplace: 1995-2001' in *Transformation*, (48); Kulati & Moja (2002) 'Leadership' in Cloete *et al.* (eds.) *Transformation in higher education*.

⁴⁵ Badat (2009) 'Theorising institutional change: Post-1994 in South African higher education' in *Studies in Higher Education*, 34(4), p. 461.

single, co-ordinated system. Thus, although the development of institutional three-year “rolling” plans began in 1998, these were developed in the context of the broad transformation agenda and policy goals signalled in the White Paper, rather than a clear set of implementation and funding guidelines linked to a national plan.⁴⁶

The document explains the incremental approach through the lack of statistical modelling and analytical skills available earlier to implement a planning agenda; the lack of an appropriate information base-line about institutions; and, finally, the need to consult and interact with institutions in order to establish cooperation and partnerships. It points out that the policy vacuum to which this situation led had both unanticipated and undesirable consequences.⁴⁷

At least in terms of its own construction, the National Plan was conceptualised not as a hiatus with the access, equity and redress goals but as a way of rescuing these principles from unintended and unanticipated consequences that threatened the possibility of a single coordinated system. To be more specific, by 1998 it was clear to the government that there was neither sufficiently distributed capacity for all institutions to develop three-year rolling plans based on symbolic policy, nor was there sufficient impetus for change among institutions to make central steering redundant; even less was it desirable to let market forces undermine the principle and goal of equity or the other values supporting the transformation of the sector. Put differently, from a government perspective, the guarantee of the realisation of access, equity and redress, was state steering. This assertion has several important consequences for a re-evaluation of the model of governance at system level, the rise of managerialism at the institutional level, and the definition of what participation in the process of planning meant during this period.

In many respects, the restructuring of the higher education landscape which was enunciated in the CHE’s Size and Shape Report of 2000, announced in the National Plan in 2001, and effected based on the recommendation of the Ministerial Working Group in 2002, somehow overshadows other aspects of the complexity of policy making during this period and how it affected governance, management and leadership at system as much as at institutional level. The governance task involved in the mergers, and the deployment of organisational, financial, and human resources that went into the creation of new institutions out of this process, starting with the establishment of the Merger Unit in the Department of Education, was phenomenal.⁴⁸ The political, intellectual and emotional involvement of the merger process was captured to some extent in the relevant HEQC institutional audits, while the challenges and breakdowns faced by some institutions surfaced in the three assessor reports produced during the period. Besides this, not much research-based rigorous analysis of the actual mergers has been done and published that could help construct a richer narrative.

Ten years later, the unbundling of the University of Limpopo and Medunsa, and recurring crises at Walter Sisulu University and the Tshwane University of Technology, are testimony to the most difficult aspects of the redefinition of

⁴⁶ DoE (2001) *National Plan for Higher Education*, p. 8.

⁴⁷ Ibid., pp. 8-10.

⁴⁸ Hall *et al.* (2002) *Governance in South African higher education*.

the “geo-political imagination of apartheid planners”.⁴⁹ It is clear that for a new imaginary of higher education to be possible much more was needed by way of leadership, management infrastructure, and regional socio-economic development than an incomplete and, at times, politically compromised, geo-political reshuffle. No merger was plain sailing, and even if in many cases institutional crises did not descend into situations requiring direct government intervention, the outcomes of the mergers were not in all cases what was expected by government. From the point of view of management and leadership the available documentation tends to agree with Pritchard in that the actual merger process encouraged – and possibly required – strongly directive if not brutal leadership.⁵⁰

The mergers were by all accounts conceived as a lengthy process, unfolding in three phases: a short pre-merger phase for consultation and planning purposes; a transitional phase lasting up to twelve months during which the newly merged institution was governed by interim governance structures and all assets, liabilities, rights and obligations, and the existing workforce and student bodies of former institutions were transferred to the merged institution; and finally, the integration phase. As indicated by international experience, the latter was anticipated to last from five to up to ten years.⁵¹ During this phase a new vision and mission, culture, ethos and identity had to be developed, teaching and learning programmes integrated, and policies, systems and procedures homogenised or newly developed. The analysis of the HEQC audits and assessor reports shows that the integration phase which started in 2004/5 remained incomplete in several cases. While most (but not all) merged public institutions have successfully developed a new institutional statute in compliance with the Higher Education Act, and established the basic set of governance structures contemplated therein, fundamental challenges remained. Governance problems included councils’ factionalism and lack of competence, and councils that fared poorly in establishing basic systems of management accountability and settling uniform conditions of service for staff.⁵² Many of these problems can be regarded as prompting government intervention in universities’ management and governance in the next period.

In terms of the reconfiguration of higher education governance at system level between 2001 and 2005, two Higher Education Act amendments fine-tuned institutional governance and laid the ground for the governance of mergers. Broadly in keeping with the CHE’s work and advice on governance, the size of councils was restricted in 2002 to a maximum of thirty members and council remuneration legally regulated. Furthermore, provision was made for interim councils and interim senates and institutional forums to be established in merged institutions.

The unfolding of mergers together with the implementation of a new suite of policies and steering tools was not too well received. By 2004/05 system disquiet

⁴⁹ K. Asmal (1999) ‘Call to action: Mobilising citizens to build a South African education and training system for the 21st century’ (press statement).

⁵⁰ R.M.O. Pritchard (1993) ‘Mergers and linkages in British higher education’ in *Higher Education Quarterly*, 47(2), pp. 79-102.

⁵¹ Hall *et al.* (2002) *Governance in South African higher education*.

⁵² These governance problems were neither necessarily confined to merged institutions nor were all merged institutions equally affected.

about state interference in institutions had taken sufficient proportions for the CHE to establish a task team on higher education, institutional autonomy and academic freedom.⁵³ The report of this task team, published almost four years later, indicates a fairly complex set of institutional perceptions and experiences of the three steering mechanisms of higher education reform: planning, funding and quality assurance. It is interesting to note how, particularly in the case of the instruments in the hands of government, the period from 2005 to 2008 was seen as representing a softening of the most criticised aspects of their implementation: its top-down manner and its undifferentiated approach.⁵⁴ On the one hand, this softening of state steering may be attributed to the sector-based concerns and debates and the HEIAAF process itself; on the other hand, it is tempting, and possibly not completely off the mark, to attribute some of the post-2005 changes to different ministers' focus for change.

While the HEIAAF report ended up one of the least discussed and least used reports ever produced by the CHE, in its process the HEIAAF put the spotlight not only on system-level governance but also investigated the academic freedom implications of institution level change.⁵⁵ Every building block of the steering system seemed to have multiplied the size of the management tier at institutions and created greater distance between university leadership and the academics, as well as between university leadership and student leaders.⁵⁶

The rise of managerialism in South African higher education had already been observed in the late 1990s at some historically advantaged institutions; it became more widely generalised and more evident across the sector during the period from 2001 to 2005 in response to mounting policy demands, institutional crises and the process of mergers and incorporations. To consider the rise of managerialism an isolated local development is, however, to fall into the familiar trap of South African exceptionalism.

There is abundant literature showing that the trend towards adopting more business-like management styles was indeed a global and incisive one,⁵⁷ which

⁵³ CHE (2008) *Academic freedom, institutional autonomy and public accountability in South African higher education: Report of the Independent Task Team on Higher Education, Institutional Autonomy and Academic Freedom (HEIAAF)*.

⁵⁴ *Ibid.*, pp. 51-61.

⁵⁵ K. Bentley, A. Habib & S. Morrow (2006) *Academic Freedom, institutional autonomy and the corporatised university in contemporary South Africa*; Du Toit (2007) *Autonomy as a social compact*; A. Du Toit (2013) 'Losing the academic freedom plot? The CHE and the debate on institutional autonomy and public accountability' in *Kagisano*, 8, pp. 28-56.

⁵⁶ T.M. Luescher-Mamashela (2010) 'From university democratisation to managerialism: The changing legitimisation of university governance and the place of students' in *Tertiary Education and Management*, 16(4), pp. 259-283.

⁵⁷ M. Kogan, M. Bauer, I. Bleiklie & M. Henkel (2000) *Transforming higher education. A comparative study*; A. Amaral, V.L. Meek & I.M. Larsen (eds.) (2003) *The higher education managerial revolution?*; C.J. Bundy (2004) 'Under new management? A critical history of managerialism in British universities' in M. Walker & J. Nixon (eds.) *Reclaiming universities from a runaway world*; C.J. Bundy (2005) 'Global patterns, local options? Some implications for South Africa of international changes in higher education' in *Perspectives in Education* 23(2), pp. 85-97; C. Bundy (2006) 'Global patterns, local options? Changes in higher education internationally and some implications for South Africa' in *Kagisano*, 4, pp. 1-20; L. Zipin & M. Brennan (2004) 'Managerial governmentality and the suppression of ethics' in M. Walker & J. Nixon (eds.) *Reclaiming universities from a runaway world*; T.M. Luescher (2009) 'Student governance in transition: University democratisation and managerialism' (unpublished doctoral dissertation).

included a typical set of tools: management by strategic plan; new centralised organs of decision-making; streamlined governance committee systems; flatter administrative structures linked to a stronger central leadership core; decentralised budgeting with departments becoming cost-centres; the development of management information systems; and, finally, explicit training for administrators and managers.⁵⁸ The restructuring of faculties, schools and departments, appointment of executive deans, the outsourcing of support services and the sprawl of planning and institutional research units, quality assurance management offices and so forth, organisationally mirrored a new management style that introduced performance and line management, even into the core functions of universities. South Africa's policy makers and implementers as well as universities struggled in many cases with the tensions and contradictions between their political convictions and the neo-liberal whiff of their choice of policies and instruments. The tension of using 'conservative tools' to achieve progressive ends was intensely debated on the occasion of the celebrations of the first decade of democracy.⁵⁹ Yet, this does not mean that it was totally inconceivable to develop entirely new local alternatives to the global offering.⁶⁰ But the reality is that neither universities nor the government did so.

This said, from the start of audits in 2005, HEQC reports provide evidence of a subtle critique of managerialism and make recommendations towards what we tentatively conceptualise as a post-managerialist knowledge-based regime. This move was supported by growing work on indicators and monitoring systems in the country as well as by the CHE's own production and use of analytical institutional profiles for HEIs.⁶¹ With the implementation of steering instruments between 2001 and 2005 the available tools to generate knowledge on the higher education system and institutions had increased considerably. By 2003 the new funding formula, only fully implemented in 2005, could rely on several years of collected Higher Education Management Information System (HEMIS) information about universities' performance in student enrolments and graduations and staff profiles. In 2007 the first throughput study of the 2001 cohort made possible a better understanding of the extent to which higher education institutions were being successful in delivering equity of outcomes at undergraduate level.⁶²

The implementation of the HEQC's quality assurance system produced detailed

⁵⁸ Bundy (2004) 'Under new management? A critical history of managerialism in British universities' in Walker & Nixon (eds.) *Reclaiming universities from a runaway world*, p. 167.

⁵⁹ See especially, CHE (2006) *Ten years of higher education under democracy*; B.G. Dale (2007) 'Tools and techniques: An overview' in B.G. Dale, T. van der Wiele & J. van Iwaarden (eds.) *Managing quality*; King (2006) 'Analysing the higher education regulatory state'; L. Lange (2014) 'Higher education policy and the fatality of nostalgia' in *Thinking Africa*.

⁶⁰ Singh (2011) 'Global 'toolboxes', local 'toolmaking' in King et al. (eds.) *Handbook of globalization and higher education*, pp. 197-221.

⁶¹ CHE (2004) *South African higher education in the first decade of democracy*; N. Cloete, L. Bunting & I. Bunting (2002) *Transformation indicators applied to two South African higher education institutions*; I. Bunting & N. Cloete (2004) *Developing performance indicators for higher education: A South African case study*; I. Bunting, C. Sheppard, N. Cloete & L. Belding (2010) *Performance indicators: South African higher education 2000 – 2008*.

⁶² I. Scott, N. Yeld & J. Hendry, J. (2007) 'A case for improving teaching and learning in South African higher education' in *Higher Education Monitor*, 6.

qualitative data about programmes and institutions from 2004. By the end of 2008, the HEQC had audited the bulk of the public higher education system and an evidence-based thicker description of the individual institutions and, therefore, of what the higher education system looked like, started to emerge. The HEQC began commissioning system-level research on different aspects of the audits in order to develop a systemic understanding of the different development trajectories of institutions and the obstacles on the way to the realisation of policy objectives and institutional missions and visions.⁶³ At the same time, research conducted by academics at their own institutions, and often in partnership with the CHE, started providing a much more complex, focused and reflective view of system-level and institutional performance in the core functions.⁶⁴

It is true that, as Cloete *et al.* argue, after 2001 there was a redirection in the themes of the discourse on higher education from equity and redress to efficiency and effectiveness.⁶⁵ Yet, in the same way that the discourse of equity at the time of the NCHE was not naive and saw that the gains in access hid profound inequalities in, for example, the distribution of enrolments across fields of study, the discourse on efficiency was not only a matter of cost-benefit in relation to state funds. It was mostly focused on throughput at undergraduate level and was often argued from a social justice perspective.⁶⁶ This was possible because the system knew more about itself. We, therefore, argue that a key characteristic of the second decade of higher education under democracy was a remarkable increase in the knowledge available on higher education and in the tools to extract it. A comparison between the knowledge-base of the CHE 2004 first decade under democracy publication and the subsequent one provides an interesting example of this point. For our discussion, the enlarged knowledge base has several important consequences: first, it made it possible to set clearer, individualised, and more accurate targets for state steering; second, it made more forceful the need for universities not just to manage their data carefully for reporting purposes, but to use this and other data with a view to develop institutional research capable of supporting internal management and decision making.⁶⁷

The aftermath of events like the 2008 racist incident at the University of the Free State, brought to the fore additional complexities underlying the notion of management and leadership and the sense of progress or otherwise in relation to the realisation of the White Paper's notion of transformation. This was dealt with at system level by the appointment, by the Minister of Education,

⁶³ C. Boughey (2007) 'Educational development in South Africa: From social reproduction to capitalist expansion?' in *Higher Education Policy* (20), pp. 5-18; C. Boughey (2009) 'A meta-analysis of teaching and learning at five research-intensive South African universities' (unpublished paper); C. Boughey (2010) 'A meta-analysis of teaching and learning (Part two)' (unpublished paper); J. Mouton (2009) *A meta-analysis of the institutional research audit process*.

⁶⁴ See for example the CHE's *Higher Education Monitor* series.

⁶⁵ N. Cloete *et al.* (eds.) (2006) *Transformation in higher education*.

⁶⁶ This argument had been made more generally in the HEQC Founding Framework in relation to transformation and shaped every audit of public higher education institutions between 2004 and 2011; CHE (2004) *South African higher education in the first decade of democracy*; Scott *et al.* (2007) 'A case for improving teaching and learning in South African higher education' in *Higher Education Monitor*, 6.

⁶⁷ CHE (2009) 'The state of higher education report' in *Higher Education Monitor*, 8.

of a Committee on Transformation and Social Cohesion and the Elimination of Discrimination in Public Higher Education Institutions, whose report provided an important system-level diagnostic of transformation.⁶⁸ Transformation failure thus added yet another layer of complexity to the management and leadership of higher education institutions and their ability to generate knowledge of and for transformation and, at the same time, it added a new and greyer area for state steering: institutional culture. With hindsight, the process also opened a new era of government intervention into higher education institutions, of which the appointment of a permanent Transformation Oversight Committee in 2013 is a prime example.

How did the university governance structures respond to the new availability of information and to the supposedly more managerial outlook of institutions' leadership and management? Institutions that lacked capacity to develop internal systems to use the steering mechanisms to their advantage and utilise the data generated at system level for institutional governance, leadership and day-to-day management, became more prone to crises. Some of these issues become evident reading the post-merger assessor reports.

Conversely, the HEQC audit reports also provide a list of good governance practices of councils that were interested and engaged as well as attuned to the challenges experienced by their institutions; councils that played their fiduciary role appropriately and kept oversight of institutional finances and management and regularly assessed the performance of senior management against institutional plans. Similarly, audit reports identified working and effective senates where a sustained focus on the academic project was underpinned by open deliberation and effective committee systems able to clear senate business and allow members of senate time for intellectual engagement and to focus on the bigger picture of academic governance. Institutional forums, as the novel invention of democratic university governance post-1994, had a more chequered history and do not seem to have been much affected by the abundance of knowledge we discussed above or by the managerialist trends in institutional leadership. If, as the legislation proposed, the role of the IF was to gather stakeholder views of the variety of matters that constituted the purview of this structure to advise council on, the failure of the IFs could result, and indeed it did in many cases, in growing factionalism of councils. There are few cases in which IFs have performed their role effectively and, in some of these, it seems that the fact that the chair (or co-chair) of the IF was occupied by a senior member of the university ensured the existence of a productive link with council.

One of the sector complaints at the height of the implementation period was a lack of institutional participation in decision-making. Our analysis suggests that this accusation, levelled by institutions and their sector body, HESA, against system-level structures forgets some of the internal governance practices at institutions. Thus, calls for return to the NCHE recommendation to establish a higher education forum at system level and a higher education council with more extensive powers do not seem to take account of the failure within most

⁶⁸ DoE (2008) *Report of the Ministerial Committee on Transformation and Social Cohesion and the Elimination of Discrimination in Public Education Institutions.*

institutions to engage their own stakeholders in decision-making at levels satisfactory to these role-players.

Some analysts have argued that government's disregard for some of the NCHE recommendations about system-level governance are at the origin of a much less participative process in planning and implementation of higher education policy.⁶⁹ Yet, these NCHE recommendations were not accompanied by an explicit definition of the meaning of steering or an indication of how co-operative governance should work at system level under conditions of policy implementation with transformative goals.

Whether the consultative process was perceived to be ineffective or unsatisfactory, or both, by the different role-players, during the period 2001 to 2008 there were regular meetings of officials and/or the Minister with organised stakeholders (especially students and trade unions) and sector representatives (such as HESA), not to mention the direct interaction of universities with the presidency through the Presidential Working Group on Higher Education. Furthermore, during the period 1998 to 2007, the CHE, following on its legislated obligations, organised annual consultative conferences of higher education stakeholders that provided the occasion to interact with government in relation to specific themes.

The 2007 CHE consultative conference, interestingly, focused on the alignment between planning, funding and quality, while the last recorded consultative conference was held in 2008 and focused on the CHE advisory function. The alignment of planning instruments that concerned the CHE in its 2007 conference only became an issue of practical concern when the full implementation of the HEQC quality assurance system was underway. By the end of the first ten audits it had become clear that audit reports, combined with accreditation profiles and the HEMIS data, could provide an important source of information about the state of individual higher education institutions, which, at least in some cases, could act as an early warning system for the department. Attempts at a more co-operative information sharing approach between the CHE and the Department of Education started to be facilitated by government officials in 2008. Whatever plans and possibilities were being explored in the Department for setting up an evidence-based early warning system for governance, leadership, management and academic problems in HEIs based on the consolidation of the monitoring and as quality assurance activity of the CHE, the change in the CHE leadership, as well change of government, seemed to have brought forward a different set of priorities. Despite this, and certainly in an unplanned or unarticulated manner, the HEQC audits seem to have played a role in developing a model of knowledge-based higher education governance, leadership and management at institutional level which we call 'post-managerialist', the details of which we elaborate below.

⁶⁹ See, for example, Cloete, *et al.* (eds.) (2006) *Transformation in higher education*; Du Toit (2014) *Revisiting 'co-operative governance' in higher education*.

6. 2009 to 2014: State managerialism and knowledge-based management

This period opens in the context of a government change and a radical remodelling of ministerial portfolios. The split of the ministry and department of education into basic education and higher education and training required not only a revision of the architecture of higher education governance at the system level, it also implied a major conceptual change. The creation of the post-schooling education sector made up of a college and a university sector, the transfer of the responsibility for the implementation of the Skills Development Act and its attached structures (the South African Qualifications Authority (SAQA) and the Skills Education Training Authorities or SETAs) from the Department of Labour to the Department of Higher Education and Training (DHET), and the establishment of a Quality Council for Trades and Occupations, all reopened and attempted to resolve the education/skills development debate that started in 1994, and which was partially settled with the creation of the Higher Education Qualifications Framework in 2007.

While the policy focus has been fairly consistently explained in the discourse of the DHET and the Ministry since 2010, the policy blueprint was only released in 2013 and it still needs to be translated into implementation plans. This said, the policy focus of the last five years has been framed by the national government's identification in the National Planning Commission of the yet unsolved structural problems of development in South Africa and their possible solutions, and, in particular, by the realisation that the number of youth out of employment and out of education has reached alarming proportions. Thus, the revitalisation and expansion of the technical and vocational education and training sector and the establishment of articulation paths between colleges and higher education institutions constitute the overarching policy preoccupation of the Ministry in the fourth ANC government.

The *White Paper for Post-School Education and Training* (2013) marks a continuity with the goals of access (expansion) and equity and development which constituted the first focus of higher education policy, reinserting in the discourse the notion of a responsive post-school system which is attuned with the needs of the world of work through a more direct and productive relationship between employers and post-secondary education providers. Specifically in terms of the university sector, the White Paper reintroduces the concept of differentiation providing some signals as to what such differentiation might entail in terms of higher education planning and funding.

While the 'policy manifesto' has been received with a fair amount of consensus and collaborative spirit among the university sector, the instruments and structures that the Ministry has put in place since 2010 have been the object of strong contestation. A number of radical amendments of higher education legislation were necessary to build the architecture of the post-schooling system. Particularly important in this regard were the changes effected by the Higher Education Laws Amendment Act 26 of 2010 which, among other things, created

the Quality Council for Trades and Occupations, and amended the NQF Act 67 of 2008.

The legislative changes that followed had little to do with the architecture of the post-secondary system. They focused entirely on the universities and system-level governance.⁷⁰ They represent a considerable tightening of the power of the Minister to determine who can be a member of council, under what circumstances and for how long assessors and administrators can be appointed, and the reporting obligations of SAQA. This has been supplemented with substantive changes in the reporting obligations of higher education institutions published for comment at the end of 2012 and finally gazetted in 2014. These changes have been received with alarm and resistance by many in the higher education system, including, at first, the distinct possibility of HESA taking the Ministry to court to determine the constitutionality of the amendments.

Since 2010 the Ministry appointed five assessors and four administrators to address a variety of governance and management problems at five universities; this took the tally of government interventions into higher education institutions between 1994 and 2014 to fourteen, with the largest number of interventions taking place in the current period. The Minister and the department have often indicated that the recurrence of these problems requires government to have greater powers to intervene and more information that could serve as a warning of potential problems arising. It is precisely this argument that has been the most contentious with the higher education system.

Now, as in the context of the HEIAAF investigation, what seems to concern universities is not so much the intervention as the 'one size fits all' governance system that multiplies reporting obligations of all institutions instead of addressing problems where the problems arise. As we have been arguing in this chapter, there is a certain consistency in the kind of problems identified by assessors over the full period of analysis. Out of fourteen reports, twelve indicate inability of the councils to fulfil their fiduciary responsibility; ten point to the existence of financial corruption at institutions; nine mentioned factionalism at council level and problems with the lack or the style of institutional leadership; eight reports indicate that institutions' administrative systems are weak or non-existent; in seven cases the reports identified academic corruption and academic quality being undermined, and weak and/or dysfunctional senates. Of all other features, the most prevalent was the undue influence of student politics in governance structures.

There is an overwhelming consistency in this analysis that should invite reflection not about how much universities report to government or how much power government has to intervene, but on how the available information (since 1998 in some cases) has been used to think of the structural problems many of these institutions faced and are still facing. Some institutions, like the University of Limpopo, Walter Sisulu University, Mangosuthu University of Technology, and Tshwane University of Technology, have been the subject of investigations more than once at different stages of their institutional history. In many cases,

⁷⁰ DHET (2011) *Higher Education Laws Amendment Act 21 of 2011*; DHET (2012) *Higher Education and Training Laws Amendment Act 23 of 2012*.

the HEQC audit reports of these institutions produced between 2004 and 2011 contained information about these issues or information that put these issues in context. What seems to be lacking at institutional as well as at system level is the ability and the capacity to put together all the information available to produce complex knowledge and deep insight into the institution and, therefore, to be able to produce a plan for change. This ability and capacity will not come from more reporting from all higher education institutions.

That in the large majority of the cases the universities that had assessors and/or administrators appointed are historically disadvantaged and in many cases rural or peri-urban, and to a lesser extent, components in a merger, speaks volumes of the issues that the higher education system and the government have not confronted.

A decade ago, Habib and Barnes offered sharp and devastating analyses of the structural conditions that constituted disadvantage.⁷¹ Read together, they show why even some of the best efforts did not always succeed, or often succeeded only in part or temporarily; they also explain the persistence and prevalence of fiduciary failure, financial corruption and factionalism among the common problems found by the different assessors.⁷² The continuities and discontinuities in this description require detailed research that provides hard evidence on the hows, whats, whys, and whos of a historical process that started in 1959 and the outcome of which is still in many cases uncertain. How will they be dealt with within a possible new framework for differentiation? If structural constraints to poor governance and performance is not the problem that more detailed institutional reporting to government and increased government power to intervene in universities is going to solve, then what is the aim of the new powers and regulations?

There is not sufficient empirical research to evaluate more conclusively this period. Reflections by senior and experienced actors in the process of policy making since the early 1990s and, especially, active parts in higher education governance, suggest that another feature of these last five years has been the progressive 'stakeholderisation' of the governance system through the government seeking, and sometimes creating, independent and parallel channels of communication with internal higher education stakeholders as such, rather than communicating with institutions themselves or with their representative sectoral body, HESA. Moreover, the CHE as the statutory body with an advisory function to the Minister has been clearly side-lined as demonstrated in government's lack of engagement with CHE advice in relation to e.g. transformation, the establishment of new universities, and the review of funding. It is possible that the apparent CHE side-lining is not just a function of government's approach to higher education governance, but also a function of a seemingly weaker CHE. Considerable work will be needed not only to provide appropriate evidence of this process, but especially to theorise what this means for the current conceptualisation of co-operative governance.

⁷¹ A. Habib (2001) 'Structural disadvantage, leadership ineptitude, and stakeholder complicity: A study of the institutional crisis of the University of the Transkei'; Barnes (2005) 'Changing discourses and meanings of redress in South African higher education, 1994–2001' in *Journal of Asian and African Studies*, 41 (1/2).

⁷² Nkomo et al. (2006) *Within the Realm of Possibility*.

There is a parallel to this at institutional level. The factionalism of councils often mentioned in assessors reports, but by no means only a feature of institutions in crisis, constitutes another manifestation of ‘stakeholderisation’ of governance. Unions, students, and in some institutions convocations, sitting in council seem to be unable to understand that their role is not that of stakeholder representatives. This trend, together with institutional circumstances, means that councils can be and, in effect are, often unable to fulfil their fiduciary role. While the role of dysfunctional and ineffective IFs might serve to explain, as we have suggested earlier, an increased stakeholderisation in council, there is also evidence pointing to universities in underdeveloped regional economies (but not only) becoming the favoured means to access resources from tenders to jobs for friends and family. This is yet another area in which much more evidence and theorisation is needed to develop a fuller understanding of institutional governance today.

As we indicated in the previous section, the appointment of the Ministerial Committee on Transformation and Social Cohesion and its report, brought into sharp relief the issue of transformation failure and opened up the question of how to deal with this at institutional and systemic level. The recommendation by the Soudien Report for government to constitute a permanent oversight committee to monitor transformation was taken up in this period. Once again, the creation of the Transformation Oversight Committee (TOC) was received with mixed feelings by the higher education sector. Besides issues with its membership, it was argued that the task should have been given to the CHE, which could have reported to both the Ministry and to Parliament through the portfolio committee.

There is no doubt that, taking a conceptually complex notion of transformation into account (see below), all higher education institutions in South Africa provide examples of halted, slowed, or never started transformation, and that this needs to be addressed. Yet, so far, besides the much criticised transformation index there is little public evidence of the work of the TOC, its understanding of its terms of reference and the work it is actually doing and how it is being managed. There is also little clarity as to the role of the TOC in relation to the new reporting obligations of universities. From the point of view of the conceptualisation of both transformation and accountability, the ‘lifting’ of transformation from the core functions of the institutions seems an artificial operation which runs the risk of reinforcing the view of transformation as something different from the educational, social and administrative processes that sustain the life of universities. There are a number of practical questions that need to be answered as to the position of the TOC in the chain of governance and accountability; in this sense it seems too early to come to any firm conclusion about its work. Yet, we believe that from the point of view of the governance, leadership and management of the higher system, the TOC represents a political intervention as opposed to a systemic or organically-based one in the existing system of accountability; in that sense, as imperative as accelerated and deepened transformation is, it might fail to achieve its goals. If, as it is rumoured, the Minister is planning to make the TOC a permanent structure in the governance system, this will confirm the view that the Minister had decided to create his own body instead of using existing capacity and experience.

While the new architecture of the post-school system as well as the new focus on

development emerged as clear new features in system governance, there have been other movements, less noted but not less important, that need to be mentioned. Here we want to discuss two: the relationship between additive policy focus and knowledge development, and the weakening of governance structures.

As we have argued throughout this chapter, the policy focus in South African higher education has proceeded in an additive manner: this process is not only a function of the time it takes to effect changes in terms of, for example, access or the quality of teaching and learning; it is also a function of the system and institutions gaining more knowledge about themselves and their core functions as more data is gathered and analysed in different places. The conceptualisation and management of the Teaching Development Grant (TDG) as steering funding is a case in point. As government's ability to evaluate proposals and assess reports has grown, a sharper and more effective implementation of the grant has come about which in turn has forced institutions to focus their proposals for funding more carefully and more clearly. Both moves should result in greater effectiveness of the interventions, better accountability and transparency in allocations, and again new knowledge as to the type and outcomes of the interventions. This constitutes in our view one example of knowledge-based management at system level.

The progressively less significant role of the CHE as the statutory advisory body to the Minister on higher education matters is an example of the weakening of democratic structures in the architecture of the system. There is no transparency with regard to how much proactive advice the CHE has provided to government nor as to how much advice the Minister has requested and accepted from the CHE; what is clear, is that advice seldom seems to have significantly shaped policy in the last five years. Much more research is required to understand whether the fading advisory role of the CHE is a consequence of a growing politicisation of higher education governance, which makes independent advice unnecessary and unwanted; a consequence of the quality of advice provided; the result of a perceived loss of authority of the CHE vis-a-vis the institutions themselves; or a combination of some or all of them. Whatever the reasons, it seems important that instead of letting the CHE die by 'natural' attrition, its contribution to the development of South African higher education should be independently assessed as a way of deciding whether it has a role in the future of higher education and what this role might be beyond its quality assurance functions.

Lastly, throughout this chapter we have mentioned the notion of knowledge-based management and we have argued that the HEQC audit reports played a role in the development of what we tentatively call an option for a post-managerial model of higher education. In the final section, which functions as the conclusion of this chapter, we offer for discussion what would be features of post-managerial knowledge-based governance, leadership and management for South African higher education into the third decade of democracy. These features are grounded in our observation of emerging trends in some institutions and our appreciation and interpretation of their potential for providing options for a post-managerial system of decision-making.

7. Conclusion: Towards new knowledge-based governance, leadership and management

In the last twenty years, much theorisation has gone into discerning what kind of relationships between government and higher education institutions, higher education management and its internal stakeholders, and higher education institutions and the public should shape a democratic and transformative higher education system that reflects the democratic and transformative aspirations of South Africa's constitution. In this conclusion we offer the characteristics of a post-managerialist system of decision-making and accountability, the defining feature of which is the ability to use and produce knowledge of transformation and knowledge for transformation at both institutional and system level.

In the introductory section of this chapter we have referred to the 'common-sense' ideological notion of transformation. Returning to the founding debates of the current policy discourse, transformation was broadly meant to define a radical change in South African society that clearly breaks with the apartheid past. In the context of higher education, transformation implies and derives from 'knowledges' of two kinds that are to support decisions and actions: the knowledge that needs to be produced in order to make change possible, and the knowledge generated about how change is taking place. They may be respectively called "knowledge for transformation" and "knowledge of transformation".⁷³ The basis of knowledge for transformation in higher education must be, firstly, knowledge of the self, i.e. of institutional history, culture and practices; secondly, knowledge of the academic core business or knowledge of knowledge that involves an ongoing, critically-reflexive examination of the social-epistemological basis of the knowledge produced and disseminated by an institution; and, thirdly, knowledge of the other, i.e. knowledge of the social and cultural diversity of the people (staff and students) involved in higher education institutions.

Our conception of post-managerial knowledge-based governance, leadership and management at both institutional and system levels is premised on the understanding that transformation fundamentally requires knowledge to decide and to act along with a different way of governing, leading and managing. This section starts by looking at the institutional level and moves on to system-level considerations.

Our analysis of the HEQC audit reports has shown a fairly consistent, empirically grounded, critique of managerialism subsumed in the arguments that precede the HEQC commendations and recommendations, as well as in their actual formulation. The point of departure of this conceptualisation is two-fold. First, it understands that for universities to fulfil their purpose in society there has to be a fitness of purpose between their mission and national demands. Secondly, it recognises that individual universities operate within the structural constraints of the immediate socio-economic environment within which they are located

⁷³ L. Lange (2013) 'The knowledge(s) of transformation' (unpublished paper).

and that for institutions to be able to fulfil their responsibilities in relation to development as well as their fundamental obligations in relation to their missions, a social compact between themselves and the government at local, provincial and national level is necessary. In this sense, there has to be a deliberate insertion of the university as partner in government-driven local and regional structural transformation as a condition *sine qua non* of institutional transformation.

Hence, the role of councils cannot be focused exclusively on stewardship of the institutional health and interests abstracted from the institution's socio-economic context as this often directly affects institutional well-being. Institutional stewardship and council's fiduciary role have to be exercised in terms of King III. King III revolves around three elements: leadership and good governance, sustainability and corporate citizenship. Two elements deserve special mention in this context: the focus on the extent of the positive and negative impact that a 'company' has on the social environment and the need to integrate financial reporting with the company's strategy. In this respect, it is disappointing that instead of radically changing and adapting the manner in which universities report to the DHET based on the philosophy of King III, the proposed changes to higher education reporting only add a 'coat of paint' of King III to a list of old and new reports; they do not change and integrate, but only multiply, reporting requirements.

The complexity of higher education institutions has grown exponentially with the multiplication of their functions as well as the expansion of enrolments, not to mention that in many cases mergers and incorporations have resulted in the need to manage multi-campus institutions and ensuring equivalence of provision. In this context transformational leadership, that is, a leadership capable of proposing a vision that unifies purpose and galvanises different internal stakeholders into action, becomes essential for the development of higher education.⁷⁴ Yet, transformative leadership at the top level is not enough. Leadership also has to be participatory and distributed, that is, it has to exist in each of the academic, support and administrative functional units of the university starting with the senior leadership team and make an effort at deliberative engagement. This is particularly important at universities where homogeneity and regimented management is more often disabling than supportive of innovation and free thinking.

Structurally, senior leadership, centred on the office of the vice-chancellor and deputy vice-chancellors, must provide a strong central point of integration of all university processes and functions in their complexity. At this level, audit reports frequently insist on the important role that registrars can play in providing a conceptual and operational link between institutional governance and management.

We see transformative and distributive leadership as having three fundamental inflection points. First, there is the role that faculties, and therefore executive deans, play in both sustaining the focus on the academic project and in acting as custodians of academic freedom. Deans need to have at their disposal, and

⁷⁴ T. Bush (2007) 'Educational leadership and management: Theory, policy, and practice' in *South African Journal of Education*, 27(3), p. 395.

be able to use effectively, knowledge of and knowledge for transformation as it pertains to their faculties. This entails that they become the drivers, translators and managers of transformation in their faculties for which they are accountable. The distributive character of leadership has to be effective at faculty level too, thus involving heads of departments and/or schools. Secondly, there is the role that support services have in facilitating and aligning administrative processes to universities' missions. Thirdly, there is the ability and the capacity of the institution to generate and use knowledge at different levels of the organisation and of integrating that knowledge in an analytical narrative that explains institutional trajectories to itself and to its stakeholders. As we will elaborate below, for this to happen a number of conditions need to be in place.

The audit reports suggest that the centrality of knowledge in management of higher education needs to be made explicit for the institution and needs to be agreed upon. This can take a variety of forms that institutions need to decide on and adapt to, but it presupposes the ability of connecting different institutional databases; the availability of sufficient expertise in HEMIS; the careful utilisation of national and international level data for benchmarking purposes; and a strong capability for institutional research that can not only produce new and relevant knowledge on the institution but that can integrate knowledge produced in different parts of the institution. In particular, it requires the distribution of appropriate information and the development of the capability to use it at different levels of the institution from the senior leadership to academic departments. Institutional goals must be assigned to responsible managers whose performance is evaluated against key performance indicators.

As mentioned above, the very notion of knowledge-based management as a post-managerialist option in higher education is predicated on the contested and dialogical character of knowledge itself and on the fact that analysis and intelligence on processes and events need to be built collectively. For this to happen it is necessary for institutional actors to admit first, that the epistemological basis of the knowledge of higher education is complex and resides in a variety of academic disciplines and is not independent from disciplinary theoretical and methodological debates. Secondly, it has to be accepted that the validity of this knowledge has to be open to question and that, therefore, knowledge of the university has to become simultaneously more reliable and more tentative and cautious about the processes about which it is trying to give account. Thirdly, knowledge of the university requires an examination of the notion of evidence and the development of this understanding not as the end but as the beginning of a process of evaluation. Finally, it is important to internalise that the purpose of "institutional knowledge" is to generate understanding for decision making and that this is often about incommensurable educative processes and outcomes.⁷⁵

Managerialism produced two fundamental casualties in higher education decision-making: academics and students. Academics have found their role in the academic enterprise to become decentred and alienated from a management discourse that they felt 'did not belong' in the university. Academics have also found it difficult to keep up with and interpret the plethora of new policy

⁷⁵ Lange (2014) 'Higher education policy and the fatality of nostalgia' in *Thinking Africa*.

requirements, which has added to the marginalisation and ineffectiveness of many senates. We argue that in a post-managerialist model, academics must be the direct interlocutors and actors in the generation and utilisation of knowledge of and for transformation. Students, despite noises about student-centeredness, have in the managerialist conception typically been reduced to being clients of the university, thus often replacing pedagogy with edutainment, the normative nature of education with marketing and communication campaigns, and their role in university governance to acting as sounding boards on user committees.⁷⁶ Re-centering academics and students as the heart of the academic enterprise will not only increase the knowledge available at the centre and re-insert fundamentally critical voices into the management discourse, it might also help to give effect to a 'thick' notion of academic freedom in which students' rights to quality education is included.

From a governance point of view, this implies the re-establishment of academic rule based on the principles enunciated above as well as the return of senate to the heart of institutional governance. Yet, a senate can only be effective in its contribution to transformation if it is sufficiently diverse and if it provides the space for free deliberation and critique, including critique of the university management. Moreover, specifically in relation to students, and partially in response to the concerns raised earlier about the dangers of stakeholderisation, it is important to reflect on the role of student leadership as custodian of the student interest and how statutory representation of students in council, senate, institutional forum, student services council and, last but not least, the SRC itself, can give effect to a conception of students not as clients, but as members of the academic community, partners in their education and co-producers of knowledge.⁷⁷

In a post-managerialist model of governance, leadership and management accountability is exercised, as it was suggested in the HEIAAF report, in multiple directions.⁷⁸ Universities understand that they have a responsibility to be transparent about what they do with public and private funds and, just as importantly, with the new generation of professionals, scientists, artists and academics they have the responsibility to educate.

In a knowledge-based model of system governance, government has a steering role in relation to the achievement of national goals through higher education. This does not imply that government can, or should, intervene in the determination of institutional goals and visions. First of all, in this model government is accountable for the outcomes of its decisions, such as the outcome of the mergers, and for the nature and level of support it provides for the achievement of agreed upon goals with institutions. The remarkable increase in the knowledge available on higher education at system level over the last two decades provides a necessary condition for knowledge-based steering of a differentiated, developmentally

⁷⁶ T.M. Luescher-Mamashela (2013) 'Student representation in university decision making: Good reasons, a new lens?' in *Studies in Higher Education*, 38(10), p. 1442-1456.

⁷⁷ Ibid.

⁷⁸ CHE (2008) *Academic freedom, institutional autonomy and public accountability in South African higher education: Report of the Independent Task Team on Higher Education, Institutional Autonomy and Academic Freedom (HEIAAF)*.

oriented higher education system, by means of the development of individualised, clear and accurate targets for state steering; a detailed system-level diagnostic of institutional performance that provides early warning signals of looming crisis; and the fine-tuning of steering instruments taking into account a differentiated landscape of higher education provision.⁷⁹ In this respect, the critique of the 'one size fits all' approach levelled against system-level steering may be addressed by harnessing transformation knowledge available at system level and thus enabling a more individualised, more effective, and transparent and accountable form of steering based on empirically grounded indicators.

In our analysis of audit and assessor reports we have repeatedly encountered the fact that rural, peri-urban, and historically disadvantaged institutions, and some merged institutions, have been disproportionately affected by governance and leadership crises. In addition, we found that mounting demands for reporting to government have not led to more knowledge-based leadership and management in these institutions, but rather tended to cause administrative overload and leadership crises. We believe it is imperative for government to reflect critically on this situation and begin a consultative process to consider how best to support poorer endowed institutions in rural and peri-urban environments to address the structural constraints affecting their ability to give effect to a developmental mandate in conjoining with local, provincial and national governments, local industries, and other stakeholders. In this respect it should be noted that institutional transformation has as its structural limits the depth and direction of transformation of society. This is not to abdicate a potential leadership role of universities; yet, in the bigger scheme of social change universities are but a small component in the pursuit of social justice and socio-economic development.

Lastly, governance relations between the Minister and the higher education sector have been strained, particularly since the Higher Education Amendment of 2011 and the related threat of court action. To some extent government has reinforced the 'stakeholderisation' of higher education by intervening politically in relation to certain constituencies. This has undermined the possibility of consensus and a sense of common purpose between a unified university leadership and government. It is urgent in this regard that structured modes of interaction between government and institutions are systematically and purposefully reinstated. For this to take place it might be necessary that the government reviews the unfortunate effect that the separation between government officials and political appointments in the DHET has had on the relationship and communication between institutions and the Ministry. After 2010 there have been no direct interactions between the government and higher education institutions with the purpose of public deliberation on the direction of the higher education system.

⁷⁹ The most recent policy proposal for differentiated state steering returns to a differentiation of institutions in terms of the levels of qualification they offer, which involves a 'continuum' ranging from institutions that offer predominantly undergraduate qualifications to more research-intensive universities that offer a combination of undergraduate and postgraduate degree programmes along with high-levels of knowledge output and thus instead of advancing the discussion sends it back a decade (DHET (2014) 'Call for comments on the draft policy framework on differentiation in the South African post-school system').

At the same time, senior observers of the sector have pointed out how the CHE's consultative and advisory function has been side-lined and its role increasingly attenuated to that of a Quality Council.⁸⁰ We do not believe this is solely a government responsibility. The CHE needs to enter into a period of deep self-reflection and decide how it can best discharge its mandate fifteen years after its creation. Independent specialist bodies are a characteristic trait of the modern evaluative state and its more democratic version.⁸¹ In this sense it is clear that also in South Africa, government needs the critical support of independent specialist bodies and that, by virtue of its functions, the CHE could provide much needed capacity in the production, gathering and interpretation of knowledge of and for transformation.

At government level a post-managerialist approach to governance should be based not on legislating problems but on greater deliberative capacity whereby accountability is based on knowledge, much of which is already available to the DHET. Stakeholder interest bodies like HESA have a fundamental role to play in this – as have other stakeholder representative bodies. Preconditions for this to happen are that internal divisions within HESA are dealt with, and that a seriously critical view of university leadership replaces the unproductive *esprit de corps* that seems to have characterised HESA's public presence in the last decade.⁸²

If the next decade of higher education under democracy is to be characterised as post-managerial in terms of the features proposed here, self-critique at all levels of the system and an appropriate use of knowledge and tools already at our disposal are of essence.

⁸⁰ Based on personal communications with senior higher education leaders, government officials, and deliberations in the task team.

⁸¹ G. Neave (1998) 'The evaluative state reconsidered' in *European Journal of Education*, 33(3).

⁸² HESA has since changed its name to Universities South Africa.

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Teaching and Learning

4

Writers and editors: *Sioux McKenna*

Task team leader: *Matete Madiba*

Members/contributors: *Gerry Bokana, Vivienne Bozalek, Siyabulela Sabata,*

Ian Scott & Yusef Waghid

CHE research assistant: *Precious Sipuka*

Teaching and learning are never neutral. Every aspect is ideological in nature: from the admission of students, to the selection of curriculum content, to the adoption of learning materials, to the pedagogical approach, to the mode of assessment and the quality of the feedback. The form of disciplinary knowledge may vary from the more subjective and contentious to the more objective and broadly accepted, but teaching and learning remain highly political acts across all institutions, faculties and disciplines. So it is unsurprising that when a country undergoes major social change, ideological demands are placed on teaching and learning.

One of the explicit demands placed on teaching and learning in post-apartheid South Africa is that it contributes to social justice. The White Paper on Higher Education of 1997 specifies that higher education has a particular role to play in the restructuring of an unequal society.¹ The *National Plan for Higher Education* states that higher education has immense potential to contribute to the formation of a socially just society, and the 2013 White Paper on the post-school sector lists social justice as the first of its five policy objectives.²

This chapter asks questions about the extent to which higher education teaching has been responsive to the social justice agenda. As South Africa moves to ensure that all its people are no longer subjects but rather fully-fledged citizens, this chapter asks about the role that has been played by teaching and learning in forging an inclusive society with equitable access to quality education for all sections of the population.³

Teaching and learning are simultaneously held to be: the key way in which higher education can address the inequalities of society; the solution to the country's dire need for skills; an essential means to economic growth; and the path that holds out the most hope for individual social mobility and financial security. The complexity of attending to these multiple aims is a central theme in reflections on teaching and learning over the last twenty years. In 1993, Wolpe, Badat and Barends argued that the tensions between development and equity should not be ignored if both aims are to be addressed in the post-apartheid education sector.⁴ They concluded that blindness to the tensions could result in placatory rhetoric

¹ DoE (1997) *White Paper 3: A programme for the transformation of higher education*.

² DoE (2001) *National Plan for Higher Education*; DHET (2013) *White Paper for Post-school Education and Training: Building an expanded, effective and integrated post-school system*.

³ S. Badat & Y. Sayed (2014) 'Post-1994 South African education: The challenge of social justice' in *The Annals of the American Academy of Political and Social Science*, 652(1), pp. 127-148; DHET (2013) *White Paper for Post-School Education and Training*.

⁴ H. Wolpe, S. Badat & Z. Barends (1993) *The post-secondary education system: Beyond the equality versus development impasse and towards policy formulation for equality and development*.

and the reality that one is privileged over the other. They cautioned, two decades ago, that postponing democracy would not be in the interests of development.

However, scrutinising the successes and failures of teaching and learning in terms of both the equity and development agendas is not a straightforward matter. Higher education is not conducted within a laboratory in which variables can be controlled and manipulated so that we can map out cause and effect. Higher education is a major social structure, which means that almost every issue of national and international significance can be shown to affect how teaching and learning occurs within our universities. This chapter is, therefore, by its very nature partial and incomplete.

2. Teaching and learning in the public sector

The degree of large-scale structural change in the higher education landscape over the last twenty years is remarkable. The number of public universities was decreased from 36 to 23 (with three new universities having subsequently been established); we have seen the emergence of new institutional types; and the nature and form of private higher education has shifted significantly. These changes are described in detail elsewhere in this publication but in this chapter we consider the implications of some of these for teaching and learning.

The higher education sector inherited in 1994 was not only deeply fragmented but also small, owing to the severe under-representation of African, coloured and Indian students, who were still confined predominantly to the historically black institutions. Demand for access to higher education among black students boiled over in the early 1990s during the transition to democracy. Wolpe *et al.* articulated the tension between open opportunity for access to higher education, and the importance of ensuring that the sector maintained the capacity to produce high-level knowledge and skills of the kind needed to take the country forward and sought policy formulation that could address this tension, but it has nevertheless continued to be a key issue in higher education.⁵

The strong demand for places in higher education, supported by the 1997 White Paper's commitment to equity of access,⁶ has manifested in substantial growth in black student enrolment over the last two decades, in terms of absolute numbers as well as proportion of the total headcount. Total enrolment has increased by over 80% to close to one million. The major portion of this growth has been in African enrolment, which reached 79% of the total in 2010. At the same time, enrolment by gender has changed markedly, with women making up 57% of undergraduate students in 2010.⁷

However, despite this achievement, equity of physical access is not close to being achieved. Black student growth has occurred from a very low base, as shown in the

⁵ Ibid.

⁶ DoE (1997) *White Paper 3*.

⁷ CHE (2013) *A proposal for undergraduate curriculum reform in South Africa: The case for a flexible curriculum structure*, p. 39.

relative participation rates of the different population groups. While the historical gaps in the gross enrolment ratio (GER) by population group have narrowed, they remain very large: in 2011 there was a fourfold disparity between the African and coloured GER on one hand (14%) and the white GER on the other (57%).⁸ This means that, when the mature adults in the enrolment are discounted, only about 10% of the youth of South Africa's majority population groups are entering any form of higher education. Black and white aspirant higher education students thus still live in different worlds of opportunity. It is evident then, that the challenge of widening participation and equity of physical access has not yet been met and is likely to be a major issue for the higher education sector in the decade to come. Major inequities in the school sector remain and this too continues to impact on participation in higher education.

In terms of student success in higher education, the challenges are similar to those of access but arguably more pressing. It is imperative that throughput and completion rates should be substantially improved across the sector, for all student groups but particularly for the historically most disadvantaged groups, that is African and coloured students. The fact that the intake is small and highly selected, as outlined above, suggests that the current student body collectively has high potential to succeed. However, this is not borne out in the performance patterns. On the basis of the performance of the 2006 first-time entering student cohort key aspects include the following:

- About one in four contact students (that is, excluding UNISA) fail or drop out before their second year of study. If UNISA is included, the number is one in three.
- 27% of contact students in all three- and four-year programmes graduate in the time intended (regulation time). In contrast, by the end of regulation time the attrition rate in these programmes is 40%.
- 52% of contact students graduate within five years in three- and four-year degree programmes, the best-performing sub-group of qualifications.
- Performance in diploma programmes, a key area for expansion, has improved in recent years but remains the lowest among the core qualification types: only 42% of contact students graduate within five years.
- Racial disparities in performance have been somewhat reduced in a number of programmes but continue overall. In three- and four-year qualifications, the completion rate of white contact students is 50% higher than that of African contact students.
- Performance at UNISA needs to be assessed on a different scale because it is common for distance education students to take longer than contact students to complete their studies. In addition, a significant proportion of UNISA students register in order to take specific courses for various reasons, with no intention of completing a qualification. Nevertheless, particularly as UNISA students now make up approximately 40% of the total higher education headcount, performance there is critical for South Africa's development as well as for the large numbers of individual students concerned. Therefore, notwithstanding that the full picture of UNISA performance needs to be

⁸ Ibid., p. 41.

considered over a longer period, it is of concern that only 8% of UNISA students in all three- and four-year qualifications are graduating within five years, including only 2% in diploma programmes.

- Even if account is taken of students taking longer than five years to graduate, as well as patterns of students returning to higher education after initially dropping out, it is estimated that some 45% of contact students, and 55% of all students, will never graduate.
- A consequence of the patterns above is that only 5% of the youth of South Africa's majority population groups is succeeding in any form of higher education.⁹

It is clear that, in terms of output overall and equity of outcomes in particular, graduate production remains very low and far from meeting the country's needs in relation to both development and social cohesion. An additional concern is the proportion of graduates who are completing their studies with marginal passes, often after failing a number of courses. The extent of the latter problem has not yet been quantified, but its existence adds a dimension to the unsatisfactory state of graduate outcomes.

Failure and dropout on this scale, among a small and selected student intake, cannot be ascribed simply to student deficits, but must be widely systemic in origin. The roles to be played by teaching and learning in addressing these realities have not been fully interrogated. Innovative pedagogical approaches, sustained student support, and the development of flexible curricula all offer potential means of addressing the high dropout and low throughput rates, and indeed there is ample evidence in higher education journal articles and conference proceedings of such endeavours being implemented across the country. But such solutions are often undertaken in an *ad hoc*, uncoordinated and under-theorised manner and so their impact is not maximised.¹⁰

As more and more students enter higher education in the hopes of increasing their skills and income potential, there is a belief that this will have an effect on overall income distribution.¹¹ From this perspective, the development goals dovetail with the equity agenda as a more educated workforce is seen to attend to both economic growth and social justice. In South Africa where the Gini coefficient has been estimated to be as high as 0.68, we have one of the most unequal distributions of income in the world. The 2013 White Paper and the National Planning Commission's *National Development Plan* (NDP) both call for massive growth in headcount enrolment in the public system.¹² However, in the context of our losing half our student body before graduation, questions need to be asked about whether such straightforward growth is possible.¹³

⁹ Ibid.

¹⁰ I. Scott, N. Yeld & J. Hendry (2007) 'A case for improving teaching and learning in South African higher education' in *Higher Education Monitor*, 6.

¹¹ O. Ashenfelter & C. Rouse (1999) 'Schooling, intelligence, and income in America: Cracks in the bell curve' in *National Bureau of Economic Research Paper Series*, 6902, pp. 1-43.

¹² DHET (2013) *White Paper for Post-School Education and Training*; NPC (2011) *National Development Plan: 2030. Our future – make it work*.

¹³ Scott *et al* (2007) 'A case for improving teaching and learning in South African higher education' in *Higher Education Monitor*, 6; CHE (2013) *A proposal for undergraduate curriculum reform in South Africa*.

Critics of the pressures to increase student numbers argue that the quality of degrees will not be maintained.¹⁴ The growth plan would mean admitting students with lower school leaving results than the current first-time entering undergraduate students, with the result that the pass and retention rates, and graduation and throughput rates could deteriorate even further.¹⁵ Furthermore, there may be an 'equity-efficiency trade-off' as some universities are ill-prepared for teaching such diverse students in such numbers.¹⁶

As we move from an elite system to one of wider participation, more students from lower socio-economic backgrounds enter higher education. It should be noted that such shifts take particular forms in different institutional types. Historically disadvantaged institutions continue to admit predominantly economically deprived students and historically advantaged institutions continue to admit mainly middle-class students.¹⁷ The teaching and learning demands of shifts in the student body to include a broader spectrum of socio-economic groups bring serious financial implications. Not least, the system will need more and better-trained academics to meet this need. In the last twenty years, however, growth in the student population has not been matched by growth in the academic body (see Chapter 7).

For the period 2005 to 2010 the headcount of academic (instructional and research) staff increased by 14.6% while student to staff FTE ratio grew from 24 to 28.¹⁸ One fifth of academics will retire within a decade, of whom 32% are professors.¹⁹ Dhunpath asks whether South African universities are able to produce, develop and retain the needed demographically representative generation of academics and raises concerns about the lure of the private sector and state opportunities.²⁰ The academic staffing situation is discussed in more detail in Chapter 7 of this review.

There is also the issue of leadership capacity to deal with the proposed growth, and this has significant implications for teaching and learning. It is recognised that bringing about positive change constitutes a substantial leadership challenge involving strengthening both accountability and incentive.

Both the 2013 White Paper and the *National Development Plan* provide a description of the current education and training landscape as incoherent and dysfunctional, so significant changes in the funding of teaching and learning and in our curriculum structures and pedagogical approaches are required if we are to

¹⁴ E. Craig & S. Bird (2013) 'Assuring quality while reducing the higher education regulatory burden' (speech).

¹⁵ C. Sheppard (2013) 'Subsidy implications of extended curricula' (unpublished report).

¹⁶ J.R. Behrman, S.W. Parker & P.E. Todd (2011) 'Do conditional cash transfers for schooling generate lasting benefits? A five-year follow up of PROGRESA Oportunidades' in *Journal of Human Resources*, 46(1), p. 93-122; D. Filmer & N. Schady (2009) 'School enrollment, selection and test scores' in *World Bank policy research working paper*, 4998.

¹⁷ V. Bozalek & C. Boughey (2012) '(Mis)framing higher education in South Africa' in *Social Policy and Administration*, 46(6), p. 688-703.

¹⁸ CHE (2012) *VitalStats. Public higher education 2010*.

¹⁹ Staff reporter (2013) 'More young black graduates are needed to fill academic posts at universities: Zuma' in *News24*, 22 October.

²⁰ R. Dhunpath (2013) 'Re-envisioning African higher education: Alternative paradigms, emerging trends and new directions' (conference paper).

meet the demand for growth, particularly if such growth is to include all potential students who are willing and able to attend university and not be limited to those from advantaged backgrounds.

Comprehensive financial projections indicate that it would be much more expensive to achieve a greater number of graduates through increased intake than it would be to re-curriculate in ways that increase the retention and completion rates of the student body.²¹ If the status quo in terms of teaching and learning structures and cultures is assumed, and student numbers are simply increased, there will be wastage of many millions of Rands of subsidy funding paid for students who fail or who are excluded from the system. There is a case to be made for focusing on changing the teaching and learning system for the existing intake of students, half of whom leave without a qualification.²² Questions arise about how well the plan for massive future growth has been conceived and how comprehensively it speaks to the present.

The concerns about calls for massive growth within a sector characterised by poor and inequitably distributed success rates are of course not only financial in nature; this is also an issue of social justice. Social justice as articulated in post-1994 South African higher education policy is probably its most distinguishing feature. The express injunction in such policy to transform and to achieve equity and redress of the racially segregated education system indicates that social justice refers to inclusion, redistribution and representation.²³ The statistics sadly suggest that our success in this regard has been limited.

3. Teaching and learning in the private sector

As at 25 October 2013, the DHET listed 89 registered private providers of higher education, with a further 26 holding provisional registration. Recent statistics suggest that there are approximately 80 000 students enrolled in private higher education, though these amount to about 43 000 full-time equivalent (FTE) students, indicating that much of the student body is studying part-time.²⁴ This is a great reduction from the approximately 150 000 students enrolled in 1995.²⁵

The private higher education sector grew rapidly post 1994 and included a number of foreign providers who had entered the market once sanctions against South Africa had ended.²⁶ Mabizela states that “private providers operate on the

²¹ Sheppard (2013) ‘Subsidy implications of extended curricula’ (unpublished report); CHE (2013) *A proposal for undergraduate curriculum reform in South Africa*.

²² Scott *et al.* (2007) ‘A case for improving teaching and learning in South African higher education’ in *Higher Education Monitor*, 6; CHE (2013) *A proposal for undergraduate curriculum reform in South Africa*.

²³ C. Bundy (2006) ‘Global patterns, local options? Changes in higher education internationally and some implications for South Africa’ in *Kagisano*, 4.

²⁴ F. Coughlan (2011) ‘Private higher education 2011: A report on a survey of private higher education institutions’ (unpublished report).

²⁵ CHE (2003) ‘The state of private higher education in South Africa’ in *Higher Education Monitor*, 1.

²⁶ D. Levy (2002) ‘Commercial private higher education: South Africa as a stark example: The private higher education landscape: Developing conceptual and empirical analysis’ in *South African Journal of Higher Education*, 20; M. Mabizela (2004) ‘Recounting the state of private higher education in South Africa’ (conference paper).

fringes of the public higher education sector and have long been regarded as inferior institutions” and concerns about this rapid growth soon emerged as the quality of teaching and learning was often problematic and reflected the ‘fly-by-night’ nature of many of these institutions.²⁷

The Higher Education Act, however, required private institutions – including foreign universities – to register with the Department of Education.²⁸ Furthermore, the Regulations for the Registration of Private Higher Education Institutions (an amendment to the Higher Education Act gazetted in 2002) only allowed private institutions to offer programmes if the institution was registered with the DoE and provided that the programmes were accredited by the Higher Education Quality Committee (HEQC) of the Council on Higher Education (CHE). With the implementation of these processes, the rapid increase in the private sector was stemmed and a number of institutions were closed.

In 2003, a CHE report indicated that after the initial round of accreditation of private provider qualifications, there were serious concerns about curriculum and programme design, as well as other quality indicators of teaching and learning, such as academic staffing.²⁹ Questions about the quality of teaching and learning in the private higher education sector have decreased with the more stringent quality assurance processes being enforced, but concerns do still exist.

While private higher education is often associated with the marketisation of education and the pressures of globalisation, Mabizela reminds us that higher education in South Africa began in the private sector and many of our well-established public universities began as private colleges.³⁰ He goes on to point out that under apartheid private higher education was a key provider to black students excluded from many of the public institutions.³¹ Kruss tracks the histories of private higher education provision in South Africa and argues that, “Private institutions have ... mutated and adapted to take quite different forms in a short space of time”.³² She warns that the private higher education sector is very diverse in both form and purpose, making generalised comments on the sector difficult.

Of concern is that 33% of academics in the private higher education sector have only a diploma or less as their highest level of qualification.³³ Academic qualifications are often used as a proxy for academic credentials and the number of academics with a doctoral qualification in particular is seen to be an important quality indicator for teaching and learning. Only 39% of academics in the public

²⁷ M. Mabizela (2002) ‘The evolution of private provision of higher education in South Africa’ in *Perspectives in Education*, 20(4).

²⁸ DoE (1997) *Higher Education Act 101 (as amended)*.

²⁹ CHE (2003) ‘The state of private higher education in South Africa’ in *Higher Education Monitor*, 1.

³⁰ M. Mabizela (2000) ‘Towards a typology of structural patterns of private-public higher education in South Africa: A contextual analysis’ (dissertation); Mabizela (2002) ‘The evolution of private provision of higher education in South Africa’ in *Perspectives in Education*, 20(4).

³¹ M. Mabizela (2006) ‘Recounting the state of private higher education in South Africa’ in N.V. Varghese (ed.) *New trends in higher education. Growth and expansion of private higher education in Africa*.

³² G. Kruss (2004) *Chasing Credentials and Mobility: Private Higher Education in South Africa*, p. 53.

³³ Coughlan (2011) ‘Private higher education 2011’ (unpublished report).

higher education sector had a doctorate in 2012, a number that is frequently quoted as being unacceptably low and as having negative effects on the culture of teaching and learning.³⁴ In the private sector, only 9% of academics have doctoral level qualifications, raising even more serious concerns.³⁵

The private sector focuses primarily on business and theological courses, which make up 62% of their offerings. It is unclear whether this attends to the role the 1997 White Paper indicates that private provision should play in 'niche areas'. The extent to which private providers can or should be held to share a responsibility with public universities for supporting social transformation and public good is a matter of some deliberation.³⁶

Private providers are expected to follow the same processes of quality assurance as the public sector, with their qualifications being scrutinised by the Accreditation Committee (AC) of the HEQC and by the Department of Higher Education and Training (DHET) prior to their being accredited. They are also subject to audit processes in line with public institutions. Unlike public providers, private providers pay a cost-recovery fee for all their engagements with the CHE. They do not, however, accrue any direct public funding through government subsidisation of student admission, throughput or research output; nor are they currently permitted to use the term 'university' in their name or in any of their marketing.

While the Higher Education Management Information System (HEMIS) run by the DHET captures detailed data on most aspects of public higher education, there is far less data available about the private sector, but this is changing and systems are being put in place to ensure rigorous monitoring at a system level.³⁷ Institutions provide data to the Higher Education Quality Committee Information System (HEQCIS), but this is not audited and is not always complete. Given the limited extent to which the public sector is able to meet the demand for higher education, further growth in the private sector is expected.

While providing direct funding to this sector is unaffordable, it may become necessary to provide support to foster this growth and to ensure that it occurs in alignment with national goals, not least the focus on social justice outlined in higher education policy documents. One possibility may be through the provision of National Student Financial Aid Scheme (NSFAS) funding to students in the private higher education sector who are studying in demarcated programmes that address identified skills needs.

³⁴ ASSAf (2010) *The PhD study. An evidence-based study on how to meet the demands for high-level skills in an emerging economy*.

³⁵ Coughlan (2011) 'Private higher education 2011: A report on a survey of private higher education institutions' (unpublished report).

³⁶ Kruss (2004) *Chasing Credentials and Mobility*; G. Kruss (2007) 'Credentials and mobility: An analysis of the profile of students studying at registered private higher education institutions in South Africa' in *Journal on Higher Education in Africa*, 5(2/3), pp. 135-154; D. Levy (2002) 'Commercial private higher education: South Africa as a stark example: The private higher education landscape: Developing conceptual and empirical analysis' in *South African Journal of Higher Education*, 20.

³⁷ Coughlan (2011) 'Private higher education 2011' (unpublished report); CHE (2009) 'The state of private higher education in South Africa' in *Higher Education Monitor*, 1.

4. The impact of institutional mergers on teaching and learning

From 2002, the Ministry of Education used a series of institutional mergers to redress the unevenness of the public higher education landscape under apartheid. The then Minister of Education, Professor Kader Asmal, indicated that the mergers were intended “to create a system that is equitable in its distribution of resources and opportunities, academically and financially sustainable and productive so that it can more actively meet the teaching, skills development and research needs of our country”.³⁸ The mergers led to institutions with very different histories needing to forge a shared academic identity; a major national project that many warned would have deleterious effects on teaching and learning.³⁹

There was much debate about the extent to which the mergers could undo the inequities of apartheid or provide a suitably differentiated university sector.⁴⁰ Jansen argues that although the mergers were met with intense political resistance from a number of different stakeholders, they were nonetheless implemented, though often in ways and with consequences that were unforeseen in their centralised framing. The mergers occurred through a “complex interplay between ‘governmental macro-politics’ and ‘institutional micro-politics’” and little assistance was given to the merged institutions to deal with the resistances that were unleashed.⁴¹

Henkel, Becher and Trowler tell us that having a strong academic identity is central to good teaching practice and that such identities are complex and emerge from a number of different allegiances.⁴² They agree, however, that key to strong academic identities is a feeling of membership in a ‘discipline’ and a strong affiliation to an ‘institution’. The institutional affiliation is not always to a particular university, it can be to a type of university that shares a particular academic project. The extent to which the mergers unsettled academic identities, drawing together very different institutions and rearranging disciplinary and programme configurations as they did, should not be underestimated.

Literature on the mergers has focused on issues of governance and the ways in which management was elected. The implications for teaching and learning seem to have been less researched despite reference to unhappinesses caused by the mergers and the finding that as a result of mergers “employees have

³⁸ Durban University of Technology (2008) *Heralding the centenary: 100 years of wisdom*, p. 16.

³⁹ DoE (2002) *Transformation and restructuring: A new institutional landscape for higher education*.

⁴⁰ See, for example, J.D. Jansen (2003) ‘How mergers shape the institutional curriculum’ in *Education as Change*, 7(2), p. 3-19; C. Chipunza & S.A. Gwarinda (2010) ‘Transformational leadership in merging higher education institutions: A case study’ in *SA Journal of Human Resource Management*, 8(1) p. 197.

⁴¹ J. Jansen (2003) ‘Mergers in South African higher education: Theorising change in transitional contexts’ in *Politikon: South African Journal of Political Studies*, 30(1), p. 27-50.

⁴² M. Henkel (2005) ‘Academic identity and autonomy in a changing policy environment’ in *Higher Education*, 49(1/2), pp. 155-176; T. Becher & P. Trowler (2001) *Academic tribes and territories: intellectual enquiry and the culture of disciplines*.

experienced an increased workload”.⁴³ The documentation for the institutional audits undertaken by the CHE between 2004 and 2011 made frequent references to the extent to which the mergers had impacted on this area. Institutional portfolios included such descriptions of the merger process as “deep divisions in a bruised organisation”, “a divided institution in which race and institution of origin play debilitating roles that contribute to the lack of a strong, productive university culture”, and “the institutional atmosphere is charged with anxiety and uncertainty amongst staff and students”. There were also a number of concerns that decisions about “the location of the faculties and departments post-merger” were being undertaken on ‘technicist grounds’ without due concern for educational interests.⁴⁴

The audit reports produced by the CHE pick up on these concerns and note that in many cases staff felt alienated, that there were schisms in the institutional cultures and that some campuses remained unequally resourced with the potential to be ghettoized through the placement of only certain kinds of courses on such campuses, such as the first year of so-called foundation programmes.

In 2014, the merger between the University of Limpopo and Medunsa was reversed. The two campuses, 300 kilometres apart, have had ongoing rifts that resulted in a ministerial task team being set up in 2010. All other mergers remain in place. The last merger took place in 2007 and thus many of the upheavals experienced as a result of these processes have now been settled, but the extent to which merged universities have been able to develop shared academic projects and ensure institutional cultures that foster strong academic identities, so crucial to good teaching and learning, is debatable, and much work in this area continues to be needed.

One measure of the extent to which the mergers have had a positive impact on teaching and learning is whether there has been improvement in the student performance patterns referred to earlier. The longitudinal nature of cohort studies means that it will take a number of years still for convincing evidence of this to be gathered. However, it may be noted that analyses of the 2005 to 2008 entry cohorts do not indicate any substantial improvement relative to the 2000 and 2001 entry cohorts.⁴⁵

Not all universities underwent mergers and there has been criticism that the decision to leave some institutions, which were primarily well-resourced traditional universities, out of the merger process enabled institutional cultures resistant to transformation to continue unabated. It has been argued that, “The fact that some of these institutions remain largely white and unwelcoming to black academic staff and students speaks volumes”.⁴⁶

⁴³ C.A. Arnolds, R.N. Stofile & R. Lillah (2013) ‘Assessing the outcomes of the higher education mergers in South Africa: Implications for strategic management’ in *Acta Commercii*, 13(1), pp. 175-189.

⁴⁴ http://www.che.ac.za/focus_areas/auditing_of_institutions/overview.

⁴⁵ CHE (2013) *A proposal for undergraduate curriculum reform in South Africa*.

⁴⁶ S. Seepe (2010) ‘South Africa: Reflections on a major merger’ in *University World News*, 28 November.

5. The implications of differentiation on teaching

There are currently three institutional types in the public higher education sector in South Africa: traditional universities, universities of technology and comprehensive universities. While the mergers had a major role to play in the structuring of this three-type landscape, the White Paper had already signalled the need to create a single coherent higher education system which used differentiation to allow for diverse educational needs to be addressed.⁴⁷

The idea of a differentiated higher education system, whereby a range of institutional types meet industry needs and student demands, is fairly common across the world,⁴⁸ but given the iniquitous use of differentiation under apartheid to create highly unequal institutions, it is unsurprising that the notion is particularly controversial in South Africa. Mamdani asserts that, “Black universities coming out of apartheid were the intellectual counterparts of Bantustans. They were designed to function as detention centres for black intellectuals [and not] as centres that would nourish intellectual thought. As such, they had little tradition of intellectual freedom or institutional autonomy”.⁴⁹

Singh argues that debates about differentiation need to be undertaken within considerations of “the qualifying conditionalities of context”.⁵⁰ The conditionalities of the South African context mean that discussions about differentiation are particularly emotionally charged given that differentiation during apartheid was based on race, ethnicity and language and “impacted negatively on access, quality, mobility and opportunity for the majority of the country’s population and exacerbated social cleavages along class and gender lines within and between racial and ethnic categories”.⁵¹

National policy indicates that differentiation is a goal as it promises better chances for the sector to fulfil the multiple and expanding goals set for higher education including fairer and wider access, a better range of qualification types, improved accountability by each university to a clearer set of stakeholders and more streamlined and directed resource allocation.⁵² But, possibly as a result of the sensitivities emerging from our past, the mandates of the three institutional types remain unclear with significant overlap between them. There are concerns that some universities lack a clear academic project tied to their particular institutional type and thus are vulnerable to academic drift,⁵³ no doubt served

⁴⁷ DoE (1997) *White Paper 3*.

⁴⁸ V.L. Meek, L. Goedebeure & J. Huisman (2000) ‘Understanding diversity and differentiation in higher education: An overview’ in *Higher Education Policy*, 13, pp. 1-6.

⁴⁹ M. Mamdani (1999) ‘There can be no African renaissance without an Africa-focused intelligentsia’ in M.W. Makgoba (ed.) *African renaissance*.

⁵⁰ M. Singh (2008) ‘Valuing differentiation as a qualified good: The case of South African higher education’ in *Higher Education Policy*, 21, p. 246.

⁵¹ *Ibid.*, p. 251

⁵² NCHE (1996) *A framework for transformation*; DoE (2001) *National Plan for Higher Education*; CHE (2000) *Towards a new higher education landscape. Meeting the equity, quality and social development imperatives of South Africa in the 21st century*.

⁵³ A. Kraak (2006) ‘“Academic drift” in South African universities of technology: Beneficial or detrimental?’ in *Perspectives in Education*, 24(3), pp. 135-152.

by a funding formula that funds all institutional types identically and privileges research output.⁵⁴

In the development of a system differentiated by institutional type rather than by history, “the tussle between differentiation and homogenization, between desired and undesirable forms of differentiation, and between differentiation and other policy goals is far from over”.⁵⁵ The Centre for Higher Transformation (CHET) has undertaken significant systematic analyses of the sector using a wide range of performance indicators.⁵⁶ These analyses make a strong, albeit controversial, case for differentiation but they also bring into question the extent to which differentiation is steering the sector in meaningful ways that promote wider access and more directed, efficient use of resources.

The implications of institutional differentiation for teaching and learning are also coloured by institutional history. Despite the mergers, there remains a division between historically advantaged and historically disadvantaged institutions in relation to both physical resources and cultural capital and this can be identified in,⁵⁷ *inter alia*, differences in the school results of the entering student body, the throughput of students, the qualifications of academic staff and the ability of institutions to manage their resources in the interests of quality teaching and learning.⁵⁸

Some higher education institutions remain largely homogeneous in terms of race and particularly class of their student body, with poorer students continuing to attend the historically disadvantaged institutions, which are cheaper and easier to access academically. Letseka and Maile as well as Breier suggest that many students who leave such institutions prematurely appear to do so because they cannot afford to remain studying.⁵⁹ Such institutions thus feel the burden of student debt most acutely and the funding formula fails to take such contextual realities sufficiently into account.⁶⁰

Teaching and learning is also often conceptualised in decontextualised, generic ways, but literature shows that both institutional and programme type have

⁵⁴ C. Boughey & S. McKenna (2011) ‘A meta-analysis of teaching and learning at five historically disadvantaged universities’ (unpublished paper).

⁵⁵ Singh (2008) ‘Valuing differentiation as a qualified good: The case of South African higher education’ in *Higher Education Policy*, (21), p. 251.

⁵⁶ N. Cloete & I. Bunting (2000) *Higher education transformation: Assessing performance in South Africa*; I. Bunting & N. Cloete (2004) *Developing performance indicators for higher education: A South African case study*; I. Bunting, C. Sheppard, N. Cloete, N. L. Belding (2010) *Performance indicators: South African higher education 2000–2008*.

⁵⁷ Bozalek & Boughey (2012) ‘(Mis)framing higher education in South Africa’ in *Social Policy and Administration*, 46(6), pp. 688–703.

⁵⁸ Boughey & McKenna (2011) ‘A meta-analysis of teaching and learning at five historically disadvantaged universities’ (unpublished paper); Bunting & Cloete (2004) *Developing performance indicators for higher education: A South African case study*; Bunting et al. (2010) *Performance indicators: South African higher education 2000–2008*.

⁵⁹ M. Letseka & S. Maile (2008) ‘High university drop-out rates: A threat to South Africa’s future’ (policy brief); M. Breier (2010) ‘Dropout or stop out at the University of the Western Cape?’ in M. Letseka, M. Cosser, M. Breier & M. Visser (eds.) *Student retention & graduate destination: Higher education and labour market access & success*.

⁶⁰ C. Koen, M. Cele & A. Libhaber (2006) ‘Student activism and student exclusions in South Africa’ in *International Journal of Educational Development* (26), pp. 404–414.

substantial effects on what constitutes good pedagogy.⁶¹ This is not least because different kinds of knowledge demand the acquisition of very different dispositions and very different teaching practices.⁶²

For example, the heavy teaching load in universities of technology (UoTs) emerges in part from the vocational and practical nature of the knowledge, which requires hours of laboratory or fieldwork, with intensive feedback. This teaching load has significant ramifications for the extent to which academics are able to undertake further qualifications and engage in research, both of which have positive implications for academic identity.⁶³ Without a clear sense of institutional identity, the nature of the academic project remains vague. Academics have a very difficult time determining what is expected of them in terms of the kinds of graduates they should be developing, the kinds of teaching, learning and assessment they should be engaged with, the extent and nature of their relationship with industry, the extent and nature of their research endeavours and so on. Indeed there can be no fitness for purpose in teaching and learning when the purpose of the university is not clearly articulated.

As technikons changed to become UoTs, the expectations placed on academics shifted and so their industry expertise, which had long been the basis on which they were hired and legitimated, became of lesser importance to their academic qualifications. At the curriculum level, it is not yet clear whether the move from technikon to university of technology has had much impact. Certainly, universities of technology have begun to offer more degrees and postgraduate qualifications, a move which has led to cautions about the need for such institutions to focus on diploma programmes.⁶⁴ Diploma programmes are characterised in the National Qualifications Framework (NQF) as programmes that provide a “depth and specialisation of knowledge, together with practical skills and experience in the workplace” to enable successful learners to “enter a number of career paths and to apply their learning to particular employment contexts from the outset”.⁶⁵ South Africa’s need for medium-level skills means that we need substantial growth in vocational, technological and career-focused education and training and so academic drift from the diploma to the degree has serious national implications. There is also indication of academic drift in traditional universities with a number of general undergraduate degree curricula focused strongly on workplace specialisations from year one.⁶⁶

⁶¹ Becher & Trowler (2001) *Academic tribes and territories: Intellectual enquiry and the culture of disciplines*.

⁶² See, for example, S. Shay (2008) ‘Beyond social constructivist perspectives on assessment: The centring of knowledge’ in *Teaching in Higher Education*, 13(5), pp. 595-605; S. Shay (2011) ‘Curriculum formation: A case study from history’ in *Studies in Higher Education*, 36(3), pp. 315-329; J. Muller (2009) ‘Forms of knowledge and curriculum coherence’ in *Journal of Education and Work*, 22(3), pp. 205-226; K. Maton (2014) *Knowledge and knowers: Towards a realist sociology of education*.

⁶³ C. Boughey (2012) ‘Linking teaching and research: An alternative perspective?’ in *Teaching in Higher Education*, 17(5), pp. 629-635.

⁶⁴ A. Kraak (2004) *An overview of South African human resources development*; M. Oosthuizen (2008) ‘South Africa: (Re)forming a sector’ in N. Garrod & B. Macfarlane (eds.) *Challenging Boundaries: Managing the integration of post-secondary education*.

⁶⁵ CHE (2012) *Higher Education Qualifications Sub-Framework*.

⁶⁶ Oosthuizen (2008) ‘South Africa: (Re)forming a sector’ in Garrod & Macfarlane (eds.) *Challenging boundaries*.

The use of experiential learning, or work integrated learning (WIL), was a central characteristic of most national diplomas, but research on the use of this pedagogical approach showed that in many cases this form of learning was entirely uncurriculated, with students having to find their own placement and then spending their time on activities that provided no access to specialized workplace knowledge, such as making tea and doing photocopies.⁶⁷ The programme accreditation process introduced in 2004 made it clear that work integrated learning modules could not count for credits unless they were very clearly curriculated, with the university responsible for the placement, support and assessment of students.⁶⁸ As a result of this, some programmes have dropped this aspect of their programme or reduced it from a full year to a few weeks.

Arguably, this has led to a greater divide between workplace demands and the diploma curriculum, a divide that may have been exacerbated by the lapsing of advisory boards in many programmes. Advisory boards, comprising industry experts and academics, had long been used to provide curriculum guidance to technikons, but in recent times many of these formal arrangements have ended.⁶⁹ This has happened at least in part because of the demise of the national nature of diplomas. Previously, each diploma programme was centrally curriculated by one 'convenor' technikon, in discussion with the other technikons offering the particular programme. This process was "highly bureaucratic, power being vested in those technikons which hold convenorship for particular programmes".⁷⁰ The convenorship process allowed the Ministry of Education to have far more control over the teaching and learning in technikons than it ever did in traditional universities. A major effect of the convenorship system has been that individual institutions and academics did not build up curriculum development capacity, unless they happened to have convenorship status.⁷¹ The South African Qualifications Act of 1995 instigated a number of curriculum development training activities in the sector, which were meant to support the registration of programmes, but the training as well the registration process produced programme descriptions that did not contribute much towards the quality of teaching and learning.⁷²

Muller and Cloete note that the terms 'technikon' and 'university' were used in an essentialist way to signify differences in both knowledge forms and

⁶⁷ C. Winberg (2006) 'Undisciplining knowledge production: Development driven higher education' in *South Africa Higher Education*, 51, p. 159-172; P. Powell (2010) 'A critical investigation into curriculum development discourses of academic staff at a South African university of technology' (unpublished doctoral dissertation).

⁶⁸ CHE (2004) *Framework for Programme Accreditation*.

⁶⁹ P. Powell (2010) 'A critical investigation into curriculum development discourses of academic staff at a South African university of technology' (unpublished doctoral dissertation).

⁷⁰ D. Naidoo & L. Cooke (1998) 'Higher education qualifications and the NQF: A fresh perspective?' in *SAQA Bulletin*, 2(2), p. 12.

⁷¹ C. Boughey & S. McKenna (2011) *A meta-analysis of teaching and learning at four comprehensive universities*; Powell (2010) 'A critical investigation into curriculum development discourses of academic staff at a South African university of technology' (unpublished doctoral dissertation).

⁷² M. Madiba (2011) 'Curriculum mapping as inquiry in higher education' in E.M. Bitzer & M.M. Botha (eds.) *Curriculum inquiry in South African higher education: Some scholarly affirmations and challenges*.

pedagogy, but they also argue that the introduction of a “homogenising discourse... suggests that different knowledge types can be unproblematically integrated, [and] is likely to produce deep confusion amongst staff and students”.⁷³ This debate about the extent to which traditional universities and universities of technology should have different focus areas, develop different knowledge types through different forms of curricula, and use different pedagogical approaches, and how articulation pathways should be created between them, is made more complex for universities tasked with being both kinds of institution at the same time.

The development of comprehensive universities as a new institutional type was met with a great deal of uncertainty. The *National Plan for Higher Education* foretold the creation of “new institutional and organisational forms” but raised concerns that, “...the programme distinction between technikons and universities has been eroded in line with the White Paper’s suggestion of a ‘loosening of boundaries’ between institutional types [which] has resulted in a slow, but sure, move towards uniformity”.⁷⁴ The formation of the comprehensive university thus seems to be at odds with the National Plan’s declared intention to maintain such boundaries.

The prescription of percentages of technikon-type programmes within such universities and the need for Programme and Qualification Mix (PQM) approval were set up as the policy tool whereby further drift would be avoided. It is possible to define the comprehensive university simplistically as a university offering both university and technikon type programmes; indeed this is what much of the national documentation does. But the ways in which knowledge structures are translated into curricula are associated with far more than just their vocational or formative nature and include issues of pedagogical approach, academic identity, extent and type of research and links to industry. Muller and Cloete argue that, “By advancing a rather ‘loose’ notion of a ‘comprehensive’ institution, the Minister has created a situation where both institutional and knowledge boundaries become blurred”.⁷⁵

The work by CHET uses a range of measures to argue that institutional type, and movement between sub-categories and even main categories of such types, should be on the grounds of evidence-based criteria and not simply on the analysis of institutional strategic plans and missions together with negotiations between government and institutions.⁷⁶ Because teaching and learning is not a set of generic practices, it is crucial that deliberations about the extent to which institutional differentiation will define the sector take the issue of teaching and learning seriously into account. At the moment, institutional differentiation continues to be the ‘biggest elephant in the room’ and the silences around it have serious negative effects for teaching and learning.⁷⁷

⁷³ J. Muller & N. Cloete (2004) ‘Playing fast and loose with knowledge boundaries’ (unpublished paper).

⁷⁴ DoE (2001) *The National Plan for Higher Education*.

⁷⁵ Muller *et al.* (2004) ‘Playing fast and loose with knowledge boundaries’ (unpublished paper).

⁷⁶ I. Bunting (2013) ‘Differentiation in the public higher education system’ (unpublished presentation).

⁷⁷ K. MacGregor (2014) ‘Vice-chancellors explore research potential and limits’ in *University World News*, 4 April.

6. Teaching and learning within a qualifications frameworks

The decision to steer differentiation of programme type and spread, through the approval of a PQM, makes the role of the National Qualifications Framework (NQF) especially important. The Higher Education Qualifications Framework (HEQF), which specifies the qualifications from levels five to ten of the NQF, was gazetted in 2007. In 2013, it was revised as the Higher Education Qualifications Sub-Framework (HEQSF), and published in an incorporated format with the General and Further Education and Training Qualifications Sub-Framework (GFETQSF). The purpose of these frameworks is multiple – pertinent to our concern with teaching and learning, the HEQSF allows for a single qualifications framework with shared understandings of the purpose and level of each qualification type and its aim is to ensure articulation across the sectors. The framework has raised concerns that attempts to merge different knowledge forms and social bases into one structure will prove unworkable.⁷⁸

The NQF is underpinned by Outcomes Based Education (OBE). OBE was identified as a means of addressing the issue of poor schooling and enabling the acquisition of ‘high skills’, which it was believed would lead to economic growth.⁷⁹ The introduction of OBE was the subject of much critique.⁸⁰ The school system had to follow a national curriculum (which has had various versions) but the university sector is far more autonomous and so, although the NQF draws on the language of OBE, the underlying philosophy was only implemented to a limited extent and only in some universities. While most universities began using the language of ‘outcomes’ and ‘assessment criteria’ and sought to ensure curriculum alignment between goals, activities and the learning that students should demonstrate, the actual teaching and learning approaches and programme design was not much affected. Increasingly, the idea of constructive alignment is being called upon as a quality indicator for curriculum design, and the popularity of this idea may well have emerged out of the philosophy of OBE, but beyond this, much of OBE was rejected from the first by academics who indicated that higher order knowledge could not be segmentalised into lists of unit standards, and that learning did not always translate into clearly stated, predetermined outcomes.⁸¹

The three qualification streams referred to in the HEQSF: vocational,

⁷⁸ P. Ensor (2003) ‘The National Qualifications Framework and higher education in South Africa: Some epistemological issues’ in *Journal of Education and Work*, 16 (3), pp. 325-346.

⁷⁹ A. Kraak (1999) ‘Competing education & training policy discourses: A “systematic” versus “unit standards” framework’ in J. Jansen & P. Christie (eds.) *Changing Curriculum: Studies on Outcomes-based Education in South Africa*, pp. 21 - 58.

⁸⁰ See, for example, Jansen & Christie (1999) *Changing Curriculum: Studies on Outcomes-based Education in South Africa*; S.M. Allais (2011) ‘The changing faces of the South African National Qualifications Framework’ in *Journal of Education and Work*, 24.

⁸¹ J. Biggs (1996) ‘Enhancing teaching through constructive alignment’ in *Higher Education*, 32, pp. 347-364; Kraak (1999) ‘Competing education & training policy discourses: A “systematic” versus “unit standards” framework’ in Jansen & Christie (eds.) *Changing Curriculum*, pp. 21-58; Allais (2011) ‘The changing faces of the South African National Qualifications Framework’ in *Journal of Education and Work*, 24.

professional and general, cannot be neatly allocated to programme type, with numerous examples of both diplomas and degrees claiming a professional focus, but nonetheless figures suggest an inverted pyramid within the sector. In 2011, there were 289 931 students enrolled for undergraduate certificates and diplomas in the public higher education sector, with 476 840 students registered for undergraduate degrees.⁸² Scott warned that this “persistent imbalance between enrolments in ‘academic’ and vocational programmes” raises questions about whether the UoT sector is “providing the technical and career-oriented skills that the economy requires”.⁸³ There has been a strong call for a growth in diploma offerings that have industry credibility to attend to the issues of the inverted pyramid and meet the skills development needs of the economy.⁸⁴

The inverted pyramid relates not only to the spread of student participation within the higher education sector. There have been frequent calls for increased participation in the Technical and Vocational Education and Training sector (TVET) – previously known as the Further Education and Training (FET) sector.⁸⁵ The co-published HEQSF and GFETQSF are structured as one means of increasing participation in the TVET sector, by improving the articulation between these sectors; massive financial input into the TVET sector by the DHET is another. It can be argued that without a viable range of quality programme and qualification options enjoying widespread public confidence, many school leavers may undertake formative, general degree study by default, rather than by choice and inclination.

The GFETQSF is overseen by Umalusi, the HEQSF is overseen by the CHE and the Occupational Qualifications Sub-Framework (OQSF) is overseen by the Quality Council for Trades and Occupations (QCTO). Meeting the teaching and learning needs of the nation will require clear articulation paths between these frameworks and close liaison by the three Quality Councils. The political will necessary for such collaboration may be in short supply and this will undoubtedly continue to impact on the problem of the inverted pyramid of post-school education in South Africa.

There needs to be an ongoing injection of finances and other kinds of capital into the TVET sector, if it is to be able fulfil its role in the government’s plans for growth. This sector has been under the spotlight of policy makers and a great deal of money has already been invested in the reform and expansion of this sector. The extent to which the higher education sector can play a role in enabling such renewal, given its own internal problems, is debatable, but it is clear that there needs to be better coherence and articulation between the TVET and higher education sector.⁸⁶ The 2013 *White Paper for Post-school Education and Training: Building an expanded, effective and integrated post-school system* makes

⁸² CHE (2013) *VitalStats. Public higher education 2011*.

⁸³ G. Fisher & I. Scott (2011) ‘The role of higher education in closing the skills gap in South Africa’ (background paper).

⁸⁴ Kraak (2004) *An overview of South African human resources development*; Oosthuizen (2008) ‘South Africa: (Re)forming a sector’ in Garrod & Macfarlane (eds.) *Challenging Boundaries*.

⁸⁵ In the *White Paper for Post School Education and Training* (2013), the Technical and Vocational Education and Training (TVET) sector is the new name given to the previous Further Education and Training (FET) sector; R. Daniels (2009) ‘Skills shortages in South Africa: A literature review’ (working paper).

⁸⁶ Scott *et al.* (2007) ‘A case for improving teaching and learning in South African higher education’ in *Higher Education Monitor*, 6.

it clear that the greatest expansion will be in technical and vocational education and training in order to develop scarce skills needed for the country's economic development. It is planned that the TVET colleges will increase student intake to 2.5 million by 2030 from the 650 000 students enrolled in 2010.

7. Quality assurance of teaching and learning

A major change in higher education worldwide in the last two decades has been the introduction of national quality assurance measures. The 'audit culture' has been simultaneously associated with better accountability and improved standards and with a surveillance culture in which education is reduced to quantifiable outcomes.⁸⁷ In South Africa, the CHE was promulgated through an act of parliament (Higher Education Act, as amended, No 101 of 1997) and established in 1998. The role of the CHE and the HEQC is discussed in detail elsewhere in this review, but here we consider the specific effects the introduction of national quality assurance processes have had on teaching and learning.

Prior to the introduction of such processes, the ways in which institutions assured themselves of the quality of their teaching and learning differed markedly across the sector. Technikons followed the Certification Council for Technikon Education (SERTEC) requirements, which were primarily compliance based and they had a convenorship system for curriculum design.⁸⁸ Historically black institutions and technikons both worked under much stronger state inspection and control than historically white universities. Bunting reminds us that such institutions had to have their budget approved by the relevant government department and in some cases even needed state approval of staff employment.⁸⁹ The ideology underpinning such compliance systems was often in direct opposition to current notions of both social justice and academic freedom. One effect of working under such systems of control was that there were often few internally developed quality assurance mechanisms.

Furthermore, many institutions in South Africa were developed with the explicit aim of ensuring skilled labour for the teaching profession and for the civil services of the 'homelands', and this had profound implications for both the types of programmes offered and for curricula design and pedagogy.⁹⁰ Historically advantaged universities managed their own quality assurance processes but there was a distinct lack of coherence to the approaches used and many of them used fairly insular processes of benchmarking and external examining. It can be said that there was little debate across the sector as to what constituted quality or how it should be assured. The introduction of national level policies and processes was

⁸⁷ S. Clegg (2009) 'Forms of knowing and academic development practice' in *Studies in Higher Education*, 34(4), pp. 403-416; C. Shore (2008) 'Audit culture and illiberal governance: Universities and the politics of accountability' in *Anthropological Theory*, 8(3), pp. 278-298.

⁸⁸ CHE (2000) *An evaluation of SERTEC and the Quality Promotion Unit*.

⁸⁹ I. Bunting (2002) 'The higher education landscape under apartheid' in N. Cloete, R. Fehnel, P. Maasen, T. Moja, H. Perold & T. Gibbon (eds.) *Transformation in higher education: Global pressures and local realities in South Africa*.

⁹⁰ C. Boughey (2010) *Academic development for improved efficiency in the higher education and training system in South Africa*.

thus an extremely onerous task with pronounced political implications.

Institutional audits, national reviews and programme accreditation processes have ensured that all universities have had fairly extensive engagements with the CHE. There has been much critique of such quality processes, both nationally and internationally, with many arguing that they are administrative burdens that deal with nuanced issues in technicist ways.⁹¹ Luckett argues that the South African approach follows a pragmatic model that fails to sufficiently interrogate causality.⁹² Others point to the very uneven quality that characterises our higher education system and argue that we need strong national systems to drive improvement.

In the area of teaching and learning, the CHE has been a significant national structure in steering a shift towards more engagement with pedagogy and in opening debates about the extent to which the system is meeting its mandate. The CHE adopted a fitness for and of purpose understanding of quality, that entailed institutions making explicit what their teaching and learning goals and strategies were and then reflecting on whether such goals and strategies were appropriate for their context, and in particular in regard to the national transformation and development agenda (fitness of purpose) and whether their internal processes and structures enabled them to fulfil these goals and strategies (fitness for purpose).⁹³

A read through the executive summaries of the institutional audits, available on the CHE website, makes clear the concerns about enormous disparities in quality of teaching and learning and a number of recommendations were made related to, for example, assessment, student development, staffing and programme design. Concerns were also raised about institutions that had failed to engage with the implications of teaching large classes of students for whom the medium of instruction is not their home language, who come from a range of socio-economic backgrounds and who have experienced poor schooling.⁹⁴

Having completed the first round of audits between 2004 and 2012, the CHE has now announced the process that will be followed in the next institutional level engagement. This time there will not be audits but rather there will be a Quality Enhancement Project (QEP) focused specifically on issues of teaching and learning. Given the problems experienced in the sector in this area, and given that all South African universities are primarily undergraduate teaching and learning institutions, there is a great need for a national project focused on this. The extent to which the proposed process can shift the sector from compliance-based quality assurance to developing suitably contextualised, scholarly and reflective responses to the teaching and learning demands of their institutions remains to be seen.

⁹¹ R. Barnett (2003) *Beyond all reason: Living with ideology in the university*; Shore (2008) 'Audit culture and illiberal governance: Universities and the politics of accountability' in *Anthropological Theory*, 8(3), pp. 278-298; S. Wright & A. Rabo (2010) 'Introduction: Anthropologies of university reform' in *Social Anthropology*, 8(1).

⁹² K. Luckett (2007) 'Methodology matters: Possible methods to improve quality' in *Perspectives in Education*, 25(3).

⁹³ Boughey (2010) *Academic development for improved efficiency in the higher education and training system in South Africa*.

⁹⁴ S. McKenna & L. Quinn (2012) 'Lost in translation: Transformation in the first round of institutional audits' in *South African Journal of Higher Education*, 26(5), pp. 1033- 1044.

8. National teaching and learning development initiatives

There have been a number of funding initiatives aimed at addressing the many problems experienced in teaching and learning as manifested in poor throughput and completion rates. The teaching development grants and foundational provision funding are the main examples of these.⁹⁵

The teaching development grant (TDG) is provided in the form of earmarked funding, which is to be used according to each institution's own plans and strategies on projects aimed at improving teaching. The funds have been allocated on the basis of discrepancies between actual and normative teaching outputs on the funding formula. A major problem associated with this funding has been the lack of clarity as to what can be funded and the lack of accountability as to how the funds have been spent. This has resulted in a number of interventions that are theoretically and ideologically problematic and a number of institutions using these funds for budget line items unrelated to the development of teaching. Another issue has been the disjuncture between the academic year at higher education institutions (January to December), over which teaching development activities can be implemented, and the state's financial year (April to March), over which funds become available for allocation. Further, the cycle for which funds were committed and confirmed, and against which grant proposals were invited, was found to be too short to allow for substantive activities to be implemented, and for tangible results to be targeted and observed.

Recent significant changes in the allocation of the TDG have addressed many of these problems. All public universities can now access TDG funds and institutions are required to develop a systematic, coordinated and structured Teaching Development Plan for the 2014/15 to 2016/17 funding cycle, with enhanced student success as its aim.⁹⁶ Furthermore, there is the inclusion of collaborative project funding that brings together a number of institutions tackling a shared concern. Nevertheless, the use of large amounts of money (in the 2014/15 cycle about R630 million was earmarked for the TDG) on a project basis carries with it the danger that teaching improvement efforts remain short-term and somewhat out of the mainstream. Criteria for future cycles will need to ensure that the allocation of these funds does not in fact marginalise efforts to improve teaching and learning rather than contribute to systemic enhancement.

State funding for foundational provision has also been in the form of earmarked funding, allocated for extended programmes since 2004. Almost all institutions now have extended versions of their main programmes. The grants are based on applications made by the institutions and full-time-equivalent enrolments in each approved programme. The funding has historically been prospective, based on enrolment projections, but a migration process is underway to make the funding retrospective, based on actual enrolments, to bring it in line with the mainstream

⁹⁵ DHET (2004) *A new funding framework: How government grants are allocated to public higher education institutions*.

⁹⁶ DHET (2013) *Draft policy statement on the management and utilisation of the Teaching Development Grant in the 2014/15 to 2016/17 funding cycle*.

teaching input subsidy approach.

The grants were initially provided in three-year cycles, at the end of each of which the institutions had to re-apply for their programmes to be approved. This was an important measure for monitoring quality and accountability in the early formative stage of the intervention, but also had the unintended consequence of acting against continuity and the development of expertise in extended provision. Because the funding was not guaranteed beyond the three-year cycle, many institutions were unwilling to appoint extended programme staff on long-term academic conditions of service. Such conditions are necessary for professional and academic career development, for staff to fully invest their energy and creativity in innovative pedagogy and programme design, and for fostering positive engagement in professional development.⁹⁷ The short-term nature of the funding also tended to reinforce the marginalisation of extended programmes arising from their non-standard nature.⁹⁸

However, the DHET took these limitations seriously, and in new policy for 2013 and beyond, the cyclical nature of the funding has been discontinued. The approval of specific extended programmes, once granted, now remains in force until such time as the programme is terminated or substantially altered (the latter requiring a new application). Together with substantial increases in the value of foundation funding,⁹⁹ this change is interpreted as a sign of the DHET's confidence in the future of extended provision, and removes any restriction on institutions' capacity to appoint extended programme staff on permanent conditions that foster the ongoing development of expertise in this area. The effectiveness of foundation provision to ensure wider physical access to higher education and improved retention and throughput is discussed in the next section.

9. Teaching and learning in extended curricula

One of the key initiatives emerging from the academic development movement over the last three decades has been the development of foundation programmes, now formally known as extended curriculum programmes (or just extended programmes), which have undergone refinement, reconceptualisation and major expansion post-1994.¹⁰⁰ Extended programmes were first recognised in higher education policy in the 1997 White Paper, and have been funded by the state since

⁹⁷ I. Scott (2009) 'Academic development in South Africa' in E. Bitzer (ed.) *Higher Education in South Africa: A scholarly look behind the scenes*; S. McKenna (2013) 'The context of access and foundation provisioning in South Africa' in R. Dhunpath & R. Vithal (eds.) *Alternative access to higher education*.

⁹⁸ C. Boughey (2013) 'The significance of structure, culture and agency in supporting and developing student learning at South African universities' in R. Dhunpath & R. Vithal (eds.) *Alternative access to higher education*.

⁹⁹ DHET (2013) *Ministerial statement on university funding: 2014/2015 and 2015/2016*.

¹⁰⁰ T. Volbrecht & C. Boughey (2004) 'Curriculum responsiveness from the margins? A reappraisal of academic development in South Africa' in H. Griesel (ed.) *Curriculum responsiveness: Case studies in higher education*; Scott (2009) 'Academic development in South Africa' in Bitzer (ed.) *Higher Education in South Africa*; Boughey (2010) 'Academic development for improved efficiency in the higher education and training system in South Africa'.

2004 through a process of proposals and ring-fenced funding.¹⁰¹

Since their inception, extended programmes have represented recognition that, for the majority of potential students in South Africa, success in higher education is severely constrained by systemic faults; and the extended programme initiative has constituted an attempt to address these faults at a curriculum level. The major problem that extended programmes have focused on is the discontinuity, or articulation gap, between students' educational backgrounds – as shaped by their familial and socio-economic circumstances as well as schooling – and the assumptions about prior learning on which South Africa's traditional higher education programmes are based. The articulation gap has, for some time, negatively affected the majority of the student intake even though this intake represents the top-achieving echelon of secondary schooling.

The articulation gap is not confined to subject knowledge but encompasses a range of facets of learning such as conceptual development, academic literacies, and socialisation. It affects learning not only at entry level but also at key points throughout curricula, particularly where there are substantial transitions (in knowledge domain or contextual knowledge) for which students are differently prepared.¹⁰²

National throughput and completion statistics reveal the acute nature of this problem of preparedness in South Africa; the apartheid legacy, ongoing economic inequalities, and major problems with the school sector exacerbate the way in which student underpreparedness is experienced in this country.¹⁰³ However, it should be noted that around the world, there is a correlation between students' socioeconomic background and their chances of higher education success.¹⁰⁴ The need for teaching aimed at careful induction of all students into the target knowledge practices and for concomitant critique of the practices valued by the academy has emerged as a global concern accompanying the shift from elite to a mass higher education system.

Through their capacity to mitigate the articulation gap at entry-level, extended programmes have begun to address the systemic constraints on both access and success. They have allowed for the admission of students who would not otherwise have gained entry to their choice of programme in higher education, and have enabled many thousands of students, including a proportion of struggling students initially admitted to the mainstream, to complete their studies and achieve a qualification. Since they have focused on redress of apartheid inequalities, they have contributed significantly to equity of access and equity of outcomes, as well as swelling the overall numbers of graduates in the country.¹⁰⁵

However, despite their achievements, the effectiveness of extended programmes in addressing the needs of the majority of the student body is limited. The essence of this is that extended programmes, in their current form, are performe designed

¹⁰¹ DoE (1997) *White Paper 3*.

¹⁰² CHE (2013) *A proposal for undergraduate curriculum reform in South Africa*.

¹⁰³ Ibid.; Scott *et al.* (2007) 'A case for improving teaching and learning in South African higher education' in *Higher Education Monitor*, 6.

¹⁰⁴ P. Bourdieu & J. Passeron (1971) *Die illusion der chancengleichheit. Untersuchungen zur soziologie des bildungswesens am beispiel frankreichs*; M. Walpole (2003) 'Socioeconomic status and college: How SES affects college experiences and outcomes' in *The Review of Higher Education*, 27(1), pp. 45-73.

¹⁰⁵ CHE (2013) *A proposal for undergraduate curriculum reform in South Africa*.

and funded as a minority intervention even though, as the performance patterns show, it is the majority of the intake that would benefit from systemic change. In terms of funding, current financial provision for foundation courses cannot serve more than about 15% of the student intake. In terms of design, the foundational provision in extended programmes has had to be grafted on to rigid mainstream curricula that were never intended for this purpose, resulting in gaps and step-changes that detract from the coherence of many extended curricula.¹⁰⁶ Moreover, because of their design constraints, most extended programmes cannot deal with the key systemic faults blocking student learning other than the entry-level articulation gap. In particular, there is little capacity for addressing substantial in-curriculum transitions or for sustaining focused academic literacy development throughout the curriculum.

In many cases, the additional year has been understood to be an opportunity to do 'more of the same', rather than to critically analyse the specific skills and practices students need for success in their chosen programme. The pedagogical underpinnings of extended curriculum programmes have at times been guilty of atheoretical approaches that treat teaching and learning as neutral and asocial.¹⁰⁷ Even where there is a more theorised social approach, the 'grafted on' nature of many foundation courses has meant that the 'mainstream curriculum' has remained untouched and the focus is on the student alone without a simultaneous critique of the existing curriculum and institutional structures.¹⁰⁸ This is particularly the case as most institutions hired staff on a contract basis to curriculate and teach the 'extended' portion of the extended curriculum programmes and these people often had little to no communication with the academics offering the rest of the programme. They also often had limited disciplinary expertise and were hired on the premise that students needed to be remediated in generic skills rather than inducted into the academic practices of their chosen courses.

There is, therefore, a need to find additional or other means of enabling the majority of the present and future student intake to be successful in their learning and in achieving sound tertiary qualifications. To the extent that extended programmes have shown that systemic intervention can make a significant difference, there is a case for analysing the educational principles underlying successful extended programmes and finding means of applying these on the scale required to substantially improve learning and graduate output. The performance patterns – particularly the fact that, even among contact students, only 27% graduate in regulation time and well under 50% graduate within five years – indicate that, as it is a majority issue, change needs to be made to mainstream provision, not on the margins of the system.¹⁰⁹

It is against this backdrop that a task team of leading figures in South African higher education, appointed by the CHE in 2011, produced a comprehensive

¹⁰⁶ Ibid.

¹⁰⁷ Boughey (2013) 'The significance of structure, culture and agency in supporting and developing student learning at South African universities' in R. Dhunpath & R. Vithal (eds.) *Alternative access to higher education*.

¹⁰⁸ McKenna (2013) 'The context of access and foundation provisioning in South Africa' in R. Dhunpath & R. Vithal, (eds.) *Alternative access to higher education*.

¹⁰⁹ CHE (2013) *A proposal for undergraduate curriculum reform in South Africa*.

report on the role of structural curriculum reform in improving student learning, graduate output and equity of outcomes.¹¹⁰ The task team analysed the structural obstacles impeding student learning, and proposed the introduction of a flexible undergraduate curriculum structure with the following main features:

- Allowing for additional structured and funded time-on-task for all who need it, to enable students who are underprepared for existing mainstream curricula to gain the foundations – at entry level, at key transition points within curricula, and through the sustained development of the academic literacies relevant to their programmes – that they require for realising their potential and succeeding in their studies. Since it is the majority of the student body that would benefit from this, in practice it means extending the formal duration of current three- and four-year programmes by one year as the norm. The mechanisms for implementing this include adding 120 HEQSF credits and one HEMIS funding unit for each programme concerned.
- To allow productively for the diversity in educational background that characterises the student intake, enabling students who can complete their studies in less than the new formal time to be able to do so.
- Promoting curriculum enhancement, particularly with a view to enabling students to gain the graduate competences and attributes needed in the contemporary world.
- Maintaining academic standards at approximately their current level while ensuring that they can be successfully achieved by a significantly higher proportion of the student body.

The CHE has prepared formal advice on the report to the Minister of Higher Education and Training, informed by analysis of the responses that were received from the higher education sector and the public at large.

10. Academic Staff Development

There have been a number of analyses of the phases of academic development in the last twenty years.¹¹¹ They all agree that these phases have overlapped and that vestiges of previous phases continue alongside new shifts. The earliest approaches to academic support and development focused largely on student remediation. The only focus on academics in these early stages was in the form of academic staff development as ‘technique’ where academics were invited to attend workshops to improve their teaching methods.¹¹² Such interventions were often premised on theories that explained teaching and learning problems largely in terms of student deficit.

¹¹⁰ Ibid.

¹¹¹ See, for example, Volbrecht & Boughey (2004) ‘Curriculum responsiveness from the margins? A reappraisal of academic development in South Africa’ in Griesel (ed.) *Curriculum responsiveness*; Scott (2009) ‘Academic development in South Africa’ in Bitzer (ed.) *Higher Education in South Africa*; Boughey (2010) ‘Academic development for improved efficiency in the higher education and training system in South Africa’; C. Winberg (2011) ‘Five generations of academic development’ (presentation).

¹¹² Winberg (2011) ‘Five generations of academic development’ (presentation).

The advent of a more scholarly approach to academic staff development saw the introduction of postgraduate qualifications, including the Postgraduate Diploma in Higher Education in many universities, where sociological accounts of teaching and learning gained particular prominence.¹¹³ At almost the same time, there was a move to undertake both staff and student development in more sophisticated ways that took the norms and values of the disciplines into account. This period saw significant development in curriculum studies, but also had the unfortunate effect of leading to many central academic development units being closed and the staff being subsumed into academic departments. In the absence of such units and without strong academic identities and rigorous research backgrounds, many of these staff were ill-equipped to undertake the necessary curriculum development or to guide theoretically sound student development, and thus found themselves running tutorials or assisting with assessment. This has meant that some universities have very little in the way of institutional expertise to guide teaching and learning policies and practices.

Boughey refers to a third generation of academic development where the focus is on a systemic view of institutions and how infrastructure could be used to support the teaching and learning project.¹¹⁴ The growing audit culture and requirements from professional bodies placed new expectations of re-curriculation on academic departments and saw the revival and formalisation of academic development centres as higher education or teaching and learning units in the form of faculties or departments. The development of strategic plans on teaching and learning also led to new institution-wide roles for academic development staff, many of whom were re-conceptualised as teaching and learning specialists or managers. New senior positions such as Deputy Vice-Chancellors and Deans of Teaching and Learning were created to drive and implement these plans across institutions.

Gosling's survey of leaders in academic development revealed that there was a lack of consensus about what academic development meant, besides the agreement that it means professional development of staff as teachers.¹¹⁵ Other conceptions included student development and education technology units. Academic development centres also differed significantly in terms of their size – from two to 130 staff. Academic development work was seen as promoting staff development, researching teaching and learning, strategic interventions such as university planning and policy development, and the development of new courses. Most units report directly to Deputy Vice-Chancellors and to Senate teaching and learning committees. Some units work closely with faculties and others work centrally.

While most universities have had research awards for many years, the introduction of similar awards to recognise good teaching practice is a relatively new phenomenon. Almost all South African institutions now have teaching and learning awards or are developing such awards, with the number of awards and the remuneration differing from one institution to the other. National Teaching

¹¹³ L. Quinn (ed.) (2010) *Re-imagining academic staff development: Spaces for disruption*.

¹¹⁴ C. Boughey (2007) 'Marrying equity and efficiency: The need for third generation academic development' in *Perspectives in Education*, 25 (3).

¹¹⁵ D. Gosling (2009) 'Report on the survey of directors of academic development in South African universities'.

and Learning Awards have been offered by the CHE in collaboration with the Higher Education Learning and Teaching Association of Southern Africa (HELTASA) since 2009. There is a concern that the teaching and learning awards offered nationally could exacerbate existing inequalities between institutions through their failure to develop context-sensitive criteria. There is also critique internationally that they may be driving a managerialist and individualist agenda, and do not necessarily promote good quality teaching.¹¹⁶ However, such awards do clearly signal an increasing focus on teaching and learning.

Alongside the introduction of teaching and learning awards, has been an increased focus on teaching and learning for probation and promotion purposes. Many institutions now demand evidence-based portfolios in which academics articulate their understanding of and approach to teaching and learning. This has also provided a wealth of resources that can be integrated into teaching and learning conversations; a potential that has been better utilised in some institutions than others.

The establishment of a chair in teaching and learning at the University of Johannesburg and a South African Research Chair (SARCHI) in higher education and human development at the University of the Free State is further evidence of an increased focus on this core aspect of higher education.

11. Scholarship of Teaching and Learning

Despite the increased focus on teaching and learning outlined above, there remains a fairly widespread idea in higher education that teaching is commonsense and that there is a generic set of 'best practices' to be acquired.¹¹⁷ Certainly it is only in the higher education sector that one can teach without any teaching qualifications or training. But there has been rapid growth, both locally and internationally, in the research field known as the 'scholarship of teaching and learning' (SOTL). This has seen a move to better theorised accounts of teaching and learning and more nuanced explanations of what affects quality in this area and what constrains or enables student success.¹¹⁸

In South Africa, much of this research, though certainly not all, has been undertaken in the "relatively unstable communities" of academic developers,¹¹⁹ though even within this community the quantity and quality of such research has been highly uneven and strongly focused on practice based, student focused solutions.¹²⁰ This research has often focused on an attempted move from 'transmission mode' to more student-centred or problem-based approaches to teaching.¹²¹

¹¹⁶ B. Leibowitz, J. Farmer & M. Franklin (2012) 'Teaching and learning awards in South Africa' (unpublished paper).

¹¹⁷ Clegg (2009) 'Forms of knowing and academic development practice' in *Studies in Higher Education*, 34(4), pp. 403-416; P. Niven (2012) 'Narrating emergence in the curious terrain of academic development research: A realist perspective' (doctoral dissertation).

¹¹⁸ Y. Waghid (2013) *African philosophy of education reconsidered: On being human*.

¹¹⁹ C. Boughay & P. Niven (2012) 'The emergence of research in the South African academic development movement' in *Higher Education Research & Development*, 31(5).

¹²⁰ S. Shay (2012) 'Educational development as a field: Are we there yet?' in *Higher Education Research & Development*, 31(3), pp. 311-323.

¹²¹ Waghid (2013) *African philosophy of education reconsidered*.

The move to 'alternative' pedagogical approaches has often drawn on SOTL research, although sometimes in ways that misappropriate the original theory. For example, in South Africa, an extremely popular theory is that of 'deep and surface approaches to learning'. This theory suggests that students use various social cues to determine whether to use a 'surface' or a 'deep' approach to their learning.¹²² This has been reduced in much of the South African SOTL literature to a fixed binary of 'deep learning' and 'surface learning', or the theory is used to pathologise students as 'surface learners'.¹²³

Similarly, the social theory that explains how literacy practices in the academy emerge as complex manifestations of the norms and values of particular programmes or disciplines (see, for example, work in the field known as New Literacy Studies) has been adulterated to justify add-on generic skills courses that are called 'Academic Literacy' but are the antithesis of the theory that shares the name. There is a substantial body of internationally regarded, South African research in the area of academic literacies that provides a more nuanced account of the difficulties students face in accessing the knowledge and related literacy practices of the university, but these publications do not seem to have translated into meaningful curriculum change.¹²⁴ Similarly, there is a body of research that attends in rigorous detail to the related issues of knowledge forms and curriculum design but these too have not enjoyed significant uptake within universities.¹²⁵

Within the field of SOTL in South Africa, there have been a number of 'turns': from predominantly individualised accounts of learning to more social ones, to concerns with issues of affect and ontology.¹²⁶ But while there has been growth in the scholarship of teaching and learning, it has generally been of uneven quality and has failed to have a significant impact on curriculum and classroom practice.

In as much as teaching and learning has assumed a more scholarly, critical stance in post-apartheid South Africa, it has not yet achieved its potential in becoming a deliberative encounter – one that allows for openness, mutual trust and critical engagement amongst lecturers and students, so necessary to enable more acceptable

¹²² F. Marton & R. Säljö (1984) 'Approaches to learning' in F. Marton, D. Hounsell & N. Entwistle (eds.) *The experience of learning*.

¹²³ Boughey (2010) 'Academic development for improved efficiency in the higher education and training system in South Africa'.

¹²⁴ H. Janks (2000) 'Domination, access, diversity and design: A synthesis model for critical literacy education' in *Educational Review*, 52(2) pp. 175-186; H. Janks (2008) 'Critical literacy: Methods, models and motivations?' in K. Cooper & R.E. White (eds.) *Critical literacies in action. Social perspectives and teaching practices*; M.I.J. Paxton (2003) 'Developing academic literacy in economics in a South African university' in *Literacy and Numeracy Studies*, 12(2), pp. 1-14; L. Thesen & E. van Pletzen (2006) *Academic literacy and the languages of change*; C. Jacobs (2005) 'On being an insider on the outside: New spaces for integrating academic literacies' in *Teaching in Higher Education*, 10(4).

¹²⁵ See, for example, Shay (2008) 'Beyond social constructivist perspectives on assessment: The centering of knowledge' in *Teaching in Higher Education*, 13(5); Muller (2009) 'Forms of knowledge and curriculum coherence' in *Journal of Education and Work*, 22(3); J.M. Case (2013) *Researching student learning in higher education: A social realist approach*; C. Winberg, P. Engel-Hills, J. Garraway & C. Jacobs (2013) 'Professionally orientated knowledge and the role of professionally orientated higher education' in *Kagisano*, 9, pp. 98-119.

¹²⁶ V. Bozalek, B. Leibowitz, R. Carolissen & M. Boler (eds.) (2014) *Discerning critical hope in educational practices*.

retention and success rates of university students.¹²⁷ Concerns about the extent to which a neoliberal agenda has begun to underpin university structures have also been raised in relation to teaching and learning, where the preparation of work-ready graduates is increasingly seen to be the primary task of the sector. Some would argue that the tensions between the social equity agenda and the economic development agenda are at a turning point with an increasingly loud demand for more efficient production of skilled labour to be the primary goal of higher education.¹²⁸

The idea of the 'knowledge economy' (as discussed in the chapter on Research) has significant implications for teaching and learning. If universities understand knowledge to be a market-responsive product with currency, then their job would be to ensure that their graduates have cutting-edge workplace skills and problem solving abilities. But, by and large, universities resist this simplification and seek to attend equally to notions of critical citizenship and public good.¹²⁹ The *National Development Plan* proposes the achievement of sixteen outcomes that range from increasing student access, particularly of black communities into the university sector; to enhancing students' cognitive abilities vis-à-vis technical and professional competences that would not only ensure greater competitiveness in an ever-evolving labour market but also increased participation as democratic citizens in service of the public good. The extent to which university curricula attend to all these outcomes is debatable. It is of course dangerous to set up a dichotomy between career focused skills development and social responsiveness, as there is significant academic ground between and beyond these, but the concern is that if curricula are understood as workplace training programmes only, there is little room for engagement with graduate attributes such as criticality or responsibility for sustainable development.¹³⁰

Locally, Waghid, Nash and Badat, and other international scholars, have expressed their view that teaching and learning ought to become more concerned with restoring the balance between higher education for technical purposes and higher education for the cultivation of moral persons.¹³¹ Waghid argues that teaching and learning as critique is a matter of enhancing the possibility of dissent and of a diversity of interpretations; of complicating what is taken for granted; and of pointing to what has been overlooked in establishing identities.¹³²

To achieve these ideals, we need to have a range of theorised understandings to call upon in our deliberations around teaching and learning. As indicated, South Africa

¹²⁷ Waghid (2013) *African philosophy of education reconsidered*.

¹²⁸ S. Badat (2007) 'Higher education transformation in South Africa post 1994: Towards a critical assessment' (lecture).

¹²⁹ A. Nash (2013) 'Excellence in higher education: Is there really no alternative' in *Kagisano*, 9, pp. 42-62.; N. Graham (2013) 'The university: A critical comparison of three ideal types' in *Kagisano*, 9, pp. 5-22.

¹³⁰ Winberg *et al.* (2013) 'Professionally orientated knowledge and the role of professionally orientated higher education' in *Kagisano*, 9, pp. 98-119.

¹³¹ Waghid (2013) *African philosophy of education reconsidered*; Nash (2013) 'Excellence in higher education: Is there really no alternative' in *Kagisano*, 9; S. Badat (2013) 'Theses on institutional planning and research at universities' in *South African Journal of Higher Education*, 27(2), pp. 295-308; M. Nussbaum (2011) *Creating capabilities: The human development approach*.

¹³² Waghid (2013) *African philosophy of education reconsidered*.

increasingly contributes to international educational debates, but we remain fairly atheoretical in our everyday teaching and learning deliberations.¹³³ Niven suggests that the current stock of theories being used by South African educators to understand our challenges and to address our problems is fairly scant and that if we are as a sector to “understand disciplinary, social change, policy formation, curriculum theory and institutional structuring or planning” then institutions will need “substantive theoretical resources ... in the scholarship of teaching and learning”.¹³⁴

Niven argues that while the sector has made substantial progress in the ‘structural domain’ of teaching and learning, in the form of policies, committees and appointments related to the improvement of teaching and learning, it has made very little progress in the arguably more important ‘cultural domain’ of ideas and theories.¹³⁵ While some communities within the sector have access to and indeed contribute to such theoretical resources, a great many do not and continue to rely on commonsense understandings of teaching and learning which can inadvertently reinforce systemic problems.¹³⁶

The flourishing of organised communities of practice around scholarship in teaching and learning, such as HELTASA, the South African Society for Engineering Education (SASEE), the Southern African Association for Research in Mathematics, Science and Technology Education (SAARMSTE) and The South African Association of Health Educationalists (SAAHE), seems to indicate that there are significant attempts to address such paucities and to rescue the social justice project of teaching and learning.

12. Teaching and learning with technology

An area in which teaching and learning has undergone significant change is in the use of technology. From 1994 to 1998 technology in higher education teaching and learning in South Africa was predominantly used for computer-aided instruction, with a behaviourist drill and practice being common. At this time, academics began to become aware of the digital divide between students and institutions with resources and those without technological access. From 1999 to 2003, South African higher education institutions focused on building their information and communication technology (ICT) infrastructures. Technologies were used to access research, and there was in some institutions a growing consciousness of how the internet could be used to democratise access to information. But most of these studies focused on how technologies *in themselves* could improve teaching and learning, rather than focusing on the *pedagogical principles* which could lead to good qualitative outcomes for higher education. The adoption of learning

¹³³ Boughey (2013) ‘The significance of structure, culture and agency in supporting and developing student learning at South African universities’ in Dhunpath & Vithal (eds.) *Alternative access to higher education*.

¹³⁴ Niven (2012) ‘Narrating emergence in the curious terrain of academic development research: A realist perspective’ (doctoral dissertation).

¹³⁵ Ibid.

¹³⁶ Boughey (2013) ‘The significance of structure, culture and agency in supporting and developing student learning at South African universities’ in Dhunpath & Vithal (eds.) *Alternative access to higher education*.

management systems (LMSs) across a number the sector “revealed a clear distinction of how in some institutions the acquisition of these systems became a mere technical project and how in others it was a conceptual one”.¹³⁷

From 2004 to 2008, higher education institutions in South Africa began to develop strategic plans on the use of ICTs for teaching and learning. From 2009 to 2013, mobile learning, social media and bring your own devices (BYOD) – using mobile devices that students already had access to, became popularised in teaching and learning in higher education. Cloud-based ICT infrastructure and open educational resources (OER) have the potential to transition technology out of institutional control to free, easy and open availability anywhere and anytime, thus creating the potential for flexible learning opportunities. Sadly, however, although mobile social media, OER, and other technology enhanced learning opportunities are available in South Africa, teaching and learning practices in higher education remain largely untransformed.

Massive Open Online Courses (MOOCs) could be seen as just one way of addressing higher education teaching and learning challenges in South Africa through the application of technology. However, the relationship between MOOCs, increasing and widening intake, and improvement of throughput and graduation rates needs to be researched much more thoroughly. Despite the increasing availability, interest and expectations of MOOCs, both their economic justification and their pedagogic worth remain largely unexplored.¹³⁸

Most institutions now have some kind of Learning Management System (LMS) for their courses though these are often used as convenient, easily accessible places for course information storage rather than dynamic learning spaces. Other innovations, such as Clickers and Lecture Capturing, have also added to the student learning experience.

The blurring of physical access to technology with epistemological access to the knowledge relayed by technology has led to some overly optimistic claims being made about the democratising potential of educational technology. The assumption that the mere presence of technology can address the need for equity of access and equity of outcomes for students is highly problematic.¹³⁹ It is clear that being technologically adept is a crucial attribute for every graduate but we have as yet made very limited progress in using technology to enhance student success. Scholarly efforts are needed to steer the use of technology in educationally sound directions.¹⁴⁰

The rapid improvements in broadband access in South Africa make teaching and learning with technology a particular exciting area for growth. It also makes this an opportunity for collaboration across institutions to develop technical and pedagogical expertise in this area.

¹³⁷ Madiba (2011) ‘Curriculum mapping as inquiry in higher education’ in Bitzer & Botha (eds.) *Curriculum inquiry in South African higher education*.

¹³⁸ M. Sharples, P. McAndrew, M. Weller, R. Ferguson, E. FitzGerald, T. Hirst & M. Gaved (2013) *Innovating pedagogy 2013: Open university innovation report 2*; G. Siemens, V. Irvine & J. Code (2013) ‘An academic perspective on an emerging technological and social trend’ in *Journal of Online Learning and Teaching*, 9(2); G. Veletsianos (2013) ‘Learner Experiences with MOOCs and Open Online Learning –Hybrid pedagogy’ (online publication).

¹³⁹ D. Ng’ambi & V. Bozalek (2014) ‘Learning technology in developing nations’ in N. Rushby & D. Surry (eds.) *Wiley handbook of learning technology*.

¹⁴⁰ M. Rowe, V. Bozalek & J. Frantz (2013) ‘Using Google Drive to facilitate a blended approach to authentic learning’ in *British Journal of Educational Technology*, 44(4).

13. Language medium of teaching and learning

Students who are studying in a language that is not the one they were raised with may find that their voices are silenced and the university, with its elevated language requirements, may seem a daunting place.¹⁴¹ The South African Constitution specifically addresses the issue of language in education:

Everyone has the right to receive education in the official language or languages of their choice in public educational institutions where that education is reasonably practicable. In order to ensure the effective access to, and implementation of, this right, the state must consider all reasonable educational alternatives, including single medium institutions, taking into account:

- (a) equity;
- (b) practicability; and
- (c) the need to redress the results of past racially discriminatory laws and practices.¹⁴²

But despite the goodwill of the Constitution and the Higher Education language policy, there has not been much progress in developing local languages for academic use.¹⁴³

The medium of instruction has long been a volatile issue in South African education. While millions of Rands were spent under the National Party government for the development of the Afrikaans language, including ensuring that it was able to function across multiple disciplines in the academy, far less has been spent in the last twenty years on developing other local languages for this purpose, despite the official recognition of eleven languages. In a context of multiple pressing educational needs and a massive demand for the use of English, there has been little done within the higher education sector to offer programmes in alternative languages. There are some notable exceptions, such as the work on multilingualism within the University of Limpopo,¹⁴⁴ or the decision by the University of KwaZulu-Natal to require that all students successfully complete a module in isiZulu as part of their curriculum.¹⁴⁵

The use of Afrikaans as the medium of instruction in universities has seen a sharp decline in the last two decades. In 1994, there were five universities that had Afrikaans as their sole medium of instruction and three universities that had bilingual medium of instruction (English and Afrikaans). This has diminished to three campuses where Afrikaans is used to any notable extent. This shift has not been without contention and there have been a number of angry arguments in the media and student protests around this issue. The language issue has added to the instability of the social justice project in teaching and learning in higher education.

¹⁴¹ E. de Kadt, E. & N. Mathonsi (2003) 'Writing in English with an 'African voice': Ownership, identity and learning' in *Journal for Language Teaching*, 37 (1).

¹⁴² South African Government (1997) *South African Constitution*, Section 29(2).

¹⁴³ DoE (2002) *Language Policy for Higher Education*.

¹⁴⁴ M. Joseph & E. Ramani (2012) "'Glocalization": Going beyond the dichotomy of global versus local through additive multilingualism' in *International Multilingual Research Journal*, 6(1), pp. 22-34.

¹⁴⁵ S. Rudwick & A. Parmegiani (2013) 'Divided loyalties: Zulu vis-à-vis English at the University of KwaZulu-Natal' in *Language Matters: Studies in the Languages of Africa*, 44(3).

14. Selection and placement of students

In 2008, the old Senior Certificate or ‘Matric’ was replaced by the National Senior Certificate (NSC) as South Africa’s school leaving certificate. Key differences were the removal of a Higher Grade and Standard Grade system and the introduction of Life Orientation as a compulsory subject, along with the requirement that all students take either Mathematics or Mathematical Literacy. While there have been questions raised about ‘grade inflation’ and ‘lowering standards’,¹⁴⁶ an investigation of equivalence found these exams to be at the same level as the Cambridge International Exams Advanced Subsidiary Level and the International Baccalaureate Standard Level.¹⁴⁷ Most universities continue to use the NSC as their main admissions tool.

Increasingly, however, universities are augmenting the admissions process by looking at prospective students’ results on the National Benchmark Tests (NBTs).¹⁴⁸ The NBTs comprise an Academic and Quantitative Literacies test and the option of a Mathematics test. These tests are designed to reflect the extent to which the prospective student is prepared for the core academic literacies, quantitative literacies and mathematics demands of higher education. A number of universities use the NBTs as a means of allocating students to either mainstream or extended curricula, or to make decisions between prospective students with similar NSC results; while a number of institutions require NBT scores as part of the admissions process, none use these in place of NSC results. Of concern is that the potential for the NBT results to direct curriculum responsiveness is underutilised.

Other additional entrance requirements used by institutions include portfolios, interviews and entrance exams developed internally. There is often a discourse of ‘testing for potential’ in such processes despite research that shows that so-called ‘potential’ for higher education success is a product of socioeconomic status.¹⁴⁹ Searching for a single test that predicts future student success is perhaps a fool’s mission, but given the low retention rates and the enormous demand for entry into higher education, it is hardly surprising that there continues to be a great deal of interest in this area.

The demand for university access and the problem of ‘walk-in’ applications means that admission decisions are often made in less than ideal situations and under great time pressure. In 2012, the death of Gloria Sekwena, in a stampede of students hoping for walk-in admission, led to this issue gaining national scrutiny. Minister Nzimande announced that a Central Applications Office (CAO) would be set up to allow all hopeful candidates to apply once and such applications to then be referred to the relevant institutions for timeous decision making. This system

¹⁴⁶ See, for example, H. Zille (2014) ‘The problem with the matric results’ from *Politicsweb*, 19 January; M. Bailey (2014) ‘Why, as a teacher, I’m suspicious of latest matric results’ in *Mail & Guardian*, 9 January.

¹⁴⁷ S. Grussendorff, E. Booyse & E. Burroughs (2010) *Evaluating the South African National Senior Certificate in relation to selected international qualifications: A self-referencing exercise to determine the standing of the NSC*.

¹⁴⁸ See, ‘More about NBTs’ from <http://www.nbt.ac.za/node/89>.

¹⁴⁹ Harris, M. (2010) ‘What more can be done to widen access to highly selective universities?’ (report).

is being phased in over the next three years. HESA has been supportive of the system provided all decisions around admission remain entirely in the hands of the universities and not the state-funded CAO.¹⁵⁰

15. Student support, representation and protests

All South African universities provide a range of student support services, through structures such as Financial Aid Offices, Counseling Centres, Health Centres, and Writing Centres. Generally these support structures are managed through the offices of a Deputy Vice-Chancellor: Student Support or similar. The first round of CHE audits revealed that there is often little liaison between the activities of this sector and those of the formal curriculum. This is despite the wealth of literature that indicates that students' physical, financial and emotional wellbeing and a positive and supportive university environment are key to student success.¹⁵¹ There seem to be missed opportunities for the various endeavours of all institutional departments to be better aligned to the university's academic project; it is not common, for example, for support structures to report on their activities and their findings to the academic sector of the university.

For students staying on campus, the quality of their residence experience is also an important factor in their chances of success. The 2012 report on student accommodation, prepared by a task team appointed by the Minister, described severe overcrowding and "squalid conditions" endured by many students.¹⁵² Students who are malnourished and hungry are clearly not going to perform well in their studies; such a situation should not be allowed for "both moral and academic reasons".¹⁵³ The 2011 report also found that the severe shortage of residence accommodation meant that the vast majority of students have to find accommodation in the private sector and are then subject to exploitative rental agreements and are often housed in unsafe areas in unacceptable conditions.

An important part of the broad area of 'student support' is the Students' Representative Council (SRC). The 1997 Higher Education Act required that all higher education institutions recognise SRCs and approve their constitutions. Given that the SRC is a student elected organisation described as being an integral part of institutional governance, with representation on council, senate, the institutional forum and various other committees, the potential for this body to impact positively on the teaching and learning ethos of an institution is enormous. However, often the SRC is a place of battle at the level of party and identity politics where students are encouraged to vote for SRC members on that basis. At one university, the Freedom Front, a conservative Afrikaner party, won the SRC elections for six consecutive years on the exclusionary platform of

¹⁵⁰ N. Jenvey (2012) 'High hopes for central university applications system' in *University World News*, 9 November.

¹⁵¹ G.D. Kuh (2011) 'Student success' in J. H. Schuh, S. R. Jones & S.R. Harper (eds.) *Student services: A handbook for the profession*.

¹⁵² DHET (2011) *Report on the Ministerial Committee for the Review of the Provision of Student Housing at South African Universities*.

¹⁵³ Ibid.

“preserving Christian principles”, while a great deal of student violence at the University of Zululand has arisen as a result of conflict between SRC candidates from the ANC and IFP parties, conflict that arises out of “poverty and political intolerance” that has at times been “accommodated and sometimes nursed by management and staff”.¹⁵⁴ The potential for political representation at SRC level to lead to future ‘tenderpreneur’ opportunities, has led to student politics being characterised as ‘big business’.¹⁵⁵ There are also, at some universities, immediate financial benefits to being elected onto the SRC including remission of fees, clothing allowances, access to motor vehicles and access to poorly monitored funding for student events. Thus, while the history of student politics in South Africa is closely attached to demands for social justice in the form of both physical and epistemological access for students, there are questions about the extent to which current SRC structures are sufficiently focused on ensuring quality teaching and learning opportunities for students.¹⁵⁶

The South African higher education system is beset with problems of unplanned and violent student protests and it is perhaps remarkable how these have become a normalised part of many institutions’ annual planning. The negative impact of such protests on an institution is considerable. Not only are teaching days lost and property damaged, but also the learning culture, so vital to student engagement and success, suffers ongoing problems as a result of these upheavals. Such events are often explained as part of the broader nation’s ‘protest culture’, with little space for the institution to intervene. While understanding student protests necessitates an awareness of the ways in which they emerge from macro-political contexts, it is a concern that there is very little interrogation of the relationship between such protests and teaching and learning.¹⁵⁷ The need for such an interrogation on the relationship between the protests and the institutional culture of learning is especially strong when the protests include violence and vandalism and the institutional response includes police intervention, tear gas and rubber bullets.

Most student protests revolve around issues of student exclusion and lack of student housing. Koen *et al.* drew up a table of the causes of student protests at twenty institutions.¹⁵⁸ The most common cause was what they term “institutional grievances” related to issues of exclusions, fee increases, financial aid, racism and mergers. These protests were also found to be the most chaotic and violent in nature. The second most common cause was grievances against student leadership, and in particular the SRC, mainly around issues of financial corruption and political accountability, but also the SRCs failure in “protecting students against exclusions and fee increases and in securing financial aid”.¹⁵⁹ Koen *et al.* conclude that while institutions attempt to negotiate with students, protests are often the only effective means available to students to bring about change.

¹⁵⁴ M.M. Hlongwana (2006) ‘An inquiry into counselling interventions and student support systems at a university in transition’.

¹⁵⁵ M. Zine (2012) ‘Student politics turns into big business’ in *University World News*, 23 October.

¹⁵⁶ S. Badat (1999) *Black student politics, higher education and apartheid: From SASO to SANSCO, 1968–1990*.

¹⁵⁷ *Ibid.*

¹⁵⁸ Koen *et al.* (2006) ‘Student activism and student exclusions in South Africa’ in *International Journal of Educational Development*, 26.

¹⁵⁹ *Ibid.*, p. 409.

Oxlund argues that much student resistance emerges in direct response to the marketisation of the university that views the student as a 'consumer' in an 'education market'.¹⁶⁰ He argues that students who have been hardest hit by the restructuring of higher education through neoliberal reform policies are those enrolled at historically disadvantaged institutions and this is why most student protests have been experienced at such institutions. Certainly, in the early post-apartheid period, historically disadvantaged institutions suffered reductions in student numbers with serious financial implications at a time when the sector enjoyed great growth and such institutions have not fared well under the sector wide 'flat' funding formula. Swartz indicates that since 1994 universities have been increasingly pitted against each other:

The effect of the new funding formula and 'opening up' of higher education access was to create a new and highly competitive internal market. In theory, it was assumed, this would put pressure on all institutions to become more responsive to 'what students want', the corollary being that 'markets' would shape institutional behaviour.¹⁶¹

The extent to which macro-level politics, the marketisation of the university or micro-level mismanagement has caused the ongoing student disruptions experienced in the higher education sector over the last twenty years is a moot point. It is clear however, that in institutions where such events are regular occurrences, the relationship between university staff and students is seriously tarnished and opportunities to foster a thriving learning culture are lost.

Another, often related, institutional event that has major implications for teaching and learning is that of the ministerial appointment of institutional administrators. In 2012 and 2013 alone, five public universities were placed under administration for reasons of maladministration, corruption and financial crises. While poor teaching and learning practices and appalling throughput have never been cited as reasons for the appointment of an administrator, the inability of an institution to govern itself must have dire consequences for its ability to perform its core function.

There have been a number of concerns expressed within the sector about the frequency of placing institutions under administration and the implications this has for institutional autonomy. This was especially with the promulgation of the Higher Education and Training Laws Amendment Bill of December 2012, which simplifies the process whereby the Minister can appoint an administrator to temporarily take over the running of a university.

This issue raises twin threats to teaching and learning: on the one hand, we have evidence of poor institutional management with a lack of capacity to ensure the wellbeing of the academic project and on the other hand we have the issue of increased state interference in the sector with the potential to curb academic freedom.

¹⁶⁰ B. Oxlund (2010) 'Responding to university reform in South Africa: Student activism at the University of Limpopo' in *Social Anthropology*, 18(1), pp. 30-42.

¹⁶¹ M. Nkomo, B Maja & D. Swartz (eds.) (2007) *Within the realm of possibility: From disadvantage to development at the University of Fort Hare and the University of the North*, p. 153.

16. Conclusion

We have argued in this chapter that higher education is failing its students and that significant change, based on a strong foundation of scholarship, is needed. Many of the difficulties experienced by students when they reach university emerge from problems in the schooling sector but these are unlikely to be resolved in the near future and the higher education sector is responsible for addressing the needs of the students it serves. This will require rethinking many of our current curriculum structures including our teaching and assessment approaches and reflecting carefully on our institutional cultures.

Until there is the capacity to achieve reasonable throughput and completion levels with the current system, we argue that massive student growth is untenable. It is hardly contentious to state that growth is necessary and that we need to find ways of accommodating a greater number of youth across the post-school education and training sector more broadly, but we have argued here that massive increases in student numbers cannot be well served by the current higher education structures. Attaining limited increases in graduation rates through enormous increases in failure and dropout rates does not constitute social justice.

Not providing access to post-school education for the large numbers of youth in the country is equally problematic and so a range of responses is needed. The TVET sector needs to be strengthened at a faster pace, ways of growing quality private higher education need to be considered and the public higher education sector needs to look critically at why it is not meeting the needs of its current intake.

The concerns we have raised are not only those of quantity. We do not wish to produce graduates who understand their qualification only as a private good for the improvement of their personal opportunities. We have asked whether we are producing critical graduates with the ability to contribute to social justice. To achieve the aim of better output of critical graduates, we need policy and scholarship on teaching and learning to work together to resuscitate the wavering social justice agenda. We need to seriously and systematically engage in capacity development and the judicious use of resources. The question we now raise is to what extent individual institutions have the ability to drive such capacity development and what national structures might foster and support such initiatives.

There is a need for a nuanced, multi-pronged approach to the scholarship of teaching and learning that moves beyond small-scale, individual researcher initiatives. There are already a number of instances of cross-institutional innovative engagements in the development of teaching and learning. It is such engagements that need to be fostered and, most importantly, that need to move beyond the confines of their project timeframes and contexts. We mention just a few such projects here as examples of potential.

The Cape Higher Education Consortium runs short courses in teaching and learning developed by and offered across all four public universities in the Western Cape. Similarly, a Postgraduate Diploma in Higher Education (PGDHE) is offered collaboratively in the Western Cape by the University of Western Cape, CPUT and Stellenbosch University to the staff of those institutions and beyond. The Centre for Higher Education Research, Teaching and Learning at Rhodes University

has developed a PGDHE specifically for those working in the field of academic development. It is focused on supporting theorised curriculum development for a more socially just higher education sector. This course is now being offered nationally in collaboration with a number of institutions and funded through Teaching Development Grant funds from the DHET.

The Large Classes Project, managed by the University of Cape Town and drawing together a number of universities, has considered the ways in which class size shapes pedagogy and how best to address the needs of a diverse student body in undergraduate classes of hundreds and even thousands of students. The national project on supervision, with its focus on issues of pedagogy in postgraduate education, is being conducted in eighteen universities through funding from Dutch organization NUFFIC, with funding from the DHET making an additional sixteen offerings possible in the near future. This international collaboration, managed within Rhodes University, has resulted in a supervision development course offered through blended learning with all materials registered under creative commons to ensure they are freely available to all.

The Special Interest Groups in HELTASA, and formed through National Research Foundation (NRF) projects focused on teaching and learning in higher education and the Teaching Excellence Awards offered by HELTASA in collaboration with the CHE are yet other spaces for inter-institutional focus on teaching and learning. The Quality Enhancement Project (QEP) launched by the CHE also seeks to drive a focus on teaching and learning across the sector.

Initiatives such as these that bring together institutions to focus on teaching and learning should not only be national; we need to seek out opportunities for co-operative work beyond our borders. Exceptionalism and isolation are detrimental to the sector and technology offers many opportunities for international collaboration. The research by the Centre for Higher Education Transformation on higher education across Africa and the collaborative research and development project undertaken by HELTASA with the International Consortium for Educational Development are two examples of possibilities.

The curriculum project run within the South Africa Norway Tertiary Education Development Programme, the research undertaken under the auspices of the CHE and culminating in the report entitled *A proposal for undergraduate curriculum reform in South Africa: The case for a flexible curriculum structure* and the South African Survey of Student Engagement project are further examples of inter-institutional research in teaching and learning. Publication of collaborative teaching and learning research endeavours in books on curriculum inquiry and on the public good of higher education, also ensures some dissemination of this work.¹⁶² But, as we have argued, such initiatives have not been widely taken up in meaningful curriculum and pedagogical responses. As a sector, we need structures that allow such projects to be valorised and supported to ensure greater impact.

We need to forge connections that ensure more productive conversations, sector-wide capacity building and shared use of resources. More systematic approaches to such collaborations require that the sector understands its inter-

¹⁶² Bitzer & Botha (2011) *Curriculum inquiry in South African higher education*; Leibowitz (2012) *Higher education for the public good*.

connectedness in ways that are often not evident in our current interactions, where we compete with each other for staff and students and for positions on ranking systems. Such broad-based systematic approaches may need external drivers in the form of policy and funding. The inclusion of collaborative projects within the latest teaching development grant allocation has the potential to work against the sense of competition and defensiveness that often exists between institutions. Similarly, the latest NRF call for education research required that proposals show evidence of inter-institutional collaborations.

It is also time to ask difficult questions about institutional differentiation and its relationship to teaching and learning. Given the heinous forms of differentiation that occurred under apartheid, it is hardly surprising that this remains a contentious issue. But the time has come for the sector to work in more supportive, collaborative ways to ensure a productive spread of institutional focus areas and qualification offerings. The problem of the 'inverted pyramid' needs to be confronted and issues of academic drift addressed.

The extent to which the sector can engage with these two issues – the need for collaborative capacity development and the need for a differentiated system – may be limited by a lack of appreciation that improving teaching and learning is a shared endeavour beyond the interests and capacity of any individual institution. Most importantly, this requires good governance, management, and leadership driving the academic project with vision and enthusiasm and integrity. This will be the key to the success of the teaching and learning project as we move into the next decade.

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Research

Writers and editors: *Genevieve Simpson with Wieland Gevers*

Task team leader: Prins Nevhutalu

Members/contributors: Rishidaw Balkaran, Robin Crewe, Pamela Dube,

Andrew Kaniki, Steve Madue & Susan Veldsman

The performance of research, understood as the skilled, knowledgeable and systematic quest for a better understanding of nature and society through rigorous methodologies, is an integral part of higher education. Higher education institutions are, to a greater or lesser extent, simultaneously custodians, transmitters, generators and appliers of knowledge. These functions (often defined as teaching and learning, community engagement and research) are generally inter-dependent.

The functions of academic staff members include all these knowledge-related activities. During the two decades under review, institutions have recognised the imperative to improve their research profiles by providing academics with opportunities for undertaking research, mainly in the form of space, fixed facilities, services, and time. Research has become more prominent in recruitment, in internal funding, and in the organisation of faculties and departments. Multi-, trans- and cross-disciplinary activity has increased. Research offices' activities have broadened to include funding opportunities and applications, grants and contracts administration, intellectual property protection, supporting conference attendance, aspects of postgraduate affairs, international partnerships, monitoring, reporting, and strategy in general. The trend has also been to encourage the consolidation of research activity in niche areas, and collaboration with partners within and between institutions, locally and abroad.

Steps to increase research activity have included: the active recruitment of postgraduate research students; capacity development of academics; and support for the accessing of outside grants from government agencies, industry and other sources. Promotions and recognition have increasingly been premised on research productivity. Similarly, higher education policy and funding are generally aligned with the emphasis on research productivity. At the individual level, the demands on academics have become more numerous, and in terms of research, reporting obligations to multiple funders have become more onerous.

1.1 Research productivity in South Africa

The policy emphasis on research has certainly acted as a catalyst to growth in this area. There has been extensive growth in peer-reviewed research outputs, as measured by the Department of Higher Education and Training (DHET) over the last decade in terms of its policy for the annual accreditation of scholarly

publications.¹ Output grew from 6 660.24 units in 2004 to 12 363.81 units in 2012. This increase is not specific to a few institutions, but growth is evident at nearly all institutions to differing degrees. Another sign of growth has been the increase in the number of annual doctoral graduations from the low base of 823 in 2001 to 1 274 in 2007, and further to 1 878 in 2012.²

What has not increased significantly is the number of permanent academic posts, as discussed in the Chapter on academic staffing. Much of the increase in numbers of researchers has been in the contract category, or through the provision of research chairs and centres of excellence. A number of initiatives of the Department of Science and Technology (DST), administered by the National Research Foundation (NRF), have resulted in the expansion or establishment of a broad range of National Research Facilities providing academics with external opportunities to conduct research.³ By 2014, within the universities, 150 Research Chairs (SARChI), and fifteen Centres of Excellence had been established, providing funding streams additional to government subsidies for research. The DHET has in turn provided substantial funding to institutions generated by formula on the basis of research outputs in the form of publications, as noted above, and graduated research students.⁴ While these awards have not been earmarked for research, the policy has encouraged the development of capacity and research activity. Research development grants have also been provided to support research in the less research-intensive institutions. In addition to the above, foreign funding to support research in South Africa has grown markedly. Much of this has been focused on the twin pandemics of chronic HIV and mycobacterium tuberculosis infections, and on astronomy and astrophysics as in the Square Kilometre Array (SKA) project.

In this environment, South African scientists and scholars spread across local institutions are producing more significant discoveries and some have achieved commanding positions in their fields. Well set-up and funded institutes have been established, and modifications in the organisation of the knowledge system have been brought about.⁵

The gains in higher education research, however, have been unequal across the institutional and demographic spectrum. The country's overall spend on research and development has remained too low and is faltering.⁶ Given the increasing pressures on academic staff, supervision capacity is under pressure.⁷ These, and other internal tensions, and the unintended consequences of policy are examined in this chapter.

¹ In 2003, the then Department of Education (DoE) published its *Policy and Procedures for the Measurement of Research Output of Public Higher Education Institutions*. This policy was applied from the 2004 output onwards. Outputs in a given year are always measured a year later, i.e. the 2011 outputs were assessed in 2012.

² CHE (2014) *VitalStats. Public higher education 2012*.

³ See Section 3.3 and <http://www.nrf.ac.za/> for further details.

⁴ DHET (2014) *University State budgets. Public report, 2014*; CHE (2014) *VitalStats*.

⁵ See, for example, ASSAf (2009) *The state of science in South Africa* for a review of the reorganisation of faculty structures in this regard.

⁶ See Section 2.6.

⁷ ASSAf (2010) *The PhD Study. An evidence-based study on how to meet the demands for high-level skills in an emerging economy*.

2. The national and international research context

2.1 The immediate historical legacy

As with the higher education sector as a whole, apartheid-era education policy left a clear imprint on the research activity in the institutions of the time. The 1996 report of the National Commission on Higher Education (NCHE) pointed out that in 1993, historically white universities produced 83% of the research output of the entire higher education sector, and 81% of masters and doctoral graduates, despite having only approximately 50% of the permanent academic staff in the system.⁸ By contrast, historically black universities produced only 7% of the research output and 5% of masters and doctoral graduates, with the then two distance-learning institutions producing 9% and 12% of these outputs. The historically white technikon sector produced only 1% of the research outputs, and 2% of masters and doctoral graduates.⁹

Much of higher education research during apartheid tended to be influenced by a particular ideology and was isolated internationally. This does not mean, however, that South Africa did not have areas of ground-breaking research and advanced technological applications. Science and technology were used in a command manner by the state, primarily to lessen the impact of international boycotts and economic restrictions (for instance the oil and arms embargoes). These dominant missions of defence and energy independence were associated with levels of national research and development expenditure as a percentage of GDP that would not be attained again until well into the second decade of democracy. The intellectual impact of the academic boycott was considerably greater in the humanities and social sciences, and was clearly divided between those generating justifications for the apartheid system and those struggling for reform and freedom. The essential feature of apartheid-era research was that it was focused on preoccupations of the state rather than on being responsive to the needs of the broader community. Thus, one of the major policy aims post-1994 was the development of a more co-ordinated, accountable and responsive research sector that included not only higher education institutions but also science councils and other government-funded research entities and the private sector.

The NCHE laid the basis for much of the research policy that would be developed over the next decade. It saw transformation in terms of research as moving away from “insularity and closed-system disciplinary programmes” towards “internationally recognised standards of academic quality... sensitive to the specific problems of the African and southern African context”.¹⁰ To achieve this, a large number of “competent, higher education-trained professionals and knowledge workers” drawn from the whole population would be needed, as well as an “interactive system of research and development” to allow for meaningful participation in technological innovation and economic development.¹¹

⁸ NCHE (1996) *A framework for transformation*.

⁹ *Ibid.*, pp. 39-41.

¹⁰ *Ibid.*, p. 70.

¹¹ *Ibid.*, p. 55.

The NCHE accepted as a principle that higher education “was a main custodian of the knowledge process itself”.¹²

At the time that South Africa sought to move out of the apartheid-era isolation back into the global economy, there was an increased global focus on the economic value of knowledge, so that the notion of a ‘knowledge economy’ or ‘knowledge society’ became prominent as a key route to economic viability. The NCHE concluded that “it was clear that advancing research and development capacity and associated technological infrastructure is a precondition for economic reconstruction and that higher education institutions need to play a critical role in regenerating this capacity and infrastructure”.¹³

2.2 A new policy environment for higher education research

The first ten years of democracy saw the release of White Papers on Science and Technology, and on Education, both of which helped to create a vision for the new focus on research in the sector.¹⁴ The Science and Technology policy, in particular, gave prominence to the development of a National System of Innovation (NSI), while the Education policy emphasised the centrality of academic scholarship. Through later policy developments, diverse funding strategies came into place. From the then Department of Education (DoE) came a new funding formula with specific categories for research outputs and research development. From the Department of Arts, Culture, Science and Technology (DACST) and its successor, the DST,¹⁵ came the establishment of a new general funding agency by bringing together the former Centre for Science Development (CSD) focused on the humanities and social sciences and the Foundation for Research Development (FRD) focused on the natural and related sciences, into the new National Research Foundation (NRF).¹⁶ The NRF subsequently developed a number of initiatives to support knowledge production, post-graduate development, and research and innovation at universities. The setting up of a single grant-making agency created a national asset that has provided systematic funding for higher education researchers and their postgraduate students.

2.3 The knowledge economy

These national policy developments arose in the context of the notion of a knowledge economy which had gained international prominence as mentioned above. Knowledge (understood as ‘knowing what’s behind phenomena’ and ‘knowing how to do things in a better way’) has become a currency of the new global market, along with traditional commodities and resources. It is widely held that the most successful societies in the future will be those that optimise the

¹² Ibid., p. 69.

¹³ Ibid., p. 56.

¹⁴ DACST (1996) *White Paper on Science and Technology. Preparing for the 21st Century*; DoE (1997) *White Paper 3: A programme for the transformation of higher education*.

¹⁵ In August 2002 the DACST was divided into the Department of Arts and Culture and the Department of Science and Technology.

¹⁶ The NRF is a statutory body established in terms of the National Research Foundation Act, No. 23 of 1998.

creation, distribution, and utilisation of knowledge or information.¹⁷ Lillejord, for example, has argued that the wealth and prosperity of nations will increasingly be dependent on information, knowledge, and creativity.¹⁸ According to Jacob, with the growing importance of knowledge and information, higher education should play a vital role in both the production and distribution of knowledge and, therefore, help drive economies.¹⁹

Gibbons suggested that universities in most countries will be expected both to share innovative ideas to advance their national competitive advantage, and to train the requisite scientifically and technically competent people to operate a modern economy.²⁰ Castells has argued further that, “if knowledge is the electricity of the new informational international economy, then institutions of higher learning are the power sources on which a new development process must rely”, not only because they are the main institutions of knowledge transfer, but because they are also among the main producers of new knowledge through research.²¹

The concept of a knowledge economy is thus understood to have two aspects: the complete essentiality of the development or recruitment of skills and knowledge; and the application of information to improve productivity and to seek competitive advantage through innovation.²² The university is an integral part of both conceptions.

It has been argued that the global economy has changed dramatically in recent years.²³ Mature, high-wage economies have moved away from traditional manufacturing towards high-value, innovation-intensive products and high-value services. Increasingly, at-the-frontier research has become the source of the knowledge that gives the greatest competitive advantage. As a result, research in many applied and practical fields is increasingly being influenced by the expectations of policy-makers, politicians, funding agencies and industrialists that the people they fund and support should produce a particular kind of knowledge.²⁴ Lillejord argued that the practical aspects of knowledge are at the forefront, and researchers are expected to be able to transform scientific knowledge into immediate practical use and value.²⁵ An understanding of the

¹⁷ L. Rhodes (1999) *Connecting knowledge to management: The case of academic research*.

¹⁸ S. Lillejord (2005) ‘Knowledge production and higher education in the 21st century’ in *South African Journal of Higher Education*, Special issue, pp. 1315-1320.

¹⁹ M. Jacob (2000) ‘Imagining the future university’ in M. Jacob & T. Hellström (eds.) *The future of knowledge production in the academy*.

²⁰ M. Gibbons (2000) ‘Universities and the new production of knowledge: Some policy implications for government’ in A. Kraak (ed.) *Changing modes: New knowledge production and its implications for higher education in South Africa*.

²¹ Castells quoted in NCHE (1996) *A framework for transformation*.

²² D. Foray (2004) *The economics of knowledge*; R. Llorah (2006) ‘The dilemma of the HBUs in South Africa’ in *South African Journal of Higher Education*, 20(3); C. Winberg (2006) ‘Undisciplining knowledge production: Development driven higher education in South Africa’ in *Higher Education*, 51, pp. 159-172.

²³ LERU (2005) ‘Competitiveness, research and the concept of a European Institute of Technology’ in *Opinion of the League of European Research Universities*.

²⁴ G. Biesta (2005) ‘Knowledge production and democracy in educational research: The case of evidence-based education’ in *South African Journal of Higher Education*, 19, pp. 1334-1349.

²⁵ Lillejord (2005) ‘Knowledge production and higher education in the 21st century’ in *South African Journal of Higher Education*, Special issue, pp. 1315-1320.

nature of the translation of research findings into innovation in the market-place has thus developed rapidly in the major research universities.

2.4 The implications for research funding

The ways in which funding for research and innovation is allocated in post-apartheid South Africa have been influenced by the understanding of the knowledge economy outlined above. While this concept has led to an increased state focus on research funding, the priority accorded to higher education to boost economic development has been undermined by limited budgets. Vossensteyn has referred to this challenge as 'fiscal stress'.²⁶ Greenaway & Haynes believe that governments have become less capable of financing higher education expansion owing to increased competition for public funds from many sectors.²⁷ Generally, the less capable governments are of financing higher education, the less the system of higher education will be able to contribute to the economy because of stagnation (if not reduction) of knowledge production. It is evident that selective targeting of research-capable institutions can mitigate fiscal stress in the short term; for example, the funding of a select group of universities in China resulted in a dramatic increase in total knowledge generation over the last decade.

The factors that determine the productivity of individual higher education institutions are not fully established, although it is known that the culture of a university system is influenced by the way in which it is funded.²⁸ Pollitt & Bouckaert have posited that most Western countries have experienced an increased requirement for new and different types of audit, evaluation and reporting systems that can measure outputs and outcomes of research activity in public sector organisations.²⁹ The allocation of funding has followed such reporting requirements. In the search for evidence of significant returns on their investments in education, many governments have increased accountability and transparency measures, which form part of the new 'managerialism' or 'New Public Management'.³⁰

In South Africa, the belief that higher education is a basic right and that education is a public good, is reinforced by Article 29 of the *Constitution of the Republic of South Africa 1996*, which appears to support the thesis that education should primarily be publicly funded.³¹ In line with global trends, South Africa has moved towards increased accountability regarding the use of public funds, as seen in the restructuring of higher education since 1997,

²⁶ H. Vossensteyn (2004) 'Fiscal stress: Worldwide trends in higher education finance' in *NASFAA Journal of Student Financial Aid*, 34(1), p. 39-55.

²⁷ D. Greenaway & M. Haynes (2004) 'Funding higher education in the UK: The role of fees and loans' in *The Economic Journal*, 113, pp. 150-166.

²⁸ J. Beath, J. Poyago-Theotoky & D. Ulph (2005) 'University funding systems and their impact on evidence-based education' in *South African Journal of Higher Education*, 19, pp. 1334-1349.

²⁹ C. Pollitt & G. Bouckaert (2000) *Public management reform: A comparative analysis*.

³⁰ P. de Villiers & L. Nieuwoudt (2005) 'Shifting trends in higher education' (conference paper); M. Power (2005) 'The theory of the audit explosion' in E. Ferlie, L. Lyn & C. Pollitt (eds.) *The Oxford handbook of public management*.

³¹ G. Steyn & P. de Villiers (2006) 'The impact of changing funding sources on higher education institutions in South Africa' in *Higher Education Monitor*, 4.

together with changes in the higher education funding formula.³² The means and levels of funding for the research system as a whole are critical if higher education is to achieve what is expected of it by government and society. Issues of state and business funding, as well as directed research funding, are explored in more detail below, while the funding for the sector as a whole is discussed in a separate chapter of this review.

2.5 University research in relation to industry and society

A second international trend related to the concept of a knowledge economy is shifting relationships between institutions, industry, governments and society. The work of Etzkowitz and Leydesdorff in the 1990s established the concept of the 'triple-helix' research relationship of higher education, industry and government.³³ This idea signifies a move from the 'double-helix' industry-government relationship of the industrial age, to a new relationship (or three-way partnership) which also involves higher education. The concept further brings out the central role played by universities in society as the main producers of new knowledge and the people with the appropriate skills to manage it. The triple-helix concept explores how innovation and economic development can be strengthened through a more prominent role for universities in their relationship with industry, to allow for new ways of production, transfer and application of knowledge. Triple-helix based theory has developed over the last two decades, impacting on governments' science policies and industry partnerships, and exploring ways for better supporting innovation at all levels of the system.

The triple-helix concept is interpreted differently in different countries, resulting in varying roles for each of the three players. Irrespective of the model, higher education plays a more direct and prominent role in the innovation sector as an actor in its own right. The notion of an entrepreneurial university is central to the triple-helix concept, and sees higher education putting knowledge into use, and creating further academic knowledge.

As part of their function of community and societal involvement, an increasing number of higher education institutions worldwide have established business centres where they work on commercialising their own innovative projects. Such

³² L. Le Grange (2003) 'Why publish?' in *Perspectives in Education*, 21(2), pp. 129-135; S.M. Madue (2006) 'The measurement of research output of public higher education institutions in South Africa: hurdle or handle?' (unpublished thesis); S.M. Madue (2007) 'New Public Management and the implementation of policies on the measurement of research output' in *Journal of Public Administration*, 42(3), pp. 163-178; J.C. Mubangizi (2005) 'Government funding of universities in the new South Africa: Some reflections on legal issues and implications' in *South African Journal of Higher Education*, 19(6), pp. 120-131; A.G.W. Steyn & P.J. Vermeulen (1998) 'Perspectives on the financing of South African universities' in *Journal of Human Sciences*, 37, pp. 248-263.

³³ The concept of the triple helix of university-industry-government relationships initiated in the 1990s by Etzkowitz (1993) and Etzkowitz and Leydesdorff (1995), encompassing elements of precursor works by Lowe (1982) and Sábato and Mackenzi (1982), interprets the shift from a dominating industry-government relationship in the industrial society to a growing triadic relationship between university-industry-government in the knowledge society (H. Etzkowitz & Leydesdorff (eds.) (1997) *Universities in the Global Economy: A Triple Helix of University-Industry-Government Relations*; H. Etzkowitz (2003) 'Innovation in innovation: The triple helix of university-industry-government relations' in *Social Science Information*, 42(3)).

developments have also recently become evident in South Africa.³⁴ A number of higher education institutions have established Technology Transfer Offices (TTOs) as a result of the Technology Innovation Agency Act and the Intellectual Property from Publicly Financed Research Act.³⁵ Research Councils have also taken steps towards developing collaborative partnerships of this sort.³⁶ Entrepreneurial activity also changes the traditional role of universities within a region or community, as they become more integrated into the general economic activity of the community.³⁷ The implication is that higher education institutions can become less reliant on state funding and student fees as sources of income, as has been the trend in South Africa.³⁸ While progress in South Africa in this respect differs considerably from one institution to another (this is especially dependent on the research focus of the institution), there has clearly been some systemic development in this direction.

More recently, the notion of the triple-helix has been expanded to one of a 'quadruple-helix', adding civil society as the fourth actor. Cooper discussed this from a South African perspective, explaining how, especially in the developing world, the important role of civil society organisations in innovation cannot be ignored.³⁹ These include trade and labour unions, women's movements, and community movements. He argues that by including this sector, the partnership discussion moves from economic development to a broader framework that includes social and community development. It allows for innovative products to be developed not only on the basis of the more traditional STEM disciplines, but also from the social sciences and the humanities, thus expanding the fundamental view of an innovating society. The innovations concerned could include new and more sustainable forms of transport or housing, or new modes of city planning; but could also include innovations in terms of work organisation and employment creation. Proponents of the quadruple-helix call for a more inclusive or holistic form of technological development that is responsive to society as a whole and which makes use of broader research and scholarship, rather than only

³⁴ For instance, the Durban University of Technology (DUT) has formed an Enterprise Development Unit (EDU) to engage the community and collaborate in order to improve facilities, expand partnerships, and create opportunities to generate third-stream income. Similarly, the University of the Western Cape (UWC) has developed a Business Innovation Centre (BIC) to manage its third-stream income strategy and to consolidate existing initiatives; the BIC promotes, facilitates and supports innovation and business opportunities to increase third-stream income and protect the commercialisation of UWC-owned intellectual property rights.

³⁵ *Technology Innovation Agency Act*, No. 26 of 2008; *Intellectual Property Rights from Publicly Financed Research Property Rights from Publicly Financed Research Act*, No. 51 of 2008.

³⁶ An example is the Strategic Health Innovation Partnerships (SHIPs) of the Medical Research Council.

³⁷ For instance, the Vice-Chancellor of the University of Surrey (UK) reported that British universities now receive less than 50% of their income from the state – which includes money for new undergraduate fees, research grants and direct funding (C. Snowden (2014) 'An outdated idea about higher education' in *The Telegraph*, 18 May).

³⁸ The 2013 DHET higher education Funding Review showed that in South Africa in 2010, across all institutions, 30% of income came from private funds, compared with 27% in 2000, with maxima of 32% in both 2006 and 2008. Private income includes money earned through research contracts and commercial activities, as well as donations, investments, rents, etc. (DHET (2013) *Report of the Ministerial Committee for the Review of the Funding of Universities*, p. 44).

³⁹ D. Cooper (2011) *The University in Development: Case Studies of Use-Oriented Research*.

some disciplines. Such understandings are discussed further in the community engagement chapter.

2.6 The National System of Innovation

A national system of innovation (NSI) at its most basic reflects the belief that if all activities that can contribute to innovations of any kind can be organised into a coherent system, the total number of innovation outputs will be dramatically increased when compared with an otherwise equivalent but inchoate *laissez faire* system. The concept was adopted in the *White Paper on Science and Technology* and confirmed as a core aspiration of government.⁴⁰ Universities and science councils are major components of the NSI, which extends to other institutions and organisations in the private sector, as well as government and non-governmental organisations which are engaged directly or indirectly with formal research or innovative activities. The relationships within the NSI are similar to the triple-helix notion discussed above.

In South Africa, the DST, once it had been separated from the DACST, built on the foundations for the NSI laid down in the 1996 White Paper, and elaborated the concept in the *National Research and Technology Foresight* and the *National Research and Development Strategy*.⁴¹ The latter emphasised the need to strengthen the place of research and development in the economy, and proposed an investment target of a minimum of one percent of gross expenditure on research and development (GERD) as a percentage of gross domestic product (GDP). By the financial year 2005/6 the GERD to GDP ratio had in fact reached 0.92 percent. The 2013 National Development Plan (NDP) proposed a target for gross expenditure on research and development of 1.5% by 2019, although a similar target had been set for 2014 that was not met.⁴²

Assessments of the South African NSI have indicated that in order for it to achieve the national research priorities set by the cabinet, there needs to be a much greater clarity of roles, structural arrangements and mandated responsibilities.⁴³ Some of the major findings of the Organisation for Economic Co-operation and Development (OECD) review in 2007 were that:

- The NSI had insufficiently supported the shift from a resource/commodity-based economy to a knowledge economy;
- There was insufficient coherence and integration between the components of the NSI;
- Business had not been sufficiently involved in building the NSI;
- The concept of an NSI had only gained limited currency;
- The notion of innovation had remained misunderstood, particularly on the demand side;

⁴⁰ DACST (1996) *White Paper on Science and Technology. Preparing for the 21st century*.

⁴¹ DACST (1999) *National Research and Technology Foresight*; DST (2002) *National Research and Development Strategy*.

⁴² DST (2011) *National Department of Science and Technology: Strategic plan for the fiscal years 2011-2016*; NPC (2011) *National Development Plan: 2030. Our future – make it work*.

⁴³ DST (2012) *Ministerial Review Committee on the Science, Technology and Innovation Landscape in South Africa*; OECD (2007) *Review of South Africa's innovation policy*.

- The functioning of the NSI had been hampered by a lack of high-level skills.

The report recommended that in order to reach the levels of innovation required by the country, considerable expansion of higher education research would be needed. In addition, more research-capable people would need to be supplied by higher education, and high-end skills attracted from outside South Africa's borders.

In July 2010, the Minister of Science and Technology commissioned a second, local review of the NSI which was to take into account the 2007 OECD review.⁴⁴ The review committee stressed the need for a differentiated system of universities with both research-led institutions and those focused on applied science, technology, and skills development. The committee commented on the difficulty of increasing postgraduate numbers with an unchanged cohort size of academics occupying established posts; the low postgraduate graduation rates; and the uneven and inadequate expansion of the post-doctoral sector. The review committee supported the proposal for a national journal licence (discussed below). Recommendations included the revitalisation and enlargement of the college sector; the declaration of teaching at all levels as an essential service; the reform of the curriculum in favour of planned coherence and breadth; the expansion of SciELO-SA (discussed later); and an increase in the value and number of public research grants. The committee proposed the addition of a further category of nationally-funded research institutes with multiple principal investigators to the already existing and successful categories of DST/NRF Research Chairs and Centres of Excellence.

The Ministerial Committee found that South Africa had maintained impressive growth in total research and development (R&D) expenditure, from about R4 billion in 1997/8 to R21 billion in 2008/9, and R22.2 billion in 2011/12. Spending as a percentage of GDP had not increased steadily, however, so that despite the desire to move to a GERD target of 1% of GDP, this had not been reached, and in fact the percentage had dropped from a high of 0.95% of GDP in 2006/7 to 0.92% in 2008/9 and 0.76% in 2010/11. In the following year, spending at 0.76% of GDP was maintained, leading to a prediction that the bottom had been reached and that a period of increased investment in R&D would begin.⁴⁵ As indicated above, the NDP called for greater investment in research and development, which prompted the government to target 1.5% of GDP by 2019. To put the South African targets in context, the OECD average in 2004 was 2.3% of GDP.⁴⁶ The Ministerial Review Committee recommended that the public resourcing of R&D at universities should be significantly increased, that science councils should be funded sufficiently in line with new and more well-defined mandates, and that industry should be encouraged to increase its spending on research. The importance of attracting foreign research investment was also highlighted.

⁴⁴ DST (2012) *Ministerial Review Committee on the Science, Technology and Innovation Landscape in South Africa*.

⁴⁵ CeSTii (2014) *South African national survey of research and experimental development: Statistical report 2011/12*; South Africa info (2014) 'South Africa 'turning the corner' on R&D spending', 10 April.

⁴⁶ OECD (2008) *OECD science, technology and industry outlook 2008: South Africa*.

The analysis conducted by the review committee suggested that South Africa still had some way to go in developing a coherent, well-functioning NSI. It was doubtful that without such a system, the country would be able to develop into a knowledge economy in the way desired. The continuing lack of a unitary public ‘Research and Innovation Vote’, by means of which the funding of the research councils would be better planned and integrated, was found to be a key deficiency. The failure to achieve the R&D target of 1% of GDP suggests that neither business nor government had prioritised the NSI, leaving the nation insufficiently competitive in the globalised economy.

3. Government interventions in the last ten years

Taking into account the policy directions laid out by the South African government as well as international developments, South Africa has witnessed a changing research environment over the past decade or two. Most of this change has been directed by two government departments – namely that of Education (more recently Higher Education and Training), and Science and Technology – together with their various agencies. Some of these developments are considered below.

3.1 DHET’s research incentives

As part of the 2003 funding formula, the then DoE allocated a specific portion of the higher education subsidy budget to awards based on research outputs and research development. At the same time, the value of the formula-generated ‘research output unit’ increased threefold from its previous level, making the performance of research a more financially viable (and important) option for universities. The percentage of the state university budget allocated to research each year is not fixed or a constant proportion of the budget, but is announced annually in the Ministerial Statement on University Funding. The research portion of the entire (DHET) allocation to universities amounts to approximately 10% of the total for the 2014/15 financial year and this percentage has remained relatively constant. Despite an increased state focus on research, this proportion of the budget is a small percentage of the total allocation, with the majority of funding going to teaching activities (input, output and development grants), as shown in Table 1.⁴⁷

The research budget is divided between research outputs and research development based on output targets for each university type. These targets were initially set at 1.25 research output units per permanent academic staff member at a traditional university, and 0.5 units for universities of technology; unique targets were established for each comprehensive university aligned with its programme and qualification mix. Based on individual university targets for output and the number of academic staff in the system, a system output target was calculated annually. Research development grants were calculated from the

⁴⁷ DHET (2013) *Ministerial Statement on University Funding: 2014/15 and 2015/16*.

Table 1: State budgets for the higher education sector

Budget Category	Budget total for the university sector (R'000)				Increase in budget from previous financial year			
	2012/13 R	2013/14 R	2014/15 R	2015/16 R	2012/13 %	2013/14 %	2014/15 %	2015/16 %
Block grants	17 433 861	18 438 584	19 561 234	20 947 875	6.4	5.8	6.1	7.1
Teaching inputs	11 658 601	12 478 219	12 713 266	13 140 290	6.9	4.2	4.7	3.4
Institutional factors	1 011 575	1 054 055	1 103 392	1 170 372	6.9	4.2	7.4	6.1
New disadvantaged factor				410 743				
Actual teaching outputs	2 537 108	2 712 979	2 974 475	3 213 301	10.0	6.9	9.6	8.0
Actual research outputs	2 226 579	2 523 331	2 770 101	3 013 169	0.1	13.3	9.8	8.8
Earmarked grants	6 846 900	7 643 478	8 508 752	9 390 330	22.0	11.6	11.3	10.4
NSFAS	3 377 902	3 693 295	3 914 893	4 094 978	27.7	9.3	6.0	4.6
Infrastructure & output efficiencies	1 800 000	2 000 000	220 000	2 301 200	10.2	11.1	10.0	4.6
Capital funds for 2 new universities		150 000	500 000	1 000 000			233.3	100.0
Establishment funds for 2 new universities	100 000	150 000	159 000	166 314	100.0	50.0	6.0	4.6
National institutes in 2 provinces	43 050	R45 418	48 418	50 358	5.0	5.5	6.0	4.6
Research development	176 820	176 820	176 820	200 000	2497.2	0.0	6.0	6.7
Teaching development	499 000	575 000	575 000	620 000	18.8	15.2	6.0	1.7
Foundation provision	194 033	204 705	204 705	306 000	9.7	5.5	15.6	29.4
Clinical training of health professionals	367 290	387 491	387 491	429 635	5.0	5.5	6.0	4.6
Veterinary sciences	121 800	128 500	128 500	142 476	5.0	5.5	6.0	4.6
Institute for human and social sciences				23 829				
Merger multi-campus	148 000	188 400	118 400	44 864	0.0	-20.0	-20.0	-52.6
Interest & redemption on loans	14 605	9 255	9 255	5 676	-25.6	-36.6	-27.0	-16.0
African institute for mathematical studies	4 400	4 694	4 594	5 000	10.0	4.4	1.5	4.2
Total	24 280 762	26 082 062	26 082 062	30 338 208	10.4	7.4	7.6	8.1

Source: DHET (2013) *Ministerial Statement on University Funding: 2014/15 and 2015/16*

surplus (i.e. the shortfall between the target and the actual achievement), and were only allocated to those institutions that had not met their target that year. Targets for the 2010 research outputs were increased by 13% before new targets were established for the 2013 outputs. A significant development was that these were based not on institutional type, but on past performance. This meant that most institutions now had the chance of accessing research development funds (whereas previously the more research-intensive universities were producing outputs above their targets and so could not qualify).

In order to define and calculate funded research outputs, the Department implemented the *Policy and Procedures for Measurement of Research Output of*

Public Higher Education Institutions in 2004.⁴⁸ The policy replaced separate policies for universities and technikons and its purpose was “to encourage research productivity by rewarding quality research output at public higher education institutions... the policy is not intended to measure all output, but to enhance productivity by recognising the major types of research output produced by higher education institutions and further use appropriate proxies to determine the quality of such outputs”.⁴⁹

Apart from the funding based on the number of research- masters and doctoral graduates, other research output types that are recognised for subsidy purposes are publications in accredited journals, approved scholarly books or book chapters and conference proceedings. Guidelines were established for the recognition of outputs in each of these areas with the main proxy for quality being the criterion of a pre-publication peer review process. In terms of journals, accredited journals are those which appear on the three Thomson Reuters Institute of Scientific Information (ISI) Web of Science indices; the ProQuest International Bibliography of Social Sciences (IBSS) index; and the Approved South African Journals list maintained by the DHET.

Books and conference proceedings are annually assessed by a research outputs evaluation panel to ensure that they meet the policy’s criteria. In terms of subsidy, a single-authored accredited journal article receives one unit (with no differentiation based on the accredited list where the journal appears), a conference proceeding half a unit, and a book or book chapter a proportion of five units based on length, with 300 pages earning the maximum. Co-authored publications share the units between the authors’ institutions. The policy has had a significant impact on the quantity of higher education research outputs as defined, but has also been criticised on the grounds that it focuses on quantity rather than quality.⁵⁰ Despite the peer review requirement, publications of very different quality are subsidised at the same level, and, owing to the large monetary incentive (per unit), the policy has led *inter alia* to cases of so-called salami-slicing (where reporting on completed research is reduced to several small publishable units in order to yield multiple publications), double publishing of the same research in different forms, and the emergence of journals of questionable quality. An unintended consequence of the policy is a strategy used by some institutions to appoint international research fellows who have little link with the institution concerned, but who publish under its name. Another significant criticism is that books are not rewarded in a way that reflects their scope and intellectual effort. The policy has also been criticised for not incentivising collaborative research and the level of subsidy for conference proceedings has also been much debated.⁵¹

Based on some of the criticisms, suggested improvements to the policy were gazetted for public comment in 2013. These included additional journal indices

⁴⁸ DoE (2003) *Policy and Procedures for the Measurement of Research Output of Public Higher Education Institutions*.

⁴⁹ *Ibid.*, p. 3.

⁵⁰ ASSAf (2006) *Report on a strategic approach to research publishing in South Africa*; DHET (2011) *Ministerial report on the evaluation of the 2010 institutional research publications outputs*.

⁵¹ ASSAf (2006) *Report on a strategic approach to research publishing in South Africa*; ASSAf (2009) *Scholarly books: Their production, use and evaluation in South Africa today*.

and the introduction of conference proceedings indices and increased funding for scholarly books to bring the unit value up to a level commensurate with the work required, as recommended in *Scholarly Books: their production, use and evaluation in South Africa today*.⁵² The issue of quality and research integrity is left to the insistence on peer review and to the integrity of individual academics and institutions, although the possibility of introducing discipline-based review panels and punitive measures has been raised. In order to improve the quality of local accredited journals, the DHET has established a working relationship with ASSAf to assist with reviewing new applications, and ASSAf has set up various peer review panels to evaluate journals, books and conference proceedings by consensus peer review. In 2009, in line with the policy, the DHET began periodic reviews of all DHET journals.

In terms of the impact of the DHET policy, a clear increase in research outputs has been evident over the past five years, in contrast with the previous five-year period which saw stagnation.⁵³ The recent increase can be interpreted as reflecting the combined effect of the policies of the DST (and NRF) and those of the DHET.⁵⁴

3.2 Investments in the research system from the DST

The DST is the custodian of the NSI and is broadly responsible for across-the-system policy regarding the desired movement of the country towards a fuller role and utilisation of knowledge in the economy and society.⁵⁵ A number of research-focused bodies fall under the DST in terms of parliamentary accountability and budgeting.⁵⁶ The DST also works closely with universities, although the majority of the research funding takes place through the NRF. A number of innovation-linked agencies are also run by and for the DST, although funding sometimes originates in other government departments.⁵⁷ The DST has also been responsible for much of the recent policy work relating to intellectual property.

One of the biggest research achievements of the DST in recent years has been the awarding, after a decade of groundwork, of the giant Square Kilometer Array (SKA) radio-telescope jointly to South Africa and Australia. This was announced in May 2012, and it will lead to substantial financial investment and an expected influx of international researchers and technical knowledge. Another area of important work, undertaken by the HSRC on behalf of the DST, is the annual Research and Development (R&D) Survey.⁵⁸ According to the latest report, the government

⁵² ASSAf (2009) *Scholarly books*.

⁵³ DHET (2014) *Ministerial report on the evaluation of the 2012 universities' research publication outputs*.

⁵⁴ Graphs indicating the changes in output level are presented after the discussion of the DST and NRF initiatives.

⁵⁵ The Ten Year Innovation Plan released by the DST marked the government's clear aspiration to achieve a shift to a knowledge economy in South Africa (DST (2008) *Innovation towards a knowledge-based economy. Ten-year plan for South Africa – 2008-2018*).

⁵⁶ These include the Council for Scientific and Industrial Research (CSIR), and the Human Sciences Research Council (HSRC), the NRF with its national research facilities, the Technology Innovation Agency (TIA), and the Academy of Science of South Africa (ASSAf).

⁵⁷ For example, the Technology and Human Resource for Industry Programme (THRIP) and the Innovation Fund (IF).

has become the country's biggest funder of R&D, directly investing R9.5 billion (43.1% of the total) in R&D in 2011/12, compared with business funding of R8.6 billion (39%). The government has established R&D tax incentives to encourage increased business R&D expenditure within South Africa. The survey also found that the number of people working in R&D in South Africa grew to 59 487 in 2011/12, an increase of only 7% (or 3 956 additional people) since 2010. This highlights the fact that the research sector is still too small in terms of human capacity to achieve the goals set for it.

3.3 The National Research Foundation

As previously mentioned, the NRF was formed in 1998 by integrating the Centre for Science Development (CSD) of the Human Sciences Research Council (HSRC) and the Foundation for Research Development (FRD) into one National Research Foundation. The mandate of the NRF, (NRF Act, No. 23 of 1998) is to, "Promote and support research through funding, human resource development and the provision of the necessary research facilities in order to facilitate the creation of knowledge, innovation and development in all fields of science and technology, including indigenous knowledge and thereby to contribute to the improvement of the quality of life of all the people of the Republic". The NRF executes its mandate primarily through universities, science councils and museums. In this section only a few of the most prominent NRF initiatives will be highlighted.

In supporting human capacity development, the NRF offers a number of grants in the form of bursaries, scholarships and fellowships, aimed at the next generation of researchers, some of which are targeted at specific fields or groups of people based on identified priorities. The NRF is restricted by the Act and its mandate to focus its support on postgraduate and postdoctoral students. The two main categories of student support are free-standing scholarships (for which students apply directly to the NRF) and grantholder-linked bursaries (where a research grantholder is awarded a number of bursaries and selects candidates). Most free-standing scholarships are for South African citizens or permanent residents only, except for postdoctoral fellowships (which must be utilised in South Africa) and innovation scholarships. In awarding all scholarships, equity and transformation are considered. NRF scholarship opportunities include (but are not limited to):

- Prestigious and Equity Scholarships for full time study from Honours/BTech level to postdoctoral level in South Africa;
- Scarce Skills Development Fund Scholarships aimed at key areas in the biological, medical, mathematical and natural sciences, financial management, information technology and computer sciences, engineering, demography and tourism;
- Innovation Scholarships for postgraduate study in SET or the social sciences and humanities at Honours, Masters and doctoral level in South Africa or abroad; and
- Renewable and Sustainable Energy Scholarships for Masters and doctoral study in specific SET fields.

⁵⁸ CeSTii (2014) *South African national survey of research and experimental development*.

Aside from scholarships for postgraduate students, the NRF also offers other human capacity development grants aimed at supporting emerging and established researchers. Those for emerging researchers are aimed at supporting academics working towards doctoral qualifications; recently completed doctoral graduates working on developing their research portfolios; and at post-doctoral fellows who may want to develop their careers in academia.⁵⁹ In order to support knowledge production and international research competitiveness, the NRF also provides funding directed towards areas of national strategic focus and geographic advantage, such as astronomy, biodiversity, earth systems science, indigenous knowledge systems, marine sciences and paleosciences.⁶⁰

The NRF balances the above support with funding through direct parliamentary vote. Between 2001 and 2007, the NRF organised its support in terms of ten nationally relevant focus areas. Following a review in 2007, it adopted a more hybrid system with funding instruments for different categories of established researchers.⁶¹ The NRF, together with the DST, has established two strategic funding initiatives, namely Centres of Excellence and the South African Research Chairs Initiative (SARChI). The Centres of Excellence, which can be virtual or physical, encourage research collaboration across disciplines and institutions on locally-relevant issues with a long-term focus. The original seven centres launched in 2004 have now been expanded to fifteen.⁶² The SARChI was established in 2006 in the hope of attracting and retaining research excellence at universities. Funding for each Chair, which is awarded to a university in collaboration with another research institution, is for up to fifteen years and can reach R2.5 million per annum. The programme aims to develop high quality research and innovation, to produce quality postgraduate students, and to attract and retain research talent from abroad or industry.⁶³

The NRF rating system for individual researchers is primarily based on peer review (by both local and international peers) of the quality and impact of an individual's research outputs over the previous eight years. Between 1984 and

⁵⁹ Examples of these funding programmes are the Thuthuka Programme and Research Career Advancement Fellowships.

⁶⁰ Some of these include the African Coelacanth Ecosystem Programme; African Origins Platform (Palaeoscience Strategy); Global Change, Society and Sustainability Research Programme; Indigenous Knowledge Systems; the Community University Partnership Programme and the South African Antarctica National Programme (SANAP).

⁶¹ These include Blue Skies Research; Community Engagement Programme; Competitive Programme for Rated Researchers; Competitive Support for Unrated Researchers; and Education Research. The programme for rated researchers is restricted to established researchers with a current NRF rating.

⁶² These are in the following areas: Mineral and Energy Resource Analysis; Human Development; Food Security; Scientometrics and STI Policy; Mathematical and Statistical Sciences; Palaeosciences; Theoretical Physics; Epidemiology Modelling and Analysis; Climate and Earth Systems Science; Tree Health Biotechnology; Biomedical Tuberculosis Research; Catalysis; Birds as Key to Biodiversity Conservation; Strong Materials; and Invasion Biology.

⁶³ In 2014 there were 150 SARChI Chairs as follows: CPUT (2); DUT (1); UFH (1); NMMU (6); NWU (5); RU (10); SU (18); TUT (6); UCT (33); UFS (3); UJ (7); UKZN (10); UL (1); UNISA (2); UP (11); UV (1); UWC (10); UZ (1); WITS (21); and WSU (1).

2001 only researchers within the natural sciences and engineering participated in rating exercises, but this was extended to other fields from 2002.⁶⁴ In 2014, there were just fewer than 3 000 rated academics. The NRF also provides research equipment support and is responsible for a number of national research facilities. Individuals or institutions can apply for medium to large equipment that can be used in one institution or shared within the region. National Research Facilities are large-scale and are not linked to a specific university or science council.⁶⁵

3.4 The Academy of Science (ASSAf)

Given that the NSI lacked a broadly accepted national science academy to mobilise expertise across the full range of empirical disciplines, the Academy of Science of South Africa (ASSAf) was inaugurated in 1996.⁶⁶ In the early 1990s, the Foundation for Research and Development had invited the three organisations aspiring to be national science academies to discuss the establishment of a fully representative science academy,⁶⁷ which was officially established under The Academy of Science of South Africa Act.⁶⁸

ASSAf was established with a dual mandate to honour distinguished scholars in all fields of enquiry and to generate evidence-based advice and solutions to national challenges from a variety of perspectives. Some of ASSAf's aims are to recognise and reward excellence; promote innovation, scholarly activity and enquiry-based education; provide effective, evidence-based advice; and promote national, regional and international collaboration. Its 425 members are drawn from the full spectrum of disciplines. The Academy is funded through a Parliamentary grant managed through the DST, complemented by donor or project funding. ASSAf has produced various studies, including those on scholarly publishing, the PhD degree, and the Humanities, which are referred to in this chapter.

3.5 Current data on research performance

The data below indicates the changes in the sector with regard to research output, research graduates and NRF-rated researchers. It emphasises the

⁶⁴ Academics can receive one of five ratings, namely leading international researcher (A); internationally acclaimed researcher (B); established researcher (C); prestigious award (P); or promising young researcher (Y). After five years, researchers should apply to be reevaluated during the sixth year or the rating lapses.

⁶⁵ The national research facilities are the iThemba Laboratory for Accelerator Based Sciences (LABS); the National Zoological Gardens; the Hartebeesthoek Radio Astronomy Observatory (HartRAO); the South African Astronomical Observatory (SAAO); the South African Environmental Observation Network (SAEON); South African Institute for Aquatic Biodiversity (SAIAB) and the Square Kilometre Array Project (SKA).

⁶⁶ For details, see <http://www.assaf.co.za/>; See also Gevers in CHE (2016) *Reflections of South African university leaders, 1981-2014*.

⁶⁷ These were the Royal Society of South Africa (RSSAf), representing mostly English-speaking white scientists; the Suid-Afrikaanse Akademie van Wetenskap en Kuns (SAAWK), representing the interests of Afrikaans-speaking white scientists which functioned during the apartheid era as the de facto national academy; and the Science and the Engineering Academy of South Africa (SEASA), which was created in 1986 to address educational and professionalisation issues confronting black scientists in the natural sciences and engineering.

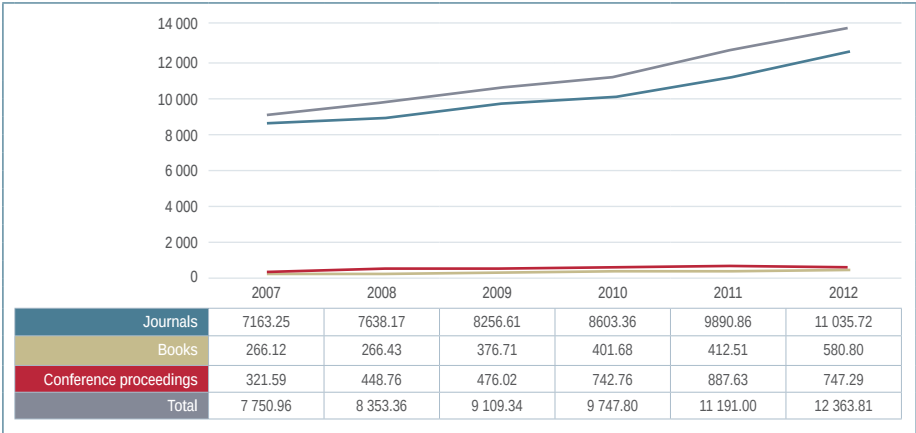
⁶⁸ *Academy of Science of South Africa Act No. 67 of 2001*.

increased focus on research as well as the limited gains in terms of research graduates. The majority of the data (unless otherwise indicated) can be found in *VitalStats 2012*.⁶⁹

4. Local and international developments during the past ten years

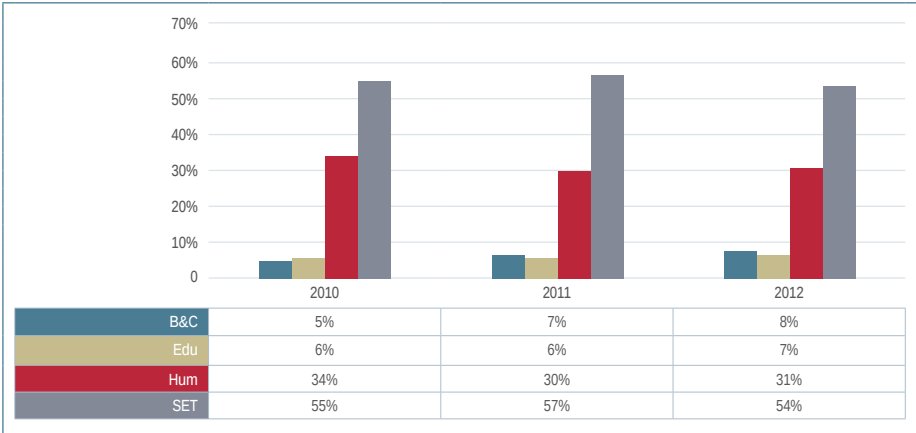
The research environment over the last decade has changed in a number of

Figure 1: Research output units (as measured by DHET) by publication type from 2007 to 2012



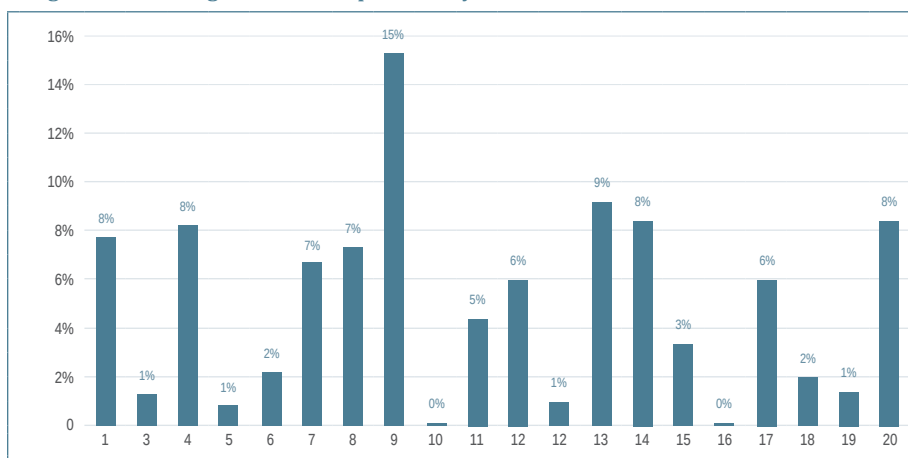
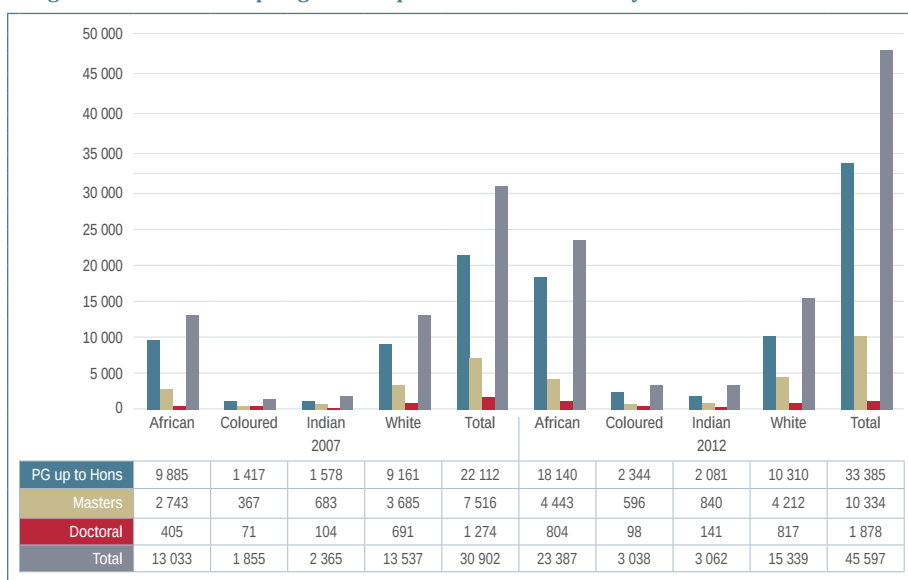
Source: Annual Ministerial Research Output Reports and HEMIS 2005-2013, extracted annually

Figure 2: Percentage research output units by broad field from 2010 to 2012



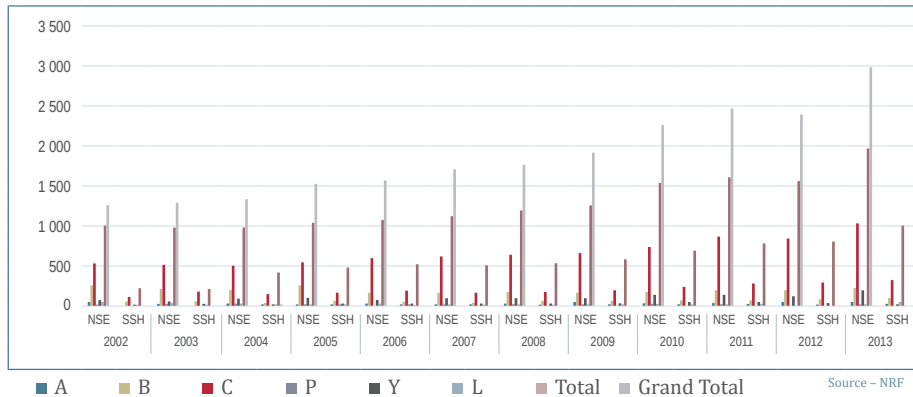
Source: Annual Ministerial Research Output Reports and HEMIS 2005-2013, extracted annually

⁶⁹ CHE (2014) *VitalStats*.

Figure 3: Percentage research output units by CESM for 2012⁷⁰**Figure 4: Headcount of postgraduate qualifications awarded by race for 2007 and 2012**

⁷⁰ The CESM categories are as follows: CESM 01: Agriculture, Agricultural Operations and Related Sciences; CESM 02: Architecture and the Built Environment; CESM 03: Visual and Performing Arts; CESM 04: Business, Economics and Management Studies; CESM 05: Communication, Journalism and Related Studies; CESM 06: Computer and Information Sciences; CESM 07: Education; CESM 08: Engineering; CESM 09: Health Professions and Related Clinical Sciences; CESM 10: Family Ecology and Consumer Sciences; CESM 11: Languages, Linguistics and Literature; CESM 12: Law; CESM 13: Life Sciences; CESM 14: Physical Sciences; CESM 15: Mathematics and Statistics; CESM 16: Military Sciences; CESM 17: Philosophy, Religion and Theology; CESM 18: Psychology; CESM 19: Public Management and Services; CESM 20: Social Sciences.

Figure 5: Headcount of NRF-rated researchers by rating type and by field – Natural Sciences and Engineering (NSE) and Social Sciences and Humanities (SSH)



ways, some intended and some unintended. The policy developments were aimed to steer the sector in a certain direction, and while certain policy goals have been achieved, others have been tempered by counter-trends. In many cases, these have resulted from institutions responding in unexpected ways, although the continuously changing national and international context has also impacted on the outcomes of policy interventions.

In this section, some of the major developments of the past decade are discussed. National developments are discussed first, and include the impact of institutional mergers on research and debates on differentiation. This is followed by international developments affecting the research sector, such as the Open Access movement and the ranking of universities. Finally, national areas of concern, and the initiatives that have been introduced in response to these, are discussed.

4.1 Mergers, institutional types and differentiation

The purpose and process of institutional mergers are discussed elsewhere in this review, but what is important for this chapter is the impact that the mergers have had on the research environment. Prior to the mergers, the higher education landscape was divided between technikons and universities. The technikons, on the one hand, focused on technical training and diplomas and developed close links with industry. They were not expected to focus on research. This was reflected in the staff qualification profile as masters or doctoral qualifications were not as much a requirement as industry experience. The universities, on the other hand, provided a spectrum from research-focused to mainly teaching institutions. In general, as noted earlier, they produced the vast majority of research and research graduates. With the mergers implemented from 2002 onwards, the landscape changed and three new institutional types emerged – traditional universities,

comprehensive universities and universities of technology (UoT). With the name 'university' now applied across the sector, the nature of these institutions also changed and all, although to varying degrees, were now expected to engage in research. This was reflected in the research targets set for institutions; while UoTs were given a lower target than traditional universities, it was high considering their history.

The 2012 research output figures indicate that the disparities between institutional types continue.⁷¹ UoTs produced 5% of research publications, the comprehensives 17%, and the traditional universities 78%. With regard to publication output per academic staff member, the continued disparity is even more evident. The five institutions with the highest outputs per capita were all historically white institutions that had been less impacted upon by mergers, namely SU, UCT, RU, UP and Wits; the per capita outputs at these institutions ranged from 1.04 units per capita to 1.36. The next group of institutions was more varied: traditional universities – historically black or white, and merged or not – such as UKZN, NWU, UFS, UWC and UFH; and some comprehensives, distance- or contact-mode (such as UJ, UNISA and NMMU) with per capita outputs ranging from 0.66 to 1.02 units. The final group, with the lowest per capita outputs of 0.06 to 0.39 units, includes all UoTs and some historically black universities, some of which had been through a merger process.

Despite this continued disparity, there has been a substantial increase in research output at many of the UoTs and historically black institutions. For instance, when considering weighted research output per capita for 2012 (including research graduates), UFH and UWC are at the top of the second cluster of institutions with 1.53 and 1.51 units per capita respectively.⁷² This places them seventh and eighth in terms of overall output per capita. Considering the same figures and the initial UoT target of 0.5 units per capita, it is evident that TUT has exceeded this target, reaching 0.58 units, and CPUT is close to target with 0.46 units per capita.⁷³ These are significant achievements considering the lack of research capacity at these institutions ten years ago.

What the above figures cannot tell is the institutional experience of the new focus on research at institutions which had not previously been geared for research, and where staff members had earlier neither been required to focus on research nor been appointed based on research qualifications. The lack of research qualifications has resulted in pressure at UoTs and comprehensives for staff to enrol for these qualifications, and a new focus on MTechs and DTechs. By 2012, a major change can be seen in the qualifications held by staff at UoTs, as shown in the following table.

⁷¹ DHET (2014) *Ministerial report on the evaluation of the 2012 universities' research publication outputs*.

⁷² Weighted output includes units allocated to institutions for the number of students graduating with a masters or doctoral degree.

⁷³ DHET (2014) *Ministerial report on the evaluation of the 2012 universities' research publication outputs*.

Table 2: Staff qualifications at UoTs, 2005 and 2012

Institution	Staff with Masters as highest qualification				Staff with Doctorate as highest qualification			
	2005		2012		2005		2012	
	Headcount	%	Headcount	%	Headcount	%	Headcount	%
TUT	454	20%	306	36%	202	9%	178	21%
CPUT	276	19%	341	45%	90	6%	124	16%
DUT	232	17%	279	47%	59	4%	88	15%
VUT	167	20%	150	42%	55	7%	44	13%
CUT	50	6%	114	42%	39	4%	72	26%
MUT	56	31%	79	44%	13	7%	16	9%

Source: HEMIS data

The merger process also had a significant impact on institutional libraries, which needed to consolidate and integrate very different collections, catalogue databases, subscriptions, policies, budgets and human resources.⁷⁴ This was especially hard in a time of both understaffing and the general move towards e-resources. Issues of equity, redress, quality development and new national policies had to be taken into consideration at the same time. It is here that the library consortia (discussed later) played an important role. Despite the merger process, library resources (including electronic resources) continue to differ vastly within the sector, with a few research-intensive libraries maintaining well-stocked collections, while others lack the basic resources and ICT needed by staff and students. The situation is made harder by the new e-resource tax implemented in 2014 which will, in effect, reduce the already inadequate library resources by a further 14%.⁷⁵ When this is combined with the impact of the declining Rand, libraries argue that resources could have been cut in real terms by as much as 40%.

4.2 Differentiation of institutional types

Throughout the last twenty years, discussions concerning differentiation of the institutional landscape have been contentious. This is largely as a result of South Africa's past with its divided system based on race, as well as traditional hierarchical notions that specific institutions were 'better' than others. Heated debates on more subtle kinds of differentiation began after the release by the CHE of its task team report on the Size and Shape of Higher Education.⁷⁶ The task team's recommendations on a new vertical differentiation of universities between broadly research-active and so-called 'bedrock' institutions with a few niche areas of research were not widely accepted by the sector, and instead it was agreed to accept a quasi-horizontal classification into traditional, and comprehensive universities, and

⁷⁴ G. Thomas (2007) 'Academic libraries in the second decade of democracy: Critical issues and challenges' in T. Bothma, P. Underwood & P. Ngulube (eds.) *Libraries for the future: Progress and development of South African libraries*.

⁷⁵ LIASA (2014) 'VAT on digital media will contribute to South African higher education libraries losing over 40% of their purchasing power' (joint press statement).

⁷⁶ CHE (2000) *Towards a new higher education landscape: Meeting the equity, quality and social development imperatives of South Africa in the 21st century*.

universities of technology, based on the past reality, rather than the determination of new missions and visions. The differentiation debate has continued but nothing substantive has been agreed. Some general principles that have been aired are: that differentiated funding would be needed for a differentiated system (unlike the current funding formula); that universities should be able to determine and change their own mission statements as necessary; and that differentiation should be horizontal and not vertical, with institutions of a different type being accorded equal status and sufficient money to excel.

The 2013 *White Paper for Post School Education and Training* also emphasised the need for differentiation in a purposeful way, although the precise form it should take was not articulated.⁷⁷ The White Paper acknowledged the need for differentiation both in the context of the entire post-school system and in the university sector itself. It recognised that much of the current differentiation was the result of historical legacy rather than being policy-driven and, as a result, had led to unacceptable inequality and inadequate resourcing. The White Paper supported the continued use of the categorisation into traditional and comprehensive universities and UoTs, but talked of a “continuum [of institutions which] would range from largely undergraduate institutions to specialised, research-intensive universities which offer teaching programmes from undergraduate to doctoral level”.⁷⁸ Within this framework, it stressed that all institutions “must offer high-quality undergraduate education” and address the “imperatives of equity and social justice”.⁷⁹ Furthermore it highlighted that all universities must engage in some level and type of research, although this could vary between institutions based on individual mandates. The important link between teaching and research has been recognised and discussions on differentiation now highlight the importance of all institutions engaging in all three core mandates (including social engagement) and linking these to enhance each other.

There have been at least two major attempts to define research-intensive institutions. In an analysis of the HEQC’s audit reports carried out by the Centre for Research on Evaluation, Science and Technology (CREST), the following priorities and characteristics were considered definitive:

- High-level leadership and commitment to research;
- Sophisticated research management information system;
- Sustained high levels of research outputs;
- A research strategy focused on areas of research strength;
- International research profile and reputation; and
- A sizable population of academics with doctorates, NRF-rated scientists, and postgraduate students.⁸⁰

CHET has based their categorisation of institutions on the following factors: research productivity; number of staff with doctorates; masters and doctoral enrolments as well as graduations; and masters and doctoral enrolments

⁷⁷ DHET (2013) *White Paper for Post-school Education and Training: Building an expanded, effective and integrated post-school system*.

⁷⁸ *Ibid.*, p. 29-30.

⁷⁹ *Ibid.*, p. 29-30.

⁸⁰ CREST (2009) ‘Meta-analysis of audit reports: Research’ (unpublished report).

relative to staff numbers. This led them to place institutions into three clusters of high, medium and low research productivity.⁸¹ A critique of such clusters is that historical legacy is not taken into account and that, therefore, no UoTs are identified as potentially research-intensive, which undermines the need for the more applied type of research that could define these institutions.

A strong view emanating from the Research Task Team of this review is that both teaching and research should be undertaken at all universities and that they directly inform one another. However, the areas of research and teaching and the focus of the institution will differ. Sensible differentiation, with the necessary funding, is needed if the country is going to compete globally in terms of research and innovation and if the skills needed by the country are to be generated.

4.3 The responsible conduct of research: integrity and ethics

With the growing focus on the integrity of research in the literature internationally and in South Africa, and with the increased use of publication metrics in determining all forms of research funding and performance assessment, the responsible conduct of research has become an important topic. This is of particular importance in the wake of revelations internationally of fraud or inappropriate behaviour in the research and publishing context. Furthermore, the increasingly global research environment requires a shared understanding of relevant principles and values in the conduct of research. According to Rossouw *et al*:

The notion of ‘responsible conduct of research’ is distinguishable from both ‘research integrity’ and ‘research ethics’. ‘Research ethics’ usually includes the processes in terms of which the proposed research study is scrutinised to assess compliance with the desired values and principles that are part of ethical research. ‘Research integrity’, on the other hand, has a broader meaning and may be understood to also incorporate implementation of the research processes and the conduct of the researchers. ‘Responsible conduct of research’ is an umbrella term that includes notions like authorship, plagiarism, research misconduct, whistle blowing, research ethics guidelines, codes of conduct, conflict of interest, research ethics and other training. The distinction drawn between ‘research integrity’ and ‘responsible conduct of research’ is increasingly fading in practice.⁸²

The 2010 Singapore Statement on Research Integrity places the onus of correct conduct on the researcher, not the institution. In South Africa, there are few cases of research misconduct which have become publicly known – in general these tend to be dealt with quietly. There is no national oversight body and no national code of conduct, only institutional guidelines, although some institutions have endorsed the Singapore Statement.⁸³

International studies into the prevalence of research misconduct indicate that it is, most likely, not very common – with figures at the level of 3 instances per 100 researchers per annum, or about 2% of all scientists. A larger number of cases of

⁸¹ CHET (2010) ‘Higher Education Summit, March 2010: Institutional differentiation’ (presentation); CHET (2011) ‘Differentiation: Reasons and purposes, systems and methodologies’ (presentation).

⁸² T.M. Rossouw, C. van Zyl & A. Pope (2014) ‘Responsible conduct of research: Global trends, local opportunities’ in *South African Journal of Science*, 110(1/2).

⁸³ Ibid.

what are called 'questionable research practices' have been experienced – 33.7% of respondents admitted to this in one questionnaire – and an even greater number of academics suspect their colleagues of such practices (72% in one study). The impact of research misconduct can be serious. In a UK example, healthcare policy was based on research which was then found to have been falsified.⁸⁴ Research has been undertaken to determine the reasons for the apparent recent increase in research misconduct, and the main reason appears to be the pressure for high research outputs in the climate of international rankings (see below) and funding and recognition based on output. This has also resulted in increased plagiarism and the practice of salami-slicing noted above. Another factor may be a lack of clarity on what constitutes misconduct.⁸⁵

While there has been a move internationally towards national frameworks or guidelines on research misconduct, the issue of research ethics is much better structured and monitored (also in South Africa). Interest in the ethics of research (as it impacts on humans) began to increase in the post-World War Two era after the outcry regarding the experiments carried out by Nazi Germany. This led to a focus on medical ethics, with the relationship between the ethics of medical research and medical practice closely linked.⁸⁶ Guidelines on the ethics of medical research in South Africa were first formulated by the Medical Research Council (MRC) in 1979, and these have been updated regularly, most recently in 2002. Looked at more broadly, the ethical conduct of research is a key element in the establishment of research excellence. The reputational risks arise primarily from the activities of individuals, but also affect the institutions to which they are attached. In order to safeguard the reputations of both individuals and institutions, a set of structures needs to be put in place in institutions and at a national level.

In South Africa, universities have generally developed senate committees to deal with research ethics and integrity, although the authority of such committees may be delegated to faculty committees. Given the seriousness of ethical lapses, it is nevertheless desirable to have institutional level committees that deal with these matters through so-called institutional review boards (IRBs). The committees are generally constituted to ensure appropriate expertise. In the case of human and animal subjects of research, there is national legislation regarding the composition of the committees.⁸⁷ These committees also give attention to: preservation of research data; adjudicating cases of plagiarism; investigating allegations of fabrication of data; and issues such as conflicts of interest and questions of authorship.

⁸⁴ Ibid.

⁸⁵ Ibid.

⁸⁶ S.R. Benatar & W.A. Landman (2006) 'Bioethics in South Africa' in *Cambridge Quarterly of Healthcare Ethics*, (15), pp. 239-247; S.R. Benatar & C.R. Vaughan (2008) 'Global & local forces shaping the research agenda & the governance of research ethics' in *South African Journal of Science*, (104), pp. 439-442.

⁸⁷ The following are examples of such committees:

- Involvement of human subjects in the Health Sciences, including Psychology: This committee will generally be based in a faculty of Health Sciences and deal with all clinically-related research involving human subjects. In the early 2000s, an Interim National Health Research Ethics

Despite these developments, research ethics protocols are still perceived to be less thorough in South Africa than in some other parts of the world, and this, coupled with the lower cost of clinical and research trials in developing countries, has led to an increase in such international clinical trials conducted in South Africa. In 2008, it was estimated that about \$150 million was spent on clinical research in South Africa annually. The concern is that this research is often externally-driven such that there has been a need for an increasing focus on ensuring that research is in line with local needs and priorities.⁸⁸

4.4 Collaboration, consortia and international bilateral and scholarship agreements

It is well recognised in the current economic climate that collaboration and the sharing of resources are of fundamental importance for the maximum development of the research sector. As an expression of the need to collaborate, the mid-1990s and early 2000s saw the development of a number of regional consortia designed to bring together the universities in a particular region.⁸⁹ As part of these consortia, subordinate library consortia were also developed with the assistance of grant funding, such as that from the Andrew W Mellon and Carnegie Foundations. While the consortia themselves proved to be short-lived, with the exception of the Cape Higher Education Consortium (CHEC), the Coalition of South African Library Consortia (COSALC), formed in 2004, continues to operate as SANLiC to negotiate licencing agreements for electronic resources

⁸⁷ (continued)

Committee (INHREC) was established which produced national guidelines for medical research and for the accreditation of all Research Ethics Committees (RECs) in South Africa. The 2003 Health Act included the formation of a statutory body – the National Health Research Ethics Council (NHREC) (<http://www.nhrec.org.za/>). This body determines guidelines for health RECs, registers and audits these committees and sets norms and standards for conducting research on humans and animals and for clinical trials. The body also deals with complaints. Developments in terms of research ethics were also made as a result of increasing international collaboration in the field of medical research, especially with regard to subjects infected with HIV (Benatar & Landman (2006) 'Bioethics in South Africa' in *Cambridge Quarterly of Healthcare Ethics*, 15, pp. 239-247).

- Involvement of human subjects in the Humanities and Social Sciences, excluding Psychology: This committee oversees studies with human subjects based on observations of behaviour, oral and written material, and surveys.
- Animal Use and Care: This committee oversees all research that is conducted on vertebrate animals and on some categories of invertebrate animals. The committee's responsibility is to see that animals are housed and used appropriately (and will oversee all animal-holding facilities). The experimental work should have been carefully designed to minimise the numbers used and distress.
- Genetically Modified Organisms (GMOs) and Environmental Impacts of Research Activities: This committee needs to ensure that the institution's facilities and research on GMOs comply with appropriate legislation. Furthermore, research activities that could potentially have adverse environmental impact must be reviewed by the committee.

⁸⁸ Benatar & Landman (2006) 'Bioethics in South Africa' in *Cambridge Quarterly of Healthcare Ethics*, 15, pp. 239-247.

⁸⁹ G. Thomas & I. Fourie (2006) 'Academic library consortia in South Africa: Where we come from and where we are heading' in *The Journal of academic librarianship*, 32(4), pp. 432-438.

for the higher education library sector.⁹⁰

In terms of research publications, collaboration is increasing as is evident from a growing number of South African-authored publications with at least one author from another country. The majority of this collaboration is with developed countries; most frequently with the USA and UK. In Africa, South Africa collaborates most with Nigerian authors. Collaboration with the BRICS countries, most notably China, is also increasing.⁹¹

The importance of collaboration is also evident in the way in which some funding programmes are structured. As an example, the European Union-funded Erasmus Mundus programme, a cooperation and mobility programme that aims to enhance the quality of scholarship and to promote dialogue and understanding between people and cultures, requires partnerships both between local institutions and with a European university in order to be eligible. The first phase ran from 2009 to 2013 at a total cost of €2.4 million, and the programme is continuing.

4.5 Open access publishing of research

One of the most significant developments in the research sector globally over the last two decades has been the way in which researchers obtain access to scholarly journals and research data.⁹² In the past, libraries could only afford to subscribe to a few printed commercial journals, thus limiting the access academics had to the relevant literature. This system has been transformed into a more user-friendly, but still very expensive, practice of aggregated subscriptions based on institutional e-licences. The new model has practical advantages, but overall access is still limited by cost and the squeezing out of smaller publishers through the bundling system. In this environment, there is increasing support for the development of open access publishing. At present, between a quarter and half of the *new* literature produced every year is free online to users worldwide, while access to the older literature is patchy, and mostly pay-to-read.

The open access movement

In South Africa, the cost of subscriptions is affected by the assessment of the country as a medium per capita income economy, the weakness of the Rand and the absence of exemptions from duty and VAT on academic books and journals. These developments began to have an impact on research productivity and in this context, local support for the international open access movement gathered momentum, despite inertia among academics and policy-makers who tended to believe in the long-term dominance of commercial journals.

The open access movement has espoused two main forms of online dissemination: the promotion of (mostly sponsored or subsidised) free-online open access e-journals (often called the Gold Route), and the promotion of

⁹⁰ Thomas (2007) 'Academic libraries in the second decade of democracy: Critical issues and challenges' in Bothma *et al.* (eds.) *Libraries for the future*.

⁹¹ NACI (2015) *South African science and technology innovation indicators*, 2014.

⁹² W. Gevers (2013) 'Access to the published scholarly literature in South Africa – A massive but still incomplete transformation over two decades' (unpublished paper); W. Gevers (2013) 'Hidden levers of science are set to become more accessible to all' in *Mail & Guardian*, 5 August.

institutional or systemic e-repositories (Green Route), in which near-final versions (pre-prints) are placed once the pay-to-read version has been published (usually after a specified delay period). The journal publishing industry has responded by espousing a variant of the older page charges model, which requires the payment of substantial article processing charges by authors to cover costs of free online e-publishing to ensure continued profit (the commercial Gold Route). Another aspect of open access publishing is a focus on article impact factor, rather than on journal impact factor, as developed by the Institute of Scientific Information (ISI) in the USA.

There are now debates in most developed countries about the Green, Gold and commercial Gold routes. Article processing charges could eventually replace subscriptions in a systemic commercial Gold Route publishing system that would still be very costly. Other possibilities include an expanded Green Route which forces publishers to match the value they add to the voluntary work of authors and peer reviewers, or better regulation of the journal-publishing industry (which could include abandoning journal impact factors in favour of article-level metrics) and limiting the funding of publishing costs to the lowest available rates in a given field in order to stimulate competition between journals and publishers.

There were a number of conferences to promote open access modes in South Africa in the mid-2000s.⁹³ Investigations into open access possibilities also began at ASSAf with a study into research publishing in South Africa.⁹⁴ The study identified the low visibility of the existing local (mainly print-only) journals, as the key barrier to the enhancement of the quantity and quality of local research. The report recommended that the DST take responsibility for ensuring that open access initiatives be promoted in order to enhance the visibility of South African research. It recommended that online, open access (Gold route) versions of South African research journals should be funded through a per-article charge system and that institutional repositories should be established (Green Route) and augmented by a central repository for those institutions that were unable to run a sustainable repository. Both the DST and the then-DoE supported the recommendations in principle, and ASSAf was charged (with DST funding) with overseeing the implementation of the ten recommendations. ASSAf established a National Scholarly (Journal) Editors Forum (NSEF), published best-practice guidelines for editing and peer review, and carried out a study on scholarly book publishing in South Africa.⁹⁵

One of ASSAf's major initiatives was the establishment of SciELO SA – an open access searchable, full-text and fully indexed journal database that covers a quality-assured collection of peer reviewed scholarly journals. The project was

⁹³ One, entitled 'Open Access Scholarly Communications', took place in July 2004. An initiative of the conference was *Sivulile* (We are Open in isiXhosa), an informal group constituted in 2005 to support open access. The first South African Institutional Repository workshop took place in May 2005 and it provided participants with an understanding of technical and policy issues concerning institutional repositories. The third key event was an Open Access Workshop for Southern Africa (2006) which focused on open access journals, institutional repositories, advocacy and the role of funding agencies.

⁹⁴ ASSAf (2006) *Report on a strategic approach to research publishing in South Africa*.

⁹⁵ ASSAf (2009) *Scholarly books*.

launched in 2009 with financial support from DST. SciELO SA is an integral part of the SciELO portal, which had its origins in Brazil. There are now 51 journal titles in the collection and all were subject to rigorous peer review prior to inclusion. The SciELO SA collection was initially managed by ASSAf as a pilot project in parallel with the Brazilian office, but since 2012, ASSAf has been officially licensed through the SciELO certification process. The table below reflects the growth of the collection, and the number of visits to the site.

Table 3: Visits to the SciELO SA site since 2010

May month	Total visits	Daily visits	Countries	Cities	Articles	Issues	Titles
2010	24 764	825	170	3 292	1 584	91	17
2011	29 544	953	172	3 154	2 904	166	22 **
2012	49 984	1 612	182	4 269	4 650	211	23 **
2013	56 808	1 833	193	3 854	6 560	277	35
2014	72 987	2354	206	5 467	12 816	831	51
2015	145 722	4701	205	6 149	13 942	941	53

Source: ASSAf

** Due to delays in the peer review processes

Barriers to the adoption of open access

Despite international momentum in which a growing number of countries are demanding that research conducted with public funds must be available through open access channels, open access is still only used by a small minority of South African researchers and research administrators. In the absence of a national policy framework recognising the public right to access taxpayer-funded research, the majority of researchers have chosen to take a conservative approach while the nature of publication is evolving. Many are unconvinced of the feasibility of an open access system and some have expressed concerns about quality. There is also no systematic collection of data on open access publications in South Africa as part of any of the research assessment exercises, although between a quarter and a third of the country's DHET-accredited journals are now free online publications. In general, few researchers post in institutional repositories and open access practices are not always rewarded. One possible explanation for the lack of policy is the emphasis given, in the interest of enhanced innovation, to intellectual property (IP) exploitation. Open access is perceived as undermining IP protection, even though this need not be the case. Another factor may be the limited funding for research, which restricts the inclusion in the award of grants of additional (publishing) costs.⁹⁶

Despite South Africa not keeping pace with international developments in this area, initiatives in relation to open access do exist. At institutional level there are 26 South African repositories in the international Directory of Open Access

⁹⁶ The South African Medical Research Council as a funding agency does allow use of its grants to cover article processing charges.

Repositories (OpenDOAR) and 67 journals are registered in the Directory of Open Access Journals.⁹⁷ In 2012, a number of South African institutions signed the Berlin Declaration of Open Access. The NRF has set up a national portal for South African theses and dissertations in collaboration with the Committee of Higher Education Librarians of South Africa (CHELSA). The Southern African Regional Universities' Association, representing 64 universities in sub-Saharan Africa, has also released a research report on *Opening Access to Knowledge in Southern Africa*, which recommended open access as strategy for the region.

4.6 Digital library and national e-journal licences

Given the prohibitive cost of accessing a range of commercial (subscription) journals, ASSAf was mandated by the Minister of Science and Technology to conduct an investigation into the electronic information needs of academic staff, students and researchers, and to advise on a possible way forward.⁹⁸

The current system in South Africa is that universities and research councils subscribe to some full-text electronic databases via SANLiC, which negotiates the best possible rates for institutions and charges a service fee (see library consortia, above). This is different from other models such as the Brazilian where a government-supported national agency negotiates national access at the best possible rates to international journal platforms (bundled subscriptions) on behalf of a large number of qualifying public universities.

The ASSAf study found that the Brazilian model would benefit South African universities as not only would total system costs be decreased, but access would be equitable across the system. Various factors appear to impact on the cost of journal packages, but the seniority of the negotiating group plays a particularly important role. ASSAf recommended that the management of the proposed national licensing system should be embedded in a National Digital Library project, run by the DHET with support from the DST and proposed a consultation process through a task team which was to consider all aspects pertaining to implementation, a process which is still ongoing.

4.7 International rankings and South Africa's standing

The ranking of universities was started in 1983 in the United States with the publication of a ranking system by *U.S. News and World Report* as a marketing device, but rapidly came to be seen by the public as a means for differentiating between institutions and making choices about which institution to attend.⁹⁹ A variety of other ranking systems soon emerged with differing methodologies and criteria. The ranking systems discussed in this section mainly consider research performance as a major factor, although the final one differs somewhat as it ranks countries (not institutions). The various ranking systems are not equivalent and prioritise different aspects of institutional functioning.

Between 2004 and 2009, *The Times Higher Education Supplement* (THES)

⁹⁷ See <https://doaj.org/>.

⁹⁸ ASSAf (2011) 'Improved access to commercial electronic knowledge resources for researchers in South Africa' (unpublished paper).

⁹⁹ Institute for Higher Education Policy (2007) *College and university ranking systems – Global perspectives and challenges*; see <http://www.usnews.com/>.

jointly with Quacquarelli Symonds (QS), ran an annual ranking system based on a set of six factors, the data for which was sourced and analysed by QS. The system was confined to the top 200 institutions globally, although the website reflects rankings beyond these. The appearance of a number of South Africa universities in this ranking system can be attributed to these being institutions with a strong research culture with a significant number of publications in international peer reviewed journals. UCT appeared in the top 200 of this ranking, while Wits, UP and UKZN were also ranked.

In 2010, the THES developed a new ranking system in collaboration with Thomson Reuters that makes use of thirteen performance indicators based on their indexing system.¹⁰⁰ These rankings are more restrictive in scope, but the most research-intensive universities still appear. They list UCT, SU, Wits and UKZN in the top 400 (depending on the year). The THES with Thomson Reuters also produces specialist rankings for regions or groupings of countries, such as the top 100 universities in *BRICS & Emerging Economy Countries*, which gives an indication of the state of development of the sector in eighteen emerging market countries. The results are encouraging for South Africa as despite being the smallest country in the group, five of its universities are ranked within the top 100.

When the collaboration between QS and the THES came to an end in 2009, QS launched its own independent ranking system.¹⁰¹ The data for components of their analysis are sourced from an Elsevier index (Scopus) and the ranking encompasses approximately 700 universities. South African university rankings in this table are generally quite consistent with the THES rankings. The number of South African institutions ranked in 2013 increased from the five of previous years to include Rhodes and UJ, suggesting that research development initiatives may be bearing fruit. In 2013, QS also introduced a ranking of the universities in BRICS countries. In this system, there are eight South African universities in the top 100, with half in the top 50. Institutions and policy-makers are thus becoming increasingly focused on tracking rankings as a means of evaluating research productivity.

Examining the ranking criteria more closely indicates specific areas in which South African institutions are performing well. For instance, the 2013 QS rankings considered 2 000 universities based on global academic and employer surveys and Scopus research metrics. The indicators are: academic reputation (40%) and employer reputation (10%) both from surveys; citations (20%) from Scopus; and data indicators – student to staff ratio (20%), proportion of international faculty or staff (5%) and international students (5%). The four South African institutions ranked in the top 500 fared as below:

¹⁰⁰ See <http://www.timeshighereducation.co.uk/world-university-rankings/>.

¹⁰¹ See <http://www.topuniversities.com/university-rankings>.

Table 4: 2013 QS rankings by specific indicators

Institution	2013 (overall)	Academic reputation	Employer reputation	Student: staff	International faculty	International students	Citations
UCT	145	142	170	401+*	194	220	137
Wits	313	262	349	401+	131	401+	360
SU	387	287	354	401+	381	401+	372
UP	471-80	305	311	401+	401+	401+	401+

*did not fall in the top 400 ranked

What is immediately evident is that South African institutions rank poorly when it comes to student to staff ratios. In fact, even within the BRICS ranking, no South African institutions featured in the top 100 when this ratio was selected as an indicator. Ironically, it seems to be teaching and learning factors, especially in terms of the size of the academic staff complement (as discussed in the Academic Staffing chapter), that hold South African institutions back on such ranking systems. It is also clear that for South African institutions, reputation and research are generally the stronger elements in such tables. Similarly, when the BRICS ranking is ordered by citations, the number of South African institutions in the top 100 increases from eight to ten, and UCT moves to position number 2 (from 11), with Wits at number 5 (from 31). The QS 2013 table can also be ordered by field to give an indication of the disciplinary areas where South African research is strong. As is evident below, the highest performing fields are Arts & Humanities and Social Sciences & Management. It is also evident that Engineering & Technology is the weakest, and is ranked only for UCT. Natural Sciences is the second weakest category for UCT, Wits and SU. These findings should be borne in mind during the later discussion of the state of humanities in South Africa.

Table 5: 2013 QS rankings by field

Institution	2013 (overall)	Arts & Humanities	Engineering & Technology	Life Sciences & Medicine	Natural Sciences	Social Science & Management
UCT	145	108	282	142	254	112
Wits	313	144	-	274	391	210
SU	387	231	-	320	345	271
UP	471-80	292	-	-	-	270

In 2003, the Shanghai Jiao Tong University established the Academic Ranking of World Universities (ARWU) in order to gauge the standing of Chinese universities globally using a set of six measures.¹⁰² Criteria include publication in the journals *Nature* and *Science*, and the number of publications indexed in the Science Citation Indices of Thomson Reuters. This means that more than 1 000 institutions are eligible, and the top 500 are ranked. Seven South African universities are considered for this ranking, and three have managed to remain within the top 500.

While the majority of systems rank individual universities, Universitas21

¹⁰² See <http://www.shanghairanking.com/>.

Ranking is the only one to assess national higher education systems.¹⁰³ These rankings at system level are intended to be used by both governments and universities, and attempt to highlight the importance of a strong higher education environment for economic and cultural development. The 2014 ranking is the third, and includes the same fifty countries as in 2013, each ranked both overall and separately based on four factors (resources, environment, connectivity and output). In 2014, Universitas21 also took each country's level of economic development into account to create a second set of ranking results. Overall, the top ten ranked systems in 2014 were (in order): the USA; Sweden; Canada; Denmark; Finland; Switzerland; the Netherlands; the UK; Australia and Singapore. There has been little change in the top ten since 2013, although the order has changed. The most notable changes were China's move up by eight places. In the second set, countries are scored on how they perform on each of 24 measures, relative to countries at similar stages of economic development as measured by GDP per capita. This approach produced very different results, with the top ten ranked countries being (in order): Sweden; Finland; Denmark; Serbia; New Zealand; the UK; Canada; Portugal; China and the Netherlands. When taking economic development measures into account, the biggest change was seen in the countries ranked both highest and lowest in the overall ranking. Serbia, South Africa, India and China all improved their positions by 25 places. By taking context into account, the publishers of these rankings believe they have overcome some of the common criticisms of rankings. South Africa was ranked 45th overall. It performed well in respect of connectivity. An important comparison for the local research sector was South Africa's rank at 41 for publications per head and higher, at 24, for their average impact. When economic context was taken into account, South Africa was ranked 17th.

The ranking of universities has led to a great deal of debate and controversy.¹⁰⁴ Much of the criticism has hinged on accusations regarding the bias in favour of the natural sciences (for instance a university with a medical school is likely to be ranked higher due to the nature of research in this field) and in favour of English-language publications. The ranking agencies have attempted to address these criticisms by adjusting the indicators to be more inclusive of the humanities and social sciences, and to consider work published in languages other than English. Other critiques are that a 'one-size fits all' university system is neither practical nor desired; that some ranking systems change criteria annually, making longitudinal comparison almost impossible; and that rankings fail to take context into account. Added to these is the excessive or exclusive focus on research, despite the fact that undergraduate students use the rankings as a way to select their institutions, which has resulted in criticism from those concerned with teaching and learning who feel that this aspect is undervalued. Academic staff members at many institutions are placed under great pressure to improve their university's rank. Data reliability has also been questioned. Despite these issues,

¹⁰³ See <http://www.universitas21.com/>.

¹⁰⁴ See, for example, J.C. Shin, R. Kevin & U. Teichler (2011) *University rankings: Theoretical basis, methodology and impacts on global higher education*; G. Federkeil (2002) 'Some aspects of ranking methodology –The CHE-Ranking of German universities' in *Higher Education in Europe*, 27(4).

rankings have gained general acceptance internationally in the news media and with the public, and are, most likely, here to stay.¹⁰⁵

4.8 Doctoral graduations

The PhD degree has become an international benchmark for starting competence as an independent researcher and is also widely used as a proxy for the health of a higher education system. While registration, supervision and examination practices and requirements vary, it is generally accepted that a doctoral graduate must have undertaken independent research to address unresolved problems in a discipline or its applied varieties. The National Qualifications Framework (NQF) has placed doctoral degrees at the highest level (10) and it has become common practice that only a doctorate-holder can supervise study for a doctoral degree.¹⁰⁶

The number of research graduates in South Africa is low which affects academic staffing and knowledge production.¹⁰⁷ While there is little empirical evidence suggesting a direct link between the ratio of doctoral graduates per capita and economic performance of the country, the National Development Plan (NDP) has set a target of over 5 000 doctoral graduates per year by 2030 (up from 1 878 in 2012), with at least 25% of all enrolments at postgraduate level.¹⁰⁸ The plan also expects that over 75% of staff members should have a doctorate by 2030, which is ambitious given that in 2012 only 39% of permanent academic staff were known to hold one.

An ASSAf study on doctorates found that PhD graduates in South Africa were still predominantly white and male, and were working mainly in the humanities and social sciences.¹⁰⁹ The three highest-producing fields were: education, economics and management sciences, and religion. The study noted generally slow throughput rates and high dropout levels, and identified specific risk factors that affect completion rates. Some of these included that many students undertaking a PhD were of an age where they had family and other commitments; there were also inadequate socialisation experiences with other postgraduate students, leading to isolation; and in many cases a poor relationship with the supervisor. Conversely, a report by SAYAS found that most doctoral candidates were satisfied with both their supervisors and their personal progress.¹¹⁰

Finally, and as expected, funding for PhD studies has a major impact on completion rates and also on the number and demographic of students who pursue postgraduate studies. The SAYAS study found that the majority of those enrolled in doctoral studies planned an academic career. Both reports made a number of key recommendations for improving the number of doctoral graduates in South Africa: the need for full-time study at this level, and the necessary levels of funding to support this; the need for a dual system of supervisors and mentors to assist with the different issues faced by postgraduate students; and the need for institutional differentiation. In addition, the ASSAf study pointed out that

¹⁰⁵ B. Wildavsky (2010) *The great brain race: How global universities are reshaping the world*.

¹⁰⁶ DHET (2008) *National Qualifications Framework Act 67*.

¹⁰⁷ See Figure 4 and ASSAf (2010) *The PhD Study*.

¹⁰⁸ NPC (2011) *National Development Plan*.

¹⁰⁹ ASSAf (2010) *The PhD Study*.

¹¹⁰ SAYAS (2013) *The research experience of young scientists in South Africa*.

the then exclusive use of the supervisor-student model was constraining in the light of the limited supervision capacity in the system. It therefore encouraged different formats for the PhD, for instance by peer reviewed journal articles or via a cohort of students who follow classes and embark on research in a more structured environment.

Two responses to the above are noteworthy. In the revision of the qualifications framework for higher education, the types of doctoral study were expanded to include the possibility of a professional doctorate undertaken on a cohort basis, and the NRF introduced its PhD project, which aims to provide a hub for peer and mentor support for PhD candidates, increase the number and diversity of mentors, and develop partnerships with the private sector.

4.9 The role of the humanities

With the South African government's focus on technological innovation and the economic impact of research-based knowledge, there has been much concern in its own community that the so-called broad humanities (the traditional arts of the BA and MA degrees and the social sciences) might be declining within an NSI more pre-occupied with the STEM subjects – (natural) science, technology, engineering and mathematics. This concern has led to the publication of two very different reports on the status of the broad humanities and its research base in South Africa, and more recently, to the establishment of a National Institute for the Humanities and the Social Sciences (NIHSS).

The first report was commissioned by ASSAf in 2008 and published in 2011.¹¹¹ The study was conducted by a twelve-person study panel drawn entirely from the field under study, under the guidance of two chairs. It followed a consensus methodology and was based on an extensive investigation into the humanities as currently situated in higher education and within the NSI as a whole. The study covered four broad areas, namely: the way 'innovation' and 'research' are interpreted in government policy; the number of humanities enrolments and graduates; research outputs; and graduate employment. The report concluded that the humanities were 'in crisis', and made a set of varied recommendations.

The second report (or Charter) was commissioned by the Minister of Higher Education and Training in 2010 and was completed the following year.¹¹² This task team consisted of two people, who were assisted by a researcher and a coordinator, as well as both national and international reference groups. The Charter team reiterated that there was a 'crisis', and made recommendations for correcting the problems they had identified, including the establishment of a national institute for the humanities over and above the Human Sciences Research Council (HSRC). Some of the findings of these studies relating to research are considered below.

First, regarding funding for humanities research. The ASSAf report argued that natural science focused definitions of research and innovation impact negatively on funding opportunities. While it is the case that funding for the

¹¹¹ ASSAf (2011) *Consensus study on the state of the humanities in South Africa: Status, prospects and strategies*.

¹¹² DHET (2011) *Report Commissioned by the Minister of Higher Education and Training for the Charter for Humanities and Social Sciences*.

natural sciences is higher, NRF funding through its Research and Innovation Support and Advancement (RISA) programme for 2012/13 for the Humanities and Social Sciences totaled R129 million (or 14% of the RISA budget) and 29% of the researchers supported were in the broad humanities.¹¹³

Second, considering the quantity of humanities research output. The scale of outputs (as measured by the DHET) does not necessarily support the view that the humanities are in crisis. The ASSAf study found that the humanities have continued to produce approximately 37% of all research outputs in accredited journals over the last twenty years. Considering the fact that the research outputs in total have grown significantly during this period, this indicates that humanities research has, generally, kept pace with other areas, although a slight decline in this regard has indeed been evident more recently. When the field of education is added to the humanities, research accounts for a significant 40% of the 2010 outputs. One area of particular concern regarding research output is the low number of book publications (5% of all publications in 2011), but 80% of these were in the humanities (86% if grouped with education).¹¹⁴ In order to stimulate book publication, changes to the research output policy have been made to increase subsidy for books.

Thirdly, regarding the quality of research output. The ASSAf report commented that many humanities publications are accredited on the DHET's list of locally published journals rather than on the international indices. However, the vast majority of research output units are generated by internationally indexed titles (about 70%), of which about 10% are in journals on the humanities-focused ProQuest IBSS index, suggesting that a good proportion of humanities research is published internationally. Furthermore, the recent increase in the number of local journals indexed internationally by Thomson Reuters suggests that many local journals are of a high quality. This is supported by the findings of discipline-grouped peer review groups constituted by ASSAf to consider the quality of local journals. The main conclusion after more than a hundred reviews carried out so far has been that local journals are generally of good quality but too small in article numbers and frequency of publication to earn an international reputation in their fields.¹¹⁵ Furthermore, as discussed in the section on rankings, South African research in the humanities and social sciences was ranked higher than research in other fields.

Finally, considering the production of PhDs, the ASSAf report on doctorates points out that the production of PhDs in the humanities is high compared with other fields (47%) although, as discussed before, doctoral education is a national concern across all fields, and is not humanities specific.

Returning to the two reports, it appears that while there are concerns about the humanities, their present situation is not a crisis. That said, some of the reports' recommendations could assist in strengthening the humanities in South Africa. For instance, the ASSAf report recommended that ASSAf introduce a second high-quality journal, in addition to the South African Journal of Science, to cater for the broad humanities. Furthermore, an NRF funding stream specifically for the humanities could be beneficial. The lumping together of the humanities, social

¹¹³ NRF (2013) *National Research Foundation: Annual performance report for 2012/13*.

¹¹⁴ DHET (2013) *Ministerial report on the evaluation of the 2011 institutional research publications outputs*.

¹¹⁵ ASSAf (2013) *Report on grouped peer review of scholarly journals in religion, theology and related fields*.

sciences and arts in these reports (and in this discussion) highlights the need for a more intricate understanding of the nuances and specific needs of these different fields. While some of the recommendations from the two humanities reports could assist in strengthening the humanities (and the higher education sector), the need for the Charter's recommended national institute of humanities is unclear, given other bodies in the sector with similar or overlapping roles, and it may lead to confusion and resources more thinly spread.¹¹⁶

5. The next ten years: re-imagining the future

In this chapter, there have been various pointers to possible improvements that could be made in higher education research. In concluding the chapter, some trends and strategies are discussed together with ideas on how the research sector could become more productive in the next ten to twenty years. The chapter closes with a list of areas where urgent development is needed in order to position South African universities as preferred research destinations. Globalisation has introduced fierce competition between countries and those succeeding as research destinations have put in place plans to develop knowledge and convert it into competitive technologies. South Africa boasts relatively modern infrastructure and is the highest producer of knowledge in Africa, but it needs to improve its position internationally.

5.1 An ever-changing cyber-environment

Over the past two decades there have been many technological changes that point towards a radically different higher education system in the not too distant future, both in unexpected as well as expected ways. The way in which scholars maintain collegial relations with other scholars has already changed considerably as a result of emails and other forms of cyber-communication. Collaboration has increased partly because it is so easy. Currently, experiments can be done in real time across continental divides through high-performance computing built into connected-up analytical instrumentation. Furthermore, research articles can be jointly authored as though several people were in a room together and not thousands of kilometres apart.

Data is the foundation on which scientific evidence is built and South Africa should consider more efficient data-sharing and more open access to information and resources which could make it easier for observations to be confirmed, experiments to be replicated, hypotheses to be supported, rejected or refined, and, ultimately, for answers to societal challenges to be found. Open Science envisages optimal sharing of research results and tools: publications, data, software, and educational resources. It relies on powerful digital technologies and e-infrastructures that enable online research collaboration and information dissemination. The collective intelligence of scientific communities could be unleashed through further collaboration across institutional, disciplinary, sectoral

¹¹⁶ DHET (2011) *Report Commissioned by the Minister of Higher Education and Training for the Charter for Humanities and Social Sciences*; see <http://www.hssi.org.za/>.

and national boundaries.¹¹⁷

In this chapter, the issue of open access to the published literature was discussed in some detail, but there are also other changes to academic publishing such as to peer review (probably in the direction of open crowd review); to altmetric assessments of article impact and significance (replacing journal impact factors); to measures to better protect the integrity of the published record (such as universal plagiarism checks, routine replication requirements, and open peer review); and to the fragmentation of the conventional single-version research article into several versions (the to-be-read-by-all stripped-down version, the version with formally reviewed online backup data, and the offline but stored data of each study, and blogged comments and reviews).

Postgraduate study and supervision could also undergo substantial change as students can enrol for individual massive open online courses (MOOCs) offered by world-class institutions on specific topics or techniques relevant to their project. In this way, something similar to the qualifying courses of the American doctoral system could be implemented without significant cost implications, but with improved knowledge and insight. In this increasingly connected world, some of the old standard ideas and practices will adapt or disappear. For instance, will individual supervision of doctoral students remain the same when the latter can access an entire community of advisors and mentors at any time, in any place? Will institutional procedures for registration, monitoring and examination of research students still make sense?

South Africa will not be immune to these coming changes, and both the government and the sector will need to respond appropriately to support the research sector. One requirement, despite the good performance thus far of university collaboration to provide high-speed connectivity, is improved broadband infrastructure to support the country's higher education researchers.¹¹⁸

5.2 Access to scholarly resources

Despite the access that improved technology promises, resources such as scholarly books and journals as a basic requirement for teaching, learning and research remain inaccessible for many students, academics and researchers at institutions across South Africa. This is an area for policy intervention. Taxes on books and resources and education material need to be reduced or eliminated to expand access across all sectors. A digital library and general journal licence needs to be negotiated at national level to allow for all institutions to benefit from access to at least a limited amount of fundamental education material. ScieLo-SA needs to be funded and expanded as a national resource.

5.3 Competition versus cooperation

The now prevalent and growing practice of ranking institutions discussed above has already elicited a variety of responses, some of them not in the best interests of the sector as a whole. Such behaviour may, in the future, threaten

¹¹⁷ UNESCO (2014) 'Open science for the 21st century: Declaration of all European academies' (declaration).

¹¹⁸ See <http://www.tenet.ac.za/> for more details.

the present culture of increasing collaboration and cooperation in research endeavours between individuals, groups and institutions. A healthy balance between competitive effort and destructive competition is required. Government funding policies need to support and encourage collaboration, be it through shared supervision, collective research centres, shared lectures, DHET output subsidies or in a multitude of other ways.

Similarly, the important role of the different branches of the sciences needs to be recognised, as has been highlighted in the two reports on the state of the humanities discussed above. It is important that an approach in which the only valid social science research is that which supplements natural science projects or investigates the impact of technological change is avoided. Just as collaboration is best done between equals, so inter-, trans- and multi-disciplinary studies require intellectual respect on all sides. This will be an agenda for the future.

5.4 Transformation remains critically important

Higher education data indicate that the demographic transformation of the undergraduate student body at South African universities is proceeding well. However, the critically important follow-through into postgraduate study is still not happening at the desired rate. One reason for this is the need for fundamental curriculum reform to ensure higher undergraduate throughput rates. A convincing case for an extended curriculum was put forward by a task team of the CHE, as is discussed in more detail in the teaching and learning chapter, but it has not as yet led to coordinated action by universities and government.

It would be useful to learn from past successful initiatives when developing research centres of excellence at previously disadvantaged universities. It is important to build active groups around strong individuals and to put in place regulations that guarantee institutional financial support against other demands or options.

5.5 The role of national disciplinary associations

Discussions on the state of the NSI generally omit the national associations for most individual (or grouped) disciplines. The NRF, as a body of the International Council for Science (ICSU), used to maintain national committees for each of the local discipline groups that corresponded to one of the international unions. There was also a joint council in place for the national scholarly associations. These committees no longer have the academic stature they once did and their focus is now on organising conferences, awarding prizes, and publishing journals.

However, such national associations could play an important academic role in developing disciplines, ensuring quality and improving research ability. For instance the Institute of Physics (on invitation from the DST) reviewed physics teaching for school learners, for undergraduates at different kinds of universities, and for honours courses, as well as physics research in South Africa, and other relevant matters. This self-review had a positive impact on the reform and renewal of a once-struggling discipline.

Harnessing the capacity of the national associations to produce critically

necessary rejuvenations and enhanced teamwork is an important agenda for the future of the higher education research sector. Furthermore, it is important to re-focus South Africa's interaction with scholars and scientists in the ICU and its international scientific unions.

5.6 Improving the innovation system

One of the issues raised by each review of the NSI has been the lack of both vertical and horizontal coordination within the national system. The decision in 1994 to transfer responsibility for the research councils to their respective line departments resulted in the unintended fragmentation of the country's science system and uncoordinated implementation of the policy instruments for stimulating and steering public sector R&D growth. For instance, the Medical and Agricultural Research Councils were unable (except indirectly) to benefit from the DST-led initiatives for major equipment, research chairs and centres of excellence, leading to unbalanced distributions of these investments. This issue must be addressed in order to make national investments work for the whole system.

Furthermore, the recommendation of the Ministerial Review Committee for the introduction of sectoral funds outside the NRF's grant-making model, but with joint industry-government funding and similarly joint award-making, has not been implemented. This proposal would increase the total public sector funding flows in a manner that has worked to great advantage in other regions (like Sao Paulo in Brazil). The challenge for higher education is to exploit the opportunity of joining up with the considerable knowledge resources of industry to deepen the multi-helical nature of enterprise.

South Africa is fortunate to have a national science academy that was established recently enough for it to be more modern in its approach; such as a broad focus inclusive of all empirical disciplines and a mission of serving the nation rather than its members. However, despite its achievements since its foundation, it still lacks true stature as a science academy. For instance, when institutions list their research achievements, few include a list of academics who have been elected as ASSAf members. Such achievements would be celebrated in many other countries. ASSAf cannot fulfill its full potential as an organisation of scholarship and knowledge in the NSI and society broadly if it does not have the appropriate recognition in the sector.

Research policy and development is not limited to one Department but is shared between the DHET and DST. While the Departments may have different foci, it is imperative that they coordinate their activities in order to ensure that the same message is sent to universities and the public regarding research development. These Departments (and their agencies) need to work together and with the universities to ensure effective policy development and implementation.

5.7 Research management to support academics

The South African Research and Innovation Management Association (SARIMA) has existed for some years and has the support of many of the people who work in university research or the field of research evaluation. There can be no doubt that the sound administration of grant applications and grant funds is of enormous

importance to the scientists and scholars of an institutions, while evaluation and reporting are key. Developing and maintaining research centres requires dedicated research leadership and management capacity. Research management cannot afford to act on *ad hoc* institutional or national decisions taken without deep analysis of presented data and decision-making from a well-informed position. For the purposes of effective planning and decision-making, institutions need to develop their capacity to conduct institutional research about their own policies, their response to government priorities, commercialisation, pressures to compete and collaborate, teaching and learning and community engagement. However, it is important to limit the unnecessary expansion of the university bureaucracy, especially when this comes at the cost of increasing the number of academics. Furthermore, universities must ensure that research, human resources, finance and similar university departments provide a useful service to academics rather than make further demands on an academic's time.

Institutions of higher learning need to apply government policies taking discipline differences into account so as to ensure the successful development of all disciplines. For instance, policies on research output cannot be applied in the same way in Faculties of Commerce, Humanities and Medicine as the nature and publication priorities of these different faculties impact on the time to complete research projects and different publication types. Universities must, therefore, develop their own institutional policies. Furthermore, in allocating research funds, universities must develop an institutional development plan and use money accordingly in a way that does not necessarily mirror the national funding formula. Money should not be allocated to individuals unless its use is directed towards research priorities.

5.8 Measuring significant discoveries

South Africa lacks a vehicle for the systematic recognition of discoveries, as opposed to research articles or other publications. In many disciplines, research articles are the first step towards innovation, but it is important to take the research to the next level. What is needed is a reliable way of assessing published outputs or registered patents in terms of widely accepted criteria that would accord discovery status to certain work. This would allow for the true recognition of the contribution that higher education research is making to the nation.

5.9 Strengthening key research platforms

South Africa's unique geographical position offers it competitive advantages in certain disciplines. Research areas such as astronomy, paleontology, oceanography, maritime studies and biodiversity are some areas that can locate South Africa as a preferred research destination. However, research in some of these areas is not fully explored (such as maritime studies) and in other areas, universities have not aligned their focus and resources according to the same priorities as government (such as astronomy).

5.10 Human capital development

Studies of success rates and throughput rates at South African universities have clearly demonstrated that the academic process lacks efficiency and does not have the capacity to address the chronic shortages of critical skills. It takes too long for students to complete their qualifications and too few complete. These inefficiencies do not support the national effort of addressing great shortages in the supply of knowledge workers and the need to transform the demography of researchers in terms of race, gender and age. The great shortage of university academics with suitable qualifications has not received the attention it deserves if South Africa is to unlock its potential as a research destination. The country has insufficient innovative strategies to address the development of the critical skills needed to drive research and innovation. For example, Brazil has prioritised sending 10 000 doctoral students abroad to be trained at select institutions. South Africa lacks such bold national strategies to address critical shortages.

5.11 Doctoral programmes

The current approach to the training of doctoral candidates may not be the most appropriate to provide South Africa with the requisite number of qualified knowledge workers. In particular, graduate schools are needed where students can work with others who are enrolled in the same field: full-time study at this level needs to be encouraged; more mentoring could be utilised; and the teaching of cohorts of doctoral students on the same programme should be explored.

5.12 A policy environment conducive to knowledge production

Globally, the countries that move forward quickest will be those that appreciate the value of a knowledge worker. Such appreciation can be demonstrated through reward policies, immigration laws and the general appreciation of such specialists in the country. Since 1994, knowledge as a special commodity has not been nationally promoted. For example, many top scholars choose to join industry rather than pursue a research career since 'research does not pay'. We need to rethink how we promote knowledge and knowledge producers in the nation. The fundamental question should be, 'how do we get the brightest in the nation to be entrusted with producing knowledge (and passing this knowledge on through teaching) for the future competitiveness of the nation?' Furthermore, immigration policy needs to be reconsidered in order to attract those with the necessary skills into the country.

5.13 Investment in research

In a country where there is growing poverty and unemployment, the most popular approach is to focus on short-term strategies at the exclusion of long-term investment in research and innovation. For many years, South Africa has undertaken to invest at least 1% of GDP in research, but investment as a percentage of GDP has actually declined. Perhaps the current fiscal instruments for research funding are not the most appropriate ones in order to reach the 1.5% target. A tax-based research fund is a possibility to explore.

5.14 Focused institutions are needed

In order for our higher education sector to meet the varied needs of society we need a diverse and differentiated system. Currently, institutions are expected to focus on and excel in providing undergraduate teaching, research, and postgraduate teaching while also meeting the needs of the economy, producing teachers and lecturers (for schools and colleges) and meeting other social and professional needs, which is difficult to maintain in the current fiscal climate.

5.15 Funding

The funding cycle of government does not coincide with the universities' academic year. This causes problems at institutional level, especially when it comes to research and student funding. Ways need to be found to ensure that funding for annual activities is provided timeously and in line with the university calendar.

In conclusion, the task team proposes that a national dialogue between universities, science councils, government, private sector researchers and industry be initiated to find new ways of developing the research and innovation sector to make South Africa a preferred knowledge destination in the world. In order for research and scholarship to be developed at our universities we need to work together to reimagine South Africa as a competitive global knowledge producer.

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Community engagement

6

Writers and editors: Judy Favish with Genevieve Simpson

Task team leader: Brian O'Connell

Members/contributors: Samuel Fongwa, Glenda Kruss, Sonwabo Ngcelwane,

Jerome Slamat & Jayshree Thakrar

CHE research assistant: Neo Ramoupi

The relationship between higher education and the community presents both opportunities as well as challenges for national, regional and local development. While the notion of serving the public good has long been part of the national and international higher education landscape, that of community engagement as a mechanism for contributing to the public good is much newer and is open to multiple interpretations.

Despite the South African government's articulated desire to see higher education institutions play a more active role in addressing the development needs of the country, there has been a policy vacuum with respect to defining strategies for enhancing the developmental role of universities. This neglect is of particular concern given the South African context of high levels of poverty and inequality, and the continued effects of the legacy of apartheid which constrain access to quality services and education and militate against building a common South African identity that transcends fragmented racial identities.

The limited focus on the role of higher education as a major development driver in most national policies has contributed to the marginalisation of community engagement within the system, and a reliance on the interests and values of individual academics and units to drive developmental activities within their universities.¹ This marginalisation has, arguably, been exacerbated by the rise of international rankings which, according to Habib, "privilege one reality of higher education and impose indicators related to that reality across multiple global systems, overlooking history and contextual specificity".² As a result, global higher education recognition systems tend to steer academics towards knowledge-generation activities that are perceived to be of international relevance in order to enhance opportunities for publishing in internationally recognised journals, thus reinforcing hegemonic notions of scholarship. Simultaneously, academics move away from devoting time to building knowledge networks that could address social and economic development challenges.³

Given this context, this chapter argues that universities in South Africa have particular challenges and responsibilities with respect to contributing to

¹ N. Cloete, T. Bailey, P. Pillay, I. Bunting & P. Maassen (2011) *Universities and economic development in Africa: Key findings*.

² M. Walker & M. McLean (2013) *Professional education, capabilities and the public good: The role of universities in promoting human development*, p. 15.

³ P.M.L. Anderson, M. Brown-Luthango, M. Cartwright, I. Farouk & W. Smit (2013) 'Brokering communities of knowledge and practice: Reflections on the African Centre for Cities' CityLab programme in *Cities*, 32, pp. 1-10.

developing future community leaders with the capacity and commitment to engage with these societal issues, and to ensure that engagement with national and global challenges informs the research conducted within our universities. Institutions also have an obligation to encourage academics to reflect on their responsibilities as citizens and scholars with regard to engaging with communities in generating and sharing knowledge. This in turn will contribute to empowering communities to be active agents, with government and other stakeholders, in generating sustainable solutions to socio-economic and political developmental challenges.

Despite these challenges, there have been major advances in engaged scholarship at institutional level in South Africa, thereby challenging the notion of a dichotomy between high quality scholarly endeavours and engagement. We argue that engagement with communities can, and does, result in benefits for communities while enhancing the academic project, through enabling access to information and drawing on different ecologies of knowledge. Furthermore, new models for collaborative engagement around development challenges are generated through such engagement. The organisation and monitoring of community-based engaged projects for students provides opportunities for nurturing critical and democratic citizenship, and helps build a commitment to shaping an equitable social order by encouraging reflection on the extremely varied social contexts that characterise South African society. In this chapter, examples of diverse modes of engagement and the range of socio-economic and political developmental challenges that can be addressed are provided together with recommendations for enhancing and expanding university-community engagement.

2. Defining the terrain: university-community engagement

University-community engagement is not something new, but it has taken different forms depending on the national and institutional context. In South Africa in the 1980s, the focus tended to be on service and outreach into the community. However, by the 2000s the focus had shifted towards engaging with the community for mutual benefit in a manner that makes community engagement integral to the core functions of the university.⁴ However, the field has been characterised by a lack of conceptual clarity about the term ‘community engagement’.⁵ South Africa is not unique in this respect. Internationally, the field has also been contested and defined very differently in diverse contexts with terms or concepts like outreach, community service, regional engagement, public service, community engagement, civic engagement, public engagement, knowledge exchange, third mission, triple-helix and social innovation being the most common. The terms ‘engaged scholarship’ and ‘the engaged university’ have

⁴ G. Bender (2008) ‘Exploring conceptual models for community engagement at higher education institutions in South Africa’ in *Perspectives in Education*, 26(1), pp. 81-95.

⁵ CHE (2010) ‘Community education in South African higher education’ in *Kagisano*, 6.

gained prominence.⁶ In this chapter, the term 'community engagement' is used as an umbrella term covering these multiple terms or concepts.

The debate around definitions is predicated on the core question of the purpose, role and responsibility of the university as an institution. While the various approaches impact on the implementation of community engagement, there are generally three models that have influenced thinking about the different roles or purposes of higher education.⁷ The first is a silo model where the three roles of higher education – namely teaching, research and community engagement – are pursued independently of each other. In this model, community engagement is seen as an add-on activity and not part of the core academic project. It tends to make community engagement voluntary and service focused. This is the traditional notion of community engagement, but it is losing favour.

The second is an intersecting model where the university is still seen to have three separate roles, but these have points where they intersect. In this model, service-learning and community-based research takes place at the points of intersection with teaching and learning and research respectively, but volunteerism and service continue where there is no intersection. This interpretation views the university as already engaging without the need for a radical shift in the way it conceptualises its activities.

The final model is an infused or cross-cutting one which sees the university as having only two core roles – namely teaching and research. Community engagement is understood as a fundamental concept which should be integrated into these core activities. This model is closely linked to the engaged scholarship approach discussed below and leads to the so-called community-engaged university.⁸ While these models are fundamentally different, all can be useful in different contexts. Therefore, rather than selecting a best practice model, in this chapter the argument is that institutions should be left to select the model and approach (or approaches) that best suits their specific context, mission and vision.

The more recent approach is that scholarship is at the core of the purpose of the university and community engagement should, therefore, be about knowledge and knowledge resources. Kruss explains that:

It is not an activity that academics engage in as citizens, but is core to their disciplinary commitments and reputational identity. Nor is it an 'add-on' to 'normal' academic

⁶ J. Goddard (1997) 'Managing the university/regional interface' in *Higher Education Management*, 9(3); OECD (1999) *The response of higher education institutions to regional needs*; G. Subotzky (1999) 'Alternatives to the entrepreneurial university: New modes of knowledge production in community service programmes' in *Higher Education*, 38, pp. 401-440; C. Duke (2000) 'Regional partnerships – Building the learning region' (unpublished paper); D.J. Maurrasse (2001) *Beyond the campus: How colleges and universities form partnerships with their communities*; D. Cooper (2010) 'The UCT idea of 'SR': 'Engaged scholarship' must be at its conceptual core for academic staff' in *Social Responsiveness Report*; J.J. Duderstad (1999/2000) 'New roles for the 21st century university' in *Issues in Science and Technology*, 16(2) p. 37; D. Watson, R. Hollister, S. Stroud & E. Babcock (2011) *The engaged university: International perspectives on civic engagement*.

⁷ Bender (2008) 'Exploring conceptual models for community engagement at higher education institutions in South Africa' in *Perspectives in Education*, 26(1), 81-95.

⁸ Ibid.

work, in that it 'cuts across' teaching, research and services in an integrated manner. It is also not driven solely by external demand, whether from markets or government or communities. The notion that engaged scholarship should be related to the mission of the unit or university, to substantive growth, is important for analytical purposes. It introduces a nuance to the normative dimension which is typical to the South African debate, in that it highlights the possible differentiation and segmentation between institutions or knowledge fields.⁹

In this review, the national developments are located within the continuum of changing theoretical understandings of community engagement in South Africa that mirror changing international concepts. The foregrounding of engagement and integration with scholarship is the more recent outcome of a long series of debates and practices, which are here outlined only briefly.

In the South African context, early post-1994 higher education government policy does not refer explicitly to community engagement in relation to the responsiveness of universities. The 1997 White Paper and the National Plan refer to 'community service', which is defined rather narrowly in relation to its potential in raising the social awareness of students.¹⁰ As such, it is largely conceptualised as involving activities that fall outside of the formal university curriculum. However, the policies do indicate that interaction with the community is part of the core business of the South African public university, along with teaching and research, although it is left up to the individual universities to determine how to define community engagement within their individual contexts.¹¹

In the absence of a clear national conceptualisation, South African institutions have drawn on one or more international approaches in developing their own conceptual frameworks for guiding community engagement activities. The dominant approaches include those used in land grant universities, academic entrepreneurialism, community engagement, regional development and engaged scholarship.¹² Such approaches have been influenced by varying understandings of the mission and role of universities in response to a variety of demands placed on them.

Land grant universities in America, for example, were developed in order to create institutions with very specific missions to meet regional needs, and in that way, they served to increase differentiation. This concept has influenced how some South African universities have understood their developmental role. Academic entrepreneurialism, as another form of engagement emphasises the need to enhance national economic competitiveness within a global knowledge-

⁹ G. Kruss (2012) 'Reconceptualising engagement: A conceptual framework for analysing university interaction with external social partners' in *South African Review of Sociology*, 43(2), p. 19.

¹⁰ DoE (1997) *White Paper 3: A programme for the transformation of higher education*.

¹¹ A.M. Thomson, A.R. Smith-Tolken, A.V. Naidoo & R.G. Bringle (2011) 'Service learning and community engagement: A comparison of three national contexts' in *Voluntas*, 22, pp. 214-237.

¹² Cooper (2010) 'The UCT idea of 'SR': 'Engaged Scholarship' must be at its conceptual core for academic staff' in *Social Responsiveness Report*; J. Favish (2005) 'Developing a framework for monitoring and enhancing higher education's contribution to social and economic development as part of a quality assurance system' in *The decade ahead. Challenges for quality assurance in South African higher education*; S. Fongwa, L. Marais & D. Atkinson (2013) 'Universities and regional engagement: Lessons from the OECD regional assessment of the Free State' (unpublished paper).

driven economy.¹³ It highlights the need for the university to be flexible in its approach and ready to adapt and change. Universities need to respond to the multiple new demands from government, industry and society without losing their role as knowledge-based institutions.¹⁴ The community engagement model emerged in the USA in the early 1990s as a reaction to urban decay caused by large-scale unemployment, and called for a recommitment of higher education to its civic purpose. This model is associated with a strong emphasis on partnerships between universities and local communities, and providing opportunities for students to engage directly with communities through service learning.¹⁵ A regional development model associated with the OECD has argued that strong regions need strong universities that, “engage with others in their regions, provide opportunities for lifelong learning and contribute to the development of knowledge-intensive jobs which will enable graduates to find local employment and remain in their communities”.¹⁶ Finally, there are models that are built on the notion of the ‘scholarship of engagement’, noted above, which differs from traditional notions of scholarship in that cues for questions and choices for instruction are driven by, and answers are produced through, contact with persons and places outside of the academy rather than only by the development of theory within academic disciplines.¹⁷

3. The value of the engaged university

The concept of engaged scholarship emphasises the need to reflect on the actual process of knowledge generation and dissemination and a broader notion of scholarship. It is closely associated with Michigan State University, which defined it as a form of scholarship that cuts across teaching, research and service. “It involves generating, transmitting, applying and preserving knowledge for the direct benefit of external audiences” in ways that are consistent with university and unit missions.¹⁸ The key feature of this approach is that engagement draws on scholarship and can involve engaged research, engaged teaching and engaged service. The use of the term ‘engagement’ reflects a commitment to working with external social partners in ways that result in, and build, mutually beneficial and reciprocal relationships between university and society.¹⁹

¹³ Walker & McLean (2013) *Professional education, capabilities and the public good*.

¹⁴ Kruss (2012) ‘Reconceptualising engagement: A conceptual framework for analysing university interaction with external social partners’ in *South African Review of Sociology*, 43(2).

¹⁵ Favish (2005) ‘Developing a framework for monitoring and enhancing higher education’s contribution to social and economic development as part of a quality assurance system’ in *The decade ahead*.

¹⁶ OECD (1999) *The response of higher education institutions to regional needs*; OECD (2007) *Globalisation and regional economies: Can OECD regions compete in global industries?*

¹⁷ D. Cox (2006) ‘The how and why of the scholarship of engagement’ in S. Percy, N. Zimpher and M. Brukardt (eds.) *Creating a new kind of university: Institutionalising community-university engagement*.

¹⁸ Michigan State University (2009) ‘University outreach at Michigan State University: Extending knowledge to serve society’ (report).

¹⁹ Cooper (2010) ‘The UCT idea of ‘SR’: ‘Engaged scholarship’ must be at its conceptual core for academic staff’ in *Social Responsiveness Report*.

Gibbons has posited the notion of the ‘agora’ which “refers collectively to the public space in which ‘science meets the public’, and in which the public ‘speaks back’ to science... It is populated not only by arrays of competing ‘experts’ and the organisations and institutions through which knowledge is generated and traded but also variously jostling ‘publics’, by academics and other ‘publics’ in which all partners bring something that can be exchanged or negotiated... where the success of these exchanges depends upon each participant bringing something that is considered valuable by someone else – whatever that value might be.”²⁰ Underpinning this approach is the belief that “recognising and valuing different knowledges should be seen as having a positive impact because new knowledge can build on the strengths of academic research and indigenous knowledge. Further, the recognition of differences can help strengthen the interface between them”.²¹

In theorising how the relationships that universities build with society impact on their developmental role, Swartz argues that social engagement is a critical vehicle for producing academic citizens, provided that:

The university does not speak at society from above (and that) it engages with societal actors as equal partners in a discursive and democratic set of social relations. In these relationships, universities bring their considerable knowledge assets to the table, which, together with the indigenous knowledge of communities, social networks and resources in society, provide building blocks for different forms of development.²²

This emergent approach to engagement illustrates the potential of partnerships between universities and various social partners or communities to yield ‘transformative knowledge’ which links the values of democracy, respect and action to knowledge utilisation.²³

Engaged research can be in collaboration with a number of partners – including business, state and civil society – and can focus on a range of concerns. In the South African context, while some universities and academics frequently engage with business and the innovation sector, as encouraged by the initiatives of the Department of Science and Technology (DST), others have reacted against what they interpret as the marketisation of higher education and have instead turned towards engagement with the marginalised in an attempt to bring about social transformation for public good. Increasingly, there is a focus on ‘development research’ around topics which impact on society as a whole.²⁴

In the understanding of engaged scholarship, mutual benefit, whether in partnership with business, the state, civil society or local communities, is central

²⁰ M. Gibbons (2006) ‘Engagement as a core value in a mode 2 society’ (conference presentation).

²¹ A. Bawa & J. Favish (2007) *Community engagement through research: Community engagement in higher education* (conference proceedings).

²² D. Swartz (2006) ‘New pathways to sustainability: African universities in a globalising world’ in M. Nkomo, D. Swartz & B. Maja *Within the realm of possibility: From disadvantage to development at the University of Fort Hare and the University of the North*.

²³ GUNi (2014) *Higher education in the world 5: Knowledge, engagement and higher education: Contributing to social change*.

²⁴ G. Kruss, M. Visser, M. Aphhane & G. Haupt (2013) *Academic interaction with social partners: Investigating the contribution of universities to economic and social development*.

to the value of such research projects. For the state and business, the focus is often on applied rather than basic research. In this view, universities need to ensure that they remain independent in selecting research projects to maintain a suitable balance between types of research.²⁵ Similarly, when entering into research contracts with civil society and local communities, it would be important for the community to benefit from the research findings. There needs to be an understanding of the ethical and moral responsibility towards the community involved.²⁶

4. National policy environment

The various approaches to community engagement discussed above help to explain why much energy has been spent on unpacking what community engagement means within the South African context. The notion of making the responsiveness of higher education part of policy was initially expressed in the National Council on Higher Education (NCHE) report in 1996. The report highlighted the social role of the university as one of the four main purposes of higher education. It noted that “...society depends on higher education for the socialisation of enlightened, responsible and critically constructive citizens.”²⁷ This concept was elaborated further in the report’s discussion of a new framework for higher education where it emphasised the need for “greater responsiveness”. It described this as a “shift of higher education to a more open and interactive system, responding to the social, cultural, political and economic needs of its environment, and adapting itself to the changes in this environment.”²⁸ Along with this call, the NCHE noted that there should also be “enough room for the kind of freedom that will ensure autonomous academic inputs and discretion, so that those longer term objectives of higher education which the market and the immediate social environment do not, and cannot, register can be attended to.”²⁹

The 1997 White Paper laid the foundation for encouraging institutions to grapple with their role in relation to advancing reconstruction and development. The policy refers to a key mandate of higher education being to address diverse problems and demands – including economic growth – at local, national and continental levels through teaching, learning and research programmes, and to support the development of democracy, and a culture of human rights, through education programmes and practices conducive to critical discourse and creative thinking.³⁰ The White Paper criticised the higher education sector for failing to

²⁵ G. de Lange (2012) ‘Developing a university-community engagement conceptual framework and typology. A case study of a South African comprehensive university’ in *Africa Insight*, 42(2), pp. 94-111.

²⁶ V.O. Netshandama (2010) ‘Community development as an approach to community engagement in rural-based higher education institutions in South Africa’ in *South African Journal of Higher Education*, 24(3), pp. 342-356; V.O. Netshandama (2010) ‘Quality partnerships. The community stakeholders’ view’ in *Gateways: International Journal of Community Research and Engagement*, 3, pp. 70-87.

²⁷ NCHE (1996) *A framework for transformation*, p. 69.

²⁸ *Ibid.*, p. 79.

²⁹ *Ibid.*, p. 80.

³⁰ DoE (1997) *White Paper 3*.

respond adequately to the needs of society and for insular teaching and research practices. At institutional level, the White Paper encouraged institutions “to promote and develop social responsibility and awareness amongst students of the role of higher education in social and economic development through community service programmes”.³¹ Institutions were also called on to partner with government and civil society in addressing the challenges facing the country.³²

While not explicit about the developmental role of universities, the National Plan of 2001 provided a compelling case for positioning universities as key players in efforts to advance social justice in South Africa and to address global challenges in partnership with other sectors of society, particularly the most vulnerable sections of society.³³ The National Plan highlighted the key role of the universities as knowledge producers and transmitters and, as a result, the important position they hold in promoting and developing policies, plans, values and capacities that support sustainable growth, human development and equity and in educating people in a way that is orientated towards poverty reduction and improving the living standards of all people.³⁴

The Higher Education Act of 1997 (and its subsequent amendments), which regulates higher education, and the funding formula, are silent about the role of higher education in community development and the funding formula does not incentivise community engagement.³⁵ This has had an impact on the development of community engagement at institutions and it has been suggested that the reference to community service and enhanced social responsiveness of universities in the White Paper was largely symbolic.

The *White Paper for Post School Education and Training* of 2013 acknowledges that, “Community Engagement in its various forms – socially responsive research, partnerships with civil society organisations, formal learning programmes that engage students in community work as a formal part of their academic programmes and many other formal and informal aspects of academic work has become a part of the work of universities in South Africa”.³⁶ While the acknowledgement of the role of community engagement is significant, the policy does not contain any strategies for strengthening or expanding this part of the work of universities, or provide any recommendations for funding to expand or strengthen community engagement. It merely suggests that, should funding be allocated, it would need to be connected to research and teaching.

The absence of detailed strategies for strengthening the role of community engagement as a vehicle for development is also evident in the focus of the Departments of Science and Technology (DST), Trade and Industry (DTI) and Economic Affairs (DEA) on the role of universities in producing high-level skills and promoting innovation to enhance the competitiveness of particular sectors of

³¹ Ibid., p.14

³² H. Perold & R. Omar (1997) ‘Community service in higher education’ (unpublished paper).

³³ DoE (2001) *National Plan for Higher Education*.

³⁴ Walker & McLean (2013) *Professional education, capabilities and the public good*.

³⁵ The funding formula (2003) determines how public funding is allocated to universities and is discussed in more detail in the funding chapter in this review.

³⁶ DHET (2013) *White Paper for Post-school Education and Training*, p. 39.

the South African economy.³⁷ These Departments tend to highlight the relationship between the universities and business (the triple-helix), with an emphasis on technological output and applied research, as well as the role of the university as supplier of skilled graduates in line with the immediate needs of business. There is, however, evidence of a growing interest on the part of the DST in community engagement as DST policy has begun to “promote the notion of innovation for inclusive development, in which universities and science councils are assigned key roles as knowledge producers, to partner with communities, particularly to the social and economic benefit of marginalised and rurally-based communities”.³⁸

The DST’s ten-year innovation plan (2008-2018) aims “... to help drive South Africa’s transformation towards a knowledge economy, in which the production and dissemination of knowledge leads to economic benefits and enriches all fields of human endeavour”.³⁹ This aim indirectly highlights the need for universities and other higher education institutions to engage in diverse ways with various sectors of the economy and society in the production and dissemination of knowledge. Though the focus of the policy is on economic transformation with little emphasis on the social, human and cultural dimensions, there is a clear indication of the need for engagement between knowledge-producing institutions and knowledge-applying sectors for this plan to be achieved. However, as was the case with previous policies, the implementation of this knowledge interaction has not been coordinated centrally, resulting in limited coordinated effort directed at sustained engagement and an *ad hoc* approach to university engagement.

A policy document that has emphasised the role of higher education and universities in development is the National Development Plan.⁴⁰ According to the diagnostic report of the National Planning Commission released in June 2011, poverty is still pervasive and insufficient progress has been made in reducing inequality. Millions of people remain unemployed, spatial and structural patterns exclude the poor from the fruits of development, infrastructure is poorly located, under-maintained and insufficient to foster higher growth, there is a widespread disease burden, public services are uneven and often of poor quality, and South Africa remains a divided society. The diagnostic report argues that successful development needs to be measured by the “degree to which the lives and opportunities of the poorest South Africans are transformed in a sustainable manner”.⁴¹

This brief summary of the national policy environment in relation to higher education illustrates that while there has been rhetorical commitment to university engagement with communities for development, this has not been sufficiently translated into active national policies to enhance and support

³⁷ DST & HRSC (2013) ‘Linking knowledge producers and marginalised communities’ (conference paper); DPLG (2006) *Stimulating and developing sustainable local economies: National framework for local economic development (LED) in South Africa*.

³⁸ DST & HRSC (2013) ‘Linking knowledge producers and marginalised communities’ (conference paper), p. 3.

³⁹ DST (2007) *Innovation towards a knowledge economy: Ten year plan for South Africa (2008-2018)*, p. iv.

⁴⁰ NPC (2011) *The National Development Plan*.

⁴¹ *Ibid.*, p. 3.

university engagement. While the situation is better than in some other countries as community engagement is mandated in policy and the university's role in economic and community development is well recognised, there has been a lack of attention to developing an enabling policy environment to institutionalise, expand and strengthen community engagement and the broader developmental role of universities beyond high-level skills development and investments in building research capacity in key areas.

5. Achievements during the last decade, 2004 to 2014

Since the 1997 White Paper highlighted the community service role of higher education, there have been a number of initiatives and significant achievements despite the policy vacuum discussed above. National efforts to advance community engagement have gone through different phases, with distinct institutions as drivers. In this section, the two phases, one which lasted roughly until 2009, and the other from 2009 on, will be discussed, together with the different foci and outcomes of these phases. The phases are not absolutely discrete and certain developments overlap.

5.1. The first phase of community engagement activity, pre-2009: Grappling with conceptual frameworks

The focus of the first phase of community engagement activity is best exemplified by the work of the Council of Higher Education (CHE), through its standing committee for quality assurance, the Higher Education Quality Committee (HEQC) and the Community-Higher Education-Service Partnerships (CHESP) project of the Joint Education Trust (JET). These projects began before 2004 but continued to dominate activity into the second decade. From 1997, JET played an important role in commissioning research into community engagement in South Africa, and in 1999 it launched the CHESP project. The aim of CHESP was to promote service learning to provide opportunities for students to learn how to apply the theories they were learning at university, primarily in social contexts characterised by poverty and degradation. In this regard, CHESP was influenced by what has been described earlier as the community engagement model, with a strong bias towards service learning. With CHESP driving the community engagement focus during this period, service learning dominated national discussions.

A report written by Perold and Omar, with the assistance of a number of advisors, was one of the first outcomes of the JET-sponsored research undertaken to better understand community engagement or service in South Africa. The report was aimed at stimulating debate and defined community service as:

Programmes linked to higher education that involve participants in activities designed to deliver social benefits to a particular community in ways that teach the participants to work jointly towards achieving the common goal.⁴²

⁴² Perold & Omar (1997) 'Community service in higher education' (unpublished paper).

This broad definition included voluntary and compulsory programmes involving either youth or adults, but was mainly focused on students. The approaches to community engagement discussed in that report laid a basis for further work on conceptualising community engagement within the South African context.

The work of JET was underlined by the activities of the CHE and HEQC. The mandate of the HEQC is to promote quality assurance within the higher education system and this influenced the focus on quality management systems in the first phase, albeit through a transformative and developmental lens. Already in 2001, the *Founding Document* of the HEQC identified “knowledge based community service” as one of the three foci for higher education – together with teaching and learning, and research. Singh, the then Executive Director of the HEQC, explained that the original intention behind including a focus on community engagement in the programme accreditation and institutional audit criteria was to further its potential of “giving content to the transformation agenda in higher education, through new partnerships and relationships between higher education and its multiple communities”.⁴³

In support of the developmental goal of the first cycle of institutional audits (2004-2012), the HEQC organised a number of events and activities in collaboration with CHESP, with a view to contributing to the development of policies and systems that would provide an enabling environment for community engagement. The intention of this collaboration was to ensure that the pilot initiatives supported by CHESP were strategically positioned to inform national policies, with the expectation that community engagement activities would proliferate once such policies were put in place. An average of two national workshops per annum were organised by CHESP to assist universities with the planning and implementation of community engagement activities, as well as with the development of service learning opportunities. In the period from 2002 to 2008, CHESP supported the conceptualisation, implementation, monitoring, evaluation and research of 256 accredited academic courses. This gave support to service learning programmes at twelve universities, across 39 different academic disciplines, which included almost 10 000 students ranging from first-year students to masters-level students.⁴⁴

CHESP and the HEQC also collaborated around reports to parliament and around the production of several good practice guides for developing service learning opportunities in higher education. In 2006, they organised an international conference to explore the potential impact of community engagement on research and teaching and learning, including the curriculum. The conference affirmed the view that service learning is only a small, albeit important, part of the developmental role of universities. Hence the conference represented a significant milestone in expanding thinking about the nature of community engagement beyond service learning to embrace the various elements of community engagement as discussed above.⁴⁵

⁴³ CHE/CHESP (2007) ‘Community engagement in higher education’ (conference proceedings).

⁴⁴ J. Lazarus, M. Erasmus, D. Hendricks, J. Nduna & J. Slamat (2008) ‘Embedding community engagement in South African higher education’ in *Education, Citizenship and social Justice*, 3(1), pp. 57-83.

⁴⁵ CHE/CHESP (2007) ‘Community engagement in higher education’ (conference proceedings).

In March 2009, a follow-up colloquium was convened by the CHE and the papers presented and responses to these were published in *Kagisano*.⁴⁶ In a paper based on analysis of the HEQC's quality audit reports on higher education institutions, Hall suggested that, "the root problem with community engagement, accounting for more than a decade of lacklustre progress in giving substance to the clarion call of the 1997 White Paper, may rest in its definition as the third key purpose of public higher education in South Africa. Thus the very act of differentiation, intended to give emphasis and prompt priority has served to set community engagement apart from the long-understood processes of teaching and research".⁴⁷ For that reason, he proposed an overarching alternative approach to understanding community engagement related to:

... the critical third sector located between the family, the state and the market. This model recognises the key private benefits that higher education gives to individuals, empowering them for a world ever more demanding in personal skills and qualifications (benefits to the family). It also recognises the key role of universities in the private, market sector (innovation and knowledge transfer to industry, professional and vocational education), and also in enabling the work of the state (labour force development, public policy innovations, partnerships for enhancing service delivery). But it focuses on the less well-defined public goods that universities can, and do, contribute through service learning, volunteerism, learning through rendering service, community participation in engaged and responsive research, and social enterprises.⁴⁸

However, this proposal was not accepted by other contributors to this edition of *Kagisano*. Several contributors questioned the wisdom of trying to develop a single conceptual framework for the system. It was suggested that it would be more appropriate to adopt a grounded approach that develops contextually relevant frameworks based on efforts to theorise and understand actual practices.⁴⁹ This latter approach came to dominate the field in the second phase.

As the first cycle of institutional audits came to an end, so did this phase of community engagement activity. Analysis of the recommendations in the audit reports of ten private and 22 public universities revealed a remarkable degree of homogeneity in the recommendations made to institutions with regard to community engagement, and very few commendations were made. Almost all institutions were enjoined to develop clearer conceptual or policy frameworks and organisational arrangements for the management and monitoring of community engagement at their institutions.⁵⁰

Aside from the CHE and JET activity in this period, the DST also provided some funding to promote partnerships between universities and the private sector around the use of research and technology to stimulate economic growth

⁴⁶ CHE (2010) *Kagisano 6: Community engagement in South African higher education*.

⁴⁷ M. Hall (2010) 'Community engagement in South African higher education' in *Kagisano*, 6, p. 43-44.

⁴⁸ Ibid., p. 44.

⁴⁹ J. Slamet (2010) 'Community engagement as scholarship: a response to Hall' in *Kagisano*, 6; L.

Nongxa (2010) 'An (engaged) response to Hall's paper: Community engagement in South African higher education' in *Kagisano*, 6.

⁵⁰ See www.che.ac.za.

and enhance productivity. At this time, the DST focus was predominantly on industry and government, rather than on research partnerships with the broader community, but it assisted in laying the groundwork for moving community engagement beyond service learning.

Notwithstanding the narrow focus on compliance with the requirement to develop policies, and on service learning, the inclusion of a criterion in the audit process on community engagement, and the activities organised by the CHE and JET during the period certainly helped to put community engagement on institutional agendas, albeit somewhat unevenly. The next phase of activity would see a greater focus on action and a broader interpretation of community engagement.

5.2. The second phase of community engagement activity, post-2009: Building the field

In the second phase of activity, starting roughly in 2009, the shift away from trying to reach consensus at a national level on conceptual frameworks continued, and the focus moved towards consciously trying to build the field of practice. This was characterised by strengthening and expanding initiatives on the ground; creating enabling institutional environments; and promoting the scholarship of community engagement. There was also a shift towards higher education institutions taking on the role of the main drivers of development and innovation in community engagement, while previously this was at national level. We trace these developments in this section.

5.2.1. The development of community engagement at university level

It is hard to ascertain the exact level of activity with regard to community engagement at institutional level, as institutions are not required to provide comprehensive reports on community engagement as part of any national information system. For this reason, there is no accurate picture of the scale and nature of engaged scholarship across the system. In the absence of comprehensive institutional reports, illustrative examples of different forms of community engagement can be gleaned from other sources. For the purposes of this chapter, some examples have been extracted from a report published by Higher Education South Africa (HESA) in 2009 on contributions of universities to the government's anti-poverty strategy and from case studies of 'Knowledge Engagement and Higher Education in Africa' published in the *Global University Network for Innovation (GUNi) Report*.⁵¹ These initiatives are outlined below in abstracts from these two reports. The first five are abstracts from the HESA publication and the last two are from the GUNi report.

⁵¹ HESA (2009) *Making a difference – Universities' contribution to the anti-poverty strategy*; GUNi (2014) *Higher education in the world* 5.

University of Limpopo

The Department of Ichthyology and Fisheries Science is involved in a wide ranging national programme with the Water Research Commission and the Department of Agriculture and Land Affairs to promote aquaculture for the purposes of commercial and rural development. It works in collaboration with emerging black farmers in rural areas to revitalise unused fish hatcheries and develop new aquaculture initiatives for commercial supplies [drawing on research conducted within the university]. In the process sustainable livelihoods are being built and jobs created in impoverished rural areas.

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The Centre for Rural Communities Empowerment Project provides training to the Makgofe Trust established through the Land Redistribution Programme for landless people to become successful farmers in two areas: vegetable and poultry production.

University of South Africa

The Food Security Project aims to empower food security facilitators to work with rural subsistence farmers to become food secure and contribute to rural development. A short learning programme in Household Food Security has been developed with the Southern African Institute of Distance Education and Kellogg Foundation aimed at individuals from rural and peri-urban areas working as assistants to community nutritionists, health workers or agricultural extension advisors from NGOs or government departments.

University of Cape Town

As part of the CityLab project in Phillippi, academics across the university involved in research on pollution, food security, housing delivery and climate change adaptation are engaged in primary research in collaboration with the City of Cape Town. Using a case based methodology and an interdisciplinary dialogue with multiple social partners the Lab seeks to foster a nuanced understanding of complex problems and the development of appropriate solutions [drawing on different knowledge sources].

University of Venda

The UNIVEN-WK Kellogg Foundation 'Amplifying Community Voices' project, in the Makhado Municipality, aims to nurture social and economic transformation of the communities through promoting the development of strategic partnerships within the University of Venda and the communities in a manner that mobilises and organises all segments of society to play meaningful roles in their own development through sustainable collective action.

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Over the last two years, a multidisciplinary collection of staff and students from the University of Venda and the University of Virginia have worked with an all-female Cooperative to construct a Ceramic Water Filter Factory. The university participants represent subject areas across anthropology, architecture, biology, business, engineering and public health, all exchanging knowledge, teaching skill sets and sharing resources within the collaboration.

University of Stellenbosch

Stellenbosch academics, Municipality officials and community members collaborated in writing a book on 'Sustainable Stellenbosch: Opening Dialogues'. The book addresses the most pressing problems of the town and offers conceptual frameworks to start thinking about possible solutions. The book is intended for use in public discussions about clusters of themes that are important for the future of the town and will eventually inform public policy directions.

These examples illustrate how universities have engaged with communities and how the engagement:

- provides universities with new research opportunities;
- enables academics involved in community engagement to develop interdisciplinary competencies and broaden their perspectives on problems through drawing on different knowledge sources; and
- helps to educate students to adapt to working in different social contexts.

The examples also illustrate potential benefits for the community partners.

5.2.2. Community engagement research during the second phase of activity

During the second phase of activity there was a substantial amount of research into community engagement, including research into community engagement practices at institutions and on developing a better understanding of what community engagement means within a South African context.

The most extensive research on the scale and forms of interaction of universities with external social partners was conducted by the HSRC in 2010.⁵² The research aimed to understand engagement and the changing role of the university in building a national system of innovation in South Africa. It was funded by the National Research Foundation (NRF) to inform its work on community engagement in higher education. The HSRC collaborated with five higher education institutions representing distinct institutional types: two research universities, one comprehensive university, one university of technology and one rurally-based university. The research studied the significance accorded to engagement in institutional strategic missions, structures and mechanisms, as the context for interpreting academic practices. A total of 2 159 academics responded to a telephonic survey and an overall valid response rate of 62% was achieved.

The majority of academics interviewed in the HSRC study, 81%, reported that they interact with external social partners in some way, with engagement activities reported most frequently at research universities and least frequently at the single university of technology. However, in the case of the research universities, this engagement was mainly with other academic partners, and related to broad academic relationships and core academic roles which many argue should not fall within the ambit of community engagement. Engaged research was more common at the research university than engaged teaching, which suggests a very specific conceptualisation of community engagement informing the activities of academics. This highlights the complexity of patterns of engagement in a differentiated higher education system as conceptualisations of community engagement tend to be related to universities' values, missions and strategic plans.

While the most frequently reported community engagement outputs were traditional academic outputs (such as articles in scholarly journals), other types of outputs such as reports, policy documents, popular publications, new

⁵² Kruss *et al.* (2013) *Academic interaction with social partners*.

or improved products and processes, community infrastructure and facilities, spin-off companies and cultural artefacts were also significant.⁵³ These types of output highlight the value of community engagement for both the university and community involved.

The types of activities reported involved engagement with communities, big and small NGOs, various levels of government, student societies, museums, galleries, trade unions, schools, regional and national development agencies, and other community-based structures. The most commonly cited benefits were community empowerment, community based campaigns, public awareness and advocacy, improved quality of life for individuals and communities and policy interventions.

The most commonly cited reasons for non-engagement across all five universities were competing priorities on time, too few academic staff, limited internal financial resources and lack of sustainable external funding.

These trends suggest that the universities are strongly committed to partnerships with the community and to new national goals, but are struggling to develop policies, structures and organisational forms that will enhance interactive capabilities. One of the problems encountered was that an institutional strategic policy framework that provides a broad and encompassing core organising concept to guide substantive policy and procedure was not always present. Furthermore, a lack of conceptual clarity sometimes led to contestation and the perpetuation of old practices. These responses affirm the findings of the HEQC's institutional audits regarding the need for institutional policy guidelines. A number of creative mechanisms were initiated for advocacy and dissemination through the university in order to encourage academics to shift their practices. These relied on stimulating and championing greater involvement, but the core academic reward systems remained unchanged. Many universities have introduced as incentives a community engagement Open Day, an annual award, a showcase of publications or website to promote greater academic involvement, but the key academic incentive mechanisms of promotion typically do not value community engagement activities, even where they are recognised. The findings of the HSRC publication correlate closely with the findings of a 2013 survey that is discussed later in this chapter.

Another research project undertaken at the University of Cape Town (UCT) reflects on the ways in which engagement enriches the knowledge project by drawing on a number of case studies.⁵⁴ While these case studies are derived from a single institution, they illustrate how engagement enriches knowledge generation and exchange processes. Academics reported how their direct engagement in policy processes provided access to contemporary questions and, in turn, strengthened their understanding of issues. The direct engagement enabled access to the views of multiple stakeholders. The insights gained also helped to inform policy courses taught at universities. The academics explained how the use of participative methodologies to co-determine the research agenda

⁵³ Ibid.

⁵⁴ J. Favish & J. McMillan (2009) 'The university and social responsiveness in the curriculum: A new form of scholarship?' in *London Review of Education*, 7(2), pp. 169-179.

and build collective ownership of the outputs, or the formation of reference or advisory groups with representation from the parties involved in the research to co-shape the research, enriched the process, as it drew on different insights and knowledge forms to generate new knowledge and outputs for the benefit of all parties involved.

The case study of the African Religious Health Assets Programme (ARHAP) describes the use of transactional spaces involving multiple stakeholders. It highlights how, “various etymologies or explanations of disease appeared to be at work and differing constructs of bodies, health and illness [were] involved, many of them imbued with religious images, symbols and understandings of the world”.⁵⁵ ARHAP’s approach is located in the body of work known as asset-based community development, or capability-focused approaches, which recognises the need to take seriously the assets that people on the ground have and build on these, rather than working from a deficit model, which is the usual approach of traditional research. As Cochrane says:

It is the collaboration between researchers, practitioners and local communities that generates the necessary set of new and different perspectives to create new knowledge and generate innovative solutions to problems.⁵⁶

A second case study focused on the Health and Human Rights Project which has run a ‘train the trainer’ course since 1998 for staff who teach health professionals at South African universities. As Favish and McMillan explain:

The content of these programmes has been based on the findings of research projects which the department of public health and family medicine has initiated on human rights issues affecting vulnerable groups. Initial research on the Patients’ Rights Charter, developed by the government, showed that human rights will not be real until people become agents of their own rights. On the basis of the lessons from this research, several staff members in the department joined the people’s health movement as activists. The knowledge gained from their involvement in the movement with multiple stakeholders helped inform the design of the health educators’ curriculum which in turn helped to inject new approaches to health care and empower the health movement.⁵⁷

These extracts illustrate the different ways in which academics engage with communities, and the value of engagement with multiple social partners in seeking solutions to development challenges facing South Africa. It is also clear from the above that the benefits are mutual. The universities’ knowledge project is expanded and strengthened while the community benefits from the outcomes of the intervention.

⁵⁵ *Ibid.*, pp. 174-175.

⁵⁶ *Ibid.*, pp. 174-175.

⁵⁷ *Ibid.*, p. 177.

5.2.3. Facilitating debate, the exchange of information and expanding the knowledge base

Growing the body of knowledge about practices of engagement has been an important mechanism of elevating the status of community engagement in institutions. During the second phase of community engagement activity, various initiatives were launched to facilitate the ongoing national conversations about the practices of community engagement and to build networks among universities to enable sharing of information about practices.

One of the important developments in this regard was the formation of the South African Higher Education Community Engagement Forum (SAHECEF). The Forum was launched late in 2009 and all public universities (and some private higher education institutions) are represented in SAHECEF. The objectives of the Forum are:

- Advocating, promoting, supporting, monitoring, and strengthening community engagement at South African higher education institutions;
- Furthering community engagement at higher education institutions in partnership with all stakeholders with a sustainable social and economic impact on South African society; and
- Fostering an understanding of community engagement as integral to the core business of higher education.⁵⁸

SAHECEF has played an important role in facilitating discussions on community engagement at a national level, both among institutions and between institutions and national bodies.

Another important milestone in furthering community engagement was a conference in 2011, organised collaboratively by the University of Fort Hare, Rhodes University, SAHECEF, the NRF and the HSRC under the title *Community Engagement: The Changing Role of South African Universities in Development*. The growing level of interest in the field was evident in the number of local and international participants.⁵⁹ The conference themes illustrate the orientation of the second phase of community engagement activity in that the overwhelming majority focused on the practices of community engagement and contributions to knowledge about the field of engagement. The number of papers presented in relation to each theme is presented in brackets:

- Philosophies, conceptions and theories (17)
- Processes of institutionalisation and formalisation of community engagement (9)
- Community engagement in practice (21)
- Promoting community engagement as scholarship (11)
- Community partners and partnerships (9)

A sample of abstracts is presented below to provide an indication of the nature of the questions being explored in relation to the practices of community engagement

⁵⁸ See <http://www.uwc.ac.za/CE/Pages/SAHECEF.aspx>.

⁵⁹ The conference had 255 delegates with 67 papers and 34 poster presentations; G. Minkley (2011) 'Community university partnership programme quarter 3 report'.

and its links with wider developmental purposes of universities, particularly with respect to nurturing the development of graduates with a commitment to engaged citizenship and maximising positive benefits for communities. Several papers provided pointers to efforts being made to develop more strategic approaches to community engagement that move it from the margins of universities into the mainstream, and towards more coordinated institutional approaches, as opposed to a reliance on individual champions. These abstracts assist in highlighting the focus of community engagement discussions in this second phase of activity.⁶⁰

This paper examines the operation and broader developmental significance of two university community partnership projects at the University of Fort Hare. The findings of the study highlight the 'need' to deepen university-community partnerships for developmental purposes, but also reveal the conditions under which specific 'deeds' associated with community engagement, paradoxically, undermine the developmental potential of this process. (E. Mudefi, W. Akpan)

In this presentation it will be argued that in order to deliver a well-rounded law graduate, community engagement should be integrated in the teaching of all procedural law subjects in the LL.B curriculum. Community engagement provides an ideal breeding ground for the instilling of basic trial advocacy skills. We will then conclude that undergraduate law students are part of an access to justice approach and the humanitarian ethos in which procedural law subjects should be taught. (I. Bezuidenhout, A.P. Frewen)

I shall argue that (1) 'engagement' has to be understood as a dual process, in which students' whole being is engaged, and through which they come to engage with the experiences opened to them; and (2) in a global age, 'community' has to be understood as a potentiality of the world, such that students are embarked on a process of becoming world citizens. We then reach the further proposition (3): that students' understanding of themselves as global citizens embraces the student's capacities for action and her total becoming as a human being. This student comes to identify with the world; the world is no longer exterior to the student but is now part of the student's interior being. (R. Barnett)

This paper examines the 'Engaged Scholarship' (ES) idea in American university discourses since 1990. It explores concepts of 'outreach' and 'scholarship' in a Report (1993) of Michigan State University (MSU)... It is argued most South African discussants have an underdeveloped idea of ES in their discourses about CE. Will/can this win over our academics to the mission of strengthening university-civil society linkages for greater social justice? (D. Cooper)

Recently an Interdisciplinary Health Promotion course at the University of the Western Cape was evaluated and revealed that the needs identified by the schools five years ago had not changed and have not been effectively addressed. The Faculty of Community and Health Sciences responded by organizing a stakeholder dialogue to explore partnerships, sustainability, and the social responsiveness of health promotion projects with schools and surrounding communities. This paper will describe the process undertaken to address these three recommendations and present the outcomes. (F. Waggie)

⁶⁰ UFH, RU, HSRC, NRF & SAHECEF (2011) '2011 Conference on Community Engagement Programme' (programme).

During the second phase of activity there has also been growth in the establishment of international publications dedicated to community engagement. Some examples include the *Journal for Higher Education and Community Outreach* and *Gateways: International Journal of Community Research and Engagement*.⁶¹ Several South Africans have contributed articles on community engagement to these and other international journals and South Africans have presented at international conferences on community engagement. One example is the Global University Network for Innovation (GUNi) International Conference which was held in Barcelona in 2013 where six South Africans made presentations and three others were asked to chair sessions.⁶² The conference was organised in partnership with 19 other international networks and South African perspectives are featured in the GUNi report *Higher Education in the World 5 - Knowledge, Engagement and Higher Education: Rethinking Social Responsibility* that was published early in 2014.

One area for development is with regard to accredited journals on community engagement. Currently no journals focused on university-community engagement have been included on the DHET list of accredited publications and this impacts negatively on local efforts to stimulate the scholarship of engagement. There are currently efforts underway, led by the University of Limpopo in collaboration with the SAHECEF Research Working Group, to launch an accredited journal. The proposal is for the journal to be called 'Africa Engaged' with a focus on community engagement in higher education.

5.2.4. Promoting the scholarship of engagement and the role of community engagement in the Knowledge generation process

One of SAHECEF's major initiatives during this second phase was to persuade the NRF to launch a fund to promote community engagement at institutions. Their community engagement programme was established to support research and activities aimed at improving understanding of the full spectrum of community engagement and the suite of activities that this implies. It was hoped that through the exchange of knowledge about the practices of engagement, the status of community engagement would be elevated at institutions. An inaugural call for proposals for funding over three years was made in 2010. The focus of the call was

⁶¹ J. Thakrar; D. Kenn & G. Minkley (2014) 'Across the continents: Engaging and questioning community' in *Comparative Sociology*, 13, pp. 1-20; W. Akpan, G. Minkley & J. Thakrar (2012) 'In search for a developmental university: Community engagement in theory and practice' in *South African Review of Sociology*, 43(2), pp. 1-4; M. Maistry & J. Thakrar (2012) 'Educating students for effective community engagement: Student perspectives on curriculum imperatives for universities in South Africa' in *South African Review of Sociology*, 43(2), pp. 58-75; Favish & McMillan (2009) 'The university and social responsiveness in the curriculum: A new form of scholarship?' in *London Review of Education*, 7(2), pp. 169-179; J. Favish & S. Ngcelwane (2009) 'Understanding social responsiveness: Portraits of practice at the University of Cape Town' in *Gateways: International Journal of Community Research and Engagement*, 2; Netshandama (2010) 'Quality partnerships. The community stakeholders' view' in *Gateways: International Journal of Community Research and Engagement*, 3, pp. 70-87; de Lange (2012) 'Developing a university-community engagement conceptual framework and typology. A case study of a South African comprehensive university' in *Africa Insight*, 42(2).

⁶² GUNi (2013) 'Programme for 6th International Conference' (programme).

on proposals that would contribute to scholarship about community engagement and knowledge generation processes through community engagement.

Over a five-year period from 2011 to 2016, the NRF has allocated over R30 million. The following two charts show the NRF monies awarded for the 2011 to 2013 and the 2013 to 2015 cohorts of grant recipients respectively.⁶³

Figure 1: NRF award for 2011 - 2013 cohort

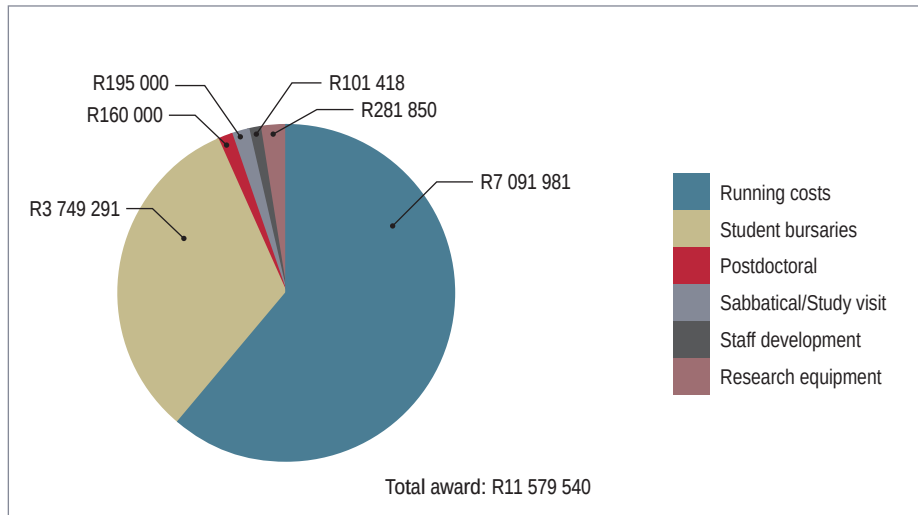
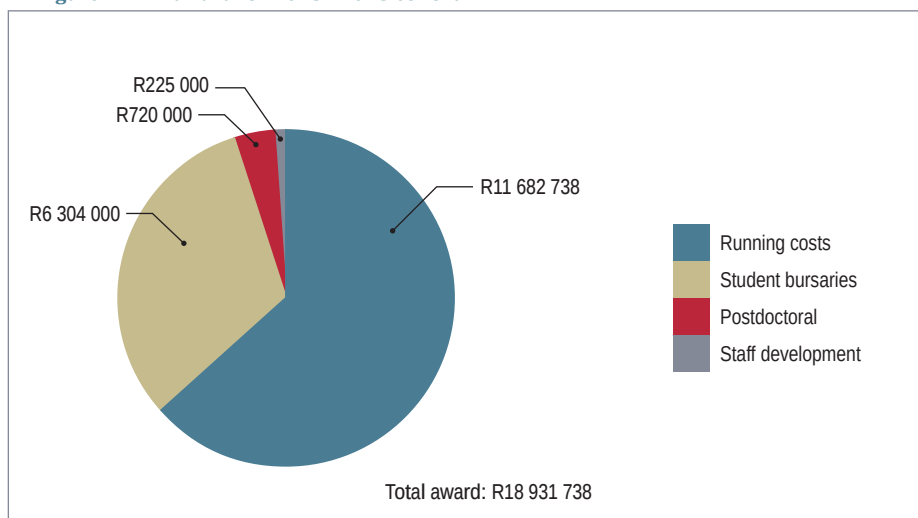


Figure 2: NRF award for 2013 - 2015 cohort



⁶³ N.L. Ramoupi & J. Thakrar (2013), 'Funded NRF community engagement projects' (unpublished background paper for task team); The NRF provided a database of all community engagement proposals received (including those not approved for funding) for analysis purposes. Note that the 2014 and 2015 awards are subject to change.

As can be seen from the above figures, significant proportions of the funding have been allocated for part-time and full-time bursaries to support 45 honours, 107 masters and 48 doctoral students. The NRF funding has, therefore, played an important role in producing new community engagement scholars and in strengthening practices of community engagement in South Africa.

Analysing the first cohort of successful applications reveals an overwhelming bias towards urban initiatives in the humanities and health sciences, a poor spread of research across the country and a preponderance of white women researchers. The majority of applicants utilised the funds to undertake community engagement activities (13 out of the 17), while the remaining four undertook research on community engagement. In terms of research output from the grants, during the period 2010 to 2012, grantees made 25 national conference presentations and 17 international conference presentations, while 34 papers were published in accredited journals.

The second cohort of successful applicants came from a wider pool of institutions, but despite a greater spread of projects across the urban and rural divide and across fields than was the case previously, the majority remained in the health sciences or education. Two proposals named international co-investigators from the USA and Australia. In the second cohort, five of the fifteen successful projects were submitted by black researchers. As per the first cohort, most of the initiatives originated from the university rather than in response to, or with, a community.

Unfortunately, no detailed final data on the outcomes of the community engagement projects are accessible and so it is hard to comment on exactly what has been achieved beyond the number of publications emanating from the research, the number of student bursaries and the extent of conference attendance. However, the awards suggest that the bulk of the funding has been used to launch new initiatives rather than to reflect on the processes and nature of community engagement itself. The limited spread of institutions and the race profile of the researcher complement are of concern. Despite these concerns, the value of this initiative in deepening an understanding of community engagement within a South African context should not be downplayed. It is especially important because of the way in which the practice of community engagement, through activity and research about the nature of community engagement, are intertwined.

5.2.5. Institutionalisation of community engagement

In an attempt to glean a national picture of the current extent to which community engagement has become embedded in institutional functions, the task team preparing this report for the CHE conducted a survey of public higher education institutions in 2013.⁶⁴ The questionnaire, prepared by two researchers at the UCT Institutional Planning Department, was distributed to the public higher educations via the institutional representatives on the SAHECEF Board. After initial distribution of the survey, the chair of the task team sent a letter to

⁶⁴ J. Favish & S. Ngcelwane (2013) 'Survey of community engagement practices at universities' (unpublished background survey for task team).

vice-chancellors requesting all institutions to complete it. The survey aimed to verify the findings of the CHE's institutional audits and the HSRC research, both of which had indicated that institutions had integrated community engagement work into the fabric of their institutions in very uneven ways, suggesting that much of the work was dependent on specific individuals.

The survey response rate was 83% (19 of the 23 institutions responded), suggesting that the findings provide a good overview of the entire sector. The structure of the questionnaire was influenced by the framework developed by Beere *et al.* for institutionalising public engagement.⁶⁵ The framework includes elements related to:

- The extent to which institutional strategic plans, budgets, reporting, and performance management systems address community engagement; and
- The extent to which institutions have developed policies that help to create an enabling environment for engaged scholarship, e.g. whether: particular forms of reward and recognition are given; staff are provided with opportunities to develop their capacity to build partnerships with community partners; senate committees have been established to develop ways of enhancing and expanding community engagement; the university provides opportunities for ongoing dialogue and reflection of the universities' developmental role; and there are visible mechanisms for communities to access the intellectual resources of the university.

In addition, institutions were invited to share their perceptions of the national policy environment, their achievements, and barriers or obstacles to the expansion of community engagement. Analysis of the responses suggests that the greatest progress has been made in areas related to the HEQC's criteria for institutional audits. Eighteen institutions reported that their strategic plans contain objectives related to community engagement or social responsiveness; sixteen prepare annual reports on activities associated with engaged scholarship and have dedicated staff to help support and promote engagement; and eleven have established mechanisms for community organisations to connect with academics and students on campus.

The responses reveal significant differences with regard to progress in elevating the status of community engagement within the institution, and with regard to integrating it into mainstream recognition systems. This is noteworthy, as while it is fairly easy to include references to notions of service to communities in mission statements and strategic plans, it is much more difficult to move 'service' activities from the periphery of higher education to the core.⁶⁶ On the basis of their responses, it appears that five universities have institutionalised community engagement to a greater extent than others. They responded positively to at least four of the key criteria referred to below:

⁶⁵ C. Beere; J. Votruba & G. Wells (2011). *Becoming an engaged campus – A practical guide for institutionalising public engagement*.

⁶⁶ Slamet (2010) 'Community engagement as scholarship: A response to Hall' in *Kagisano*, 6.

- 5 institutions (26%) consider commitment to, and experience with, community engagement in the criteria for hiring academic staff;
- 9 institutions (57%) have integrated criteria related to community engagement into performance review systems for academic staff;
- 8 (42%) and 9 (47%) institutions provide awards to recognise outstanding contributions to community engagement for staff and students respectively;
- 6 institutions (31%) have established initiatives aimed at building the capacity of staff in relation to community engagement; and
- 9 (47%) institutions periodically organise institutional colloquia to promote awareness about community engagement within the institution.

Another finding of the survey was that there are high levels of dissatisfaction with regard to the lack of national policies to provide an enabling environment for expanding and recognising community engagement across the sector.

Several institutions reported on community engagement activities that suggested that the institution had identified clear strategic priorities with regard to community engagement, which included the identification of institutional focus areas, the establishment of forums for building ongoing relationships with various external social partners, and the allocation of dedicated resources for stimulating new activities to address institutional and regional priorities. Some of the challenges identified include:

- Difficulty in developing mechanisms for evaluating the quality of community engagement;
- Lack of funding;
- Competing priorities impacting on academic workloads;
- Difficulty in changing mind-sets about the nature of community engagement, particularly with respect to its interconnections with teaching and research; and
- A lack of genuine executive support and understanding of the community engagement mandate and its potential.⁶⁷

The survey responses reveal the continued use of very different conceptual frameworks that guide community engagement at institutional levels. However, consensus is emerging on a number of common elements that institutions believe should characterise the field of community engagement in South Africa, namely:

- Community engagement involves universities and multiple social partners, but excludes interaction with other academic constituencies;
- The interactions between universities and social partners should be characterised by reciprocity and mutual benefit;
- Community engagement is a key mechanism for building civic consciousness among students and plays a role in building their commitment and capacity for critical citizenship;

⁶⁷ J. Favish & S. Ngcelwane (2013) 'Survey of community engagement practices at universities' (unpublished background survey for task team).

- Engagement can take multiple forms, including research-oriented forms (such as participatory action research and community-based research); teaching-oriented forms (including service learning, clinical service, continuing education courses, and the collaborative production of popular educational materials); and can operate at multiple levels (local, regional, national, sectoral, etc.); and
- The activities should have an intentional public purpose or benefit and form part of the broader notion of the social responsiveness of universities.

This approach to conceptualising the role of higher education is in line with international trends which reflect an increased emphasis on the role of higher education in contributing to democracy and inclusive societies.⁶⁸

Despite consensus on the above points, it is clear that across the sector there are different, and at times contradictory, interpretations of what constitutes public benefit. This is an indication that academics operate with very different developmental paradigms and values and focus on different types of development: social, economic, political and environmental. The focus of the interpretations tends to be divided between those that emphasise notions of social justice and human rights, and those that emphasise economic growth and competitiveness, entrepreneurship, and individual empowerment.⁶⁹ It is important for any national policy or national conceptualisation of community engagement to take into account and support these different interpretations. However, while acknowledging the validity of different paradigms and emphases, given the pervasive nature of poverty and inequality in South Africa, public universities should consciously reflect on how their resources are used to promote inclusive development and a more equitable and just social order. As Odora-Hoppers has argued, theorising the university's role with regard to critical citizenship should include an examination of the 'reconstructive development function' of higher education and the production of students who are able to promote social justice and construct empowering relationships with disadvantaged communities.⁷⁰ These relationships should avoid 'the negation of others' in line with the spirit of Ubuntu, a central tenet of African life philosophy.⁷¹ In this regard, it is relevant for the sector to question what ethics and values are transmitted to students through current educational practices and not just to assume that engagement

⁶⁸ P.R. Trowler (1998) *Academics responding to change. New higher education frameworks and academic cultures*; D. Charles (2006) 'Universities as key knowledge infrastructure in regional innovation systems' in *Innovation: The European Journal of Social Science Research*, 19(1), pp. 117-130; T.K. Stanton (ed.) (2007) 'New times demand new scholarship. Research universities and civic engagement: Opportunities and challenges' (conference report); GUNi (2013) 'Programme for 6th International Conference' (programme).

⁶⁹ CHE (2010) *Kagisano 6: Community Engagement in South African Higher Education*; Nongxa (2010) 'An (engaged) response to Hall's paper: Community engagement in South African higher education' in *Kagisano*, 6; Slamati (2010) 'Community engagement as scholarship: a response to Hall' in *Kagisano*, 6; Favish & Ngcelwane (2013) 'Survey of community engagement practices at universities' (unpublished background survey for task team).

⁷⁰ C. Odora-Hoppers (2006) 'Constructing a conceptual framework for HBUs in a developmental paradigm' in Nkomo *et al.* *Within the realm of possibility*.

⁷¹ Nkomo *et al.* (2006) *Within the realm of possibility*.

with external constituencies in and of itself results in explicit engagement with ethical choices and the criteria used for making these choices.

During the second phase of activity (2009 to 2014), much has been achieved. First, community engagement is now understood in much broader terms and the focus is now on partnerships of mutual benefit rather than on providing a service to a community. In this way, community engagement is of greater benefit to both the university and the community and is a longer-term project. Secondly, in this phase, institutions have come to play a much more central role. Initially, it was national bodies (in particular the CHE and JET through CHESP) that were driving the community engagement process. Now institutions have taken over this role which has resulted in more integrated practices at institutional level and the first steps towards institutionalising community engagement, although this has not yet been achieved at the majority of institutions. An important university initiative in this regard was the formation of SAHECEF. Finally, this phase has seen growth in community engagement research. This is no longer limited to conceptualising community engagement, but includes research on community engagement activities. Important developments in this regard include the NRF awards, new journals founded and conferences.

6. Future innovation and opportunities regarding community engagement

While advances have been made in the field of community engagement, as discussed above, it has not yet been institutionalised at system level. This lack of institutionalisation has been compounded by the absence of national funding for community engagement and the passive approach to the integration of it in funding and promotion policies at system and institutional levels. However, as a concept and practice it has clearly gained prominence in the higher education discourse in South Africa and South Africans have contributed to the growing body of knowledge about engaged scholarship. Taking this into account, the task team has developed a number of recommendations to support the development of community engagement over the next decade. These have been organised around two prongs:

- Strengthening efforts to institutionalise community engagement; and
- Locating efforts to strengthen community engagement within a national developmental paradigm.

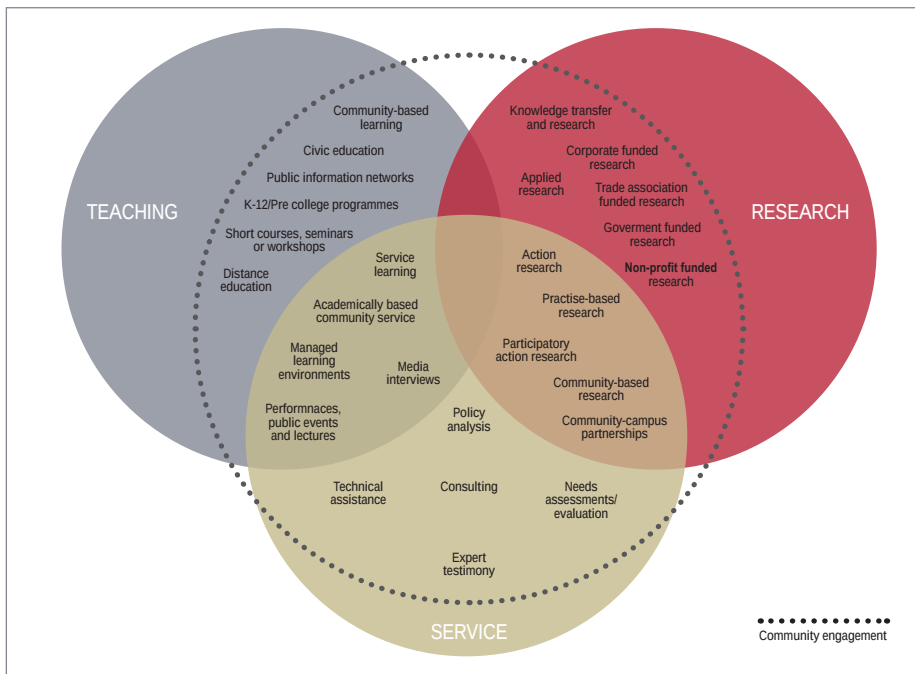
6.1. Strengthening efforts to institutionalise community engagement

6.1.1. Linking community engagement with different forms of scholarship

The task team believes that efforts to reach consensus about a single conceptual framework for community engagement across the sector are unlikely to be fruitful. Any definition of community engagement needs to be contextually relevant and as the contexts of South African universities differ, so too will the conceptualisation. However, there should be recognition of the common elements of community engagement around which there is consensus and the links with scholarship.

These elements are listed above. In the next phase, efforts should be concentrated on the development of more strategic approaches to institutionalising community engagement and improving the quality and impact of practices of engagement. This entails harnessing the resources of the university in support of key initiatives in line with the university's mission and in line with the core focus on teaching and research. Universities should re-imagine how community engagement can help invigorate, enhance, deepen, contextualise and enrich pedagogy, including teaching, learning, curriculum and assessment. They must also examine how community engagement can help to contribute to relevant research and should consider the usefulness of different types of knowledge outside of academic knowledge, and how it can revitalise the universities' knowledge project.⁷² The notion of engaged scholarship offers a method of research and inquiry that advances academic disciplines while responding to important contemporary questions or issues. Furthermore, opportunities for enriching learning in preparation for careers and active citizenship are embraced.⁷³ Engaged scholarship offers a continuum of activities where teaching, research and service intersect as in the diagram below.⁷⁴

Figure 3: Examples of a continuum of engaged scholarship across teaching, research and service



Source: Glass et al, 2010 p.16

⁷² Slamati (2010) 'Community engagement as scholarship: A response to Hall' in *Kagisano*, 6.

⁷³ B. Holland (2013) 'Presentations at pre-conference morning workshop on leadership, planning and change management for community engagement' in *5th International Symposium on Service Learning* (conference proceedings).

⁷⁴ C.R. Glass & H.E. Fitzgerald (2010) 'Engaged scholarship: Historical roots, contemporary challenges' in E. Fitzgerald-Hiram, C. Burack & S. Seifer (eds.) *Handbook of engaged scholarship. Contemporary landscapes, future directions, volume 1: Institutional change*.

6.1.2. Developing mechanisms for assessing the quality of community engagement

Responses to the HSRC study (2010) and the task team survey (2013) reveal that many academics perceive the biggest challenge to the expansion of community engagement to stem from the lack of integration of community engagement into performance criteria or academic workloads. The absence of recognition of the wide range of scholarly outputs associated with community engagement compounds the problem. Similar concerns dominate international discourse. Given the global nature of higher education, these challenges cannot be addressed at the level of a single institution or indeed solely at a national level given the influence of the international rankings of universities. For this reason the task team recommends that SAHECEF consider best practice within South Africa and highlight these strategies, while also forging links with international networks and organisations already working on this, to collaborate with them around the development of strategies for assessing and recognising engaged scholarship.

6.1.3. Establishing a sustainable funding model

Lack of funding for community projects, especially over the longer term, has impacted negatively on growth in community engagement and led to the haphazard nature of some engagement. Internationally, there are numerous examples of how governments have helped to create a more enabling environment for promoting the responsiveness of universities.⁷⁵ Some strategies include the establishment of earmarked funds that institutions can bid for; the establishment of centres of excellence in the field of public engagement, the provision of national awards, and the widening of criteria used for measuring the quality of research to include consideration of the impact of research, where applicable, on wider society.⁷⁶ Other examples of support mechanisms include the financial support for regional structures that broker partnerships around research and teaching between higher education institutions, business and government; and the allocation of funds to address particular skills shortages that impact on regional economic growth. Opportunities for funding should also be explored with provincial and local governments. In this regard, the objective-driven national teaching and research development grants and the special fund established in the Western Cape, with funding from the Western Cape Government, may provide useful models.⁷⁷

⁷⁵ For example the Higher Education Funding Council in England, the Organisation for Economic Cooperation and Development's Regional Engagement Project, and the National Review Board for Scholarship of Engagement in the United States of America.

⁷⁶ For example, in the USA major federal research funding agencies, such the National Science Foundation (NSF)—have adopted additional criteria for proposals that address aspects of collaborative methods and the public impact or potential application of research. NSF criteria now require that grant applications submitted for its consideration address the broader social impacts of the proposed research on public understanding; policy and/or practice; educational strategies.

⁷⁷ In 2013 the Western Cape Government allocated funds through the Cape Higher Education Consortium (CHEC) for projects focused on enhancing social and economic development. The criteria used for disbursing grants include: Demonstrating broad alignment with the themes of a joint Plan of Action drawn up by the universities and the provincial government; Planned utilisation of the scholarly expertise of academics and/ or students, with an intentional public purpose or benefit; Demonstrable mutual benefit to the academic enterprise and one or more non-academic constituencies; and A focus on working with marginalised or very poor communities (CHEC (2013) 'Call for proposals for grants for engaged scholarship initiatives').

In light of the above, it is recommended that a task team be established to investigate options for incentivising the scholarship of engagement through the provision of DHET funds for community engagement. While NRF funding has been an important catalyst in stimulating new community engagement initiatives and the scholarship of engagement, it is further suggested that such a task team review the impact of the funding provided and generate focus areas for future NRF funding.

6.1.4. Strengthening the policy environment

The 2013 White Paper acknowledges that, “Community Engagement in its various forms – socially responsive research, partnerships with civil society organisations, formal learning programmes that engage students in community work as a formal part of their academic programmes and many other formal and informal aspects of academic work has become a part of the work of universities in South Africa”, and that the concept of community engagement must be distinguished from a national graduate service programme.⁷⁸ While the acknowledgement of the role of community engagement is important, the White Paper does not contain any strategies for strengthening this part of the work of universities. The only policy recommendations refer to the likelihood that future funding of such initiatives in universities will be restricted to programmes that are linked to their teaching and research functions. It does not address the critique, raised in this chapter, of the national policy environment or the need for incentivising university leadership and academics to take community engagement more seriously. Implementation of any of the funding options outlined above would go a long way towards enabling universities to enhance their social responsiveness.

The task team recommends that revised reporting requirements for universities should include a focus on community engagement as a way of signalling the importance of holding universities and the national department accountable for reporting on the responsiveness of universities to multidimensional transformation. Therefore, a small unit should be established to help promote the institutionalisation of community engagement within the fabric of the universities and develop strategic focus areas across the system. This unit should also be charged with facilitating engagement with national, provincial and targeted local authorities about building structured relationships with universities. Institutions should be encouraged to form regional consortia and develop agreements with various levels of government in support of regional development needs.

The brief summaries of national policies earlier in this chapter suggest that there are opportunities for partnerships with the DST, the Department of Economic Development, the National Planning Commission, and the DTI in addition to the ongoing collaboration with the NRF and the CHE. It is important though, that universities should not be viewed as delivery arms of the state. Critical engagement with government is vital. Universities need to use the opportunities presented by the NDP, and the recognition of major challenges facing the globe, to position engagement scholarship as a key strategy for strengthening the contribution of universities to addressing national and global challenges.

⁷⁸ DHET (2013) *White Paper for Post-school Education and Training*, p. 39.

7. Conclusion

This chapter has raised a number of complexities associated with the concept of community engagement internationally and in South Africa. Various community engagement approaches and models have been discussed together with descriptions of the way in which it has been understood in the South African context over the last two decades. As a result of work done by key institutions such as JET, and the HEQC of the CHE, it appears that community engagement is certainly on the agenda of public universities in South Africa.

The paper has also outlined the multiple ways in which universities are currently engaging with development challenges drawing on elements of different models for university engagement, and has argued that these engagements have brought reciprocal benefits for the academic project and for communities. In this respect, the notion of engaged scholarship offers a method of research and inquiry that advances academic disciplines while responding to important contemporary questions or issues.

As Badat has argued, it is necessary to examine how community engagement can facilitate the pursuit of specific institutional values and commitments and translate these into concrete deeds and action. In this way, universities can give expression to the great promise of higher education to be, “a process of expanding the real freedoms that people enjoy” and can “embrace the ethics of social accountability and an expansive humanism” by being “guided by the developmentalist and democratizing demands of global ‘public good’”.⁷⁹

We argue that, given the scale of the grand challenges facing South Africa, and the potential of the universities to enhance their contributions to multidimensional development, it would be fruitful to move away from efforts to reach consensus on a uniform approach to conceptualising community engagement in favour of focusing on strengthening the field through institutionalising community engagement in all institutions, building partnerships with various levels of government and other social partners, and promoting scholarship of engagement. This could enable the further development of a body of knowledge on the kinds of practices, models and spaces that best enable universities to work together with other social partners within an inclusive developmental approach. As Badat notes:

Through community engagement staff and students can become active agents for social change, contributing to widening educational and social opportunities and improvements in the quality of life of individuals and communities, to local economic and social development, and advancing the public good. It enables scholars, students and universities to take on practically the responsibility of re-thinking and re-making our world and our societies on the basis of other principles and logics than the ones that have dominated in recent decades: putting human development, people’s needs, social justice and human rights at the centre of all our action.⁸⁰

⁷⁹ S. Badat (2013) ‘Eleven theses on community engagement at universities. The social responsibility of universities: Community and civic engagement - Context and Big Picture’ (conference presentation), p. 7.

⁸⁰ Ibid., p. 8.

The NDP suggests that the potential and capacity of South Africa to address its pressing needs will depend on adopting an approach that, “systematically includes the socially and economically excluded, where people are active champions of their own development, and where government works effectively to develop people’s capabilities to lead the lives they desire”.⁸¹ Implicit in the notion of inclusive development is the need for collaboration between different social partners for mutually beneficial outcomes, and hence new perceptions of the roles of different partners. Given the desire to adopt an inclusive approach to development, community engagement as a way of doing teaching and learning, and research that involves working with those outside the academy who have expertise, wisdom, insights and lived experience that equips them to contribute to the quality of scholarship, while addressing development needs has the potential to enhance higher education’s contribution to the goals of the NDP.⁸²

South African universities should work together to build a system of higher education that advances the public good and ensures that the intellectual resources within the sector are harnessed to enable the country to generate solutions to the problems facing the country and to transform the social and political context. Collaboration between universities can enhance the impact of scholarship on policy development and implementation.

The above approach to community engagement resonates with recent calls by international community networks promoting engaged scholarship. This is explored in the GUNi in which Hall suggests that, “it is core that the sharing of knowledge across and through the boundaries of the community and the university plays a central role in the re-imagining and self-renewal of society”.⁸³ In arguing why university-community engagement is critical, Razak suggests that a new approach to human development largely depends on universities being able to produce graduates with the necessary capacities to help build a just and sustainable social order. He challenged universities to think about the kind of transformation that would be needed in their governance structures, curricula, extra-curricular activities and research to enhance their responsiveness to addressing ‘global grand challenges’.⁸⁴ The global grand challenges he is referring to are those identified in a communiqué agreed upon at the GUNi conference, which include: poverty; gender inequality and other forms of discrimination; climate change; energy; global health and healthy ageing; and agriculture and food security.⁸⁵

Both the NDP and GUNi communiqué recognise that the multidimensional and systemic nature of the grand challenges necessitate the involvement of many different stakeholders in developing solutions. An inclusive approach is needed to build communities with the intellectual and organisational capacity

⁸¹ NPC (2011) *National Development Plan*, p. 3.

⁸² Holland (2013) ‘Leadership, planning and change management for community engagement’ (presentation).

⁸³ GUNi (2014) *Higher education in the world 5*, p. 39

⁸⁴ D. Razak & E. Afendras (2014) ‘Engagement beyond the third mission: The experience of Albukhary International University’ in GUNi (2014) *Higher education in the world 5*.

⁸⁵ GUNi (2014) *Higher education in the world 5*.

to take ownership of the generation and implementation of solutions to societal problems. At the GUNi conference it was argued that:

Higher Education should help to create problem awareness and promote systemic thinking, thus empowering people to participate in and shape the transformation process. Research and Higher Education Institutions must be held accountable for equitable partnerships with community-based organizations through clearly articulated memoranda of understanding that describe the principles and a plan for how these will be monitored and evaluated.⁸⁶

Locating community engagement in a developmental paradigm would highlight the role that community engagement can play as a method for promoting collaboration between the universities and different social partners for mutually beneficial outcomes, and thereby contribute to addressing socio-economic and political needs.

⁸⁶ GUNi (2013) 'Big Tent IV: The grand global challenges and the transformation to sustainable societies. A Communiqué' (declaration), p. 3.

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Academic staffing

Writers and editors: *Denyse Webbstock with Chika Sehoole*

Task team leader: John Higgins

Members/contributors: Raphael de Kadt, Thandi Lewin, Sean Muller & Chris Winberg

CHE research assistant: Mosa Phadi

This chapter offers a critical survey of some of the key policy issues and institutional practices that have shaped academic staffing in South African institutions of higher education over the past twenty years. At the centre of these stands a multi-dimensional attempt at self-transformation and renewal in which at least two currents of analysis and intervention mingle and clash. First, there is the local pull of democratisation, as the higher education system seeks to eradicate the deeply ingrained inequalities that were deliberately engineered by the apartheid state; inequalities themselves grounded in hard realities of racialised social and economic division which run so deep that twenty years of progressive policy have barely been able to shift them. Second, there is the global push associated with the emphasis on measures for improved efficiency in the context of massification, and negative implications with respect to what many regard as an undue narrowing down of the social purposes of higher education.¹

Sometimes pulling together, and sometimes pulling apart, the different elements of a broad attempt at post-apartheid transformation have placed considerable demands on academic staffing in the highly diverse, and still evolving, South African higher education system. In this chapter, we note and underline the increasing awareness, in both policy and practice, that the demands made on academic staffing for playing a role in systemic transformation have a better chance of being met if the needs of academic staffing are more fully articulated in policy; if, that is, the nature and substance of the academic profession as a determining element in the higher education system is better understood, particularly in relation to 'external' demands for performance placed on it. For this reason, our account is structured in the following way: 1) the policy environment related to staffing, noting frictions and unintended consequences of policy and practice; and 2) the changing demands on and the nature of the academic profession.

This chapter begins with a cautionary note on nomenclature, as vocabulary can rarely be regarded as a neutral element in argument and analysis. The term 'staffing' itself, with its common use referring to those employed to carry out the academic functions of higher education, may tend to obscure certain aspects of 'staffing' in higher education; notably the ways in which, properly understood, academic staffing is constitutive of the higher education system, or as Altbach

¹ This includes the tenets of the new 'common sense' identified (in the European context) as 'Reform' policy. J.P. Olsen & P. Maassen (2007) 'European debates on the knowledge institution: The modernization of the university at the European level' in P. Maassen & J.P. Olsen, *University dynamics and European integration*.

puts it, “at the heart of the university”.² Indeed, he notes further that “no institution of higher education can be successful without a well-qualified, highly motivated, and effective professoriate. Yet, too often the academics are forgotten in discussions of the problems of universities – or sometimes demonized as creators of the university’s difficulties”.³ While university staffing as a whole is generally understood to comprise three broad constituencies – academic staff, administrative staff, and ancillary and support staff – with some cross-over functions between them (various senior management and administrative staff may also perform or have performed academic functions, for instance), this chapter focuses on academic staff, and suggests that a key feature of discussions should be the conditions for the *formation* of academic staff, in terms of professional development. Although the discussion of staffing in this chapter is more specifically concerned with the terms and conditions of the academic profession in South Africa, we have used the term ‘academic staff’ as the central object of our analysis. The chapter does not evaluate the quality of academic staffing other than through a discussion of qualifications, but points to the need for further research in this area.

2. The policy environment and other contextual factors

We have distinguished four main dimensions in which the push and pull pressures for transformation of the higher education system in South Africa have impacted on academic staffing, noting the ways in which the general framing of ‘staffing’ in much policy discourse tends to marginalise the necessarily constitutive professional dimensions of academic staffing to the detriment of policy goals. These four main dimensions are interrelated and have points of overlap, but for the purposes of argument and analysis we distinguish them as: equity; massification; productivity drivers; and the restructuring of institutions and the higher education landscape.

2.1 Equity

2.1.1. Legislation

A major pull factor related to democratisation was the need to change the demographic profile of academic staffing, and policy and legislation were seen as the primary vehicles to bring this about. A key feature of South African labour legislation in general in the last twenty years has been the attempt to redress the severe inequities of the apartheid labour system, and it has played a significant role in the attempt to shape the academic staffing complement. The demands and expectations built into general labour policy, however, do not address the specific nature of professional academic work, and there have been increasing calls for a better understanding of its dynamics. Hiring and retention patterns still appear to perpetuate largely racialised and gender-biased patterns, despite some

² P.G. Altbach, G. Androushchak, Y. Kuzminov, M. Yudkevich & L. Reisburg (eds.) (2013) *The global future of higher education and the academic profession*, p.21.

³ Ibid.

improvements. Thaver notes that, “While much current thinking is at the macro-level and focused on narrow human resource aspects related to ‘getting the numbers right’, there is limited research on what happens in the daily experiences of faculty”.⁴ Indeed, much of the policy activity focused on academics as human resources has shaped the context within which that daily experience takes place.

In the labour domain, in the early post-apartheid period, a framework of labour legislation was developed through the passing of successive laws (the Labour Relations Act of 1994, the Basic Conditions of Employment Act of 1997, the Skills Development Act of 1998, and the Employment Equity Act of 1998) that aimed to delineate and enforce human rights and obligations in the sphere of employment. One effect of these laws was that they brought all workers, including academic staff, within one domain of employee relations. Whereas academics had previously been organised in loose staff associations that had no legal rights, they were now entitled to form trade unions and collectively bargain for sector-wide rights and conditions of service. Although it is not evident that academic staff have effectively become unionised in the twenty-year period under review, despite some attempts in that respect, what is clear is that the relationship of academics to their work environment became defined primarily by the employment contract, which in turn was governed by the general provisions of the Labour Relations Act no. 66 of 1995.⁵ The status of academic staff as general employees was given further impetus through the Employment Equity Act of 1998, which required all institutions to undertake an organisational analysis to determine under-represented staff categories and barriers to equity. Universities were to submit to the Department of Labour an annual equity plan, setting out equity targets, measures, strategies and monitoring mechanisms, and to account for any lack of progress towards achieving equity goals.⁶ All universities became ‘designated employers’, and were required to put affirmative action strategies in place for women, black people and people with disabilities, who form part of so-called ‘designated groups’. An implication of the labour legislation was the need for institutions to establish specialised functions to monitor and report on equity in staffing.

In addition to a new labour relations regime, academic staffing also became subject to higher education legislation which carried with it reporting requirements to the Department of Education, and later, Higher Education and Training, in relation to meeting transformational goals. The need to transform post-apartheid higher education into a single coordinated system and the respective policies that were adopted to achieve that goal, as well as the impact of these policies in general, have been addressed in a number of policy analyses and studies as well as elsewhere in this review.⁷ Of particular interest to this chapter are the effects and impact of these policies on academic staffing. An early policy goal, set in the White Paper of 1997, was that of

⁴ B. Thaver (2010) ‘The transition to equity in South African higher education: Governance, fairness, and trust in everyday academic practice’ in *International Journal of Politics, Culture & Society*, 23, p.43.

⁵ E. Webster & S. Mosoetsa (2001) *At the chalk face: Managerialism and the changing academic workplace*, 1995-2001.

⁶ C. Howell & G. Subotzky (2002) Obstacles and strategies in pursuing staff equity: A regional study of the five Western Cape higher education institutions.

⁷ CHE (2004) *South African higher education in the first decade of democracy*; CHE (2007) *Review of higher education in South Africa: Selected themes*; CHE (2009) ‘The State of higher education report’ in *Higher Education Monitor*, 8.

equity and redress of inequalities in the staffing of higher education institutions through capacity development measures to facilitate a more representative staff complement.⁸ As one of the state steering mechanisms for the sector, it required universities to submit to the national education department institutional three-year rolling plans that included human resource development strategies to achieve equity goals. The latter were to outline staff recruitment and promotion policies and practices, staff development arrangements, remuneration and conditions of service, reward systems, the transformation of institutional cultures and mechanisms to support diversity.

Steering the system through planning was a government response to addressing key challenges that were considered unlikely to improve without deliberate intervention. In its introduction and justification for student enrolment planning, for instance, the Department of Education in 2005 identified unplanned enrolment growth that was unrelated to available funding resources, and that was detached from the available institutional, physical and personnel resources, as one of the troubling features of the higher education sector that required a planning response.⁹ The unplanned growth that had been a response to pressures to increase student access to achieve greater equity, was seen as unsustainable, and government attempted to bring about change through planning that was reflective of, and related to, the quantum of funding available to be distributed to institutions. An interpretation of this development is that, in the trade-off between meeting the aspirational goals of the system and the realities of funding constraints, the discourse of participation shifted to one of resource adequacy.¹⁰ Similarly, the discourse with respect to academic staffing shifted from members of an academy appointed into established posts, to human resources required for particular cost centres within the corporation of the university.

These changes were consistent with the growth of managerialism in academia experienced globally, which arguably changed the nature of academic work through greater levels of reporting, accountability and administration. They were at the same time, however, motivated by concerns for equity and redress, which are forces that are somewhat contradictory to the logic of efficiency that generally underlies the trend towards managerialism.¹¹

The effects of the new policy environment, alongside policies and strategies that came to be adopted later such as institutional mergers (2002) and the new funding framework (2003), reflected this tension. The policies were perceived to be heralding a changing role for the state and, in particular, expanding state intervention in higher education, yet the equity imperative was the social good that justified it. Thaver argues that, “there [was] a clash of bureaucratic and traditional forms of professorial power, occurring simultaneously with the incursion of market-type forces into the academy”.¹² A new facet of the tension surfaced, one that pitted

⁸ DoE (1997) *White Paper 3: A programme for the transformation of higher education*.

⁹ DoE (2005) *Student enrolment planning in public higher education*.

¹⁰ J. Jansen, C. Herman, R. Morake, V. Pillay, C. Sehoole & E. Weber (2007) ‘Tracing and explaining change in higher education: The South African case’ in CHE (2007) *Review of higher education in South Africa*.

¹¹ Webster & Mosoetsa (2001) *At the chalk face*.

¹² Thaver (2010) ‘The transition to equity in South African higher education: Governance, fairness, and trust in everyday academic practice’ in *International Journal of Politics, Culture & Society*, 23, p. 23.

historical struggles for autonomy against the new language of accountability. Under the banner of autonomy, universities argued – as they had under apartheid – that the right to decide on academic policy matters was sacrosanct; under accountability, the state argued that – under democracy – it had a vested interest in how the heavily-funded public universities used public funds.¹³ Thaver writes that, “Given the statutory nature of the reform, the central oversight level (which is charged with carrying out the policy mandate) tends to clash with traditionally autonomous forms of professorial power and scholarly freedom [such that] the boundary between the executive or managerial and the professorial levels is transgressed or blurred... the data suggest a tendency among some faculty to frame the equity reform as an exogenous incursion, treating it as no more than an appendage to the otherwise meritocratic business of the university. This trend is often bolstered by an invocation of the principle of academic autonomy”.¹⁴

While changes to demographic profiles are affected by many factors, in evaluating the impact of the legislative environment that was designed to promote the achievement of a more equitable academic complement in terms of both race and gender, the changing patterns in terms of numbers provide a baseline for analysis.

Changing academic staff profiles: race

In terms of race, statistics on the profile of academic staff in the country’s public universities show that while there has been considerable change, the situation is not yet reflective of the demographics of the country.¹⁵ The statistics are presented below, first in terms of permanent academic staffing and then in terms of both permanent and temporary academic employees.

Figure 1 shows that the permanent academic staff complement grew by 35% between 1994 and 2012. The number of permanent African staff members more than quadrupled, albeit from a very low base. The numbers of permanent white academic staff members declined by 13%. In proportional terms, Africans made up 9% of the permanent staff complement in 1994 and 31% in 2012, while the proportion of white staff members declined from 83% to 53% over the same period. Despite these significant changes in demographics, a snapshot picture in 2012 indicates a permanent academic staff complement in which the majority is white (53%) and male (55%), with roughly a third made up of African staff members.

Considering the entire academic staff complement, permanent and temporary, there was a growth in the second decade of democracy of 24%, with the greatest growth occurring in the African component. While the numbers of white academic staff overall grew from 2004 to 2012 (after a decline in the period to 2008), much of the growth was in the temporary staff category. Indeed, the growth in temporary academic staffing overall has been much greater than in the permanent category, with permanent staff numbers growing by 19% and temporary staff by 30%,

¹³ Jansen *et al.* (2007) ‘Tracing and explaining change in higher education: The South African case’ in CHE (2007) *Review of higher education in South Africa: Selected themes*.

¹⁴ Thaver (2010) ‘The transition to equity in South African higher education: Governance, fairness, and trust in everyday academic practice’ in *International Journal of Politics, Culture & Society*, 23.

¹⁵ The data in the following graphs refers to public universities, unless otherwise specified.

Figure 1: Headcount permanent academic staff 1994, 2004 and 2012¹⁶

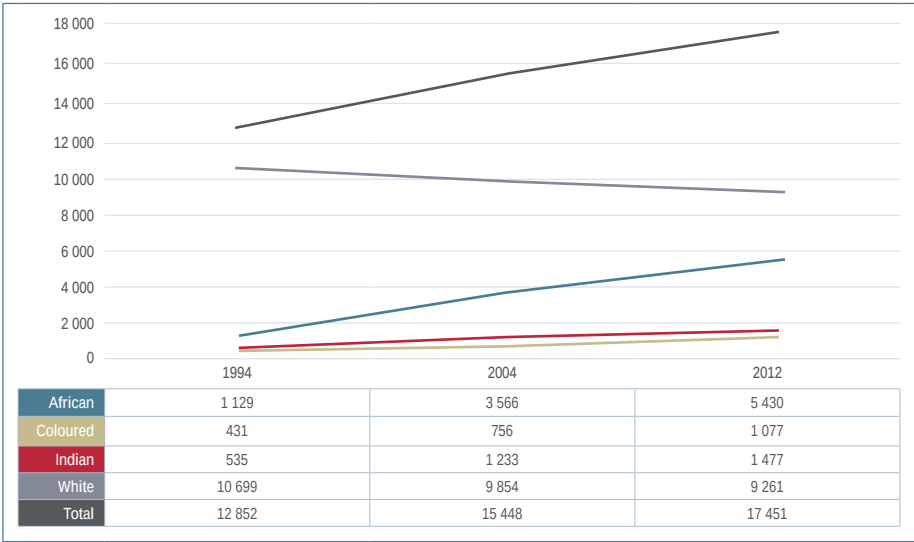
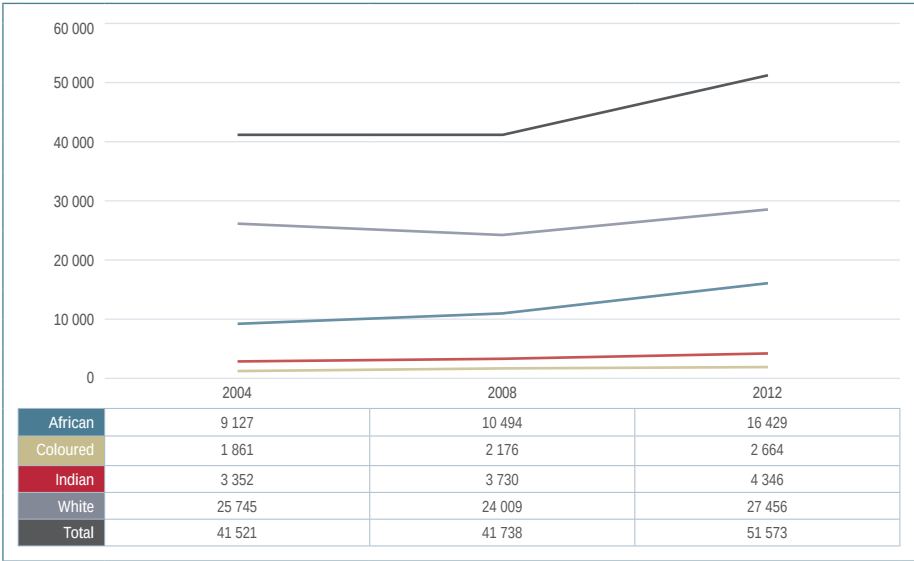


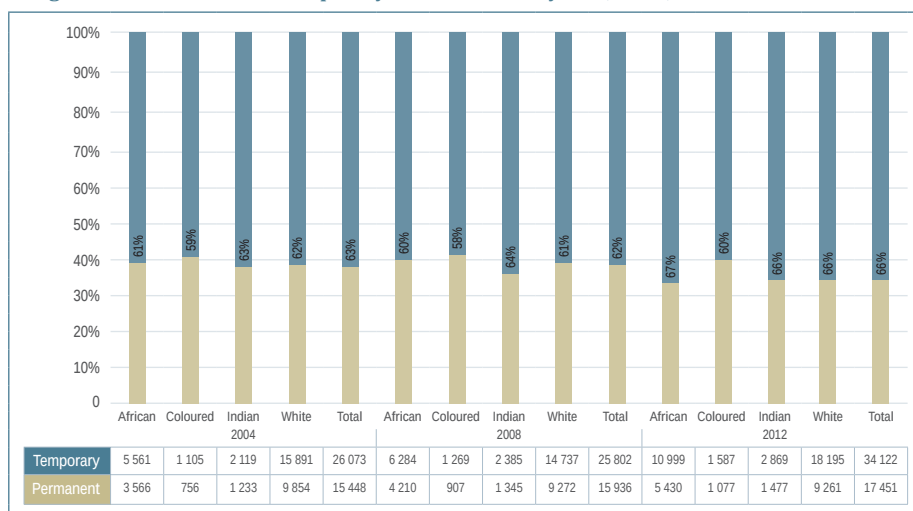
Figure 2: Headcount academic staff both permanent and temporary, 2004 - 2012



¹⁶ The 1994 figures are taken from the SAPSE system which recorded temporary staff differently from HEMIS; the permanent staff category is thus the most comparable over the 20-year period. Data from 2012 have been used rather than 2014 as these are the latest relevant audited figures from HEMIS. The HEMIS category used is 'Instructional and Research staff', which has here been referred to as academic staff. The source of the data for the following graphs is [SAPSE](#) and [HEMIS](#), extracted annually.

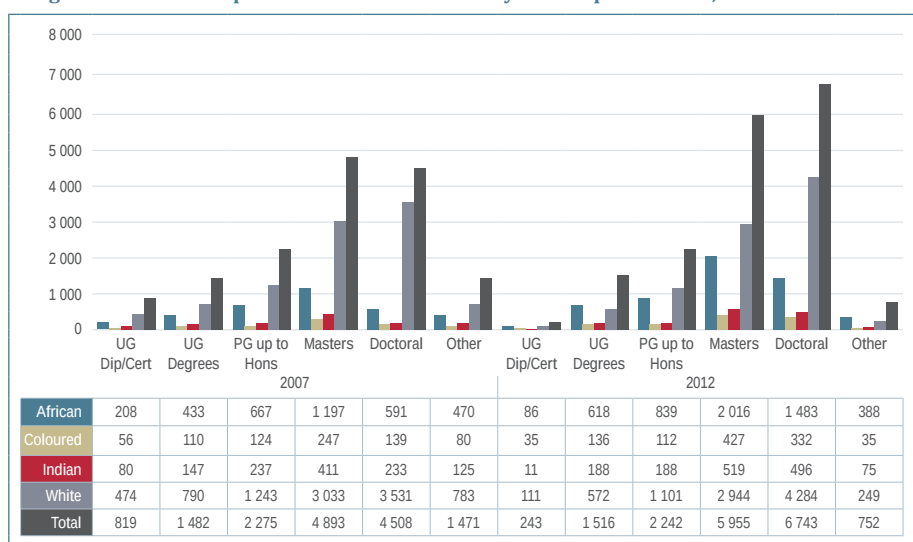
such that in 2012 there were twice as many temporary academic staff (34 122) as permanent (17 451), as indicated in the Figure 3 below.

Figure 3: Permanent and temporary academic staff by race, 2004, 2008 and 2012



In addition to overall numbers, a further dimension to indicating moves towards greater equity is the level of qualifications of academic staff, and how such qualifications are distributed, as shown in Figure 4 below. When analysed according to qualification level, significant change is evident. The numbers of permanent African academic staff with Masters degrees almost doubled between 2004 and 2012, while the number of white Masters holders dropped slightly. Similarly, the number of permanent African staff with doctorates almost trebled in that period,

Figure 4: Headcount permanent academic staff by race & qualification, 2004 and 2012

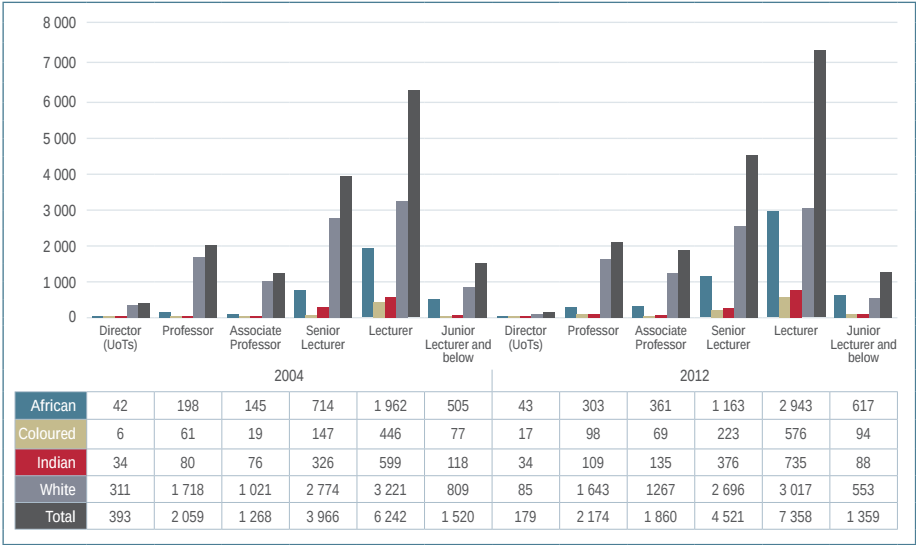


while the number of white academics with doctorates grew to a lesser extent, i.e. by 21%. These changes may, in part, be indicative of the effects of institutional hiring policies and quality assurance processes that have in recent years demanded higher levels of academic achievement for permanent appointment, as well as greater access to higher education over the last twenty years. It also indicates that the pipeline of potential new black academic recruits is growing.

The distribution of academics across universities has largely continued to follow the historical race patterns. Disaggregated in terms of institutions, the proportions of permanent African academic staff in 2012 range widely, from 5% to 91%, with an average of 31%.¹⁷ There were six institutions (of the 23 operative in 2012) with a majority of permanent African academics, and in terms of absolute numbers, there were only two with a permanent African academic staff component of more than 500. This is an indication that the existing pool from which senior African academics can be drawn by other universities is small, and highlights the need for larger numbers of Africans to enter academia. There were seven institutions with an African academic staff complement of less than 20%, six of which had not been through major merger processes. When considering black academic staff in general for 2012 (including Coloured and Indian academic staff members), institutions range from 93% black to 19% black. These figures changed slightly for 2013, with no institution having fewer than 21% black academic staff members. The statistics indicate that the pursuit of equity in terms of race has proceeded unevenly across institutions.

In terms of the rank, as shown in the figure below, in 2012, 14% of professors and 19% of associate professors were African, compared with 10% and 14% respectively in 2008. In 2012, 76% of professors were white, a drop from 83% in 2004. In comparison, when considering lecturers in 2012, 40% were African

Figure 5: Headcount permanent academic staff by race & rank, 2004 and 2012



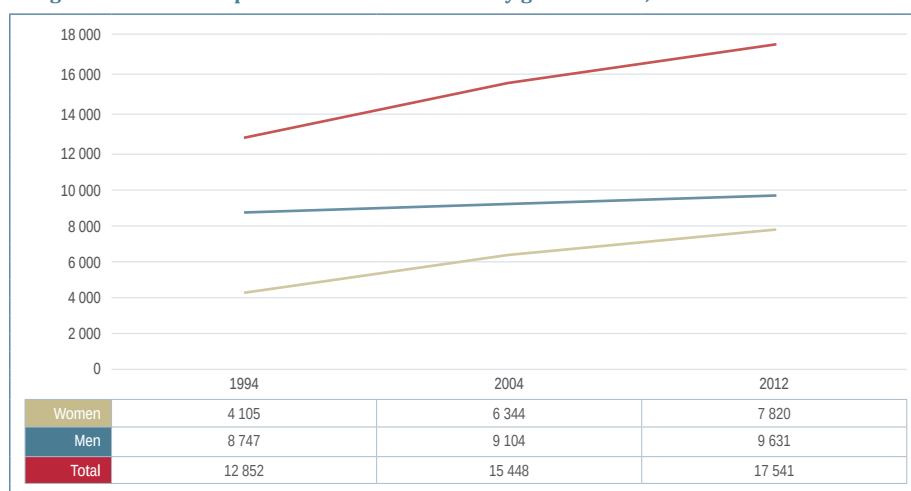
¹⁷ HEMIS data, 2012.

academics and 41% white. This suggests that transformation of the academic profession is progressing from the lower ranks and should spread upwards over the next decade.

Changing academic staff profiles: gender

With respect to gender equity, the patterns indicate a greater level of change than in terms of race. The graph below illustrates that the growth in permanent female academics since 1994 has been far greater than for males (90%: 10%), and that the situation in 2012 was such that almost 45% of the permanent complement was female, 55% male. At aggregate level thus, it is apparent that progress towards gender equity has been rapid.

Figure 6: Headcount permanent academic staff by gender 1994, 2004 and 2012



Though gender equity in academic staffing in 2012 is much closer to being achieved, statistics at aggregate level mask the continuation of substantial gender inequities in specific fields and at different levels. Disaggregated data reveal, first, that when analysed according to both race and gender, inequalities in terms of representation become even more evident, and secondly, that female academics in general are clustered in the lower ranks of the academy. A derivation from the graphs below reveals that African women comprise 14% of the entire academic staff population; white women 27%. Half the female academics are white, with the rest being African, Indian, Coloured or unknown. Similarly, African female academics are the least well represented at senior levels: in 2012 they constituted 9% of the total number of female professors (662), and only 2% of all professors (2 190).

In terms of all professor and associate professor posts, 29% are filled by women (see Figures 7 and 8). Conversely, women constitute just more than half of all lecturers and junior lecturers. These ranks are also, however, in relation to the qualifications which women hold, with only 2 514 (37%) female academics possessing a doctorate in 2012, compared to 4 229 (63%) men. Qualifications will be discussed in more details below.

Figure 7: Headcount female academic staff positions, both permanent and temporary, by race in 2012

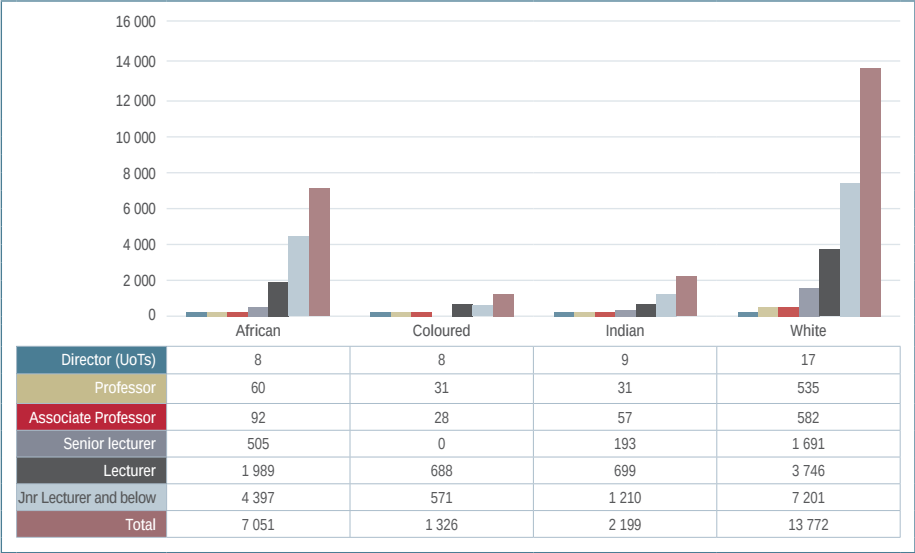
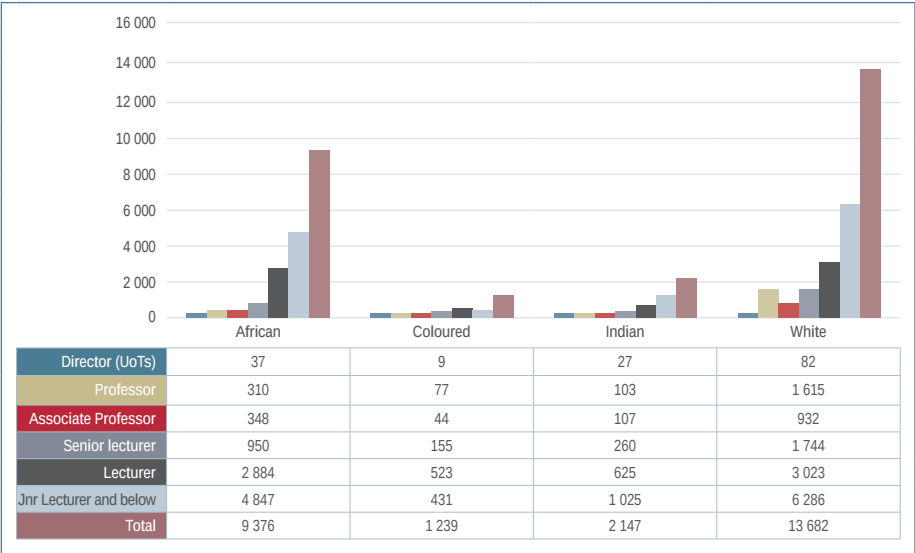


Figure 8: Headcount male academic staff positions, both permanent and temporary, by race in 2012

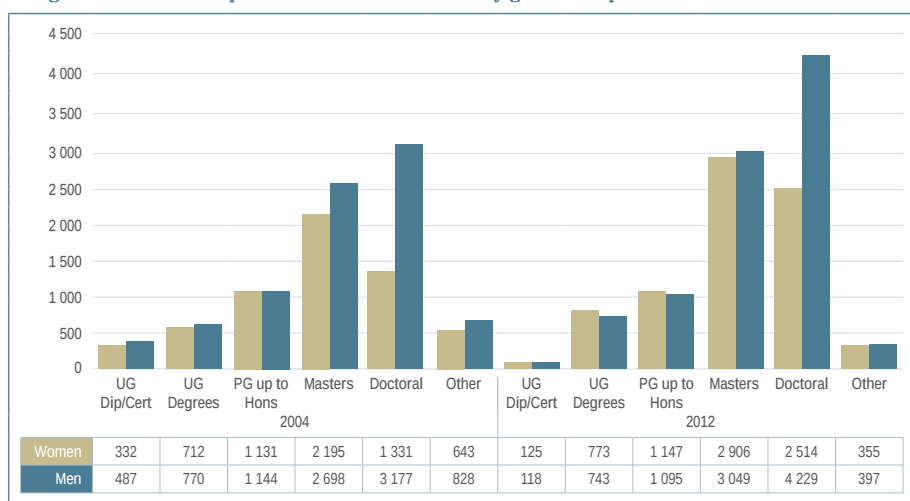


The patterns of greater gender disparity at senior levels are reflective of those in other parts of the world, including universities in developed countries, and suggest that there may be gender-specific barriers to achieving equity in universities that need to be understood.¹⁸ Gender inequalities are evident not

¹⁸ L. Morley (2013) 'The rules of the game: Women and the leaderist turn in higher education' in *Gender and Education*, 25(1) pp. 116-131.

only at senior levels of appointment, but also in terms of the related factor of qualifications at the higher level, as shown in Figure 9 below. It is evident from the figure that while the numbers of male and female academic staff with Masters' degrees (and lower qualifications) are relatively similar, at the level of staff with doctorates the proportions change markedly, with roughly twice as many men as women holding doctorates. This indicates that the conversion rate from Master's to doctorates is higher among male academic staff members than females. The situation is, however, improving, as seen in Figure 9. In 2004, women constituted 45% of academics with a Master's degree and 30% of those with a doctoral degree. By 2012, the number of women with a Masters had increased by 33% so that they constituted 49% of all academic staff with a Masters. Similarly, the number of female academics with a doctorate had increased by a substantial 89% so that they constituted 37% of those with a doctorate. It is evident that the gap between the qualifications of men and women is narrowing, just like the gap in rank. The potential further narrowing of the gap is also evident when considering postgraduate enrolments and graduations (Figures 10 and 11).

Figure 9: Headcount permanent academic staff by gender & qualification for 2004 and 2012



The substantial growth in both enrolments and graduations of women in all postgraduate categories, but especially at the lower postgraduate levels, indicates a pipeline that could lead to achieving gender parity within academia.

As Table 1 shows, the growth in temporary staffing indicates little gender discrimination in terms of permanent and temporary status. More male academics were appointed in temporary positions relative to permanent ones than females during the period 2004 to 2012, and there was near parity of genders in temporary staffing in 2012.

Figure 10: Headcount enrolments by gender per qualification type for 2004 and 2012

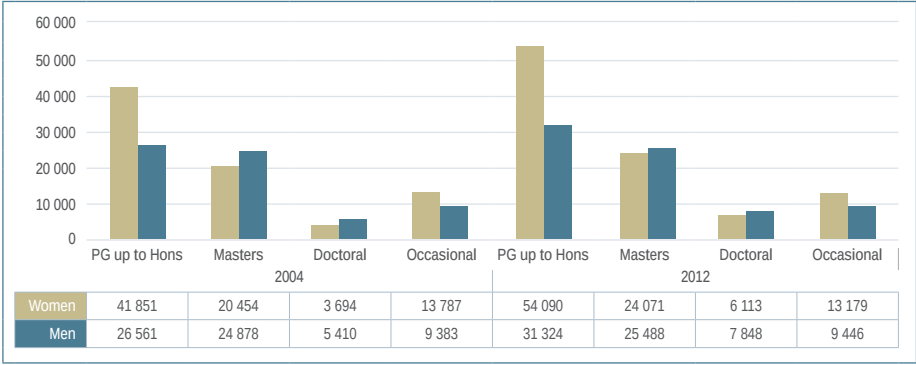


Figure 11: Headcount graduates by gender per qualification type for 2004 and 2012

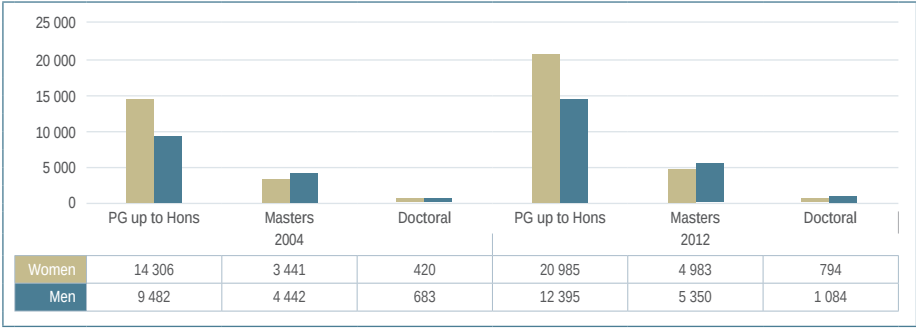


Table 1: Headcount academic staff employment status by gender in 2000, 2004, 2008 and 2012

	2000		2004		2008		2012	
	Perm	Temp	Perm	Temp	Perm	Temp	Perm	Temp
Women	5 539	9 584	6 344	11 906	6 916	11 917	7 820	16 884
Men	9 093	14 186	9 104	14 149	9 020	13 881	9 631	17 234
Total	14 632	23 812	15 448	26 073	15 936	25 802	17 451	34 122

2.1.2. Discussion of academic staff profiles

With hindsight it is not clear that transformational goals and the pursuit of equity in terms of staffing were advanced as intended by the more hands-on planning measures introduced. Despite a strong policy framework for achieving equity, twenty years into democracy there is deep concern that demographic change in the academic staffing of universities has been too slow.¹⁹ Furthermore, as noted by the Commission on Employment Equity, “Race and gender are still the two major factors that determine where a person sits in the academic ‘hierarchy’ in South Africa. White males come first and on top, even with respect to disability. They are followed, in monotonous and predictable fashion, by White females and then Indian males. The country is rigidly locked into this paradigm.”²⁰

¹⁹ CHE (2013) *A proposal for undergraduate curriculum reform in South Africa: The case for a flexible curriculum structure.*

²⁰ DoL (2013) *14th Commission for employment equity, 2013-2014: Annual report.*

Explanations for the difficulty in achieving equity in academic staffing differ widely, with some focusing on the national policy environment, some on institutional behaviour and others on economic supply and demand factors. In some perspectives, the limited success of national legislative and policy measures can be related to the lack of punitive measures adopted by the Department of Labour or Department of Higher Education and Training against universities to ensure compliance, as this would be seen as transgressing the boundaries of institutional autonomy. In such views, change in universities requires yet greater steering towards the achievement of goals in the face of perceived conservatism and recalcitrance. As Minister Nzimande has stated, “Some institutions have made substantial progress in transforming themselves, but others have lagged behind. Focused attention by all of us is required on this matter”.²¹ He added that “... I will pay close attention to accelerated transformation in our universities, including setting concrete targets and transformation indicators” and then explained that, “I am also resourcing the transformation oversight committee to assist us in this regard”.²² The lack of transformation may, however, be less a deliberate strategy not to comply, than simply an optimising response by academic managers in the face of other pressures. In other words, an unwillingness to make systematic attempts to address the issue arises, almost inevitably, from the fact that there is little incentive to do so and potentially much cost in the form of internal resistance and conflict.

The perceived slow rate of change is often ascribed to the relative autonomy of institutions from government, as the key responsibility for putting in place mechanisms to achieve equity lies with individual institutions. This has had both positive and negative connotations. On one hand, it has been argued that any change that has occurred has been a result of institutional action rather than a response to legislative requirements to produce plans and to report on progress at a national level. Schoole and Ojo (2013) describe a number of programmes and strategies across institutions to grow the numbers of young academics, and some of these are discussed below.²³ The limitations of such programmes have been argued to be that they are generally targeted at supporting individuals in their career pathways, while not necessarily changing the structure of the academic working environment and shifting the ways in which institutions operate that might militate against the achievement of greater equity, and that they are small and not widespread. Much of the funding and support for programmes designed to bring about change in academic staffing profiles has emanated from philanthropic organisations in the United States and elsewhere. Such foundations have together invested some \$56 million in staff equity programmes, specifically at selected historically white institutions.²⁴

On the other hand, institutional cultures have been regarded as resistant to change. Research into managerialism and the changing workplace in the early

²¹ B. Nkosi (2015) ‘This is the year varsities will transform’ in *Mail and Guardian*, 14 May.

²² *Ibid.*

²³ C. Schoole & E. Ojo (2013) *Entering academia: Conditions and opportunities for new faculty in higher education*.

²⁴ CHEC (2014) *Review of initiatives in equity and transformation in three universities in South Africa*.

post-apartheid period indicated that human resource managers at institutions had found it difficult to persuade academics to regard recruitment as anything other than an individual departmental matter, rather than part of a deliberate institutional employment equity strategy.²⁵ Descriptions of academics experiencing discrimination have been found in several studies spanning the period under review,²⁶ and further studies posit that the effects of past institutional racism remain firmly part of university cultures.²⁷

A government-initiated investigation in 2008 into reasons for the failure of institutions to change their staff profiles more profoundly cited six main reasons: heavy workloads and unsatisfactory working conditions of academic staff; a lack of funds for new permanent posts; language policies in some institutions; under-developed networks and support systems for black staff; an absence of effective monitoring and a lack of accountability for equity within institutions; and a failure to deal with issues that specifically affect female academics.²⁸ While raising concerns about what institutions are doing to address the “real-life experiences” of staff, the report also noted that many institutions have initiatives in place to improve staff equity, recruitment and retention.²⁹

The lack of thoroughgoing demographic change in the staff complement has recently been vigorously debated in the media, with two main broad responses evident. The first is that the slow rate of change has been ascribed to conservative institutional policies and cultures that militate against or actively resist change, as noted above.³⁰ A contrary view is that a faster rate of change could not have been expected, given that, “It generally takes more than 20 years from getting a PhD to becoming a professor. The pool of South African black academics available for appointment to professorship in 2014 is a proportion of the pool of black PhD graduates in 1994. Given our history, this was a very small pool. Few in that small pool chose academic careers over offers from the new government, civil service and corporates, all desperate to recruit highly skilled black professionals.”³¹ Similarly, it has been noted that there is significant competition for highly-qualified black and women graduates who are able to find jobs in other sectors with generally higher salaries than can be achieved within the

²⁵ Webster & Mosoetsa (2001) *At the chalk face*.

²⁶ R. Mabokela (2002) ‘Reflections of black women faculty in South African universities’ in the *Review of Higher Education*, 25(2), pp. 185-205; C. Potgieter (2002) *Black academics on the move*; DoE (2008) *Report of the Ministerial Committee on Transformation and Social Cohesion and the Elimination of Discrimination in Public Higher Education Institutions*; S. Ismail (2011) ‘Researching transformation at a South African university: Ethical dilemmas in the politics of representation’ in *Studies in Higher Education*, 36(3), pp. 275-289; S. Vandeyar (2010) ‘Shifting selves: Constructing and negotiating academic identities’ in *South African Journal of Higher Education*, 24(6), pp. 914-934.

²⁷ M. Mamdani (2004) *Race and ethnicity as political identities in the African context*; N. Tazi (ed.) *Keywords: Identity*; J. Statman & A.E. Ansell (2000) ‘The rise and fall of the Makgoba affair: a case study of symbolic politics’, in *Politikon* 27(2).

²⁸ DoE (2008) *Report of the Ministerial Committee on Transformation and Social Cohesion and the Elimination of Discrimination in Public Higher Education Institutions*.

²⁹ *Ibid.*

³⁰ The Guardian Africa Network Expert Panel (2014) ‘Why are there so few black professors in South Africa?’ in *The Guardian*, 6 October.

³¹ UCT (2014) ‘Staff transformation at UCT’ in *UCT Daily News*.

university sector.³² However, it is not possible to say with any certainty whether that is, in fact, a contributory factor in persistent low levels of representation. There is as yet little systematic evidence on why individuals choose some career paths over others, which is crucial information for policies seeking to address the overlapping challenges of transformation and successfully developing new generations of academics.

The debate on academic staffing twenty years on is fierce; that the demography of academic staffing is currently giving rise to such contestation is an indication of deep-seated frustration and thwarted expectation on one hand, and a resignation to the difficulties of change on the other.

Part of the more recent responses of government to expedite change has been to introduce more hands-on monitoring and planning measures, and the discourse on dealing with non-compliance in universities has become tougher, while the need for active interventions such as funding more academic posts to speed up transformation has also been recognised.³³ There have been attempts to develop national measures of the extent to which universities have transformed in terms of academic staffing complements reflecting national demographics more closely, such as the Equity Index and a Transformation Oversight Committee has been established to monitor such change.³⁴ These have not been without some level of controversy, with both methodological and conceptual concerns having been raised about the Index and the import of the establishment of such a body.³⁵

Further policies have been developed with the aim of bringing about more rapid transformation in institutions, requiring social inclusion reports to form part of annual reports to government, seemingly in addition to already existing reporting on staffing equity.³⁶ Universities have, through their Vice-Chancellors' association, Higher Education South Africa (HESA), perhaps as a pre-emptive move in the face of potential sanctions, also undertaken the monitoring of the pursuit of equity through compiling transformation reports.³⁷ The difficulty in these has been to isolate demographic change from policies and strategies on transformation as a whole, and indeed, to pin down the concept within the shifting meanings that shelter under the transformation umbrella. Transformation plans and institutional missions tend to merge so that it is difficult to distinguish rhetoric from action. Cloete

³² Potgieter (2002) *Black academics on the move*; HESA (2011) *Sector position paper on the report of the Ministerial Committee on Transformation and Social Cohesion and the elimination of discrimination in public higher education institutions*.

³³ DHET (2015) '2nd Higher Education Summit: Addressing systemic higher education'; Parliamentary Monitoring Group (2013) 'Equity Index in South African Universities: Briefing by Deputy Minister of Higher Education and Training and the Transformation Oversight Committee'.

³⁴ K.S. Govinder & M.W. Makgoba, (2013) 'An equity index for South Africa' in *South African Journal of Science*, 5/6.

³⁵ J. Higgins (2014) 'Universities and state control: Cloudy days for academic freedom' in *Mail and Guardian*, 6 June; A. Morris (2014) 'Is the Equity Index a good tool to gauge demographic transformation at South African universities?' in *South African Journal of Science*, 3/4; T.A. Moultrie & R.E. Dorrington (2014) 'Flaws in the approach and application of the Equity Index: Comments on Govinder *et al.* (2013)' in *South African Journal of Science*, 1/2.

³⁶ DHET (2014) *Draft Social Inclusion Policy Framework for Post-school Education and Training Institutions*.

³⁷ HESA is now Universities South Africa

has traced the shifting interpretations of transformation over time,³⁸ and Lange has similarly pointed to the differing connotations of the term in different periods and contexts, and how one, rather narrow, version has “entered the administrative logic of the state bureaucracy, becoming a key performance indicator for ministers, government officials, vice-chancellors and universities, CEOs of public enterprises, the professions, the church and business. From this perspective transformation needs to be measured, benchmarked, multiplied, squared, divided, exhibited in graphs and pie charts, monitored and reported on quarterly and annually, and has to be evaluated and meta-evaluated each decade. Thus transformation has become synonymous with Lyotard’s performativity”.³⁹ In this she has also cautioned against attempting to bring about transformation without understanding that, “institutional transformation has as its structural limit the depth and direction of the transformation of society. This should not be taken as an excuse to stop change or to absolve universities for not pushing further, it is simply a reminder that in the big scheme of social change and social justice universities are but a very small part”.⁴⁰

It is thus worth embedding the discussion on equity in academic staffing within an outline of some of the contextual factors that have shaped, and that continue to shape, the academic profession in South Africa.

2.2 Massification

2.2.1. Size of the academic staff body

Apart from the pull factors associated with democratisation, a number of push factors integral to the context of higher education in the 21st century have been exerted on the South African higher education system. The massification of higher education has been a global phenomenon for over half a century as the social and economic demand for advanced qualification has increased, as discussed in the Overview to this review. Globally, this has resulted in significant pressures on academic staffing.

In South Africa, increasing the participation rate of youth in the higher education system became a primary goal in the new dispensation.⁴¹ The aim was to increase the participation rate of 18 to 24-year olds from 15% to 20% over a 10 to 15 year period, both to respond to external pressures for responsiveness to internationalisation and an increasingly competitive global economy, and to meet an increasing demand from groups that had previously been denied access to higher education.⁴² The pressure for massification is complicated by the damage wrought on primary and secondary education by the apartheid system and its legacy, resulting in major variation in the levels of preparedness of students to undertake undergraduate and postgraduate studies. It is complicated further by high levels of variability in quality within and across institutions, variable levels of qualification of academic staff, and limited capacity in the system to teach and supervise doctoral programmes.⁴³

³⁸ N. Cloete (2015) ‘The PhD and the ideology of no transformation’ in *University World News*, 28 August.

³⁹ L. Lange (2014) ‘Rethinking transformation and its knowledge(s): The case of South African higher education’ in *Critical Studies in Teaching and Learning*, 2(1), pp. 1-24.

⁴⁰ *Ibid.*

⁴¹ DoE (2001) *National Plan for Higher Education*.

⁴² C. Bundy (2006) ‘Global patterns, local options: Changes in higher education internationally and some implications for South Africa’ in *Kagisano*, 4.

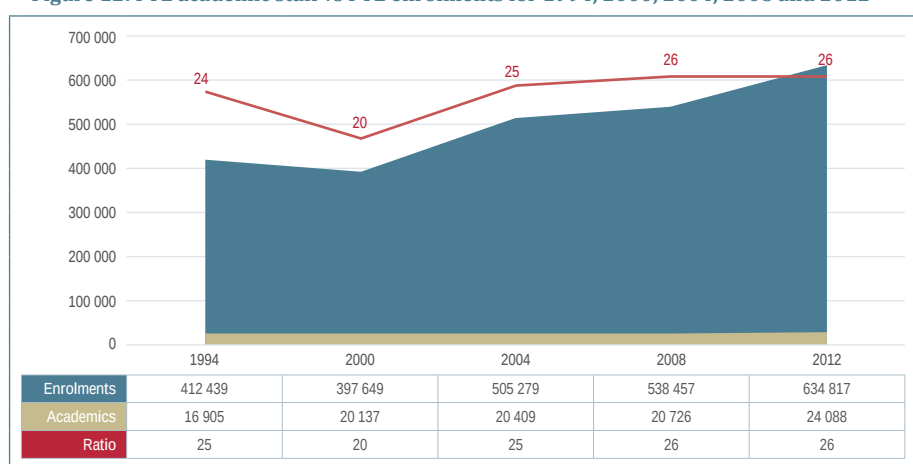
⁴³ NPC (2011) *National Development Plan: 2030. Our future – make it work*.

Nevertheless, in the twenty years post the introduction of democracy, South Africa experienced a substantial increase in enrolments in higher education, and a significant change in the demographic make-up of the student body. These achievements were made possible by the implementation of policy measures to redress past inequalities, such as outlawing discrimination on the basis of race or sex; affirmative action; alternative admissions tests to complement the national final secondary school examination; the recognition of prior learning to facilitate access for mature students; extended curriculum programmes for students that show potential; and a state-funded national student financial aid scheme.

HEMIS data indicate a growth in headcount student enrolments from 493 342 in 1994 to 953 373 in 2012, a growth of 92%, with a change in the proportion of African students from 43% to 69% in 2012, reaching 81% black students (i.e. Africans, Indians and Coloureds) overall.⁴⁴ The proportion of female students increased from 45% in 1994 to 58% in 2012. By contrast to the 92% growth in student enrolments, the permanent academic staff complement grew by only 36% over the same period.

Looking more closely at the more recent period from 2000 to 2012, as is shown in the figure below, it is evident that the growth in FTE enrolments (60%) outstripped growth in academic staffing FTEs over the same period (20%). The staff to student ratio deteriorated from 1:20 in 2000 to 1:26 in 2012. In terms of headcounts, as shown in *VitalStats 2012*, the permanent academic staff to student ratio for 2012 was 1:55, with the combined temporary and permanent academic staff to student ratio being 1:18. These figures indicate that there is a growing reliance on temporary academic staff to cater for the increase in student numbers. Indeed, this is borne out by the headcounts of temporary academic staff which rose from 25 571 in 2007 to 34 122 in 2012, i.e. 34%. In contrast, the rise in permanent academic staff between 2007 and 2012 was from 15 812 to 17 451, i.e. only 10%.⁴⁵

Figure 12: FTE academic staff vs FTE enrolments for 1994, 2000, 2004, 2008 and 2012



⁴⁴ CHE (2014) *VitalStats: Public Higher Education 2012*.

⁴⁵ CHE (2012) *VitalStats: Public Higher Education 2010*.

Given the above figures and the decline in real terms in state funding for higher education – the Funding Review reports an annual 1.1% decline in funding per student FTE between 2000 and 2012 – it is clear that academics are now expected to do more with less.⁴⁶ A study by Johnson (2006) bears this out at institutional level in that significant growth in student numbers was achieved without a proportional increase in the staff complement. The impact was described as follows, “Academic staff is increasingly required to take on more and more work as classes get bigger due to the inability of management to track enrolments or plan effectively. We do this for less and less pay”.⁴⁷ Certainly, the increase in student numbers implies a greater total workload. Institutions have adopted a variety of strategies to cope with increasing research, teaching, community engagement and administration responsibilities being placed on academic staff, including shifting undergraduate teaching and assessment to junior or part-time contract staff, and changing assessment practices, for example, replacing essay questions with multiple choice questions that can be ‘marked’ by an automated process. This is not dissimilar to the situation described in other contexts that have experienced rapid student growth. For example, Altbach writes that, “The academic profession has been stretched to the breaking point. Close to half those teaching in postsecondary education worldwide possess only a bachelor’s degree. Class sizes have increased, and students receive little personal attention from professors. Academic salaries have deteriorated, and many academics must hold down more than one job to survive. It is likely that access has produced, on average, a poorer learning environment for students, in part because the academic profession has not grown fast enough to keep up with expansion.”⁴⁸

2.2.2. Age

Rapid massification in many contexts has led not only to existing academic complements being stretched ever more thinly across more students, but also to the related challenge of replacing ageing academics with a new generation of young academics.⁴⁹ Altbach *et al.* point out that more than half the professoriate in much of the world is getting close to retirement, too few new PhDs are being produced and there are too few incentives to induce new doctorate holders to enter the profession. These trends are exacerbated in countries with rapidly growing student populations.⁵⁰

Similarly, in South Africa it is feared that there are insufficient numbers in the existing academic and postgraduate pipelines to replace the retiring cohorts.⁵¹ This has given rise to a realisation that individual institutional programmes

⁴⁶ DHET (2013) *Report of the Ministerial Committee for the Review of the Funding of Universities*.

⁴⁷ B. Johnson (2006) ‘South African academia in crisis: The spread of contrived collegial managerialism’ in *South African Journal of Higher Education*, 20(1).

⁴⁸ Altbach *et al.* (2013) *The global future of higher education and the academic profession*.

⁴⁹ HESA (2011) *Sector position paper on the report of the Ministerial Committee on Transformation and Social Cohesion and the elimination of discrimination in public higher education institutions*.

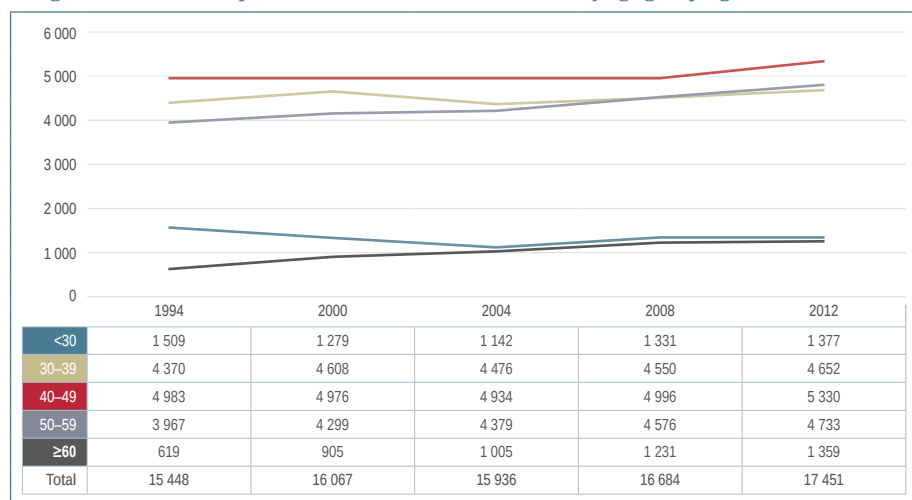
⁵⁰ Altbach *et al.* (2013) *The global future of higher education and the academic profession*.

⁵¹ ASSAf (2010) *The PhD study. An evidence-based study on how to meet the demands for high-level skills in an emerging economy*.

– such as those mentioned above – to develop new generations of academics will not be adequate. Instead, policy documents such as the White Paper of 2013 acknowledge the need for stimulation at a national level to increase the pool of young academics, and a national programme towards this end has been developed.⁵²

In its study of the problem, HESA pointed to a looming crisis in this regard, with one fifth of professors set to retire in the next decade, including nearly half of the professoriate (i.e. professors and associate professors).⁵³ In the context of a student body that is growing much faster than its academic counterpart, the need is not only for replacement as in a static situation, but for growth in terms of numbers. The loss of academic expertise at senior levels is thus disconcerting for institutions for many reasons, not least because it is generally at these levels that research productivity is most intense and supervision is undertaken. Contradictory pressures have led to institutions adopting a range of strategies in this regard. While in the early years of democracy some institutions lowered their retirement age in an effort to accelerate the transformation of the demography of the academic staff body, more recently, given the effects of the loss of senior academic expertise, some have reverted to a higher retirement age. There has also been an apparent increase in contract appointments of retirees, given that 7.3% of the entire academic population in 2012 comprised people over 60 on temporary conditions of service.⁵⁴ In Figure 15 it shows that in 2004, 6% of academic staff were over the age of 60, but by 2012 this had increased to 10%.

Figure 13: Headcount permanent academic staff members by age grouping from 2004 to 2012



⁵² DHET (2013) *White Paper for Post-school Education and Training: Building an expanded, effective and integrated post-school system*.

⁵³ HESA (2011) *Sector position paper on the report of the Ministerial Committee on Transformation and Social Cohesion and the elimination of discrimination in public higher education institutions*.

⁵⁴ CHE (2012) *VitalStats*.

Figure 14: Headcount temporary academic staff members by age grouping from 2004 to 2012

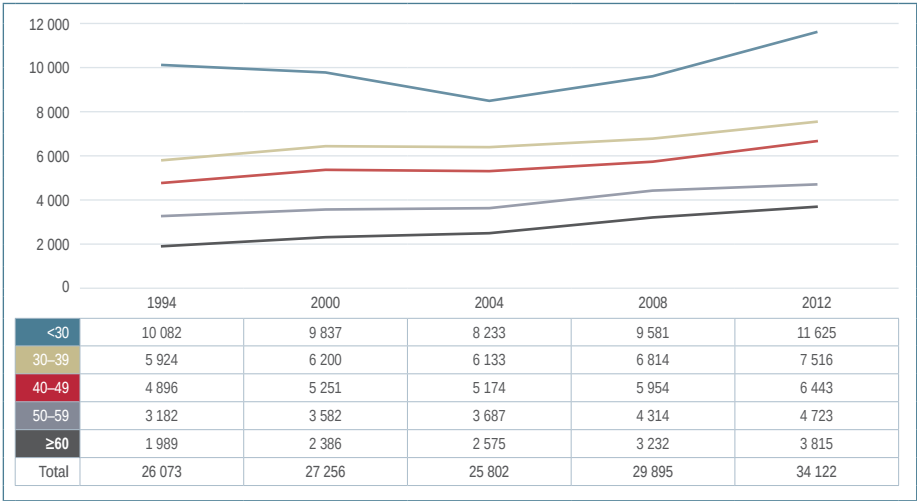
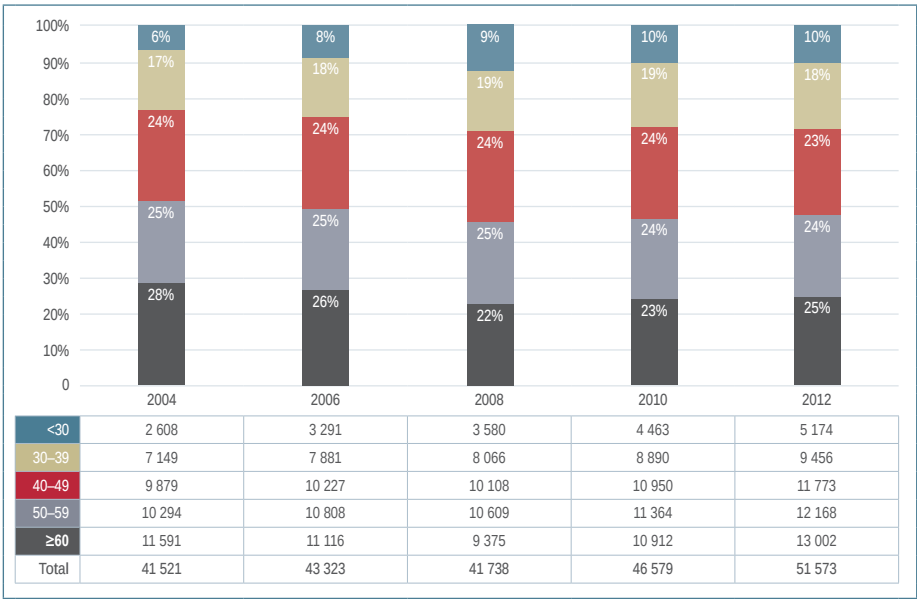


Figure 15: Headcount academic staff members by age grouping from 2004 to 2012



Figures 13 to 15 above indicate that in 2012, 35% of permanent academics were 50 or older, most of whom would be due to retire in the next ten years, depending on their institution’s retirement age. At the same time, however, there were 35% under 40 in the pipeline. Considering both permanent and temporary staff, that figure rises to 49%. There is thus some potential in the system that could be harnessed depending on appropriate staff development strategies, career-pathing opportunities, and the development of their scholarship and research

productivity, and thus in a steady state the reported looming crisis may be contained. Given natural attrition, possible growth in the system, and competition from other types of employment, however, the concern about whether the next generation will be large enough to succeed the retirees may well be justified.

In addition to numbers, the concerns are related to the qualifications and skills profiles of the next generation of academics and their experience and capacity to deliver in key areas of the academic profession, namely knowledge production as demonstrated through journal articles and book publications, as well as ability to supervise at masters and doctoral levels. Research shows that older academics are responsible for a disproportionate amount of research production and supervision. Whether this is due to the lack or inability of younger academics to take on such roles or that senior academics have greater opportunities to do so, remains an open question. Nevertheless, it is one with potentially important implications for staffing, such as the need for deliberate efforts to stimulate research productivity among younger academics.⁵⁵

Furthermore, the size of the academic staff body as described above, constrains the pace and extent to which doctoral graduations can be increased. A study by Mouton finds that it is doubtful that doctoral graduations can be increased unless “the size of the pipeline from Honours onwards and the limited supervisory capacity in the system can be addressed.” Furthermore, he argues that research output and general productivity will decline unless “many more black (and to a lesser extent female) academics who publish and regenerate the workforce” are employed.⁵⁶

2.2.3. Casualisation

An examination of the data on permanent versus temporary staffing in South African higher education reveals a trend towards the so-called casualisation of academic work that mirrors trends elsewhere. In Figure 14 above, it is evident that there was a growth in the number of temporary academic staff at all levels, and that in 2012, there were 11 625 temporary academic staff (of a total of 34 122) who were under 30. While on the one hand this indicates a reasonably sizeable pool from which future permanent academics can be drawn, it also confirms the existence of a so-called academic ‘precariat’,⁵⁷ which, without sufficient incentives such as job security, is at risk of being lured to more stable opportunities elsewhere. The negative effects of casualisation on the attractiveness of the academic profession are clear: attraction and retention of academic staff becomes more difficult; career tracks are undermined; commitment to academia suffers; job satisfaction and personal employment security become increasingly important factors influencing career decisions; institutional memory and disciplinary expertise are harder to build up; and these together have a negative effect on the reproducibility of the academic profession overall.

⁵⁵ ASSAf (2010) *The Phd study*.

⁵⁶ J. Mouton (2010) *Knowledge production at SA universities: Issues of size, shape and stratification*.

⁵⁷ R. Cahill & T. Irving (2015) ‘Radical Academia: Beyond the Audit Culture Treadmill’ in ‘*Radical Sydney/ Radical History*’ (blog).

Figure 13 reveals that there has been comparatively little growth in permanent academic staffing, and that the growth in academic staffing overall that has happened has come about mainly through an increase in temporary positions. The effects of this are not only deleterious in terms of the conditions of service of academic staff and reproducibility overall, but it influences the rate at which the demography of the staffing complement can change. Figure 1 indicates that since 2004, white permanent academic staff numbers have declined, and that permanent African academic staff numbers rose from 3 566 in 2004 to 5 430 in 2012, which would suggest a trend towards a major change in demography. It must be borne in mind that there are relatively few permanent positions becoming vacant each year; Figure 12 suggests that, given 10% of academic staff over 60, the permanent posts arising from retirements may be in the region of 4 500 annually, but given the requirements of senior posts, these are unlikely to be filled from the ranks of younger temporary staff. It is also the case, however, that there were 10 999 temporary African academic staff members; two-thirds of the African academic workforce was thus on temporary conditions of service. Given the trend towards increasing casualisation, and the much slower growth in permanent positions, the negative implications for the rapid transformation of the academic workforce in terms of demography and the achievement of greater equity are obvious.

2.2.4. Salaries

A comprehensive HESA study on academic salaries in 2012, which compares them with public and private sector salaries at different levels, comes to a number of interesting and relevant conclusions. It found that at senior levels, remuneration levels of academic staff in 2012 were better than that of comparable staff in the public and private sectors, particularly for some top researchers; at the introductory levels of academic ranks, however, they were far worse. There is some dispute, however, about whether the senior academic packages are indeed competitive with the public sector, as the benchmark of professorial level against a Director in the public service may not be the most appropriate, given the different levels of qualification and experience required.⁵⁸ Nonetheless, the conclusion that the salaries do not compare well at the lower levels is significant in relation to the attractiveness of an academic career for young graduates who may be drawn to better offers elsewhere. The report also notes that while there is no direct discrimination in remuneration between male and female academic staff, female staff are under-represented at the higher academic ranks and over-represented at the lower academic levels, resulting in lower remuneration levels overall. The same is true for African and Coloured academics who are similarly over-represented at the lower ranks. Interestingly, the data bear out perceptions that a new managerialist trend has resulted in a widening gap in salaries between academics and managers, with vice-chancellors' salaries being five times the average amount earned by academic staff members.⁵⁹

⁵⁸ HESA (2014) 'Summary of the study of remuneration of academic staff at universities and response from HESA' (report).

⁵⁹ Ibid.

2.3 Productivity drivers

2.3.1. Audit culture

Higher education operates in an increasingly interconnected and global environment. Factors internal and external to the universities shape the nature of academic work. A key feature of massification has been the concomitant rise of what is commonly called an ‘audit culture’ in higher education systems across the world. On the positive side, the aims of this audit culture have been to bring about the necessary improvements in efficiency to the system if larger numbers of students are to be catered for without a matching increase in the provision of teaching staff. On the negative side, it has raised many complex questions relating to academic freedom and institutional autonomy. South Africa has not been immune to the rise of such a culture, given the advent of more external monitoring and measurement such as external quality assurance and enrolment planning, as well as performance management systems, both internal and external, such as the National Research Foundation’s rating system. The rise of institutional ranking systems in which institutions seek to climb league tables measured largely on quantitative measures of output, has also increased pressure on academic staff to perform in prescribed ways.

A predominantly quantitative attention to measuring performance has arguably had an impact on academic staff activity, with both intended and unintended consequences. The positive impact of the system to reward research output is that it provided an incentive, as intended, to increase performance in research for both institutions and individual researchers, as evidenced in the Research chapter of this review. However, a concern with the pressure to increase research outputs has, in some instances, threatened the appropriate balance between teaching and research, and has sometimes led to hiring practices designed to ‘play the numbers game’ that may not be in the interests of student learning. The pressure to increase research outputs has also, arguably had an unintended consequence of lowering the quality of research in that it is more beneficial to ‘salami slice’ the same work and publish it in different small bits, rather than in one definitive article. In some cases, it may have led to undesirable practices such as fraudulent claims for research subsidy, or the existence of journal-publishing syndicates in which ‘peer review’ is bought rather than properly and independently applied.

Further unintended consequences are that it has, in some institutions, led to the creation of hierarchies within the academic profession with some academics being seen as researchers and some as teachers with the former enjoying more recognition than the latter, and the general undervaluing of teaching as discussed in Chapter 4. This is also an historical global phenomenon.⁶⁰ At an institutional level, emergent entrepreneurial and audit cultures, coupled with institutional funding and sustainability pressures, have created the need for institutions to compete for funds, talent and rankings, and this has thus exacerbated existing inequalities. Furthermore, as noted by many critics, international rankings can distort institutional priorities, while the local research incentive system may, in

⁶⁰ E.L. Boyer (1990) *Scholarship reconsidered: Priorities of the professoriate*.

many cases, simply induce the publication of lower quality work, as noted above.⁶¹

The nature of academic work has also been affected by differing models of management, particularly where academics have increasingly had to manage academic administrative departments as cost centres, and to adopt new roles and functions such as fundraising, which can detract from the traditional focus on teaching and research.⁶² Academic work has also often been determined and allocated on the basis of workload formulae used to measure it and manage it across disciplines in order to be seen to be more equitably distributed.⁶³ Much of this development has happened to counter the effects of the introduction of ad hominem promotions, which led small departments with a preponderance of professors to become too expensive to run as cost centres.

2.3.2. Professional development of academic staff

Some of the constraints on existing staff have already been outlined, but there is also the reality that many may be out of step with a rapidly changing student body, context and curriculum, making staff development for more appropriate and effective teaching and learning a necessity.

In South Africa, as in most other countries, there is no formal requirement for teaching competence or pedagogical training. Nevertheless, (or perhaps because of this), academic staff development has focused on building capacity for effective and innovative undergraduate teaching, curriculum design, and the assessment of students – and this remains a central concern of professional development in South Africa.⁶⁴ The focus of staff development for teaching arose from the widening access to higher education in South Africa; this confronted institutions with students who were underprepared for tertiary education (for complex and varied reasons, including the ‘articulation gap’ between schooling and university study).⁶⁵ A culturally, linguistically and educationally diverse student population challenged many of the fundamental assumptions and attitudes of academic staff, and in some instances led to the establishment of staff development programmes that re-assessed traditional curricula and pedagogical practices.⁶⁶ The admission of underprepared students placed demands on institutions for foundation programmes (later changed to extended curriculum programmes), increased student support, and for more innovative use of learning technologies (such as learning management systems and social media for learning). As larger and more diverse student groups participated in higher education, the role of academic development changed its focus from student development (the ‘underprepared’

⁶¹ S. Marginson & M. van der Wende (2007) ‘To rank or to be ranked: The impact of global rankings in higher education’ in *Journal of Studies in International Education* 11(3-4); U. Teichler (2011) ‘The future of university rankings’ in J.C. Shin, R.K. Toutkoushian & U. Teichler, *The Changing Academy – The Changing Academic Profession in International Comparative Perspective*.

⁶² M. Sirat, K.R. Lie & S. Kaur (2007) *Quality assurance and university rankings in the Asia Pacific: Country and institutional contexts*.

⁶³ CHE (2016) *Reflections of South African university leaders, 1981-2014*.

⁶⁴ D. Gosling (2009) ‘Report on the survey of directors of academic development in South African universities’ (report).

⁶⁵ CHE (2013) *A proposal for undergraduate curriculum reform*.

⁶⁶ T. Gibbon & J. Kabaki (2002) ‘Staff’ in N. Cloete, P. Maassen, T. Moja, M. Perold & T. Gibbon (eds.) *Transformation in higher education: Global pressures and local realities in South Africa*.

university student), to teacher development (the ‘underprepared’ university teacher and, by implication, the ‘underserved’ student).

The field of student learning in South Africa has developed powerful theoretical tools for understanding students’ experiences in higher education, and for exploring alternatives to deficit constructions. A similar powerful theorisation of academic staff development is needed to understand how academic staff might be supported to bring about systemic change.⁶⁷ South African universities offer many opportunities for the professional development of its academic staff: workshops, seminars, project-based interventions, peer mentoring, formal qualifications, rewards, incentives, research and innovation funding, specialist associations, conferences and special interest groups. However, there tends to be a lack of coherence, and often little sense of purpose, in such offerings, and therefore a low uptake of professional development opportunities, despite incentives and rewards.

As in other contexts, the trend is towards formalising such learning for staff through the introduction of higher education studies modules and the like at several institutions. This will no doubt serve to improve teaching and learning, but the downside is that yet another demand is placed on academic staff amid all the other increasing pressures to perform.⁶⁸

2.4 Restructuring of institutions and the higher education landscape

As in many other higher education systems, differentiation between institutional types in South Africa is evident, and this has an effect on the types and nature of academic staff employed. In South Africa, differentiation is complicated by the overlay of the historical apartheid divisions which still bedevil patterns of institutional resourcing in which the legacies of decades of underfunding in some institutions still endure. This has had concomitant effects on working conditions for staff across the system which are vastly uneven.

A strategy of mergers of institutions implemented between 2002 and 2005 was a response to the fact of this complex and over-determined differentiation. A number of studies have been conducted to examine the processes, experiences and achievements of mergers, most of them based on individual institutions.⁶⁹ A study in the early part of the process described the impact of mergers on the emotional and professional lives of staff at universities, noting that, “Careers ended abruptly, or were suddenly redirected in ways that were traumatic for the affected staff”.⁷⁰ Many mergers, already complex in terms of marrying institutions with different

⁶⁷ L. Quinn (2012) ‘Understanding resistance: An analysis of discourses in academic staff development’ in *Studies in Higher Education*, 37(1).

⁶⁸ See for example, South African postgraduate programmes in higher education <https://www.ru.ac.za/teachingandlearning/staffdevelopment/pgdips/pgdipheforacademicdevelopers/>.

⁶⁹ J.D. Jansen (2002) *Mergers in higher education: Lessons learned in transitional contexts*; M. Hall (2015) ‘Institutional culture of mergers and alliances in South Africa’, in A. Curaj et al. (eds.) *Mergers and alliances in higher education*; S. Badat (2015) ‘Institutional combinations and the creation of a new higher education institutional landscape in post-1994 South Africa’ in Curaj et al., *Mergers and alliances in higher education*; T. Barnes, N. Baijnath and K. Sattar (eds.) (2010) *The restructuring of South African higher education: Rocky roads from policy formulation to institutional mergers, 2001-2004*.

⁷⁰ Jansen (2002) *Mergers in higher education: Lessons learned in transitional contexts*

cultures, purposes and geographic locations, were further complicated by the need to harmonise salaries and other conditions of service from widely differing starting points. In some cases, there were somewhat surprising challenges to be met, for example, when the salaries of the historically disadvantaged partner proved to be higher than those for the more advantaged one.⁷¹ The merger period was characterised by processes of voluntary retrenchment in some cases, and matching and placing exercises, or processes in which staff had to re-apply for jobs for which more than one qualified, and this led to many uncertainties and unhappiness among academic staff complements, which no doubt contributed to some loss of academic talent from the sector. A number of the studies note that academic staff experienced a decrease in identification with their institutions as a direct result of a merger, leading to a shift in focus towards greater identification with their discipline. This decrease in organisational identification can be explained by the negative influences of perceived pre-merger status differences and dominance. The impact of these changes varied in accordance with the context of the restructuring at the local level.

A number of HEQC audit reports on specific institutions that were merged, point to staffing difficulties related to the implementation of labour legislation and the processes associated with harmonising conditions of service, which sometimes led to intense industrial disputes. Some point to staff demoralisation; others report on the extra demands on staff to design and teach in new programmes and qualifications which not only needed to be aligned across an institution, but with new national frameworks as well.⁷² In mergers where different types of institutions were merged, i.e. between traditional universities and technikons, the demands on staff were exacerbated by the need to acquire different qualifications very rapidly in order to be competitive. Despite these hints, there has, however, been little sustained research into the effects of mergers on academic staffing, but given the far-reaching nature of the upheaval and readjustment needed by the academic staffing body in most institutions across the system, this is certainly an area for further study.

3. Changing demands of the academic profession

3.1 The significance of the academic profession

The preceding section has outlined the exogenous pressures that shape the contours of academic staffing and that generally result from past policy interventions or the determinants of new ones. It may be, however, that a more sophisticated understanding of the nature of the academic profession – particularly in a highly differentiated system – is necessary if systemic improvements to some of the most visible and easily quantifiable products of academic labour (research outputs and graduations) are to be achieved. The need to understand the actual dynamics of academic work – what is referred to here as the ‘demands of the academic profession’ – is perhaps most obvious in this regard.

⁷¹ See R. Stumpf in CHE (2016) *Reflections of South African university leaders, 1981-2014*.

⁷² CHE ‘Summary of HEQC audit reports on institutions’ (reports).

Altbach *et al.* describe both the centrality and the crisis of the academic profession as one of the major current trends in higher education.⁷³ They write that:

A variety of factors have combined to place growing pressure on the profession and the growing tension between enrolment demand, constrained budgets, and greater accountability has resulted in a discouraging environment for the academic profession worldwide. No university can achieve success without well-qualified, committed academic staff. Neither an impressive campus nor an innovative curriculum will produce good results without great professors. Higher education worldwide focuses on the 'hardware' – buildings, laboratories and the like – at the expense of 'software' – the people who make any academic institutions successful.

It is also the case that the academic profession is regarded as becoming more central to the realisation of economic and social development goals. On the assumption that higher levels of education are related to higher levels of economic development, the South African policy documents (such as the NDP, White Paper 2013) are replete with exhortations to increase the rate of postgraduate and doctoral production to increase the pool from which academia itself, the public and private sectors, and the professions must grow. The comparison of South African doctoral graduate output with countries with similar levels of development is very low; in 2013 the entire South African doctoral output was 2 051, or roughly 28 per million of the population, in comparison with 187 for Korea and 48 for Brazil.⁷⁴ The NDP sets a target of 100 doctorates per million by 2030, but while the production of PhDs is growing, at the current rate of growth, which is in itself very rapid (from 644 in 2008 to 2 051 in 2013), the low starting point makes this a target unlikely to be reached without major intervention. To reach this goal, the NDP calculates a need for about 5 000 PhDs (particularly in the STEM subjects) per annum; this would mean about 2.5 times the current annual output.⁷⁵

Academic staff are key agents needed to give effect to many policy goals. In the context of a rapidly growing student population, academics are needed to teach more, and in different ways, to take account of student diversity in terms of learning styles and levels of preparedness, to improve throughput rates, and to develop curricula that are more relevant and appropriate to current realities than those they inherited or are familiar with. Academics are also the main drivers of the knowledge production that is essential in a knowledge-based economy, and thus need to increase research output and to take the products of research into actualisation for innovation and entrepreneurial ends. The growth of a next generation is dependent upon the efforts and input of the existing generation – through increasing their postgraduate supervision, or venturing into postgraduate supervision where they have not done so before, and mentoring recruits to the profession. Many current academics are also striving to improve their own qualifications, given changed expectations and requirements for

⁷³ Altbach *et al.* (2009) 'Trends in global higher education: Tracking an academic revolution' (report) p. 89.

⁷⁴ HESA (2014) 'Remuneration of academic staff at South African universities'.

⁷⁵ NPC (2011) *National Development Plan*, pp. 59-60.

career advancement. Other functions they need to perform include undertaking community engagement in ways that require deep commitment and reciprocity, or forging ongoing and dynamic relationships with industry, civil society and government. Academics also need to ensure that the requirements of internal and external quality bodies and the professions are met. There is a greater requirement for measurement and reporting on academic and students' activities, with an increasing administrative load to manage the complexity. The pressures on academic staff (understood as those in universities) are also sometimes in tension: there is a need to produce the next generation for universities, but in order to achieve many of the policy goals for the post-school sector, there is also a need for academic staff to develop the staff complements for colleges in the growing TVET system, and to contribute to the uplifting of quality in teaching at schools at all levels.⁷⁶

The carrying out of these functions and their sometimes intersecting and overlapping dimensions, as elaborated below, is essential for enabling the higher education system to meet its societal and developmental obligations. The successful growth of the size and capacity of the academic profession is a prerequisite to realising the expansion goals of the NDP and the 2013 White Paper. In order to achieve this, not only will the size of the complement need to grow, but the attractiveness, desirability and appeal of the academic profession will need to be enhanced.

3.2 The value accorded the academic profession

There is a considerable literature on the nature of academic identities that expresses the importance of understanding academics in any change or policy development process. As is pointed out by Trowler, any attempt to appreciate the processes involved in change must have "a developed understanding of the underlife of higher education" and the social construction of the academic profession.⁷⁷ Becher thirty years ago described the identities of academics as being related, in the first instance, to particular academic disciplinary 'tribes' and 'territories', implying that academics would naturally resist their activities being 'aligned to any corporate or strategic goals'.⁷⁸ This is still relevant, since, as D'Andrea and Gosling note, "In the rush to adopt managerialist methods, universities and colleges can too easily lose sight of the distinctiveness of the culture of educational organisations. When individuals become simply 'human resources' and managers talk about 'driving the agenda forward' and 'rolling out the programme', the indications are present that the people affected by the change are being ignored."⁷⁹

Policy responses to the problematic of the need to increase the number of academics and particularly to attract young, aspiring black intellectuals in South Africa are necessarily focused on numbers and resources to fund specific

⁷⁶ DHET (2013) *White Paper for Post-School Education and Training*.

⁷⁷ P.R. Trowler (1998) *Academics responding to change*.

⁷⁸ Becher (1989) *Academic tribes and territories*.

⁷⁹ V. D'Andrea & D. Gosling (2005) *Improving teaching and learning in higher education: A whole institution approach*, p. 57.

programmes, but there is comparatively little local research into the qualitative factors that make academia attractive to new recruits, or satisfying enough to retain those already in the profession.⁸⁰ Why people become academics can be assumed to be for different reasons, and these are likely to be somewhat context and time-specific, and be influenced by many factors. These could range from the intrinsic ones such as personal motivation, to extrinsic ones, such as attractive conditions of service. Finding out what most academics value may also deepen an understanding of what would make the profession attractive. Although academic identities are plural and not homogenous, an empirically-based knowledge of such values could help shape the enabling conditions for these to flourish and could inform the development of appropriate and effective recruitment drives and reward and career advancement processes and structures. Such research is particularly important in South Africa, where it is little understood what factors would make an academic life attractive to young people whose other options may be more immediately lucrative or desirable in other ways.

3.3 Constraints on reproducibility

The people who comprise academic staffing stand at the centre of the higher education system, but there are widespread concerns that a combination of the lack of sufficient funding for higher education, a lack of forward planning, and the unintended consequences of many policy initiatives – particularly those informed by the drive for efficiency that is characteristic of new management approaches – are resulting in a crisis in the reproducibility (not to speak of the extension) of the system. This is most visible – and needs most to be addressed – in three related dimensions: 1) a suitably qualified academic profession, one in which the teaching-research nexus is recognised and supported; 2) a system at least capable of self-reproduction, but in fact needing significant growth, and 3) a profession that is sufficiently robust to deal with the myriad challenges it faces, including responding appropriately to changing student learning needs. This suggests that significant attention needs to be given to the national formation of an innovative research culture, one that brings together research and teaching for the necessary strengthening of core disciplines, and the articulation of this research culture with both the provision of entry-level posts and (equally important) ongoing staff development and enhancement. In this, real innovation in thinking through how to stimulate and provision improved academic staffing is necessary, and a first step in that direction lies in the simple recognition that existing measures do not go deep enough.

The universities are well aware of the inadequacy of existing measures. With respect to the retention and attraction of academic staff, for instance, HESA recognised in 2006 already, that for universities to thrive, they need to be adequately resourced, both in terms of funding and the quality of academic staffing and argued that, “To remain competitive, they should reward their academics in a way that

⁸⁰ International literature on this includes M. Kogan & U. Teichler (eds.) (2007) *Key challenges to the academic profession*; U. Teichler, A. Arimoto & W. Cummings (2013) *The changing academic profession: Major findings of a comparative survey*; H. Coates & L. Goedegebuure (2012) ‘Recasting the academic workforce: Why the attractiveness of the academic profession needs to be increased and eight possible strategies for how to go about this from an Australian perspective’ in *Higher Education* 64(6).

ensures that they are able to attract and retain both qualified and vocationally-driven staff who will contribute to the achievement of the university's triple mission of teaching, research and community engagement".⁸¹ Given the pressure placed on academic staff to perform in many areas (from research to teaching and learning, to contributing to efforts to increase third-stream income, to engaging meaningfully with communities), reward systems that recognise performance in ways that do not skew activities towards one or other of these roles, are becoming increasingly important. Striking a balance in the value ascribed to more easily measurable or prestigious activities such as research remains a challenge, not only in South Africa, but also globally. In Australia, research across twenty universities revealed that academics were very concerned about the perceived lack of recognition for teaching in existing promotions processes, despite the efforts of some universities to include teaching performance and achievement in promotion criteria.⁸² The baseline study of the Quality Enhancement Project has confirmed this in the South African context.⁸³

Rewards are related both to promotion possibilities and to remuneration. At the level of the individual academic, the kind of contract and salary he or she can command and the nature of work he or she gets involved in (whether teaching, research or management) are determining factors for the health of the profession. HESA's study on the salaries of academics, discussed above, indicates that at entry levels, the salaries offered in academia are not conducive to attracting new entrants.⁸⁴

The issue of whether salaries are competitive with other sectors is complex. The diversity of the academic profession needs to be recognised in this regard – academics are not an homogeneous group of people in that they work in different kinds of institutions and carry out different kinds of activity at different levels. For example, there are publicly acclaimed and eminent academics whose chief loyalty is to the production of knowledge and to their disciplines who possess tradable, specialist skills and are in a position to supplement their incomes through research or consultancy activity; in contrast, at other senior levels, university managers, sometimes better paid than their colleagues, are more concerned with the advancement of their institutions. Furthermore, with the co-called corporatisation of the university, such managers are becoming less academic in orientation but rather are skilled generalists implementing generalisable management theory. Indeed, Habib argues that:

Management practices and accountability mechanisms from the corporate sector have often been imported unthinkingly into universities. Universities are increasingly treated like, and understand themselves to be, business entities, and power has shifted from structures like Senate (where academics predominate) to Finance and Council (where administrators and external stakeholders are in the majority).⁸⁵

⁸¹ HESA (2006) 'Good governance in remuneration' (final report).

⁸² E. Bexley, R. James & S. Arkoudis (2011) *The Australian academic profession in transition: Addressing the challenge of reconceptualising academic work and regenerating the academic workforce*.

⁸³ CHE (2014) *Framework for institutional quality enhancement in the second period of quality assurance (QEP)*.

⁸⁴ HESA (2014) 'Remuneration of academic staff at South African universities'.

⁸⁵ A. Habib (2013) 'Reflections of a university bureaucrat interested in advancing a progressive social agenda', in *Kagisano*, 9, p. 65.

The permanent senior academic staff complement is generally reasonably well-paid as the HESA study shows, but is finding that the pressure of more demands being placed on them – to produce research and to teach a student cohort with diverse levels of preparedness – is rendering their positions more difficult and less attractive to newcomers. Then there are the members of the academic precariat, those on temporary or part-time posts, often holding down posts at more than one institution in order to earn sufficient salary.

In the last category are younger academics in the main, whose prospects of a fulfilling life-project in academia are uncertain. It is here that the greatest concerns for the reproducibility of the system exist. Like their established counterparts, they are increasingly expected to produce ever larger quantities of research output while ensuring that they acquire the requisite qualifications (higher and more time-consuming to get than would be the case in other professions) while working ever longer hours to make ends meet. A particular problem with the precariat is that they are prone to becoming professionally stuck: their situations do not lend themselves to the levels of productivity increasingly demanded of those hoping to secure permanent or more senior positions. The incentive structures have changed: research output increasingly trumps teaching as a measure of achievement, with some institutions having put in many incentive schemes to reward research.⁸⁶ And yet many of these same institutions have adapted to increasing student numbers by shifting a large part of that burden on to part-time and contract academics, meaning that neither institutions, nor senior academics, have an incentive to change the position that potential new academics find themselves in. The system has, in its own way, become 'industrialised'. This is a global phenomenon, and not something that is likely to be reversed. Institutional funding and financial sustainability have constrained many institutions in their ability to offer rewarding careers. Indeed, to become an acclaimed academic able to attract large amounts of research funding will be much more difficult for the next generation of scholars.

In the context of rapidly increasing higher education enrolments, diagnoses of an ageing academy and a social imperative for transformation of higher education, there would appear to be few more important issues than the development of young academics i.e. the process of training, hiring, retaining and the professional advancement into successful long-term careers. Despite having been recognised as an imperative at least a decade and a half years ago in the National Plan, this primary challenge was not addressed through a thorough and detailed national strategy until recently, with the 2011 HESA proposal for a strategy to create a new generation of academics having been taken up by the DHET (2013).⁸⁷ The proposal for a large tranche of funding to create supernumerary posts 'earmarked' for young academics for three years, after which they would be guaranteed employment subject to their meeting certain criteria, follows on from preceding research undertaken in the last ten years. Cloete and Galant, in an overview of institutional

⁸⁶ Ibid.

⁸⁷ DHET (2013) Staffing South Africa's Universities programme (SSAUF): <http://www.dhet.gov.za/ssauf/home.html>.

programmes that focused on the development of young academics (such as those funded by philanthropic organisations, as discussed above) found that their success or failure was hard to determine and advocated a concentrated approach to such development which should involve institutional collaboration rather than competition.⁸⁸ A report by ASSAf in 2010 focused on the constraints to the successful reproduction of academics associated with PhD output, noting that the limitations to increasing the number of doctoral graduates included financial constraints, the quality of incoming students, limited supervisory capacity in the system (the ratio of PhD students to PhD-holding staff was already 2:1) and the length of time spent on doctoral study such that the average age of graduation with a doctorate was 40, which is high by international comparison. Challenges identified by ASSAf and others are echoed in the concerns listed in the HESA proposal, namely, “inequality of representation”, “institutional culture”, “academic mobility”, “age profile of academics” and the growth or “expansion of higher education”.⁸⁹

There are three aspects of concern related to the research that currently exists on young academics that may have a bearing on the potential success of HESA’s proposal and the DHET’s framework for staffing the system. The first is the difficulty in tracking individual academics’ career trajectories and determining the factors that induce them either to stay in academia or to take up other opportunities. The data that exists are based on individuals still within the system, whether postgraduate students who are continuing with their studies or young staff members who are continuing their careers, which is likely to skew the results of such assessments with the most likely effect being a bias toward relatively more positive views. There appears to be an assumption that, given the creation of some posts, young academics will stay in academia, but given the paucity of publicised data on attrition rates and why young graduates leave, this is by no means a certainty. Schoole and Ojo (2013) suggest that there is some incoherence in the system and that career paths are not as linear as is sometimes thought, in that some individuals obtain permanent posts before getting doctorates or even masters degrees, while others obtain doctorates but then find only part-time positions.⁹⁰ There is perhaps also inadequate recognition of the extent to which the career paths taken by existing academics have become less available for new entrants.

Secondly, the increasing reliance on part-time and temporary staff as illustrated in the data above, which may partly be a response to funding limitations, serves to reduce the availability of full-time positions and hence academic career paths available for graduates. It also has an effect on the quality of education that is able to be offered. According to Altbach *et al.*, the full-time professoriate is in retreat internationally, with the numbers of part-time and temporary staff members on the rise. They regard this as undermining high quality education as poor payment and few benefits result in a group of people, with little commitment to the university or its students, needing to divide their attention to focus on secondary occupations to supplement their incomes. Given that this phenomenon is more prevalent at institutions that are not the top research universities, institutional

⁸⁸ N. Cloete & J. Galant (2005) *Capacity building for the next generation of academics*.

⁸⁹ ASSAf (2010) *The PhD Study*; HESA (2011) *Sector position paper on the report of the Ministerial Committee on Transformation and Social Cohesion and the elimination of discrimination in public higher education institutions*.

⁹⁰ Schoole & Ojo (2013) *Entering academia: Conditions and opportunities for new faculty in higher education*.

inequalities are exacerbated.⁹¹ In this context, individuals may initially prioritise obtaining permanent positions over achieving further qualifications, with negative consequences for their own later progression and the overall calibre and supervisory capacity of the academic staff complement. Indeed, the low masters and doctoral enrolment and completion rates, and the long times taken to graduation reported in the ASSAf study are almost certainly partly due to such dynamics.⁹² In a resource-constrained environment, it is not a given that universities will be able to convert supernumerary posts based on short-term funding to permanent ones, a factor that needs to be borne in mind in relation to proposals to hasten transformation through the creation of 'equity' posts.

Thirdly, the calls for greater PhD production to augment existing academic staffing capacity rests partly on an assumption that this is appropriate for all academic staff, which, in a functionally differentiated system, may have counter-productive effects. In some fields, particularly professional and vocationally-oriented ones, the PhD as a requirement for academic appointment may inadvertently lead to academic attrition and make the career path less attractive to a class graduating with diplomas, for example, particularly where the immediate salary benefits are better elsewhere.

From a knowledge production and policy perspective, it is clear that improving the qualifications among academics is a priority if South Africa is to be a knowledge producer rather than a knowledge consumer. Figure 4 above shows that of the 17 451 permanently employed academics in South African universities in 2012, only 39% had doctoral qualifications, and that the highest qualification of 4 753 (27%) of these academics was below a Master's degree. This highlights not only the diversity of the system, but also its unequal and differentiated nature. The existence of academic staff members with their highest qualifications being certificates, diplomas and postgraduate diplomas may be the residue of practices in the technikon sector which did not require degrees for teaching in those institutions. Another factor could be the insularity of institutions as a result of the academic boycott during the apartheid era, whereby as a result of lack of competition from the academic labour market, many institutions appointed their own honours and Master's graduates.⁹³ At the same time, however, the focus on PhD production may be inappropriate in some contexts (such as extended university programmes intended to meet the needs of underprepared students, or in highly specialised programmes in which industrial or professional expertise is more apposite than deep academic disciplinary knowledge). An additional challenge is that most of the supervisory capacity is currently within traditional universities which are most likely to develop academics for their contexts rather than ensuring a new generation of academics for all institutional types across the sector.⁹⁴ The focus on PhD production may also, as discussed elsewhere, increase the pressures on already existing academic staff and provide further obstacles to access for a new generation of academics, and this needs to be borne in mind in further policy development both institutionally and nationally.

⁹¹ Altbach *et al.* (2009) 'Trends in global higher education: Tracking an academic revolution' (report).

⁹² ASSAf (2010) *The PhD Study*.

⁹³ J. Fedderke, R. de Kadt & J. Luiz (2003) 'Capstone or deadweight? Inefficiency, duplication and inequity in South Africa's tertiary education system: 1910-93' in *Cambridge Journal of Economics*, 27(3).

⁹⁴ ASSAf (2010) *The PhD Study*.

4. Conclusion

The importance of maintaining or improving quality in academic staffing, particularly in a developing country in which higher education is called on to play a major role in economic and social development and to meet national goals, cannot be over-emphasised. It is important to understand under what conditions both quality and growth in higher education can be realised, and what will influence and stimulate the reproducibility of the academic complement.

The above examination of data related to academic staffing suggests the following conclusions and recommendations.

4.1 Equity

With respect to the first dimension considered in this chapter, the analysis above indicated that although substantial change in the demographic profile of academic staffing has occurred, the current picture is far from equitable. Concerted efforts will need to be made to increase the numbers of African academics at all levels of academia, with special attention paid to women at the higher ranks. This chapter has argued that the achievement of greater equity needs to be seen as an integral part of changing contextual factors such as institutional culture.

4.2 Underfunding needs to be addressed

The second theme was massification, and its effects on academic staffing. In terms of the numbers of academics available to carry out a much more complex range of activities than before in the face of a rapidly growing student population, the higher education system is clearly underfunded. While access for students has increased rapidly over the years, a concomitant increase in the number of academic staff, particularly on permanent conditions of service, has not occurred.

The projected scenarios developed for the CHE Task Team's proposal for undergraduate curriculum reform demonstrate that, to retain the current student to staff ratio, which is not considered to be optimum, to account for an increase in one student cohort for the main undergraduate qualifications (i.e. 3-year diplomas, 3-year degree and 4-year degrees) by a modest 13.7%, the academic staff population would need to increase by 4 102 FTEs. The subsidy amount generated by the enrolment increase would be in the region of R3 billion, which would need to cover all costs, including the increased staff FTEs.⁹⁵ Assuming no growth in student numbers, Table 2 below indicates that to reach a more appropriate student to staff ratio, as expressed by universities in a HESA survey, would currently require 1 582 more academic staff FTEs. This gives an indication of the current deficit in academic staffing. Assuming a 13.7% increase in one cohort of undergraduate students as above to achieve a better

⁹⁵ The NDP projects a growth in student numbers to 1 600 000 in 2030, from the current 983 698 (2013). This is a growth of over 60%, implying an annual growth rate of some 4%. The R3 billion is how much would be generated through the increase in student numbers.

student to staff ratio, 6 350 more staff FTEs would then need to be funded from the same level of teaching input subsidy generated, i.e. about R3 billion.⁹⁶

Table 2: FTE academic staff numbers and funding required for one cohort in order to maintain 2010 student-staff ratios

	Status quo	Growth
FTE staff required	10 288	14 390
Staff cost	R4.775 bn	R6.713 bn
FTE staff increase with respect to status quo		4 102
Cost increase with respect status quo		R1.938 bn
% increase in cost with respect status quo		41%
Additional subsidy generated by increased enrolment		R3.07 bn

Table 3: FTE academic staff numbers and funding required for one cohort in order to achieve student-staff ratios recommended by the universities

	Status quo	Growth
FTE staff required	11 870	16 642
Staff cost	R5.508 bn	R7.764 bn
FTE staff increase with respect to 2010 status quo	1 582	6 354
Cost increase with respect to 2010 status quo	R0.733 bn	R2.989 bn
% increase in cost with respect to 2010 status quo	15%	63%
Additional subsidy generated by increased enrolment	-	R3.07 bn

Source: Sheppard (2013)

These scenarios reflect that even modest growth would require a much larger academic staffing complement than is currently the case. Four to six thousand extra staff FTEs would need to be drawn from a pipeline that currently produces some 2 000 PhDs a year, and where growth is constrained by the current supervisory capacity which is already at full stretch. The levels of subsidy would be hard pressed to accommodate the increase needed to maintain student to staff ratios, and would be wholly insufficient to be able to facilitate a slightly better average student to staff ratio.⁹⁷

4.3 The nature of academic staffing needs to be better understood

The nature of academic work, particularly in a South African context, needs to be better researched to allow for policy interventions that improve its appeal and make it attractive to new generations of academic recruits. The ways in which research and teaching intersect and enhance each other need to be better understood and more appropriately rewarded, both institutionally and nationally, to ensure the development of innovative and transformed academic cultures

⁹⁶ The 2010 student to staff ratios were: SET – 19; Business and Commerce – 33; Education – 35; Humanities – 32. The universities proposed instead: SET – 17; Business and Commerce – 32; Education – 26 and Humanities – 25. See DHET Funding Review. The assumption is made of an 8% annual increase in salary costs.

⁹⁷ Note that subsidy generated needs to cover all costs, of which staffing is generally the largest proportion.

across all disciplines. At the same time, the diversity of academic work in a differentiated system needs to be recognised and fostered to ensure that existing resources are best utilised and deployed. Questions such as the appropriate qualifications necessary for particular academic roles need to be reconsidered, particularly where the insistence on academic qualifications e.g. doctorates for all in place of industrial experience, may be having counter-productive effects. More research needs to be undertaken into what motivates and drives academics in order to develop a genuinely active research culture, and better teaching and learning to help students realise their potential. More specifically, the future of higher education depends largely on finding ways of increasing the attractiveness of the profession. This may mean finding ways to relieve the teaching load that a growing number of students presents; ensuring that there is a sufficient number of academics to allow for a diversification of roles; developing appropriate reward systems to motivate academics; and finding ways to address possible demoralisation and stress in the face of competing demands.

Salaries are important factors in attracting people into the profession; however, they are generally not the main issue in terms of retention and the overall value placed on the profession, although more research needs to be undertaken in this area. At the more established levels, academics have some freedom to increase their income through research or consultancy; the difficulties manifest along the path to such levels. The more likely motivating factors involve respect, recognition, the provision of suitable conditions for pursuing one's own learning, reputation, mobility, opportunities to undertake research, and conducive conditions for engaging in satisfying and meaningful teaching and learning. Where these are eroded through factors such as increasing administrative loads, greater numbers of students, authoritarian management regimes, skewed workloads that mitigate against stimulating deep learning or undertaking innovative research work, or that lessen the satisfaction that comes from nurturing others' research journeys, the inherent value is weakened and reproducibility is undermined.

4.4 The myth of infinite elasticity needs to be debunked

An academic staffing complement that in real terms is shrinking in relation to a growing student body, of which a growing proportion is becoming 'casualised', and where the desirability of the profession is becoming significantly eroded, may not be able to fulfil adequately the many different roles they need to play and functions they need to perform. Among these are: bringing about economic and social development; teaching generations of underprepared students to achieve 21st century graduate attributes; supervising a new generation of academics for universities and TVET colleges; improving school teaching, producing world-competitive new knowledge; earning third-stream income; developing new patents and designs; facilitating engagement with communities and carrying out a public intellectual function. There is a risk of increasing demands on academics resulting in diminished levels of graduate attainments and attributes, poorer throughput rates and a reduced pipeline from which to draw new generations of academics. Academics are key to higher education, and where the conditions of

employment and the value placed on the profession are in decline, the quality of higher education may be affected. The policy question to be considered is: how can the competing and increasing demands on the academic profession be fulfilled without concomitant increases in numbers and improvements in conditions, and without a loss of quality in higher education?

4.5 Other factors to consider

In considering what it will take to prevent further decline in the academic profession and to increase its attractiveness, the pursuit of holism in policy interventions so that they are not driven by isolated goals becomes increasingly important. Pursuing isolated goals can, in some instances, thwart the achievement of others. In attempting to increase research output as one policy goal, for example, resources may be diverted into prestigious programmes at the expense of increasing efficiency in undergraduate teaching. Likewise, in attempting to increase the academic qualifications of academic staffing overall, mission differentiation may be ignored in such a way that upward academic drift reduces the number and type of learning opportunities available for students, and the system as a whole becomes more expensive to fund as all institutions attempt to mould their activities according to the most expensive model. Conversely, the pursuit of some goals may indirectly bring about the achievement of others. As an example, addressing student funding issues can indirectly assist in making the academic environment more satisfying for academic staff, increasing its appeal and creating more space for research and intellectual engagement; rethinking curriculum structures to avoid teaching many repeat classes and students can also increase staff satisfaction; more and better co-curriculum support for students would similarly have a knock-on positive effect on staff and allow for more attention and care to be paid to the teaching and learning process. It is only belatedly that attempts have been made to join the policy dots, as it were, in linking student access to questions of increasing academic staffing.

Indeed, the call for transformation in academic staffing needs to be linked to the broader strategies identified for 'revitalising' the academic profession and the recognition that academic staffing cannot continue to do more with less.⁹⁸ Such strategies include the need to address overall staff numbers, to clarify and extend academic pathways, to stimulate the growth of new generations of young academics and to improve salaries and conditions of service. These issues will need to be addressed holistically if there is to be a significant shift in inequity and stagnation.

⁹⁸ DHET (2012) *Green Paper for Post-school Education and Training*.

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Writers and editors: Charles Simkins with Ian Scott, Rolf Stumpf & Denyse Webbstock

Task team leader: Jenny Glennie

Members/contributors: Glen Barnes, Gerald Ouma & Charles Sheppard

CHE research assistant: Michael Gordon & Genevieve Simpson

The purpose of this study is to illuminate the funding situation of universities as it may evolve over the next ten years. In doing so, it considers policy aims, the functioning of the system and resource constraints. On the projection assumptions, the analysis indicates the choices facing the main actors: the National Treasury; the Department of Higher Education and Training (DHET); the universities and students.

The introductory part of this chapter considers values applicable to funding and the demographic context of higher education. Section 2 puts the current circumstances of universities into a recent historical perspective, paving the way for Section 3, which constructs three scenarios, each with different levels of funding, student enrolments and university staffing. Taken together, the scenarios show the expected pressures on the system, which will require changed behaviour on the part of the major actors. Section 5 considers four productivity growth measures which will make available resources stretch further. The last section draws conclusions.

The study in applied economics undertaken for this chapter takes a general equilibrium approach to higher education funding. This means that all the major variables are considered together and brought into relationship with one another. The aim is to avoid a narrow focus on individual variables, an approach that easily leads to policies with unintended consequences.

1.1 Values

Two key economic and social values inform this study. The first is that of **economic efficiency**; there must be investment in raising the average levels of human capital, particularly in terms of formal education and training, in each successive cohort of the South African population as a complement to investment in physical capital.¹ Ever since the boom of the mid-1930s, South Africa has experienced difficulty in achieving this goal. The situation was worsened by the inefficient allocation of resources under apartheid. Economic inefficiency leads to wasted resources and lost opportunities; in terms of education, the inefficiency lay primarily in the failure to optimise the development of knowledge and skills across the population. The second (and equally important) value is **equality of opportunity** which, applied to education, means that every person should be able to acquire the education that their interests and talents make worthwhile. It is

¹ Educated, trained and experienced people generally earn more than their less-educated, untrained and inexperienced counterparts. The capital value of the difference in earnings over a lifetime represents the human capital embodied in an individual or group of individuals.

here that particular aspects of the broader concepts of redress and transformation in higher education find their application.

Investing in human capital development is like investing in other areas: it produces a return. In terms of education, every person, irrespective of their capacity, will reach a point where diminishing marginal returns set in, such that there will be limits on the further value of the type and quantity of formal education that should be provided. Equality of opportunity does not mean equality of outcome since there is a range of interests and capabilities among learners. Neither does equality of opportunity depend on introducing completely free higher education.² If higher education is not completely free, equality of opportunity requires a well-functioning credit market in which students can borrow on reasonable terms, repaying as graduates out of an enhanced income stream later on. A good credit market is one that advances loans to all students who qualify, while avoiding unsustainable levels of student indebtedness.³ This enables access for all who qualify educationally for higher education, while drawing on future income streams when graduates start to work. The return flows from graduates can then be added into new allocations for student loans, making a loan scheme less onerous on the state than a corresponding bursary scheme without return flows.

The twin values of economic efficiency and equality of opportunity constitute the backdrop against which the material in the rest of the chapter should be viewed.

1.2 Demographic context

In addition to the values outlined above, a major contextual factor underlying this study is the demographic context of South Africa. The South African population increased eightfold between 1900 and 2000 and so the economy could grow extensively, if increasingly inefficiently, in the twentieth century on the back of a rapidly expanding labour supply. From the beginning of the 1970s, however, it became apparent that South Africa lacked a sufficiently educated population to achieve economic growth. Moreover, in the last thirty years, demographic circumstances have changed, with fertility rates dropping rapidly. Table 1 sets out a projection of the South African 20-24 year-old age group (approximately the average age of participants in higher education) for the period 2013-2023.

From this table, it is evident that the growth of the cohort will slow appreciably, especially on the 'without migration' assumption.⁴ This implies that growth will depend on increasing average levels of education and training rather than on the same level of education and training spread over more people.

² Completely free higher education requires no obligation to pay for higher education at the time of delivery or later. It contrasts with a situation in which no payment for higher education is made at the time of delivery, but which entails repayment of a loan once earnings commence.

³ Unsustainable debt is here taken to be debt that cannot be repaid within fifteen years on a reasonable income-contingent repayment scheme.

⁴ The 'with migration' estimates are based on net immigration of 200 000 per year; 60% male, 40% female. This is close to the estimates contained in Statistics South Africa's 2013 mid-year population estimates.

Table 1: Demographic projections for 20-24 year-old age group, 2013 -2023

	With migration	Without migration
2001	4 486 136	4 486 136
2013	5 091 638	5 091 638
2018	5 211 661	5 074 802
2023	5 507 504	5 307 308
Annual growth (averaged)		
2013-2023	0.79%	0.42%

Source: UNAIDS, Spectrum/EPP 2013

1.3 The structure of the chapter

Section 2 contains a summary of developments affecting funding since 1994 and a detailed account of the population flows through the education system over the years following the restructuring of the higher education sector. The account references the output of senior secondary schools (Appendix) and traces inflows of students into higher education, enrolments, progression rates and graduates. It then traces developments in university funding (both block and earmarked grants) and allocations through the National Student Financial Aid Scheme (NSFAS). The purpose of Section 2 is to contextualise the current state of the system and to provide a base for a ten-year projection from 2013.

Section 3 considers some of the funding implications attendant on the 2013 White Paper.⁵ It reports demographic projections for the ten years from 2013 to 2023, following the same pattern as the historical analysis: the senior secondary school system, first-time enrolments in higher education, total enrolments and graduates. It constructs three scenarios, each of which comprises a connected cluster of factors; that is, university funding, enrolment and staffing.⁶ Common to all three scenarios is an assumption that the long-term growth rate of the economy is 3.5% per annum. This is divided into a 1.75% per annum increase in real incomes and (implicitly) a 1.75% per annum growth in employment.⁷

The first scenario assumes an improvement in secondary school throughput alongside the maintenance of the current rates of transition from the National Senior Certificate (NSC) to first-time enrolment in higher education.⁸ A funding envelope is defined by assuming that state grants to universities will be a constant proportion of gross domestic product (GDP). The projected costs of the first scenario are compared with the funding envelope. The comparison leads to the conclusion that the first scenario will lead to increasing shortfalls in state funding as far as both grants to universities and allocations to NSFAS are concerned. Such

⁵ DHET (2013) *White Paper for Post-school Education and Training: Building an expanded, effective and integrated post-school system*.

⁶ Universities are funded in three ways: by state grants, by tuition fees and by 'third-stream' income which comprises all other forms of revenue. In addition, the state makes grants to the National Student Financial Aid Scheme.

⁷ The real growth in wage income between 2000 and 2012 is reported by the Reserve Bank as 1.78% per annum.

⁸ Details of the improvement are set out in the Appendix.

funding shortfalls will have a number of negative consequences, such as limiting the access to higher education of prospective academically deserving students, undue pressure on universities in maintaining academic standards, and downward pressure on student throughput rates arising from potentially insurmountable difficulties in maintaining acceptable levels of teaching and learning support.

This outcome of the first scenario leads to the development of two further scenarios. The second scenario can be accommodated in the funding envelope, but it leads to an unduly slow growth rate in student enrolments at universities, which would, in turn, have unacceptable social and economic consequences for the country.

A compromise third scenario is then defined, which entails an increasing share of GDP being allocated to higher education, a rising gross enrolment ratio, but greater competition for university places among those who obtain a National Senior Certificate qualifying them to embark on study at a university.⁹

The three scenarios constitute the heart of the analysis in Section 3 and the study as a whole. Based on the analysis of these three scenarios, the capacity of the state to steer the higher education system through the challenges of the next ten years is discussed.

Homer relates the story of Odysseus sailing home from Troy. At a certain point, he encounters a narrow and hazardous sea lane. On one side is Scylla, a six-headed monster that would swoop down and consume sailors if ships passed on its side of the lane. On the other side is Charybdis, a pair of clashing rocks and a whirlpool that would suck in ships and destroy them. Odysseus chose the Scylla route, reckoning that the loss of six sailors was not as bad as the termination of the entire enterprise. By contrast, this study looks for a middle passage, just out of the reach of both Scylla (very large numbers of students, but inadequate funds to provide high level university education) and Charybdis (adequate funds to maintain a high standard of academic services but rendered to a very much smaller number of students). As is the case with most compromises, the choice of a middle passage, as will be seen later in the study, will require mind-shifts and attitudinal adjustments from the various constituencies and stakeholders relevant to higher education.

Spending an increased proportion of GDP on higher education as foreseen in Scenario 3's 'middle passage' would need to be accompanied by cost-saving measures and more prudent forms of expenditure within higher education. Section 4 considers the steering capacity of the state and the adaptability of the current system. Section 5 considers four possible sources of cost saving: a shift in the balance of enrolments to distance education, which is here assumed to be less costly over the long term than traditional forms of 'face-to-face' education; leveraging higher levels of resources from the private sector; expanding cost-saving technological innovation; and the introduction of reform in curriculum structure as means of maximising the effective use of academic resources. Implications for universities and the Department of Higher Education and

⁹ The use of UNESCO's indicator of participation, the Gross Enrolment Rate or GER, i.e. the total headcount enrolled in some form of higher education over the national population of 20-24 year-olds of the population, has become widespread. CHE (2015) *VitalStats. Public higher education 2013*, p. iii.

Training are drawn from the analyses as a whole. Section 6 draws a number of overall conclusions based on the previous analyses.

Throughout, student enrolments are defined as headcount enrolments rather than full-time equivalent student enrolments. In the university funding model, teaching input units are calculated using full-time equivalent student enrolments in a so-called funding matrix, which is discussed in more detail later.¹⁰ Teaching input units are assumed to be a constant proportion of headcount enrolments.

2. Historical overview

2.1 Key developments affecting funding since 1994

There have been four main developments affecting funding over the last twenty years.¹¹

2.1.1 Mergers of universities and technikons into a unified higher education system

As discussed in detail in the Overview, the South African higher education system has undergone major reorganisation since 2004. There are now eleven traditional universities, six comprehensive universities and six universities of technology, plus a further three new universities: one in the Northern Cape, one in Mpumalanga, and one focused on the Health Sciences established from the former Medical University of South Africa (Medunsa) in Gauteng.

This restructuring of the higher education institutional landscape has had two implications for funding. First, the previous funding system which was in force until 2004, differentiated between universities and technikons, whereas the new funding system, fully operational since 2007, treats all universities in terms of one set of rules, except in the case of research output norms set by the DHET. Secondly, earmarked funding was implemented to steer the system, with allocations intended to assist with the costs of merging and other developmental ends. Allocations from earmarked funding in many cases involved the submission of detailed project proposals to the DHET. This requirement highlighted serious managerial and administrative shortcomings in some universities that were often also those most in need of such funding. As a consequence, a proportion of the funding in this category was not fully taken up by institutions, meaning that the problems to be resolved by such funding allocations in many cases remained. The differences between block grant funding and earmarked funding are discussed later in greater detail.

2.1.2 Reform of the way in which universities are funded

The South African Post-School Education (SAPSE) funding formula, introduced in the 1980s and now replaced, essentially had a 'follow the student' approach. Funding allocations to universities were based on student enrolment numbers of two years earlier, as well as course success rates. There was a difference in funding level between students in the natural sciences and the humanities, and

¹⁰ Since part-time students are less demanding of teaching resources than full-time students.

¹¹ See DHET (2013) *Report of the Ministerial Committee for the Review of the Funding of Universities*.

the formula contained several so-called cost components graduated partly on the basis of historical cost. The formula generated an entitlement for each university and technikon which was then brought into alignment with available state funds by means of an 'a-factor'; this represented the proportion of entitlements that could actually be funded. Attempts were made to keep the a-factors constant across universities and technikons. However, this became increasingly difficult as the provision for growth in student enrolments in the SAPSE formula made the formula allocations sensitive to unbridled increases in student enrolments at some universities, which necessitated lower a-values for those.¹²

In 2004, the SAPSE system was replaced with a 'state steering mechanism' approach. University funding was to be based on block and earmarked grants. Block grants have four components: teaching input (based on enrolments); teaching output (based on graduations); research output (based on approved publications and advanced postgraduate research degree graduates) and institutional factors (based on institution size and proportion of historically-disadvantaged student numbers). Block grants are consolidated into a single transfer that can be used for any legitimate university purpose. Earmarked funds, on the other hand, must be spent on the purposes for which they are designated. In recent years, earmarked provision has been made for interest and redemption of government loans, infrastructure, teaching development, research development, foundation courses, multiple campuses in the case of some newly-merged institutions, clinical training of health professionals and veterinary science.

The bulk of the block grant (67% in 2012) is made up of the teaching input grant. The teaching input grant is calculated using a funding grid which has subject matter categories along one axis and levels of qualification registered for along the other. The grid assigns a funding weight to each cell and every year each university is offered funding for a certain number of places (full-time student equivalents) distributed across the cells in the funding grid. This offer, negotiated between universities and the DHET, constitutes the heart of the steering mechanism. The teaching output, research output and institutional factor grants are based on historical data.

2.1.3 The National Student Financial Aid Scheme (NSFAS)

This scheme has its origins in the Tertiary Education Fund for South Africa (TEFSA), started in 1991 with a capital of R25 million. In 1999, the National Student Financial Aid Scheme Act was passed and NSFAS became the successor organisation.¹³ Funds awarded by NSFAS have expanded massively during the past number of years: in 2012, R5 871 million was awarded to students at universities and a further R1 822 million to those in further education and training colleges.¹⁴ At the outset, TEFSA was purely a loan scheme, but soon

¹² By contrast, the new funding system distributes available state funds by a system of 'funded places'. Universities can admit more students than there are funded places, but no teaching input grant is allocated for the excess.

¹³ DHET (1999) *National Student Financial Aid Scheme Act*.

¹⁴ In 1992, TEFSA awarded loans to 10 828 students and in 1997 to 28 076 students. In 2007, NSFAS awarded loans to 57 837 students and in 2012 to 199 479 students. In 2013, NSFAS allocations increased further to R6 729 million to university students and R1 953 million to TVET students (NSFAS (2013) *Annual Report, 2013*; NSFAS (2014) *Annual Report, 2014*).

bursary elements emerged, both in the form of rebates for academic success and bursaries for specific purposes. In 2012, 53% of funds awarded by NSFAS took the form of bursaries.

In 2012, NSFAS had the following components:

- Generally available awards
- A final-year programme rebate, consisting of 100% rebates of final-year loans to students who completed their qualification
- An allocation for teacher education, funded by the Department of Higher Education and Training
- An allocation for disabled students
- An allocation from the National Skills Fund
- An allocation from the South African Institute of Chartered Accountants
- The Funza Lushaka scheme, for training teachers in under-supplied subjects, funded by the Department of Basic Education
- An allocation from Sectoral Education and Training Authorities (SETAs)
- A range of smaller schemes, some of which are funded by other government departments.¹⁵

2.1.4 The funding of foundation courses in extended curriculum programmes

These date back to the early 1980s when racial segregation in university enrolments started to be relaxed. They were a response, chiefly by institutions designated as 'white' under apartheid, to a situation where students' knowledge and skills on entry were diverse as a result of the segregated school system. Initially, they were funded primarily by donations from external funders, supplemented in some cases by internal university allocations. The end of apartheid has not abolished inequality in school quality despite much greater resource inputs – in general, there is still a large gap between the preparedness for higher education of learners from top-quintile schools and those from the remainder, although the racial contours of inequality have been softened somewhat. Accordingly, most universities have found it necessary to continue – and in fact intensify – a variety of forms of academic support to students aimed at mitigating the 'articulation gap' between schooling and the demands of higher education.

Foundation courses, forming an integral element of planned extended curricula, have constituted the major strategy for addressing the articulation gap. The state has accepted responsibility for funding them, and an earmarked allocation of R235 million was made for them in 2014, intended to enable about 15% of the student intake to benefit from this provision.¹⁶ Differentials in capacity and commitment between, and even within, universities have meant that the effectiveness of this provision has been uneven across the sector.

¹⁵ See Table 10.

¹⁶ DHET (2013) *Ministerial Statement on University Funding: 2014/15 and 2015/16*.

2.2 The influence of post-apartheid transformation objectives on funding

2.2.1 The integration and articulation objective

First, the system of apartheid-structured inequality of opportunity through a multiplicity of segregated and initially differentially-funded institutions often led to educational ‘dead-ends’ – points beyond which students could not progress. The post-apartheid vision has been one of co-ordinated institutions with a high degree of articulation between different institutional and qualification types, i.e. the construction of pathways along which students could progress as far as they could and wanted to, facilitated both through the restructuring of the institutional landscape and the development of a coherent National Qualifications Framework (NQF). Articulation of this kind is as yet an imperfectly realised objective, but it has been included as a criterion for the accreditation of qualifications, and further development to ensure articulation between sectors is an ongoing project. An aspect of particular significance for the vision of the post-school sector is effective articulation between Technical and Vocational Education and Training (TVET) college programmes and higher education. The need for this is strongly emphasised in the White Paper for the post-school system.¹⁷

2.2.2 Increasing access

Secondly, high levels of poverty and socio-economic inequality have made the financing of students from poor households a necessity. NSFAS has been the primary vehicle for the dispensing of the state’s obligations in this regard. In so far as it makes loans, it draws on the expected future increment of earnings from qualified graduates. Bursaries, on the other hand, inject an immediate capital transfer from the state to the individual student, until now through the university concerned. In 2011, NSFAS made 221 653 awards to students in universities, compared with a total undergraduate enrolment of 703 747. This number decreased in 2013 as NSFAS made 194 923 awards, with a total enrolment of 800 955. NSFAS awards were thus made to 31% of all undergraduate university students in 2011 and 24% in 2013.

2.2.3 Improving success

Thirdly, as discussed above, underpreparedness of students entering universities has been, and remains, a widespread problem. In accordance with policy on state funding for foundational provision that was introduced in 2004, foundational provision has over the last decade been integrated into ‘extended curriculum programmes’, which are now offered by almost all the universities. However, application of this kind of provision has been particularly challenging in institutions where the majority of the intake are poorly prepared; in these cases foundation courses, with their present limited scope, cannot be offered on a scale that can effectively address the articulation gap, and this has implications for failure

¹⁷ DHET (2013) *White Paper for Post-school Education and Training*.

rates and the overall quality and outcomes of the institution's programmes. This problem has spread to more universities as enrolments have grown across the system, leading to an increase in the proportion of underprepared students in the intake.

One solution to the problem of widespread underpreparedness has been proposed by a CHE task team: a four-year degree to replace three-year degrees as the norm, with the proviso that students may be exempted from certain modules if they demonstrate the necessary competence at the outset of their studies, enabling them to shorten their studies by up to a year.¹⁸ The task team's study concludes that the proposed curriculum structure would increase retention in the system and, by improving pass rates, would increase graduation rates. The projections show that, if the forecast benefits of mitigating the articulation gap are realised, the resulting improvement in efficiency will reduce the cost per graduate, despite the costs of the additional provision required. This would be achieved because currently the majority of the intake (some 70%) are taking an additional one or more years to graduate, or are not graduating at all, and the state is having to bear the high costs of extensive repeating of courses and other forms of inefficiency.¹⁹

The *Report of the Ministerial Committee for the Review of the Funding of Universities* was released in early 2014. This report contained many recommendations for change in the details of state funding, but concluded that the overall system was sound.²⁰ The Minister has not yet introduced formal proposals for changes to the existing funding model emanating from this Review. As will be evident later, this study concurs with the finding that the overall funding system for universities now in place has been a sensible one.²¹

2.3 Historical outcomes and constraints

Table 2 provides a snapshot of the highest level of education among 29-year olds in 2011 in South Africa, 29 being the age by which students in higher education could be expected to have completed at least a first degree. In this table, an entry does not necessarily mean that all the persons indicated successfully completed that year of study, but merely that they had been educationally active at that level. Some could be expected to go on to undertake higher level qualifications.

Table 2: Highest level of educational activity reported by 29-year olds in South Africa, 2011

Less than Grade 9	168 047
Grade 9	60 305
Grade 10	96 451
Grade 11	139 082

¹⁸ CHE (2013) *A proposal for undergraduate curriculum reform in South Africa: The case for a flexible curriculum structure*.

¹⁹ The report estimates that, assuming the current student intake, a four-year curriculum would increase total enrolments by 16% because of increased retention, creating upward pressure on the block grant to universities, but that it would improve graduate output by 28% (CHE (2013) *A proposal for undergraduate curriculum reform in South Africa*, p. 22).

²⁰ Such details are not contemplated in this study.

²¹ See section entitled "The steering capacity of the state and the adaptability of the current system".

Grade 12	343 102
NTC 1-3	7 586
NTC 4-6	9 494
Certificate/diploma with less than Grade 12	5 127
Certificate with Grade 12	22 222
Diploma with Grade 12	27 254
Higher diploma	21 838
Post higher diploma	2 735
Bachelor's degree	20 533
Bachelor's degree and postgraduate diploma	5 188
Honours degree	9 370
Higher degree	4 437
Other	3 492
Unspecified	18 016
Total	964 279

Table 3: Summarising the data above leads to the following aggregated distribution

	Number	Proportion (Per cent)
Up to completed primary	228 352	23.70%
Incomplete senior secondary	235 533	24.40%
Grade 12	343 102	35.60%
Technical (NTC 1-6)	17 080	1.80%
Certificate/diploma with less than Grade 12	5 127	0.50%
Higher education	113 577	11.80%
Other and unspecified	21 508	2.20%
Total	964 279	100%

Source: 2011 Census, interactive tabulation

The following observations are pertinent:

- The number of people who have not progressed beyond Grade 9, which marks the end of the compulsory phase of education, is substantial, and is double the number with a higher education qualification.
- The number of people who reached Grades 10 and 11 but not Grade 12 is also substantial. This clearly indicates a problem with progression through senior secondary school, as is evidenced by the high dropout rates during the senior secondary school phase (Grades 10-12) as shown by numerous other studies.
- Despite efforts to improve enrolments in the existing further education and training (FET) colleges and other institutions offering technical qualifications, the numbers with secondary-level and further education technical qualifications (NTC 1-6) are small, making up only 1.8% of the total.
- The number of 29-year olds who reached Grade 12 is large, making up 35.6% of the total, and is triple the number with higher education. This comparison could, however, be misleading since not all those indicating

Grade 12 as their highest educational level would actually have written the (National) Senior Certificate examination and, in addition, not all who take this examination manage to pass, or to pass well. It is therefore estimated that not many more than half of those indicating Grade 12 as their highest educational level would be eligible to go on to higher education.

However, a trend towards higher school retention and pass rates for the NSC examinations, coupled with low absorption rates into formal economic activity for young South African school-leavers, points to considerable latent pressure on higher education resources. The FET/TVET sector is becoming an increasingly strong competitor for resources and, as is evident in Table 2 and as set out in the 2013 *White Paper for Post School Education and Training*, it is desirable to expand technical education, especially during the senior secondary and lower higher education phases. Such expansion would increase demand for higher education. Removing undesirable constraints, such as resolving imperfections in the credit market and reducing the existing high unemployment levels, would further increase the demand and pressure on higher education resource provision.

2.4 Key pressures affecting higher education

2.4.1 Senior secondary school output

The expected increase in the number of learners arriving at the gate of the higher education system will exacerbate the pressure for access. As this chapter's focus is higher education, the modelling of the performance of the senior secondary system which informs the analyses here, is placed in an Appendix for reference.

Figure 1 graphs performance in the National Senior Certificate since its introduction in 2008. In this graph, trends are depicted in NSC passes which provide admission to:

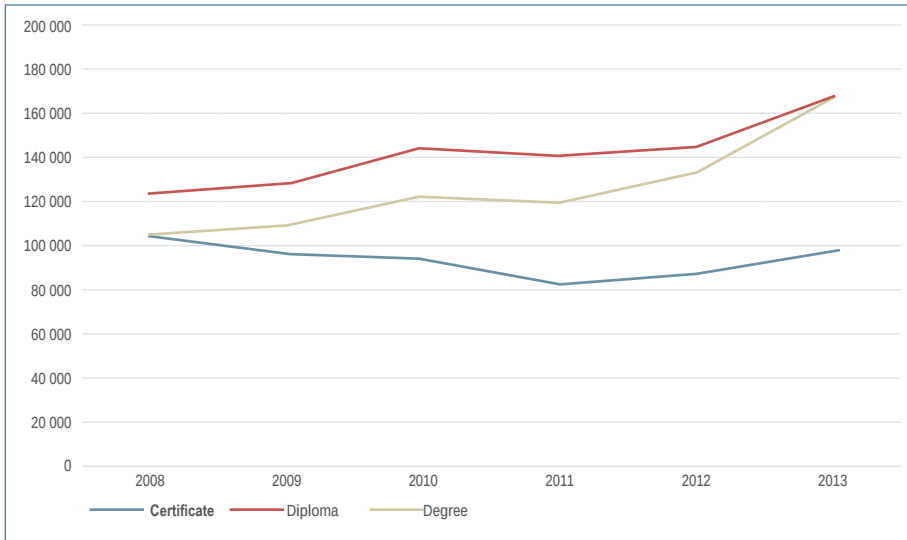
- higher education study at certificate level, which, despite a decrease during the middle of the period 2008-2013, reverted in 2013 more or less to where the figures for 2008 were;
- higher education study at diploma level, which shows a steady upward trend during the period 2008-2013; and
- higher education study at degree level, which shows an accelerated increase for this period compared with eligibility for diploma study and with eligibility for certificate-level study.

Proportionally more holders of the NSC were thus eligible for degree study as opposed to only diploma and certificate study at a university in 2013 than was the case in 2008.

2.4.2 University intake

Table 4 sets out the undergraduate intake into South African public universities by type of qualification. The proportion of the intake entering certificate and diploma programmes fluctuated between 40 and 45% of total first-year enrolment between 2008 and 2011. However, the proportion of NSC passes allowing study for higher education certificates and diplomas varied between 65 and 68% between

Figure 1: National Senior Certificate passes enabling continuation to certificate, diploma and degree studies



Source: DBE National Senior Certificate Technical reports

2008 and 2010. This indicates that a relatively small fraction of school-leavers with certificate and diploma passes gained entry to higher education, in contrast with the position of holders of Bachelor passes. The 'relative probability' column of Table 4 computes the probability that the holder of an NSC pass for degree study will enter higher education compared with the corresponding probability for holders of NSCs for higher certificate and diploma studies. The result is stark and shows that holders of NSC passes for degree study are nearly three times more likely to go on to higher education than holders of NSC passes for certificate and diploma study, who are also entitled to do so. This indicates a lack of articulation between the mix of qualifications offered in the post-school sector and the new NSC, leading to unfulfilled expectations among many holders of National Senior Certificates.²²

²² These estimates are only approximate, since not everyone goes immediately from school to university and mature age entrance to university is possible. Despite this, the overall trends would be reliable enough to support the conclusions made here. The continuation rates in the fourth and fifth columns of Table 4 are also only approximations. This is the case since it is assumed in Table 4 that learners with NSC passes for degree study will in fact register for degrees only, even though they are entitled to register for diploma and certificate study in higher education as well. (Equally, those with NSC passes for diploma study are entitled to register for certificate study at a university). Accordingly, the percentage of those with NSC passes for degree study going on to university may be higher than in the fourth column of Table 4 and the percentage of NSC diploma and certificate passes going on to university may be lower than in the fifth column of Table 4.

Table 4: First-time undergraduate entrants, 2008-2013

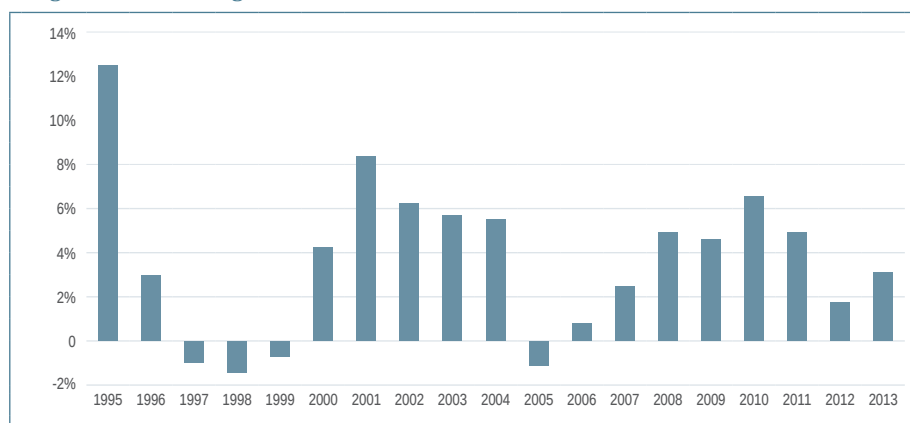
Year	Certificate/ Diploma	Degree	1 st -time cert&dip entrants/ cert&dip NSC passes previous year	1 st -time degree entrants/ Bachelor NSC passes previous year	Relative probability ²³
2008	68 921	83 047			
2009	70 106	94 472	30.1%	88.1%	2.93
2010	70 485	98 457	31.4%	89.8%	2.86
2011	71 967	107 037	30.3%	84.7%	2.79
2012	67 946	101 821			
2013	64 466	93 933			
Averages	1.5% annual growth	4.6% annual growth	30.6%	87.5%	

Source: HEMIS data, extracted annually

2.4.3 Enrolments

Figure 2 sets out annual student enrolment growth rates between 1995 and 2013. A clearly discernible and consistent trend in student enrolment growth rates is not immediately apparent from Figure 2. However, the period 2008 to 2011 witnessed average student enrolment growth rates for the whole higher education system of close to 5% and higher. Such growth rates are difficult to sustain while maintaining academic standards and academic services of high quality without a commensurate increase in resource provision. That this has not been the case is evident from the deteriorating staff-student ratio for universities during the past number of years.

Table 5 sets out student enrolments in 2001 and between 2007 and 2012 for various types of qualifications. Enrolments at universities other than UNISA, and UNISA student enrolments are first given separately and thereafter in combined

Figure 2: Enrolment growth rates 1995-2013

Source: SAPSE 1995-1999 & HEMIS 2000-2013, extracted annually

²³ The relative probability is the ratio of degree continuation rate to the diploma/certificate continuation rate.

format. At the end of each of these three sets of data, the average annual student enrolment growth for the period 2007-2012 is given.

Table 5: Headcount student enrolments in 2001 and 2007-2012 in various qualification types

Set A	Contact universities						
	Dip/Cert 1-2 year	Dip 3 year	Degree 3 year	Degree 4 year	Under- graduate	Post- graduate	Total
2001	27 416	109 111	99 271	120 741	356 539	80 762	437 301
2007	50 280	139 216	125 605	110 977	426 078	86 753	512 831
2008	51 220	143 407	126 522	114 309	435 458	91 421	526 879
2009	50 660	153 035	133 324	127 053	464 072	99 720	563 792
2010	45 741	160 421	141 547	134 409	482 118	104 903	587 021
2011	40 996	163 158	146 981	141 224	492 359	114 848	607 207
2012	31 839	165 498	152 144	148 894	499 538	110 832	616 061
Average annual growth rate							3.7%

Set B	UNISA						
	Dip/Cert 1-2 year	Dip 3 year	Degree 3 year	Degree 4 year	Under- graduate	Post- graduate	Total
2001	14 601	22 482	73 328	19 953	130 363	17 049	147 412
2007	13 098	52 182	99 481	33 974	198 735	23 644	222 379
2008	19 625	57 058	104 074	37 183	217 940	27 201	245 141
2009	26 915	48 756	102 902	41 774	220 347	29 027	249 374
2010	20 170	59 616	109 718	55 260	244 764	33 707	278 471
2011	20 208	65 552	115 123	73 505	274 388	33 084	307 472
2012	30 830	53 113	112 964	86 428	283 335	38 644	321 979
Average annual growth rate	18.7%	0.4%	2.6%	20.5%	7.4%	10.3%	7.7%

Set C	ALL		
	Undergraduate	Postgraduate	Total
2001	486 902	97 811	584 713
2007	624 813	110 397	735 210
2008	653 398	118 622	772 020
2009	684 419	128 747	813 166
2010	726 882	138 610	865 492
2011	766 747	147 932	914 679
2012	781 710	149 476	931 186
Average annual growth rate	4.6%	6.2%	4.8%

Source: HEMIS data

These data sets indicate that the average annual growth rate in student enrolments for the entire higher education system for 2007 to 2012 amounted to nearly 5%, as was already evident from Figure 2. They also indicate that while contact student enrolments in the period 2007 to 2012 grew by an average annual figure of 3.7%, the corresponding figure for UNISA is 7.7%. This could be due to a number of factors such as cost and accessibility, but it certainly is an indication that UNISA is increasingly providing for expansion in the system that cannot be accommodated at the same rate by the contact institutions.

2.4.4 Student progression

Table 6 sets out the cohort progression rates for 2006 first-time entrants (2005 entrants in the case of UNISA) into three-year degrees, four-year degrees and three-year diplomas, with UNISA and other institutions reported separately.²⁴

Table 6: Cohort progression rates – 2006 first-time entrants to contact universities and 2005 first-time entrants to UNISA

Cumulative percentages	Year							
	1	2	3	4	5	6	7	8
Three-year degrees								
Contact universities								
Graduates			28.9%	46.7%	54.5%	57.8%		
Dropouts	21.1%	29.0%	34.3%	37.4%	38.7%	42.2%		
UNISA								
Graduates			1.7%	4.7%	8.2%	10.9%	12.7%	14.0%
Dropouts	38.1%	54.3%	62.8%	66.9%	69.1%	71.7%	73.9%	86.0%
Four-year degrees								
Contact universities								
Graduates				35.2%	49.2%	54.6%		
Dropouts	19.7%	30.1%	35.6%	38.5%	40.2%	45.4%		
UNISA								
Graduates				3.9%	8.1%	11.5%	14.2%	16.1%
Dropouts	33.5%	50.6%	59.3%	63.8%	66.6%	68.8%	71.1%	83.9%
Three-year diplomas								
Contact universities								
Graduates			17.5%	31.0%	39.0%	42.9%		
Dropouts	26.2%	37.8%	46.2%	50.3%	51.7%	57.1%		
UNISA								
Graduates			0.2%	0.8%	1.7%	2.7%	3.8%	4.6%
Dropouts	64.7%	75.8%	82.3%	85.5%	86.6%	87.5%	89.4%	95.4%

Source: Sheppard tabulations from HEMIS data for CHE 2013

²⁴ Dropout rates may be biased upwards, since some students not graduating in 2011 (or 2012 in the case of UNISA) may have re-registered in the following year. This bias is more marked in the case of UNISA, where stopouts are common. Accordingly, UNISA has adopted a methodology of its own. See Barnes (2013) 'The context of the DHET 2006 cohort retention results for UNISA' (unpublished paper).

The final dropout rates at the contact universities, Column 6, and at UNISA, Column 8, can be compared with an OECD average of 30%.²⁵ However, a major contextual difference is that OECD countries have participation rates three to four times higher than South Africa's, so a very much higher proportion of the population in the OECD is succeeding in higher education.

From this Table, it is evident that in terms of graduations and accompanying dropouts, the South African higher education system suffers from significant output inefficiencies. The factors contributing to the high dropout figures are insufficiently researched, although the *Proposal for undergraduate curriculum reform: The case for a flexible curriculum structure* provides some coverage of these.²⁶ A range of factors beyond the control of higher education, such as: the lack of meaningful career and study guidance in our school system; the poor quality of teaching offered at many schools, especially in socio-economically deprived areas, which results in severe levels of underpreparedness for university level studies among large numbers of students; financial hardships suffered by many students despite being recipients of NSFAS financial aid; and the demands of independent study at university level contribute to these high dropout rates. In addition, there are few meaningful alternatives to university study, and these were further reduced with the incorporation of teacher education colleges into universities in the late 1990s and early 2000s. Until recently, not all universities were devoting adequate resources and attention to proven academic support interventions for students. While such interventions may lead to improved student retention figures and improved student graduation rates in time, the current indications are that without a systemic intervention, poor throughputs are likely to remain.

2.4.5 Graduates

Table 7 sets out the number of graduates in each year from 2007 to 2012. As in the previous case, the data is first presented for contact universities, then for UNISA, and finally in combined format. The figures at the end of each of these data sets reflect average annual growth rates in graduates for the period 2007 to 2012.

The number of awards of certificates, diplomas and degrees at all levels increased at an average rate of 4.7% per annum for contact institutions, 14.7% for UNISA, and 6.0% for the entire university system. These figures confirm that UNISA graduates have increased at a considerably faster rate than non-UNISA graduates, reflecting a rising share of UNISA enrolments in total enrolments, and overall rapid growth in the system in the last decade, increasing pressure on the higher education system.

²⁵ OECD (2010) 'How many students drop out of tertiary education?' in *Highlights from education at a glance 2010*.

²⁶ CHE (2013) *A proposal for undergraduate curriculum reform in South Africa*.

Table 7: Graduates, 2007-2012

Set A	Contact institutions					
	Dip/Cert 1-2 year	Dip/Cert 3 year	Degree 3 year	Degree 4 year	Post-graduate	Total
2007	14 895	24 547	24 302	22 121	26 412	112 277
2008	14 954	24 601	24 961	23 040	27 763	115 319
2009	16 145	25 671	24 510	24 940	30 913	122 179
2010	15 352	25 849	25 726	28 534	31 791	127 252
2011	15 399	28 193	26 624	28 233	35 368	133 817
2012	16 578	29 624	28 524	29 184	37 330	141 240
Average annual growth	2.2%	3.8%	3.3%	5.7%	7.2%	4.7%

Set B	UNISA					
	Dip/Cert 1-2 year	Dip/Cert 3 year	Degree 3 year	Degree 4 year	Post-graduate	Total
2007	2 115	1 862	4 157	1 712	4 495	14,341
2008	3 893	2 642	4 448	2 145	4 795	17,923
2009	8 223	1 541	5 275	2 464	5 172	22,675
2010	7 070	3 613	5 725	1 314	8 351	26,073
2011	5 665	3 755	6 031	3 659	7 698	26,808
2012	6 099	3 814	6 354	4 073	8 193	28,532
Average annual growth	23.6%	15.4%	8.9%	18.9%	12.8%	14.7%

Set C	ALL					
	Dip/Cert 1-2 year	Dip/Cert 3 year	Degree 3 year	Degree 4 year	Post-graduate	Total
2001	12 237	18 999	21 667	17 002	23 413	93 318
2007	17 010	26 409	28 459	23 833	30 907	126 618
2008	18 847	27 243	29 409	25 185	32 558	133 242
2009	24 368	27 212	29 785	27 404	36 085	144 854
2010	22 422	29 462	31 451	29 848	40 142	153 325
2011	21 064	31 948	32 655	31 892	43 066	160 625
2012	22 677	33 438	34 878	33 257	45 523	169 773
Average annual growth						
2001-2007	5.6%	5.6%	4.6%	5.8%	4.7%	5.2%
2007-2012	5.9%	4.8%	4.2%	6.9%	8.1%	6.0%

Source: HEMIS data

2.5 Funding: block and earmarked grants to universities

Funding is a key factor determining the possibilities in higher education. Table 8 sets out block grants and earmarked funding to universities since 2007.²⁷

Table 8: Block and earmarked grants to universities and NSFAS allocations for 2007-12 in thousands of Rand, current prices²⁸

	Block grant	Earmarked grant	Subtotal	NSFAS	Total
2007	10 100 192	2 956 655	13 056 847	1 098 696	14 155 543
2008	11 451 502	2 827 888	14 279 390	1 306 383	15 585 773
2009	12 700 520	2 794 033	15 494 553	1 426 668	16 921 221
2010	14 532 751	3 543 917	18 076 668	1 565 597	19 642 265
2011	16 386 794	3 392 659	19 779 453	2 616 390	22 395 843
2012	17 433 861	3 646 820	21 080 681	3 377 902	24 458 583
Annual increase					
Nominal	11.5%	4.3%	10.1%	25.2%	11.6%
Real	5.4%	-1.5%	4.0%	18.3%	5.4%

Source: DHET, University State Budgets 2004-12, Section 2, adjusted for consistency of definition.²⁹

The share of state allocations to higher education dropped slightly between 2007 and 2008, but it has since risen.

If allocations to NSFAS are excluded, block grants have constituted an increasing proportion of total grants to universities in recent years, moving from 77.4% in 2007 to 82.7% in 2012. Earmarked grants have declined slightly in real terms. This follows since infrastructural grants are not normally made available annually but in intermittent tranches which can cover 2 to 3 years at a time.

The real increase in NSFAS allocations has been rapid, especially between 2010 and 2012.

The average real growth of 4.0% per annum over the period for grants to universities (i.e. NSFAS excluded) has had to cater for the growth in the system, which from Table 5, amounted to an average annual increase in student enrolments of nearly 5%.

The per unit growth in the four grants making up the total block grant is set out in Table 9.

²⁷ The data for earmarked grants includes allocations for infrastructural renewal which should, together with NSFAS allocations, be excluded from the earmarked allocations. However, it could be argued that to obtain an accurate picture of block grant versus earmarked funding, all allocations that are earmarked for a specific purpose in higher education and over which a university council has no discretion, constitute earmarked funding.

²⁸ The block grant is taken as the sum of the teaching input, institutional, teaching output and research output grants. All other grants are regarded as earmarked.
Current prices refer to actual prices in any given year, and are used to calculate nominal growth rates. Constant 2013 prices use the prices in 2013 to value items in all other years. Constant prices strip out inflation and are used to calculate real growth rates.

²⁹ The 2012 definition of the block grants was used throughout.

Table 9: Block grant components of the funding model for 2007- 2012

	Teaching inputs				
	Units	Grant R '000	Grant per unit	Nominal growth per unit	Real growth per unit
2007	876 259	6 772 475	7 729		
2008	905 000	7 746 610	8 560	10.8%	5.6%
2009	940 000	8 497 186	9 040	5.6%	-1.4%
2010	983 663	9 792 984	9 956	10.1%	2.1%
2011	1 027 326	10 909 568	10 619	6.7%	2.3%
2012	1 071 824	11 658 601	10 877	2.4%	-2.4%
Average growth	4.1%				1.2%

	Teaching outputs				
	Units	Grant R '000	Grant per unit	Nominal growth per unit	Real growth per unit
2007	108 631	1 692 253	15 578		
2008	110 442	1 859 238	16 834	8.1%	3.0%
2009	112 611	2 123 210	18 854	12.0%	4.6%
2010	117 907	2 446 994	20 754	10.1%	2.0%
2011	125 959	2 725 997	21 642	4.3%	0.0%
2012	134 272	2 537 108	18 895	-12.7%	-16.8%
Average growth	4.3%				-1.8%

	Research outputs				
	Units	Grant ³⁰ R'000	Grant per unit	Nominal growth per unit	Real growth per unit
2007	14 547	1 236 836	85 026		
2008	15 243	1 347 782	88 418	4.0%	-0.9%
2009	15 015	1 540 604	102 603	16.0%	8.4%
2010	15 679	1 836 716	117 144	14.2%	5.8%
2011	17 429	2 224 568	127 638	9.0%	4.5%
2012	18 659	2 226 579	119 331	-6.5%	-11.0%
Average growth	5.1%				1.1%

	Institutional factors		
	Grant R'000	Nominal growth	Real growth
2007	705 298		
2008	806 746	14.4%	9.0%
2009	884 912	9.7%	2.4%
2010	849 701	-4.0%	-11.0%
2011	946 582	11.4%	6.8%
2012	1 011 573	6.9%	1.8%
Average growth			1.6%

Source: DHET, University State Budgets 2004-12, Section 3

³⁰ Excludes research development grant.

Table 9 indicates that the real growth in unit allocations was moderate (and negative in the case of teaching output). Financing system expansion in the form of providing for increased student enrolments accounts for most of the real increase in grants shown in Table 8. Significantly, research outputs increased by an average of 5.1% per annum, but research output funding only increased in real terms by an average of 1.1% per annum. This could be indicative of a disjuncture between policies of government departments such as DHET and the Department of Science and Technology (DST), and the effective support of these policies through targeted implementation measures.

2.6 The National Student Financial Aid Scheme: universities

Student financial aid is an increasingly important factor to consider. Table 10 sets out key statistics of NSFAS funding that is allocated to qualifying students.

Table 10: NSFAS: universities, 2009-2012 (Aggregate values in thousands of rand: Current Prices)

Set A	New grants to NSFAS ³¹	Awards	Number of awards	Growth in number of awards	Average award in Rand	Nominal growth in the average award
2009	2 205 953	2 818 220	135 862		20 743	
2010	2 516 221	3 343 531	148 873	9.60%	22 459	8.30%
2011	3 875 159	4 833 866	221 653	48.90%	21 808	-2.90%
2012	5 579 188	5 871 490	216 028	-2.50%	27 179	24.60%
Average				16.70%		9.40%

Set B	Recoveries	Bursaries	Per cent of awards in the form of bursaries
2009	580 129	1 277 598	45.3%
2010	704 339	1 529 453	45.7%
2011	719 435	2 521 348	52.2%
2012	296 401	3 118 515	53.1%

Source: NSFAS Annual reports, 2011, 2012 and 2013

Table 10 shows that there was a rapid increase in the number of student financial aid awards made between 2009 and 2012. There was also an uneven growth in the size of the average award, so that the average annual real increase has been in excess of 20%. This is an unsustainable rate of growth. Moreover, the proportion of awards that has taken the form of bursaries has increased significantly. Bursary allocations have risen from 0% in 1991 to about 25% in 2000, 45% in 2009 and 53% in 2012. As a result, income from loan recoveries is very low and, as is evident from Table 10b, fell sharply in 2012. This is most likely due to the absolving of final-year students from any loan repayments, provided that they passed.³² This is not a sustainable situation in a context of increasing

³¹ Includes grants from sources other than DHET.

³² Different loans have different rules about conversion. Up to a maximum of 40% of a general loan is converted into a bursary when a student passes all of the courses they were registered for in that year. Students who apply at their institution's Financial Aid Office to be on the NSFAS Final-year Programme have their final-year loans converted into a 100% bursary if they pass their final-year courses and qualify to graduate (see www.nsfas.org.za).

pressure on NSFAS funds. In addition, given that allocations generally cover only a portion of the full cost of study, awardees continue to be underfunded.³³

NSFAS funds are divided into award categories. Table 11 analyses awards by category and shows that there is considerable variation in average award size across them.

Table 11: Number of awards per category

	2009	2010	2011	2012	Average size of grant in 2012
DHET					
General	106 682	109 798	126 557	99 938	R25 359
Final year programme			24 684	29 203	R37 140
Teacher allocation	3 898	4 672	5 099	4 198	R27 149
Disabled students	762	1 040	1 104	1 176	R37 867
Historical debt relief			3 521		
National Skills Fund	1 890	3 885	24 491	38 987	R22 019
SA Institute of Chartered Accountants	782	774	837	807	R40 121
SETAs				3 071	R18 404
DBE					
Funza Lushaka	9 190	10 074	8 893	11 702	R56 980
Other	12 658	18 630	26 467	26 946	R19 035
Total	135 862	148 873	221 653	216 028	

Source: NSFAS Annual Reports

In recent years, FET/TVET colleges have emerged as a substantial competitor to universities for NSFAS funds. An amount of R1.807 billion was awarded to students at FET colleges in 2012/2013, all of which took the form of bursaries.³⁴ This development will undoubtedly put pressure on the student financial aid available for the higher education system.

2.7 Sources of university funding

Table 12 divides recurrent funding of universities into three revenue streams, these being government subsidies (1st stream income), tuition fees (2nd stream income) and so-called 3rd stream income representing all other forms of university income.

³³ See CHE (2014) *VitalStats. Public Higher Education 2012*, Figure 153, which indicates the average full cost of study in 2012 was R55 843.

³⁴ NSFAS (2013) *Annual Report, 2013*, p.71.

Table 12: Sources of university funding (Current prices in thousands of Rand)³⁵

	State grants	Fees	Third-stream	Total
2007	11 491 425	7 776 841	10 862 153	30 130 419
	38.1%	25.8%	36.1%	
2012	19 891 962	15 467 386	14 545 547	49 904 894
	39.9%	31.0%	29.1%	
Nominal value increase	11.6%	14.7%	6.0%	10.6%
Real annual increase	5.5%	8.4%	0.2%	4.5%

Source: DHET tabulations

The recurrent income of the universities increased at an average annual rate of 4.52% between 2007 and 2012.³⁶ Table 12 shows that state grants and fees increased somewhat as a share of total income between 2007 and 2012. The share of third-stream income, however, has dropped from 36% in 2007 to 29% in 2012, and aggregate third-stream income has only barely kept up with the rate of inflation. Of the third-stream income in 2010, 35.6% could be used for general purposes. The remaining 64.4% could be used only for specified purposes.

The increase in the proportion of total income made up by tuition fees from nearly 26% in 2007 to 31% in 2012 is a cause for concern. When viewed together with the decline in third-stream income during this period it appears as if universities have offset declining third-stream income by substantial increases in tuition fees, as is evident from the high real annual increase in tuition fee income of 8.4% during this period. Such increases will undoubtedly have a negative effect on the ability of large numbers of students to finance their studies and could result in more students dropping out of their studies for financial reasons than would have been the case in the past. A strong case can be made that universities should not seek to 'balance their books' primarily through tuition fee income, which currently appears to be the case.

2.8 A summary of the current situation

There was a sharp upward movement of 60% in the number of National Senior Certificate passes satisfying the requirements for degree study between 2008 and 2013. The corresponding increase in NSC passes for diploma study was 35%.³⁷ These increases have occurred as the NSC system, with its first cohort produced in 2008, has taken root.

This has put upward pressure on first-time student enrolment numbers, which increased at 4.6% per annum between 2007 and 2011. Overall student enrolment rates over the same period grew at 4.3% per annum in universities other than UNISA, and 8.4% per annum at UNISA.

³⁵ Recurrent funding only. See CHE (2014) *VitalStats*.

³⁶ University expenditure is not here analysed in detail. Each university's pattern of expenditure depends on its infrastructure, its human capital, its range of programmes and the distribution of students across programmes. It is recognised, therefore, that individual institutions will be differently affected by changes in state funding.

³⁷ See Table A.1 in the Appendix.

The number of graduates grew at 6.1% at the same time, which is likely to be a reflection of earlier growth in the system. Even so, the supply of graduates remains tight, with low levels of unemployment among them, as the 2011 census indicates that virtually all new economically active graduates are absorbed into employment within a year of graduation.

Block and earmarked grants grew at a real rate of 4.0% per annum, which is, however, less than the student enrolment growth rate. This is indicative of increasing pressure on universities to maintain academic standards and standards in other services and functions. The number of student awards by NSFAS rose much more rapidly (16.7% per annum between 2009 and 2011) albeit unevenly, from year to year, with the average real grant size increasing by 3.5% per annum between 2009 and 2011. Such growth is unlikely to be sustainable.

In addition to the above it should be noted that the private higher education sector has grown significantly in recent years. Student enrolments are estimated to be approximately 10% or slightly more of public higher education sector enrolments, i.e. 90 000 to 100 000.³⁸ Private higher education institutions receive no state funding at all, whether in the form of state subsidies or in the form of NSFAS funding for students.

3. Scenarios for the next ten years

3.1 Introduction

3.1.1 The White Paper for Post-School Education and Training

The Department of Higher Education and Training published its *White Paper for Post-school Education and Training: Building an expanded, effective and integrated post-school system* in January 2014. It anticipates that there will be 1.6 million university students in 2030, up from 931 186 in 2011. This implies an average annual growth rate in student enrolments of 3.05%.

The White Paper makes no attempt to project the fiscal requirements of its proposals; nor are the proposals of the chapter on universities prioritised. Objectives listed in the White Paper for which new funding for universities is required, include:

- expansion of programmes in specific areas required for national needs;
- grants for three new universities;
- more foundation programmes;
- academic staff development;
- new student housing in terms of improved student housing norms;
- increase in research capacity; and
- progressively introducing free undergraduate higher education for the poor.

³⁸ DHET (2014) *Statistics on post-school education and training: 2012*; numbers are based on a count of figures provided in these institutions' annual reports.

3.1.2 Purpose and interpretation of the projections

In order to assess where the system is going, or might go, projections have been constructed in this chapter for the decade from 2013 to 2023. The main purpose of projections is not to predict, but to take the various pressures on the system into account by means of plausible assumptions and so to create a deeper sense of the structure of any funding challenges that pertain. Many of the tables in this section are projection versions of the tables depicting historical trends given earlier.

The projections shown in the tables that follow should not obscure the fact that there are substantial stochastic elements in the system such as secondary school progression rates, National Senior Certificate passes, first-time enrolments, total enrolments, graduation rates, fiscal envelopes and economic growth rates, all of which are capable of showing fluctuations from trends. Separating noise from signal in the ensuing modelling exercises is not always an easy task, and the funding system thus needs effective error correction capabilities. One such mechanism consists of the discretionary entrance criteria applied by individual universities. Another, not yet fully developed, would consist of measures to correct for initial estimates in the components of the block grant funding formulas.

The three scenarios mentioned earlier are developed below. As was indicated earlier, the first scenario assumes an improvement in secondary school throughput and maintenance of the current rates of transition from the National Senior Certificate to first-time enrolment in higher education. The funding implications of the first scenario lead to the development of the two further scenarios. The second scenario fits into an appropriate funding envelope, but it leads to an unacceptably slow growth rate in student enrolments at universities. A compromise third scenario entails an increasing share of GDP being allocated to higher education.

3.2 A first look at the next ten years: Construction of the first scenario

3.2.1 Parameters of Scenario 1 (Scylla)

An initial ten-year projection can be carried out on the following assumptions:

- Trends in pass rates in the NSC examination as set out in the Appendix will continue.
- First-year enrolments will run at a constant 87.5% of NSC passes for degree study in the preceding year (this figure constitutes the average for 2009-11).
- The baseline for diploma/certificate enrolments will be taken as 2013, in which first-year enrolments are assumed to be 30.6% of 2012 NSC passes for diploma/certificate study. The continuation rate of NSC passes for diploma/certificate study is assumed to rise thereafter by 1.5% per annum, so that the diploma/certificate first-year enrolment rate will be 31.1% of NSC passes for this type of study between 2013 and 2014, and 31.5% between 2014 and 2015 and so forth.

The relative probability in Table 13 below represents the rate of continuation to first-time enrolment from a Bachelor's NSC pass, divided by the rate of continuation from an NSC pass for diploma or certificate study to first-time

enrolment in a certificate or diploma programme. Table 13 sets out the projected first-time enrolments and the associated relative probabilities.

Table 13: First-time enrolments 2013-2023³⁹

Scenario 1	Certificates/ Diplomas	Degrees	Total	Relative probability
2013	82 987	119 041	202 028	2.54
2015	94 740	151 191	245 932	2.46
2017	98 221	169 523	267 744	2.64
2019	106 539	172 618	279 157	2.47
2021	115 526	187 025	302 551	2.45
2023	122 513	193 746	316 259	2.37
Annual growth				
2013-2023	4.0%	5.0%	4.6%	

Using first-time entrants as given in Table 13, and the cohort survival figures of Table 6, total university enrolments can be projected.⁴⁰ The initial projection yielded too few enrolled students, suggesting that the dropout figures in Table 6 may be overestimated. Adjustments in enrolments have thus been applied based on the assumptions below to achieve a more acceptable fit of projected to historical figures.

Key assumptions are that the following ratios remain constant:

- One and two-year certificate/diploma enrolments to three-year diploma enrolments.
- Four-year degree to three-year degree enrolments.
- Postgraduate to undergraduate enrolments.

No changes in the performance patterns or in the quality and efficiency of the educational process are assumed. Table 14 sets out the ensuing total enrolment projections for all universities other than UNISA, and for UNISA separately, and contains historical as well as projected estimates based on the above assumptions. These are used as a basis for deriving projected subsidy and other costs.

From Table 14 it is evident that total enrolments are projected to increase by an average of 6% per annum during the period 2013 to 2023, which can be compared

³⁹ These figures for the annual growth in student enrolments reflect growth rates for first-time entering student enrolments only and should not be confused with the growth rates for total student enrolments discussed earlier.

⁴⁰ The methodology for deriving the expected number of students given in the cohort tables constructed by Shepard which were discussed earlier, is straightforward. Define the n th year survival rate (l_n) as the number of students remaining in the system at the end of the n th year of study (i.e. students who have neither graduated nor dropped out) divided by the size of the relevant intake ($S_{t-n,1}$). Then the total expected enrolment is $\sum S_{t-n,1} l_{n-1}$ with $l_0 = 1$. As an example, the number of students enrolled in 2012 is the number of entrants in 2007 multiplied by the five-year survival rate plus the number of entrants enrolled in 2008 multiplied by the four-year survival rate plus the number of entrants enrolled in 2009 multiplied by the three-year survival rate plus the number of entrants enrolled in 2010 multiplied by the two-year survival rate plus the number of entrants enrolled in 2011 multiplied by the one year survival rate plus the number of entrants enrolled in 2012.

Table 14: Projected enrolments 2013 to 2023: Scenario 1⁴¹

Set A	Contact institutions						
	Dip/Cert 1-2 year	Dip/Cert 3-year	Degree 3-year	Degree 4-year	Subtotal Under-graduate	Post-graduate	Total
2013	21 692	166 084	162 774	156 167	506 717	118 197	624 914
2015	50 239	190 893	199 627	192 482	633 241	147 710	780 951
2017	52 084	214 545	237 980	232 531	737 141	171 946	909 088
2019	56 496	230 843	256 129	252 632	796 100	185 699	981 799
2021	61 261	250 305	269 398	265 785	846 749	197 513	1 044 262
2023	64 966	268 581	284 832	280 460	898 839	209 664	1 108 503
Average growth							
2001-2007							2.7%
2007-2013	-13.1%	3.0%	4.4%	5.9%	2.9%	5.3%	3.3%
2013-2023	11.6%	4.9%	5.8%	6.0%	5.9%	5.9%	5.9%

Set B	UNISA						
	Dip/Cert 1-2 year	Dip/Cert 3-year	Degree 3-year	Degree 4-year	Subtotal Under-graduate	Post-graduate	Total
2013	21 692	54 519	122 341	89 727	288 279	39 318	327 597
2015	24 764	62 120	145 152	125 034	357 070	48 701	405 771
2017	25 674	69 203	168 649	152 456	415 981	56 736	472 716
2019	27 848	75 512	184 768	176 411	464 539	63 358	527 898
2021	30 197	82 604	200 364	188 900	502 065	68 476	570 541
2023	32 023	88 533	211 626	197 213	529 395	72 204	601 599
Average growth							
2001-2007							7.1%
2007-2013	8.8%	0.7%	3.5%	17.6%	6.4%	8.8%	6.7%
2013-2023	4.0%	5.0%	5.6%	8.2%	6.3%	6.3%	6.3%

Set C	ALL		
	Under-graduate	Post-graduate	Total
2013	794 996	157 515	952 511
2015	990 311	196 411	1 186 722
2017	1 153 122	228 682	1 381 804
2019	1 260 639	249 057	1 509 696
2021	1 348 813	265 990	1 614 803
2023	1 428 234	281 868	1 710 102
Average growth			
2001-2007	4.2%	2.0%	3.9%
2007-2013	4.1%	6.1%	4.4%
2013-2023	6.0%	6.0%	6.0%

⁴¹ Historical estimates based on HEMIS data. Occasional students excluded. The subdivision of 2001 estimates into categories is not the same as in later years. Caution must therefore be observed in comparing categories of enrolment between 2001 and later years.

with the historical average annual increase in total enrolments of 4.8% for 2007 to 2012 given in Table 5. The projected enrolment patterns for 2013 to 2023 would thus require a substantial increase in funding for higher education if existing academic standards and standards of other services were to be maintained.

Using first-time entrants and the cohort graduation rates of Table 6, one can project total numbers of graduates. The initial projection yielded too few enrolled students, again suggesting that the graduation rates in Table 6 may be underestimated. Adjustments in enrolments have been made to provide a closer fit of projected to historical figures. Table 15 presents the results in which the column 'grand total' in the data for UNISA in Set B reflects the graduate totals obtained by adding the entries in Set A to the corresponding ones in Set B.

Table 15: Graduates 2013-2023: Scenario 1

Set A	Contact institutions						
	Dip/Cert 1-2 year	Dip/Cert 3-year	Degree 3-year	Degree 4-year	Subtotal Under-graduate	Post-graduate	Total
2008	14 954	24 601	24 961	23 040	87 556	27 763	115 319
2009	16 145	25 671	24 510	24 940	91 266	30 913	122 179
2010	15 352	25 849	25 726	28 534	95 461	31 791	127 252
2011	15 399	28 193	26 624	28 233	98 449	35 368	133 817
2012	16 578	29 624	28 524	29 184	103 910	37 330	141 500
2013	17 757	31 056	30 423	30 136	109 372	39 811	149 182
2014	18 003	31 091	29 934	32 982	112 010	45 132	157 143
2015	20 272	33 753	32 040	32 707	118 772	49 751	168 523
2016	20 651	36 009	37 904	36 168	130 732	54 217	184 949
2017	21 017	39 405	41 411	43 858	145 692	57 914	203 606
2018	21 515	41 957	45 453	47 151	156 075	60 478	216 553
2019	22 797	43 470	47 689	51 734	165 690	62 546	228 236
2020	23 854	44 734	48 627	53 410	170 624	64 440	235 065
2021	24 719	46 393	49 336	54 262	174 711	66 526	241 236
2022	25 290	48 432	50 758	54 807	179 287	68 578	247 865
2023	26 214	50 490	52 479	56 694	185 878	70 618	256 496
Average annual growth							
2013-2023							5.7%

Set B	UNISA							
	Dip/Cert 1-2 year	Dip/Cert 3-year	Degree 3-year	Degree 4-year	Subtotal Under-graduate	Post-graduate	Total	Grand Total
2008	3 893	2 642	4 448	2 145	13 128	4 795	17 923	133 242
2009	8 223	1 541	5 275	2 464	17 503	5 172	22 675	144 854
2010	7 070	3 613	5 725	1 314	17 722	8 351	26 073	153 325
2011	5 665	3 755	6 031	3 659	19 110	7 698	26 808	160 625
2012	6 099	3 814	6 354	4 073	20 339	8 193	28 356	169 856
2013	6 532	3 872	6 677	4 487	21 568	8 336	29 904	179 087

2014	6 623	3 569	6 012	5 637	21 841	9 289	31 131	188 273
Set B	UNISA (continued)							
	Dip/Cert 1-2 year	Dip/Cert 3-year	Degree 3-year	Degree 4-year	Subtotal Under- graduate	Post- graduate	Total	Grand Total
2015	7 458	3 641	6 146	6 601	23 846	10 325	34 171	202 694
2016	7 597	3 841	6 560	7 680	25 678	11 339	37 017	221 966
2017	7 732	4 198	7 172	9 081	28 182	12 029	40 211	243 816
2018	7 915	4 517	7 928	10 225	30 585	12 726	43 311	259 864
2019	8 386	4 877	8 617	11 277	33 157	13 433	46 590	274 826
2020	8 775	5 207	9 235	12 226	35 444	13 936	49 379	284 444
2021	9 094	5 431	9 645	12 856	37 026	14 518	51 545	292 781
2022	9 304	5 663	9 897	13 169	38 032	14 921	52 953	300 817
2023	9 644	5 850	10 183	13 556	39 233	15 308	54 541	311 037
Average annual growth								
2013-2023							6.1%	5.7%

Table 15 should be compared with the analysis performed in Table 7 on historical graduate figures. Table 7 also showed an historical average annual growth in graduates for the entire university system of 6% compared to the figure of 5.7% given above in Table 15 for 2013 to 2023. A consideration of Tables 5 and 7, and 14 and 15, shows that with an average annual growth in enrolments for 2013 to 2023 of 6% compared to the historical figure for 2007 to 2012 of 4.8%, no gains in the number of annual graduates would be achieved, and for the period of 2013 to 2023, the outputs in terms of graduates would grow only by an annual figure of 5.7%. The increases in enrolments during 2013 to 2023 are thus not matched by a corresponding increase in graduates.

3.2.2 The funding envelope⁴²

The October 2013 *Medium Term Budget Policy Statement* projects national government spending to rise from R452.5 billion in 2013/2014 to R550.1 billion in 2016/2017 in nominal terms. Using the inflation rate in the projections, this means that real national government spending will rise by no more than 1.02% per annum over the next three years. This is due to fiscal austerity being considered necessary to prevent national debt from rising to unsustainable levels. The International Monetary Fund's (IMF) October 2013 *World Economic Outlook* projects the South African average economic growth rate to be 3.49% in 2017 and 2018, and it will be assumed that this growth rate will be maintained between 2018 and 2023. It is assumed that funding for public higher education will account for a constant proportion of GDP between 2017 and 2023.

⁴² The funding envelope refers here to the amount of government funding that is projected to be available for higher education over the period. All funding projections are carried out in constant 2013 prices.

Table 16: The funding envelope (constant 2013 prices in thousands of Rand)

	Block grant	Earmarked grant	Total	NSFAS new	NSFAS recovery	NSFAS awards
2013	19 313 622	4 040 029	23 353 651	6 180 267	328 334	6 508 601
2015	19 709 629	4 122 866	23 832 495	6 306 988	335 066	6 642 054
2017	20 605 550	4 310 275	24 915 824	6 593 678	350 297	6 943 975
2019	22 068 915	4 616 382	26 685 297	7 061 948	375 174	7 437 122
2021	23 636 205	4 944 228	28 580 433	7 563 474	401 819	7 965 292
2023	25 314 802	5 295 357	30 610 159	8 100 616	430 355	8 530 971
			2.74%			2.74%

According to these projections, the funding available for the entire higher education system, including NSFAS, will grow at an average real rate of 2.74% per annum between 2013 and 2023.

3.2.3 Projections of funding required under the first scenario

On the basis of an average annual economic growth rate of about 3.5%, as estimated above, the first scenario assumes that the value of the unit grants for teaching input and teaching output will rise at 1.75% per annum for the 2013 to 2023 period. This is the same as the rate of growth of individual and household income if the economic growth rate is 3.5% per annum: half of the increase in economic growth is apportioned to rising average incomes, while the other half is apportioned to expanding employment in the economy as a whole. This assumption means that university salaries will keep up with the average growth rate in average individual incomes for the country at large.

It is further assumed that:

- The unit grant for research output will remain constant in real terms.
- The number of teaching input units will grow at the rate of growth in enrolments, teaching output units will grow at the rate of growth of graduates, and research output will grow at the combined rate of teaching input and teaching output grants, since these grants together provide the primary funding for the employment of academic staff.
- The institutional grant will grow at 1.75% between 2013 and 2023, and the earmarked grant will grow at 7.5% per annum. This implies that these components of state subvention to the universities will decline relative to the teaching input and output grants, since enrolments and graduations will rise at a faster rate under this scenario.
- NSFAS awards will rise at the same rate as enrolment growth plus 1.75% per annum.

Table 17 displays the results based on these assumptions.

Table 17: First scenario costs (constant 2013 prices in thousands of Rand)

Set A	Grant amounts required						
	Teaching inputs	Teaching outputs	Research outputs	Institutional	Earmarked	Total university grants	NSFAS Awards
Unit grant	11 498	19 974	126 143				
Annual increase							
Unit	1.75%	1.75%	0.0%				
Total grant increase				1.75%	7.5%		
2013	13 035 142	2 927 517	2 460 661	1 107 070	3 991 095	23 521 485	6 568 812
2015	16 813 699	3 430 409	3 120 651	1 146 156	4 612 209	29 123 125	8 772 093
2017	20 268 877	4 272 054	3 783 011	1 186 623	5 329 984	34 840 548	10 948 092
2019	22 926 710	4 985 411	4 302 684	1 228 518	6 159 462	39 602 785	12 820 924
2021	25 388 701	5 498 626	4 761 315	1 271 892	7 118 029	44 038 563	14 698 970
2023	27 836 314	6 047 731	5 223 262	1 316 798	8 225 772	48 649 877	16 685 030
Annual increase	7.88%	7.52%	7.82%	1.75%	7.50%	7.54%	9,77%

Set B	Shortfall		
	University grants	NSFAS	Total
2013	167 834	60 211	228 045
2015	5 290 630	2 130 038	7 420 668
2017	9 924 724	4 004 117	13 928 841
2019	12 917 489	5 383 802	18 301 290
2021	15 458 129	6 733 678	22 191 808
2023	18 039 718	8 154 059	26 193 777

Note: The shortfall is calculated on the following basis:

- **University grants**

The shortfall here is the difference between the demand for university grants, as shown in Table 7 Set A, and the university grant funding envelope, shown in Table 6, in thousands of Rand. For example, the shortfall in university grants in 2023 is projected as 48 649 877 (the 2023 entry in the 'Total university grants' column of Table 7 Set A) minus 30 610 159 (the 2023 entry in the fourth column of Table 6), which comes to 18 039 718 (the 2023 entry in the 'University grants' column of Table 7 Set B).

- **NSFAS**

The shortfall here is the difference between the demand for NSFAS funding (at the current inadequate level), as shown in Table 17 Set A, and the NSFAS funding envelope, shown in Table 16. For example, the NSFAS shortfall in 2023 is projected as 16 685 030 (the 2023 entry in the last column of Table 17 Set A) minus 8 530 971 (the 2023 entry in the last column of Table 16), which comes to 8 154 059 (the 2023 entry in the NSFAS column of Table 17 Set B).

As is clear from Table 17, the first scenario is far too generous and does not contain costs sufficiently compared with the funding allocations given in the funding envelope in Table 16. Simply put: Scenario 1 is not affordable. It would have disastrous financial consequences for universities and would have a concomitant fallout with regard to academic standards and services. In terms of Homer's story of Odysseus sailing to Troy, we have encountered Scylla.

The remaining two scenarios are developed next.

3.3 The second (Charybdis) and third (middle) scenarios

3.3.1 Overview

As noted earlier, additional scenarios have been developed to aid consideration of future growth and funding possibilities. Table 18 sets out three projections of aggregate funds required by universities in accordance with three scenarios over the period 2013 to 2023. Throughout, fees are assumed to rise at 1.75% per annum, so that they form a constant proportion of average household income.

Summary figures for the *first scenario*, the details of which have been set out above, are provided to allow for ready comparison. The first scenario assumes constant continuation rates from NSC passes to university and is based on 7.5% per annum real growth in third-stream funding. As is evident from the historical analysis of the universities' three income streams, this may not be feasible.

The *second scenario*, which is financially more conservative, grows state funding at the rate of 2.74% per annum to accord with the funding envelope set out in Table 16, and is based on a 2.5% real growth in third-stream funding.

The *third scenario* grows student enrolments at the average annual rate implicit in the White Paper goals. Enrolments are thus assumed to grow at an annual rate of 3.05% as calculated earlier. The target enrolment in 2023 is therefore 1 292 320, which would yield the White Paper's anticipated enrolment figure of 1.6 million by 2030. The third scenario is based on a 5% real growth in third-stream funding.

As is evident from the analysis of historical income patterns for universities, in all three scenarios third-stream income needs to rise considerably faster than between 2007 and 2012. This will pose a serious challenge to universities, especially to those that have not been able to achieve meaningful levels of third-stream income in the past owing to capacity constraints coupled to their geographic locations.

In the second and third scenarios, it is assumed to be inevitable that the degree continuation rate will drop in 2014. This follows since it is simply not possible for the universities to absorb the 22% increase in NSC passes for degree study between 2012 and 2013 by accommodating the same increase in their first-year intake.

3.3.2 Aggregate university income required under the three scenarios

The implications of the three scenarios for aggregate university income required are set out in Table 18.

Table 18: Three projections of aggregate university income required (constant 2013 prices in thousands of Rand)

Set A	First scenario: aggregate university income required				
	State grants	Annual increase	Fees	Third-stream	Total
Annual increase				7.50%	
2013	23 521 485	3.93%	16 893 092	15 636 463	56 051 040
2014	26 283 520	11.74%	19 372 220	16 809 198	62 464 938
2015	29 123 125	10.80%	21 789 972	18 069 888	68 982 985
2017	34 840 548	8.50%	26 267 762	20 882 014	81 990 324
2019	39 602 785	6.31%	29 712 222	24 131 777	93 446 784
2021	44 038 563	5.51%	32 902 877	27 887 285	104 828 725
2023	48 649 877	5.11%	36 074 899	32 227 244	116 952 020
Annual growth					
2013-2023	7.54%		7.88%	7.50%	7.63%
Percentage of total income					
2013	42.0%		30.1%	27.9%	
2023	41.6%		30.8%	27.6%	

Set B	Second scenario: aggregate university income required				
	State grants		Fees	Third-stream	Total
Annual increase			2.50%		
2013	23 353 651	3.18%	16 893 092	14 909 186	55 155 929
2015	23 832 495	1.02%	17 239 469	15 663 963	56 735 927
2017	24 915 824	3.49%	18 023 106	16 456 951	59 395 881
2019	26 685 297	3.49%	19 303 071	17 290 084	63 278 452
2021	28 580 433	3.49%	20 673 936	18 165 395	67 419 765
2023	30 610 159	3.49%	22 142 158	19 085 018	71 837 335
Annual growth					
2013-2023	2.74%		2.74%	2.50%	2.68%
Percentage of total income					
2013	42.3%		30.6%	27.0%	
2023	42.3%		30.6%	27.0%	

Set C	Third scenario: aggregate university income required				
	State grants		Fees	Third-stream	Total
Annual increase				5.0%	
2013	23 353 651	3.18%	16 893 092	15 272 824	55 519 567
2015	24 843 970	3.14%	17 971 129	16 838 289	59 653 388
2017	27 075 609	5.66%	19 585 407	18 564 213	65 225 229
2019	30 229 188	5.66%	21 866 579	20 467 045	72 562 813
2021	33 750 075	5.66%	24 413 447	22 564 917	80 728 440
2023	37 681 051	5.66%	27 256 957	24 877 822	89 815 829
Annual growth					
2013-2023	4.9%		4.9%	5.0%	4.93%
Percentage of total income					
2013	42.1%		30.4%	27.5%	

Comparing the outcomes of the three scenarios with the historical analysis of income sources of universities in Table 12, it is evident that in all the scenarios, the proportion of income from government subsidies is set to increase from nearly 40% to 42% and in the case of Scenario 1 to nearly 43%. The proportion of income due to tuition fees declines slightly from 31% in 2012 to 30%, while third-stream income declines from 29% of total income in 2012 to 27%, even in Scenario 1. These trends can be corroborated from Figure 3 below, which represents the evolution of required university income from 2013 to 2023 in each scenario. From Figure 3, it is clear that from the point of view of aggregate university income, Scenario 3 is indeed the 'in-between' scenario and requires appreciably less overall income than would be the case for Scenario 1.

Figure 3: Aggregate university income required by scenario

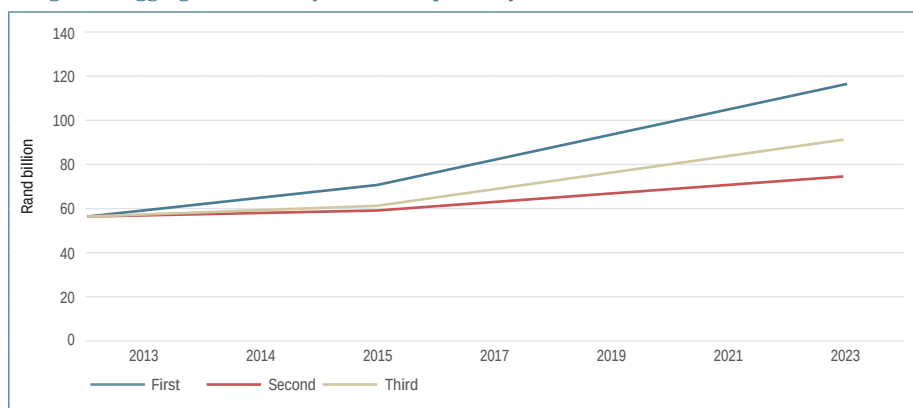


Figure 4 below represents the required evolution of state grants (block, earmarked and NSFAS) under the three scenarios. The state grants are depicted against proportion of GDP for each scenario. Scenario 1 would require a higher education state budget of close to 1.2% of GDP in 2023, which should be compared with current figures in the region of 0.8% of GDP. Scenario 3 would require a more modest increase in the proportion of GDP spent by government on higher education, amounting to about 0.9% in 2023.

An increase in the proportion of GDP spent by government on higher education tacitly assumes some form of re-prioritisation of government's spending priorities in favour of higher education, inevitably at the expense of some other existing priorities. Interestingly, Scenario 2 leads to a proportion of GDP spending on higher education in 2023 which is very close to existing levels.

3.3.3 Enrolments

The projected student enrolments, tuition fees and required total income per student according to the three scenarios are set out in Table 19.

Figure 4: Higher education state expenditure/GDP by scenario

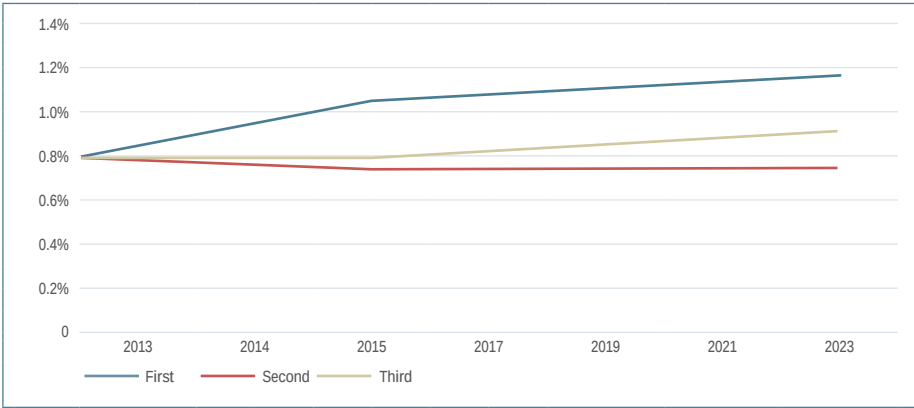
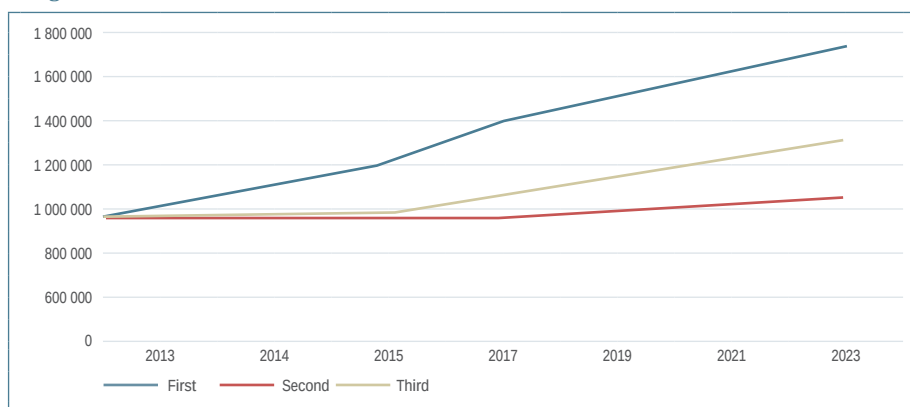


Table 19: Three projections of student enrolments, tuition fees and required total income per student (constant 2013 prices)

	Average fee (Rand)	First scenario		Second scenario		Third scenario	
		Students	Required income per student	Students	Required income per student	Students	Required income per student
Annual increase	1.75%						
2013	17 735	952 511	59 487	952 511	57 906	952 511	58 288
2015	18 361	1 186 722	58 854	938 893	60 429	978 740	60 949
2017	19 010	1 381 804	60 161	948 097	62 647	1 030 282	63 308
2019	19 681	1 509 696	62 868	980 801	64 517	1 111 054	65 310
2021	20 376	1 614 803	66 053	1 014 633	66 447	1 198 160	67 377
2023	21 095	1 710 102	69 715	1 049 631	70 801	1 292 094	69 512
Annual growth							
2013-2023	1.75%	6.03%	1.60%	0.98%	2.03%	3.10%	1.78%

From Table 19 it is evident that with annual tuition fee increases of 1.75%, the annual average growth income required per student in Scenario 3 falls between the corresponding values for Scenarios 1 and 2. This is mainly due to the student enrolments for Scenario 3 falling between the corresponding values for Scenarios 1 and 2, with Scenario 1 yielding a relatively high enrolment figure and Scenario 2 a very much lower one.

The evolution of student enrolments in each of the three scenarios is graphed in Figure 5, which shows the ‘middle’ position of Scenario 3.

Figure 5: Student enrolments

3.3.4 Graduates

Table 20 sets out the projected number of graduates, from diplomas and certificates to doctorates, for each of the three scenarios, assuming no improvement or decline in efficiency in graduate production.

Table 20: Graduates 2013-2023, by scenario

Set A	First scenario	Second scenario	Third scenario
2013	179 087	179 087	179 087
2014	188 273	188 273	188 273
2015	202 694	191 904	193 957
2016	221 966	195 534	199 641
2017	243 816	192 899	201 086
2018	259 864	186 816	198 834
2019	274 826	188 567	204 912
2020	284 444	189 241	209 963
2021	292 781	190 210	215 471
2022	300 817	192 464	222 602
2023	311 037	195 435	230 785
Annual growth			
2013-2023	5.68%	0.88%	2.57%

Set B	Third scenario graduate output by qualification level in 2023	
	2023	Percentage of output
Dip/Cert 1-2 years	26 606	11.5%
Diploma 3 years	41 803	18.1%
Degree 3 years	46 495	20.1%
Degree 4 years	52 124	22.6%
All first qualifications	167 029	72.3%
Postgraduate	63 756	27.6%
Total	230 785	100%

These estimates assume that graduation rates remain constant at the historical levels shown in Table 6. To the extent to which there is improvement or decline in throughput in relation to enrolments, Table 20 will contain under- or over-estimates. Nevertheless, in accordance with its design, Scenario 3 yields an average annual growth rate in the number of graduates of 2.6% compared to the figure of 5.7% for Scenario 1.

Figure 6 presents the information in Table 20 graphically for each of the three scenarios.

Figure 6: Graduates 2013-2023: by scenario

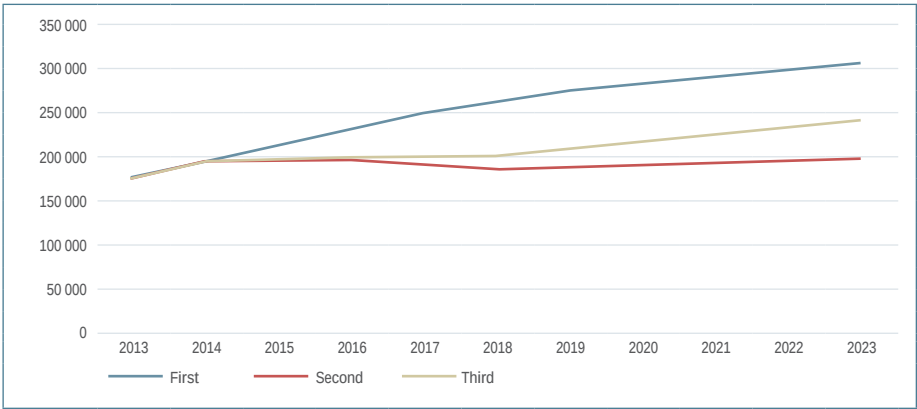
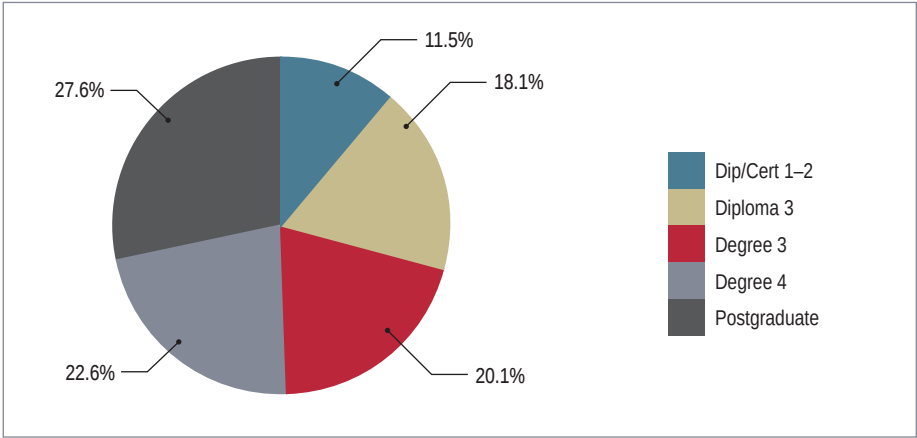


Figure 7 displays a pie chart of the distribution of graduates in 2023 for the third scenario, as given in Set B of Table 20.

Figure 7: Distribution of graduates for the third scenario, 2023



The distribution of graduates under Scenario 3 in 2023 shows that nearly 28% of all graduates will be postgraduate. This may seem high but it includes lower, intermediate and advanced postgraduate qualifications, so it is difficult to ascertain whether projections in government plans such as the National Development Plan for doctoral graduates have a realistic chance of being realised.

3.4 Implications of the three scenarios

3.4.1 Size and cost

The *first scenario* assumes access to higher education at the current rate by the growing number of eligible candidates with Bachelor passes from the NSC. This scenario does not seem to be a feasible one. It requires unsustainably rapid growth, both in state funding and in third-stream income. Student enrolments grow at 6.03% per annum and state grants grow at 7.75% per annum between 2013 and 2023. To keep pace, third-stream income should grow at 7.5% per annum.

In the *second scenario*, state grants grow at the much more modest rate of 2.74% per annum between 2013 and 2023. However, this means that student enrolments can grow only at the rate of 0.98% per annum over the same period, which is inadequate to meet the anticipated demand for higher education from school leavers qualifying for access. According to Homer's story of the journey of Odysseus to Troy, with this scenario we have encountered Charybdis.

In the *third scenario*, student enrolments will rise at 3.1% per annum between 2013 and 2023. This would require state grants to grow at 4.9% per annum over the same period. This represents an attempt to find a middle way.

The first scenario means that state expenditure on higher education (including NSFAS) would rise from 0.78% of GDP in 2012 to 1.21% in 2023. The second scenario would mean that in 2023 the corresponding level would be 0.73%, lower than in 2011 as a result of projected budget austerity between 2013 and 2016. The third scenario would mean that 0.9% of GDP would be spent on higher education in 2023.

In the first scenario, the gross enrolment ratio would rise from 18.7% in 2013 to 31.1% in 2023, which does not seem feasible given that this ratio has languished around 18% since 2001. The ratio would rise to 19.1% in 2023 under the second scenario, which does not represent a significant improvement on the present value.⁴³ Scenario 3 would yield a gross enrolment ratio (GER) of 23.5% in 2023, which represents a significant but realistic improvement on the present position. Under this scenario, the absolute level of the gross enrolment ratio would rise at an average rate of 0.48% per annum.

The implications for the continuation rates from the NSC to first year higher education study for each of the scenarios are set out in Table 21.

Table 21: Continuation rates, 2012-2013 to 2022-2023⁴⁴

	First scenario		Second scenario		Third scenario	
	Degree	Dip/Cert	Degree	Dip/Cert	Degree	Dip/Cert
2013	87.5%	30.6%	80.1%	28.4%	79.9%	28.4%
2015	87.5%	30.6%	57.2%	20.9%	62.0%	22.7%
2017	87.5%	30.6%	58.9%	22.2%	65.7%	24.8%
2019	87.5%	30.6%	56.5%	21.9%	65.9%	25.6%
2021	87.5%	30.6%	54.0%	21.6%	66.0%	26.4%
2023	87.5%	30.6%	53.6%	22.1%	68.2%	28.1%

⁴³ In 2013, the GER was 20%. See CHE (2015) *VitalStats*.

⁴⁴ These ratios are calculated by subtracting the enrolments of students already in the higher education system from total enrolments, thus defining first-time enrolments, and then dividing the number of first-time enrolments by the relevant number of applicable passes in the NSC in the previous year.

Figure 8 graphs the evolution of continuation rates for the Bachelor’s degree.

Figure 8: Bachelor’s degree continuation rates by scenario

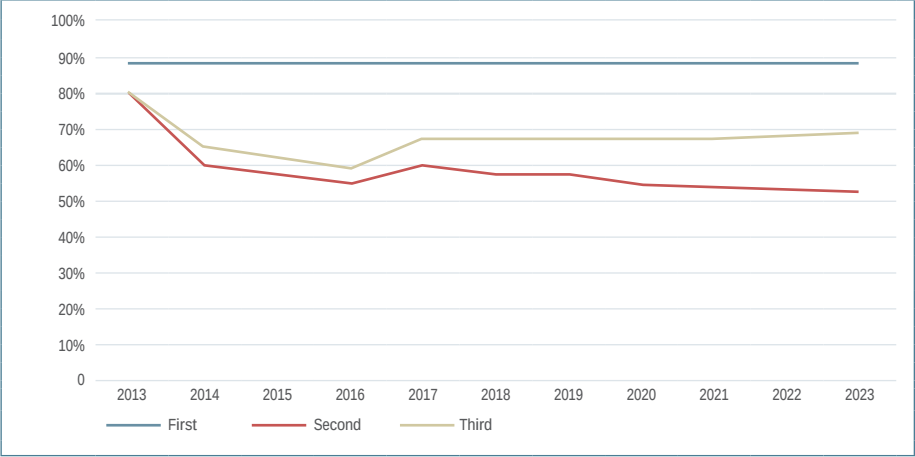
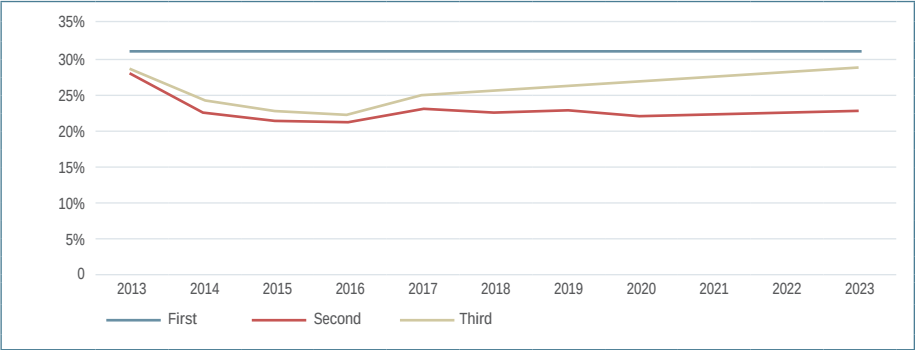


Figure 20 graphs the evolution of diploma and certificate continuation rates.

Figure 9: Diploma/Certificate continuation rates by scenario



The first scenario’s continuation rates, by design, remain constant. The continuation rates for the Bachelor’s degree are high and not likely to be sustainable.

The second scenario’s continuation rates for holders of a Bachelor’s pass decline steeply from 87.5% in 2012 to 59.7% in 2014 (not shown in Table 21) and decline further to 53.6% in 2023. This would be unacceptable for both socio-political and economic reasons. The diploma and certificate continuation rate drops from 30.6% in 2012 to a low of 20.7% in 2016 (not shown in Table 21) and rises to 22.1% in 2023. From a socio-political and economic perspective this is also too low.

The third scenario’s continuation rates for holders of a Bachelor’s pass drop from 87.5% in 2012 to 61.0% in 2016 (not shown in Table 21), but rise again slowly after that to 68.2% in 2023. This would be more acceptable from a socio-

political and economic point of view and would also be more attainable than the continuation rates for Scenario 1. The continuation rates for diploma and certificate study are 22.6% in 2016 and 28.1% in 2023. As in the case of the Bachelor's degree, these rates are also more feasible. It is assumed throughout that first-time enrolments in diplomas and certificates will rise faster than first-time enrolments in degrees.

It can be expected that the lower the continuation rate for the Bachelor's degree, the greater will be the 'downward-raiding' by Bachelor's pass holders entering diploma and certificate study as they find entrance into degree study more competitive. This applies in particular to the second and third scenarios. In this respect as well, Scenario 3 strikes a 'happy medium'.

3.4.2 Academic staff requirements⁴⁵

The consequences of the three sets of assumptions reflected in the scenarios can be traced out for staffing overall and for academic staff (or more formally, instructional and research staff) in particular, as this category is likely to constitute a key constraint experienced by universities. New academic staff recruits are required in order to:

- Replace academic staff members who exit from the system. While no attrition data are available, an estimate of 5% per annum is assumed, implying an average career length of twenty years.
- Add to the academic staff establishment to keep the student-staff ratio constant as the system expands. No reduction in this ratio is projected, even though this would be desirable in the longer term, given the pressures exerted on maintaining acceptable student-staff ratios in higher education institutions during the past few years.

Table 22 sets out the required annual recruitment needs for academic staff for each of the three scenarios.

Table 22: New academic staff recruits required

	First scenario		Second scenario		Third scenario	
	All	New	All	New	All	New
2013	20 804	1 340	20 804	1 340	20 804	1 340
2015	25 920	3 645	20 507	885	21 377	1 343
2017	30 180	3 276	20 708	1 366	22 503	1 917
2019	32 974	2 899	21 422	1 413	24 267	2 067
2021	35 269	2 917	22 161	1 462	26 169	2 229
2023	37 351	2 848	22 161	748	28 221	2 404
Mean 2013-2023		2 985		1 209		1 858

⁴⁵ See Chapter 7 on academic staffing at universities.

Universities have, on the whole, become stricter with regard to desired academic qualifications for the appointment of new academic staff. Most have started requiring PhDs for appointment to the level of senior lecturer or above, with the exception of some of the more professionally-oriented fields. If it were desired that all newly-appointed academic staff required PhDs, the ‘New’ columns would also represent the number of new PhDs required each year just for universities: an annual mean of 2 985 for the first scenario, 1 209 for the second scenario and 1 858 for the third scenario. These estimates compare with 1 878 PhDs awarded in 2012 for all purposes.⁴⁶

3.4.3 Special infrastructural needs

a. Redress funding for historically disadvantaged universities

Redress funding for seven historically disadvantaged universities was identified as a special need by the Ministerial Committee for the Review of the Funding of Universities.⁴⁷ The needs are quantified in Table 23.

Table 23: Catch-up costs for seven historically disadvantaged universities (millions of Rand)

Infrastructure backlogs	4 094
Maintenance	758
Municipal expenses	63
HEQC recommendations	956
Teaching, learning and research	1 050
Student housing	11 210
Total	18 131

Source: Report of the Ministerial Committee for the Review of the Funding of Universities, 185-186

The item ‘HEQC recommendations’ refers to recommendations made in respect of these seven institutions as part of the institutional audits conducted by the HEQC in the period 2005-2012.

The total required for redress funding is substantial, particularly for a higher education budget which is already under pressure in terms of matters such as the increasing need for more student financial aid and expectations of some form of free higher education for the poor. In addition, the implementation of the recommendations contained in the *White Paper for Post School Education and Training* would require significant additional expenditure, especially on training, which will make finding ‘new’ funds for higher education very difficult.

To place the amount of R18.131 billion in perspective, even if, under third scenario assumptions, 40% of the total earmarked grant were devoted to infrastructure, and 75% of this were allocated to the seven universities, the above infrastructural backlog could not be eradicated in the next decade.

⁴⁶ See CHE (2014) *VitalStats*, Figure 30.

⁴⁷ The seven institutions are: University of Fort Hare, University of Limpopo, Mangosuthu University of Technology, University of Venda, University of the Western Cape, Walter Sisulu University and University of Zululand. See DHET (2013) *Report of the Ministerial Committee for the Review of the Funding of Universities*.

b. The construction of housing for students in the sixteen other universities⁴⁸

The Ministerial Committee for the Review of the Provision of Student Housing of 2011, estimated the costs of developing adequate residential accommodation at all universities over a fifteen-year period to be between R4.7 billion and R5.6 billion a year in 2013 prices. Against this can be offset the amount required to reduce the backlog in student housing infrastructure in the seven historically disadvantaged universities. It is, however, a virtual certainty that given the student housing needs in these seven universities, little new student housing could be provided for in the other sixteen universities in the next decade. There will, therefore, be continued reliance on the private sector to offer student accommodation, with all the consequential challenges this holds for universities as well as for individual students.

c. Implications of enrolment growth for infrastructure

There will also be a need for infrastructure other than student housing to cope with increased student numbers. This could be met, in part, by the introduction of a trimester system, which would use existing assets more intensively. However, in the absence of additional academic staff, the effects of doing so on the other core functions, namely research and community engagement, have not been investigated.

3.5 Conclusion

The analysis of the three major scenarios set out in this section shows that universities will experience increasingly tight financial constraints over the coming decade. Demand for places will rise in relation to the number of students who can be financed. Cost containment will be paramount and universities will need to make every effort possible in this respect without jeopardising the quality of higher education.

The possible means of substantially improving internal efficiency in higher education, particularly through improving the current low throughput and graduation rates, are not examined analytically in this chapter, but are referred to briefly in section 5 below.

4. The steering capacity of the state and the adaptability of the system

The discussion of the adaptability of the present higher education system that follows has two dimensions: a technical consideration of what can be altered in the system to adapt to changing circumstances; and the constraints that value commitments put on these adaptations.

Against this background, the components of the funding system are considered in turn.

⁴⁸ DHET (2011) *Report of the Ministerial Committee for the Review of the Provision of Student Housing at South African Universities*. This report considered the 23 universities that existed in 2011.

4.1 The block grant

The principal degrees of freedom include:

- The number of places funded each year under the teaching input grant, and their distribution across subject categories and types of qualification as set out in institutional enrolment plans. While universities are not prevented from exceeding the numbers of students approved by the DHET, the fact that so-called over-enrolments will not be funded by the state is a powerful disincentive for departing from the DHET-approved enrolment plan. This follows since the tuition fee income received from such over-enrolled students does not cover the full cost of providing university education for the student.
- The weights within the funding grid. The original funding grid and its cell entries are based on data analysis conducted in the late 1990s and early 2000s, which can, and should, be reviewed from time to time to allow for changes in relative costs and priorities.⁴⁹
- The relative pricing of units counted under each of the four components of the block grant. Changing the relative pricing of these four components, particularly the first three, will change the weights of teaching input, teaching output and research output in determining the size of block grants to individual universities.

Table 9 above suggests that the parameters driving the block grant did not vary much between 2007 and 2012. Real growth of unit prices varied from 1.2% per annum for teaching inputs to 1.1% per annum for research outputs, and -1.8% per annum for teaching outputs. The drop in the real unit value of the teaching output grant signals a weakening of emphasis on the efficiency objective. The number of teaching input units increased by 4.1% per annum, the number of teaching outputs by 4.3% per annum and the number of research outputs by 5.1%, reflecting increased activity in postgraduate studies and research. The weightings for different knowledge fields in the funding grid have not been substantially altered since the inception of the new system, although the Funding Review has proposed changes in some fields such as engineering and computer studies.

The most obvious steering measure to bring university funding into line with available state resources is to tie the expansion of study places to the rate of growth of the funding envelope. Doing so would ensure that academic and other service standards in universities would not be affected negatively by a growth in student numbers. However, while some adjustment of this kind seems unavoidable over the next few years, effecting such adjustments in practice is difficult to achieve for the following reasons:

- Students acquire 'rights' to continued enrolment as they progress through their years of study and these rights need to be accommodated in projecting the

⁴⁹ An example of such an exercise is contained in the DHET (2013) *Report of the Ministerial Committee for the Review of the Funding of Universities*.

number of students enrolling for their second and subsequent years. This means that, in effect, the only policy variable for the total number of teaching input units is the number of first-time entrants. However, the whole burden of adjustment cannot be borne by this factor since this would create undesirable year-on-year fluctuations in the probability of holders of NSC passes, which qualify them for entry into higher education, from actually proceeding into higher education.

- Another form of adjustment would be to adjust average unit prices, but there are limits on how far this can be done. A sharp downward adjustment, or a sustained smaller adjustment, would require universities to embark on contested and often undesirable retrenchments of staff, including academic staff, resulting in many negatives for institutions and students alike. Sharp upward adjustments are less likely and are also not desirable, since they create expectations and would lead to commitments in regard to staff expenditure that may not be sustainable.

Another way of reducing costs per student is to negotiate more distance and fewer contact students, since the former currently carry half the input subsidy of the latter. The trend between 2008 and 2012 was in this direction, but the fact that the average throughput rate for distance education students tends to be substantially lower than for contact students means that, while such a step would increase access, it would not be matched by a concomitant level of student success.⁵⁰ If this step were to be pursued, it could not be expected that UNISA should bear the full burden of such student enrolment increases. Increases in distance education student places could be negotiated with the other universities as well, as is foreseen in DHET's *White Paper for Post School Education and Training*, 2014 and the DHET's Draft Distance Education Policy in 2012.

An increase in the size of the teaching output unit grant relative to the size of the teaching input unit grant could provide a spur to greater efficiency on the part of the universities. This would entail reversing the trend between 2007 and 2012 in which, as was seen before, the teaching output grant declined in relation to the teaching input and research grants.⁵¹ However, such an adjustment would have considerable implications for quality assurance across the sector.

4.2 The earmarked grants

The principal degrees of freedom include: the number of areas identified by the Minister of Higher Education and Training for earmarked grants; the relative amounts allocated through the various earmarked windows; and the proportion of total funds allocated between the block grant and the earmarked grants. If NSFAS allocations are excluded, between 2007 and 2012 the proportion of funds allocated as earmarked grants dropped from 22.6% of the total to 17.3%. This comparison is complicated by the institutional restructuring grant associated with the mergers and incorporations of universities and campuses of universities.

⁵⁰ For example, the 5-year completion rate of the 2006 UNISA intake, in respect of all standard Bachelor's degrees and national diplomas, was 6% (CHE (2013) *A proposal for undergraduate curriculum reform in South Africa*, p. 45).

⁵¹ See Table 9.

These were short-term earmarked grants, compared with some of the other grants, which have medium- and even long-term expected lifetimes. Table 24 compares the allocation of earmarked grants in 2007 and 2012.

Table 24: Allocation of earmarked grants across categories, 2007 and 2012

Grant description	2007	2012
Interest and redemption on loans	4.6%	0.5%
Institutional restructuring	32.5%	
Former VISTA development grant	4.3%	
Multi-campus grant		5.5%
Teaching development	20.5%	18.7%
Research development	4.2%	6.6%
Infrastructure development	24.1%	37.5%
Foundation programmes	6.2%	7.3%
Clinical training of health professionals		13.8%
Veterinary science	2.9%	4.6%
Other	0.6%	5.5%
	100.0%	100.0%

Source: DHET, University State Budgets 2004-12, Section 2

Considerable flexibility has been shown in the allocation of earmarked grants, although the basis on which the Minister assigns weightings to the various earmarked grants or introduces new ones (as in the increase from 2007 to 2012 in the category 'other') is not evident. The changes in the earmarked grant component have largely resulted from changing circumstances. The reduction in the share of interest and redemption on loans is, for example, a result of no new loans being extended and underwritten by the state. Institutional restructuring, as mentioned earlier, was fully underway in 2007, but has since run its course. Some elements of the old SAPSE funding system have re-emerged, as in the case of the grants for veterinary science and clinical training of health professionals. Infrastructural development has moved up as a priority, not surprisingly in the light of the many years of neglect by the state in providing meaningful funding for this area of expenditure, as well as the rapid expansion of student enrolments during that period.

4.3 NSFAS

The fundamental problem which NSFAS has been faced with since its inception is that the funds available for awards are inadequate for creating reasonable equality of opportunity, despite very rapid growth in NSFAS funding over the last twenty years. The Ministerial Committee on NSFAS observed that:

Current estimates are that NSFAS has less than half of the funds it needs to meet the demand for financial aid from qualifying applicants, even at current participation rates... Underfunding [in terms of award sizes] contributes to many of the secondary impediments.⁵²

Unless loan recovery rates improve dramatically, the gap will not be closed over

⁵² DHET (2013) *Report of the Ministerial Committee for the Review of the Funding of Universities*, p. xiii.

the coming decade, even under the second scenario. In fact, it will widen.

Nonetheless, the allocation of funds by NSFAS occurs within a framework which has some degree of freedom. The loan/bursary mix is one of them. The higher the loan component in NSFAS awards, the higher future loan recoveries can be, which can then be recycled into the system. A possible route to making NSFAS funding stretch further is to increase recoveries by abolishing all the bursary components and reverting to the pure loan fund that TEFSA was at the outset. While recognition of achievement is desirable, making provision for the conversion of loans into bursaries means that the most able students (with the highest earning-power in later life) are exempted much of their repayments, leaving repayments to be recovered from weaker graduates who take longer to complete their studies, and from dropouts. As indicated earlier, the bursary component has in fact been strengthened significantly during recent years, and has adversely affected the already low level of loan recoveries and hence the replenishment of student financial aid funds. It seems that pruning rebates in the form of loans being converted to bursaries is essential for the sustainability of NSFAS.

Although investigated in the past, consideration should again be given to obtaining finance from commercial banks for the least risky student loan components. Commercial banks could, for instance, prioritise the awarding of loans to final-year students. In order to keep interest rates down, commercial loans could be given repayment seniority over NSFAS loans, with the first repayments being made to the commercial banks.

Moreover, the loan size entitlement criteria in relation to household income can be adjusted. Also, NSFAS should have loan balance limits for individual students, such that loans can be repaid within a reasonable time-frame, say not more than fifteen years. A special supplementary grant may then have to be paid to NSFAS to be passed on as a grant to students from the poorest households to enable them to complete their studies within a reasonable time without becoming over-indebted.⁵³

At present, claims on NSFAS are related to the level of student fees, which vary significantly between universities. The Ministerial Review Committee on University Funding found that fee increases from 2005 to 2012 in all but one university were higher than the rate of inflation, and that the proportion of fees in university income had risen from 24% in 2000 to 30% in 2010.⁵⁴ The knock-on effect of such tuition fee increases on NSFAS funding is obvious. The Ministerial Committee recommended that no cap be placed on fees, but noted that tuition fee increases well above inflation will add further stress to NSFAS and will require matching (and higher) increases in the allocation of funds to NSFAS if the scheme is, at the very least, to maintain its levels of support to students qualifying for financial aid. Furthermore, consideration should be given to those students who do not fall within the current means eligibility criteria, but who do not qualify for bank loans.

⁵³ Students with household incomes less than the income tax threshold who reach the loan ceiling before completing their qualification could be offered grants to complete within a reasonable time. The cost of such a measure is sensitive to interest rates, but is likely to be modest.

⁵⁴ DHET (2013) *Report of the Ministerial Committee for the Review of the Funding of Universities*, Figure 9 and Table 94.

5. Possible productivity improvements

As the analysis above has indicated, the first and second scenarios are not deemed to be feasible, the first because of its very high cost and the second because of the limitations it would impose on system growth and individual opportunity. Scenario 3, representing a compromise position, thus appears to be the most practicable of the three.

However, it is evident that implementing Scenario 3 would not, in itself, address all the pressures on the system and could indeed introduce others. It also involves considerable cost. It is, therefore, necessary to consider what strategies could be followed to achieve significant productivity improvements and thus to strengthen the practicability of the scenario. Broadly, there are three areas in which improvements could be sought: first, changing the mix of modes in which higher education is delivered; second, finding sources of provision outside the public sector; and third, effecting internal efficiencies in the educational process in higher education. Some possibilities are discussed below for illustrative purposes.

5.1 Changing modes of delivery

Two possibilities are discussed in this section: changing the mix of contact and distance education; and more extensive use of technological innovation in the delivery of higher education.

5.1.1 Contact and distance higher education

Students are classified as 'contact' or 'distance' for the purposes of the teaching input subsidy. Distance education students attract half the subsidy that contact students in the same cell of the funding grid attract, up to and including the honours degree. It follows that, from the point of view of the state, distance education makes less demand on the public purse, so increasing the proportion of distance education students in an expanding system would reduce the subsidy required. In the following analysis, enrolments in the two categories are taken from the University State Budget workbooks. The numbers reported there are not headcount numbers but student units to which the contact and distance weightings have already been applied. The gap between student headcounts and student units is not great in the case of contact students, but the student unit numbers should be doubled to give an indication of the headcount in the distance education sector. Moreover, the numbers reported are not actual enrolments, but the enrolment targets or student numbers approved by the DHET for state funding purposes. So-called over-enrolled student numbers would thus not be taken into account, nor would under-enrolments. Table 25 reports the student-unit statistics for 2008 to 2012.

Table 25: Contact and distance student units, 2008-2012

	Contact		Distance	
	non-UNISA	UNISA	non-UNISA	UNISA
2008	808 551	777	12 941	82 121
2009	834 640	769	18 676	86 275
2010	874 581	516	17 019	91 547
2011	911 429	615	18 816	96 466
2012	949 522	571	18 171	103 560
Average growth	4.1%	-7.4%	8.9%	6.0%

Source: DHET, University State Budgets 2004-12, Section 3

In terms of weighted student units, Table 25 shows distance education enrolments rising at a faster rate than contact education enrolments. If student units as defined above are seen as indicative of student enrolments themselves, predominantly contact universities contributed 14.9% to total distance education student enrolments in 2012. These enrolments have thus far been concentrated at a small number of universities. The Department of Higher Education and Training is now encouraging universities to extend distance education provision, as long as it meets quality requirements set by the DHET in its programme and qualification mix approval process and by the HEQC in programme accreditation.⁵⁵ If this trend were to continue, the demands on subsidy would be reduced. One of the complexities, however, is that the increasingly widespread use of technological innovation is rendering the distinction between traditional contact education (learning from live lectures) and distance education (learning from e-linked materials and mailed printed materials) less clear-cut. There is now a continuum from completely on-line modes, where lectures, tutorials, assignments, tests and examinations are all conducted by electronic means, to 'blended' or 'hybrid' modes, where on-line interaction is combined with face-to-face teaching and assessment. Consequently, maintaining the distinction between contact and distance education for funding purposes could be challenged in the future.

As pointed out previously, the mode of educational delivery is here considered from the point of view of student enrolments. From the point of view of graduate production, it needs to be borne in mind that distance education graduation rates are significantly lower than contact education graduation rates, and that good-quality online distance education provision may not be less costly than contact education.

5.1.2 Implications of extending technological innovation: costs, staffing, infrastructure and effectiveness

a. Costs

South Africa is not the only country to struggle to afford its higher education, and a substantial international literature has been developed in recent years on an approaching crisis in higher education, mainly occasioned by reduced public funding levels.⁵⁶ There is a wide range of material on the possibilities of cost-

⁵⁵ See DHET (2012) *Draft Policy Framework for the Provision of Distance Education in South African Universities*.

⁵⁶ M. Barber, K. Donnelly & S. Rizvi (2013) 'An avalanche is coming: Higher education and the revolution ahead' (report); P.G. Altbach, L. Reisberg, & L.E. Rumbley (2010) *Trends in global higher education: Tracking an academic revolution*.

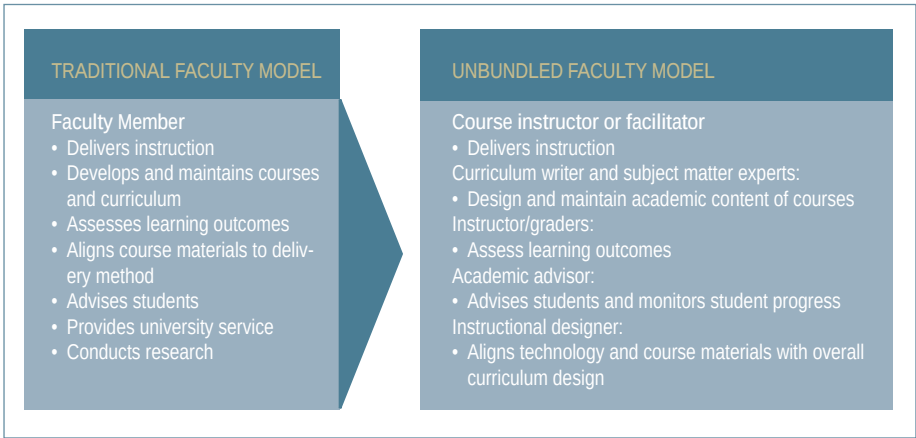
saving through the expanded use of technological innovation, some of which is relevant to the South African context.⁵⁷ While some regard the use of educational technology as a potential cost-saving strategy, there is no consensus on this.

In these circumstances, South African higher education must weigh and test options carefully in the light of local conditions. Given funding constraints, everything that is done must lead to clear cost reduction or quality improvement to make it worthwhile.

b. Implications for academic staffing

Change in delivery mode also has substantial implications for academic staff roles. Bowen (2013) and Carey and Trick (2013) observe that the unbundling and re-bundling of functions in the move from face-to-face teaching and learning to online/hybrid teaching and learning will have radical consequences for the structure, composition of employment and status system of universities. Figure 10 illustrates what is at stake:

Figure 10: Reorganisation of staff functions as a consequence of online teaching and learning



Source: P Neely and J P Tucker, Unbundling faculty roles in online distance education, *International Review of Research in Open and Distance Learning*, 11(2) 2010. In Carey and Trick, Ontario (2013) p. 18

There needs to be thorough investigation into the extent to which the higher education sector would have the capacity and will to implement such far-reaching change in academic staff roles on any large scale. Alerts of this kind to major complexities in introducing innovation in delivery mode, which may not be foreseen by policy-makers, are of particular importance in South Africa's environment of limited human resources. Constraints on infrastructure are equally important, as discussed below.

⁵⁷ For example: W.G. Bowen (2013) *Higher education in the digital age*; W.G. Bowen, M.M. Chingas, K.A. Lack and T. I. Nygren (2012) *Interactive learning online at public universities: Evidence from randomized trials*; T. Carey and D. Trick (2013) *How online learning affects productivity, cost and quality in higher education: An environmental scan and review of the literature*.

c. Infrastructure

South Africa has clear limitations, but also some strengths in terms of infrastructure for supporting technological innovation.

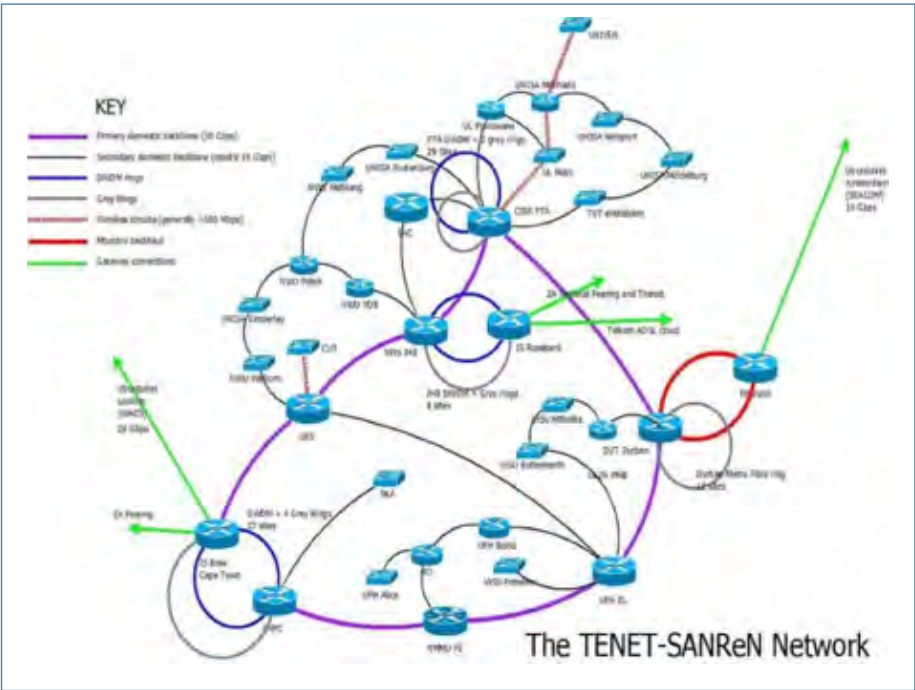
A key consideration is that South Africa has a very different telecommunications system from advanced industrial countries, as shown in Table 26.

Table 26: Telecommunications statistics, South Africa and the United States, 2012

	South Africa	United States
Fixed telephone subscriptions per thousand inhabitants	7.9	44
Mobile subscriptions per thousand inhabitants	134.8	98.2
International internet bandwidth: bits/sec per internet user	11 668	62 274
Percentage of individuals using the internet	41	81
Fixed broadband prices as a per cent of gross national income	4.8	0.4
Mobile broadband prices: pre-paid hand set: 500Mb per month as a per cent of gross national income	2.1	3.8
Digital natives per 100 of population between the ages of 15 and 24 ⁵⁸	18.6	95.6
Household download average speed: Mbps	4.33	20.55

Sources: International Telecommunications Union, Measuring the Information Society, 2013

Figure 11: The TENET-SANREN network



Source: Greaves, TENET

⁵⁸ The ITU defines ‘digital native’ as a youth aged 15-24, with five or more years’ experience using the internet.

The implications of these factors, particularly broadband costs and download rates, are substantial.

In contrast, an example of a significant asset is the TENET-SANREN system, which forms the connectivity backbone of South African universities and research institutions. A proposal to include FET/TVET colleges in this system is being considered. The system is based on CSIR infrastructure, with TENET configuring and operating a network on top of it. This network is comparable in reach and capacity to those found in many mid-rank developed countries. Almost all of it has been built in the last five years, during which bandwidth has increased more than twentyfold. Figure 11 maps the network.

The further strengthening of this network, which South Africa clearly has the skills to design, could greatly increase the technical feasibility of expanding the use of technology in teaching and learning in higher education.

d. Suitability of online learning for the current South African context

It cannot be taken for granted that changing the mode of delivery in the direction of online learning will be effective in improving, or even maintaining, the quality of learning (and consequently success and graduation rates) across the South African student body, with its high levels of inequality and underpreparedness. Key factors such as those outlined below, require in-depth consideration.

The generally low quality of South African schooling is well-known. For example:

- The 2013 DBE Report on the Annual National Assessments showed that mean scores on grade-appropriate tests in Grade 9 were 43% for the home language, 33% for the first additional language and 14% for mathematics.⁵⁹
- Ninth-grade South Africans achieved an average score of 352⁶⁰ in the 2011 round of the Trends in International Mathematics and Science Study (TIMSS), compared with an average score of 509 among United States eighth-graders and 613 among South Korean eighth-graders.⁶¹
- Fifth-grade South Africans, whose language of learning and teaching was English or Afrikaans in the first three grades, were tested for reading literacy in the 2011 round of the Progress in International Reading Literacy Study (PIRLS). This included in this group are historically Coloured, Asian and white schools as well as a substantial number of historically African schools. The distribution of outcomes against low, intermediate, high and advanced standards was as follows:

⁵⁹ DBE (2013) *Report on the Annual National Assessment of 2013: Grades 1 to 6 & 9*.

⁶⁰ This was up from 285 in the 2002 round. The centre point of the TIMSS scale is 500.

⁶¹ V. Reddy, C. Prinsloo, F. Arends, M. Visser, L. Winnaar, N. Feza, S. Rogers, D. Janse van Rensburg, A. Juan, M. Mthethwa, M. Ngema, M. Maja (2012) *Highlights from TIMSS 2011: the South African perspective*.

Table 27: PIRLS results, South Africa and international median, 2011

Per cent distribution	South Africa	International
Worse than low benchmark	43	5
Between low and medium benchmarks	23	15
Between medium and high benchmarks	20	36
Between high and advanced benchmarks	10	36
Above advanced benchmark	4	8

Source: PIRLS 2011, South African Children's Reading Literacy Achievement, University of Pretoria, 2012, 50

- University entrants are likely to be drawn from the top quartile of the distribution. Even so, findings at the university gate are not propitious. A study conducted by the South African Institute of Physics and the Council on Higher Education found unanimity among physics teachers that students' preparedness had been dropping over the last five years.⁶²
- National Benchmark Tests developed under the auspices of Higher Education South Africa (HESA) have been introduced as a placement mechanism at some universities. Table 28 shows the outcome for 12 202 students who wrote the AQL test (which includes academic and quantitative literacy) and 10 672 who wrote the mathematics test in 2009:

Table 28: National Benchmark test outcomes, 2009

Test	Basic	Intermediate	Proficient
Academic Literacy	7%	46%	47%
Quantitative Literacy	25%	50%	25%
Mathematics	20%	73%	7%

Source: Unpublished CHE document

These results show that while academic literacy skills are substantially stronger than quantitative or mathematics skills, fewer than half the students who sat the test were ready for university study (that is, in the Proficient category) based on academic literacy skills alone. The results for quantitative literacy were worse, and the mathematics results were very poor. It must also be noted that the students who took part in the pilot had already been accepted into programmes at universities.⁶³

In short, many university entrants arrive with slow reading speeds, poor reading comprehension, limited ability to express themselves in writing, inadequate numeracy levels, and little experience with computers and the internet. There are also concerns about the capacity of many entrants to work on their own for extended periods of time without face-to-face interaction with academic staff.

However, hybrid teaching and learning modules have the advantage of offering the opportunity of closer contact with students than traditional distance education does. This mode of delivery may consequently offer significant advantages.

⁶² B. Nkosi (2013) 'School maths failing varsity entrants' in *Mail and Guardian*, 19 July.

⁶³ Some of the universities in the pilot had relatively high admissions criteria (UCT, Wits, UKZN, SU, and RU).

The above discussion suggests that, for South African higher education, at least in the near future, purely online teaching and learning modules are less likely to be successful for undergraduates than hybrid or blended modules. As long as it is well-designed in relation to the target audiences, blended provision could enhance learning among students who are adequately prepared for utilising it. Active exploration of expanding the use of blended provision is also justified by potential practical benefits, such as that hybrid modules could be useful in delivering a more flexible curriculum, and have the potential for space saving, leading to reduced demands for infrastructural development. Conversely, hybrid modules require physical attendance at universities for a significant amount of time, so there are limits on how far they can replace distance education. As noted earlier, moreover, changing delivery mode in this way carries a range of implications – particularly for academic staff recruitment, roles and capacity – as well as unforeseen consequences. Its contribution to facilitating higher education growth through cost-saving cannot be taken for granted.

Online and hybrid educational delivery is no doubt here to stay and will develop fast internationally over the next decade. Although some individual universities are already active in this mode of educational delivery, it will require a major effort to incorporate it systemically into South African higher education. Against the background of the cost analyses given earlier, the maxim for considering specific developments should be: unless cost savings are certain to be substantial in a steady state, maintain the status quo until greater certainty emerges in this regard.

5.2 Alternative sources of provision: Private higher education

Section 29(3) of the Constitution guarantees a right to independent education and section 29(4) permits state subsidies to this form of education provision. Accordingly, a framework has been established for the registration of independent higher education institutions and for their regulation, including the adequacy of premises, the submission of reports to the DHET, and the accreditation of qualifications by the CHE's HEQC. Unlike independent school education, independent higher education currently receives no subsidy from the state. According to the *White Paper for Post School Education and Training* of 2013, this is not likely to change in the foreseeable future.

In October 2013, there were 89 registered and 26 provisionally registered private higher education institutions. Among the registered institutions were 18 business colleges, 16 theological seminaries (and three faith-based institutions), 15 institutions in the media, advertising, design, fashion and film fields, 10 in health and sports, and five in computer and information technology. Eighteen had a mixed range of offerings, and the remainder were specialist institutions in other fields. No private higher education institution has been allowed to use the designation 'university' as part of its formally registered and approved institutional designation.

While private higher education institutions submit annual reports to the DHET, data other than enrolments and achievements are currently not collected in the same way that public institutions submit data to a central database, i.e. HEMIS.

While enrolment and achievement records are collected via the Higher Education Quality Committee Information System (HEQCIS), these are unaudited and therefore not easily comparable. A UNISA study, based on unpublished returns to the DHET, found that 65 755 students were enrolled in 82 private higher education institutions in 2010, and the most recent count of enrolments, according to the Annual Reports submitted to the DHET, is over 90 000.⁶⁴ The policy issue to be considered is whether, despite the views expressed in the above-mentioned White Paper, state subsidies should be introduced for independent higher education, on either a general or a selective basis. Subsidies per student, even well below those paid to public universities, would have the effect of stimulating the sector, increasing overall higher education student enrolments and lowering per-student costs over the entire public and independent system.

It should be borne in mind, however, that if NSFAS support is not extended, the numbers of students in a position to take advantage of growth in private provision will be likely to be very limited, with the public sector having to accommodate the great majority of indigent students.

5.3 Improving internal efficiency

5.3.1 Trimesters: restructuring the academic year

Internal efficiency could also be increased through extending or better structuring the teaching time available in a calendar year. It would be possible, for example, to run three terms per year, each the length of a standard university semester, which currently averages about 13 weeks. From a productivity point of view, this would utilise the physical plant more intensively at little extra maintenance cost. The number of academic staff members would have to rise, but not necessarily in proportion to the lengthening of the teaching year.

Introducing a tri-semester system would enable a capable and sufficiently motivated student to complete what is currently a three-year degree in two years and a current four-year degree in three years. However, unless there were indeed a commensurate increase in staffing (which would have substantial cost, space, equipment and other infrastructural implications), the effects of introducing such a system on a university's research activities and outputs could be negative.

5.3.2 Reform of curriculum structure

As noted earlier, the scenario projections set out in this chapter all assume the continuation of the student performance patterns that currently exist across the higher education sector. However, as research over the last decade has indicated, the persistence of these performance patterns is in itself a major obstacle to viable growth in higher education, particularly in relation to the production of graduates on the scale needed for the country's development. The performance patterns show that, despite the student intake being very small in comparison with other emerging economies, there is severe inefficiency in graduate production, with approximately half of each intake not completing their studies.

⁶⁴ L. S. Tladi (2010) A profile of the private higher education landscape; DHET (2014) Statistics on post-school education and training: 2012.

While the reasons for this are complex, it is evident that improving the internal efficiency of teaching and learning within higher education could be a significant means of facilitating positive growth. This issue has not been addressed in depth in this chapter, but is the theme of a comprehensive study recently undertaken by a CHE Task Team.⁶⁵ The study found that structural curriculum change – allowing for additional formal time for most degrees and diplomas as the norm, within a flexible framework enabling students to complete in a shorter time if they are able to – is necessary to improve the efficiency of the higher education teaching and learning process substantially. Extensive enrolment, performance and financial projections developed within the study, indicate that relatively modest efficiency gains, of the order expected to be achieved by the proposed reform, would result in significantly lower average costs per graduate. The Task Team's findings and recommendations were subsequently endorsed by the Council, which formally advised the Minister of Higher Education and Training to undertake pilot studies with a view to implementing the proposal.

A central point arising is that improving internal efficiency, however it may be achieved, would make a substantial difference to the capacity of the higher education sector to respond to the pressures on it in an economically feasible way.

6. Conclusion

6.1 Key conditions for implementing planned growth in higher education over the next decade

The compromise position represented by Scenario 3 as discussed above, is considered to be the most viable of the three scenarios in practice; Scenario 1 is deemed not financially feasible and Scenario 2 is deemed unacceptable socio-politically.

In these circumstances, it is clearly important for the DHET and the higher education sector to identify the key system parameters and financial conditions that will be required for implementing a viable growth plan along the lines of Scenario 3, and to determine the feasibility of these parameters and conditions. This is necessary not only to ensure effective planning and management, but also to enable all stakeholders to develop realistic expectations of what the higher education sector can deliver.

The analysis in this chapter indicates that the following parameters and conditions would be necessary for successfully implementing Scenario 3:

1. Tuition and residence fees at current prices should grow at no more than the inflation rate plus, at most, half the economic growth rate. This will ensure that the burden of fees will not rise in relation to average household incomes.
2. Third-stream income should grow at the rate of inflation plus 5%, which is higher than was the case over the period between 2007 and 2012.
3. The state block and earmarked grant envelope should grow at the rate of national state expenditure plus 2.1% each year.

⁶⁵ CHE (2013) *A proposal for undergraduate curriculum reform in South Africa*.

4. Continuation rates between NSC passes for degree study and first-time degree entrants should be allowed to drop in the very short term and, if there are further upward jumps in the NSC pass rate, for a longer period. This will require universities to become more selective in their degree admission criteria. They should also consider making their academic exclusion policies more stringent for degree study students. Stricter application of rules for academic exclusion would permit the NSC continuation ratios for Bachelor's passes to be higher than indicated for the third scenario assumption rates shown in Table 21. There is little obvious indication of a need for adjustment for certificate and diploma selection criteria, or for policies for certificate and diploma academic exclusions.
5. The NSFAS allocation system needs urgent attention. The whole approach to student financial aid and its various packages needs to fit into an appropriate funding envelope, and should be heavily targeted towards students from households with incomes below the income tax threshold, with a gradual reduction of loan support as household incomes rise above the income tax threshold. Consideration should be given to making NSFAS purely a loan scheme (i.e. without bursary elements) and to inviting commercial banks to participate in the funding of the least risky student loans.
6. Universities should consider whether and, if so, in what ways effective online and hybrid provision can reduce costs in the steady state, and should innovate only in such ways as will secure cost-reduction in teaching and learning. Innovations in this area will take some time to introduce and an undue rush by individual universities will entail a potential waste of resources. HESA should take the lead in brokering inter-university partnerships on forms of blended and online learning.
7. The rate of student enrolment growth should, as soon as possible, taper down to 3.1% per annum plus the rate of productivity growth (here defined as student enrolments per unit real state subsidy) in the university system as a whole (probably not more than 0.5% per annum). As indicated in this chapter, possible sources of productivity gain include: a shift in balance between public to private higher education; changing the mode of delivery through shifting from contact to distance education and/or towards online and hybrid teaching and learning provided this leads to lower cost; and improving internal teaching and learning efficiency by, for example, restructuring the academic year or reforming curriculum structure. Since the rate of growth of the 20-24 year age-group will be about 0.8% per annum in the next decade, this will mean that the gross student enrolment rate will continue to rise, but entrance into universities will become more competitive.
8. Non-profit private higher education institutions should receive some financial support in the form of state grants, and access to student financial aid via NSFAS should be extended to them.

In summary, the third scenario can be realised if the following conditions are all satisfied:

- The National Treasury accepts that a rising percentage of GDP should be devoted to funding universities and financially-deserving students. The Department of

Higher Education and Training (a) negotiates a higher budget with the National Treasury for NSFAS and optimizes student financial aid allocations within this budget, and (b) stimulates, rather than just regulates, private higher education.

- Universities (a) increase the rate of growth of third-stream income and (b) adopt teaching and learning productivity improvement measures, for example, a trimester system or a flexible and extended undergraduate qualification structure.
- Potential students accept that entry into university will become more competitive.

In addition, the higher education sector would clearly be strengthened if the Department of Basic Education, the Department of Higher Education and Training and the universities succeeded in working together to improve the quality of National Senior Certificate output, improve articulation between secondary and tertiary education, and extend the variety of types of qualifications in higher and further education.

6.2 Summary

South African higher education has grown rapidly since the turn of the century, and is likely to go on doing so for the next decade at only a slightly reduced pace. In the third scenario, enrolments in 2013 were 953 000 and enrolments in 2023 are projected at 1 292 000, the latter up by 121% from the 2001 level of 585 000. Table 1 indicated that the 20-24 year age-group is expected to grow from 4 486 000 in 2001 to 5 092 000 in 2013 and 5 508 000 in 2023, and the gross enrolment rate will have increased from 16% in 2001 and 19% in 2013 to 24% in 2023.⁶⁶ The actual outcomes will depend on whether material improvements occur in the levels of school-leavers' preparedness for university study and the evolution of the fiscal envelope, determined by the economic growth rate and the priority accorded to higher education in the longer run.

The South African gross enrolment ratio in 2011 is compared with the ratios for regions of the world in Table 29.

Table 29: Gross enrolment ratios: world regions and South Africa, 2011

North America and Western Europe	77%
Central and Eastern Europe	68%
Latin America and Caribbean	42%
East Asia and Pacific	30%
Central Asia	24%
Arab states	23%
South and West Asia	18%
South Africa	18%
Sub-Saharan Africa	8%

Source: UNESCO Education Statistics, Table 14

⁶⁶ If in addition, there were a 0.25% per annum productivity gain from 2013 to 2023, enrolments would rise to 1 325 000 in 2023 and the participation rate would rise to 24.2%. A 0.5% gain would put enrolments at 1 366 000 in 2023, with a participation rate of 24.8% in that year.

South Africa needs to improve its position, but there are limits on how quickly progress can be made.

Funding will remain tight throughout the decade and particularly in the next three years. The Department of Higher Education and Training will need to keep tight control over costs. The provision of infrastructure is a difficult issue, since the projections indicate that there will be great pressure on the teaching input and teaching output grants, and that it is not possible to fund all the redress infrastructure needed at historically-disadvantaged universities, let alone finance increases elsewhere in the system.

NSFAS is the weakest link in the system and needs urgent and sustained attention. It is not reaching all students in need, it does not have equitable access rules and it cannot proceed on its current path without a huge injection of funds. Not to optimise NSFAS, subject to the funding constraints, acts against equality of opportunity.

Also needing more attention is the mismatch between the output of the National Senior Certificate across the three categories of pass and the opportunities for study towards degrees, diplomas and certificates.⁶⁷ Although only modest progress is likely over the next decade, in the longer run failure to deal with this issue will entail a low ceiling on the higher education participation rate. Moreover, continuing failure to improve secondary-tertiary articulation will result in a similarly low ceiling on completion rates.

In general, the state possesses the necessary tools for steering the system during the decade to 2023, but it must be careful that the way in which it uses them does not impose intolerable adjustment burdens on the universities.

Technological advance in computing, telecommunications and the internet hold promise for South African higher education. However, only those innovations which offer cost reductions – and do not compromise quality or success rates – should be implemented.

The task for the decade ahead is to build a basic system for the cost-effective growth of high-level human capital. More ambitious objectives, such as a preoccupation with South Africa's place in global education rankings, should await a later generation.

⁶⁷ See Tables 4 and 13. Also to be considered, when graduation rates from TVET colleges rise from their present very low levels, is articulation between TVET colleges and universities, particularly universities of technology and comprehensive universities.

Appendix

Developments in senior secondary school throughput and output

This appendix outlines the projections for secondary education output that inform the higher education projections developed in the body of this chapter.

Table A.1: Secondary school enrolments, 2008-2013

Year	Enrolments				
	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
2008	926 603	902 656	1 076 527	902 752	595 216
2009	991 093	926 531	1 017 341	881 661	602 278
2010	1 001 180	1 009 327	1 039 762	841 815	579 834
2011	1 008 110	1 049 904	1 094 189	847 758	534 498
2012	971 509	1 096 113	1 103 495	874 331	551 837
2013	942 345	1 073 060	1 146 285	834 611	597 196

Source: Department of Basic Education, Education Statistics (2008-12) and School Realities (2013)

A simple inspection of Table A.1 suggests that there is substantial repetition in Grades 9 and 10. Compare, for instance, the 1 146 285 enrolments in Grade 10 in 2013 with 1 096 113 enrolments in Grade 9 in 2012. There is also substantial learner dropout between Grades 10 and 11, and again between Grades 11 and 12.

No reliable direct observations of promotion, repetition and dropout exist for the secondary school system.⁶⁸ A model fitted to the enrolment data obtains indirect estimates based on the following assumptions: modest improvements to the promotion rates are projected for 2013 to 2018, and 2018 to 2023 (despite decreases in the 2008 to 2013 period), with accompanying declines in repetition rates in Grade 10 and in repetition and dropout rates in Grade 11. The figures are set out in the following four tables.

Table A.2: Promotion, repetition and dropout rates, 2012-2013

	Grade 9	Grade 10	Grade 11
Promotion	0.837	0.695	0.651
Repetition	0.113	0.205	0.134
Drop out	0.05	0.1	0.215

Table A.3: NSC passes enabling continuation to certificate, diploma and degree studies

	Certificate	Diploma	Degree
2008	105 847	127 423	107 274
2009	93 356	131 035	109 697
2010	91 241	146 224	126 371
2011	85 296	141 584	120 767
2012	88 604	152 881	136 047
2013	94 566	172 624	171 755

Source: DBE, National Senior Certificate technical reports

⁶⁸ Promotion, in this context, means passing (or being promoted in) one year and enrolling in the next.

These figures could have been much higher if the efficiency of the senior secondary school system had been greater: 10% of learners drop out in Grade 10, and over 20% in Grade 11. Furthermore, repetition is high: over 20% in Grade 10 and over 13% in Grade 11.

Senior secondary promotion, repetition and dropout rates are projected as follows:

Table A.4: Projection of promotion, repetition and dropout rates, 2013-2017 and 2018-2022

2013-2017			
Promotion	0.857	0.715	0.671
Repetition	0.093	0.185	0.124
Drop out	0.05	0.1	0.205
2018-2022			
Promotion	0.877	0.735	0.691
Repetition	0.073	0.165	0.114
Drop out	0.05	0.1	0.195

These rates represent a modest improvement on the rates reported in Table A.2

Demographic projections and projections of enrolment rates make possible projections of Grade 12 enrolments and National Senior Certificate passes in the three categories leading on to higher education. Table A.5 shows the results.

Table A.5: Projected National Senior Certificate outcomes, 2013-2023

	Candidates	Not achieved	Pass	Higher education entrance		
				Certificate	Diploma	Degree
2013	562 112	122 541	176	94 566	172 624	171 755
2014	558 031	117 796	558	94 411	172 476	172 790
2015	617 186	128 116	617	104 714	191 370	192 369
2016	617 537	126 020	618	105 068	192 091	193 741
2017	617 314	123 807	617	105 324	192 633	194 933
2018	620 718	122 310	621	106 201	194 309	197 277
2019	646 023	125 028	646	110 838	202 870	206 641
2020	663 982	126 172	664	114 236	209 167	213 743
2021	675 878	126 059	676	116 605	213 584	218 954
2022	679 215	124 296	679	117 504	215 311	221 424
2023	691 576	124 130	692	119 972	219 914	226 868
Achievement rates						
2013		0.218	0.000	0.168	0.307	0.306
2023		0.183	0.001	0.173	0.317	0.326
Annual growth	2.09%			2.41%	2.45%	2.82%

There was a large jump between 2012 and 2013, with total passes increasing by 16.3%. From 2013 to 2023, an average annual increase of 2.41% is projected for NSC passes for certificate study, 2.45% for diploma study and 2.82% for degree study. However, these results are sensitive to assumptions made. For instance, if

it is assumed that the Grade 11 repetition rate is kept constant at 0.134, and that the Grade 11 pass rates in 2013 to 2017 and 2018 to 2023 are projected at 0.691 and 0.731, with compensating decreases in the dropout rate, the increase in the number of NSC passes for degree study rises to 3.40% per annum between 2013 and 2023.

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