2012

The State of Graduate Teacher Transition to the Labour Market

Nolutho Diko and Theniiwe Meviwa

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Preface

One of the gravest economic challenges facing South Africa is high unemployment, but at the same time, a skills mismatch. The market demand for skilled labour is greater than the number of individuals completing post-school education and training. Prospective employers often complain that the education system does not give individuals the necessary skills to be productive in the workplace, or to start their own enterprises.

Government acknowledges that the unemployment crisis is a systematic problem and cannot be addressed by ad hoc interventions scattered across line departments. With this 'big picture' thinking in mind, DHET aims to create broad and equitable access to a full spectrum of post-school opportunities and lifelong learning encompassing adult education and training, workplace training, the FET college system, artisan and technical training, higher education and innovation.

DHET's ability to create these learning opportunities requires a network of partners to gather and maintain a labour market intelligence system. Such a system can provide analytical insights to support policies and intervention programmes.

In February 2012, therefore, DHET commissioned a HSRC led research consortium to support its capacity to create and maintain a labour market information and intelligence system, guided by the national Delivery Agreement 5. The primary focus is the development of a 'strategic intelligence capability' towards the establishment of 'a credible institutional mechanism for skills planning'. The HSRC coordinated research project is organised in terms of six interlocking research themes, two which focus on labour market information and four which focus on labour market intelligence:

- Theme 1. Establishing a foundation for labour market information systems in South Africa
- Theme 2. Skills forecasting: the supply and demand model (a Wits EPU project)
- Theme 3. Studies of selected priority sectors
- Theme 4. Reconfiguring the post-schooling sector
- Theme 5. Pathways through education and training and into the workplace
- Theme 6. Understanding changing artisanal occupational milieus and identities

The consortium made a strategic decision that their research must not duplicate or repeat existing research about the challenges facing South Africa's education and training system and labour markets. Their research must address gaps, promote synergies and explore complementarities.

Hence, as a first step, working papers were commissioned to inform the research agenda for each theme. Although the working papers cover different issues, each has four common dimensions: policy challenges to institutionalise and build a post-school education and training system in South Africa, lessons from seminal national and international research, conceptual frameworks, methodological issues and data challenges raised by this research, and potential research gaps.

One of the HSRC led consortium's goals is to create a living community of practice that researches and debates education, skills and labour market issues. These working papers were presented at a conference in May 2012 to start building such a research network.

The dissemination of these working papers is intended to encourage more individuals to join the research community. We look forward to individuals' comments. They can be emailed to agoldstuck@hsrc.za.za. Welcome to the research community!

Theme 1:	Theme 3:	Theme 4:	Theme 5:	Theme 6:
Establishing a foundation for labour market information system in South Africa	Studies of selected priority sectors	Reconfiguring the post- schooling sector	Pathways through education and training into the workplace	Understanding changing artisanal occupational milieus and identities
Simon McGrath	Haroon Bhorat and Morne	Andre Kraak	Michael Cosser	Angelique Wildschut
Some international reflections on	Oosthuizen	Private post-school education	Pathways through education and	Conceptualising the study of
developing VET indicators	Studies of Selected Priority Sectors	in South Africa	training and into the labour	artisans
	in the South African Labour Market:		market	
	A Proposed Research Programme			
Phil Toner	Peter Jacobs and Tim Hart	Andre Kraak	Pundy Pillay	Jeanne Gamble
Establishing a foundation for	A critical review of the research on	Differentiation in the post-	Pathways through education and	Models and pathways to
labour market information	skills development in rural areas	school sector	training and into the workplace: a	institutionalise
systems in South Africa			concept paper	apprenticeships
Anthony Gewer	Shirin Motala	Joy Papier et al	Sharlene Swartz	
Developing a framework for	A critical review of research on	Contemporary issues in public	Navigational capacities for youth	
institutional planning and	skills development and labour	FET colleges	employment: A review of	
monitoring in FET Colleges	market demand in the early		research, policies, frameworks	
	childhood development sector		and methodologies	
Carmel Marock	Thembinkosi Twalo	Veronica McKay	Fiona Lewis	
Developing a framework for	A comparative review of skills	A critical review on Adult	Traffic jams or trees – how are	
understanding SETA	development in cooperatives	Basic Education (ABET) in	South African youth progressing	
performance: Monitoring and		South Africa	through the higher education	
evaluating their role in skills			sector? And what lessons can we	
planning, steering and enabling a			learn from current studies?	
supply within their sector				

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Bongiwe Mncwango Towards a demand side firm level survey of labour information in South Africa	Margaret Chitiga and Stewart Development of a national skills forecasting model	Thenjiwe Meyiwa and Nolutho Diko The state of graduate teacher transitions to the labour market	Stephanie Alais Jobs? What jobs? Skills? What skills?An overview of studies examining relationships between education and training and labour markets	
Michael Cosser and Fabian Arendse Education and labour market indicators	Imraan Valodia Conceptualising skills development in the informal sector	Felix Maringe An overview of studies exploring systemic issues related to the South African post-school sector		
Joan Roodt National database sets and research on labour market demand		Peliwe Lolwana Is post-school education adult education and training? The shape and size of post-school education		
Mariette Visser National database sets available for post school sector (supply side)		Michelle Buchler A critical review of research on skills development qualifications structures		
Michael Gastrow Innovation, skills development and South African labour market intelligence		Volker Wedekind Towards responsiveness and employability in the post- school sector		

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EXECUTIVE SUMMARY

Education has a critical role to play in the broader economic and social development of communities. Integral in any education projection are teachers that are skilled and are able to offer quality education. Various kinds of both national and international literature and research studies (e.g. Lewin, 2004; OECD, 2005 & 2006 and Kruss, 2009 – to list a few) concur that teachers are the most important resource in schools in any drive geared towards raising education standards. Subsequently, this concept paper, *The State of Graduate teacher Transition into the Labour Market* provides a broad overview of literature, research studies and policies related to teacher education.

South Africa's Department of Education and the Department of Higher Education and Training, acknowledging the vital role of teachers, has over the years, established a suite of policies, and curriculum and structural changes in an effort to (i) produce more teachers as well as (ii) produce better-skilled and capable teachers. However, the realities at the coalface reveal that, despite the fact that both policies and the curriculum have changed, a number of challenges abound within the education sector. Thus, in order to enhance teacher professional development, a more nuanced understanding of teacher trainees and new teachers is necessary.

The paper provides an analytical synthesis of:

- firstly, teacher education policies, taking into consideration the country's political and historical context;
- secondly, teacher recruitment, supply and demand; and
- thirdly, and finally, identified research gaps in teacher education with some methodological recommendations.

1. INTRODUCTION

South Africa's Department of Higher Education and Training (DHET) has a daunting task ahead and that is to produce 12 000 *skilled and capable teachers* by 2014 and 18 000 by 2019. Such a formidable task is informed by the Department of Higher Education (DHET) and Department of Basic Education's (DBE) Integrated Strategic Planning Framework for Teacher Education and Development in South Africa 2011 – 2015 (DBE & DHET, 2011) and the state-led agreed-upon 12 outcomes which have been expressed through the national Delivery Agreement 5, i.e. paving a path towards producing *a skilled and capable workforce to support an inclusive growth path*.

Compounding the challenge - producing enough highly skilled teachers - is the uneven nature of teacher competencies, the uneven nature of the supply and demand of teachers with particular skills and certain schools being more affected than others. In addition, there is a lack of reliable information about the true state of affairs of the said challenges (DoE, 2007). This is why the two departments, DHET and DBE came up with a plan to work on improving teacher education and providing the schooling sector system with enough skilled teachers collaboratively. This paper, *The State of Graduate Teacher Transition into the Labour Market*, is written in response to the *HSRC's Labour Market Intelligence (LMI) Research Project request to write a state-of-the-art paper* that:

- Focuses on teacher education policies, graduate teacher transitions and choice and returns
 on investment in education and training in relation to the sub-theme Graduate Teacher
 Transitions to the Labour Market,
- Locates teacher preparation and employment, education and training and labour market transitions, in terms of policy challenges, particularly in relation to the Delivery Agreement 5.2 and 5.3,
- Summarizes research that has been conducted in the teacher education field, clarifies the
 conceptual frameworks that shape this research, highlights methodological issues and data
 challenges, and
- Proposes further research that could be required within the teacher education subject field
 in order to better respond and contribute towards an inclusive growth-path agenda of
 producing a skilled and capable teacher workforce.

In engaging in this exercise, we reviewed related research and reflected on issues that have influenced and shaped South African teacher education and the teacher labour market over the years. Contributors to this paper conducted a literature search of selected key empirical and desktop studies covering the apartheid era and the first sixteen years of democracy; they selected from them themes that are transnational and seem to have endurance in focus, summarized and provided a brief report on them herein.

The review we offer is an overview of the situation at national level and thus deliberately states very little about provinces and institutions. This decision was taken to provide a delimited kind of literature and focus due to the limits of the terms of reference. Within these limits, trying to cover the national arena and the nine provinces at the same time and still offer in-depth analysis of the state of affairs in teacher production and the transitions into the labour market would have been a challenge. In addition, it is worth pointing out that the length of the sections of this paper is not a reflection of their importance; it has more to do with the sum-total of research conducted on that theme to date.

We did not include every study on each theme; we chose studies that have been deemed to have been influential in the field as well as studies taking us to the next phase of this work, with the intention of better identifying gaps and persistent challenges in the targeted research. We also identified topics that may need further exploration. The proposed projects will deploy a wide set of

research strategies, including a combination of quantitative and qualitative methods, as well as comparative and regional research. Other research institutions, universities and students would therefore be an integral part of research projects to which this concept paper refers in order to enhance and build research capacity. It is hoped that ideas expressed in this paper will have an impact on policy-makers, teacher educators, the wider research community and the general public. This can be achieved through regular stakeholder consultation, on-going publication of research results and engagement in public debate related to teacher education.

2. TEACHER EDUCATION POLICIES AND RELATED ISSUES OF TEACHER PATHWAYS

2.1. International context of teacher education

The development of productive and educated human resources is central to all developing countries. In the post-Cold War, due to the global economic order (Hofmeyr and Hall, 1996; Jansen &Taylor, 2003), South Africa aligned her policies with the 'international order'. The national dialogue had to accommodate international debates. Consequently, especially after 1996, a strong line about the relationship between education and economic growth, investment in human resources and human development, curriculum revision and student achievement was drawn from all education and training policy documents (Breier, 2001; Parker, 2003; Lewin et al., 2003). The process of education reconstruction and development became intertwined with fiscal stabilisation at one and the same time (Sayed & Jansen, 2001; Parker 2003; Fiske & Ladd, 2004). In essence, the tone of radical changes which had been embraced by anti-apartheid studies was 'muted in the new policies'.

Changes in higher education (HE), which we discuss in the next section, had an impact on teacher education reform. Additionally, there were international perspectival shifts happening synchronously with the national changes within South Africa. According to this view, teachers matter and are the most significant agency in the efforts to improve education outputs or efficiency (Stuart & Tatto, 2000; Adler & Reed, 2002; Cochran-Smith & Zeichner, 2005; Schmidt et al. 2011). Consequently, a new wave of international teacher preparation, which promotes borrowing and globalization of policies on how to recruit, prepare and retain better and skilled teachers, took shape. South Africa is unequivocally part of this dynamic and it strives to prepare teachers in ways that promote meeting the needs of the knowledge economy (Kruss, 2008; Breier & Mabizela, 2008).

2.2. POLITICAL AND HISTORICAL BACKGROUND OF SOUTH AFRICAN TEACHER EDUCATION

To understand contemporary teacher education and the teacher labour market, it is important to understand teacher education under apartheid. Such understanding provides a historical background to current teacher education and fosters appreciation of the complexities that beset the system such as:

- multiplicity of segregated teacher training institutions that were not responding to the national plan,
- top-down separate governance structures,
- inequitable budgets that made the system costly,
- inadequate and differentiated curricula, varied qualifications structures, weak quality controls and quality assurance measures,
- shortages of teachers and under-representation of Blacks in certain subject areas and phases,
- domination of Whites and males in the high level end of the teaching profession

- producing more teachers than the system could absorb and
- misalignment between the national plan and the teacher labour market (Sayed & Jansen, 2001; Adler & Reed, 2002, Kallaway, 2002; Welch & Gultig, 2002; Samuel & Sayed, 2003; Jansen & Taylor, 2003; Parker, 2003; Sayed, 2004; Jansen, 2004; OECD, 2008; Morrow, 2007; CHE, 2009).

Acknowledging these complexities and having an understanding of the problems helped the new government in planning for change. Within the context of implementing equity and in order to redress policies, there was a drive to align policies with global markets. In attempting to respond to the problems with which the new government was faced, they initially found there was a lack of useful data to fully assess the situation. There was no central repository, empirical evidence or records of the exact problem of teacher production, deployment and utilization as well as the accompanying wasteful duplication of resources and overlap (Sayed, 1995). To get a better systemic overview of teacher education, in 1995 the Department of Education commissioned the National Teacher Education Audit. This study mapped teacher demand, supply and utilization of teachers, and evaluated all the nation's teacher institutions and teacher education programmes (Hofmeyr & Hall, 1996). Specifically, the study addressed issues of:

- > Teacher supply, demand and utilization,
- > Teacher quality, and
- Multiplicity of institutions of teacher training, qualifications and curricula.

The audit found that the 281 institutions offering in-service and pre-service teacher education to 481 000 students comprised of universities, technikons, and colleges of education, private colleges and non-governmental organisations. It was also found that the quality of teacher education was generally poor, inefficient and not cost effective. The recommendations of the audit thus suggested, among other things, rationalization and repositioning of teacher education institutions and proper response to, and planning in line with, higher education national competence, as prescribed by the 1996 RSA Constitution and the Higher Act of 1997.

2.3. THE REFORM OF TEACHER EDUCATION AND RELATED POLICIES

2.3.1. Policies, reforms and decentralization of teacher education

In analysing the state of teacher graduate production and the related teacher labour market, it is important to begin with an analysis of the relevant policies, laws and regulations that the democratic government put in place to govern teacher education, the implementation thereof and the associated consequences. Studies of democratic education policy abound. Depending on the lens adopted, they all tell a similar story relating to the restructuring of higher education. Policy frameworks were formulated with the intention of bringing about development, equity, participation and redress (De Clercq, 1997, Samuel, 2001; Cross et al. 2002). These intentions are explicated in the RSA constitution of 1996.

The South African Constitution identifies restructuring and transforming of higher education and teacher education as a means to better respond to the economic and development needs of the country (RSA, 1996). Dr Ben Parker, who worked for the Department of Education (DoE) between 1999 and 2000, gave a first-hand account of the unfolding of the events of how this constitutional mandate was effected; Samuel (2001) and Chisholm (2009) also provide a brilliant portrait of the unfolding of the teacher education revolution process. From the literature we reviewed, we identified the following periods that frame the process of teacher education transformation:

- 1990 to 1994 was a period of stagnation on the government side but not on the side of the government in waiting as preparations for reforming education were underway. Concerns were issues of equity and quality and not of financial and human resources
- 1994 to 1996 manifestation of policy in the form of new structures, role-players and authoritative bodies. This phase, according to Samuel (2001), was a phase of 'reconstruction through restructuring'.
- 1997 to 1999 appraisal of the policies within the context of Growth, Employment, and Redistribution (GEAR), the macro-economic policy framework adopted in 1996. GEAR sought to achieve efficiency, expected the system to have a reasonable throughput, a good retention rate and growth in student intake (Cloete, 2004).
- 1999 to 2004 limitations of re-distributional logic began to emerge and threats of declining teacher education enrolments, the HIV/AIDS pandemic and teacher migration, threw the teacher labour market into turmoil. Studies, such as the HSRC-led ELRC study in 2005 commissioned to get a sober understanding of this situation, emerged. Studies re-evaluating supply and demand issues (Crouch and Lewin, 2002; Morrow, 2006)) pointed to a state of panic. Despite this, there some studies were showing that there were enough teachers in the system (Diko & Akoojee, 2009)
- 2004 to 2008 was the consolidation and strengthening of teacher preparation and development.

Responding to the demands of the RSA Constitution of 1996, the White Paper of 1997, and the National Education Policy Act (NEPA) (RSA, 1996), the government democratized and decentralized governance of education by establishing one national department of education and nine provincial departments of education. To support these structures the Council of Education Ministers (CEM) and the Heads of Education committee (HEDCOM) were established. There are also other committees that were tasked to assist the Minister, as for example, in the higher education sector, the Council for Higher Education (CHE) was established. The responsibility of these committees was to assist the Minister of Higher Education with quality-assuring higher education.

After the establishment of the various inter-governmental forums, they worked collaboratively with the Minister of Education on redeveloping higher and teacher education structures and policies (Parker, 2003; DoE, 2005). The Minister of Education, after consultations, used the Higher Education Act of 1997 to establish, declare, merge and close public institutions of higher education, including colleges of education (Parker, 2003; Peltzer et al., 2005; Kruss, 2008). This change has been referred to as refreshing because until 1994, the production of policy in South Africa was a bureaucratically-centralised, racially-exclusive and politically-authoritarian state business (Sayed & Jansen, 2001). Under the new dispensation, the process was participatory and inclusive. Carrim and Sayed (1992), Sayed (1995), Sayed (2000), Sayed and Jansen (2001), Jansen & Taylor (2003) explore the role of the state of teacher education restructuring.

The levers for systems change were multiple. One of those was the creation of a national qualifications framework (NQF) that would be responsive to the labour market needs. It was instituted along with the accountability systems as well as curriculum change through the introduction of the norms and standards for the educators' policy (NSE) of 2000. This policy brought a shift in teacher-education curricula from a content approach to a competence approach (Parker and Deacon, 2002). It stipulates that teacher education curricula must ensure that theory and practice are integrated, and that teachers demonstrate knowledge of the subject/learning area, ways of teaching it and practical teaching competence. To emphasize the importance of teacher competence, in 2011, the DHET legislated the Minimum Requirements for Teacher Education Policy. This policy stipulates knowledge mixes as well as their ratios. This is the manner in which most countries approach the competency issue (Schmidt et al. 2011).

Structural adjustment policies in developing countries tend to link education reform to macroeconomic stabilization, and South Africa has not proven to be different (Chisholm et al. 1999). The fact that the country demands new kinds of workers who should be prepared for the globalised realities in the 21st century (Kraak, 2000, 2008, Breier & Mabizela, 2008), was in every major policy document. Teacher education discourses followed suit. They quickly changed to include discourses associated with globalisation, such as competencies, restructuring, governance, mergers and so on (Jansen, 2001).

There was a slight problem for the new government with regards to how the country's human capital was produced. Fund allocations were unpredictable, irregular, and characterised by weak accountability and bureaucracy (Pillay, 2004). Instead, continues Pillay, the quality of education and the stock of human capital were determined by the state of regional economy. On 26 April 2007 the then Minister of Education, Naledi Pandor, presented the National Policy Framework for Teacher Education and Development. It set out to change the irregular funding distributions. In turn, it encouraged prospective students to make teaching a career of choice as it now made funding available for students who wished to pursue Initial Professional Education of Teachers. These funds are meant to attract students of high academic performance who will commit to teaching in high priority areas (DoE, 2007), however, it has been pointed out that what happens at the coal-face is different. Parker (2005) asserts that students with good matric results, especially in mathematics, choose studying areas they think will be more rewarding than teaching.

In addition, the National Policy Framework for Teacher Education and Development today caters for the on-going professional development of teachers. It encourages and motivates teachers to remain in the profession for long by providing for incentives for teachers who participate in professional development activities and funding for teachers opting for the priority fields of study; for example, foundation phase teaching, and teaching subjects such as English, Mathematics, Science and Technology. Attempts at strengthening the sector were further realised in setting up structures such as the South African Council for Educators (SACE) with the responsibility for the registration of qualified teachers, and the South African Qualifications Authority (SAQA). SAQA, with its educator-n-schooling qualifications, works collaboratively with DHET and DBE in keeping the process on track and in check.

The DoE (2007) also provided another avenue which allowed schools to provide quality, skilled teachers by recruiting teachers from other countries. It could be argued that this short-term plan is a means to an end but it is not an end in and of itself.

2.3.2. Teacher education research

Teacher education policies and practices are intertwined with teacher education research. Under apartheid, research was conducted mainly by the government or government related institutions. It documented information to support the apartheid government and anything that was opposed to it was not entertained. This means the momentous changes described above, affected research as well. As a result, changes characterize contemporary teacher education too and they affect teacher education policy and practise, as well as teacher education research, in a considerable way. Clearly, studies of teacher education are connected to studies of teacher education research.

Chisholm (2002) and Jansen (2003b) posit that, post-apartheid, education research has changed fundamentally. Not only did the process of research change by involving more institutions and people than before, but the areas being researched as well as modalities and methodologies, also have changed. Jansen, observing how some studies continue to encourage and support weak or bad education policies, encourages critical approaches to research, noting that if researchers are

uncritical, they run the risk of blindly supporting government work and failing at being critical in approach.

The first group of education studies to come out of post-apartheid were policy studies followed by implementation studies. These studies followed global trends and patterns. International experts and donor agencies, to a large extent, were drivers of education research during the first years of the democratic government (Samoff, 1997). Following restructuring of teacher education and the standardization of qualifications and curriculum, universities and other South African institutions took ownership of research and the focus became more and more on producing quality teachers. The country's labour, economic and education agendas coincided with the studies. Parker and Deacon's (2002) review of the writings of teacher educators is a reflective interplay between systemic policy changes and practice and research activities of teacher educators.

The fact that teacher education has expanded to include or accommodate other orientations and to incorporate international perspectives has opened the field up even with regards to research methods. Research collaboration and mixing of methodologies or using multi-disciplinary approaches is very common now. Research consortiums including researchers from the same or varied organizational and institutional backgrounds is displayed in studies such as the collection by teacher educators in Adler and Reed (2002) and in Lewin, Samuel and Sayed (2005). A collaborative teacher-education study by the CEPD led consortium conducted a suite of studies to inform policy formulation and implementation regarding the organisation and practice of teacher education.

The partners in the study, CEPD they being (the Centre for Education Policy Development) the Centre for Evaluation and Assessment at the University of Pretoria, the HSRC, and the South African Institute for Distance Education possess considerable research expertise and experience and have the capacity to produce influential studies. The HSRC studies on teacher supply and demand provided a comprehensive analysis of why there was an impending shortage of teachers with the potential to threaten the human resource needs of the country. In addition, Paterson and Arends (2009) provide valuable demographic information for planning and management purposes with regards to the profile and quality of the teacher education workforce. Cosser (2009) adds value to this information as he studied student choices, a topic that was not getting enough attention at the time and yet it had the potential to make or break the government's goal of producing enough teachers.

Studies such as these have both a qualitative and quantitative flavour and have the potential to develop new research methodologies or to use approaches not always popular in education. Clearly, there is consensus about using research as one of the pillars to provide more and better teachers. The calls may be motivated by different goals and traditions but being dissimilar does not mean these goals are mutually exclusive, therefore, drawing together a range of researchers, with different research expertise and methodological orientations, to explore and debate teacher education has the potential to improve and strengthen teacher education significantly and thus contribute to DHET and DBE's vision to produce sufficient and better-quality teachers.

2.4. Institutional changes or reconfiguration

The post-apartheid government inherited a teacher education sector consisting of colleges of education, technikons and universities. The National Commission on Higher Education, commissioned by Professor Bhengu, set the platform for the restructuring of higher education but nothing happened until Professor Asmal's era. By this time the country had adopted a stringent macro-economic programme. And thus, the reconfiguration of teacher education happened within the context of the twin logics of the transition, i.e. the logic of resolving the apartheid legacy in higher education and the logic of incorporating the higher education system within the context of a

competitive, globalised economy (Reddy, 2001; Jansen, 2003a, p:32; Reddy, 2003; Breier & Mabizela, 2008). The notion of mergers was first revealed in the Council of Higher Education (CHE) report in 2000 and then in the National Plan for Higher Education in 2001. Change in teacher education was a result thereof and took place in two stages, namely: the incorporation of colleges of education into higher education and the merging of institutions of higher education.

After the Minister of Education had announced the mergers, there was a flurry of activities. Certain institutions and qualifications were targeted for closure. Some were allowed to continue if they could attract at least 2000 students but the climate was not conducive to such and all teacher training colleges ended up closing or merging with universities. Researchers located within these restructured institutions and external researchers began studying what these processes would mean. The configurations of the new institutions varied and they experienced the trajectories of restructuring in different ways. Lewin et al. (2003) present a number of case studies showing the varied forms of restructuring that resulted. Kruss has studied this phenomena closely too. In one of her teacher education studies, Kruss (2008) investigated curriculum restructuring and the new configurations and how these influenced teacher-education. She reported her findings in two separate monographs (cf. Kruss, 2008 & 2009).

Studies of institutional redress have disquietingly observed that the process had the unintended consequence of decreased student enrolments. This unfortunate dynamic played itself out in many ways. As stated by a variety of scholars, it contributed to bringing decreases in enrolments in historically-black universities and increases in their historically-white counterparts (Welsch & Gultig, 2000; Jansen, 2002; Jansen & Taylor, 2003; Reddy, 2003; Cloete, 2004; Kruss, 2008). Jansen (2004) and Welsch and Gultig (2000) comment that, for institutions training teachers there was a reduction in the number of students who registered for teacher education, generally. This, according to them, was because black students enrolling in formerly-white institutions were not choosing teaching, even though their enrolment numbers were increasing in higher education. Moreover, initial teacher training providers were now concentrated in the richest provinces thus decreasing access to students in the poorer provinces, and consequently contributing to further reduction in recruits.

The problem of teacher shortages, especially in qualitative shortages, is troubling the government of the day.

In the following section we focus on the recruitment, supply and demand of teachers and we cannot do justice to the topics if we do not review, among others, government studies or government-commissioned studies, the National Teacher Education Audit of 1995, HSRC studies, and CEPD studies.

3. TEACHER RECRUITMENT, SUPPLY AND DEMAND

Education and training is recognised as a large factor in the success of all of the government's socio-economic programmes (Kraak, 2008). HE institutions are expected to produce highly-skilled and dedicated professionals who will respond to national innovation and development needs. This goal is similar to the DHET and DBE goal of producing enough highly-skilled teachers as expressed in the Integrated Strategic Planning Framework for Teacher Education and Development — to which we refer in the introductory section of this paper. Provincial education departments and schools have a huge role to play too. They are expected to attract, recruit and retain some of the best teachers.

3.1. TEACHER RECRUITMENT AND RETENTION

Teacher recruitment is an important aspect of education planning and yet little attention is paid to it (Patterson & Arends, 2009). Ideally, recruitment should include attracting people to train to become

teachers as well as the human resources management procedures involved in employing a teacher. Employment of teachers is a provincial government's competence but School Governing Bodies (SGBs) have the right to interview and and make recommendations as determined by the Employment of Educators Act of 1998 (DoE, 2008) – a system that is fraught with challenges (Diko & Akoojee 2009). This study confirms the assertions by the government that one of the challenges provincial education departments have is recruiting and retaining teachers for rural schools, especially for mathematics and science (DoE, 2005; DoE, 2007). In fact, the National Policy Framework for Teacher Education and Development emphasizes that 'decisive measures' are needed in order to increase the supply of teachers in the country. The situation seems to be the worst for Foundation Phase teachers, especially black ones. The two biggest teacher unions are of the view that the shortages warrant re-opening of the colleges. Of course, at this point one cannot say with surety that reopening of teacher colleges would solve the problem because currently, institutions of higher education, even though they are few in numbers, are struggling to attract new recruits. It seems as though the problem at this point resides more with the attractiveness of the profession.

Another challenge that impacts teacher supply is the aggressive recruitment of South African teachers by other countries, especially the United Kingdom, (Manik, 2007) and the recruitment of those who do not wish to leave the country but to leave public schools, by private schools (Diko & Akoojee, 2009). Beginner teachers' problems with getting jobs are another factor adding to supply problems. There are teachers who are teaching out of field but there is no reliable data about the extent of the problem. Arends (2008) conducted a pilot study on this phenomenon. From that study, it became apparent that there was a need to conduct research on how many teachers are now teaching out of field country wide. Schools need to adopt stringent policies with regards to attracting and recommending candidates for filling of positions. Provinces need to update databases on teachers in the system.

Retention is also high on the list of government priorities. Brenda Ntombela of the Human Resource Development Council of South Africa (HRDCSA) details these priorities in a presentation on the role of the HRDCSA in driving the agenda to deliver a competent human resource base for SA 2030 (Ntombela, 2012). The government is seeking ways to improve conditions of employment for teachers. This includes paying attention to issues around class sizes, salaries and incentives, assessment, induction and so on. The government has also adopted strategies that focus on IPET programmes such as getting information on, and understanding enrolments in the various teacher education programmes, and the related outputs as well as information on who enters and leaves the teaching profession. At the moment, the four-year BEd programme has the unenviable task of being responsible for supplying the system with most teacher graduates (Morrow, 2006). Evidently, these sources are insufficient, thus we argue that the South African teacher education system needs aggressive and competitive recruitment strategies. At the moment, recruitment strategies focus mainly on high school graduates, university students enrolled in programmes other than education, under-qualified teachers, out-of-field teachers, people from other fields and South African teachers teaching in other countries. However, high school graduates seem to be more responsive than the other sources. This status quo is worrying especially with recruitment drives for education and other professions subsequently intensifying since the de-racialisation of higher education. Concerted and systematized recruitment strategies need to be explored if education is to compete.

3.2. TEACHER SUPPLY

The findings of the teacher audit report of 1996 about the size and the shape of teacher supply had two very huge impacts: teacher rationalization and the reduction of institutions preparing or producing teachers, which we have discussed at length already.

The government introduced a policy that was driven by information that proposed demand-led, centralised teacher redeployment (Chisholm, 2009). Teachers who were in excess were offered opportunities to move to understaffed schools or to take voluntary severance packages (Chisholm, 1999; Peltzer et al. 2005; Crouch & Perry, 2003; Chisholm, 2009). Where there was a need for new teachers, they were employed on contracts, sending a message that they were not needed. This resolution, according to Chisholm (1999), ignored supply side solutions, which was a mistake.

Soon after the rationalisation processes, Crouch and Perry (2003) were forecasting looming shortages. Ramrathan (1999), supporting them, noted that fields such as mathematics did not have an adequate supply of qualified teachers. Morrow (2006) emphasizing the Foundation Phase challenge noted that of the 6000 graduates that were to be produced by universities countrywide that year only 4% were Africans. Despite the panic, the 2005 DoE report, *Teachers for the future: meeting teacher shortages to achieve education for all* acknowledged that there were no quantitative shortages at that point but the impact of HIV/AIDS on the teacher labour market was cause for alarm (Shisana et al. 2005; Peltzer et al. 2005). It had negative implications for teacher supply through morbidity and mortality.

Due to lack of reliable teacher enrolment data, Morrow (2006), manually collected data about enrolments from all the 23 universities training teachers. He noted low enrolments and low graduate production. This was confirmed by the Doe (2007). The production of science, mathematics, technology and foundation phase graduates, especially of African origin, was found to be the lowest. Patterson and Arends (2009) improved on this study. They used Higher Education Information Management System (HEMIS) data to conduct an analysis of teacher graduate enrolment and graduation. In doing the analysis, they experienced enormous challenges regarding data. This leaves us with no option but to say that while we know that the number of teacher graduates is improving, we do not have specifics about the nature of their profile and how that helps to meet the national needs.

Presently, the main source of data for the analysis of Higher Education Institution graduates is the Higher Education Management Information System (HEMIS) which, under the custodianship of the Department of Higher Education and Training (DHET), is the repository for management information submitted by each higher education institution on an annual basis. In the form that it is received from the institutions, the data is not based on individual unit records (Paterson & Arends 2009). In other words, the data simply reports the total number of students who are enrolled in a particular year and the number who graduate in the same year. This means that neither the progress of individual students, nor the progression of specific student cohorts can be tracked from year to year. This should be the work of tracer studies and at the moment they have not been used for this kind of research.

Another challenge is with regards to the National data on student enrolments and graduations. This information is organised according to the Classification of Education Subject Matter (CESM) system. CESM is a single, standardised scheme according to which enrolment and graduation of students studying in different subject matter/study fields can be compared. The CESM system needs to be updated to reflect changes in knowledge and study fields. There needs to be more detailed information from the HEIs as well – on specializations offered, for which teachers are enrolled, and for which they have been qualified once graduated. There would also need to be information about capacity of HEIs to offer programmes and particular specializations within programmes. The bulk of education graduates are practicing teachers seeking further professional development, and not Initial Professional Education of Teachers (IPET) graduates.

3.3. TEACHER DEMAND

'Primary demand' for teachers is influenced by how strongly government responds to:

- the education aspirations of society,
- the skills needs of the economy, and
- the constitutional mandate to provide equitable access to quality schooling opportunities.

Fiscal constraints place limits on the government's response. To date there is no proper management information system that shows whether there is a mismatch of teachers and curriculum at the school level. The Post Provisioning model and the vacancy lists published by provincial departments of education are not adequate measures of demand. The number of posts per province is constrained by a number of factors such as the financial limitations imposed on the model, and the lack of comprehensive educator data. The post provisioning model does not address the demographic realities of South African schools. Although there is a redress factor built into the post provision model many learners from lower socio-economic backgrounds attend schools in higher quintile brackets.

The questions to bear in mind would be: (i) How do provincial departments of education assess whether they have sufficient subject teachers in their schools, and (ii) Are these teachers properly qualified to teach a particular subject?

Provincial departments of education have no monitoring mechanism in place to assess whether educators with the appropriate qualification status and subject specialization are optimally used within their subject fields. Decision-making regarding the utilization of teachers is done at the school level, and the best-qualified educators are not necessarily given the opportunity to teach subjects they are qualified to do (Peltzer et al. 2006).

3.4. PROPOSED PROJECTS

The collective aim of the projects assembled under this theme will be to provide a comprehensive picture of teacher education and to explore and understand the issues that surround demand of teachers, teacher attraction, attrition and retention to the teaching profession in South Africa.

We propose two major projects. The first would be conducted with an intention of identifying appropriate gap analyses of management information systems from a quality and quantity aspect in order to:

- 1. Develop a reliable system to assess whether the quantity of teachers in schools is sufficient by analysing how many teachers are needed in a specific school based on the norms and standards, number of learners, etc.
- 2. Review how many teachers are actually situated in schools based on the profile obtained via the analysis of EMIS data. By comparing the ideal provisioning numbers (based on the norms and standards) to the actual provisioning numbers, it is possible to map out the gaps in teacher provisioning in provincial schools.
- 3. Assess whether the quality of teachers in schools is in line with the curriculum requirements. An assessment needs to be made regarding what curriculum is offered in schools and what skills set(s) are necessary for teachers to adequately teach the curriculum to the learners. A review of teacher qualifications/competencies levels and requirements (according to the curriculum) ought to be determined. A solution could be proposed to narrow and eventually overcome the gaps based on the analyses.

The second would be a project to conduct a study of teacher profiles. In this project researchers could:

1. Provide a comprehensive profile of the teacher-education workforce focusing on the changing composition of the teacher-education workforce, review of staff recruitment,

- replacement and selection policies, budgeting processes and funding arrangements for teacher education.
- 2. Provide a picture of the trends in recruitment of teachers by location, learning area and post level through analysis of teaching posts (at school level) advertised over the five years. An analysis of trends in the filling of the vacant posts as well as trends in attrition of teachers for the system could be undertaken.

4. **CONCLUDING REMARKS**

In this paper we have provided a conceptual outline of issues that beset teacher education within South Africa. This has been done by providing a synopsis of research studies and literature and to a lesser extent research methodologies that have been generated in response to these issues. After this sketch, we then signpost areas of investigation to which future research studies could be directed.

We are confident that the research route and methodological approaches that we are suggesting in this paper could produce an account (and possibilities) of what could be regarded as ideal forms of graduate teacher transitions to the labour market. Flowing out of the research areas that we are proposing, we feel certain that the agenda of reconfiguring the post schooling sector in order to pave a path towards producing a skilled and capable teacher workforce to support an inclusive growth path (Delivery Agreement 5) could be achieved.

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