

Chapter 6

Multiple paths to success

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The four imperatives of quality, efficiency, transformation and quantity, outlined in Chapter 1, typically play themselves out at a broad policy level, structuring national and international debates. What is often neglected, however, is how such general demands or pressures (e.g. to increase the number of PhDs) are experienced and responded to at the level of a university, a department, or even an individual supervisor. This chapter reflects on an attempt to discover how these four imperatives are experienced and addressed. The focus of the chapter is mostly on issues of quantity (producing more PhDs) and efficiency (low dropout and high completion

rates), but concerns about quality and transformation weave their way in and out of these discussions.

This chapter focuses on the humanities and social sciences in South Africa, and what we can learn about the successful cultivation of doctoral scholarship. Twenty-five disciplines that had consistently enrolled and graduated significant numbers of PhD students were selected from the national database, the Higher Education Management Information System (HEMIS), for further study through interviews with heads of department and productive supervisors.

Method and selection criteria

Thirteen universities were selected to take part in this study: the universities of Cape Town, Johannesburg, KwaZulu-Natal, Pretoria, South Africa, Free State, Western Cape, Witwatersrand, Zululand, Nelson Mandela Metropolitan, Rhodes, North-West and Stellenbosch. Collectively they produced 96% of the higher education system's doctoral graduates in social sciences and humanities over the ten-year period from 2000 to 2009.

The first criterion applied to select individual departments for study was that a university must have produced a total of at least 20 graduates in that field over the ten-year period between 2000 and 2009, based on HEMIS data. As 52 departments met this criterion, there were too many to interview with the project's resources, so additional criteria were applied to reduce the department selection. This included analysing graduation rates and doctoral enrolments over the ten-year period and checking on the progress of cohorts of new doctoral enrolments for the period 2001 to 2004.

Ten disciplines were identified for further exploration: Education, Psychology, Public Administration, Political Studies, Economics, Sociology, Religion, Law, English and Social Work. In all, these fields produced 80.9% of the doctorates in the social sciences and humanities across South Africa. No field contributed less than 2.5% (Political Studies being the smallest) to the total, and each field also had an average annual intake of at least 26 doctoral candidates between 2000 and 2004. Ultimately 25 departments were included for this part of the study.

The interviews were conducted by the authors, both senior academics with doctorates and many years of academic experience. All interviews were recorded in audio and transcribed, but interviewers also took notes and these were included in the analysis.

Table 6.1 shows the departments that were selected on the basis of the HEMIS data. However, these 25 departments should not be regarded as the most productive ones. The authors did not want the cases to be concentrated in only a few geographical areas and to include only a few universities and

disciplines, so these factors were considered as part of the final selection of cases to study.

Extracts from interviews are recorded in this chapter without any identifying details of the individual concerned, the department or the university. This is in line with the confidentiality arrangement discussed with respondents prior to the interviews. The purpose of the extracts used in this chapter is illustrative in that the extracts serve to demonstrate arguments advanced in the body of the chapter.

Studying the human and social sciences is not a simple task – simply deciding on which disciplines to include in the study was a challenge in itself. Furthermore, once the decision had been taken on which disciplines to study, these did not map directly onto the departments (the unit of analysis for the study). At some universities the disciplines are confined to departments but at others they constitute whole faculties, such as Theology, Law or Education. Some departments fall within the Commerce Faculties, such as Economics at UCT and Public Administration at SU. Others fall within the Health Sciences Faculty, such as the Social Work Department at

Table 6.1: Departments selected to explore the quantitative report on the HEMIS data

University	Department/Faculty	Number of participants
North-West University (NWU)	Education	2
North-West University	Social Work	2
Rhodes University (RU)	Education	4
Stellenbosch University (SU)	Public Administration	3
Stellenbosch University	Theology	1
Stellenbosch University	Sociology	6
University of Cape Town (UCT)	Faculty of Law	2
University of Cape Town	Economics	2
University of Cape Town	English	2
University of Cape Town	Political Studies	1
University of Johannesburg (UJ)	Education	2
University of Johannesburg	Psychology	1
University of KwaZulu-Natal (UKZN)	(School of) Accounting, Economics and Finance	1
University of KwaZulu-Natal	English	2
University of KwaZulu-Natal	Religion	4
University of Pretoria (UP)	Law	1
University of Pretoria	Public Management Administration	3
University of Pretoria	Social Work and Criminology	3
University of Pretoria	Theology	3
University of South Africa (UNISA)	Public Administration	2
University of the Free State (UFS)	Theology	3
University of the Western Cape (UWC)	Education	1
Witwatersrand University (Wits)	Psychology	2
Witwatersrand University	Political Studies	1
Witwatersrand University	Sociology	1

NWU. For simplicity's sake, departments are the unit being referred to throughout the chapter, unless a specific faculty or school is mentioned.

Universities also differed in how they handled these complex disciplinary boundaries. This resulted in a changing configuration over time. At SU, for example, the Sociology and Social Anthropology departments both fall under Sociology. As a result of the changing configuration over time, a question raised during the study was what constitutes a pure Sociology degree. Wits Psychology follows a similar approach, but their departments are still recognisable as such within the overall school. The UCT English Department underwent a major reorganisation during the study. The department lost Film and Media Studies to a newly created department and Linguistics to a new school. Similarly, the School of Accounting, Economics and Finance at UKZN has undergone many changes since it was the School of Economics and Management. Despite these differences in nomenclature, the selected departments mapped reliably onto disciplines in the social sciences and humanities.

Quantity: Increasing the number of PhDs produced in South Africa

All the departments involved in this study were aware of recent policy initiatives aimed at increasing the number of PhDs produced in South Africa, and are already responding to it in some way or another. A number of departments indicated that their university's policy is to increase the percentage of postgraduate students overall, with the figure of 30% often being mentioned. Typically those departments that are essentially postgraduate departments or faculties are already in line with policy: UWC Education, RU Education and UCT Law reported that the percentage of postgraduate students in their faculties were already in excess of 30%.

Capacity to supervise

With few exceptions, all the departments included in the study had sufficient capacity to supervise PhDs as they had a respectable number of experienced staff members with PhDs. This is unsurprising given that they are among the most PhD productive departments in social sciences and humanities in South Africa. The percentages of staff with PhDs in these departments are much higher than for the average South African university department. Finding ten of the Academy of Science for South Africa (ASSAf) study (ASSAf 2010) was that approximately a third of all permanent academic staff members at public higher education institutions in South Africa hold a doctoral qualification.

Public Administration at UNISA reported that 90% of their academics have PhDs. Other departments with high percentages of staff with PhDs

are Education at UWC (70%) and Wits Sociology, UCT English and UKZN English, with more than 80% each. In the middle range are departments like Wits Psychology and NWU Education at around 50%, and UFS Theology with 65%. NWU Education commented that their relatively low percentage of PhDs came about when the merger with Potchefstroom Teachers Training College took place. The merger also led to the taking on of a number of teaching modules, resulting in a heavy teaching load and leaving staff with little time to improve their qualifications. Departments falling within the lower end of the spectrum are UJ Psychology (45%) and UKZN School of Accounting, Economics and Finance (33%).

There is a concerted effort by almost all universities to increase their number of academics with PhDs. UKZN reported that there is a vice-chancellor's PhD project in place, according to which all academic staff must either have a PhD or be enrolled for one. NWU has a similar goal in mind, and the Wits respondents reported that their university envisions that 70% of their staff should have PhDs in the not too distant future.

A particular advantage of having a sufficient number of supervisors with PhDs is that they are able to assist other less-experienced colleagues to become productive supervisors by co-supervising or mentoring. However, numerous interviewees pointed out that academic staff without PhDs place some stress on the capacity of departments as they themselves require supervision for their own PhDs. To increase the percentage of academic staff with PhDs from 34% to 70% in line with the objective stated in the *National Plan for Higher Education* (Ministry of Education 2001) would create strain, even in these high-capacity departments.

The extent to which the 25 departments have spare capacity to supervise PhDs is not clear. The number of PhDs supervised ranges from 2 to 12 per supervisor in the sample interviewed. In a number of instances it was clear that the departments perceived themselves as running at full capacity and were thus introducing steps to manage new enrolments. Departments with relatively open admission procedures and criteria reported very high numbers of PhD enrolments.

Departments were aware of the age profile of their productive supervisors and the potential burden this will put on their capacity to produce PhDs in the future. Departments such as UCT Law, NWU Social Work, UFS Theology, NWU Education, UJ Education, Wits Political Studies and UP Law regarded their age profiles as less of a problem as their current staff complements are younger and many have PhDs. All departments recognised the need for succession planning to replace retiring supervisors. At the time of conducting the interviews, some departments used only a few supervisors to carry out almost all their PhD supervision. In the UCT English Department, three people were responsible for almost all supervision, and the UCT Political Studies Department had only two

supervisors. The three supervisors of most UWC Education PhDs had retired and 11 other supervisors at UWC Education had left the university over the period 2000 to 2012.

The strategies to address succession planning varied. In some cases, retiring supervisors were retained in some capacity. In other cases, appointments favoured people with PhDs who were able to supervise straight away. Others encouraged staff members to complete their own PhDs as soon as possible. A number of departments used part-time supervisors. The RU Education Faculty had six such supervisors to supervise eight students. UNISA Public Administration used eight emeritus professors to supervise six students. SU Sociology Department had two part-time supervisors for eight students and UP Theology Faculty used six to supervise eight students. UKZN Religion employed the most part-time staff, with at least 20 part-time supervisors and co-supervisors. At the time of the study Wits Sociology indicated that they would in the near future expect emeritus professors to co-supervise PhDs in order to pass on their supervision skills. All departments reported that their universities are cautious about over-reliance on part-time supervisors. Some departments, such as UP Public Administration, discourage it. Study participants mentioned that different mechanisms are employed to regulate this process. At many places, including UCT Law and UP Law, part-time supervisors are only afforded co-supervision status. At others they are appointed as honorary research associates (UCT English), extraordinary professors (UWC Education) or research fellows (UJ Psychology).

UJ Psychology and UKZN Accounting, Economics and Finance reported a somewhat different problem in succession planning. In these departments the problem is not so much a 'greying faculty' as of a 'missing middle'. There is a gap between younger staff members and those aged 49 and older. Our impression was that this could be the case with other departments as well.

Institutional pressure

The study asked participants if they experienced pressure from their universities to increase doctoral enrolment. Most participants indicated that pressure is perhaps too strong a term for what they currently experience. Wits Psychology, however, indicated that they have felt under pressure since 2005. Most other departments felt that they were merely responding to the policy directions given by the universities:

Pressure? Not so much pressure ... I would argue that maybe it's more in the way of incentives. The department gets more funding for graduates, even undergraduate student[s] and so ... we gain as a

department if we increase our graduate numbers. I think there is increasing pressure in the way of ... gentle nudging from the Dean in particular to try and make sure our completion rates are ... within the time frame that one would like because there's a large number of people who register and don't complete. That's a global issue. But I don't think it's the case that there's any kind of undue or stipulated pressure in that sense. I think there's a general move, a general encouragement, a general sense of ... the direction we should go; and there are incentives in terms of finance and resources that support them.

Thus, for many departments, an increase in the enrolment of doctoral students has become the norm and what is expected of them. In some, such as UWC Education, UP Social Work and UCT Law, the pressure is not on enrolment but on throughput. One department, UJ Education, did mention pressure from the university to increase numbers. The department is, however, resisting this and would rather try to bring numbers down and increase throughput.

In one instance a respondent believed that it was easier to expand at masters level than at doctoral level, a view that is likely to be shared by others as well:

It's certainly feasible at the masters level because there are more applicants and it's easier to deal with those than the doctoral students for a number of reasons. First of all, the doctoral students ... tend to be of a poorer calibre to those of the masters because, for example, they're maybe more mature [and] they've been out of academia for longer. So although they might have verbal and ... intellectual skills, there is a certain mindset they've lost because they've been involved with families and their careers and jobs. So simply because they're older, they tend to be more involved in their career development and therefore they're less able to devote time to their doctoral studies. The masters applicants ... tend to be a bit younger. The complexity of the requirements for a masters [are] far less than for a doctoral, so it's easy to handle. Also we have more staff that are able to oversee the masters supervision than at the doctoral level. So for all those reasons it's easier for us to expand the postgrad at the masters level, but there is pressure across the board.

A sizeable number of interviewees held strong opinions about this pressure. Not all saw it as benign: although departments and individuals are encouraged or pressurised by their universities to increase postgraduate enrolment and PhD graduations in particular, many interviewees felt that

it came without an accompanying increase in resources. As one said, 'It is a monster that just demands more and more'. Concerns that increasing the number of PhDs would lead to a drop in quality were often raised during the interviews. Universities were frequently quite strongly criticised for a lack of support for such strategic drives, and for an absence of recognition of good individual or departmental performance in doctoral production. Generally we got the impression that only a few universities were perceived to give due credit to senior academics for the overall amount of work they put in: balancing research, teaching, administration, student development and particularly in developing and encouraging students from disadvantaged backgrounds.

I think the difficulty is the balance between different types of work. I think many academics are happy to supervise, but supervision is quite time-consuming and so there has to be a balance between that and coursework delivery: the actual teaching. And also the university requires quite a lot of administration. So in positions like mine, positions like this academic leader position, there are many demands on time and therefore the time available for supervision is contested time. And obviously people [also] have to do their own research. And although supervisions are related to your own research, they're ... a distinct thing. Directing and commenting on somebody else's work is not the same as just writing down what you do.

This could be the underlying, more general explanation behind the perceived lack of incentives to supervise PhDs, discussed below.

Resources go beyond these matters, to a systemic level:

It's really a question of resources. The older model was individual initiative: research was a kind of hobby; research teaching certainly was a hobby as it was totally unaccredited. These things shouldn't really be personal initiatives. There needs to be a systemic base for supporting them within a department, within the faculty, within the university, within the national higher education system as a whole. There has to be an integrated set of supporting measures which work together to really allow this kind of rare initiative to ... be realised. It's just ridiculous that it's not. So there's something systematically wrong. The Research Chair Initiative is an excellent model. That is the model for creating a research culture. But the research chairs are not as well-resourced as they should be. But it does raise the question then of [whether] you want the system of higher education to be well-resourced, or only those selective and often politically selected areas of it [to be resourced]?

Now my feeling is that if the faculty and university system really wants to promote PhD production – research production – it must put resources there. So the faculty needs to do something. But of course the faculty is reliant on the university. Now there we get to a version of the black box: the black box of what happens to the research funding, which comes in from the government in terms of PhD and scholarly production and ... goes out into the faculties and departments and the individuals concerned. How does that come to us in a way that enables the building of a research culture? So actually the old system is still in place because there isn't a proper articulation between national funding agencies and individuals, between universities and faculties, faculties and departments. It's just a mess, as I'm sure you've heard many, many times.

And, from another university:

We feel a little bit [at] times we're struggling against a lack of cohesive response to the issue within the faculty ... I don't think it's faculty's response: I think faculty is doing quite a good job. It's really [a] lack of ... funding from the top. A lot of hot air comes from our administration about what we should be doing and it's not backed up by resources.

More efficient models to produce PhDs?

The ASSAf study (2010: 16) found that 'the traditional apprenticeship model may not be an efficient approach for the purpose of rapidly increasing the production of doctoral graduates in South Africa'. There has been a proliferation in the types and styles of doctorates in the recent past, but this landscape is now well mapped out and broadly speaking five PhD models can be identified (Huisman & Naidoo 2006; Park 2007):

- The traditional research-based PhDs, often referred to as the British model;
- The PhD by publication via a series of peer-reviewed academic papers;
- The taught PhDs, often referred to as the American model;
- Professional or work-based PhDs, where the field of study is within a profession rather than an academic discipline; and
- Practice-based PhDs, typically awarded in the creative and performing arts.

We draw on Louw and Muller's (2014) literature review conducted for this project to describe the five models briefly.

The traditional PhD

This is the best-understood version of all pathways to the doctorate, with its roots in European mediaeval universities. It is based largely on a supervised research project and examined through a thesis, which often is defined in terms of an original contribution to knowledge. The mode of supervision focuses on the individual. The student typically works alone on the thesis, under the supervision of one or two senior researchers:

The objective is to deliver an original and significant contribution to the research literature in the field of study. A broad understanding of the field she/he is working in is often an additional criterion, as well as that the quality should be such that academic publication of the dissertation is likely. (Huisman & Naidoo 2006: 6)

PhD by publication

The PhD by publication is based on a supervised research project but is examined 'on the basis of a series of peer-reviewed academic papers which have been published or accepted for publication, usually accompanied by an over-arching paper that presents the overall introduction and conclusions' (Park 2007: 33).

For Huisman and Naidoo (2006: 6), the PhD by publication is:

rather similar in terms of objectives and standards as the traditional PhD, but the process is different. The candidate presents a volume of academic publications. In the social sciences, the publications are often accompanied by an introduction and reflection.

Introduced in the UK in the mid-1960s, this pathway to the PhD has been attractive for a number of reasons. Two major reasons are:

- The implementation of university funding models that reward publication and research student completions; and
- Pedagogical reasons for favouring publication by doctoral students. Kamler (2008) provided evidence suggesting that success in publication of PhD work is well correlated with subsequent scholarly productivity. This comes about as a result of closer institutional attention to the process, and skilled support from knowledgeable supervisors.

The taught doctorate

This is the North American doctoral model, containing substantial taught elements, often including research training. The taught elements are formally examined separately from the thesis. The thesis can be shorter

than is typically expected in the UK and Europe. According to Park (2007), this model entered the UK in 2001, where it is referred to as the New Route PhD.

Professional and work-based doctorates

This form of the doctorate also contains a substantial taught element, but:

the field of study is a professional discipline, rather than the academic discipline. Quite often, a variety of didactical tools are used in the educational process. Although research-based, the focus is normally more (or also) on application within the student's professional practice (reflexive practitioner). (Huisman & Naidoo 2006: 7)

The supervised research project is often smaller than the traditional PhD, is more applied, and is work-based or work-focused (Park 2007). The research problems investigated often emerge from professional practice and the students are typically experienced professionals. It also covers research in cooperation with enterprises.

Examples of such degrees include the Doctorate in Education (DEd or EdD) (one of the best developed of the applied or practitioner professional degrees in the USA and Australia), the Doctorate in Clinical Psychology (DClinPsy), and the Doctorate in Engineering (DEng).

The Doctorate in Business Administration (DBA) is a relative latecomer to the field, but Gill and Hoppe (2009) have shown that its presence at universities is on the increase. These authors identified 16 DBA programmes in the UK by 1999, and the initiation of 20 DBA programmes in Australia between 1993 and 2005.

It appears that the professional doctorate is the most prevalent alternative to the traditional PhD. It has proliferated, especially in the UK and Australia (Bourner et al. 2001). Although the USA offered its first professional doctorate in 1921, Nerad (2008: 279) emphasised that:

the primary purpose and goal of doctoral education (in the US) has been preparation of the next generation of university professors who will become productive researchers and innovators, and in turn become teachers of the following generation.

Practice-based doctorates

For Park (2007: 33), the practice-based doctorate is:

based on a supervised research project, usually in the performing arts, where the output involves both a written piece (which is usually

much shorter than the traditional PhD thesis, and includes both reflection and context), and one or more other forms, such as a novel (for Creative Writing), a portfolio of work (for art and design), or one or more performance pieces (for theatre studies or music). Both forms of output are examined.

Huisman and Naidoo (2006) agree that this PhD is work-based or practice-based, and earned in the creative and performing arts. The exact form of this PhD is still much contested.

Practices in South Africa

Given the Higher Education Qualifications Framework prescribed by the Department of Higher Education and Training (DHET), it is not surprising that the traditional PhD model is used almost exclusively in these departments. Only one department, NWU Social Work, produces most of their PhDs by publication. They have done so since 2007 and now produce approximately 90% of their PhDs using this model. A maximum of five articles, and more usually four, are submitted. The SU Public Administration, Theology and Sociology Departments, as well as UWC Education, UP Social Work, NWU Education, UKZN Accounting, Economics and Finance and Wits Psychology, have produced a limited number of PhDs by publication. Internationally the jury is still out on this model. Badley (2009), for example, has found that papers discussing the use and value of the PhD by published work are still relatively rare.

The PhD by publication has been rejected in two instances: the faculty to which the UJ Psychology Department belongs has considered and rejected the degree by publication. The interviewee stated this was 'because it would undermine the integrity of the academic endeavour'. Wits Sociology Department is strongly of the view that only a PhD by dissertation provides the necessary academic challenge and rigour for students. It was thus not amenable to proposals to allow students to follow the PhD by publication model, even though it is followed by at least one other faculty at Wits.

The RU Education Faculty is in the process of discussing a professional or work-based Doctorate in Education (D Ed). UNISA Public Administration reported that they are phasing out their D Admin programme. Elsewhere, it appears that the professional doctorate is the most common alternative to the traditional PhD.

The UCT Economics Department has gone furthest in offering a taught doctorate by offering a degree by coursework plus a thesis. It offers a four-year, full-time programme, with two years devoted to prerequisite courses and two years for writing a thesis. The advanced courses are prerequisites to registering for the thesis but do not accrue credits. This programme is offered in collaboration with other universities in sub-Saharan Africa and

is supported by the African Economic Research Consortium (AERC) through donor funding. The UCT Economics Department thus offers a blend of the traditional model and the taught doctorate, since the coursework in their programme does not accrue credits. They indicated that since they introduced this degree, PhD enrolments have increased dramatically.

The current debate, at least as reflected by these 25 social science and humanities departments, is mostly about the traditional PhD and about strengthening or improving that process. Considerations on the design of the doctoral enterprise and on different routes to get to a doctorate are much less in evidence in South Africa than elsewhere in the world (see Park 2007). The exception is universities where PhD by publication is already allowed; most of the discussions at other universities are about this option.

Almost all the departments we interviewed are moving towards coursework of some kind, where coursework means formal courses that PhD students have to complete in order to continue with their studies. As indicated above, UCT Economics have gone the furthest in formalising a comprehensive coursework component.

Concerns about quality

A concern that increasing the number of PhDs will lead to a drop in quality was a recurring theme throughout the interviews. Universities were often criticised quite strongly for their lack of recognition of good individual or departmental performance in doctoral production. Generally, we got the impression that only a few universities were perceived to give due credit to senior academics for the overall amount of work they put in.

In a few interviews, especially in departments like law and accounting, the question was asked, 'Why do students who do not want to pursue an academic career want to obtain a PhD?' Part of the answer would seem to be that in some professions, such as psychology, social work and theology, there is a high demand for PhDs as they enhance professional status. In other professions, such as law and accounting, there is no incentive whatsoever. This may lead to a low number of PhDs in some faculties, such as in UKZN Management and Accounting.

Student preparedness

Universities everywhere fret about student preparedness for PhD studies. Respondents to this study provided answers that are largely in line with concerns raised in other South African studies. The ASSAf study (2010) identified the quality of incoming students as one of the primary barriers to

increasing the productivity of PhD programmes at South African higher education institutions. Studies from other parts of the world, such as Allan and Dory (2001, in Herman 2011) pointed to similar concerns about incoming candidates. One of the supervisors interviewed for this study explained what kind of skills and discipline students require:

[Students require the] ability to clearly conceptualise their projects as a whole, and the problem statement and purpose in particular, as well as to construct an appropriate focused ... theoretical ... framework in ... support of their respective investigations. [They need p]ractical skill with regard to gathering and analysis of valid and reliable data, and to ... synthesise their findings into coherent responses to the central problem statement and research question. Finally, students need to be able to come up with a realistic schedule of work, and need the self-discipline to stay with such a schedule, else they seem to struggle to keep up good momentum in terms of progress.

Almost everyone interviewed talked about PhD students' writing or language skills. Many mentioned how students struggle with conceptualisation: they do not have the ability to convey concepts in writing. Indeed, the importance of writing as a factor affecting completion rates is widely acknowledged. Many respondents felt that this is where students struggled the most. It was often attributed to poor schooling or insufficient writing coaching at other universities. But there is more to it. Many interviewees mentioned the fact that students lack experience with academic projects and discourse. Some students have not really absorbed an academic ethos, one aspect of which is academic writing. Thus, learning academic writing becomes part of the PhD process.

But how do students acquire competence in academic writing? The finding of this study is that the current one-on-one model, where the supervisor provides the student with continuous feedback on submitted work, is the default position for bringing about writing competence. All supervisors expressed tremendous frustration with this aspect of their work. A second remedy, mentioned elsewhere in this chapter, is to enrol students in a writing centre or writing workshop. However, questions remain about how much of the academic project could be taught this way. Some supervisors try to overcome a lack of academic writing skills by giving preference to students who have already published at the time of applying for their PhD.

The first place where academic writing problems emerge is during the proposal-writing phase. Supervisors can see if students are struggling with the proposal. This raises an interesting conundrum as students have to

prepare and submit their PhD proposals at a point when their writing skills may be inadequate.

It is likely that two further shortcomings of PhD students mentioned in the interviews are related to language issues. These are the lack of prior reading in the field and the lack of theoretical rigour. Supervisors frequently see students who have not read sufficiently or in depth on the topic prior to presenting a research proposal. As a result, they are uncertain about theoretical frameworks that may be appropriate to their intended work.

Weakness in research methodology and a lack of understanding of how to do PhD research emerged as additional major deficiencies in student preparedness. As students are said to lack research skills, a frequent remedy is to arrange special workshops or courses in research methods (discussed elsewhere in this chapter). In the NWU Social Work Department, the issue is addressed via an entrance examination that focuses entirely on methodology. However, some staff interviewed said students did not understand the depth of engagement with data required for a PhD. Students also needed to be able to conceptualise their research question and their strategy for answering it. Supervisors clearly saw PhD research as a major transition and step-up for students. They explained that coursework often does not help with research methods.

The role of a coursework masters degree in preparing students for PhD research was seen as less than ideal in at least one instance:

And the MA by research has been ... fundamentally undermined by the taught masters because it's a much tougher degree. But the MA by research, if you do it, is a much better preparation for [a] PhD because of the style of work, and what you do when you're involved in it. And so I think that [is] the sense in which [the] MA by research has been devalued, and yet [it's] a much better indicator of, and more consistent with the style of work that you do for a PhD.

And it's not just South Africa, I think there's a global trend. The MA has become quite seriously devalued, I think. So I don't think the research experience they get at MA level necessarily equips a lot of students, who are quite able, with the adequate background, to undertake what is a ... much more demanding [exercise].

When advanced coursework is part of expectations, PhD students sometimes struggle:

I think the biggest challenge with the PhD students coming to do coursework is that they are often a little bit rusty. They haven't been doing masters for a while and they've been out of school for a while.

And we then find that they come in for the coursework and they battle.

Other factors mentioned include that prospective students don't have a good idea of the scale of their undertaking. They have a naive sense of what a PhD is, and of the commitment required to complete one. One supervisor said student commitment plays a role in his decision to accept a student or not. Lack of time and poor time-management skills also negatively affect student completion rates.

Student preparedness, or lack thereof, may be related to what Scott (2012) identified as the four major purposes of masters degrees. Only one of the four, the traditional, research-based degree with a strong disciplinary focus, is deliberately designed to act as a portal into doctoral education. The other three objectives are to complete undergraduate education, to provide conversion courses for students who want to switch fields, and to provide various vocational courses often leading to professional accreditation. These three objectives do not focus on the research skills required for PhD study; and it is likely that students completing masters degrees for these objectives may be identified as being underprepared for PhD studies. This was mentioned by a number of interviewees.

Difficulties experienced by specific groups

Social sciences and humanities at South African universities reflect an increasing diversity in their PhD student body. In 2009, for example, 22% of doctoral students at South African universities came from other African countries. As the interviewees indicated, the vast majority of these students study part-time as they already work full-time. Law and Public Administration were particularly good illustrations of this.

Two challenges, provided by different groups of students, stood out: funding and language.

Students from other African countries, in particular, struggled to obtain sufficient funding to support their studies in South Africa, especially if they are full-time students. UP Theology has asked for funding for a PhD house for African students as they believe that, with such a facility, they could add another ten students from Africa. Funding issues often intersected with personal difficulties as these students' families back home are also making personal sacrifices.

Language provides some interesting challenges for departments. The SU Theology faculty, for example, attracted quite a few students from South Korea and they often struggled with English. The PhD students in the UCT Law Faculty who come from Portuguese- and French-speaking African countries were in a similar position. Wits Political Studies had two French-speaking academic staff members and this helped with the language issue

in their department. South Africans who have not attended Model C or private schools are reported to be very weak in English language, particularly in grammar and sentence construction. Academic language, with its nuances and understated style, adds to this complexity, especially for students choosing qualitative research methods for their study.

The majority of PhD students at South African universities are studying part-time. A number of departments raised this as having its own challenges, mainly in terms of time commitments and funding. Students also often study at a distance from the university, which is not perceived as ideal. The NWU Social Work Department had a slightly different take on this: although most of their students were part-time, they were also older, in their 40s or 50s, and this made the process smoother as they were clear about what they wanted to achieve and had fewer home commitments.

Only one department, UKZN Religion, mentioned a residence requirement that they instituted recently. This was introduced as a remedy for the distance element in PhD studies and to ensure that students could spend time in the library and work closely with a supervisor. Other universities may also have such a requirement.

The UCT Economics Department, which has gone the furthest in formalising coursework, mentioned an unexpected drawback they have experienced. Many students have been out of academia for a period and so their knowledge of the discipline was rusty. These students sometimes found the high-level coursework difficult.

Postdoctoral positions

The study enquired about postdoctoral positions in these departments, as these are often considered to add significant value to the department concerned, as well as the PhD programme. Views varied quite dramatically: some respondents were disinterested, others knew little about it, and a third group both knew and were enthusiastic about postdocs. Those who were sceptical about postdoctoral positions saw them as part of a science model unsuited to the humanities. Perceived obstacles were that, until recently, it was not possible for supervisors to appoint their own students to postdoctoral positions; students often needed to earn money once they have graduated; finding office space for postdoctoral staff was a challenge; and where PhD students work full-time it was not feasible to offer many such positions.

Postdoctoral fellows are funded mostly by either the university concerned or the National Research Foundation (or both). With a total of ten, NWU Education had the largest number of postdoctoral fellows. Expectations differed: some departments, such as NWU Education and the UKZN Departments of Accounting, Economics and Finance, required staff

in postdoctoral positions to produce a paper for each year they spent there. UP Theology expected staff in postdoctoral positions to produce four journal articles per year and to assist with PhD supervision tasks such as reading first drafts of PhD chapters.

Efficiency: Improving performance and completion rates

A significant part of the interviews enquired about steps participating departments took to improve their performance in terms of reducing student dropout and increasing completion rates. These practices are presented below as a series of chronological steps in the PhD process, from the early phases in the process, such as the recruitment and selection of students into the programme, to submission of the thesis and graduation. Of course, the final logical step of doctoral education is the transition to a career, but that would require another study in itself, and is thus not included here.

Selection or acceptance of doctoral candidates

Ideally, departments aspire to admitting highly qualified students who will complete the doctoral programme within the expected time frame.

Up to now, departments have paid relatively little attention to the beginning of the PhD process of how students are recruited and selected into the programme. This is rapidly changing in a number of departments, as a refined selection process is expected to result in improved throughput. Wits Political Studies and the UFS Theology faculty stated that in the past they had accepted virtually everyone as PhD students but that this has changed in the past five years. Where departments had introduced changes to general practices in the past five years, this was particularly evident in changes to selection procedure. Those introducing changes had carefully considered their entrance criteria and selection procedures and would only admit students who met these requirements. UCT Law, for example, has introduced a strict selection process. They proposed advertising ten PhD positions in areas where the Faculty has capacity. Students are selected on the basis of their ability and the availability of a suitable supervisor. Selected students receive exemption from registration fees. This process addresses the selection of PhD candidates, their supervision and their student funding concurrently.

Some departments have included a minimum pass mark at masters level as a criterion for selection into their PhD programme. Wits Political Studies, Wits Psychology and UCT Political Studies require a 70% minimum pass in the masters degree. NWU Social Work requires a 68% minimum pass and UP Social Work a 65% minimum pass.

The NWU Social Work Department has formulated specific, explicit application and selection procedures. A key component of these is a formal entrance examination. Students contacting members of staff are referred to the head of department for a discussion. A document about the envisaged research, containing a preliminary title, the problem statement and the aim, is submitted to the department head. All prospective postgraduate students need to write an admission examination based on a prescribed methodology text and additional readings. Admission examinations are written four times in a year. Prospective students have only two opportunities to write the admission examination. Students who have passed their masters thesis with a minimum of 65% within the last three years are exempt from this rule. A research proposal must be submitted within six months of registration. A departmental committee considers and approves the proposal or refers it back to the student. If a student fails to submit a research proposal before the end of their first year of registration, their student registration is terminated. The maximum period of study for a PhD is four years, regardless of whether this is full-time or part-time.

Nearly all departments indicated that they are selective in taking in PhD students. One exception was UNISA Public Administration, which accepts most applicants and had 365 registered PhD students in 2012. Usually a small postgraduate or doctoral committee reviews these applications, as is the case for NWU Social Work discussed above. There is some variability in terms of how strictly applications are channelled through these committees. With UCT English, UP Public Administration and SU Sociology, the committee is the only route into the PhD programme. Wits Psychology screens candidates by requiring them to submit a portfolio of work to a minimum of two committee members as well as to the suggested supervisor, after which they will be screened by the head of the committee. At UWC Education, the advice of the prospective supervisor is taken into account alongside the more formal screening procedures. If a supervisor accepts a student, the committee accepts the supervisor's decision.

The RU Education faculty has adopted a novel approach to addressing both student preparedness and selection. They have introduced a pre-doctoral programme to allow students not yet ready for PhD studies in a particular area to start the process. Participants are given access to university facilities and are expected to undertake two long assignments during the programme. Support and feedback is given on these assignments, which then form the basis of a doctoral proposal. This pre-doctoral programme is, however, no guarantee of admission into the doctoral programme. The UFS Theology faculty and UNISA Public Administration have similar requirements. Their students are required to spend a year working on a proposal before they register. Proposals are then carefully scrutinised and must fall within an available supervisor's expertise. UCT English are

considering a similar strategy with the possibility of introducing a year of pre-doctoral studies. UCT Political Studies sometimes uses provisional registration whereby students are given six or 12 months to work on a proposal while attending other courses. UP Public Administration described this as the Ethiopian model. Students in the Ethiopian model are given a one- to two-year intensive pre-PhD training, and are then allowed as much time as they need to complete their PhD. Students at UJ Education who apply for a PhD are allowed to work with a supervisor for six months before submitting a preliminary proposal. If they cannot do so, they are not considered for a PhD. Once accepted into the PhD programme, they have nine months to write a proposal that must be approved by the faculty committee. UJ Psychology also uses a preliminary preparation process. Once the department accepts a candidate's application, the candidate must work closely with a supervisor before applying for registration.

One department that does not have a pre-doctoral process made the following observations about the potential for one:

[W]hat [would] be a very good idea [would] be to have a pre-registration year in which students do advanced graduate work across a range of specified courses. That would mean that those courses would have to be there as part of the research culture of the department. And that might include things like practical things like grant applications ... but also just raising the level of students' cultural capital to the level which it should be for them to become doctoral students. If we want to really have internationally competitive PhD production, [then] because of the historical particularities and specificities of our situation, there needs to be at least a year of carefully thought-out and conceptualised ... pre-doctoral work or pre-registration. I think that will have huge dividends in the ultimate completion of PhDs within a time frame and better chosen research topics. Because, as we found even in our little process of working through the research committee, it has helped students enormously to engage a little bit. But to do that systematically would be ... the key to really helping create a research culture.

Wits Psychology has a recruitment strategy and a selection process for attracting PhD students. There are websites with clear and accessible information on the benefits of pursuing doctoral studies in the relevant department and step-by-step instructions for submitting doctoral applications. Other departments have also thought about recruitment. UP Public Administration, for example, recruits actively from its masters classes.

Wits applications require a full academic transcript, a copy of the masters research report or dissertation, examples of previous research and

publications (where possible), and a concept paper relating to the proposed research. The following criteria for evaluating the proposal were noted at Wits:

- The applicant should have obtained a minimum of 70% in a masters degree at a South African university;
- The applicant should demonstrate above-average capacity on the compulsory fields in the evaluation sheets; and
- There is supervisory capacity in the proposed topic of the research.

If accepted, the candidate is expected to present a proposal of acceptable quality to the committee within six months of registration with the faculty.

While many departments have some element of this approach, Wits' approach is the most systematic and detailed. Not surprisingly, the research proposal is central to the application process described by all departments. Many have a two-step process consisting of the student first submitting an initial concept paper (the Wits Psychology term for this) and then later submitting a full proposal to serve before a thesis committee. SU Sociology calls the initial concept paper a pre-proposal.

The UP Social Work Department screens proposals similarly to Wits Psychology. Proposals are read by two blind-reviewers from the department. These reviewers consider criteria, including the following:

- The knowledge gap justifying research in the field;
- The research focus area in relation to the department's priorities;
- The feasibility of the study;
- The ability to write in a scholarly manner (also explicitly mentioned by SU Theology); and
- The available expertise and human resource capacity in the department to supervise a study (also mentioned by most interviewees).

Feedback from the reviewers is given anonymously to prospective students. After feedback, candidates can immediately begin work on a second draft of their research proposals. When prospective candidates do not meet the criteria, feedback is provided and the candidate is allowed to submit a second time. Should their second attempt still not meet the minimum requirements, the candidate is refused acceptance into doctoral study.

UP Public Administration and UCT Law conduct interviews with prospective PhD candidates together with the written application. Many departments ask for CVs and some, such as UCT Law, also ask for referee reports.

Three observations follow from the study findings. First, admission to doctoral education in the departments interviewed ranged from the strongly

regulated to informal and unregulated. Eligibility, selection criteria and admission procedures were frequently not transparent (with certain exceptions mentioned above), and they varied as much as the requirements for admission. In international literature this is often linked to the model of supervision. In the apprenticeship model, widely followed in South Africa, the model of supervision is informal and unregulated. In this model, students do not do coursework and choose their own thesis topics, but have to find a supervisor who accepts the task of supervision and helps with identifying the chosen topic. As departments moved more towards to a programme model, the procedures tend to become more regulated and contractual.

Second, the mere act of streaming the PhD into research clusters or niche areas had knock-on effects in many aspects of managing the PhD process. Here we can see how structuring a department in this way draws attention to supervisory capacity, the selection process itself and the criteria applied.

Third, as stated above, all departments were aware of the call to increase the number of PhDs in South Africa. Despite the fact their selection criteria and admission processes differed, they had all admitted more students than they would have liked due to the pressure to increase the number of PhDs. UFS Theology identified this as a tension they experience. Additionally, as supervising PhDs has an impact on incentives and holds consequences for promotion, it is very difficult for academics to be dismissive about this. The aim of increasing numbers of postgraduates to 30% of the overall student population was frequently mentioned. Interviewees were definitely aware of the tension between increasing PhD student-population percentages and the strategy of accepting only top students and producing PhDs faster and more easily, and with more publications. The NWU Education faculty is following this route: they are reducing the intake into their PhD programme to improve throughput, although they are aware of the potential drawbacks. The dilemma of quantity versus quality is well illustrated in the UKZN English Department. They experience almost no challenges with PhD students as they only admit students into a PhD if their English is excellent. However, the concomitant problem is that they have almost no students.

The alternative is to uphold a developmental obligation – referred to as transformation in some circles – by taking in students who are not ideal candidates for PhDs as they require much time and effort, but who will learn a great deal and make a lot of progress, certainly contributing to the country when they finish. This tension was present in every department interviewed. In some of the interviews, respondents expressed anger at the irreconcilability of the two goals of transformation and large numbers of PhDs set by the DHET. Transformation often requires a lot of effort from supervisors or departments and to provide this for increased numbers of

students appears impossible. This exasperation is further compounded by a perceived lack of recognition for achievements by both university and national authorities with the emphasis rather always falling on what is still to be done.

With regard to the perceived quality of doctoral applicants and candidates, two departments stated that their applicants were sub-standard and that this had resulted in them having to cut down on the number of PhD students admitted. A number of other departments implied that they had the same challenge. The Wits Political Studies Department explained that their high PhD throughput rate was, in large part, due to the rigour applied when admitting PhD students.

Funding

Students

Many studies have found that funding is an important issue for doctoral students everywhere. Ehrenberg et al. (2010) found that attrition rates and the time taken to complete degrees are most improved by extending multi-year financial support to students, including tuition fees, scholarships, state grants, part-time studies and paid teaching positions. The overall findings of this study were that the insecure financial situation of doctoral students contributes to high dropout rates and increases the time needed to complete the degree. As one interviewee said:

There are issues of economic stability: people needing to be employed and earning an income and having people to support whilst still trying to do a PhD. And in fact most of the people fail to complete, some to complete at all, some to complete on time, because they are holding jobs and then they delay, so they are not putting all they should be putting into work.

Eggs (2008) reports on the frequent involvement of governments in funding doctoral study by making grants to institutions or students. In some countries, such as Australia, Canada and the Nordic states, doctoral education is free. In others, the fees are sponsored by a range of stakeholders – research councils, institutions, employees and individuals. Loans are available in Thailand and Japan. In the United Kingdom, doctoral students and particularly those studying on a part-time basis frequently fund themselves. One complaint raised in this study was that the public funding provided in South Africa was so low that candidates could not afford to undertake research.

In many departments, lack of funding emerged as a major obstacle to PhD enrolment and completion. Departments with funding sources

reported more enrolments. UKZN English stated that increasing the number of postgraduate bursaries was the most helpful contribution the university had made in support of PhD study. UCT Economics launched its four-year programme with external funding via the African Economic Research Consortium (AERC), which allowed them to increase their enrolments substantially. All PhD students at NWU Social Work either have university bursaries or National Research Foundation (NRF) bursaries, and they estimated that they would have an 80% graduation rate over four years. The NWU Education faculty awards three merit bursaries to PhD students per year, covering fees and a decent living allowance. UP Theology provides bursaries that fully cover the fees for PhD students after they found that giving partial bursaries (50%) proved futile as students could not afford the other half. UCT English is attempting to integrate the PhD application process with the funding application process. UCT Law is able to waive registration fees for successful applicants due to external funding. UKZN Religion ascribed their growth in student enrolment between 2001 and 2004 to increased funding. At UKZN, incentive schemes for attracting postgraduate students include waiving fees and non-taxable research awards. Wits Political Studies utilises a Mellon-funded 'Grow-your-own-timber' programme to provide finance for students and incentives to supervisors.

Wits and UKZN have introduced different financial incentives for PhD students. If students are able to graduate by the end of a specified year, they are given an additional grant of between ZAR 20 000 and ZAR 30 000 for additional time to review their writing and finish their dissertation. One of the interviewees thought this was a good initiative for improving completion rates and providing students with the resources to do so.

An interviewee suggested the following possible improvement:

I think the best thing that ... can be done [nationally] is to move towards a kind of financial packaged programme. People have been talking about this now for quite a while. It's not realistic for the university to grow its graduate numbers without there being financial packages, financial support for graduate students. At the moment it tends to be the universities making these initiatives on their own or trying to find some kind of international foundation to support the initiative, but a state-backed initiative would be crucial; and it would have spin-off effects for the whole of the country in terms of the impact of better qualified citizens. We could be creating a lot more doctorates to feed into South African higher education institutions and create general diversity. It's about the structure of opportunity that is put in place for people.

An Australian study by Sinclair (2004) supported this argument. The study found that across university types and disciplines the likelihood of completion was enhanced by a scholarship. In addition, full-time candidates were more likely to complete than part-time candidates.

The PhD Completion Project (Council of Graduate Schools 2004) identified the following positive practices in financial support of PhD students:

- Guaranteeing multi-year support via the allocation of funding to departments;
- Providing competitive travel grants to support students invited to present at conferences;
- Promoting graduate student applications for external fellowships and providing staff assistance with proposal development and submission;
- Holding supervisors to strategic performance indicators of satisfactory degree progress; and
- Developing best practices to track student progress and financial aid amounts and types.

We found that many departments, and supervisors in particular, did not have information about bursaries and scholarships readily available. Most relied on their universities' postgraduate funding office instead to assist students with information on funding options. However, this strategy only works if the postgraduate funding office functions efficiently and communicates well with students.

Research

Departments trying new ways to create and support a research culture pointed out that most efforts are due to individual initiative, and that university-allocated resources to assist with PhD production and research production are too limited. Where support is provided, it is often done via external funding through education-focused charitable groups like the Mellon Foundation. Although this is good, the danger identified is that this support is not part of the university system and that it could disappear rather quickly.

Administration

Monitoring the progress of PhD students

At most universities, monitoring is done via an annual progress report prepared by supervisors, either online or in hard copy. Wits Psychology reported that the faculty keeps students to a tight deadline with the first

draft of a proposal expected within six months, and annual progress reports by both student and supervisor submitted to the faculty. The PhD convener follows up with students every six weeks. The NWU Social Work Department indicated that their faculty, the Health Sciences Faculty, follows a stringent progress-monitoring process, issuing first and second warnings before deregistering students who have not progressed. They also stipulate that proposals must be completed one semester after registering. The NWU Social Work Department estimated that 80% of PhD students graduate within four years. NWU Education provides a great deal of training in the first year of the PhD. However, if students have not completed their proposals within their first year, their enrolment is terminated. The UP seems to be the strictest in this regard: students have to complete their PhDs in three years or else they are deregistered (with special consideration given for exceptional cases). The UP Social Work Department uses a progress form with codes indicating progress levels, similar to that used by UP Faculty Administration, to indicate annual progress. The intention is that supervisors complete progress forms biannually and submit these to the head of the department.

RU Education includes progress sessions in their doctoral weeks. The administrative load that this involves is often not recognised:

I would like to see that the heads of the department taking charge of the supervisors within that department and have regular meetings with them ... just basically to remind them. Because you see what can happen with a doctoral student very easily is that you continue with your daily work and the doctoral student is not really on your mind. And then six months later, another student turns up again. The responsibility [is] to a large extent on the student and what I would like to do is just to instil the sense that we have to manage the process more closely. And I would use the HoDs to assist in doing that. The other thing that is a problem is funding, but I would like to have [someone] like a retired academic who can actually almost be like a guardian for the doctoral students and who can call seminars and get the supervisors together, and so on. So it's not going to cost the university that much, but I think, if you can get a person who doesn't have other administrative responsibilities, that would be the way to go.

Graduate schools

A number of universities including UCT, Wits and UNISA have introduced graduate schools as an organisational model for administering PhD students. This was not explored in the interviews. Park (2007) identified graduate schools and doctoral/research schools (Crosier et al. 2007) as a

major development internationally. Graduate schools include doctoral and masters students. They provide administration, ensure developmental and skills support, are responsible for quality assurance, and organise admission, courses and seminars. There is great variability in the form graduate schools take: from the virtual to the physical, from the institutional to the faculty-based. Doctoral/research schools admit only doctoral students and may be organised around a particular discipline, research theme or a cross-disciplinary research area. They may involve anything from one institution to several institutions in a network.

Departmental and institutional support

The ASSAf study (2010) found that one of the major risks of non-completion or attrition of doctoral candidates in South Africa is due to inadequate socialisation experiences. Golde (2005) quoted research suggesting that lack of academic integration rather than social integration into a department is the key to doctoral attrition. Socialisation has become the common theoretical framework used to better understand the complexity of the doctoral student experience. In the natural sciences, this is encouraged through the nature of the research: often laboratory work is conducted in groups, with additional collective work on joint publication of papers. Doctoral students and research in the humanities and social sciences usually functions much more independently and individually, with less collaborative authorship.

Clear expectations when students start the process

Evidence from other studies has shown the importance of stating clearly, at the outset, what students can expect. This includes timetables for satisfactory progress and expected time to completion. Ehrenberg et al. (2010) found that clear expectations have the greatest impact on completion rates. This would usually include clear and unambiguous information about university and faculty regulations, guidelines, paperwork and the structure for completing the PhD. We found that most departments interviewed provided students with little of this information, ranging from students receiving only the university's general guide, to a memorandum of understanding (MoU) signed by both the student and supervisor and lodged at the faculty and/or university level. Departments felt they were improving in this aspect and that they were exploring new ways of providing students with positive first experiences:

We're getting slightly better. In the past I think we weren't so good at it ... We've made the application date earlier ... and that gives us more time to organise our lives: to give the letters of acceptance

quicker, to get them funding more efficiently. They then have time to do their visas. The housing has been a crisis of major proportion in the past and we haven't had too much trouble for two years now, but up to three years ago, it was ... not very cool. When they come, we have lunch with them ... and we have a bit of a chat [and] a library tour. There is a sort of a social aspect to it as well that is [developing] organically. So we have one of our other masters students do this tour with the students ... We have introduced a mentorship programme where, once in a while, probably once a quarter, possibly twice a quarter, in principle an academic gets allocated to a student, have lunch together and ask him (sic) what's going on. I'm not sure if that's quite working out. I think we want to have that a little bit fleshed out. So there is thinking about how (we) can make it better for the students just to get involved in the department. We are fortunate in that all the PhD students sit in the same lab and we've got a lab of 36 seats ... There's place for growth, so we can go to 40, I think.

In a few cases, supervisors developed their own, stricter and more detailed MoU with their PhD students. UKZN Religion requires students to sign a contract. UP Public Administration also requires students to sign a contract and deregisters students if they do not submit work as agreed. This raises a general question about what the consequences are when a student does not meet the requirements.

We have the MoU in place. Does it always work exactly as it should? What happens if there's poor performance? Often there's an explanation for it, personal or otherwise. I have not seen very many people thrown out of the programme because they didn't meet the requirements of the MoU. The promises that get made at the beginning of the year are often quite substantial. So sometimes students meet them but often they don't, and then there could be a variety of different reasons: family, personal, whatever.

Lack of student orientation at the start of the PhD contributes to a lack of clarity in expectations. The traditional model for PhD study, as followed by everyone in our sample, is so highly individualised that almost no effort is made to orientate students at the beginning of their studies. The exception is RU Education, which offers an orientation in the form of a doctoral week in March each year. Many departments use their university's online learning platforms for students to introduce themselves. We expect that the growing number of enrolments at many departments will make student orientation more important in future.

Support provided to PhD students

Park (2007) identified an increasing emphasis on skills development and training in PhD studies in many countries; it is now standard to include both research and skills development and training in the overall student experience. Departments involved in this study tended to have little formal support to PhD students. One department, NWU Education, stated that both they and the university itself provide PhD students and supervisors with much support. One feature of their additional support is that attendance is compulsory. This statement summarises the general view across all interview sites:

Doctoral studies, however, remain a lonely route. Students are easier linked on masters level in group discussion because of group cohesion, especially in coursework programmes. The faculty [and] university should do much more to strengthen departments' hand in supporting doctoral students.

One area in which departments provided some support is in writing. This is unsurprising given the shortcomings identified with writing. In some cases, departments organise annual writing workshops. More commonly, departments make use of writing centres at their universities.

Respondents frequently mentioned courses in research methods. The exception was NWU Social Work because students are selected via a methodology examination, so they have to have a strong methodology knowledge base already, and thus no further methodology courses are offered.

Most departments organise formal doctoral seminars, of which the three doctoral weeks arranged at RU Education are the most systematic example. These weeks at RU comprise seminars, workshops, debates and presentations on a range of issues, among them methodology. SU Public Administration and UKZN English have an annual doctoral workshop or seminar, or annual research day, where PhD students present their proposals and findings. NWU Education runs compulsory development and training workshops two or three times per year that include academics from other local and overseas universities. UJ Education PhD students must attend two compulsory doctoral colloquia. The faculty also runs an annual voluntary Research Indaba for PhD students, with a prize for the best presentation. Where departments have formed research clusters, such as at UCT Law and RU Education, they hold regular meetings or sessions for cluster members. UWC Education also has regular sessions on Saturdays for their students in Science Education. UKZN Religion runs a parallel process of one lecture a week of teaching alongside doctoral work. Foreign students at UKZN Religion, such as those from Francophone

Africa, are required to complete an English course before registering. Most departments include doctoral students in events organised for postgraduates in general. These events include training in research and library skills, how to apply for funding and other topics, and lunchtime seminars.

PhD students are encouraged to submit papers to conferences. This enhances students' professional development and encourages collaborative work. UWC Education provides assistance to students in presenting their work as papers at conferences. Students at NWU Social Work are encouraged to attend and read papers at conferences, and funding is made available for this purpose. UCT English provides specific assistance on how to convert conference papers into publications. UP Public Administration reported that PhD students are all encouraged to co-author papers and attend conferences. In 2012, all staff and PhD students at the UP Public Administration School attended the conference of Schools of Public Administration in Bangkok, which was made possible through external donor funding.

UP Social Work follows a slightly different route. They organise a doctoral student presentation before students submit their doctoral theses. During this seminar, held in the final stages of study, doctoral students present their study findings and conclusions. Experts in the research field and academics are invited to the seminar to provide final expert input before the study is concluded.

Wits Psychology has made presentation of work prior to evaluation one of their key interventions to increase the quality and quantity of PhDs. They recommend mandatory monthly seminars, annual symposia, annual writing retreats and supervisor workshops to support this process.

One of the ways in which support can be improved is when students encourage each other through formal departmental or informal student working groups, but this strategy was not found much in this study. Respondents felt that the nature of PhD work in the humanities and social sciences, the high numbers of part-time students, and the number of students working at a distance from the university contributed to students' isolation. At UWC Education, PhD students in Educational Psychology are formally organised into groups that meet regularly. RU Education reported that in one of the niche areas, Higher Education Studies, students have formed regional support groups in Cape Town, Johannesburg and Durban. RU students also use the online learning platform to engage in debate, share readings and provide support to each other. At UJ Education, some networking ensues from support provided by one of the departments to science teachers, and some from weekly Saturday morning methodology and writing courses for the first six months after registration. UKZN Religion organises a weekly lunchtime Theology Café with research presented by staff and visiting academics, often from overseas. In the Wits

Political Studies Department, PhD students organise their own forum where they present their research and listen to invited speakers.

In a few interviews, people mentioned how useful it would be to have communal workspaces for students in their departments. Others who already have such spaces confirmed their value. The NWU Social Work Department makes two rooms available for the exclusive use of PhD students. Students who come from far afield are encouraged to come in to the Social Work Department to work for a week at a time.

In a number of interviews, the poor level of functioning of the postgraduate office at the universities was mentioned. Although only a few departments explicitly complained about this, it was implied by a number of others. It should be noted, however, that it was frequently expressed in terms that suggested that supervisors (rather than heads of departments) had a tenuous understanding of how these offices work and what they offer to students.

Supervision

The work of doctoral supervisors has emerged as an issue of concern in higher education internationally. In the USA, for instance, the Carnegie Initiative on the Doctorate, led by the Carnegie Foundation for the Advancement of Teaching, identified supervisors as pivotal to any effort to improve doctoral education (Golde and Walker 2006). As part of the Bologna Process, the crucial role of supervision was recognised in a ministerial agreement on the Ten Salzburg Principles on the Doctorate (Golde and Walker 2006). At the inaugural meeting of the European University Association Council for Doctoral Education (EUA 2007), one of the five themes identified for doctoral training in Europe was improving the supervision of PhD candidates, particularly through better training and monitoring of supervisors. The recent Mellon-sponsored report (Ehrenberg et al. 2010) has sustained this critical attention. As the Mellon report also shows, the mounting anxiety around supervision seems to be tilted towards the humanities and social sciences; concern about supervision of the natural and applied sciences is far more muted (Ehrenberg et al. 2010). As we show later in the study, all modifications to doctoral supervision are in effect modifications to supervision in the social sciences and the humanities specifically, whereas supervision in the natural sciences continues in much the same vein as before.

Various policy changes have intensified the demands on supervisors' time: here, in Europe and elsewhere (EUA 2007, QAAHE 2004). These policy changes included a shift to a new form of managerial regulation known as the New Public Management. This management system features regular performance reviews of supervisors, multiple supervision

arrangements, requirements for continual professional skilling, and output-based funding. These factors have in turn increased the requirements for supervisors to monitor PhD students and report on their progress to curb attrition and shorten the time for completion of a PhD (Neumann 2007). Increased demands for satisfactory performance via improved productivity are coupled with an effective reduction in staff numbers due to the economic downturn. This has made the traditional model increasingly unsustainable in the humanities and the social sciences because, if the years to completion are seen in financial terms, it is plain that the model is grossly inefficient. Student-funding regimes across the world have pegged funding at three to four years. While this has further increased the pressure to complete PhDs within this time frame, there is the simultaneous recognition that very few students finish within this time frame (EUA 2007).

Neumann (2007) argued that this pattern has had two principal effects in the Australian system. The first is a perverse effect. The traditional pattern has been for students progressively to define their research topic, refining it through an iterative process that was traditionally leisurely, depending on the candidate's progress and confidence. With the new funding regime, Neumann (2007: 465) revealed a distinct downsizing in both scope and ambition of doctoral projects: 'the effect in the humanities and the social science-based professions is to encourage less ambitious projects in terms of scale'. The new funding regime has thus brought a distinct curb on innovation in Australia. This may conceivably account for at least some of the concerns expressed about quality in the South African system.

The second effect is to look for ways to build in multiplier mechanisms or to maximise supervisory expertise and the productive inputs to students. This can be done in one or more of the following ways:

- Seminar programmes;
- Taught courses, often in a summer or winter school format; and
- Cluster supervision in varied cohort formats, trying to adapt the laboratory-based model to different disciplinary requirements.

All of these are attempts to ease the time pressure on academics.

The result in Australia has been that for students, the supervisory relationship has become more formalised and the demands more diverse and intense, and for supervisors, the requirements are likewise more formalised, but the workload has not noticeably decreased. Of most concern is that students reported less productive supervisory contact compared with their experience in their honours and masters years (Neumann 2007).

It is not surprising that there are signs of the pendulum swinging back from these augmentations in the supervisory job which, as the above findings suggest, are not sustainable. At the 4th Annual Meeting of the EUA Council for Doctoral Education held in June 2011 in Madrid, the focus shifted back from the supervisors to the students and their responsibility. Reminding readers that the aim of the doctorate is to ‘nurture the innovative research mindset’, the communiqué for the meeting added, ‘Achieving this mindset requires the development of a high level of autonomy and critical thinking as well as the ability to think independently and creatively about highly complex issues’ (EUA 2011). The argument is that regulation of doctoral education might be reaching a ceiling and that the discourse is moving towards putting the onus for the doctorate back on the student and at least partially away from the supervisor. The issues of attrition and lengthy time before conclusion then become the fault of the tardy student rather than the supervisor or institution.

These themes are all recognisable in the concerns raised by heads of departments and supervisors in the interviews.

Support provided to supervisors

The preparation of supervisors and supervision arrangements themselves have become increasingly formalised. The interviews made reference to efforts to improve the quality of supervision via workshops and seminars, with many universities organising postgraduate supervision workshops. A couple of departments conceded that they did not really provide such assistance to supervisors.

Inexperienced supervisors initially receive additional support via co-supervision with a more experienced supervisor. However, given the amount of supervising experienced staff members are required to do, they are often not enthusiastic about taking on extra co-supervision. Another mechanism is mentoring, but this seems to be rather unsystematic and vague.

The Netherlands University Foundation for International Cooperation (NUFFIC) is funding a project to develop postgraduate supervision involving RU, UCT, SU and the University of Fort Hare (UFH), with Rhodes as the lead partner. The South African group is partnered with a consortium involving the Free University of Amsterdam. The group is trying to develop an accredited open-source course for supervisors. The course, organised in four modules, will carry 30 South African Qualifications Authority (SAQA) credits. Universities would be able to accredit it using their short-course policies. The development of the course is the first phase of the project. The second phase, involving rollout to 19 universities to make the course available in South Africa, was scheduled to run until the end of 2014.

Experienced supervisors usually receive minimal attention, apart from invitations to attend the general workshops mentioned above. One respondent commented on the likely experience of supervisors:

I [have] had quite a number of doctorate students going through my hands up to now, but nobody trained me. What I know is what I learned the hard way by doing it myself.

Students and supervisors coming together

We asked supervisors to describe how PhD students were allocated to them. Unsurprisingly, reputation was mentioned as the most recognisable factor. Some universities, notably UCT, mentioned the role of the university's reputation in attracting students. The ASSAf study (2010) found that half of doctoral students selected particular PhD programmes or institutions based on the research focus of departments or programmes. Other contributing factors are the reputation of particular supervisors at the institution, the perceived quality of the programmes or departments, financial support offered, and whether the masters degree was completed at the same institution.

In terms of the reputation of the supervisor, promising applicants are usually familiar with the supervisor's work. One reputational aspect is the throughput rate supervisors achieve for their students. UKZN interviewees said students pick good, reliable supervisors who meet with their students regularly, give quick feedback, and provide information about available grants and bursaries. The RU Education faculty specifically mentioned the Mathematics Education Programme. This programme facilitates an easy transition from masters to doctorate, and has developed a national and international reputation as a good career trajectory. UCT Economics mentioned its recognised strength in the research focus areas, including the good reputation of its supervisors.

Research focus areas are clearly important to students. Departments with research focus areas are popular study areas at PhD level. A characteristic of such focus areas is that they involve longer-term projects as in the science model. This in turn generates recognition which helps to attract students. Focus areas also make it easier for students to identify where their interests overlap with potential supervisors' research fields or fields of expertise.

The Wits Psychology Department referred to the following reasons for its acceptance of PhD students, as well as reasons why students wish to study under a particular supervisor:

- The area of expertise of the supervisor: content and methodology;

- Students discuss it among themselves and rate certain supervisors as more reliable than others;
- Supervisors have worked with particular students from honours to PhD;
- Supervisors may approach students with particular interest areas or expertise to work on chosen research projects (also mentioned at UP Social Work); and
- Supervisors' work is shared through reading groups (of which there are many in Gauteng) for continuous professional development (CPD) points in the psychology profession.

Departments that have structured their programmes using strong research niches reported that students responded positively to this. RU Education confirmed that students apply because they like the structured programme with its support and sense of community.

Some departments offer funding packages to students incentivising them to do well. UCT Economics and UCT Law follow this route. Answers to the question on how many applications were turned down varied considerably, from 'none', 'not so many' to 'at least 20' over the last two years. Supervisors and departments had a tendency to turn down more applications than they accepted, with some cases of only a third of applications of enquiries resulting in accepted PhDs. In most cases, students from outside South Africa were turned away.

Criteria for accepting students

Supervisors were generally in agreement about the factors they take into account before accepting a PhD applicant. Reasons included knowledge of their field, evidenced by whether students have read widely, are able to identify the central issues in the field and can talk critically about them. Ideally, some supervisors would also like to see that a student is an active member of that particular knowledge community:

Quality of the student, not in the sense of only taking excellent students but in the sense of thinking that the student has a real shot at the degree.

Their area of interest.

Whether they are interested in working full-time on their research.

Many of my bursaries are available only to South Africans, and black South Africans in particular. So this is important. The

department has worked hard to broaden our funding for African students and so this makes a difference too.

When you refer ... a student to articles, to read papers, basically you will see if the student has enough. If somebody wants to work, say, on banking: that person has a knowledge and understanding of banking from a non-academic perspective. Now I want to find out whether that person is able to read [the] leading paper ... in the academic field ... Now that is technical and it is intuitive. Now if the person is not able to read the paper, then it becomes problematic.

The specific mechanism used to ascertain students' knowledge of their field is their PhD proposal. The proposal should hold a clear, focused research objective and should demonstrate the student's familiarity with the literature. Supervisors also look for evidence of the student's research and writing abilities, and use the student's masters' track record to help determine this. One department asks for references as part of the application to explore further the extent to which the applicant meets the criteria.

Despite these academic criteria and the relatively high rate of requests for supervision being declined, many interviewees also mentioned the developmental role that higher education institutions have to play. Although certain applicants may not fully meet the academic criteria, they are given a place if they appear to have the potential to later develop this or make an important contribution to society or the discipline.

Managing students

All the supervisors interviewed carried above-average supervisory workloads at PhD level, and often at masters level as well. The interviews showed that supervisors do not pay this above-average supervisory workload much attention. Responses to a question of what strategy they use to manage their supervisory workloads elicited answers like 'not much', 'none really' and 'just via regular meetings'. Two departments, Wits Psychology and SU Public Administration, noted the importance of managing the intake of PhDs. Wits Psychology said that the enrolment screening has improved quality and increased throughput. This again draws attention to the perception that selectivity in PhD intake is a significant factor in the whole process.

Other strategies adopted to manage students included:

- Using electronic communications to motivate students regularly;
- Remaining in contact with students and enquiring regularly about their progress;
- Linking students with one another and with relevant resources; and
- Ensuring good academic support, such as from the library.

In departments where students collaborate on defined research questions that feed into a larger research agenda, it is easier to set up, manage and structure these aspects.

UJ Education is one department that mentioned supervision by committee. Each doctoral student works with a doctoral committee consisting of a supervisor, two to three other academics from within the department, and one academic from another department. The committee provides input into the proposal, attends the two compulsory doctoral colloquia that each PhD student must present, and provides feedback to the student.

A distinction is often made in the literature between hands-on and hands-off supervisory styles. Our impression is that both styles were present in the sample of supervisors interviewed, and often the same person will follow different styles with different students.

Hands-on supervisors:

- Create their own expectations, which may differ from those of the faculty;
- Track progress more closely than the faculty's reporting requirements;
- Tend to involve students in collaborative teamwork; and
- Involve sources of advice other than the supervisor.

Hands-off supervisors are likely to direct students to available sources of information such as university handbooks and administrative staff, with the expectation that students will determine their own course.

Very few supervisors mentioned changes in their supervisory practice over the last decade. Where they did, it was by way of more group meetings with students being supervised, more accountability to the faculty, and by arranging seminars for students to talk about their work.

As my PhD cohort increased, I had to streamline my supervision practices more and more. The establishment of a central research agenda has facilitated this very effectively.

and

Instead of trying to get things perfect from the start, I get students to proceed from one chapter to the next ... That way, the student acknowledges the shortcomings in the chapters submitted but moves along and is more able to fix the chapter at a later stage.

Supervisors were of the opinion that, as numbers increase, their supervisory practice will change. They are considering streamlining the process by, for

example, adhering more closely to a centralised research agenda. They also felt that following existing procedures more strictly, such as structuring the process via goal-setting and deadlines, may also assist with dealing with large numbers.

Students needing help

Some interviewees did not consider it a good sign when students needed help:

First of all, if a PhD student needs help, it's a bad thing. It means that that person is not up to scratch or that person is not able to appreciate the literature ... so it becomes problematic. So hopefully you won't have students like this; but if you have them, then it very much depends on what type of help the students need.

Where the supervisory style is characterised by regular contact sessions and interactions, long silences in communication may indicate that the student needs assistance. Hands-on supervisors respond when students miss or cancel scheduled meetings. Another warning sign is when a student shows lack of progress by not submitting analysed data or written work, or handing in written work that lacks conceptual clarity.

If they have not made contact [or] submitted for a while, it does not mean that they necessarily need help with their studies, but with planning, finding balance between work and studies [or] being motivated again. The quality of submitted work will also be a clear guideline of a need for more specific guidelines.

Supervisors generally help students with the following:

- Conceptualising the research project, especially in the initial phases when the research question has to be formulated;
- Analysing, managing and interpreting data;
- Maintaining theoretical and philosophical alignment in the student's work;
- Directing students to key readings; and
- Structuring the thesis, but not writing it.

The importance of keeping students motivated is sometimes overlooked:

Two things I give help on: ... first and foremost, inspiration and motivation ... I think it's the most important thing to inspire them

and to take their ideas seriously. And then I would give help ... in that moment of exciting animated discussion: [I'd] say, look, read this, read that. Or I'll give them contacts that I know. So it's more helping to ... re-motivate them and to give them linkages. That's what I'm prepared to do and that's what I believe I need to do.

The interviewees suggested that language and writing issues provide supervisors with the most difficulty. Practices for dealing with these vary a great deal, with some supervisors willing to assist with language and others not. One supervisor stated, 'I am not willing to help with grammar, punctuation and referencing'. The practice of using language editors also drew widely varied reactions:

I forbid them using language editors. We as a school have got a policy: you cannot do that until the very final product; in other words, [only] once your supervisor has said this can be submitted for examination, [can] you ... go to a language editor. For me, the focus is first, on coherent argument, second, on issues of language and third, on issues of presentation. So what I try to get them to understand is that ... the word thesis means an argument.

Language editing is also considered at an institutional level:

there seems to be an acceptance in this faculty that language editing is permissible. And in fact very often when they'll submit work, they'll actually have a statement, even on a proposal, 'This has been language edited by so-and-so'. And the language editor will say, 'I haven't changed any words'. Most of us, I think, in this department have a concern about that for other reasons. On the one hand ... maybe if English isn't their first language, they should be assisted. Certainly any psycholinguist will tell you this and certainly a lot of psychologists and philosophers: the way in which we conceptualise complexity is embedded in one's ability to express that linguistically ... If a person, for example, expresses it [other than] in home language ... they would write in very poor English. And then there's a language editor. The only way in which that language editor can [do their job is] by improving the grammar; clearly they improve the flow, the texture, the depth of the discussion, the complexity. It's an issue: whose work is it? It is a candidate's, but now there's been a language editor ... The faculty has a policy to support that. I mean, maybe I'm old school: I do not.

Others feel that, given the students' lack of preparedness in writing and technical skills, they must assist with language usage issues even if they are uncomfortable in doing so:

everything that they give to me, I do a kind of preliminary language edit on it. So I jot down certain things ... just to give them an indication. I don't do it exhaustively but I try to show them the kind of things that need to be worked on, whether it's referencing, whether it's grammatical stuff, whether it's argument.

Areas where supervisors indicated they are not prepared to help are with technical skills students should already have mastered – proofreading and rewriting theses.

I expect work of the highest quality ... submissions must be proofread, referencing practices must be 100% ... I am not willing to assist students with technical skills that they should have mastered before entering a PhD programme. My role is an intellectual and academic one. I invest a lot of time with the student in ensuring that the conceptual groundwork is thoroughly done. Once the proposal stage is over, I assist in providing support in the data analysis and data management stages. This is very time-consuming. Students need a lot of assistance in maintaining theoretical and philosophical alignment in their work. I do not proofread work. We have other expertise that the student can draw from [for that].

They were also not prepared to intervene in students' personal lives or with financial assistance. Despite this, in almost all cases, we detected an awareness that these factors play a significant role in a student's progress. Supervisors frequently mentioned that funding, family commitments or access to basic facilities might affect a student's studies.

Student throughput

Experienced supervisors (defined as those with the heaviest supervisory workloads over the last decade), reported that all or most of their students graduate within five years of registration. Across the board, however, answers to this question ranged from all to none graduating within five years.

Most experienced supervisors had very few students withdraw from their doctoral studies over the last decade. Where students did withdraw, it was often for financial reasons. UP Public Administration identified the tough three-year time limit for PhD completion as the cause of most of

their dropouts. Other reasons for pulling out were students' difficulty with studying part-time and personal, often family-related, circumstances. In a small number of cases, students withdrew because they enrolled for the wrong purposes, due to lack of discipline, or sometimes because they chose inappropriate research projects.

Almost none of these experienced supervisors do cohort supervision (where students collaborate on projects), but UKZN Religion reported that they use it extensively. Wits Psychology has instituted a cohort system for a specific area of psychology: psychoanalysis. There is a cohort of supervisors and a cohort of PhD students involved. They hold a monthly seminar where the students are very competitive, pushing one another to make progress. The quality of the work is perceived to be high and the progress is fast, but it is time-consuming for the cohort convener. At RU Education, one of the research niche areas uses this system of supervision, and at UCT Law a number of other sections are doing the same, including labour law, property law and criminology. At least one supervisor in the UP Theology Faculty makes use of student groups, since all students do similar types of research. This is what one supervisor using cohort supervision said:

Students mainly work within the scope of my research focus: as such, their projects are related and complementary. Of those who completed during 2000–2009, five out of seven worked in this way, albeit in two separate cohorts. Currently, two out of four doctoral students working with me are working in such a way on related investigations.

Incentives to supervise

Most departments revealed that there were no direct benefits to staff (such as finance and teaching relief) who supervise PhD students. However, sometimes PhD supervision contributes to the calculation of individual workloads, as we mentioned earlier in the chapter. One or two departments indicated that this should change and that there should be direct incentives, while most signalled that it should be seen as part of the job, with no additional benefits. Overall it appeared to be a negative incentive for promotion and in performance appraisals if one does *not* supervise PhDs. Although there were differences of opinion as to whether the practice was good or not, most respondents believed that in some locations, academics were being paid cash into their bank account for successful supervision of PhDs. UKZN respondents were the most forthcoming about receiving financial incentives in the form of payments into their research funds for each PhD student who graduates.

Research experience

Improving the students' research experience in a department by creating a particular research culture is one strategy for developing a successful PhD programme. A few departments in the sample addressed this explicitly, often framing it in terms of how they cover their disciplines. Available resources are limited, and so it is unlikely that every programme can be good at every aspect of doctoral education. Many of the departments interviewed had already decided which aspects of the discipline they intended to cover.

Three departments – Wits Psychology, UP Public Administration and RU Education – completed structured assessments of their departments' strengths and then tailored their PhD offerings in accordance with these strengths. UCT Law confirmed that it had been tailoring its PhD offering for a number of years by identifying research clusters and giving these more formal recognition. UCT Law considered three factors when identifying research clusters: what the department is known for, existing departmental specialists, and how the department perceives and responds to developments in its discipline.

The RU Education Faculty was structured by niche area into the Environmental Education Sustainability Unit, the Centre for Higher Education Research, Teaching and Learning, and the Mathematics Education Programme. UP Public Administration have organised themselves into five areas of specialisation, with PhDs fitting into these. Wits Psychology has identified 12 potential research clusters and PhDs must fall under one of these. The Wits PhD in the psychoanalytic psychotherapy cluster was highly organised and combined a number of features discussed in this chapter. Students are allocated a primary supervisor but also receive panel supervision from all members of that cluster. In addition, this PhD requires a minimum number of publications in peer-reviewed journals that are later bound by a common argument to make up a coherent thesis.

Departments following the strategy outlined above frequently spoke of promoting a research culture in the department. PhD production then forms part of this strategy rather than being a goal to be pursued in its own right. The term *research culture* includes the following aspects:

- Professionalising graduate studies;
- Appointing or developing well-qualified academics who are active in research;
- Having institutional support for research;
- Making research visible via discussion groups and conferences;

- Initiating active research cohorts; and
- Creating academic exchanges and postdoctoral opportunities.

A few departments have received NRF research chairs. This has resulted in increased doctoral interest and an improvement in the research culture of the department. All departments that have followed this strategy reported that they were very satisfied with the resulting changes.

This more focused and specialised approach has many advantages. The Wits Psychology Department estimates that candidates would be able to complete the degree in half the time normally required. An added advantage is the publications accruing to the individual, the department and the university. Departments where this practice has been in place for a while, such as RU Education and UCT Law, reported increased interest in their departments and in PhD enrolment. Similarly, NWU Education stated that students are attracted to PhD study there because there is a focus on particular specialisations, such as Mathematics Education. When students become aware of specialisation areas, they are often prepared to travel and are sometimes referred by other campuses. Experience from other countries has also shown that students in a mass higher-education system find open-ended, unstructured study less attractive than structured study pathways (Scott 2012).

This is a significant finding. It recognises that departments cannot do everything in their discipline and that some specialisation is required. No department is resourced to perform both a great deal of teaching and research across the whole discipline. Thus departments can aspire to cover different aspects of their discipline, depending on their frame of reference, context and staff expertise. Identifying and building strong niche areas may lead to an increased diversity of offerings across departments in specific disciplines in the country.

Reconfiguring departments in this way can have a number of interesting consequences:

- It encourages cohort supervision;
- It guides the future direction of departments;
- It guides staff appointments; and
- It provides guidance on how to strengthen and maintain growth areas in respective disciplines.

In the English Department at UCT, reconfiguring is also nudging the department in the direction of small supervisory panels for the supervision of PhD candidates.

PhD thesis examination as quality control

South African universities require, on average, three written reports for research theses. In exceptional cases (see below), candidates are required to undergo an additional oral examination during the final stage. Many interviewees regarded the thesis examination as the major existing quality-control mechanism.

Two departments, UP Public Administration and UP Law, said they use two examiners – one from South Africa and the other from another country. In Public Administration, the internal examiner is the supervisor. All the other departments use three examiners.

RU and UCT do not use examiners from their own university. The rest of the universities indicated that one internal examiner is allowed and that, in some cases, such as at NWU Social Work, the examiner is from their own department. UCT Economics, UCT English and UKZN English use a minimum of one examiner from outside South Africa and UCT Law uses a minimum of two. All universities require thesis examiners to be experts in that field. Examiners are usually nominated by the supervisor, via the head of department.

SU and UP have introduced a form of oral examination as part of the procedure. NWU Education introduced an oral examination in 2013. UFS Theology does not conduct an oral but does hold a discussion that is attended by all staff members of the merits of the thesis. This also gives the faculty an opportunity to reflect on the questions addressed by research in the faculty, and on how the research contributes to its envisaged direction.

Two departments indicated that publication forms part of the examination. UJ Education requires each student to submit a journal article before graduating. In 2012, NWU introduced a rule across the university, making it a compulsory part of the PhD examination for students to have at least one article either accepted for publication or already published in a recognised journal. The rule is stated on their 2012 website as follows: ‘When a thesis is submitted for examination, a research article that in the opinion of the promoter is ready for publication, may be required’. The Education Faculty at NWU mentioned that the small number of journals in some specialist fields – and also the length of time it takes for articles to be accepted by some journals – can make it difficult for students to get articles published before graduation.

A final word on efficiency

With smaller numbers of PhD candidates, performance is not an issue. However, as numbers increase, departments have come to realise that they need to pay more attention to managing students and to formal procedures.

Thus most departments increasingly pay attention to the formal, administrative aspects of the PhD process. Departments commented that the relatively *laissez-faire* approach to managing and supervising students needs to be replaced by a more systematic approach, and that good supervisory skills must be formally taught. It is likely that the increase in PhD enrolments has influenced these changes, alongside university and DHET pressure to monitor progress.

The trend towards more structure has also been seen elsewhere: Park (2007) drew attention to the increased formalisation of PhD studies, manifested in new institutional regulations and formalisation of supervision. In most cases, the trend goes hand in hand with an increase in student numbers: larger numbers require better, more explicit management procedures. Students in mass higher-education systems also seem to need more guidance and support. The findings from these interviews corroborate a trend that Mouton (2011) identified at South African universities over the past decade: the move towards increased structuration – or ‘thick’ models – in doctoral education. The key features of these are identical to those described in this study: structured and rigorous forms of screening; coursework, particularly in theory and research methods; doctoral research-proposal development completed as a structured process; more directive supervision; and encouragement to publish papers.

Summary of findings

This chapter summarised the efforts of productive departments to increase the number of PhDs awarded in the humanities and social sciences in South Africa, without compromising quality and efficiency, while keeping transformation as an important goal in mind. Much of what has been described in this chapter can be read as different responses to the contradictory demands of increasing the number of PhDs in South Africa without substantially better resources, and maintaining or improving quality while transforming the face of the doctoral cohort.

The interviewees were struck by how positive the responses to these conflicting policy discourses generally were. There is little doubt that heads of departments and supervisors experienced these external demands as onerous, but they nevertheless responded to them thoughtfully and positively. Ehrenberg et al. (2010) explained that the support of academic staff and departments is central to making decisions about doctoral programmes, because they shape the innovations at the outset and are responsible for carrying them through. They made the fairly obvious observation that innovations coming from departments are more likely to be successful than those that come from the ‘top down’. Thus the heads of departments and supervisors we interviewed were less than impressed with

the way external demands were made from the top down, but they made the decisions regarding the changes they wanted to see.

The interviews left us with the distinct impression that doctoral education in South Africa is, at least as reflected in the most productive departments in the social sciences and humanities, a changing practice. Aspects of this practice include the following:

- All departments are aiming to increase the number of doctoral graduates.
- Despite the relative homogeneity forced on the sample by the selection process, there is still great variability in the practices followed by departments. These practices or strategies echo those tried elsewhere in the world.
- Departments included in the study have a good number of experienced academics with PhDs. However, supervisors increasingly experience the supervision of doctoral candidates as a heavy burden, which is specifically linked to the perceived quality of incoming students.
- The ageing profile of potential PhD supervisors is not characteristic of all departments interviewed, but there is an expected shrinking of the workforce through retirement. Succession strategies and efforts to expand the pool of supervisors, by making use of emeritus or extraordinary professors, are either in place or are being considered.
- The traditional research-based model of producing PhDs is still dominant. A few departments have awarded a small number of PhDs on the basis of publications. No department offers what is known as the American model, a PhD by coursework and thesis.
- Increasing numbers and more diverse PhD students have led to changes in pedagogy. Every department recognised a need for some coursework for their PhD students and many have made arrangements for this by way of more structured programmes, summer school programmes, and intensive weekend training programmes.
- Departments in the past decade shifted towards greater management of doctoral education. The quality of management systems and procedures (such as continuous monitoring of doctoral performance), supervisory practices, examination processes, and formal and informal support to PhD candidates have all come under scrutiny. As we noted above, admission to doctoral education ranges from the strongly regulated to the informal. Nevertheless, there is a strong tendency for more structured and rigorous selection and screening procedures. Despite this, many departments still struggle to make eligibility and selection criteria, as well as admission procedures, transparent to prospective applicants. Supervisory practices are changing slowly, from the informal and unregulated features of the widely followed apprenticeship model

to practices that give more direction to students. One notable consequence of these changes is that the doctoral research proposal is becoming a much more managed and structured process to enable departments and supervisors to judge the quality of the applicants.

- A number of departments have identified their research strengths or niche areas and are streaming PhD studies into that structure, which affects many aspects of managing the PhD process. Structuring a department in this way draws attention to supervisory capacity, the selection processes, and the criteria applied.
- The greatest challenge that students face is in securing funding for their studies. A number of universities have introduced incentives for this, such as waiving fees.
- A number of departments have started to work with students before they formally register for a PhD, partly because their language and writing skills and research-methodology skills are perceived to fall short of those required at PhD level. Two departments have introduced a formal pre-doctoral year to prepare students for doctoral studies.
- The preparation of supervisors is increasingly formalised. Many departments offer training for supervisors, particularly for the inexperienced. Incentives for supervising PhDs are under consideration, and vary greatly between universities.
- Supervisors are selective in accepting PhD students. They examine the PhD proposal for the student's knowledge of the field, as reflected in their familiarity with the literature, their ability to write, and their ability to conceptualise a research problem.
- Only one department mentioned supervision by committee, although a number are considering variations on this theme. The default position still is the apprenticeship model, where the supervisor works individually with the student.

In conclusion

Perhaps the outstanding finding that emerged from the interviews is the variety of strategies employed by departments in response to the demand to produce more PhDs. The interviews showed that departments introduced strategies to improve their performance at each step in the PhD process: in selection, orientation, administration and funding. This is not surprising as there is little evidence of there being a single solution to enhance either productivity or quality in earlier large-scale studies of PhD education (Ehrenberg et al. 2010, Golde and Walker 2006). The present investigation is therefore no exception. Departments have tried a number of strategies that could make a difference without evidence that these would work. Strategies identified here as efforts to improve performance are similar to

what the PhD Completion Project (Council of Graduate Schools 2004) has called ‘promising practices’. Since there is no silver bullet or single pathway to success, none of these strategies can be eliminated. It thus makes sense for departments to focus on one or more of them. From the interview data, it appears that most of these strategies worked at least partially, and that no department reported interventions that had really failed.

When assessing whether promising practices will deliver on their promises, the time lag in seeing results must be taken into account. With almost no exception, the strategies described were only introduced at some stage in the past five years, and together with some major restructuring in some cases. Numbers included in the present study were drawn from the period 2000 to 2009 and so do not yet reflect the full effect of these strategies. There is thus potentially a tenuous link between how departments have performed in the past and how they are going to perform in future. The effects of recent efforts to improve PhD production will only emerge in the future, and it is unlikely that these effects will turn out to be only positive (see Neumann 2007). For example, do we lose something in streamlining procedures and the drive to be more efficient, such as no longer taking risks on students, with ‘wild cards’ dealt out of the new improved system? Or that our attention will shift to compliance (increasing numbers, for example), away from content (a PhD graduate who can engage with the discipline in a specific way)?

Comparing the findings of the present study to literature on PhD education, it becomes clear that there is an enormous amount of re-tilling of well-tilled ground here. It is apparent, in most innovations discussed and in the large-scale studies mentioned, that there is an inexorable trend in response to increases in doctoral enrolments and the pressure to increase enrolments and graduations (Louw and Muller 2014). This trend is characterised, firstly, by a greatly increased regulation of the doctoral study process and, secondly, by an increased proceduralisation of the stages of the doctoral cycle. Together, these aspects push the procedures and routines into an ever-greater generic direction, as noted in the Dublin descriptors for doctoral study (JQIA 2004) and in a critique of these by Gewirtz (2008). The trend towards genericism runs counter to the individualising trajectory of PhD work. The latter approach calls for the singular authoritative voice of the doctoral student to stand out against that of his/her peers to fulfil the criterion of genuine innovation that is the hallmark of the doctoral thesis. A related aspect is that the drive to increase the structure of doctoral programmes is counter to the development of independence and autonomy that doctoral education seeks to foster. These seem to be essential tensions in doctoral education.