
Education research in South Africa, 1995-2006

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Abstract

This article examines the main features and findings of a 2008 CEPD/NRF study which constructed and analysed a database of education research in South Africa from 1995 to 2006, inclusive, with the aim of determining gaps, strengths and general research trends. The CEPD/NRF study, which defined education research as broadly pertaining to teaching and/or learning, obtained extensive data from a wide range of sources, including universities, public institutions, NGOs, Sector Education and Training Authorities, museums, publishers, donor agencies, trade unions, conferences, journals and electronic databases. The levels, scale, educational sectors and disciplinary/thematic areas of each entry in the resulting 10,315-strong database were identified, and a random sample of 600 texts was analysed in order to distinguish primary research themes. In this article, particular reference is made to the type and quantity of education research outputs, single- and multi-authorship, publication location of journal articles, levels, scale, educational sectors, disciplinary/thematic areas and primary research themes. It suggests that most research has been classroom-based, small in scale, focused on the formal schooling sector, concentrated in the eight disciplinary/thematic areas of educational theory, education management, education policy, higher education studies, teacher education, language studies, educational psychology and academic development, and steadily increasing in its annual output over time.

Introduction

During 2008 the Centre for Education Policy Development (CEPD), commissioned by the National Research Foundation (NRF), constructed and analysed a database of education research in South Africa from 1995 to 2006, inclusive, with the aim of determining the gaps, strengths and general research trends over that twelve-year period (Deacon, Osman and Buchler, 2009). After briefly outlining the methodology used in the construction of the database, this article examines the main features of the database, in terms of the type and quantity of research outputs, single- and multi-authorship, publication in or outside South Africa (in the case of journal articles), the levels and scale of

research and its distribution across educational sectors and disciplinary/thematic areas, compared against each other and over time, as well as the primary themes in education research, identified on the basis of a textual analysis of a small random sample. After identifying the main gaps and strengths in education research, the conclusion suggests a number of ways forward.

Methodology

The CEPD/NRF study defined education research very broadly, as pertaining to teaching and/or learning, in order to capture the widest possible range of research endeavours and education (and training) contexts and sub-sectors. 'Education research in South Africa' was taken to include all education research undertaken in or on South Africa by either South Africans or non-South Africans, regardless of where the researcher was located at the time. It excludes all texts deemed to contain little or no substantial research inquiry, such as book reviews, editorials, interviews, newspaper articles, posters, forewords, prefaces, short introductions, epilogues, textbooks and manuals.

Research and publications data – consisting primarily of bibliographical information – was obtained from the following overlapping sources (with their overall response rates listed in parentheses): all 23 universities (74% responded), the national Department of Education and 15 other government departments, public institutions and councils (33%), 15 education NGOs and research units (60%), 27 Sector Education and Training Authorities (SETAs) (15%), 8 museums (25%), 18 publishers of education books (17%), 24 donor agencies (13%), 7 education sector trade unions and an education labour service NGO (57%), 7 sets of annual education conference proceedings (71%), 10 South Africa-based education journals (90%) and the ERIC, NEXUS, AHERO, Blackwell, InformaWorld, Ingenta, Sage and Taylor and Francis electronic databases (100%).

This data was categorised in terms of a multi-dimensional matrix (identifying the *level/s*, *scale*, *educational sector/s* and *disciplinary/thematic area/s* of each database entry), that were determined by the NRF prior to the commencement of the study. These categories are explained in detail below. Note that a single database entry may have been categorised as located at more than one level, in more than one educational sector and/or focused on more than one disciplinary/thematic area, but will have been categorised in terms of only one

scale (i.e. large scale, case study or small scale). While the categorisation process was facilitated by obtaining, and extracting the aims and findings from, a total of 2,100 texts (20% of the database, which for ease of access were primarily journal articles), this means that the bulk of the database was categorised on the basis of bibliographical references rather than on the perusal of the actual texts.

The final database contains a near-comprehensive list of education research in South Africa from 1995 to 2006. However, some data sources (particularly educational donor agencies, SETAs and publishers) were unable to provide much if any data, and some data received was incomplete and occasionally inaccurate, and thus the database cannot yet be said to be complete. In addition, research in the form of Masters and doctoral theses is largely missing from the database: thesis data was being collected by other researchers in a separate project, which has not yet been integrated into the database; nevertheless, where sources supplied thesis information it was incorporated into the database, with the proviso that this information cannot be understood to be anywhere near comprehensive.

Categorising, analysing and compiling databases of education research is nothing new. However, while audits of specific thematic areas within education research have been undertaken in South Africa and internationally (for example in mathematics education, and in teacher education – see Adler, Pournara, Taylor, Thorne and Moletsane, 2009 and Murray, Campbell, Hextall, Hulme, Jones, Mahony, Menter, Procter and Wall, 2008), little if any similar national-level research has been done in other countries, and where it has been done it is often treated as a marginal concern within the context of research more broadly interested in higher education policy-making and funding. There are some exceptions, however, such as in the United Kingdom (Gorard, 2001; Christie, 2003) and Australia (DEST, 2011), and their findings (further discussed in the penultimate section of this paper, below) often parallel what was found in the CEPD/NRF study.

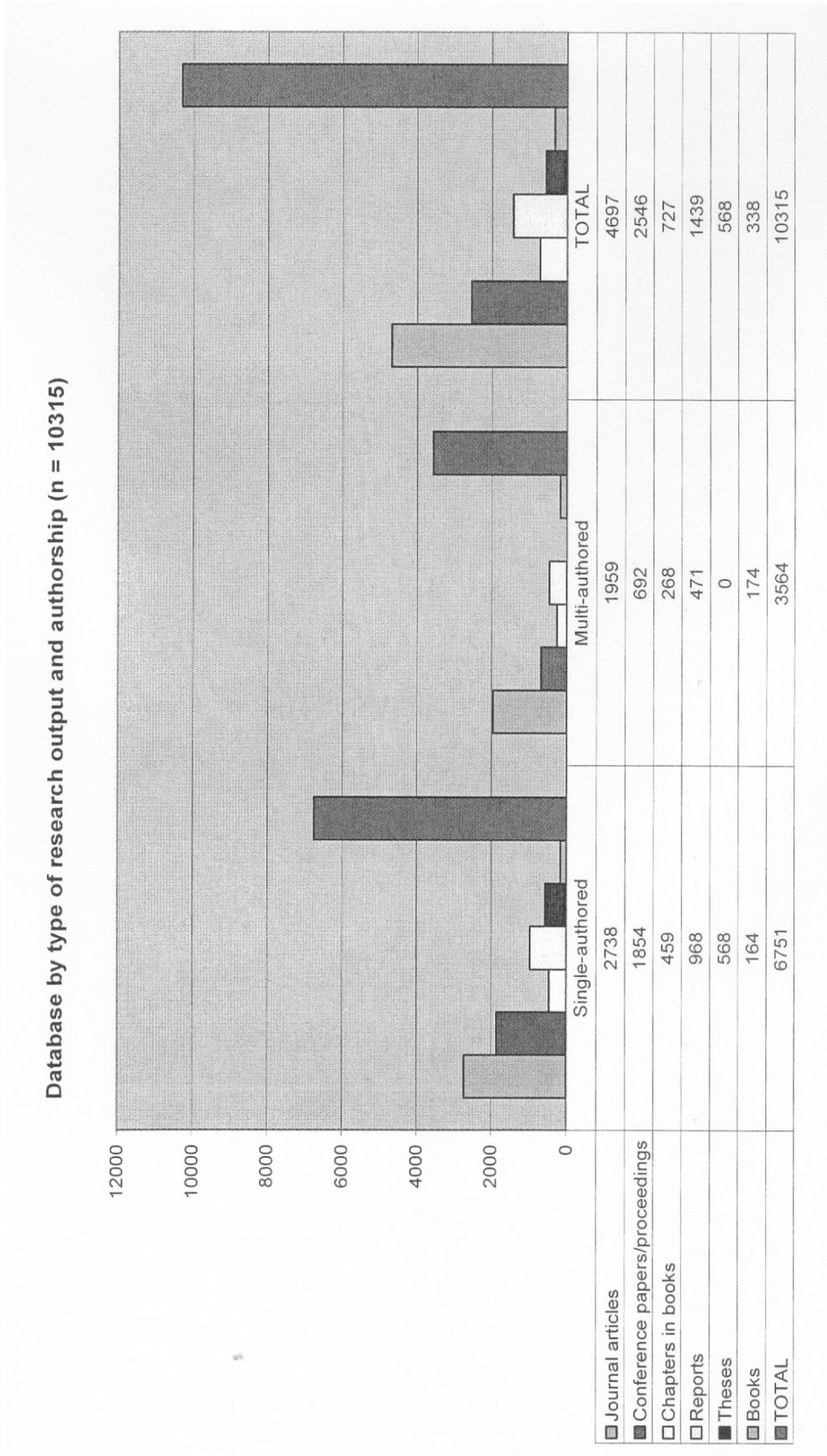
Findings: education research in South Africa

The study revealed that education scholarship is vibrant and substantial, but also largely diffuse, individualised and on a small scale, with a negligible number of large scale research projects which might be able to consolidate what is known about significant national and global issues.

Annual research output, types of research output and authorship

The annual output of education research in South Africa has fluctuated over the twelve-year period: the total quantity of research production increased annually from 1995 to 1998, briefly declined in 1999, increased again up to a peak in 2001, and thereafter leveled off, with a brief dip in 2004. In 1995, 541 research outputs of all types were produced; the 2006 output was almost double this figure, at 1027. The output of journal articles (which constitute 45% of the database) averages 391 per annum from 1995 to 2006. The output of conference papers and proceedings, and of reports, increases to peaks in 2000 and 2001, respectively, but do not sustain their increases. For the first six years (1995–2000), the quantity of output in most of the largest disciplinary/thematic areas seldom exceeded 100 per annum (with only educational theory and education management regularly exceeding this norm); this picture is unchanged for the last six years (2001–2006), with the exception that output in the areas of education policy and higher education studies now also more regularly exceeded 100 per annum.

Table 1: Database by type of research output and authorship



Of the 10,315 texts in the database, 45% are journal articles, 25% are conference papers and proceedings, 14% are reports, 7% are chapters in books, 6% are theses, and 3% are books. Some 35% of these texts are authored by more than one person, which provides an indication of the degree of research collaboration taking place. If one leaves aside theses, then conference papers and proceedings, followed by reports, are most likely to be single-authored, while books, followed by journal articles, are most likely to be multi-authored.

The largest proportion (45%) of the database thus consists of journal articles. Many (2,311 or 49%) of these journal articles were published in one of the following ten South Africa-based journals of education:

- 691 in *South African Journal of Higher Education*;
- 566 in *South African Journal of Education*;
- 336 in *Perspectives in Education*;
- 167 in *Africa Education Review/Educare*;
- 144 in *Journal of Education*;
- 124 in *Pythagoras*;
- 115 in *Education as Change*;
- 62 in *Per Linguam*;
- 54 in *African Journal of Research in Mathematics, Science and Technology Education*; and
- 52 in *Southern African Review of Education*.

Approximately 24% of journal articles in the database appeared in other South Africa-based journals like *Agenda*, *Die Kerkblad*, *Education Monitor*, *Health SA Gesondheid*, *Indilinga*, *Journal for Language Teaching*, *Koers*, *Quarterly Review of Education and Training in South Africa*, *Politikon*, *Social Work Practitioner-Researcher*, *South African Journal of Science*, *South African Journal of Library and Information Science*, *South African Journal for Natural Sciences and Technology*, *Southern African Journal of Environmental Education*, *Tydskrif vir Christelike Wetenskap*, *Tydskrif vir Geesteswetenskappe* and others. (The 24% figure is an estimate because it has not been possible to definitively verify the national base of all the journals in the database.)

The remaining approximately 27% of journal articles in the database were published in a non-South Africa-based journal, offering an indication of the extent to which South African education research is reaching a global

readership. Among these journals are several which each published a dozen or more articles on education research in South Africa from 1995 to 2006, including *Cambridge Journal of Education*, *Comparative Education*, *Compare*, *Early Child Development and Care*, *Gifted Education International*, *Higher Education*, *International Journal of Educational Development*, *International Journal of Learning*, *International Journal of Science Education*, *International Journal of Special Education*, *International Review of Education*, *Journal of Education Policy*, *Journal of Educational Studies*, *Journal of Negro Education*, *Language and Education*, *Quality in Higher Education*, *School Psychology International* and others.

The finding that most journal articles are published in South Africa-based journals accords with other research that suggests that most, if not all, local journals cater primarily for a local audience. Between 2001 and 2004, 76% and 73% of citations in the long-established *South African Journal of Education* and the *South African Journal of Higher Education*, respectively, were from South African-authored Thomson Scientific-indexed journal articles, with the smaller and more recent *Journal of Education* containing only 4.5% of such citations (ASSAf, 2006). In fact, most South African journals in all fields (not only education) have little or no international visibility, and during the period on which the present study focused (1995–2006), only two South Africa-based education journals achieved Thomson Scientific accreditation (namely, the *South African Journal of Education* and *Perspectives in Education*), and regrettably even these journals are rather poorly cited in international research (Tijssen, Mouton, Van Leeuwen and Boshoff, 2006; ASSAf, 2006; Deacon, Osman and Buchler, 2010).

Levels

In terms of the various levels at which education research is being undertaken, almost half (48%) of all research was found to focus on the classroom level, while 38% is systemic (i.e., regional, provincial, national or international) level research. Eleven per cent of research concentrates on the institutional level, with a tiny remainder (3%) concerned with out-of-school situations (including adult education and training, vocational training and home schooling, but not including formal higher education). Considered over the twelve-year period, classroom and systemic level research generally increase to a peak in 2001, before falling back slightly and then recovering again by

2005. Institutional level research also increases to reach a plateau between 2000 and 2003 and then declines somewhat, while out-of-school research remains fairly constant over time.

Scale

As noted previously, 'scale' was pre-defined by the NRF into the categories of large-scale, case study and small-scale research. Only five percent of research could be clearly identified as case studies (understood by the authors as detailed, firmly bounded and issue-focused research), and 1% could be classified as large scale research (defined by the authors as research involving 450 or more subjects, 40 or more schools, one or more educational sectors in their entirety, a province, the country or several countries). In effect, because the definitions underpinning both large scale and case study research were relatively clear and straightforward, the category 'small scale' became a catch-all for categorising the balance of the research output. As a result, 94% of all education research was thus categorised as small scale and often qualitative, ranging from experiential micro-studies through textual exegesis to small scale surveys.

Despite the dearth of large scale and case study research in the database, it is worth noting that large scale research triples in quantity during the 7 years from 2000 onwards (relative to the preceding 5 years), while the number of case studies also increases markedly during the same period. Much of this increase in large scale research is a reflection of a series of nation-wide studies in learner achievement and performance in the areas of numeracy, literacy and life skills. Comparing the scale of education research with the level at which it is taking place, most large scale research is at the systemic level, while most case studies are of classrooms.

Educational sectors

The formal schooling sector is, at 48% of the database, by far the greatest single focus of education research, followed by the higher education sector at 32%. A small but significant percentage of research (9%) focuses on teacher education, while Early Childhood Development, further education and training, adult education and special education make up the remainder in small proportions.

Within the formal schooling sector, systemic level research is most prominent, while classroom level research is at the forefront in the higher education sector. These two sectors have also attracted the most institutional level research by far. Systemic level studies are outnumbered by classroom level studies in all but three sectors: schooling in general, further education and training and adult education. The teacher education sector resembles higher education more than it does the schooling sector, with twice as much classroom level research than research at all other levels combined, and comparatively little institutional level research.

Case study research is concentrated in the schooling and higher education sectors, and to a lesser extent in the teacher education sector. Nevertheless, case studies represent only 7% of research done in the higher education sector, and only 4% of research done in the schooling in general sector.

Disciplinary/thematic areas

Most texts (63%) in the database have been categorised as being concerned with more than one disciplinary/thematic area. Taking this into account, 33% of all education research over the past twelve years is concentrated in four disciplinary/thematic areas: educational theory (or sociology and philosophy of education) (12%), education management (including governance, leadership and discipline as well as whole school development and school efficiency) (9%), education policy (including education planning, policy development and policy implementation) (6%) and higher education studies (referring to all aspects of teaching, learning, curriculum development, institutional change and management at the tertiary level, both public and private) (6%). A further 20% of education research is clustered in the disciplinary/thematic areas of teacher education (which does not include teaching in higher education) (5%), language studies (including linguistics and literature) (5%), educational psychology (including guidance, counselling, career education and life orientation) (5%) and academic development (treated as distinct from higher education studies albeit pertaining largely to this sector, and including academic support, academic literacy, tutoring, mentoring, supervision, school-university transitions, and issues of access and admissions) (5%).

The very strong showing of educational theory contradicted expectations that most research would prove to be practice- and policy-oriented and

consequently relatively atheoretical. The considerable interest in education management research adverts to changing conceptions of educational leadership and new participatory management structures and practices, as well as perennial concerns about discipline and institutional change. Education policy research also features prominently, as ought to be expected in a national context undergoing radical policy change, development and implementation, while the large amount of research in the relatively new but growing area of higher education studies reflects the significant and substantial transformation of the higher education landscape over the last decade, including a drastic reduction in the number of universities and several institutional mergers.

The strong showing of research in the disciplinary/thematic areas of teacher education, language studies, educational psychology and academic development demonstrates the importance ascribed, respectively, to new policies and practices such as outcomes-based education and continuous assessment in a context of poor levels of achievement in international comparative rankings, to the difficulties of learning – and also teaching – through the medium of a second language, to processes of identity formation and heightened stress consequent on educational integration, and to the reasons for and possible solutions to the phenomenon of academic under preparedness, especially at tertiary level.

It is worth noting that the thematic area of assessment (the tenth largest area in terms of quantity), apart from having proportionally the least amount of small scale research of all areas, boasts the most large scale studies: these include several learning achievement assessment reports which took place under the auspices of, among others, the Monitoring Learning Achievement (MLA) Project, the Trends in International Mathematics and Science Study (TIMSS), and the Southern Africa Consortium for Monitoring Educational Quality (SACMEQ). Education management also features a significant amount of large scale research, often having to do with issues of crime, bullying, racism and corporal punishment in schools. The highest proportions of case study research are located in the disciplinary/thematic areas of education management and educational theory, and often consist of explorations of the effects of changing education governance policies on particular schools and universities, or of empirically-grounded conceptualisations of cooperative learning, metacognitive development and the acquisition of academic literacy, respectively.

Systemic level research predominates in educational theory and in education policy, appropriately so given what might be called theory's inherent striving towards universality, on the one hand, and the weightiness of national policy developments, on the other. Nevertheless, the relatively small amount of institutional and classroom level policy research suggests that little is yet known about how policy at the systemic level filters down to or has effects at the level of individual schools and classroom practice. This may be partly offset by the many institutional level studies in education management, and to a lesser extent in higher education, which can be attributed to the importance of, and a strong interest in, the ongoing transformation of schools and universities, highlighting issues of governance, mergers, access and integration. Research in teacher education, language studies, educational psychology and academic development is overwhelmingly classroom-based; and classroom level research is also significant in educational theory, suggesting that a considerable degree of attention is being paid to the theorisation of everyday practice (in the form of cooperative learning, critical thinking skills and exemplars of good teaching).

Differentiating the largest disciplinary/thematic areas by educational sector provides yet another angle from which to view the database. Most educational theorising focuses on the schooling sector, with half as much attention paid to higher education and a third as much again to the teacher education sector. Most education management and education policy research is also aimed at the schooling sector, with 30% and 24%, respectively, of research in these areas devoted to the higher education and FET sectors combined.

Primary research themes

In the process of categorising the database, a random, unstratified sample of 600 texts was drawn in order to both assist the categorisation process and to help identify primary research themes in the literature. While neither these texts nor their themes can be said to be representative of the final database as a whole (compared with the final database, books, chapters in books and journal articles were over-represented while reports and conference papers and proceedings were under-represented in the sample, in the order of 5%), when considered in conjunction with the 20% of the database that is replete with aims and findings, they offer a glimpse of some of the more important issues that have been addressed by education scholars in South Africa since 1995.

The primary themes identified in the course of the textual analysis are organised below in terms of the eight largest disciplinary/thematic areas. Primary themes in the disciplinary/thematic area of *educational theory* include the critical application and assessment of constructivism, the relationships between disciplinary and applied knowledge and between theory and practice, and reflections on power relations, key educational concepts and ‘asset’ models of education. In *education management*, primary themes include the effects of educational decentralisation and devolution of power, the changing nature of leadership, discipline, and institutional and organisational cultures. Much *education policy* research tracks what is seen as overly idealistic policy-making in South Africa, exacerbated by implementation difficulties, and also undertakes a large amount of sector- and discipline-specific studies, such as higher education policy and language in education policy. Research under the rubric of *higher education studies* explores the political and institutional implications of higher education transformation, the dual focus on both equity and excellence, the emphasis on performance and productivity, assessment, accountability and autonomy. In *teacher education* the primary themes include the reconceptualisation of teachers as facilitators, the problems and possibilities of cooperative learning or group work, the use of educational support materials and resources, the nature of continuous assessment, and debates over teacher evaluation. Among the primary themes in *educational psychology* are the precise roles and functions of critical thinking and metacognition, the impact of stress on teaching and learning in changing educational environments, and the nature of individual identity formation. Poor language proficiency, especially in English, and the close connections between language, cognition and academic achievement, are the primary concerns of *language studies*, along with debates over the use in education of indigenous languages, or mother tongue. Finally, the disciplinary/thematic area of *academic development* focuses mainly on the transition from school to university, the ‘underpreparedness’ of incoming students and/or accepting institutions, the recognition of prior learning, and the acquisition of academic literacies.

It was also found that education research in South Africa is being conducted not only by educationists but by researchers from a wide range of disciplines and academic schools or departments, and this indicates the importance of such research for understanding and getting to grips with issues of social development in the country as a whole. Though the vast majority of education researchers are formally employed in university Schools, Departments or Faculties of Education, or education-related units, centres, NGOs and

government departments in South Africa, a small but significant degree of education-related research emanates from researchers in Schools or Departments of Anatomy, Anthropology, Computer Science, Economics, Environmental Science, Health, Information Science, Law, Physics, Physiotherapy, Psychology, Mathematics, Mechanical Engineering and Social Work, as well as from foreign researchers visiting the country and/or affiliated to South African universities.

Analysis and discussion of findings

In terms of the education research landscape in South Africa from 1995 to 2006, it can be said that much education research has been classroom-based, small in scale, focused on the formal schooling sector, concentrated in the eight disciplinary/thematic areas of educational theory, education management, education policy, higher education studies, teacher education, language studies, educational psychology and academic development, and with its annual output having increased over time to reach a certain plateau.

Most education research is on a small scale, but within that, most systemic level research is divided equally between large scale and case study research, and most classroom and institutional level research consists of case studies. Most education research, whether at a systemic, institutional or classroom level, is concentrated in the schooling and higher education sectors. Systemic level research is concerned in the main with the disciplinary/thematic areas of educational theory and education policy, institutional level research with education management and higher education studies and classroom level research with language studies and educational theory. Most large scale research is at the systemic level, while most case study and small scale research is at the classroom level.

The most important gap in education research in South Africa from 1995 to 2006 is that there has been hardly any large scale and quantitative research, which is tied in with the fact that, relatively speaking, there has been a great deal of small scale and qualitative research. The preponderance of small scale research, and the negligible number of large scale research projects, could perhaps be attributed, on the one hand, to ‘publish or perish’ pressures on academics and researchers to produce publications, a demand satisfied more easily, more quickly and more cheaply by small scale research than by sustained, long-term and in-depth research projects, and, on the other hand, to

the limited availability of research funding (some sources of which – particularly for NGOs – dried up after 1994, while other sources – especially for public universities – became increasingly regulated, while also being reduced), the equally limited availability and often poor quality and unreliability of existing (systemic) data, a widespread lack of research capacity and experience, and reduced time available for research due to increased teaching and administrative workloads (see Mouton, 2006, and Deacon *et al.*, 2010).

In addition, methodological and ideological proclivities – in terms of which progressive researchers in particular associated empirical and especially quantitative research with apartheid, positivism and capitalism (Taylor, Muller and Vinjevold, 2003; Diphofa, Vinjevold and Taylor, 1999) – and the intellectual rise of constructivism (Muller, 1996) reinforced the focus on small scale research. All these pressures are amplified in a society undergoing massive educational and social change, confronting researchers with the constant need to monitor, analyse and evaluate the effectiveness of recently introduced and mooted new developments and to reflect and report on change as a whole, and thus possibly encouraging a hurriedly reactive rather than a more measured and proactive research stance.

These issues relating to the largely small scale and qualitative nature of education research are not confined to South Africa, however. Reports on education research in the United Kingdom during the 1990s and until recently, including successive Research Assessment Exercises, suggest that, for various reasons including insufficient funding, most research is small-scale and qualitative, with few large-scale projects (Gorard, 2001; Christie, 2003; see also Murray, *et al.*, 2008). Similarly, a survey of education research in Australia during the 1990s found “an increase in both interpretative and participatory research, a decline in the large scale quantitative studies of the type school administrators seek to support policy decisions, and more small highly focused qualitative studies” (DEST, 2011, n.p.).

With particular reference to the South African case, however, these issues raise a number of critical questions for the education research community. One such question relates to the purpose of education research, particularly in the context of a developing country with extreme inequalities and widespread poverty. Without arguing that all education research should be policy- or implementation- or improvement-focused, and recognising the limitations of the ‘evidence based policy and practice’ movement (Lather, 2004), the

apparent extent of small scale education research in South Africa does raise the question of whether the limited research financing in education can support such extensive small scale research whose benefit to, and impact on, the education system is not clear.

However, this is not an either/or issue. In order to go beyond *description and documentation* of change to *advancing and implementing* change, education scholarship needs to turn to larger-scale or meta-analytical studies that synthesise, draw on and connect insights from the many small scale studies in ways that suggest more effective answers to the most powerful and enduring problems in education. With a sharper focus, more small scale research could become case study research; with bigger samples, more small scale research could become large scale research; while with stronger empirical foundations, more research of all kinds could become more useful and of better quality without being any less qualitative. All of these improvements will require more funding, but this will not be sufficient: the country's best and most established researchers also need to be encouraged to work more closely together in teams and networks (both intra- and inter-institutionally) which can design viable research questions, attract resources and expertise that can sustain the research, build on what is already known, communicate the thinking and findings to other researchers and to policy-makers and practitioners, and simultaneously train co-researchers and induct postgraduate students in the processes and methodologies of investigating issues identified by and under the oversight of panels of experts.

A second critical question emerging from the categorisation of 'scale' is a methodological one. Many of the difficulties that the CEPD/NRF study encountered in regard to categorising the scale of education research are related to how research methodologies are defined, and these have been documented in a parallel study which collected and analysed Masters and doctoral education theses (Karlsson, Balfour, Moletsane and Pillay, 2009). Karlsson, *et al.* found inconsistencies within institutions and between 'supervisor-researchers' around the categorisation and definition of methodological approaches and how these were (permitted to be) used in theses (Karlsson, *et al.*, 2009).

Importantly, too, Karlsson, *et al.*'s (2009) research parallels the finding of the CEPD/NRF study that most research is of a small scale and qualitative nature, in that 82% of postgraduate research was found to be qualitative. While the current predominance of qualitative research is not in itself objectionable, research in the United Kingdom on the quality of education research indicates

that many in the education research community believe that the quality of qualitative research is not as good as it should be, characterised by problems such as a lack of clarity and consistency in the categorisation of methodology, and a tendency for such research to be non-cumulative and also to over-generalise (Gorard, Rushforth and Taylor, 2004). Notwithstanding such issues related to categorising the scale of research, it would be immensely useful if future investigations in this area could give close attention to the possibility of breaking the category of small scale research down further into other or sub-categories, as well as making more specific use of 'methodological' categories such as 'quantitative', 'qualitative' or 'mixed'.

A third critical question relating to the largely small scale and qualitative nature of education research in South Africa has to do with the thematic areas being studied, as well as the level at which they are being studied. Given the general dearth of large scale research, any and all large scale projects at any level of the education system should be encouraged. In this regard it is worth noting that the thematic area of assessment boasts the most large scale studies, and that many of these studies in turn have taken place in the primary schooling sector. There are also many extant small scale research projects which could be taken up and extended, to ascertain if their findings could be replicated in other classrooms in other grades, schools or provinces. In addition, the Early Childhood Development sector, which suffers the inglorious distinction of receiving the least research attention among all education sectors, is a clear candidate for a large scale and quantitative, yet classroom-based, research project.

Only 11% of all education research focuses on the institutional level (referring to education-related environments like schools, colleges and universities and some NGOs and government departments). More attention paid to this level could help explain how the directives of policy-makers and planners are translated into practice, and whether and how everyday micro-events spread laterally to other institutions or filter back up to inform management and other stakeholders, and also provide useful comparative perspectives. Given that, hitherto, most institutional level research has been located in the schooling and higher education sectors, an ideal focus for the future would be the teacher education sector, especially now that this is concentrated in higher education institutions, or else the further education and training sector, given the recapitalisation of, and projected expansion of capacity in, this sector and the need to find new ways of addressing the country's skills shortage.

It is interesting to note that the disciplinary/thematic area of education finance is among the ten *least* researched areas, along with rural education, history of education and arts education, but it is quite promising that research into issues around HIV/AIDS is *not* among these ten least researched areas. A number of other areas and sectors appear to be under-researched: very little research in education policy makes explicit reference to the ECD sector, very little education management research refers to the adult education sector, and research in the area of teacher education hardly touches on the adult education, ECD or FET sectors.

In addition, certain research topics or themes do not appear to have received much research attention. First, in an economic context crying out for scarce skills of every description, very few texts in the entire database directly address the problem of the skills shortage in the country. Second, while the issue of race is inherent in almost every aspect of South African society, little education research explicitly or directly addresses race or racism, or even discrimination in general, but seems instead – for good or ill – to subsume these issues within debates around diversity and uniformity, and difference and identity, while the body of work on critical race studies in education remains very small. Third, without going so far as to suggest that gender analysis is missing from education research, gender effects and features pervade all aspects of educational life, from HIV/AIDS to national identity, to such an extent that gender analysis ought to be a more explicit component of all research. Last but not least, amidst a plethora of research on teacher education, there appears to be astonishingly little on what teachers themselves actually want, or on their views, attitudes, desires or expectations with regard to the current and future state of education, or on what they think about themselves, not least given that their profession is currently held in low esteem.

Conclusion

These broad trends, strengths and weaknesses in education research in South Africa are, as indicated above, not unique to the country. Given South Africa's immense educational challenges, however, much more focused, pertinent and thus directly useful research needs to both emanate from and also feed back into the undoubtedly growing enterprise. In addition, more all-encompassing overviews of research are required, so as to guide individual researchers, research teams and postgraduate students alike towards areas in particular

need or which may benefit from different methodological applications. Such overviews would also help to augment, refine, extend and keep up to date databases such as the one on which this paper has drawn. Most importantly, it is hoped that the availability of this database, and the fact that it consists of too many rather incremental, even indiscriminate, pieces of research, will prompt greater communication and collaboration among researchers with a view to building stronger, more informed and indeed more synthesised bodies of work which can address South Africa's pressing educational problems in a more concerted manner.

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