Researching postgraduate educational research

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Abstract
This article is about the national project to gather together information about postgraduate education research (PER) in South Africa conducted over a ten-year period, namely 1995–2004, being the first decade in the democratic era for South Africa. The ideas informing the PER Project are provided and the complex process of developing the PER database is discussed. Although it is too early to yield firm findings about the trends, the article offers a tentative first level of description about postgraduate education research.

INTRODUCTION
The 1994 elections that mark the beginning of the democratic era in South African politics also ushered in a period of dramatic policy change that embraced all aspects of the education system. Many scholars have commented on the shifts in the organisation of schools and the curriculum, governance and funding innovations in that sector (for example, see Chisholm 2004; Jansen and Sayed 2001; Motala and Pampallis 2001; Taylor and Vinjevold 1999). The post-schooling and higher education sectors were also subject to institutional mergers among other changes, and a new national qualifications framework and approaches to skills development were also introduced and these too were subjected to discussion and debate (for example, Karlsson and Berger 2006; McGrath 2000; Parker 2003). These embracing policy shifts in the
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education system inevitably also attract the attention of postgraduate researchers studying for higher degrees in education. Such research presented in masters and doctoral dissertations from students of South African higher education institutions is the focus of a national database on postgraduate education research (PER) currently being established by the University of KwaZulu-Natal. In this article we provide the background to the database, how it is constructed, and we give a general description of the database and the way it can be used to track trends in educational research at higher education institutions in South Africa.

RATIONALE FOR THE POSTGRADUATE EDUCATION RESEARCH (PER) DATABASE

The initiative to establish the PER database was premised on the understanding that postgraduate research relates to developments occurring on the larger stage of the nation and in the international arena of global trends and mandates that press down on the nation State. The project was also driven by questions about how the enormous effort and investment in research from postgraduate students is taken up by the State and influences its response to needs and conditions in the education system.

The research set out to address the absence of an overview of what postgraduate education research is and has been undertaken in South Africa, both in terms of subject-content knowledge, and in terms of methodological approaches. South African academics know very little about the profile of education research in the region, and while we engage in debates and scholarship at national and international level, it is often the case that such debates do not reach, nor affect, our broader contexts precisely because they are located in domains associated with the academy.

It is generally accepted that education research does not always inform adequately the shaping or priorities or the State’s responses to educational needs. It is less clear how research impacts on the worlds of practitioners. In particular, the extent to which education research, which is produced by postgraduate students, impacts on schools, other educational institutions and communities, has not been documented or fully understood. This corpus of postgraduate student research is a potentially valuable resource for students, supervisors, scholars, higher education institutions and the wider society.

We envisaged postgraduate research to be a microcosm of the large volumes of research produced by academics and professional researchers in the form of books, reports, articles and other media. Our purpose is to establish the scaffolding that enables us to explore how this growing body of research reflects research agendas shaped by academics and the State, and thereby to begin to understand the emergent trends and patterns and what this narrative says of the higher education sector. We believe that a study of education research undertaken by postgraduate students is important for higher education institutions since it will serve to foreground in explicit ways the agendas, values, priorities and aportia in educational practice as it pertains to the preparation of trained researchers, field-workers, and educators. The period of
research covers ten years (1995–2004) comprising postgraduate research completed in the decade immediately following the 1994 democratic elections. The aim of the PER research project was to answer the following research questions:

1. What do the issues, developments, and trends reveal in terms of where HEIs and researchers place their focus?
   a) To what extent is education research limited to contexts already known to the researcher?
   b) To what extent does the research represent an innovation in terms of methodological approach?

2. What foci are included and excluded and why?
   a) To what extent does context come to be understood as synonymous with focus in education research?
   b) What are possible reasons for this development?
   c) To what extent are the theoretical paradigms employed in education research able to yield new insights concerning a ‘research priority’?

3. How are research priorities understood, investigated and interrogated?
   a) How is a ‘research priority’ defined or prioritised in postgraduate research in education with reference to scholarship, student interest, and areas in need of further research?
   b) To what other domains or disciplines do researchers and their supervisors refer in contextualising these priorities?

Having sourced funding from the Ford Foundation, we embarked on a lengthy process of developing the PER database in 2007, as described in the next section. A year later the National Research Foundation (NRF) became involved in the project and this led to the project’s expansion.

Central to the plan to explore knowledge constructed by postgraduate researchers was the strategy that the database would be developed by a team of academics and postgraduate students, with the latter using the database of postgraduate research for their own degree-related research and construction of knowledge. Thus the enterprise of developing the PER database has provided a team of masters and doctoral students with a collective internship in research that is distinct from but runs parallel to each student’s supervised research. Their theses will be the major avenue for yielding answers to the research questions mentioned above. The parallel process of the PER project and the students’ thesis research yielded a supervision model that presented the students with some challenges as well as unexpected support. The challenges occurred mostly in the early stages of the project when students may have clung to assumptions that supervision support would take a particular form. In time, however, students derived support from each other and academic researchers by way
of a collective or team-based approach to research. The support grew as the project progressed and that process is described in the next section.

**CONSTRUCTING THE PER DATABASE: METHODOLOGICAL CONSIDERATIONS**

The PER database has been developed over two years by way of a layered survey methodology in which both quantitative and qualitative methods were used. The fieldwork entailed sending three groups of student-researchers each to visit about three institutions in the same geographical region. The duration of their stay at each institution varied depending on the volume of theses in the libraries they visited.

In the first stage the research team identified an initial sample of eleven participating institutions. This constitutes the Phase 1 of the project. The selected eleven institutions in provinces were (in alphabetical order):

- Nelson Mandela Metropolitan University (Eastern Cape)
- North West University (North West)
- Rhodes University (Eastern Cape)
- Stellenbosch University (Western Cape)
- University of Cape Town (Western Cape)
- University of Fort Hare (Eastern Cape)
- University of Free State (Free State)
- University of Johannesburg (Gauteng)
- University of KwaZulu-Natal (KwaZulu-Natal)
- University of Western Cape (Western Cape)
- University of the Witwatersrand (Gauteng).

Initially, ten universities were selected for the purpose of the study, but once the team found only eight postgraduate education theses in the University of Fort Hare we decided to add Rhodes University, which then became the eleventh participating institution for Phase 1 purposes. The theses that were on the shelves at the time of data collection were selected by looking at the year in which the research was conducted and making sure that these were for either a Master’s or Doctorate in Education degree. Certain sections of the theses, namely the titles, abstracts, theoretical frameworks, methodologies and conclusion, were photocopied for analysis later. Thus, the total number in phase 1 of theses for educational degrees that we found produced during the period under study at these institutions was around 3 400.

Phase 2 also included follow-up visits to some of the Phase 1 institutions. This became necessary when these institutions reported that other holdings of theses existed that had not been originally made available to the Project Team. This omission was owing to various factors such as certain theses being housed in special archives not ordinarily available to the public, or being located only in Faculty Offices, or individual supervisors’ offices, or on campuses not part of the Phase 1 visitation schedule. In this way about 380 theses were added to the project’s collection.
Ten more institutions were surveyed in 2008, that is, Phase 2, when the NRF became a partner in the project. They are:

- Cape Peninsula University of Technology
- Central University of Technology
- Durban University of Technology
- Tshwane University of Technology
- University of Limpopo
- University of Pretoria
- University of South Africa
- University of Venda
- University of Zululand
- Walter Sisulu University.

From these institutions approximately 1,500 theses have been collected to date. Of all the institutions identified for Phase 2 collection visits, only one refused to participate despite representations made to the DVC Administration, the Registrar, and the Dean of the Faculty, by both the NRF and the project team. Visits are pending to two institutions, namely Durban University of Technology and University of Zululand.

At the start of the first phase the research team held a series of workshops in which the methodology was developed. Data generating instruments were formulated collectively for the field visits to the higher education institutions. These comprised guidelines for photocopying extracts from the relevant theses and dissertations held in the libraries of the various institutions, an interview schedule and a questionnaire for supervisors. Once each photocopied extract was bound and brought to the team’s office at UKZN, the student team commenced a process of cataloguing and classifying data about the thesis. This constitutes the PER database that can be used to analyse trends. By December 2008 3,260 of the gathered theses were captured on the database and used for a preliminary analysis. Complementing the thesis data are a set of interview transcripts and a set of questionnaire responses that have been captured using a statistical data software package. In this article our discussion concentrates on the database of theses and what has begun to emerge from the description of theses about postgraduate education research in South Africa.

Grounded theory (Ryan and Bernard 2003) provides a useful entry into understanding data sets emerging from, and grouped within the Project. Grounded theory involves an iterative analytical process of developing concepts and categories by returning to the data over and over again, when necessary with return visits to the field to gather additional data. In this PER Project there is a stress between the focus applied by the Project to the data, and the foci that emerge from the data themselves. Initially, the focus must be on description rather than analysis, category identification rather than imposition of a prior categories, and trend development through dialogue with academics, rather than trend identification arising simply from the Project’s reading of the data. Our approach has been to focus on two levels of description. The first was the methodological emphases of a particular institution on the basis that
academics, even if conducting research alone, nevertheless will be most informed by the culture of the institution in which they are located, or by the particular networks of knowledge production in which they are engaged. The second was to scrutinise the subject-content knowledge of the theses in order to provide a basis for a narrative about research priorities and values.

Initially the database was established using several sample theses to identify categories or discrete variables and working within the structure of spreadsheet software. More categories were added at a later stage, together with tools such as authority lists for greater stability and consistency in capturing the values within each category. These quality-related refinements sought to enhance the analytical potential of the database and consistency at a retrieval stage.

We encountered three methodological challenges that are worth mentioning here. The first concerns an inter-personal dimension in that the groups visiting the institutions comprised students who were ‘researching up’ as they negotiated with the management and leadership at each institution to access carefully controlled thesis collections and interview supervisors who were often very senior and seasoned academics. Further, the groups received help at some institutions. For example, assistance from librarians proved very useful, whereas the assistance provided by hired students was sometimes problematic as important sections from theses were not captured. The omissions have affected data capturing that may necessitate return visits to some individual libraries and institutions.

The second methodological challenge arose in the act of reading and interpreting data. For this PER Project this characteristically involves the researcher-readers, the author-researchers of the theses, the academic-researchers (i.e. the Project leadership) and the academic-supervisor-researcher. For example, we have noted that in certain institutions what is understood by ‘education research and education research methodologies’ differs from that at other institutions. What becomes clear is that not all institutions teach research methodology in the same way. For example, although research can generally be classified as quantitative or qualitative, these categories in themselves only reveal a small aspect of the methodological frame. The effect of this was that in relation to some institutions the reader-researchers could not find discrete methodology chapters since the discussion of methodology may have been integrated into the theory-overview type chapter. We noted that at other institutions many author-researchers made no distinction between method, paradigm, and theoretical framework. Thus, when it came to reading the data and discussing the difficulties pertaining to data capture, the challenge of categorising methodologies in a meaningful, sensitive, and reading-rich manner revealed itself to be a ‘problematic of interpretation’. In many instances reader-researchers have had to interpret the methodological allegiance of a piece of research especially where the author-researcher has not identified this explicitly. In turn this reveals that supervisor-researchers themselves do not insist (or find it necessary to insist) that such distinctions are routinely made, and even where they are made, they are not made consistently within or between institutions of higher education in South Africa.
The extent to which consistency of reference is desirable is debatable, but the fact that this has revealed itself as a persistent ‘problematic’ within this comprehensive survey of postgraduate education research in South Africa, is an illuminating and fascinating area for further research in itself.

The third challenge was about category definition, particularly as defined by the academic-researcher leaders of the Project, the reader-researchers (i.e. student researchers in the Project) and how these are superimposed onto the categories as used by the author-researcher, and by implication the supervisor-researcher. Project Team discussions revealed that this reading-interpretive task is nebulous and unyielding in its complexity. For example, in the structure of the database certain levels of categorisation are pre-established such as the category of qualification/degree as revealed in the National Qualifications Framework, while other categories are overlapping and less easy to specify. ‘Mixed-mode’ research is such an example. It can contain both qualitative and quantitative components, can be a survey and case study all rolled into a longitudinal tracer study over five years. Add to this complexity that the author-researcher might not make reference to his/her research as being either ‘mixed-mode’, tracer/longitudinal, case-study/survey in explicit terms. This then means that any reader-researcher as an individual interprets the work with a fair degree of subjectivity allowed in that reading process. Added to that dimension is the ‘mandated’ reading of research data within a Project mandate. This mandating process has required the development of ‘authority list’ tools in order to ensure greater consistency during data-capturing processes as well as the integrity of a category. These tools seek to address the unstable ingredients in the data capturing process, namely accuracy, consistency, and integrity, and thereby render the database credible, reliable and useful. While the Project Team continues to grapple with these issues, we have reached a stage of having sufficiently developed the PER database to begin an initial though tentative description of postgraduate education research in South Africa for the period 1995–2004. Some of that description is offered in the next section.4

DESCRIPTIVE ANALYSIS OF THE PER DATABASE

In this section we provide an overview of the main demographic categories of postgraduate research in education as captured on the PER database in December 2008.

When the total number of 3 260 theses on the PER database is disaggregated over the first and second halves of the research period of 1995–2004, the latter half appears to be more productive. There were 1 509 (46%) education-related theses produced between 1995 and 1999, and 1 723 (53%) theses over the years 2000 and 2004. (The database includes 28 (1%) theses for which we have queries or insufficient information on the title page to locate by year.)

Over the entire decade, there is a higher percentage of female research students (1 761, 54%) compared to males (1 499, 46%). A cautionary note needs to be inserted
here. Data pertaining to the gender apportionment is highly subjective since names do not in many instances indicate gender. The Project has thus looked to other areas of the theses, notably the Acknowledgements section, to ascertain the gender of authors, but even then it is not always clear.

Tracking race as an indicator of change in access to education and in the purchase of ideas about education is important in the South African context given our legacy of white superiority and dominance in education. To determine a researcher’s race the data capturer interpreted the name of the thesis author. It is acknowledged that this is subjective and names are an unreliable signifier. Notwithstanding these weaknesses, we endeavoured to identify the racial profile of the postgraduate education researchers. An interesting trend emerges from the racial representation of post-graduate research output for the period 1995–2004. Forty Six (46%, 1 540) percent of the total sample of post-graduate research captured on the PER database has been undertaken by White students. This is the largest proportion and the next largest group is African students (38%, 1 224), then Indian (9%, 284) and lastly Coloured students (2%, 58). It should be noted that we were unable to identify the race of the authors for 152 (5%) of the 3 260 theses because we were unable to construe as derived from the names or authors.

A primary focus of the PER database project is the concern with understanding the methodological choices made by researchers when writing theses. Notwithstanding the factors mentioned above, as pertaining the team’s deliberations concerning how to describe and capture methodological choices when these are often not described with accuracy within theses themselves, the emphasis on obtaining a regional and national profile of the uses of research methodologies for the purposes of developing novice-researchers, remains critical for two reasons. First, as we have stated earlier, the methodological choices evident in postgraduate research may have some link to their relative impact and dissemination. The second reason is because these choices reveal trends which while institutionally (or regionally) located, may also be reflected on a national ‘scale’ and might thus yield illuminating information for future research development in South Africa. Figure 1 reveals that when broadly apportioned to the supra-methodological categories of qualitative and quantitative research, educational research is largely of a qualitative nature.

Figure 1: Quantitative and qualitative postgraduate education research for the period 1995–2004

Figure 2 shows that the predominant form of methodological choice is the case study.
Figure 2: Categorisation of education theses according to methodologies, for the decade 1995–2004.
Two degrees are included in our definition of postgraduate research. These are the Masters degree and the Doctoral degree. The overwhelming number of theses on the PER database fall in the Masters degree category, but no distinction has been drawn between full thesis and half thesis. In total, we have 2 663 (82%) Masters theses and 588 (18%) Doctoral theses on the database. This indicates that most of the postgraduate education research in the country comprises studies towards Masters degrees. The institutional locus of the research production is presented in Figure 3.

Figure 3: Contribution towards national postgraduate education research output, per institution, for the decade 1995–2004

It should be noted that at the time of writing this article, the Project’s researchers had yet to complete their field work at three institutions. Furthermore, one institution had declined repeated invitations for the institution to be part of the study. Thus, not all of South Africa’s higher education institutions are represented in Figure 3. Instead, Figure 3 presents research productivity over the ten year period only at the participating institutions and those at which field work was complete. Despite the partiality of the national ‘picture’, this information is worthy of reporting at this stage since it confirms what is already known about the different research productivity levels of previously disadvantaged and advantaged institutions (Department of Education 1997, 8). However, it is too early since the mergers to predict trends reliably in relation to the new institutions.

Nevertheless, the legacy of racial segregation and the differential deployment of resources appears to continue in South African higher education despite the restructuring of the sector by way of institutional mergers. For example, in Figure 3 the institutions contributing over 5 per cent each towards the national postgraduate educational research output mostly are associated as previously advantaged institutions that were established during the apartheid era to serve the needs and interests of the white ruling class and community. Examples of this category are the universities of the Free State, Johannesburg (formerly Rand Afrikaans Universiteit), KwaZulu-Natal (although this is a merged university that includes an institution
falling outside of the advantaged category, namely Durban-Westville), University of Pretoria and University of the Witwatersrand. Historically such institutions received substantial state and private investments and bequests over many decades to establish special library collections and pursue large research projects such as the two Carnegie Inquiries into poverty in South Africa (for the education reports from these studies see: Malherbe 1932; Nasson and Samuel 1990). These were some of the features that attracted acclaimed scholars and researchers to their ranks, and the subsequent postgraduate education research output in the ten-year period for this study attests to that legacy. By contrast, the institutions in Figure 3 with the lowest levels of contribution to the national output of postgraduate education research are regarded as formerly disadvantaged institutions. The term ‘disadvantaged institution’ is meant to indicate that these institutions mostly were established by the apartheid government to serve the black community and supply homeland or Bantustan governments with qualified personnel for the various administration departments. The University of Venda is an example of this category. Many of these institutions have been established for only a few decades and are based in small rural towns. With these factors and the stigma of being established as part of the apartheid system, such institutions do not have the same pull as the older, better resourced, city-based advantaged institutions to attract the scholars who would lead important research programmes with teams of postgraduate students. Hence, such institutions tend to have a low research output in comparison to the advantaged institutions, and this is evident in Figure 3.

In South Africa, education provisioning prior to 1994 was offered in two official languages only and higher education institutions followed this practice as well. In the study period 1995–2004, we find a continuation of this practice in the languages used in writing up the research, namely English and Afrikaans.

Of the theses on the database, 80 per cent, that is 2 721, are written in English. Afrikaans theses comprise 20 per cent, that is 684, and 5 theses were written in other languages. As mentioned above, about 300 theses in this period have yet to be captured on the database and of these over 200 are written in Afrikaans. Thus, English is still the dominant language of written communication in the higher education sector and the language of research.

Our first level for describing the content of postgraduate education research during the period under investigation used a sector analysis of the education system. We identified twelve sector categories: early childhood education (ECE), schooling, post secondary, tertiary, continuing, adult basic education and training (ABET), government, private sector, parastatal, civil society, service provider, and mixed to signify when a topic was focused on more than one sector. Figure 4 represents the focus of the theses on the database according to sector. Almost three quarters of the postgraduate education research on the database concerns the schooling sector. The next largest content category is the tertiary sector, though this only stands at 14 per cent. Thus, together these two sectors account for most postgraduate education researches and the remaining sector categories attract little attention.
Schooling as a sector and a focus for research during the ten year period under study is seemingly the most popular. Understandably so, education in South Africa has undergone substantial political reform that impacted on issues of curriculum, governance and funding, restructuring and access. Furthermore, with the closure of colleges and teacher education becoming a higher education competence, a range of challenges and issues have and continue to confront us daily, making schooling, like tertiary education a worthwhile area of study in a transforming educational context. This field covered a range of issues about, in and on schooling such as inclusive schooling, home schooling in South Africa, disrupted schooling on rural children, performing gender in early schooling, and so on. Figure 5 reveals a steady increase in research about schooling over the ten year period 1995–2004.

Figure 4: Disaggregation of theses on database, by education sector focus, for the decade 1995–2004

Figure 5: Annual number of education theses nationally, with the focus pertaining to the schooling sector, for the decade 1995–2004
When entering a thesis on the PER database keywords are assigned to describe content. When correlated with the year of the thesis, a keyword is useful for revealing trends. For example, our search of theses tagged with the keywords *special needs, remedial and/or inclusive education* retrieved 145 (4.44%) theses. Of these, 22 were doctorates, while 124 were Masters theses/dissertations. When these are disaggregated over the first and second halves of the research period (1995–2004), 75 of the theses in the first half reported one or more of these keywords, while in the second half 70 of the theses reported the same, indicating a slight decrease in the number. Figure 6 shows the number of theses with a focus on *special needs, remedial and/or inclusive education*. There appears to be a significant drop in number in 1999 and a slow increase in output over the following years. Although we are not implying evidence of a cause and effect relation, this trend is interesting when we take into account that the *Education White Paper 6* (Department of Education 2001) on inclusive education was issued in 2001.

![Figure 6: Annual number of education theses nationally, with a focus on special education needs/remedial education/inclusive education, for the decade 1995–2004](image)

**CONCLUSION**

In this account of the development of the PER database and the first level of describing postgraduate education research we have illuminated the complexities we encountered in the process of collecting and analysing this type of data from higher education institutions. From our team-based approach to this research initiative we have found that the phenomenon of students researching up within the higher education context has proved to be a significant factor in shaping their experience. Students developed a range of higher order thinking skills. For example, they had to become skilled at navigating between their subject-positions of postgraduate students who are already practicing professionals, while relating to and negotiating with other professionals (often in the most senior posts) located at other institutions, and making on-the-spot evaluative judgements about obstacles they encountered as
well as ethical issues. In addition, they acquired a range of data-management and teamwork skills.

We have indicated that a wealth of information is to be gained from the reading of the data and as such we have provided the reader here with a first entry into the data. We have shown that there was an increase in research productivity between the first five and the latter five year period; that while females produce most research at this level, the proportion does not nevertheless relate to the ratio of male/female educators in the profession itself. We have also shown that there is a dearth of quantitative research, and that only a fifth of the postgraduate education research produced is at Doctoral level and that the vast majority of postgraduate research takes the form of the case study methodology. We see the continued legacy of apartheid education in the dominance of research undertaken by white researchers, and in the research productivity of higher education institutions, despite the anticipated changes to that ‘landscape’ as envisaged by the merger process. We see that certain newly defined areas of professional development (such as inclusive education) have witnessed a steady growth in research interest and productivity. We remain aware that much more can be made of the PER database, but, mindful of the fact that data captured is still being verified and data for two institutions is pending, we have avoided an overly interpretative narrative here.

NOTES

1 This journal article draws on a project progress report (Balfour et al. 2008) presented to the National Research Foundation in December 2008. The authors acknowledge the contribution of our colleague in this project, Peter Rule, and Annah Bengesai, Brenda Davey (sadly deceased since the initial submission of this article), Busi Goba, Liile Lekena, Nomnessi Madiya, Serufe Molefe and Thabisile Nkambule as student members of the Project Team, as well as the Ford Foundation and National Research Foundation for funding.

2 The student members of the Project Team presented a joint paper at the Kenton Education Association conference held in October 2008 in Magaliesburg, in which they discussed these challenges.

3 UKZN Ethical clearance certificate HSS/0603/07.

4 A fuller though no less tentative description is available in Project progress reports. Once the data has been fully captured on the PER database, firmer findings about postgraduate education research will become available.

5 It should be noted that we count theses of any pre-merger institutions as being of the new institutions. For example, theses of the former universities of Natal and Durban-Westville are now counted collectively only as of the University of KwaZulu-Natal even though the merger only occurred in 2004.
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