# Introduction

### Michael Cosser and Moeketsi Letseka

This monograph comprises seven chapters commissioned by the principal investigator (Moeketsi Letseka) of the Student Retention and Graduate Destination Study, which was conducted between 2005 and 2006 by a team in the erstwhile Human Resources Development research programme of the Human Sciences Research Council (HSRC).

In this introduction we discuss the antecedents of the study that gave rise to this volume, describe the study itself, and outline the organisation of the monograph.

## Background to the study

The Student Retention and Graduate Destination Study was conceived in response to multiple concerns that South Africa's higher education throughput rates were too low (Cloete & Bunting 2000; DoE 2001a; Sunday Times 6 August 2000¹). The National Plan for Higher Education (DoE 2001a) expressed concern that, at 15%, South Africa's 'graduation rate'² was one of the lowest in the world, and noted further that there were wide disparities in the graduation rates of black and white students, and that the evidence suggested that the average graduation rate for white students tended to be more than double that of black students.³ The Department of Education (DoE) posited that at some institutions the graduation rate ranged from 6% at the low end to 24% at the high end.

The National Plan set target graduation rates that distinguished between contact and distance programmes and among different types of qualification. For example, it set a target graduation rate of 25% for three-year undergraduate programmes through contact delivery and a 15% target for the same type of programme through distance education. The document noted that few institutions

- 1 F Meintjies, 'Higher education registers a fail mark overall'.
- At the time of publication of the National Plan, graduation rates were arrived at by calculating the number of graduates divided by the headcount enrolments for any particular year. In the absence of cohort studies tracing a group of students from first year to graduation, which would provide an accurate picture of the throughput rate, graduation rate remains a proxy for throughput. For further information, see Subotzky (2003).
- In this monograph we disaggregate figures by race and gender to show the extent of transformation. With our history of enforced racial segregation, it is important to see whether the racial profiles in higher education are changing. To do this, we unfortunately need to continue to make use of the racial classifications that were used to separate and discriminate against people during apartheid. We use the terms 'African', 'coloured', 'Indian' and 'white' to denote the different population groups, because these are the most commonly used in the data sources. Where we wish to refer to all population groups other than white, we use the term 'black'. It should be noted, however, that the terminology is becoming increasingly problematic as more South Africans of all races assert their right to be called 'Africans' and many refuse to classify themselves on a racial basis at all.

**TABLE I.1** National benchmarks for graduation rates, 2001 and 2004 (%)

	Graduation rate (contact)		Graduation rate (distance)		
Qualification type	National Plan 2001	Adjusted 2004	National Plan 2001	Adjusted 2004	
Undergraduate					
Up to 3 years	25	22.5	15	13.5	
4 years or more	20	18.0	10	9.0	
Postgraduate					
Up to honours	60	54.0	30	27.0	
Masters	33	30.0	25	22.5	
Doctoral	20	NS	20	NS	

Source: DoE (2001a, 2004a) Note: NS = Not specified

had met the proposed benchmarks. If they had, the higher education system would have been producing about 40 000 more graduates than it was at the time (2001). Subsequently, the rates were found to be unrealistically high and were reduced by two-and-a-half percentage points for threeyear undergraduate qualifications and by six percentage points for honours level qualifications (DoE 2004a). Table I.1 sets out both the old and new target rates.

Although the DoE lowered its target graduation rates somewhat, improved throughput remains a priority, to the extent that the new funding framework links funding to the number of graduates an institution produces. (For a discussion of its implications, see Breier and Mabizela [2007].)

#### Student success

Another way to assess student progress is to calculate success rates. These rates take into account full-time equivalent (FTE) student enrolments rather than headcount enrolments.<sup>4</sup> When these data are disaggregated by race, Africans and coloureds are the worst affected. According to the DoE, in the period 2001–04, the success rates of white undergraduates averaged 84%, Indians 80%, coloureds 74% and Africans 69% (DoE 2001b, 2002, 2003, 2004b). Table I.2 provides the full profile.

The graduation and success rates are motivating factors behind the DoE's concern about student dropout. However, they are arguably too crude a measure to be taken seriously: only longitudinal cohort studies can give an accurate picture of student throughput. Graduation rates, moreover, are severely affected by enrolment patterns. Rapid increases in enrolments lead to corresponding drops in graduation rates, which are not necessarily related to actual throughput. Conversely, graduation rates improve when enrolments decline.

4 FTEs are calculated by (a) assigning to each course a fraction representing the weighting it has in the curriculum of a qualification and (b) multiplying the headcount enrolment of that course by this fraction. Success rates are determined by (a) calculating FTE-enrolled student totals for each category of courses, (b) calculating FTE degree/diploma credits for each category of course using the same credit values, and (c) calculating the percentage of FTE credits in relation to FTE enrolments (i.e. FTE enrolments divided by FTE credits multiplied by 100 = success rate percentage). The benchmark for success rates is not clear, with estimates ranging from 75% to 80% for contact postgraduate and undergraduate combined (DoE 2005: 37-38; Subotzky 2003: 378).

**TABLE 1.2** Undergraduate success rates of contact students in all public higher education institutions, by race, 2001-04

Year	African	Coloured	Indian	White	Average
2001	65	75	78	85	74
2002	70	74	81	86	77
2003	70	71	80	85	76
2004	70	75	79	84	75

Source: DoE (2001b, 2002, 2003, 2004b)

#### Student attrition

Concern with dropout rates has become a worldwide phenomenon. Education policy-makers, tertiary education role-players, businesses and employers the world over are working towards developing best practices for conceiving and implementing acceptable student retention policies, maintaining acceptable graduation and throughput rates, and reducing high dropout rates. The dropout rate in the UK, for example, is estimated to be 22% (Grimston 2008), while UK universities are under pressure to increase participation in higher education to 50% for under-thirties by 2010/11 (House of Commons Public Accounts Committee 2009). The attrition rate in Australia in 2002 was 19% for domestic students and 18% for international students (DEEWR 2002). In the United States, approximately 58% of first-time students seeking a bachelor's degree or its equivalent and attending a four-year institution full-time in 2000/01 completed the degree or its equivalent at that institution within six years (National Center for Education Statistics 2007).5

If student attrition is a worldwide phenomenon, the problem is acute in South Africa. In 2005, the DoE's Directorate on Higher Education Planning reported that of the 120 000 students who enrolled in higher education in 2000, 36 000 (or 30%) dropped out in their first year of study. A further 24 000 (or 20%) dropped out during their second and third years of study. Of the remaining 60 000 (or 50%), fewer than half (22%) graduated with a generic bachelor's degree within the specified three-year period (DoE 2005).

One of the key factors contributing to student attrition in South Africa has been shown to be school leavers' under-preparedness for higher education study (Moll 2004; Nyamapfene & Letseka 1995; Slonimsky & Shalem 2006). While a sub-standard schooling system goes some way towards accounting for student under-preparedness, the other key factor influencing attrition is financial difficulty. The DoE acknowledges this dual influence by attributing high dropout rates 'to financial and/or academic exclusions and students in good academic and financial standing not remaining in the public higher education system' (DoE 2001a: 17, emphasis added). The Student Retention and Graduate Destination Study was initiated to provide a clearer understanding of the roles of these and other factors in shaping the trajectories of students into, through and out of higher education institutions and into the labour market.

This graduation rate was calculated as the total number of completers within the specified time to degree attainment divided by the cohort of students who first enrolled in the 2000/01 academic year. This indicator focuses on the cohort of first-time, full-time students seeking a bachelor's degree or its equivalent who began attending a four-year institution in 2000 and who completed the degree or its equivalent four, five and six years later.

## Aims and objectives of the study

Seven institutions were selected for inclusion in the study: the University of Fort Hare (UFH), the University of the Western Cape (UWC), Peninsula Technikon (Pentech), Stellenbosch University (SU), the University of the Witwatersrand (Wits), the University of the North (UNorth) and Pretoria Technikon (PtaTech).

From a programmatic perspective, the study sought to investigate those factors that influence students' 'choices' of fields of study in order to enhance our understanding of the reasons for study differentiation. The use of inverted commas around 'choices' reflects a recognition that, for many students, their choices of fields of study are constrained by a range of factors often beyond their control: their socio-economic status (SES) and subsequent inability to finance certain programmes of study; the quality of their school education; the range of school subjects open to them when they made their subject 'choices' – or often, more correctly, when they were streamed into pursuing certain subjects – in Grade 9; and the extent and nature of the career guidance open to them.

The study sought to investigate in two ways the factors that influence the pathways of students as they progress through the higher education system into the labour market: by tracing a cohort of students into the labour market, asking them to retrace their learning and career trajectories from the moment of their school subject choices to their present destinations; and by understanding, through visits to the seven selected higher education institutions, the dynamics that promote or hinder student movement from first registration to dropout or to graduation.

The students traced were of two kinds: those who graduated with a notional three- or four-year qualification in 2002, and those who left the higher education system in 2002 without achieving a qualification. This design assisted the research team to ascertain which factors enable students to complete a qualification as well as the factors that disenable them from completing a qualification. By considering the differential labour market situations of these two groups of students, the study sought, at the simplest level, to assess what value the achievement of a higher education qualification adds in terms of enhancing the employability and improving the employment situations of students.

Labour market outcomes aside, however, a major focus of the study was on those factors that enable not only graduation but also the achievement of milestones along the way to graduation – in other words, the factors that facilitate student retention.

Underlying the study was the conviction that an understanding of the factors influencing student pathways would assist policy-makers and planners to devise interventions to increase the participation rate in higher education, which would lead, in turn, to increased graduation output.

## Methodology

The project comprised three phases:

- 1. Institutional profiles of graduates and non-completers from the seven institutions constructed from the unit record data on students, obtained with the permission of the institutions involved from the DoE's Higher Education Management Information System.
- 2. Profiles of individual students obtained from two surveys one distributed to non-completers from the seven institutions, the other distributed to graduates from the seven institutions.
- Case studies of the seven institutions.

As the second phase indicates, the project traced two cohorts of students: those who left the seven higher education institutions during or at the end of 2002 without achieving a qualification, and those

who left the institutions during or at the end of 2002 with a notional three- or four-year qualification. The first survey was administered to all non-completing students from the seven institutions, the second to all students who obtained one of the following six qualifications in 2002:

- a three-year undergraduate degree (e.g. BSc, BA);
- a four-year professional degree (e.g. BA Social Work, BSc Engineering);
- a one-year postgraduate certificate (e.g. Higher Diploma in Education);
- a one-year honours degree (following a bachelor's degree);
- a three-year National Diploma; or
- a four-year Baccalaureus Technologiae.

In the case study phase, each of the seven institutions was profiled according to the following categories:

#### Part 1: An institutional perspective

Section 1: Pathways into the institution

Section 2: Pathways through the institution

### Part 2: An individual perspective: students who left the institution without achieving a qualification

Section 1: Personal profile of respondents

Section 2: Pathways into the institution

Section 3: Pathways through the institution

Section 4: Pathways from the institution

#### Part 3: An individual perspective: students who graduated from the institution

Section 1: Personal profile of respondents

Section 2: Pathways into the institution

Section 3: Pathways through the institution

Section 4: Pathways from the institution

As this design suggests, the case studies were framed around three temporal junctures: transition from school to higher education; passage through higher education; and transition from higher education to the labour market. A client report on the seven case studies (Letseka & Cosser 2009) is available from the Ford Foundation, co-funder of the project.

## Response profile

In the Student Retention and Graduate Destination Study, questionnaires were sent to 34 548 students who at the end of 2002 had left the seven institutions included in the study. Of these, 14 195 had graduated and 20 353 had left prematurely. There was a 15% response rate (or 2 163 respondents) among the graduate cohort and 16% (or 3 328 respondents) among the non-completers. The realised sample makes analysis at lower levels of disaggregation difficult because of reduced cell sizes - a difficulty alluded to in Chapters 1 and 7 of the monograph.

Broadly, the implication of small cell sizes is that one cannot generalise with any confidence to the entire graduate and non-completer populations of the seven institutions. The authors of Chapters 1 and 7 draw the reader's attention to this limitation.

# Organisation of the monograph

As indicated, the Student Retention and Graduate Destination project had its genesis in concerns expressed by the DoE about student success in higher education. The case studies of the seven institutions included in the project (Letseka & Cosser 2009) provide clear indications, from first-hand observation, of the capacity of the various institutions to create a learning environment conducive to such success. But the case studies present evidence of student performance in a disparate way. To supplement and deepen the case studies, analyses that step back from individual cases to investigate key issues in the student retention-graduation-destination nexus affecting one, some or all of the institutions under investigation are required. This is the justification for this volume.

The monograph is organised around two central themes: student access - to higher education, to the labour market, and to employment; and student success - whether students drop out of higher education or stay in the institution and graduate. The shift between access and success does not, however, disrupt the temporal logic behind this organisation. The monograph – like the study from which it derives - follows students' trajectory from school into higher education, through higher education, and into the labour market.

In Chapter 1, Michael Cosser sets the tone for the remaining chapters. He foregrounds the congruity of influences upon students' aspirations and enrolments in the seven institutions included in the Student Retention and Graduate Destination Study, the significant differences between non-completer and graduate responses, the extent to which students from different institutions differ in certain critical ways in their responses, and the disjunction between higher education aspirations and preferences on the one hand and student enrolments on the other. He argues that the school-to-higher education transition is not a linear process, but that the various disjunctions between aspiration and actualisation reveal an inherent volatility in the youth-to-adulthood transition as young people move from one phase of school to the next and from school into and through the higher education system. The key reason for the failure to realise ambition, he contends, is the strong correlation between SES and choice in the South African context - the higher the SES of students, the greater their ability to exercise choice (of subjects at school, of higher education institution, and of higher education study field) and map out their career trajectories and destinies. Financial constraints and poor academic performance, in a mutually reinforcing way, preclude large percentages of students from studying at their institutions of first choice: they cannot do so because they cannot meet the admission requirements and, if they could, they would not be able to afford the fees.

From issues of access in Chapter 1, the focus shifts in Chapter 2 to a study of success - or, more accurately in this instance, of its antithesis. Some of the key factors contributing to students' dropping out of higher education without obtaining a qualification were shown by the Student Retention and Graduate Destination Study to be lack of finance, academic failure, insufficient or no career guidance, personal and family deprivation, and institutional culture. Against this backdrop, Moeketsi Letseka, Mignonne Breier and Mariette Visser examine poor students' struggles for access and success in the seven institutions included in the study. Tracing the poverty levels of students who drop out back to the apartheid policies of the previous regime and its key legacies – a Gini coefficient that makes South Africa one of the most unequal societies in the world and an education system that is dysfunctional for Africans – they show the effects of poverty as going beyond access to such basic needs as food, shelter and clothing to encompass perceptions of helplessness, vulnerability, voicelessness, social exclusion and abandonment by the authorities. Since impecuniousness manifests itself as the primary cause of student attrition, Letseka et al. investigate the capacity of the National Student Financial Aid Scheme to support – and ultimately to retain – financially needy but academically capable students within the higher education system.

The attention shifts from the seven institutions that are the focus of Chapter 2 to a historically advantaged institution in Chapter 3. Wits has had to counter imputations of racism and come to terms with the reality of racially skewed success rates (Mangcu 2006; McKinney 2007). As Nongxa (2004) observes, even those institutions (like Wits) which considered themselves to be at the forefront of transformation have to recognise either that their student profiles have barely changed or, if they have, that they now have racially delineated differences in their success rates. In this chapter, Gill Scott and Moeketsi Letseka explore the implications of transformation and the effects of institutional culture on student dropout at Wits. They show that while student enrolment patterns at the institution have been steadily changing since the late 1980s (in 2002/03, black students made up nearly two-thirds of the student body), the same cannot be said of the academic staff complement, which in 2002 was still predominantly (79%) white. The perceived overemphasis of lecturing staff on content and theoretical underpinnings at the expense of study skills – however patronising this might be in some quarters (though the chapter does not provide data in support of this possibility) - patently invokes feelings of exclusion among students from previously disadvantaged communities and promotes a sense that the academic culture in the institution is inherently alienating.

In Chapter 4, Mignonne Breier confirms that the vicious cycle of financial disadvantage and academic underperformance which originated under apartheid continues to hold sway at UWC. Drawing on interviews with senior managers conducted as part of the case study of the institution, she notes the abject poverty - manifested in barely concealed physical hunger - which is the daily lot of a sizeable number of students at the institution, linking it to the low SES of respondents to the Student Retention and Graduate Destination surveys conducted earlier. Poverty, she shows - and not the individual cost-benefit analysis Tinto (1987, 1993) claims students undertake in deciding on whether to stay the distance - is the primary reason for student dropout; and precisely for this reason, many students do not so much drop out as 'stop out' in order to earn the money needed to finance their continued studies at the institution. A large proportion of non-completer respondents, Breier reveals, indicated that they had re-registered for further study since leaving in 2002, mostly for diplomas or certificates. This suggests that students 'downscale' their academic ambitions after dropping out - but whether for academic or financial reasons (the lower qualifications are obviously more quickly achievable) is not clear.

Breier's telling comparisons between UWC and SU show the stark contrasts in SES between students of the two institutions. Trish Gibbon, in Chapter 5, tackles the uncomfortable tension between the success for which SU has increasingly become known - success based largely on the relative advantage of the predominantly white student body to whose SES Breier drew attention in Chapter 4 – and the conspicuous lack of diversity which has become the institution's nemesis. In 2004, the former vice-chancellor of SU, Chris Brink, posed a critical question – 'Whose place is Stellenbosch, anyway?' (Brink 2004) - which opened up the cultural identity and ownership of the institution for debate. This debate centred around two axes: the university's decision to award an honorary doctorate, posthumously, to Bram Fischer, a scion of Free State Afrikaner aristocracy but also a communist who had deliberately and publicly walked out of the 'laager' to join forces with the 'swart gevaar' (black threat) and the 'rooi gevaar' (red threat); and the distinction between the language Afrikaans, which crosses the boundaries of colour, culture and religion, and Afrikanerdom, the traditional preserve of white Afrikaners. If SU wanted, Brink (2004) argued, to be an agent for Afrikaans - a language spoken by far more black people than white – Stellenbosch could not afford to be viewed as the sole property of Afrikanerdom. Against this provocative backdrop, Gibbon explores the success-diversity tension, concluding that any compromise in the student demographic<sup>6</sup> that saw meaningful increases in the enrolment of coloured students (African students would be unlikely to want to study at SU because of the institution's language policy) would compromise the high academic standards of the university and lead to reduced financial stability.

Coloured students constitute the second largest group at undergraduate level, but in 2002 they constituted less than 14% of the first-year enrolment, while African students constituted only 3% of first-year enrolments in 2002.

In Chapter 6, Percy Moleke shifts the focus from student success back to access. She provides a broad analysis of the performance of the South African graduate labour market to answer the guestion: 'How has the graduate labour market performed?' She then narrows her focus, drawing on the employment and unemployment experiences of graduates in the Student Retention and Graduate Destination Study to show that, notwithstanding the generally positive graduate uptake in the labour market, high levels of unemployment are found among African graduates, whose absorption into the labour market occurs at a much slower pace than that of graduates of other race groups, especially whites.

In Chapter 7, Haroon Bhorat, Natasha Mayet and Mariette Visser provide an empirical overview of the Student Retention and Graduate Destination Study dataset and a descriptive analysis of selected variables of interest; race; gender; gualification completion status; institution; field of study; home language; entry points to institution; matriculation results in specific subjects; full- or part-time study status; location of school attended (urban versus rural); funding of higher education; employment, income and education levels of parents/quardians; and sibling graduate status. They go on to conduct a quantitative modelling of three observable outcomes of the datasets - graduation, employment and earnings - disaggregated by race, gender and field of study. These analyses reveal enduring but subtle forms of inequality and exclusion in South Africa's higher education and labour market. Finally, an analysis of the determinants of graduation, employment and earnings reveals that race continues to be a significant determinant in South Africa of the probability of outcomes such as graduation and employment, and remains the key variable in the study even when controlling for institution type and field of study. However, while individuals are selected into employment on the basis of a number of characteristics, race is not a significant variable once students are actually in the labour market. Counter-intuitively, Bhorat et al. show that while socio-economic variables are important in determining graduation and success in the labour market, they are not crucial: household income and attending a rural school were found to have a significant impact on the probability of graduating, but other variables such as parental education were insignificant in the graduation multivariate analysis. Indeed, individual were more important than household variables in determining labour market outcomes such as employment and earnings.

In the final chapter (the Afterword), Cosser provides a brief environmental scan of the higher education landscape mid-2009, showing how the seven chapters outlined above contribute to current debates and ministerial policy initiatives under way in the higher education sector.

#### A note on the data

As indicated in the methodology section of this chapter, the data for the surveys pertain to the 2002 cohort of graduates and non-completers: those who graduated at the end of 2002, and those who left during the course or at the end of 2002 without achieving a qualification. The surveys were conducted in 2004. The case studies were conducted in 2005 and written up in 2005/06. The first drafts of the chapters for this monograph were written in 2007. Clearly, then, there has been considerable slippage between the data year (2002), the case study year (2005/06), the chapter year (2007) and the present.

The Afterword is one mechanism for dealing with this slippage, attempting as it does to tie the monograph chapters to current developments in the higher education sector. But on another level, the monograph needs no such unification: as it stands, it provides a snapshot of student access and success at one juncture in the unfolding higher education story. And as the Afterword shows, access and success and their interplay are perennial themes in this story, particularly in the light of the enduring legacy of apartheid with which the country as a whole has now to deal.

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