

Editorial Introduction

Doctoral education in South Africa – research and policy

The doctorate has a long history in South Africa. The first doctorate was in law and was awarded at the University of the Cape of Good Hope in 1899 to William Alison Macfadyen. Since then, South African universities have awarded nearly 30.000 PhD degrees, about two-thirds of which in the past two decades. Despite this long history, doctoral education in South Africa has been an unknown phenomenon, mostly conducted behind closed doors, as a private affair between the doctoral student and a supervisor. Knowledge about the doctorate was anecdotal and informal. Furthermore, until the late 1980s, such education in South Africa was the privilege of élite, white, mostly male students.

This is no longer the case. Since the transition to democracy in 1994, doctoral education has increased and diversified. Various factors, including different concepts of knowledge, changes in university-industry-government relationships, the growing demand for postgraduate education, and a diverse student population, together with government policy, have resulted in multiple research agendas and diversity of purposes and outcomes that students as well as policymakers now expect from the PhD. award (Herman, 2011). Subsequently, doctoral education has been drawn into the policy debate and has also become a focus of the research fraternity.

Like their international counterparts, South African scholars and policymakers are now raising pertinent questions about the PhD. What is a PhD? Who are the graduates? Where do they graduate? What are the disciplinary emphases? What are the major drivers shaping changes in doctoral education? And, most importantly, how can the PhD become a driver for economic and social development in South Africa?

In 2009, the Council of the Academy of Science of South Africa (ASSAf) commissioned a series of studies on the status of the PhD. These first systemic studies on doctoral education in South Africa aimed to provide an evidentiary base from which a study panel could provide a policy advice as to what was concretely needed to increase the number and quality of doctoral graduates to meet the demands of the knowledge economy. The report (ASSAf, 2010) was the first publication on doctoral education in South Africa.

With this special issue we aim, first, to establish doctoral education as a research focus; secondly, to capture current debates on the degree and, thirdly, to assess the status of research on doctoral education in South Africa and to generate a research agenda for future studies.

In our call for papers, we invited conceptual and empirical articles on the subject of doctoral education. Our aim was to explore the many ways in which doctoral education in South Africa is changing and adapting to the new demands of the knowledge economy. We received many worthy articles on supervisory relationships or on the personal journey of becoming a doctoral graduate. These articles were rejected. We only reviewed those articles which explored meso- or macro-processes in doctoral education.

In compiling this collection, we identified three main themes. The first theme linked articles that explored systemic macro-issues (Nerad, Mouton, Backhouse, Herman, Sehoole, Halai). The second theme linked research at meso-levels, mostly at department or faculty levels (Samuel and Vital, Govender and Dhunpath, Hattingh and Lillejord, Grossman and Cleaton-Jones). The third theme dealt with research on doctoral education in South Africa (Wolhuter, Jansen). The main points of each article are briefly summarised below.

Nerad argues that South Africa's recent focus on the PhD and the drive to increase the number of doctoral graduates reflect global trends. She identifies a number of global processes that prompt countries with different resources, sizes, populations and histories to reform their postgraduate education. These include the advent of the knowledge economy, the shift from Mode 1 to Mode 2 knowledge production, the expansion of doctoral education worldwide, and the growing phenomenon of international students. Universities around the world have responded to these new realities by instituting reforms aimed at improving the quality and efficiency of doctoral education. Nerad identifies the common features of these

reforms, examining their converging practices, and points out relevant practices for South Africa to assure both quality and quantity of doctoral programmes.

Mouton reviews the policy context in South Africa in order to trace the evolution of the discourse on doctoral production and to explain the current emphasis on increasing the number of PhDs. Drawing on a quantitative analysis of the current status of doctoral education in South Africa, Mouton discusses four key policy challenges: to increase the volume of doctoral graduates; to expand the supervisory capacity of the system; to improve the efficiency of the system (time to degree and attrition rate), and to improve the quality of doctoral production. He argues that while the first two “quantitative” challenges are unlikely to be met, the system, when compared to international standards, is relatively efficient. As far as the quality of the product is concerned, Mouton detects a shift from a “thin” model of doctoral training to a “thick” model based, among other factors, on increased structuring, screening, coursework, and directional supervision. He calls for further research to assess whether this new model of supervision is in fact improving the quality of the students, making them more employable and preparing them for the new demands of the knowledge economy.

Backhouse explores three discourses on the purpose of doctoral education which are current in South Africa, namely the doctorate as generating new knowledge and developing a scholar (which is embedded in the scholarly discourse); the doctorate as generating knowledge for the knowledge economy and developing highly skilled human resources (embedded in the labour market discourse), and the doctorate as producing new knowledge and developing a critical intellectual (which is embedded in the personal development discourse). Backhouse argues that all three discourses contribute important understandings of doctoral education, and that the tensions between them ensure that such education develops to meet the imperatives of access, efficiency and quality in South Africa. While the ongoing personal development discourse is more reflective of the national goals for equity and redress and better supports the kind of people who currently undertake doctoral studies, limited resources and the urgent need for more doctoral graduates highlight the concerns of the labour market for efficiency and effectiveness. At the same time, the concern of scholarly discourse with autonomous knowledge production is still a key part of how scientific knowledge-making is understood internationally.

Herman utilises the attribution theory to explore how doctoral students and PhD programme leaders in South Africa understand the causes of doctoral attrition. Drawing on qualitative and quantitative data, she identifies common understandings, as well as misunderstandings, gaps or silences in both narratives. While PhD programme leaders emphasise students’ internal attributions for attrition, such as lack of basic skills, lack of capacity to do a PhD, lack of fit between students and academia, and lack of recognition of the value of the PhD, the students themselves attribute attrition to external factors, such as insufficient training at postgraduate level. The role of the department or the faculty is overlooked in both groups’ narratives. Since, according to attribution theory, misunderstanding the attributions of attrition can increase attrition, Herman calls for further research to explore the actual causes of doctoral attrition, studies which would take into account the context and the culture of the department or institution.

Schoole analyses doctoral education programmes in South Africa, with particular focus on the inward-bound international student mobility which constitutes 30% of doctoral student enrolment in this country. By explicating the “pull-and-push” factors, Schoole shows that international doctoral students’ mobility patterns in South Africa tend to mirror developments in global doctoral education, except that the state in this country is not active in recruiting or sending students overseas for capacity-building. In South Africa, the state only creates conditions for the inflow of international students by issuing visas, providing subsidies and creating an enabling policy framework for such students to study in the country. A more active state role in both “pull-and-push” factors of international doctoral students’ mobility could help South Africa to meet the challenges of global competitiveness and its set targets of doctoral graduate outputs by 2018.

Halai describes how another developing country, Pakistan, grapples with similar objectives to those of South Africa, namely how to increase the number of quality PhDs. In her article, Halai describes the context of doctoral education in Pakistan and the experiences of students in one particular department of

education. Her findings illustrate that students perceive and experience the PhD as a professional rather than a research degree. Halai argues that changing the conception of knowledge is a long process, one which requires support and pressure, and that the current political and economic contexts in Pakistan further hinder this process.

Samuel and Vital revisit a seminar-based cohort doctoral programme in education which they founded over a decade ago at the University of KwaZulu-Natal (UKZN). They argue that this pedagogic model, which stands as a counterpoint to the traditional “master-apprenticeship” supervisory model, addresses questions of both scale and quality in doctoral education, while it mentors new supervisors. The article suggests that the structure of this interdisciplinary programme, the balance between “headwork” (epistemology), “fieldwork” (methodology) and “textwork” (representation), the diversity of the students and the supervisors, and the institutional support, are among the factors contributing to the high completion rate in the programme. On reflection, Samuel and Vital offer a theory of doctoral studies which draws broadly on four emergent philosophies: the democratic philosophy of teaching and learning (Giroux); the philosophy of scaffolded learning (Vygotsky); the philosophy of *Ubuntu*, and serendipity.

Govender and Dhunpath provide the students’ perspectives on the collaborative cohort model (CCM) at the UKZN. The students’ experiences are juxtaposed with the literature on the cohort models in education in order to explore the extent to which the programme was instrumental in creating genuine learning communities. The authors argue that, while the cohort model provides rich opportunities for collaborative research learning and collegiality, it also generates conflicts, as students negotiate the multiple and often contradictory voices of cohort supervisors and peers. However, these conflicts are often symptomatic of individual teaching and learning styles and preferences, and do not necessarily threaten the creation of genuine communities of practice or the robustness of the cohort model.

Hattingh and Lillejord explore university collaboration across borders, in this case between Norway and seven developing countries. In their article, they reflect on their leading a collaborative doctoral programme, Productive Learning Cultures (PLC). They describe the programme’s design features, its participatory values, such as trust and community of practice, its future sustainability and some of its intended and unintended outcomes. They highlight the “networked” support pathway towards the PhD, and its potential in providing a climate of trust for PhD students to achieve their goals and to socialise them in the academic community.

Grossman and Cleaton-Jones reflect on 53 years of postgraduate output in a South African Dental Research Institute (DRI) and ask what lessons this database could offer faculties of Health Sciences in their efforts to expand their doctoral production and meet the demand for high-level skills. They discuss the programme’s features, the students’ demographics, and the skills that were gained during their postgraduate experience, such as publishing and presentation skills. The quantitative analysis showed that these skills were already being learned at MSc level, raising the question of whether a PhD is necessary for a career in clinical research.

Wolhuter surveys the growing international literature on doctoral education, compared to the miniscule number of publications in South Africa. Internationally, the research covers numerous aspects, from the contextual forces shaping doctoral education to the actual process of such education, including its objectives and outcomes, its methods, administration, supervision, and students’ issues. At the same time, there are noticeable gaps in research on the social rates of return to doctoral education, and the scholarly contribution to or impact upon this. Furthermore, the international literature tends to examine doctoral education through the lens of an equilibrium paradigm and to shy away from critical theories. As a result, it does not take socio-political contexts into account.

Lastly, **Jansen** brings to the fore questions of quality and significance in doctoral research, key issues in the current rush to expand the number of PhDs in South Africa. He calls for doctoral research both as an intellectual practice and as a continuous quest for significance. Significance can be achieved by dedicated scholars who have intimate knowledge of their subjects; are able to recognise the class of problems within which their research topic falls; have the capacity to articulate an independent argument; are able to recognise the limitations of the existing research and on that basis make arguments to justify their own

research; are able to make justificatory claims in writing; know the leading thinkers in their field, and have the openness and capacity needed for learning. These traits are essential in doctoral research in order to achieve practical, theoretical, emotional or personal significance.

In summary, what can these articles tell us about doctoral education in South Africa? What is the status of the research on such education in South Africa? In this critical time, when doctoral education in this country has attracted the attention of both policymakers and researchers, it is important to ask, "How does research inform, enter or otherwise engage with policy or policymakers?" (Bridges, Smeyers, & Smith, 2009, p. 5).

The selection of articles in this issue portrays doctoral education in South Africa as a changing practice. It shows that individual PhD programme leaders have been forging new pathways to doctoral education over the past decade, and that some alternatives to the apprenticeship model of one supervisor/one student have been successfully implemented in this country. Yet, as Mouton (in this issue) clearly indicates, major challenges still face higher education in South Africa, especially as it endeavours to improve the quality and efficiency of doctoral production. This issue highlights some of these challenges, among them misunderstanding the reasons for doctoral students' attrition (Herman); lack of supervisory capacity (Mouton); lack of career paths for graduates (Grossman and Cleaton-Jones), and the paucity of research on doctoral education in South Africa (Wolhuter).

It is evident from the articles that have been submitted to or accepted for this special issue that research on doctoral education in South Africa is taking its first steps into the field, seeking information, facts and basic knowledge about what was until recently unexplored territory. A number of the articles are reflective, with PhD programme leaders describing their own practices and experiences. Others use quantitative data to describe current trends or make predictions for future scenarios. There is a paucity of articles based on rigorous research or that engage with philosophical or political issues concerning doctoral education. It is important that research on such education makes the shift towards more complex and critical objectives. Wolhuter's article points to a similar gap in the international research knowledge on doctoral education. It also highlights the need for different epistemologies and methodologies, which will encourage reciprocal conversations between researchers and policymakers.

The articles in this issue mostly responded to the major challenge currently facing policymakers in South Africa: how to increase the number of PhD awards without prejudicing the quality or the significance of the product. The majority/all of the authors cited the ASSAf (2009) report or the national policies as their main sources of reference. For example, Mouton questions the feasibility of implementing the policy; Nerad, referring to international practices, suggests the way forward for policy implementation; Samuel and Vithal, as well as Govender and Dhunpath, suggest the seminar-based cohort model as an alternative pathway to the doctorate in South Africa in order to achieve the policy goals. In this sense the research takes the form of "policy advocacy" or "information for policy" (Ball & Stevenson, 2006). This type of research aims to promote and advance a specific policy, or provide policymakers with information and advice.

Bridges and Watts (2009) discuss another type of research that could and should inform educational policymaking. They argue that if one considers policy as "the authoritative allocation of values" researchers have to "expose, critique, interpret, construct and deconstruct the normative assumptions of policy" (Bridges & Watts, 2009:50). Adopting this kind of research agenda can subject doctoral education in South Africa to all kinds of analysis including historical, political, phenomenological or ethnographical. Halai's article in this issue reminds us that doctoral education is provided in political, economic and social contexts. Research must therefore include critical analysis of the policy itself. We need research on doctoral education that takes account of the socio-political environment and its impact on practice. And most importantly, in the current global economy, where knowledge is viewed as a critical resource for a country's social and economic development, we need to question knowledge itself: What knowledge has been produced? How has it been produced? Whose interests does it serve? And how does it serve society? Such studies will secure practical and theoretical significance (Jansen, in this volume) in research on doctoral education.

This special issue provides a glimpse into doctoral education in South Africa, highlighting the current research knowledge on the topic, the gaps and silences. In particular, it exposes the preference for quantitative, reflective or opinion-based articles and the paucity of critical and rigorous empirical research at faculty, institutional or national level. I hope that this special issue will stimulate interest in such studies.

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(Guest Editor)