Education and Skills Development

Towards a 20 year review: Basic and Post School Education

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Contents

PART ONE

Basic Education

Reception year provision

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Abstract

Grade R formal provision began after 1994 in South Africa. The significant role of Grade R in improving learners' experience of success in their schooling influences the policy reforms and urgency for Grade R provision. Regretfully, the skewing of the resources to the White population could not be fixed quickly and easily in meeting this policy imperative. Hence, this desktop review paper foregrounds the processes through which the Education Department has to go in making the dream of education for all Grade R learners a reality. The paper reveals that South Africa achieved a high rate of Grade R roll-out. The impact of Grade R is already indicated in the local findings and African regional studies; and as an indication of progress in formalising Grade R qualifications. However, the inequities continue to favour learners from better socio-economic backgrounds, and those who are geographically located in urban and semi-urban areas rather than rural areas. Grade R practitioners continue to carry the "Cinderella" status on salaries and varied qualifications. In addition, lack of accurate data about learners who are not attending private and public Grade R institutions continue to hinder accurate reporting and efficient decision-making.

Introduction

Reception year has been indicated as having a significant impact on learners' school readiness, language skills, confidence, and social skills (Taylor, 2012). International literature supports this claim, highlighting more variables that affect learners' readiness, such as good school attendance (Brewster and Railsback, 2002; Ohio State Legislative Office of Education Oversight, 1997; Pennsylvania Partnership for Children, 2003; WestED, 2005) and social skills (Brannon, 2005; Brewster and Railsback, 2002). Reception year is an important foundational year for young children, because it is the year before they begin formal schooling. Duncan et al. (2007) indicated that social skills, language skills, and school attendance, are predictors of academic performance. Responding to the factors that make it

difficult for learners to adjust in 1st Grade, teachers' responses suggested poor academic skills, lack of social skills, inability to follow directions, and difficulty in working independently, and in group work (Rimm-Kaufman, Pianta & Cox, 2000). Hence, reception class became one of the important educational priorities in addressing learner performance, and in inequalities from the history of segregation and limited access for some learners in South Africa, prior to 1994.

In 1995, the Department of Education White Paper 1 on Education and Training included 5-year-olds in their provision of the first 10 years of compulsory education. With this commitment, many plans were designed and much money was spent on achieving this commitment. This paper aims to draw the map of the journey taken by the Department of Education in achieving this commitment since 1995, highlighting policy development and changes, presenting the achievements, reflecting on these achievements as seen in the South African context. The review will address the following questions; which achievements is the country celebrating; what are the current challenges facing Grade R provision; and how can we tackle them, functioning as a better state? In constructing this map, a desktop review on the literature trail from 1994 is synthesized, inclusive of reviews conducted on Grade R and General Household data (GHS). Statistics South Africa and EMIS are used to update the current status of Grade R, depending on the latest available data. Policy reforms are presented with the aim of tracing the path taken, and the challenges that lead to changes, if any.

Historical background and development

It is difficult to measure any kind of progress if the history is not recognised as part of the journey. Prior 1994, reception class was not accessible to all learners within South Africa; only to a chosen few, sidelining the Black learners of the country. Quantitatively, this refers to a service that was rendered to only 19 % of the 5- to 6-year-old population of the country, overlooking the 81% of the 5- to 6-year-old majority population. Attending to such skewing demands enormous resources, because the 19% provision that was intact could not automatically accommodate the 81%, without causing challenges in the quality, space, human resources, and financial resources available at the time. However, the changes were overdue, and had to be made immediately, showing more ambition. This argument is supported by the policies which followed the democratic elected government, beginning with the 1995 White Paper 1 on Education and Training, which proposed compulsory education for the first 10

years, this being inclusive of Grade R. This policy indicated the importance of access at the time, transitioning from the history of no access for the majority. The implementation therefore, was driven by access and "rights" which lead to many challenges which occurred, and sometimes delayed the progress. However, the National Education Policy Act of 1996 did not confirm the compulsory nature of Grade R; however, it brought forward the universality of Grade R.

The quick change of terminology indicated some change in the urgency or awareness of the practicality of such a promise. Also, it indicated some realisation of how great the commitment might be and the readiness of the Department of Education in delivering such provision. Policy development and reforms of Grade R provision changed with time. These policies, therefore, reflect the acknowledgement of Grade R as a vital year of schooling for human development. As in any new era, there were many challenges faced by this new grade in education. Many changes and achievements occurred over the last twenty years. Policy reforms indicate these changes and the progress made. Hence the presentation of the changes in policy as presented below.

Policy reforms for Grade R provision

In 1994, early childhood development was recognised as imperative for human development. This recognition led to the Department of Education's White Paper 1 on education and training, committing the government to provide the first 10 years of compulsory schooling, that is, inclusive of 5-year-olds. In 1996 the National Education Act of 1996 proposed a universal Grade R instead of the compulsory Grade R proposed in 1995 by the White Paper. The difference between the two commitments was huge concerning Grade R provision. The compulsory provision meant that Grade R would be free, and all 5-year-olds would have to be enrolled, making their attendance a right. While the universal provision allows all 5-year-olds to be enrolled, the Education Department is not committed to providing a free Grade R to all learners; this cannot therefore be regarded as a right. Compulsory Grade R commits the Education Department to providing all the necessary resources for all 5-year-olds, regardless of their geographical locality, and socio-economic status. It ensures that all 5-year-olds attend school. However, universal Grade R does not force parents to enrol their children at school. They can still keep them at home, which is a disadvantage for children from poor socio-economic backgrounds.

In 2001, Grade R became a national priority in White Paper 5 on Early Childhood Education, phasing in Grade R as the first year of schooling in 2001. This was still universal, with the emphasis that in 2010 all 5-year-olds will be attending a formal Grade R class. White Paper 5 asserts that all public primary schools will provide an accredited Grade R programme by 2010, targeting mostly children from low socio-economic backgrounds. However, challenges prevented the Department of Education in achieving the 2010 target. Two main factors impeded the phase-in: the universality provision, and differing provincial interpretations of the urgency of rolling out Grade R (Richter et al., 2010). The Grade R enrolment increased from 17% in 2001, to 62 % in 2009; quite a significant increase (Biersteker, 2010; Department of Education, 2009). However, the 100% enrolment in 2010 was not achieved (Department of Education, 2011). An estimate of 87.7% was achieved by 2011 (Richter et al., 2012). On the other hand (KwaZulu-Natal Department of Education, 2011) reported coverage of 92%. A strategic plan for 2011-2014 was produced in 2010, suggesting that the completion of Grade R universality was to be achieved by 2014.

White Paper 5 also proposed the development of a qualification framework and career path for Grade R practitioners. This proposal was not attended to immediately. SAIDE (2010) highlights the impact of the low status of the Grade R practitioner in attracting practitioners to teach Grade R, which is evidently observed in remuneration packages that are lower than a Grade 1 educator's with the same qualification. SAIDE (2011) highlights challenges faced by lack of commitment to changing Grade R practitioners' status of their qualifications and remuneration. Richter et al., (2012) and Feza (2012) revealed that the qualification gap starts from high school education without matric, to post-graduate degrees. SAIDE (2011) proposes a debate about the entry into Level 6, and the financial policy issues that affect the status of the Grade R teacher (p.5). Another challenge in Grade R qualifications is the close relationship between Level 5 and 6 qualifications, which demand a review of the Level 5 qualification (SAIDE, 2011). The practitioner qualifications were then attended to in 2011 in the Government Notice 583, stipulating minimum requirements for Teacher Education. The requirements for Grade R practitioners' appropriate qualifications are a Diploma in Grade R Teaching, and a Bachelor of Education in Foundation Phase. This paper, therefore, carries forward the recommendation of reviewing Grade R qualification and remuneration as a proposal needing attention in achieving the goals of White Paper 5.

Norms and standards for Grade R funding became active in 2009, providing a legislative foundation for a Grade R roll-out. However, this funding is revealed to be thinly spread; this leads to poor quality provision (Richter, et al., 2012; SAIDE, 2010). Also, Biekster (2010) revealed inconsistencies in the use of Grade R funds at provincial level, such as directing funds into other priorities rather than Grade R, and money remaining unspent. The status seems to remain unchanged, because, the unpublished AGSA performance audit (2013) reports Grade R large class sizes, lack of learner/teacher support materials, and poor infrastructural provision in some areas.

Achievements

Access is one of the achievements which can be celebrated by the Department of Education, because Grade R is a new class in the foundation phase. This achievement is high for children from poor socio-economic backgrounds. Table 1 indicates this access achievement by ethnicity.

Grade R access

Table 1: 5- to 6-year-old children's status of Grade R attendance in 2011, by ethnicity, in thousands

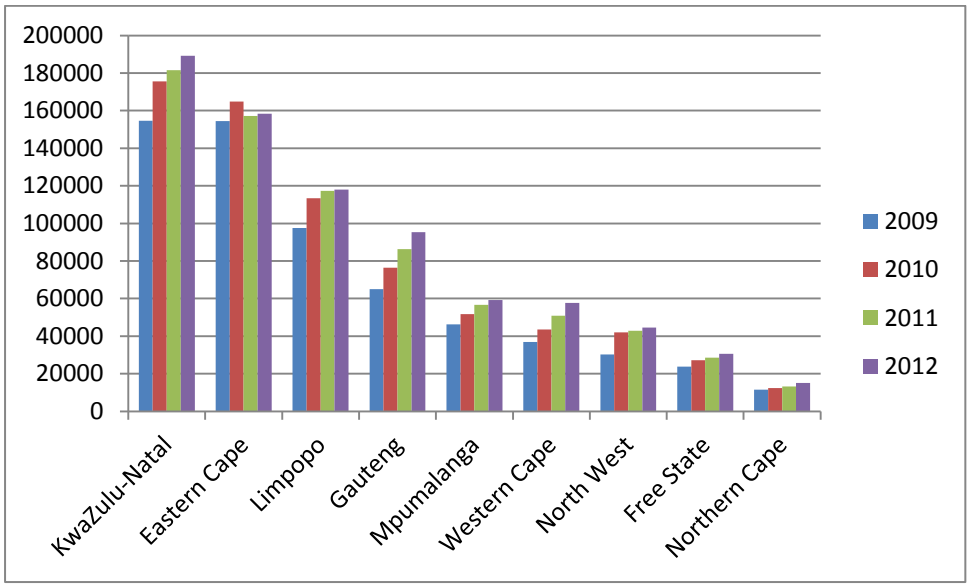
Ethnicity	**Attending**	**Not attending**	**Do not know**	**Unspecified**	**Total**
Black African	1749	178	*	30	**1957**
Coloured	141	34	*	5	**180**
Indian/Asian	30	*	*	*	**30**
White	94	10	*	*	**104**
Total	**2014 (88.6%)**	**222 (9.7%)**		**35 (1.5)**	**2271**

Source: GHS-2011(2012, 68) Numbers below 10 000 are not given estimates, and the sensitive cells are indicated by an asterisk.

Table 1 indicates that, of the Grade R age population, 88.6% are reported as attending Grade R in 2011; 9.7% are not attending Grade R; and 1.5% are unspecified. By 2011 the

Department of Education had managed to provide 88.6% of the 5- to 6-year-olds with Grade R services. Since 2009, Grade R enrolment has shown an improvement, as indicated below in Figure 1, which asserts that by 2012 the percentage of coverage had increased. It is important to note that data in Figure 1 excludes data from stand-alone ECD sites. Richter et al. (2012) assert that access to Grade R means more than just learning, to children from poor socio-economic backgrounds; it also means access to a meal, clean water, and a safe environment.

Figure1: Grade R enrolment from 2009 to 2012, per province



Source: School Realities (2009-2012)

Figure 1 indicates an increase in the Grade R provision from 2009 to 2012 in all provinces except Eastern Cape, which had a student drop after 2010, however a slight increase in 2012. KwaZulu-Natal, Limpopo, Gauteng, Mpumalanga and Western Cape indicate yearly increases from 2009 to 2010, while the Eastern Cape, North West and Free State show increases in 2010, and slight increases in 2012. In the Northern Cape the increase is slight compared with other provinces across the three years. Generally, access to Grade R enrolment indicates increases nationally, and raises hope that by 2014, the universality may be achieved with a little more effort, in 2013.

Grade R Practitioner qualification and status

Qualification

The registration of the Grade R diploma with the South African Qualification Authority (SAQA) in November 2011, is an achievement towards uplifting the status of a Grade R teacher and Grade R as a career path to be followed. The minimum requirements for teacher education qualifications 2011 document specifies that a Grade R teacher qualification is a Diploma in Grade R (NQF level 6). It also stipulates that this qualification should not be treated as a foundation-phase qualification, as it is specialized only for Grade R. The document suggests that, in order to be a foundation phase teacher, one has to have a Bachelor's degree in Foundation Phase teaching, as a minimum qualification. However, the current status of Grade R teacher qualification is a complex challenge, as indicated by (Van der Berg, 2011). He revealed that only 39 % of Grade R teachers in public schools have a diploma; about 11 % a degree or postgraduate diploma; 13% with the ECD Level 4; and 15 % with the ECD Level 5 Certificate.

Remuneration

Remuneration inconsistencies in the Grade R provision are influenced by various funders of salaries within provinces, as indicated below in Table 2.

Table 2: Grade R: Teachers' salaries (in rands) by source of funds from the three provinces

	Paid through Persal		Paid from State Subsidy		Paid by SGB		Paid from State Subsidy and School Funds		Total	
Province	**No. of teachers**	**Average Salary (p/m)**	**No. of teachers**	**Average Salary**	**No. of teachers**	**Average Salary**	**No. of teachers**	**Average Salary**	**No. of teachers**	**Average Salary**
Province 1	30	10,863	12	5,325	120	4,426	34	3,738	196	5,347
Province 2	134	10,665	12	6,243	62	4,674	4	4,870	212	8,553
Province 3	144	10,508	12	6,251	15	3,133	1	3,000	172	9,524
All	308	10,611	36	5,940	197	4,404	39	3,832	530	7,757

Source: van der Berg et al. (2011:15) 'Tracking public expenditure and assessing service quality in early childhood development in South Africa'.

Table 2 indicates that the average salary for state-subsidized practitioners is R5 940.00, while SGB-paid salaries are on R4404.00 average, and those salaries funded by both state and

school funds are R3832.00, on average. This reveals the inequities in the remuneration of Grade R teachers which may result in lack of interest in joining the field. Attending to these inequities will allow South Africa to gain from the revealed positive outcomes of the reception class, as indicated by other countries.

Comparison with other countries

International literature asserts the significant importance of the reception class, by highlighting factors which may be attained in both the short term and the long term. The short-term gains on the U S Head Start and the British findings are similar to Taylor's finding in South Africa on items such as self-esteem, and social skills (Sylva, 1994, Taylor, 2012). However, there are more factors suggested by this meta-analysis on international literature, in short-term gains of reception class such as achievement and motivation (Sylva, 1994). The literature emphasises the importance of quality provisioning as the key to long-term gains (Laza and Darlington, 1982). In their findings they revealed that attendance of high quality pre-school programmes linked with later school competence, Sylva et al. (2011) support these findings, that attendees of quality pre-school showed academic success at age 11. Canadian researchers also confirm these longitudinal achievements, indicating "association between kindergarten cognitive, attention, fine motor, and physical aggression characteristics; and later achievement and classroom engagement by the end of 2nd grade" (Pagani et al., 2010, 984). Generally, the international and South African literature suggests the importance of quality Grade R attendance in preparing learners for successful schooling and academic achievement.

Conclusion

Grade R attendance has significant effects on learners' progress in school, especially learners from low socio-economic backgrounds. South Africa took this seriously in 1994, and immediately developed policies enforcing the provision of Grade R schooling. The policies developed after the White Paper 1 on Education and Training did not echo the compulsory status of Grade R, as proposed in the White Paper 1. This inconsistency between compulsory provision and universal provision had implications for the rolling out of Grade R, affecting the quality of the provision. The main significant achievement of the department is the access increase, especially amongst the indigent. There are still some gaps, however, this access has

academic and health gains to indigent South African learners. The second achievement is the professionalization of Grade R teaching, in registering a Grade R teacher qualification on SAQA. This progress indicates the commitment of the Education Department to quality learning. However, the challenges of quality, provincial inconsistencies in funding, practitioner remuneration, the funding for Grade R , the various provincial models on funding Grade R, the infrastructural quality of some schools which are not conducive for young learners because they lack basic requirements for learning; different levels of ECD qualifications, especially levels 5 and 6, which seem to be interpreted as the same qualification, and the entry requirements for studying the Grade R Diploma, need attention, for quality Grade R provision to be attained.

Recommendations

There should be a policy amendment on the status of Grade R in the foundation phase, because the "Cinderella" status will not go away while there is a continuation of exclusion of privileges for Grade R compared with Grade 1. (1) The funding formula for Grade R does not have to be below Grade R, if what the literature suggests about the impact of Grade R on the progress of a learner's education is true. (2) Also, the Government Notice 583 on minimum requirements for Teacher Education, asserts that the Grade R Diploma is only for teaching Grade R. This assertion continues to put Grade R teachers in a lower status compared with foundation phase teachers. This questions the training given to Grade R practitioners, that makes it so different from the foundation phase degree. If it is so different from a foundation phase curriculum; not developmental towards the B. Ed, how will the Grade R teacher be able to attain the BEd degree? Funding of practitioners' salaries by various stakeholders also needs to change, and become the responsibility of the department, as this carries unfavourable inequalities, such as unequal salary scales. In addition, an improved EMIS management will assist in having an in-depth insight into children and their needs, who do not attend Grade R. Also, teacher needs and qualifications could be documented, thus enabling the Department of Education to make management decisions efficiently. Unavailability of data from stand-alone sites in the EMIS results in gaps of factual knowledge, lack of understanding of the current status of the provision and addressing challenges of the provision as indicated in the ECD diagnostic review, and the grade R research report (Richter et al., 2012, SAIDE, 2010, Biesterker, 2010).

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Literacy and language/s in school education in South Africa

Kathleen Heugh

Introduction

Transformation of the education system has been a priority in the twenty years since political change took place in South Africa. This paper focuses on the development and implementation of new policy intended to ensure equitable and internationally sound literacy and language development in the schooling system of the country in the years following the end of apartheid. More than anywhere else in the world, the previous government had used language policy in education to effect socio-economic and educational division within the country. Under the guise of protecting the language rights of each linguistic community and by making opportunistic use of UNESCO's report on language education in Africa, *The Use of Vernacular Languages in Education* (UNESCO, 1953), Bantu Education divided education into ethnolinguistic compartments. Apartheid government insisted on the use of the 'mother tongue' as medium for eight years of primary schooling for African children. African students were also required to learn English and Afrikaans and to change medium of instruction in secondary school: half of the content subjects to be in Afrikaans and half to be in English. The requirement regarding the use of Afrikaans medium in secondary school, especially for mathematics, led to the student-led SOWETO rebellion in 1976. Government was forced to remove this requirement and accepted a reduction of eight years of mother-tongue medium (MTM) education to four years of (MTM) in a significant amendment to the Bantu Education Act in 1978.

At the time, neither the apartheid government nor anti-apartheid educationalists had any idea that by the 1990s international research in psycholinguistics, first in Canada and then in the USA, Sweden, Germany, and later in Australia and the UK, would show that students, whose home language is different from the majority or dominant language, require a minimum of six to eight years of bilingual education. Bilingual education for students from either minority

or disadvantaged communities requires a system in which the mother-tongue is retained as the main medium education while the second language, more socio-political and economically powerful than the students' home language, is added to the student's repertoire of languages and it is taught very well. By the early 1990s this kind of bilingual education had become widely known as 'additive bilingual education' and it is based on first language (mother-tongue or home language) medium education for six to eight years alongside excellent and well-resourced teaching of the international or second language (usually English). Additive bilingual education has been shown to be educationally advantageous for students in every country of the world. In countries such as South Africa, disadvantaged students require very good access to a language of wider communication (such as English) in order to participate in an equitable manner with more privileged students in regional (provincial), national and international concerns. Provision of excellent teaching of the second language (usually English) is one of the cornerstones of additive bilingual education.

The inequitable political ideology of apartheid, however, obscured the educational value of mother-tongue medium (MTM) education and this has resulted in long-standing negative prejudice associated with the term, 'mother-tongue education', even when it has been used in the context of 'additive bilingual education' in South Africa. It is the history of discriminatory educational practice during apartheid that has resulted in on-going misunderstandings of the role of each child's home language (also known as: first language, mother tongue, language of the immediate community) in the twenty years of educational transformation and renewal since 1994.

Emergence of new language and literacy policy

The groundwork for post-apartheid and transformational language education policy began in the late 1980s amongst non-government organisations and educational linguists, taking into account post-colonial language policy developments of other African countries and India (Heugh, 1987). Subsequent to the unbanning of anti-apartheid movements in 1990, the National Education Co-ordinating Committee (NECC) initiated investigations of policy changes for education, including language education. This was followed in the preparation of draft ANC education policy in what became known as the ANC's Yellow Book of 1993. Immediately after the elections of 1994 and the reconfiguration of a new national Department

of Education (DoE), two strands of policy development were initiated: one directed towards curriculum and assessment, the other towards language policy.

The language policy initiative took into account the research and debates within and without South Africa from the mid-1980s onwards, including the internationally accepted theory of 'additive bilingual' education and its value for students from poor or disadvantaged communities. Within the curriculum discussions, the priority turned towards constructivist theory of curriculum, particularly the notion of 'outcomes-based' education. In the international domain, since this theory was primarily developed in countries where English is the language of the majority of citizens (USA, UK, Australia and New Zealand), it was a theory premised on the notion that English, as the home language of the majority, would be the unquestioned and usual medium of instruction. Literacy was regarded as a matter integral to the primary school curriculum, and since the assumption was that students would develop school-based literacy in their home language, English in the countries mentioned above, it was not necessary in those contexts to make it explicit that literacy should be firmly established in the home language/first language of the student.

Summary of changes to language policy and literacy in South African education since 1994

The post-apartheid language education policy is therefore based: firstly on the principles of eleven official languages and multilingualism of the Constitution (RSA, 1996), and secondly on research conducted on language education policy in linguistically diverse and post-colonial contexts in Africa and India, as well as in North American and North European settings where marginalised minorities and Indigenous communities encountered majority or dominant languages. The language policy went further than this and included South African Sign Language as the 12th official language of education. This policy is regarded as the most progressive language policy in the world.

The curriculum and assessment policy, however, is based on other educational development designed for majority and dominant communities in countries regarded as 'more developed' by some; or, in the case of the UK as a former colonial power, and in the case of the USA as the 'super-power' of the late 20th century. In each of these powerful countries the trajectory of mainstream education is towards an English-mainly education system, and the South

African curriculum documentation of 1997 and its revisions in 2002 and 2011, similarly reflect a similar English-mainly trajectory, as if the socio-economic and linguistic character of the country were similar to that of the USA and UK. In the 1990s, it seemed logical to follow what seemed to be the most advanced school curriculum in the international community. Unfortunately, the unintended consequences, of taking on curriculum in the absence of thinking through the very different ethnolinguistic and socio-economic circumstances of the majority of South African students, were not clearly understood.

Essentially, therefore, the new language education and curriculum policies were informed from different theoretical perspectives and by different sets of advisors to government. In hindsight it is now clear that both policies needed to have been developed in concert with one another and that there needed to be a cross-fertilisation of expertise. Therefore, it was a strategic error that the initial language education policy and curriculum policy developments were kept as separate processes between 1995 and 1997 and that two separate policy documents, based on different sets of concerns for equity, were released: Language and Education Policy (DoE, 1997a) and Curriculum 2005 (DoE, 1997b). Whereas there has been a necessary and much welcomed series of curriculum policy revisions between 2000 and 2012 and several attempts at curriculum implementation and refining of curriculum implementation, a similar process of revision has not been applied to language education policy. An attempt to initiate language policy implementation (DoE, 1998), and two ministerial colloquia on languages in education (or the schooling system) (DoE, 2006 and DBE, 2010), have not yet been translated into coherent and practical plans accompanied by timeframes accompanied by systems for monitoring and evaluating language policy implementation.

Ultimately, the two policies have never been successfully integrated and they are based on different theoretical trajectories: curriculum towards an end objective of English-mainly education and termination of home language medium for African students by the end of Grade 3; vs. language policy with an objective of high-level individual bilingualism or multilingualism, in which high level proficiency in both home language and English are two inextricable components. In effect, while the curriculum has been implemented, the language policy has not.

The crucial educational domain of literacy is given emphasis within the first three years of primary education (and, where feasible, within early childhood education which precedes the first three grades of primary). There are intimate connections between literacy development and the language/s through which literacy needs to be developed. Whereas it has been believed in some settings that literacy may be well-enough developed by the end of the third grade of schooling, even under the best case scenarios, this is simply not the case. It is also not possible to develop literacy in both the home language and a second language (such as English) by the end of Grade 3. Literacy development occurs along a continuum which needs to continue throughout primary school and into secondary school in order that students are able to develop high levels of academic literacy. It is this high level of academic literacy that is necessary for successful achievement across the curriculum, and through the various phases of basic, continuing and further education. For students in a multilingual society, it is essential to develop high level literacy in at least two languages: home (neighbourhood) language and a language of wider communication (e.g. English). In any event, increasingly in the international arena, because of the rapid increase of human mobility and migration, multilingualism is becoming a *de facto* necessity in every country of the world.

Despite excellent intentions, the understanding of the early literacy-to-academic literacy continuum within formal schooling and language education policy was not sufficiently clear or spelt out within curriculum documentation between 1997 (DoE 1997b; DoE 2002; DoE 2005). The Curriculum and Assessment Policy Statement (CAPS) (e.g. DBE, 2011a) does make significant progress in this regard and this is to be welcomed. In particular, what is meant by literacy and how teachers might go about ensuring that students may learn to read and write for school-based purposes is far more clear in the CAPS documents. Nevertheless, exactly how students may be best empowered to develop adequate levels of literacy in their home language and their first additional language (usually English) still needs to be explicated for teachers, school management and education department officials at each level. Further progress in this will be required, however, if the country is to achieve its potential and goals for development.

Comparisons

Comparisons are always vexed, especially when making comparisons between different historical periods within particular countries and also between different countries with different histories and socio-economic realities.

If we are to be brutally honest, we have to acknowledge that despite the very best intentions, new language and literacy policy and practices taken up through the curriculum and assessment systems of the country show little evidence of a positive return on investment. The scoreboard for South African students in multi-country studies (PIRLS, TIMSS, SACMEQ11 and SACMEQ111) has become a national embarrassment (see Table 1 below).

While it was possible to ascribe the reason for this as a legacy of apartheid for the first 10 years after 1994, this can no longer be regarded as a valid excuse and it is vital that we engage in the most theoretically thorough and honest explanation of what has gone wrong, because there is a constitutional obligation to honour and this is the provision of equitable education for all students. One uncomfortable truth is that students who attend the so-called 'former Model-C schools' in middle class urban areas, resourced with well-trained and committed teachers, outperform most students in poorer areas and most students in the former 'DET' or 'HOR' schools. Another uncomfortable truth is that students whose home language is English outperform students whose home language is one of the African languages and also students from poor socio-economic communities where Afrikaans is the dominant home language. In other words, those students who were most marginalised during apartheid continue to be those who are most marginalised in the post-apartheid education system. Through various studies conducted in South Africa and through our knowledge and participation in research conducted across Africa and in other developing countries, it is clear that four of the most significant factors which currently contribute to the disparity of achievement amongst different ethnolinguistic cohorts of South African students and between South African students and their international peers are: home language, medium of instruction (language of learning and teaching/LOLT), and human and material resources made available for quality instruction in literacy throughout the primary school.

Progress and Stumbling Blocks

Shortly after the finalisation of the Constitution of the Republic of South Africa (RSA 1996) 'new' multilingual education policy (Department of Education /DoE, 1997a) and curriculum policy (DoE, 1997b) followed. The intention behind these policies was to ensure that the diverse educational needs of a complex and hitherto deeply unequal society would be addressed in order to ensure equal and meaningful access to quality education benchmarked

against contemporary international systems. The focus here is to evaluate the changes and attempts to change the system in relation to student achievement and in relation to the theoretical and methodological foundations of these as they relate to matters which are fundamental to literacy and language education. The policies and revisions of policy include the Language in Education Policy (DoE 1997a) and three iterations of new curriculum and assessment policy: Curriculum 2005, (DoE 1997b), the Revised National Curriculum Statement (DoE 2002), and the Curriculum and Assessment Policy Statement (CAPS) (Department of Basic Education/ DBE 2011a).

The results of policy changes have become increasingly evident in the system for some years (e.g. Prinsloo & Kanjee, 2005; DoE, 2005; Ramphele, 2008; Reeves et al., 2008; Heugh, 2009a, b; Howie et al. 2008a, b; Howie et al. 2012; DBE, 2012; Pluddemann, 2013; Reddy et al. 2012a, b; Reddy et al.ftc.).

These consequences have produced a recent set of responses from both academics and education officials, and following a brief historical overview, these responses are discussed below.

Three Phases of Educational Transformation

Between 1994 and 2013, there have been three attempts to modernise and transform the education system of the country (1994-1999; 2000-2008; and from 2009 onwards). These have included radical changes to language policy, curriculum and assessment. Each attempt has been based on what has been understood as best practices in the international domain of education and as translated into what was hoped would be workable in the South African context.

In regard to literacy, the in-coming government was faced with a significant socio-economic and educational challenge regarding levels of literacy which were very low in comparison with more developed countries, although comparatively slightly better than other less developed countries of the world. Of particular concern was a disparity of literacy levels between: rural and remote communities compared with urban communities; women vs. men; less privileged or previously disempowered communities vs. previously privileged or empowered communities. Apartheid education, during its two iterations (Bantu Education based on mother-tongue education for each ethnolinguistic group, 1955-1976; and post-

SOWETO Department of Education and Training education based on watered down mother-tongue education for four years followed by transition to English for most African students, 1978-1994) had underserved the majority of students, particularly the approximately 75% of students whose home language was an African language.

New government, therefore, needed to ensure that educational transformation signalled an ideological distance between apartheid conceived mother-tongue education and a new, modern, internationally oriented education system which would offer students access to a rapidly changing global context. This historical period coincided with the rise of a new orientation towards literacy in the 'English-speaking world' and these were to influence the twenty years of educational change in South Africa. The 'whole language approach to literacy' (Goodman, 1986) and 'new literacies studies' (e.g. Street 1996) emerged from the USA and the UK, respectively. These are contexts where English is the language of the majority population, and other languages, used by many different minority communities, have not yet been included in the mainstream education system to any significant degree.

The most popular methodological approach to teaching languages in the schooling system, the 'communicative approach' to teaching language, emerged from the work of UK-based applied linguist, Dell Hymes in the late 1970s and gradually became the most significant approach to teaching languages, especially second or foreign languages in the UK, the USA, from the 1980s onwards. It remains the preferred methodology in these countries and of the British Council in its work of spreading English language teaching across the developing world (e.g. Coleman, 2011). It is hardly surprising therefore, that both the literacy specialists responsible for literacy in the foundation phase, and the English Second Language (ESL) specialists, who contributed towards the languages learning area component of the new curriculum documentation in South Africa during the 1990s, were influenced by the 'the whole language approach to literacy', 'new literacies' studies' and the 'communicative approach' to teaching language, especially in regards to ESL in the new curriculum. However, despite the best of intentions, these changes, particularly in relation to literacy and language education, have not yet led to the outcomes desired by government, parents, students and the private sector.

A great deal has been written about language education or multilingual policy in South Africa beginning with a new Constitution of the Republic of South Africa (RSA, 1996) which makes

provision for a multilingual policy with 11 official languages. The South African Schools' Act (DoE, 1996) makes further provision for South African Sign Language (SASL) to be employed as the 12th official language in education. In terms of promising to provide progressive and enabling environments for linguistically diverse students, the South African language education policy (DoE, 1997a) appears to be one of the most progressive language policies in the world, second only to the Ethiopian language education policy. However, as discussed in the Overview above, there is a theoretical gap between the language education policy and the way language education is understood in the curriculum and assessment policy documentation.

Good intentions, mistaken remedies

The discussion now turns towards mistakes made during the attempts to transform the education system. The first strategic mistake was that the language education policy (DoE, 1997a) discussions were kept separate from and not included within debates on curriculum (DoE, 1997b) and assessment change. A second mistake was that within the curriculum discussions, language was treated as a subject, while its role as a language of learning across the curriculum received little attention. The third, related, error was that in the curriculum documentation literacy was conceptualised as largely independent of the language/s through which reading and writing takes place in school. A fourth error has to do with terminological slippage in relation to what is meant and what is understood by 'multilingual education', 'multilingual schools', 'mother tongue education / MTE', 'additive bilingual' and 'additive multilingual' education. Terminological confusion precipitated misunderstandings whereby education officials claimed to be concerned that if they encouraged the use of the mother tongue (even though the terminology was changed to 'home language') in the first four to six years of education that civil society would interpret this as an attempt to deny children access to English or a return to Bantu Education. The fear that civil society might be opposed to the use of African languages alongside English (as was intended in the approach towards additive bi/multilingualism in the language in education policy) was carried into intellectual spaces of universities in the metropolitan centres where some academics misinterpreted additive bilingual education, based on the home language (or mother tongue) plus English, to mean either the mother tongue or English. The fear that the provision of mother-tongue education alongside English for African school students would be interpreted as a return of apartheid

education was evident even at the level of senior advisors on literacy to the national Minister of Education. (These matters are discussed in more detail below in the full paper.)

Results

Although critics are swift to argue that the decline in student achievement coincides with the onset of the new curriculum in 1997, careful analysis shows that the decline in student achievement began during the second half of apartheid education, i.e. amongst African students since 1976 when the practice of eight years of mother-tongue followed by English and Afrikaans medium education was replaced with four years of mother tongue followed by switch to English medium. However, it has declined even further since the Curriculum 2005 (DoE 1997b) reduced mother tongue/home language medium to three years followed by English medium. This has been a matter of considerable concern for the DoE. In order to keep track of achievement, and in the hope of finding evidence of improvement, the DoE has enthusiastically engaged in regular system-wide assessment of literacy and numeracy of students between Grades 3 and 9 (e.g. Prinsloo & Kanjee, 2005: DoE 2005). These have recently come to be known as Annual National Assessments / ANA) (e.g. DBE, 2011a, 2012). The department has also ensured South African participation in multi-country and internationally benchmarked assessments since 1995, e.g. ('Progress in International Reading Study' / PIRLS and 'Trends in International Mathematics and Science Study' / TIMSS). In each of these, South African students have under-achieved, and they have been less successful than students in other African countries (e.g. Mothibeli, 2005; Reddy, 2006; Reddy et al. 2012a, b; Howie et al., 2008a, b; Howie et al., 2012; Jordaan, 2011; Moloi & Chetty, 2011). For example, in the third Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ III), South African students in Grade 6 performed below the SACMEQ countries' mean in 2007, as they had done in 2000. Although South African students appear to have improved slightly in both literacy and numeracy between 2000 and 2007, the improved achievement of students in other SACMEQ countries has exceeded that of South African students:

Table 1: Comparison of South African relative to SACMEQ student achievement (Grade 6)

	Pupil Reading Score		Pupil mathematics score	
	2000	2007	2000	2007
South Africa	492	495	486	495
SACMEQ	500	512	500	510
Gap between SA and SACMEQ	8 points below the mean	17 points below mean	14 points below mean	15 points below mean

Adapted from Moloi & Chetty, 2011:6. The figure 500 was determined as the mean achievement of students across the SACMEQ countries in 2000.

Although the South African scores improved in mathematics and reading between 2000 and 2007, so did those of SACMEQ. While the gap between South Africa and SACMEQ for mathematics narrowed slightly by two points in 2007 compared with 2000, the gap in reading achievement doubled. This means that South African students at Grade 6 have effectively fallen behind their peers in other countries of Southern and Eastern Africa in regards to reading. This is a matter of considerable alarm.

Achievement of Grade 4 (and Grade 5) students in PIRLS 2006 and 2011 are similarly disappointing (Howie et al. 2008a; Howie et al. 2012). Although students were tested in 11 languages, on average, the majority of South African students fall significantly below the international norm, even speakers of English and Afrikaans, although speakers of African languages achieve the lowest scores of all. Furthermore, as Howie et al. (2008b) point out, South African students tested in PIRLS 2006 were one to two years older than their international counterparts, making their lack of achievement even more serious.

Attempts to correct the trajectory

Fifteen years after the change of government, rapidly declining school achievement in: literacy, mathematics, and across the curriculum, despite two iterations of curriculum renewal and revision, the renamed Department of Basic Education (DBE) began a series of critical evaluations. One of these involved a second review of post-apartheid curriculum, Review of the Implementation of the National Curriculum Statement (Dada et al., 2009, for the DBE). Even as late as this, an educational linguist with a specialisation in psycholinguistics and

language acquisition in linguistically complex settings, was not included on the team. Unsurprisingly, the misunderstanding of the additive bi/multilingual policy continues:

> *While the Home Language plays the primary role in developing literacy and thinking skills and is of importance in enhancing the protection and further development of the indigenous language, the Language of Learning (in particular English) is the one in which students must master educational concepts… (Dada et al., 2009).*

If the home language is not considered to be suited for the learning of educational concepts, in the curriculum review, then it is unlikely that the language policy is likely to be implemented, even at this stage.

Another evaluation involved an overview of 'The Status of the Language of Learning and Teaching (LoLT) in South African Public Schools' (DBE, 2010), and included data which shows the rapid transition to English in Table 1 above. This report was followed by a 'Colloquium on Language in the Schooling System' in 2010 and yet another report (DBE, 2011b). Twelve years after the DoE's first 'National Conference on the Implementation of the Language-in-education policy' in 1998, exactly the same recommendations that were made for implementation then, were again put on the table. Regrettably, no new proposals were put forward, even though conditions have changed somewhat, and there has been substantial research on multilingual education across Africa since this time (e.g. Ouane & Glanz, 2010, 2011). Far more is now known about developing strong reading and writing skills amongst poor communities (e.g. Abadzi, 2006), and heritage language communities (Bale, 2010); and far more is now known about the weaknesses of constructivist curriculum (Abadzi, 2006) and the 'whole language approach to literacy' in less developed contexts (e.g. Macdonald, 2002; Heugh 2009a). The last decade of research beyond South Africa (e.g. Coleman, 2011) has much to contribute to the current debates within the country.

The assumption that African children will switch to English medium in Grade 4 continues even in the Curriculum and Assessment Statement (CAPS) of 2011:

> *In South Africa, many children start using their additional language, which is often English, as the Language of Learning and Teaching (LOLT) in Grade 4. This means that they must reach a high level of competence in English by the end of Grade 3 (DBE, 2011a:8).*

The curriculum documentation, even in 2011, continues to reflect a fundamental misunderstanding of what is linguistically and cognitively possible for students to achieve by the end of the third grade. It means that even if all other difficulties within the system were to be resolved very few students who are speakers of African or mixed urban varieties of languages, will be able to succeed within the current education system. It needs to be emphasised that both from the field of cognitive neuroscience and from a psycholinguistic perspective, the system is asking the students to do the impossible.

Drawing Conclusions and looking forward

Linguistic diversity and multilingualism have been defining features of South African constitutions and education policy for more than 100 years. Between 1910 and 1990, under the guise of language rights, multilingualism was promoted in order to enhance structural inequality. Political change during the 1990s introduced the principles of linguistic equality alongside language rights and these were intended to be interpreted through legislation and policy which would provide the structural support of multilingualism for the purpose of furthering democracy and socio-economic equality, and particularly in education. Despite promising beginnings, curriculum and assessment changes have not been aligned with multilingual policy and when viewed through a lens of theoretical linguistics, they are not designed to further socio-economic equality. A succession of expensive curriculum revisions and reinterpretations between 1997 and the present has yet to be underpinned by an administrative understanding of how multilingualism might offer: meaningful access to and retention of students in the schooling system, access to further and higher education, and access to employment opportunities in the formal economy. Despite twenty years of costly annual national assessments and participation in multi-country and international assessments (SACMEQ, TIMSS and PIRLS), each of which shows a decline in student achievement in literacy, numeracy and science, education decision-makers focus on one language, English, as the main language of education. The majority of students, who use English as the medium for education, do not have the necessary literacy and language proficiency to navigate the curriculum and assessment requirements through English. Their teachers do not have the necessary academic literacy or language proficiency to teach through English. Hybridised spoken language practices, stigmatised by students, teachers, parents and education authorities, characterise the teaching and learning contexts, simply because teachers and

students have no alternatives. The spoken language practices do not enhance student reading access to text-book or internet material in English. They do not foster adequate writing skills in English. The student is therefore left entirely dependent upon the teacher's explanation for any given subject. Since a constructivist curriculum has given teachers to understand that they no longer need to provide content and 'input', this leaves students almost entirely abandoned.

A flip-side to the focus on curriculum and its numerous revisions, each of which implicitly foregrounds English as the medium of instruction, written resources and assessment, has been neglect of and even elimination of the resources and expertise developed in the use of South African languages prior to 1994. This is despite the constitutional commitment to a policy of eleven official languages, nine of which are indigenous African languages. Since 1994 there has been a decline in the number of university students studying African languages, there has been a neglect of training teachers through and in the African languages, there has been a neglect of training teachers to teach reading and writing in either the home language or in English (Reeves et al., 2008), and there have been serious inefficiencies in the state-run terminology development, and translation services. Optimistic notions of 'whole language literacy' and immersing children in books, while possibly viable in more developed contexts of countries of the global north, were doomed in a context where there are limited literacy practices at the level of family and community, and the cost of books places these out of reach. Poorly conceptualised literacy strategies in education, amount to serious neglect. This is especially the case where experienced primary school teachers found their pedagogical practices stigmatised and new teacher training failed to offer teachers practical guidance on exactly how one might be expected to teach children to read and write in early primary (Reeves et al., 2008). Under such conditions, school students have not been given the basic tools to develop their reading and writing skills (cf. Abadzi, 2006; Macdonald, 2002).

Recent, poorly resourced, attempts to encourage home language literacy for the first three years of school (DBE, 2010, 2011a) may have come too late. They come after: experienced teachers have lost their confidence in more explicit literacy practices, newer teachers have not been trained to teach reading and writing, and earlier resources in these languages have been destroyed (Reeves et al., 2008). The re-introduction of African languages medium in early primary but without the necessary human or material resources does not bring a 'silver bullet' quick-fix solution to the education crisis in the country. The re-introduction of home

language/mother tongue education for three years, as if three years of home language medium education will permit successful transition to English in the fourth year of primary, is irresponsible and ignores considerable research throughout Africa and in numerous other international contexts on this very matter (e.g. Alidou et al., 2006; Ouane & Glanz 2010, 2011; Skutnabb-Kangas & Heugh, 2012). The literature has yet to provide evidence of any successful system-wide transition to English programme, for a majority population, if the transition occurs in fewer than six years of primary education in the language (or language repertoire) of a local community in Africa. The research in Africa, whether in South Africa, Nigeria, Ethiopia or elsewhere, shows that successful transition to English requires a minimum of six years of competent teaching of English as a subject under the best resourced conditions, and possibly only after eight years in less well-resourced conditions.

Therefore, attempts to pass off three years of L1/home language education with early transition to English medium as what is required, advised or theoretically sound, is dangerous. When this does not result in higher achievement for students who have three years of home language/mother tongue, the detractors are then in the position of declaring that African languages used as languages of learning and teaching do not result in higher levels of achievement. This is probably one of the most seriously flawed theoretical issues which is likely to afflict South African education today. Related to this is the need to clarify what is understood by the term multilingual education. The narrow view which positions this as multiple parallel and separate systems is inadequate. Multilingual education needs to be understood to include a range of modes: homogenous language classrooms in some settings where appropriate, but also to include modes which work with students from linguistically diverse backgrounds, including situations of hybridised language practices (e.g. Makoe & McKinney, 2009). The future of the next generation depends in no small way upon whether or not academic researchers and education officials are able to work together in forums which accommodate divergent views of multilingualism and divergent needs of communities across the country. Language education policy needs to articulate with curriculum and assessment policy, and vice versa. Unless misunderstandings are cleared up, terminological slippage and misrepresentation of theory and research evidence will continue, to the detriment of school students.

To summarise: the South African education system, compared with other African and developing countries, has considerable resources including strong research capabilities both

within South Africa and within the continent. The system also has the potential of structural support of multilingual services for education, although these are presently located within the Department of Arts and Culture, rather than within the Department of Basic Education. Government initiated approaches towards literacy and the language education policy could have been strengthened by capabilities which lie both within the research community (universities, other public sector research bodies, and civil society) as well as within the public sector. However, language education policy and the early literacy-academic literacy continuum have not been sufficiently well understood. Where ambiguities arise, these have not been ironed out; and monitoring and evaluation has not yet translated into efficient systemic remedies.

As a matter of urgency, any lingering controversies, misunderstandings or misrepresentations about the term 'mother tongue education' need to be dealt with in an unambiguous, responsible and ethical way by the DBE, university academics and influential stakeholders. Quality provision of home language literacy and language development alongside excellent provision of English as an additional language for most students, within a well-resourced 'additive bilingual' or 'additive multilingual system' needs to be clearly distinguished as designed for educational achievement of all students. This can be accomplished by maximising a re-tooling of teacher education. We know that that many teachers require on-going or regular strengthening of their subject knowledge. Programmes designed for this purpose need to be infused with an understanding of how each teacher in the system can contribute towards literacy and language development. Each teacher in the system needs to be equipped with an understanding of how to manage teaching and learning where there are students from different languages in the classroom and how to ensure that students can strengthen their academic use of both their home or neighbourhood language (even if this is a hybrid urban variety) as well as English wherever necessary. This sounds like a tall-order. But it is achievable. With modern technologies and research expertise, such programmes can be resourced with minimal expense.

Mathematics Education

Vijay Reddy and Andrea Juan

Abstract

The first part of the paper provides a nuanced analysis of policy and programme interventions, the curriculum reform attempts, the teacher development programmes and the attempts to improve infrastructure in the education sector in the last 20 years. The second part of the chapter provides an analysis of the state of school mathematics through an analysis of the performance of learners. This draws on empirical studies: Trends in International Mathematics and Science Study which compared South African performance with other countries, the Annual National Assessments, the SACMEQ studies, the systemic evaluation studies and the analysis of matric results. In general performance has been low and unchanging for the last 20 years, with TIMSS 2011 demonstrating the first improvement of educational outcomes, especially at the lowest and poorest levels. The third part of the paper offers suggestions to improve access, participation and outcomes at the school level.

Introduction

Mathematics and science are key areas of knowledge and competence for the development of individuals, society and the economy of South Africa in a globalising world. The withholding of mathematics for African people in South Africa by the apartheid government was an effective tool that ensured a racially differentiated access to mathematics and science within the framework of Bantu education, which was designed to under-develop and exclude Black people. Since 1994, each of the government administrations emphasized the centrality of mathematics and science as part of the human development strategy for South Africa. Performance in school mathematics and science is one of the key indicators of the well-being of our educational system; it predicts the available skills for post-secondary education and training and the economy and has been a contributor to inequalities of access and income.

School mathematics pre-1994

The state of mathematics and science education just before the first democratic elections in 1994 is outlined in Kahn's (1993) sector study of science and mathematics education, the Foundation for Research Development's Science and Technology Indicators (1993), and a British Council ODA report (Reddy, 1995). This discriminatory apartheid education system was accompanied by unequal resource allocation. Table 1 illustrates the differences in the per capita school funding.

Table 1: Per Capita Learner Expenditure by Race Measured in Rand (R)

Year	Black	Coloured	Indian	White
1970	25.31	94.41	124.40	461.00
1980	91.29	234.00	389.66	1,169.00
1990	930.00	1,983.00	2,227.01	3,082.00
1991	1,169.10	Not available		3,969.00
1994	1,053,00	3,691,00	4,687,00	5,403,00

Adapted from: MacKenzie, (1993) and Veriava, (2005)

In 1994 the government spent over 5 times more on White learners than on Black learners although White learners only made up 17% of the learner population (Fiske & Ladd, 2003). Schools allocated to Black learners could therefore not afford to spend precious resources on school infrastructure and the maintenance of the existing buildings or on science laboratories or mathematics and science equipment and resources. The result was that Black learners were forced to attend under-resourced schools, which were often in bad conditions and did not have enough classrooms. In some cases as many as 50 learners had to be accommodated in one classroom (Sparks cited in Fiske & Ladd, 2004). In 1991 it was estimated that there was a shortfall of 14 000 secondary schools for Black learners. In addition, few schools had electricity, water or sanitation (Fiske & Ladd, 2004).

Table 2 describes participation and performance patterns in mathematics by the different racial groups in 1990.

Table 2: Participation and performance in mathematics, by racial groups, in 1990

	Participation rate in matriculation mathematics	Pass rate in mathematics	% higher grade mathematics participation
White	64	97	60
Indian	70	76	74
Coloured	45	74	38
African*	24	15	65

* Education for Africans was fragmented and offered in the homeland and self governing states as well as 'South Africa'. The statistics for the African group is from the Department of Education and Training schools.
Source: FRD Indicators, 1993

This analysis points starkly to the not unexpected differences in participation and performance of learners from the different ex-racial departments with performance outcomes for the African group being the poorest by a wide margin. In 1990 only a quarter of African matriculants participated in mathematics, and of these 15% passed mathematics – a very small number of African matriculants who left with a qualification in mathematics.

Pre 1994, there was a vibrant NGO sector which focussed on improvement of mathematics and science. NGOs like the Science Education Project, Centre for the Advancement of Science and Mathematics Education and Primary Science Project was funded by private sector and international agencies. These NGOs provided resources like science kits and professional development courses and training for teachers.

Context for Educational Performance

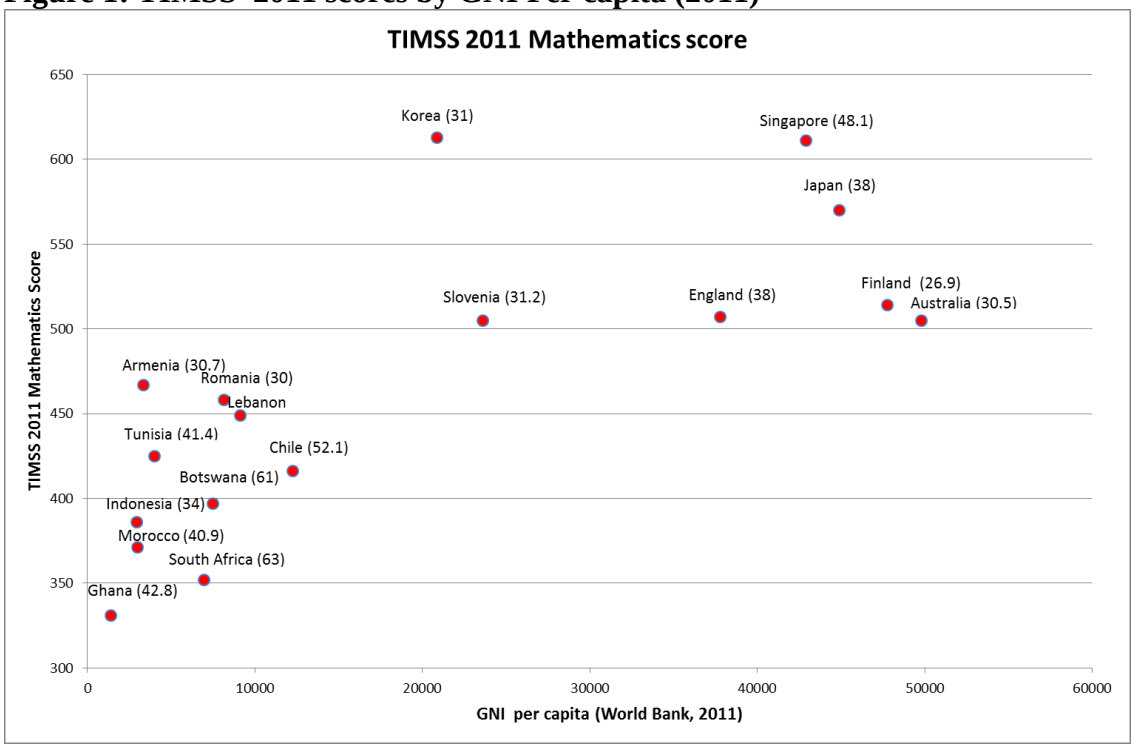
In low income countries poverty and inequality is enduring and persistent – i.e. countries and individuals despite many efforts and programmes are unable to break out of the cycle of poverty and inequality traps. In these traps different inequalities (education, health, socio-cultural) reinforce each other, leading to their persistence and countries and individuals continuing on a low development trajectory. The challenge for countries and households is to explore and find leverage points that could contribute towards breaking the cycle of these inequality traps.

In low income countries there are many development challenges, and underpinning these challenges is the level of education and skill of the population. Education is seen as the key to development and is central to whether and how social, human and economic sustainable development takes place. While education is key to development it is also dependent on the state of development of a country. Education and educational quality is both a determinant

and outcome of the stage of development and thus we have the education and development trap – education is unable to improve because of the low level of development and development is unable to change because of the low level of education.

This education and development trap must be seen as context rather than a barrier and it is within these contexts we have to find leverage points to improve the quality of education. The graph below illustrates the relationship between education and development by plotting the mean mathematics TIMSS 2011 scores against the Gross National Income of the countries.

Figure 1: TIMSS 2011 scores by GNI Per capita (2011)



In general there is a high correlation between GNI per capita and the mathematics achievement scores. Countries with lower GNI perform below the centre-point and countries with higher GNI above the centrepoint of 500. However, within each group of countries, the relationship between GNI and achievement is not straightforward, and another confounding factor illustrated in this graph is the level of income inequality in a country (Gini-co-efficient). Countries with higher income inequality generally have lower performance. The determinants of educational inequality are complex and multi-faceted and no single factor can explain the outcome.

School mathematics post-1994

Since 1994, all sectors (government, business, academia, parents) have recognized the importance of school science and mathematics for the development of the country. They also recognised that the African population was most disadvantaged and needed a programme of redress to ensure better participation and performance in mathematics and science. This section outlines the policies and programmes committed to development of mathematics at school level; the curriculum reform attempts; the teacher development programmes and attempts to improve infrastructure.

Policies and programmes to enhance school mathematics development

Government led policies, programmes, interventions and strategies to improve the state of mathematics and science in schools have been led by three departments: the Departments of Basic Education (DBE), Higher Education and Training (DHET)[1] and Science and Technology (DST). Given that education is a societal issue and the countries number one priority, and performance in schools is key for future skills development, other government departments like Economic Development Department, the Department of Trade and Industry, the National Planning Commission and the Presidency are also involved. Commitment to education has been outlined in a number of government gazettes and policy documents (Table 4) and programmes. These policies affirm that for the country to build the mathematics, science and technology capacity interventions are needed at the school level. The schooling system is a critical part of the human resource pipeline to higher education and the labour market the South African challenge is to increase quantity and quality of graduates from the schooling system.

[1] Prior to 2009 DHET and DBE formed one national Department of Education.

Table 4: Major Policies & programmes relating to Mathematics and science

Year	Policy	Mathematics and science contribution
1995	White Paper on Education and Training	An appropriate mathematics, science and technology education initiative is essential to stem the waste of talent, and make up the chronic national deficit, in these fields of learning, which are crucial to human understanding and to economic advancement(Chapters 4 and 5)
1996	National Education Policy Act	General education stipulations that facilitated the reformation of the education system
1996	South African Schools Act	The act puts forward a uniform system for the organisation, governance and funding of schools to address past imbalances.
2001	National Strategy For Mathematics, Science And Technology Education	The flagship programme in the strategy is the Dinaledi schools project. This strategy selected schools in each province which showed the potential to perform well and therefore could increase higher grade mathematics participation and performance. The schools received additional facilities, equipment and support for effective mathematics and science teaching and learning. By 2008 the programme was expanded to 500 schools
2006	DST Youth into Science Strategy: Nurturing Youth Talent for a Stronger National System of Innovation (YiSS)	The Strategy aims to promote science awareness and understanding among the youth, encourage more young people to study in the sciences and engineering, and to pursue careers in those directions.
2006	No-fee schools policy	The objective of this policy is to bring financial relief to parents of school-going children who cannot afford to pay school fees, thereby being denied access to schools. The Policy is currently implemented in school quintiles 1, 2 and 3. [Note: this policy is not a single document, but is derived from a number of policy documents]
2009	Human Resource Development strategy 2010 - 2030	The strategy includes the following goals: -To dramatically improve learning attainment at all levels of the schooling system -Learner performance in standardised tests for Mathematics at Grades 3, 6 and 9. -Target aggregate percentage of learners who pass the Grade 12 final examination with a mark equal to or above 60% in Mathematics and Physical science -Target 500 Dinaledi schools to double the high-level Mathematics and Science output to 50 000 by 2010. -Increase participation rates in Mathematics and Science (Commitments three and six)

2009	New Growth Path	Performance in the schooling system is at the heart of building the skills base for economic growth and development and ensuring that the society is able to achieve our equity and development goals.
2009	Governments strategic priorities	Education and skills forms one of the 10 key priorities in the 2009-2014 strategic agenda of the government, with Education as Priority One and Skills Development Priority Five.
2010	DBE 2014 Action plan	To increase the number of learners in Grades 6 and 9 who, by the end of the grade year have mastered the minimum language and mathematics competencies for Grades 6 and 9 (goals 2 and 3). To increase the number of Grade 12 learners who pass mathematics and physical science (goals 5 and 6).
2010	DHET Revised strategic plan	Commitment to improve the average pass rates in Mathematics and Mathematic Literacy to 50% in continuing and vocational education
2012	Green Paper for Post school Education and Training	The paper identifies the problem of poor Mathematics and Science results as a barrier to post schooling education. Working with the universities, FET colleges could offer bridging or foundational programmes to students who wish to enter university but who require upgrading in particular subjects, especially Maths, Science and Language.
2012	National Development Plan 2030	Commitment to improve the school system, including increasing the number of students achieving above 50 % in mathematics. The plan targets the increase in the number of students eligible to study towards maths and science based degrees to 450 000 by 2030.
2012	Industrial Policy Action Plan	While the plan does not specifically speak of mathematics and science there is an implicit reference as the plan seeks to ensure long term intensification of South Africa's industrialisation process and movement towards a knowledge economy

In addition to government there have been other interventions by private sector and non-governmental organizations to improve education. Many of these were abandoned after a few years and there have limited evaluation accounts and lessons learnt from interventions. Major international funders have also contributed significant amounts of money to South African education. However, of late, funding has been funnelled away from South Africa to countries in greater need. In 2005, 18 international funders were active in education; by 2008, this had dropped to five (Khoza, 2010). The private sector, foundations, trusts, and international development agencies spent approximately R2 billion, amounting to 1.4 per cent of the national education spend in the 2008/9 financial year (Khoza, 2010). While non-governmental spending is low compared to national spend on education, these funds can be used for strategic projects that the state cannot undertake. An example of a public-private partnership is the partnership between the Mark Shuttleworth Foundation and the Department of Basic education where 1 277 550 Grade 10-12 Mathematics textbooks and 934 700 Physical Science textbooks were provided to schools as part of a strategy to improve performance in mathematics and science at the FET level (Motshekga, 2013).

Another significant intervention to improve the state of mathematics and science education in the country is the Dinaledi project. While the Dinaledi project is mentioned as a flagship programme of government to improve mathematics and science, it is not clear what the key interventions in these schools are. An impact evaluation carried out by the World Bank found that Dinaledi schools made a contribution to reducing inequalities and expanding math and science education from 2005 to 2007. Enrolment and passing rates in Higher Grade physical sciences increased every year. Dinaledi schools had 5 to 7 percent higher enrolment than control schools. The program also increased the number of learners passing the Senior Certificate examination in Higher Grade (HG) math and physical sciences by 55 percent, compared to control schools (Blum et al., 2010). The total number of learners writing and passing mathematics in Dinaledi schools in 2011 was 54%, with only 1 174, out of a total of 42 083 that wrote, passing with over 80%. In 2009, the number of learners who passed mathematics at Dinaledi schools with 50% and above was 12 213, in 2010 it was 16 001, and in 2011 it was 9 412.

TIMSS 2011 included a sample of Dinaledi schools to estimate the performance in these schools. The achievement estimates for public schools in TIMSS 2011 is 348 (SE 2.5) and for

the Dinaledi schools the TIMSS estimates is 392 (SE 10.8). This implies that the average performance in Dinaledi schools is around one grade higher than the general set of public schools. However, it is not clear whether these differences are due to a set of Dinaledi interventions of whether is in the selection of schools.

Curriculum reform

In the last two decades there have been large scale and radical curriculum reform in South African. The change in curriculum was one way of demonstrating a break with the old apartheid systems and establishing a new curriculum committed to transformation, equity and achieving a social justice and some authors argued that the curriculum changes had more of a 'symbolic' significance rather than designed to improve the quality and substance of learning and teaching.

In the previous (NATED) curriculum all learners took general science and mathematics up to the end grade 9 year. In grade 10 learners could choose to enrol for mathematics, physical science or biology and these subjects could be taken at either higher or standard grade. The NATED mathematics and science curriculum was criticised as being highly content driven and very little emphasis on process, inappropriate content with low relevance to the lives of the students and very little links to context and needs of the society. Further, it was argued that this curriculum was designed by university academics to meet the needs of higher education.

In 1997, amidst much fanfare Curriculum 2005 (C2005) with an Outcomes Based Education philosophy was launched. C2005 was criticized for the under-specification of content and lack of structured resourced materials for teachers since they departed from the traditional content-based approach. (Chisholm, 2000; Jansen, 1999). The streamlined Revised National Curriculum Statements for the GET was launched in 2002, however it too was criticised for lacking an implementation plan. The outcomes based education curriculum for the Further Education and Training phase (grade 10-12), the National Curriculum Statements was introduced in 2006. This FET curriculum is orientated to high knowledge and high skill as South Africa has committed itself to a Science and Technology pathway for development.

Curriculum development has occurred in a fast paced and piece meal fashion, responding to critiques of the curriculum. The Department of Education has responded to the critiques of

the curriculum by setting up new ministerial committees and then tried to make some changes. The latest changes respond to the criticism that there is an overabundance of policies, and guidelines which were vague and thus could be open to a number of interpretations. To overcome these fundamental flaws, the National Curriculum and Assessment Policy Statements (CAPS) were introduced in 2012. This is not a new curriculum but presents the curriculum in single, concise policy document. The aim is to provide details on what teachers need to teach and assess which are specific to each grade and subject area. This would lead to lessening the administrative load on teachers, and ensuring that there is clear guidance and consistency for teachers when teaching. At present CAPS has been introduced at grades R to 3 and grade 10. CAPS for grades 4 to 6 and grade 11 are currently being introduced (2013).

Constant curriculum changes have caused confusion and anxieties for teachers. For each new curriculum change, teachers have to attend workshops for an 'orientation' to the new curriculum. These training programmes have been of uneven quality and the level of professional development seems to always be at the same point – induction – and is not able to progress to higher levels of professional training. In addition for teachers attending the training programmes, it means a loss of classroom teaching time. Despite the high levels of training, there have not been the expected shifts in the educational outcomes.

With each curriculum change, the subject options for students have also changed. In the C2005 curriculum and Revised National Curriculum Statements, at the General Education and Training phase (grades 1 to 9), Natural Science, Mathematics and Technology learning areas are compulsory for all learners: for mathematics from foundation phase onwards, for Natural Science and Technology for the intermediate and senior phase. In the Curriculum Assessment Policy Statement, Natural Science and Technology is combined into a single learning area.

In an attempt to improve the numeracy levels of all citizens the new National Curriculum Statements for the FET phase made it compulsory that learners study mathematics, either in the form of mathematical literacy or mathematics. There have been debates about whether this high level of mathematics is viable for all learners at the grade 10 level, given their poor performance in mathematics at the grade 8 level (evidenced by TIMSS 2002) and whether there were enough suitably qualified teachers. Minister Pandor took the decision that all

students at the FET phase participate in either mathematics literacy or mathematics. The Minister acknowledged the non-ideal conditions for the teaching and learning of mathematics literacy and adopted a parallel approach– offer the new subject and set the aspirational targets and build the capacity of students and teachers.

Mathematics teachers

Teachers with expert knowledge in mathematics and science are essential for a quality delivery of the curriculum, especially in the FET phase. There is shortage of mathematics and science teachers, but the data has not been available to quantify the shortages, although in 2012 Minister Motshekga indicated 2888 schools had a shortage of maths teachers and 2669 schools needed more teachers of physical science. Teacher mathematics knowledge has been found to be lacking and a few studies that have been undertaken to test teacher mathematics knowledge have shown that teachers teaching primary school mathematics, taking the same test as the students (or up to grade 6 mathematics) demonstrate low levels of mathematical knowledge (Taylor ,2013, Carnoy et al 2012).

Attracting quality high school graduates to the teaching profession is a high priority. Thus the Funza Lushaka Bursary Programme, which began in 2007, is a multi-year programme that targets young people who wish to enrol for tertiary studies in teaching mathematics, the sciences and languages. By the end of 2012, 11 500 Funza Lushaka bursaries were award by the department (Motshekga, 2013). This is one of the most successful programmes for improvement of the education system. However the concern is that not all graduates have been placed in suitable positions and given that the shortages are mainly in rural area, it is highly unlikely that these graduates would elect to teach in these schools.

The Department of Education has supported many teachers to upgrade their qualifications. These include participation in diploma courses and short training courses. There has not been wide-scale evaluation of these courses, and there is the concern that they have not demonstrated the expected outcomes.

Infrastructure

In the last twenty years the government has made improvements to the infrastructure and resources in schools The 2007 NEIMS reported that 11.5% of schools did not have access to running water (down from 28.7% in 2000) and 16.1% of schools do not have access to

electricity (down from 45% in 2000). The poorer provinces, like Eastern Cape, have schools where the school building infrastructure has been found to be wanting and the Department of Education, despite having the resources have not been able to complete buildings.

While there has been a general improvement of school infrastructure the area of concern especially in relation to STEM subjects is the provision of libraries, laboratories and computer labs. The **2007 NEIMS** data shows that 79.3% of schools did not have libraries, 60.2% did not have laboratories and 67.9% did not have computer labs. These resources are critical to facilitate the pedagogical access and build the quality of the educational system.

Mathematics participation

Most South African citizens meet mathematics and science knowledge for the first and last time in the schooling system. Competency in these gateway subjects at a school level opens up opportunities for empowerment through an understanding of common technologies on which all depend and provides better access to tertiary education and higher skilled jobs and livelihoods. In the pre-1994 NATED curriculum all students took mathematics and general science up to the end of grade 9. For the senior secondary phase (grade 10-12) students could choose to offer the subjects of mathematics, physical science and biology. (see above for the curriculum offerings). One of the debates about the school curriculum was the exit level of mathematics for school leavers. In the earlier curriculum debates it was proposed that math/ science/ technology were to be offered in the compulsory GET phase. Given the need for education to also respond to the citizenship agenda, it was also proposed that since we live in a world dominated by technology, to participate in that world we need to include a functional science and mathematics curriculum in the post compulsory phase. In the FET phase students could choose between the 'academic' math and science necessary for tertiary education participation or the 'functional' mathematics and science necessary for participation in the world. In the curriculum debates that ensued, it was decided since 2006 that students in the FET phase needed to offer mathematics – either in the form of mathematics or mathematical literacy. There had been many debates and concerns about the introduction of the mathematics literacy and what would constitute the curriculum as well as having a suitable cadre of teachers to teach this. However, the decision of the Minister was to start the mathematics literacy offering and in parallel improve elements of the curriculum and teacher qualifications for mathematics literacy. In 2008 the first group of matriculants wrote

mathematical literacy or mathematics. The period from 1995 to 2007 saw an increase in mathematics participation (from 200 444 to 347 570) and a decrease in mathematics higher grade participation (from 65 616 to 46 125). In 2008, the first group of matriculants graduated with either mathematics or mathematics literacy subjects. In 2008 there were higher numbers of mathematics than mathematics literacy students, and from 2009 there numbers of mathematics literacy students was greater than mathematics students. The percentage of mathematics literacy students at the grade 10 level from 2008 was 47%. This increased to 49% in 2009, 52% in 2010, 55% in 2011 and 56% in 2012. Thus an increased participation in mathematics literacy and a decreased participation in mathematics.

Performance in mathematics

We need to examine the impact of the policies, commitments, programmes and investments to improve the state of mathematics and science education. The indicator of success is the performance by learners. Analysis of the performance of the South African schooling population, using ANA, systemic studies, TIMSS, SACMEQ show the following characteristics:

- the national mathematics mean scores are low and the national average mathematics achievement score at different grades across the schooling system, for a long time had not shown any improvement. TIMSS 2011 showed a slight improvement in achievement scores.
- There is a high differentiation of the educational performance of students from different socio-economic conditions and we can say that we have two systems of education. One part is described as well performing and we estimate that this around 30% and the other part described as underperforming is 70%. Any meaningful analysis must involve a disaggregation of the performance scores into relevant groupings.
- Schools are the institutions where learners are exposed to knowledge and skills in mathematics and science and the place that the state can intervene to improve the educational outcomes - thus we need to provide a school level analysis.
- There are very few top performing students that are globally competitive. As we evaluate the extent of high skills in the country and active participation in the knowledge economy, mathematical skills are very important and the state; in addition to the equity agenda of needs to focus on the excellence agenda.

The national mean mathematics scores is low and remained the same for a long while

South Africa has participated in a number of large-scale systemic studies (national, regional and international) to assess the performance of the country in science and mathematics. Using the national and cross-national studies we will comment on the achievement trends over the last 20 years.

The following table provides a description of mathematics/ numeracy performance at different grade levels over time.

Table 5: South African Learner performance in Mathematics

GRADE 3 Level		**GRADE 6 LEVEL**		**GRADE 9 LEVEL**	
Assessment	**Mean score**	**Assessment**	**Mean score**	**Assessment**	**Mean score**
Systemic Evaluation 2002	30%	SACMEQ I (2000)	486[2]	National Assessment Learner Achievement(2009)[3]	25%
Systemic Evaluation (2007)	35%	Systemic Evaluation (2004)	27%	ANA 2012	13%
ANA[4] 2011	28%	SACMEQ 2007	494 [2]		
ANA 2012	41%	ANA 2011	30%		
		ANA 2012	27%		

Performance in the national achievement studies is low and even though the methodologies and instruments in each of the studies are different, these scores demonstrate the low performance of the education system. Government has set a target that by 2014, 60% of students should be achieving at above the 50% mark. In 2011, 17% of grade 3 learners and 12% of grade 6 learners achieved at above the 50% mark and in 2012 according to the methodology used by the DBE, 36% of grade 3s achieved at above the 50% mark and 11% achieved at above the 50% mark. This is a long way from the target.

[2] SACMEQ provides Rasch scores.

[3] Study undertaken by HSRC.

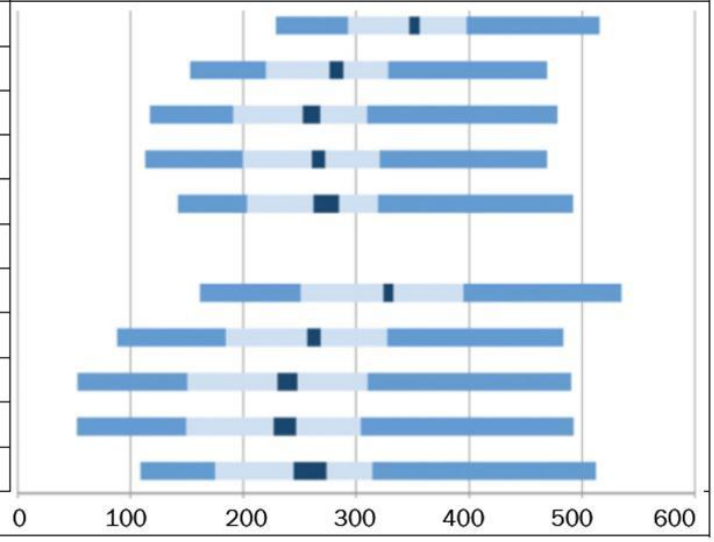
[4] The Annual National Assessments, a population based survey, testing the competences in numeracy/ mathematics and literacy/ languages was first undertaken in 2011. The Department of Basic Education used the calculations from the 'verification' ANA (nationally represented sample) undertaken by the HSRC to present the performance results from the grade 3 and 6 shows that the national scores were low with performance at grade 3 numeracy at 28% and at grade 6 mathematics at 30% (DBE, ANA 2011). In 2012, the Department of Basic Education did not undertake verification ANA and from scores submitted by schools for the population generated the national scores

The national average mathematics achievement score for different grade levels across the schooling system is similar and stable. This raises the question whether schooling matters for improved performance and raises challenges of how can we make schooling matter. While the above analysis provides an indicative view of trend performance, The Trends in International Mathematics and Science Study (TIMSS) was designed specifically to measure trends over time. In the TIMSS 1995, 1999, 2003 and 2011 which tested mathematics and science proficiency at the grade 8 level & grade 9 level, South Africa performed at the bottom end of the performance table of the countries participating (Mullis et al 2012).

Figure 1 below illustrates the trends in mathematics and science achievement distributions between the bottom and upper ends at the 5th and 95th percentile for TIMSS 1995, 1999 and 2002 at the Grade 8 level and for TIMSS 2002 and 2011 at the Grade 9 level.

Figure2. Trends in South African Mathematics and Science Achievement: 1995 to 2011

MATHEMATICS	Ave scale score (SE)
Grade 9 TIMSS 2011	352 (2.5)
Grade 9 TIMSS 2002	285 (4.2)
Grade 8 TIMSS 2002	264 (5.5)
Grade 8 TIMSS 1999	275 (6.8)
Grade 8 TIMSS 1995	276 (6.7)
SCIENCE	
Grade 9 TIMSS 2011	332 (3.7)
Grade 9 TIMSS 2002	268 (5.5)
Grade 8 TIMSS 2002	244 (6.7)
Grade 8 TIMSS 1999	243 (7.8)
Grade 8 TIMSS 1995	260 (7.9)



These graphs show an overall improvement in mathematics and science achievement scores in TIMSS 2011. The average national scale score for mathematics and science remained static over the years 1995, 1999 and 2002. This is likely attributable to the structural and educational changes made as the country moved from apartheid to a democratic state after

1994. One of the unintended consequences of the many changes that occurred in the educational landscape was that school and classroom educational quality suffered leading to continued poor educational outcomes as measured by the mathematics and science achievement scores.

In contrast, from 2002 to 2011, in the public school sector the national average mathematics score increased by 63 points and the national average science score by 60 points. TIMSS estimates that a 40 point increase is equivalent to improvement by a grade level. The increases over the two cycles of TIMSS in South Africa mean that learner performance has improved by one and a half grade levels. However, South Africa still achieves a low average mathematics and science performance, meaning that South African learners are performing below the level expected for grade 9 learners.

For the period 1995 to 2002, the South African score distribution for both mathematics and science, from the 5^{th} to 95^{th} percentile, was one of the widest of all countries participating in TIMSS. This reflects the wide disparities in society and in schools, and is evident in the educational outcomes of the learners. In 2011, the variance in the range of mathematics and science scores in South Africa decreases, suggesting that the country is moving (albeit slowly) towards more equitable educational outcomes.

The achievement scores at the lowest levels (5^{th}percentile) are generally those of learners from low-income households and the most disadvantaged schools. These lowest scores have improved between 2002 and 2011 (look at the start of the bar on the left hand side). Government had instituted a number of pro-poor policies and programmes (e.g. no fee schools, basic income grant) and the improvement at lowest end could be due to these investments.

ii. There is a high differentiation of the educational performance of students from different socio-economic conditions

An important characteristic of the TIMSS 2011 achievement performance is that South Africa had the widest distribution of scores in mathematics and science of all the countries that participated. This wide range means that there were very low as well as a few very high scores. South Africa is not a homogenous society and the single aggregate score is misleading

to understand the mathematics and science performance in the country. Disaggregation of the mean scores of students by different categories is essential to understand the educational system and suggest educational interventions.

There is an inequitable performance at the provincial level, where the Western Cape, Gauteng and Northern Cape perform at the higher levels and the provinces of KwaZulu Natal, Limpopo and Eastern Cape perform at the lowest levels. In addition, the provincial mean scores, closely mirrors the trends in GDP per capita for each of the provinces.

The mathematics performance, as expected, varies with the poverty index ranking of schools – where performance at ranks of 1, 2 and 3 (non-fee paying schools) is fairly similar, we see a slight improvement for the group on Quintile 4 schools and the group of Quintile 5 schools form a distinct group with much higher performance. Similarly analysis of learners by previous racial department shows that learners in the African schools continue to have the lowest average scores, and learners in the former House of Assembly schools have the highest score. However, the greatest improvements in achievements from TIMSS 2002 to 2011 were demonstrated by learners attending schools designated for Africans. Learners attending the former House of Assembly schools, schools categorised as Quintile 5 and independent schools all have similar means scores and their mean score is slightly below the international mean score in TIMSS.

In the past, access to the different types of schools had been determined by race, now access is determined by the ability to pay the school fees, staying in an area where one was previously excluded from, and being able to travel to schools which are outside the township. The former racial departments of schools are located in communities with different socio-economic conditions. The areas where most Africans live and where most African schools are located still rank the lowest on the scale of socio-economic conditions. The lowest performance is in the African schools and this forms the majority of South African schools.

iii. Schools are the important unit of analysis and there are too few functioning schools producing high performing school graduates

Educational inputs take place largely in schools and we need to examine how those institutions are performing. Schools almost certainly have a much greater importance for

performance in poorer communities than middle class communities because they are the institutions that can substitute for lack of cultural capital and home support to facilitate educational experiences for students.

An indicator of the differences in performances is provided by examining which schools are dominant suppliers of science and engineering students to university. Auret (FRD, 1993) determined that 9% of White and 29% of African students came from the ten most prominent schools in their respective racial departments of education illustrating a very high degree of polarization in access and performance, especially in African schools. In 1993 only 0.4% of African schools provided one fifth of the students to science and engineering faculties.

In a study to examining school performance, Reddy and van der Berg examined school performance in mathematics for the period 1998 -2003. A quick examination of the database indicated that there were schools that consistently, over the 6 years, produced high quality mathematics passes (and we call these schools established schools), there were schools that showed the potential to produce high quality mathematic performances (and we call these schools emergent schools) and there were schools that consistently produced poor results. Table 6 provides the information for two provinces, Gauteng and Free State.

Table 6:Established, emergent and low performing schools in Gauteng and Free State

	GAUTENG				**FREE STATE**			
Ex-dept	No. school	Established base	Emergent base	Low performer	No. school	Established base	Emergent base	Low performer
Black*	262	3	45	214	228	11	47	170
White	168	119	35	14	42	22	8	12

For an improvement of school quality it is important that schools have an enduring quality and a predictability that they will consistently produce high quality mathematics passes. Therefore the challenge is to move more schools from the emergent band to the established band. The key leverage point for creating better opportunities for most youth is the school. Therefore the challenge for the science and math education system is to build, expand and sustain the base of well performing schools in the country. Interventions therefore should

concentrate on firstly working with schools which are classified as emergent and to ensure that they consistently produce high quality math passes and thus have an enduring quality.

In 2003, it would seem that over 75% of schools in each of these two provinces would be categorized as low performers. We would need to undertake a more recent analysis to establish whether the number of established, well performing schools has improved or not.

(iv). There are very few top performing students and they are not globally competitive.

South Africa aspires to move from a resource based to a knowledge economy. A knowledge based economy is premised on the availability of high levels of education, skills and competences. An analysis of our mathematics performance over the last 20 years provides an insight into our potential pool of high competence school graduates from the schooling system who could then progress to higher education and labour market technical careers.

Using matric performance indicators and examining the trend of high performers in TIMSS, we comment on whether the present high skills base is sufficient to meet the needs of the economic route for South Africa. In TIMSS 1995, 14% of the grade 8 students performed above the low benchmark indicator. This increased to 24% in 2011. The percentage of those who reached the high benchmark was 0.3% in 1995 and this rose to 1% in 2011.

Using the indicator of grade 12 passes, the mathematics higher grade passes in 1995 was 29 475, in 2000 was 19 327 and in 2005 it was 26 383 – a very small number of warm bodies. In the new curriculum, where the equivalence between higher grade passes and the pass mark in the new NCS that would constitute a higher grade pass is still being established, in 2011 there were 61 592 passes at above the 40% mark and 40 434 above the 50% mark. In 2012, this increased to 80 716 who scored above 40% and 51 047 above 50%. This would constitute the pool of high skills from the schooling system to participate in qualifications for STEM careers – a number that is very still low when examined against the aspiration of the country. In order to improve the quality and quantity of graduates from the matric, there needs to be a higher investment in the agenda for excellence in mathematics performance.

Concluding comments and recommendations

1. The policies and programmes for an improved educational system seem to be in place and we are now collecting macro level educational data. However we know very little

about mathematics and science classroom practices and the focus has to be on improving what happens inside classrooms and schools in order to improve educational outcomes.

2. A review of literature of home and school effects on student achievement scores tells us that in the developed world that both the home and school interact to produce the educational outcomes. In this study we start from the perspective that home and school characteristics, like resources and environments, interact to produce the educational outcomes like achievement scores. We have seen an improvement of home conditions, in the form of household assets and increase in parental education levels. There needs to be continued resources to increase household resources as well as continued investments in adult education to improve parental educational levels.

3. The state has spent a great deal of resources on training. Training has taken the form of introduction of new curricula or policies and also short term training for new knowledge, given the gaps in teachers' knowledge. There needs to be a much high scrutiny on the nature, quality and outcomes of the training programmes and even of university based upgrading qualifications. Anecdotal evidence suggests that the training is generic and of concerning quality. It is not achieving the desired impact on educational outcomes. While there has been a high emphasis on training for skills and competences in order to bring about change, there are many non-technical aspects (like work-ethic, work values and cultures) that also need improving. Our next phase must focus on these aspects.

4. Since 1994, the equity agenda (rightly so) has been paramount. The agenda now must include the agendas of equity, quality and excellence. South Africa needs to produce more high achievers from the schooling system. As part of this agenda, schools who had historically been well performers need to be nurtured and supported in their work.

5. South African performance is low. Bringing about educational change takes major effort from schools, teachers and learners and support and resources from the national and provincial departments of education. Extrapolating from the trends analysis of TIMSS, would suggest that around the year 2023, the country would be closer to the TIMSS centrepoint.

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Teacher Education

Nolutho Diko

Abstract

In order to make a clean break from the past, South Africa revamped the whole higher education system including teacher education. The basis for change was disbanding the old system and developing a national teacher education system underpinned by democracy, equity, redress and transparency. Second, it was to develop a system that would respond to individual and economic development needs in the context of global economies and globalization (DoE, 1996). With democratic structures in place and guided by democratic principles and ideals the government formulated and implemented new teacher education policies. Universities were restructured accordingly; funding models, curricula and qualifications were revised. However, intervening circumstances such as globalization, manifested through the development policy of the country and fiscal constraints, changed the course of the shifts in a manner that turned out to be less favourable for teacher education. These consequences, whether anticipated or unanticipated, had far reaching implications; teaching lost its appeal to African youth as they exercised their right to go to their institutions of choice and study fields perceived to be high status areas, teacher education lost its standing within universities, funding for teacher education decreased and the field had to fight for survival and to remain relevant. Using data collected from secondary sources, we report how the changes have developed so far; the successes and the challenges the system has to stand and we make recommendations of how it can be improved to advance the quality of teaching in the country.

Introduction

Soon, we will be celebrating 20 years since the democratic government was first elected to power. Equally, substantive questions about what has changed in education are bound to come up. This is a response to the following questions: What major changes have taken place in teacher education since 1994? Why did they happen? What are the future consequences of the changes? While documenting the changes, continuities will also be highlighted because

they assist to underscore the changes. There is a multitude of changes in teacher education but focus here is on: *the policies, the size and shape, the structure and governance systems, the student composition and distribution, the programmes and curricula, the qualifications, the influences of globalization, funding, the changing nature and role of research on and in teacher education*. The spotlight will be on public teacher education providers because provisioning by private teacher education is so small that the number of teachers produced by all the private teacher education institutions combined is negligible at this point (DBE & DHET, 2011).

The education sector demands of the 21st century put pressure on institutions training teachers to produce teachers who are able to teach learners who perform well (OECD, 2004). Due to the global economic order (Hofmeyr & Hall, 1996; Jansen &Taylor, 2003), South Africa has aligned her teacher education policies with the international order and the national dialogue accommodates international debates about teacher quality. Consequently, teacher education; initial professional education of teachers (IPET) and continuing professional teacher development (CPTD) (DoE, 2007), is attracting unprecedented attention. South Africa's National Policy Framework for Teacher Education (NPFTED) (DoE, 2007), the Department of Higher Education and Training's (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) all attest to this.

This report provides an overview of teacher education from 1994 within a specific framework: the state of teacher education before 1994, policy developments, staffing, governance and structure, curriculum, research, strengths of the current system, related challenges and suggestions on how to overcome some of the challenges. To compile the report, the author relied solely on secondary data as there was no time or resources for collecting primary data.

The historical character of South African teacher education

Understanding contemporary South African teacher education needs to be fore-grounded by relevant history. South Africa emerged from a fragmented and deeply discriminatory system where the goal of teacher education had less to do with meeting the national plan (RSA, 1996; DoE, 1997; DoE, 2001; Parker, 2003; Sayed, 2004). The primary goal of apartheid

teacher education was to produce teachers that would support the policy of separate development. There was no national control of teacher education (Hofmeyr & Hall, 1996) and some of the teachers, especially Blacks, were under-qualified. Instead, the responsibility for teacher training was divided between the 19 governance structures that were present at the time.

Following are some of the terrible consequences of the disparate apartheid teacher education:

- the systems could produce as many teachers as it saw fit, depending on race, training could be done in teacher training colleges or at universities (Hofmeyr & Hall, 1995) with teacher training colleges catering mainly for black people,
- teacher education had no minimum entry requirements or uniform qualifications, structure or standards and norms to provide guidelines about what the students were going to learn in the programmes (Parker, 2003),
- there was a range of curricula and no quality assurance mechanisms to monitor the teacher education programmes (Sayed, 2004),
- there was no national body certified to evaluate and oversee all the registered programmes as each of the governing bodies had its own approved set of regulations and laws, (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).

When reforming the system, the vision of the DoE was dual. First, it was to develop a national system underpinned by democracy, equity, redress and transparency. Second, it was to develop a system that would respond to individual and economic development needs in the context of global economies and globalization (DoE, 1996). Below, the focus is primarily cast on showing how far has teacher education managed to achieve the goal of developing a national system underpinned by democracy, equity, redress and transparency and to a lesser extent on how the system responds to individual and economic development needs.

Transformation of the South African teacher education system

Teacher education was doubly affected by transformation. First, it was experiencing transformation as part of higher education and second as a sector. The biggest shift that triggered all the others within higher education was the transformation of the higher

education sector in response to the national mandate contained in the Republic of South Africa Constitution of 1996 and the Higher Education Act of 1997. Specifically, the current shape of teacher education is a result of two interrelated complex processes; closure of many colleges of education in the late 1990s and the incorporation of the remainder into higher education in 2001. From the literature reviewed, we identified the following periods that frame the whole process of higher and teacher education transformation:

- 1994 to 1997 – The period soon after 1994 was a period of systemic reform, dismantling of apartheid structures and procedures and processes and creating an equitable financing system (DoE, 2001). This resulted in the manifestation of policy in the form of new structures, role-players and authoritative bodies and an enabling environment for transformation. This phase, according to Samuel (2001), was a phase of 'reconstruction through restructuring'.
- 1998 to 2000 – This period can be characterized as a period of movement from frameworks to action. With the educational management, administration and governance systems in place, attention had to be turned to implementation (DoE, 2001). The global slowdown in financial markets led to an appraisal of the Reconstruction and Development (RDP) policies introduced in 1994 within the context of Growth, Employment, and Redistribution (GEAR), the macro-economic policy framework adopted in 1996. Efficiency, labour market responsiveness and economic development goals became central to public policy. The resultant tighter fiscal framework had a terrible impact on teacher education compared to other university faculties.
- 2000 to 2004 – This was a phase of policy reformulation or revision based on problems encountered during the implementation phase. For example, 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.
- 2004 to 2008 – consolidation and strengthening of teacher preparation and development.

The teacher audit and a new trajectory

To get a picture of the size and shape of the teacher education system, in 1995, the Minister 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). According to the study findings, the teacher education system was found to be disparate with 281 institutions offering in-service and pre-service training to 481 000 students in universities, technikons, and colleges of education, private colleges and non-governmental organisations. The quality of teacher education was reported to be generally poor, inefficient and not cost effective.

The study recommendations led to a number of changes within teacher education that were accompanied by some costly and unintended results (OECD, 2008). The rationalization and repositioning of teacher education institutions within higher education and the closure of teacher training colleges sent a wrong message that teaching was not important. This proved to have long lasting consequences that affect teacher education because numbers of teacher trainees dropped drastically since then.

Transformation, restructuring and cooperative governance

Instead of the top-down approach that characterized the policies of the Nationalist party government, the ANC-led government chose to adopt a democratic approach. Transforming education was not solely in the hands of government. New policies provided education stakeholders with an opportunity to participate in decision making too. This power is derived from the National Education Policy Act (NEPA) (1996) which allows for stakeholder participation in policy developments and provides for democratized decision making.

From 1995 to 2000 the Department of Education and the relevant partners introduced many policies that were intended to radically transform higher education. An independent advisory body, the Council on Higher Education (CHE) and various inter-governmental forums, like the Council of Education Ministers (CEM) and the Heads of Education Departments Committee (HEDCOM), were to work collaboratively with the Minister of Education on redeveloping higher and teacher education structures and policies (Parker, 2003; DoE, 2005; DoE, 2001). A report of the National Commission on Higher Education titled *Framework for Transformation* (1996) sets out a new vision for higher education (Jansen, 2004). It is supported by the Education White Paper 3 and the Higher Education Act both published in 1997. These statutory bodies and policies created an environment for and embarked on changing higher education.

The restructuring and transformation of higher education was not smooth. According to Kruss (2008), the restructuring of higher education had four or even five trajectories that happened over a ten year period. What was compounding the difficulty was the fact that the changes were also influenced by global forces that were reshaping higher and teacher education at the same time. This means as South Africa was responding to national demands, there was global reform and transformation of teacher policies happening simultaneously. South Africa had no choice but to respond to both influences. The most visible change was the reduction of public institutions of higher education from 36 to 23. Their governance was consolidated and brought under national competence (Jansen and Taylor, 2003). Breier (2001) tells us that globalization affected all the different facets of higher education. She goes on to say that even the curriculum changed as it was affected by debates about globalization, massification, and internationalization.

A new teacher education system

After 1994, the desire to break away from the past was so great that there were so many policies formulated it was difficult for policy implementers to keep up. Upon realizing that the multiplicity of policies were making it difficult to have a meaningful implementation, and by implication realization of education transformation, in 2003, the Minister of Education appointed a task team to review teacher education to develop clarity and coherence across the various authorities and policies that play part in training and developing teachers (DoE, 2005). Over two years, the members of the task team interviewed a number of stakeholders such as members of teacher unions, members of Faculties of Education across the country, the Council on Higher Education (CHE), the South African Council for Educators (SACE), the South African Qualifications Authority (SAQA), the Educations Labour Relations Council (ELRC), the Education, Training and Development Practices: Sector Education and Training Authority (ETDP-SETA). The committee reported back in 2005 in the National Policy Framework for Teacher Education (DoE, 2005), a framework that gives guidance regarding all the aspects of teacher pathways and the supply and demand of teachers.

In 2007, the DoE responded to the report with the production of the National Policy Framework for Teacher Education and Development in South Africa: More Teachers, Better Teachers. The framework acknowledges that providing the country with more and better

teachers starts with making sure that there is a constant pool with enough recruits. The number of new recruits is very low at the moment because after the process of teacher rationalization and the restructuring of teacher education, attracting new recruits and thus, providing schools with enough supply of teachers was not easy (Morrow, 2006). Consequently, there is heavy reliance on the pool of teachers in the reserve and the in-service training of teachers is as important as their pre-service training.

To change the bad image created about teaching and to make the profession more attractive, the government created bursaries for students with good grade 12 results who want to pursue teacher education. The Fundza Lushaka – meaning teach the nation – bursary scheme, introduced in 2007, has helped increase student enrolments in teacher education. The bursary is specifically aimed at training teachers in scarce skills areas, such as Mathematics and Science. In addition to this bursary, there is a financial aid scheme administered by the National Student Financial Aid Scheme (NSFAS) to help poor students 62ulfi in teacher education (DoE, 2009).

To deal with problems in the practice of teaching, in 2011, the DBE and DHET released the Integrated Strategic Planning Framework for Teacher Education and Development in South Africa 2011 – 2025 (DBE & DHET, 2011). This framework gives clarity on teacher education and development.

The size of contemporary teacher education and related challenges

As indicated earlier on, studies of institutional redress disquietingly observed that rationalization of higher education had unintended results with serious implications. Enrolments in historically-black universities decreased and increased 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) observed that, generally, there was a reduction in the number of students who registered for teacher education. 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. On the other hand, Crouch and Perry (2003) were forecasting looming shortages of teachers. Ramrathan (1999), supporting them, noted that fields such as mathematics did not have an adequate supply of qualified teachers. 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 quantitative and qualitative shortages qualified and competent to teach has emerged as a constant trouble for the government of the day (DBE & DHET, 2011). As early as 2006 the need to respond to the decline in the supply side has been registered see Morrow (2006). Recently, the DBE and DHET have voiced similar concerns. The number of initial teacher education graduates produced by all the universities was slightly less than 6000 and more than half of them were further education and training (FET) graduates. This number is far from the estimated 20 000 that the system needs per annum. The impact of HIV/AIDS on the teacher labour market is not making things any better (Shisana et al. 2005; Peltzer et al. 2005). It has negative implications for teacher supply through morbidity and mortality. We are aware of the perceived availability of a large pool of unemployed teachers. What is worrisome about this is that there is no data about the qualifications of these teachers as well as the learning areas or phases they can teach. Acute shortages are in the following learning areas; science, mathematics, technology and languages, economic and management, arts and culture, the foundation phase, in Special Needs schools, in Early Childhood Development (ECD) and remote and rural schools. Production of foundation phase teachers of African origin is the lowest.

We acknowledge the strides made in terms of providing disaggregated data that gives detailed information about what the system is able to replace. The DHET report titled Trends in Teacher Education 2008-2009 (2010) is the first government initiated teacher education study that does not provide the number of teacher education graduates only but it also gives the graduates' specialization areas. However, given the shortages in so many specific learning areas, there needs to be more detailed information on specializations offered by HE institutions, areas 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. For example, more information is necessary regarding provisioning and needs in ECD and areas such as special needs; an area currently not known much about. Universities need to have programmes that show responsiveness to the identified demands.

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 as they do not address the demographic realities of South African schools (Gordon, 2009). Provinces need to develop data systems that respond to this problem.

Curriculum restructuring

Teacher education curriculum changed in the form of the Norms and Standards for Educators (NSE) as gazetted in 2000. According to NSE, curriculum has to be competence based; meaning theory and practice must be integrated. Gordon (2009) expands on this and says that universities had to develop curricula that would be locally relevant and yet geared towards an increasingly competitive technological and knowledge driven world.

The NSE (2000) and the NPFTED (2007) define the parameters for the curriculum and programmeme changes. The NSE and recently the Minimum Requirements of Teacher Education Qualifications policy mandate universities to construct teacher education programmes and modules that are consistent with teacher policies and institutional goals. According to these policies, the courses offered in teacher education programmes must subscribe to the following thematic areas; disciplinary learning, pedagogical learning, practical learning or work-integrated learning, fundamental learning and situational. The knowledge mixes of programmes must also subscribe to the level of learning stipulated by SAQA.

Teacher qualifications

In the new dispensation teacher qualifications have been rationalized to match international developments (DBE & DHET, 2011). Initial teacher education qualification has been catapulted to the status of a degree. A national qualifications authority, called the South African Qualifications Authority (SAQA), which is responsible for national qualifications, is in place. SAQA established a national qualifications framework and the Norms and Standards for Educators (NSE) policy. According to SAQA, being a teacher in South Africa follows strictly one of the two ways; completing a four year Bachelor of Education (Bed) degree, which consists of 480 credits including a practical component of 120 credits at level 7, or completing an appropriate first degree followed by a one-year Advanced Diploma in Education. NSE introduces competencies that a trained competent teacher must possess, and,

a Bed degree must lead to the development of those. Graduates are also expected to demonstrate knowledge and skills in their particular phase/s and or specialization/s as well as practical skills and workplace experience to teach in varying contexts. Teachers who were trained before the norm was set have since upgraded and mostly through distance education. This delivery mode has gained incredible currency in teacher development.

Continuing professional teacher development

The National Teacher Education Audit criticized the in-service training model or CPTD that was in place before 1994 as a qualifications-driven in-service model with little impact on classroom practice (DoE, 2007). Further, the report noted that CPTD did not have a national regulatory structure; there were multiple programmes without coordination, and there was no formal reward structure for teachers who went through these programmes (DoE, 2005).

Under the new dispensation, CPTD is regulated and subjected to the same governance principles guiding IPET (DoE, 2007, DBE & DHET, 2011). The policy responsible for CPTD is the same as the policy for IPET but CPTD is provincial competence and is provincially controlled, just like all issues pertaining to practicing teachers. The government has brought CPTD under teacher education in order to ensure that teachers who participate in such programmes are protected from fraudulent providers, are properly guided about which professional development activities to do, and to make sure they are able to contribute to the improvement of education quality after going through the programme.

CPTD activities are conducted at provincial, regional and district levels. Provinces have public Teacher Development Institutes (TDI) and Education Resource Centres (ERC) as well as privately sponsored ones. These are spaces used for professional development (PD); TDIs are provincial spaces while ERCs are regional spaces. They are staffed and they have resources. The South African Council for Educators (SACE) is the regulatory body responsible for the implementation and management of CPTD and for teachers to practice; they must be registered with SACE. Service providers who want to conduct professional development of teachers go through SACE. The policy prescribes what developers need to take into cognizance when developing their programmes. According to the policy, not all professional development activities are expected to be NQF credit bearing. Lastly, teachers are monitored if they participate in PD activities or not. There are rewards for participation

and punishment for non-participation. There is a body responsible for monitoring teachers' and schools' performance, the National Education Evaluation and Development Unit.

Debates in international teacher education literature

This section provides a brief overview of key trends in the international literature on teacher education. This is done within the limitations of understanding that there is no international or uniform regional teacher recruitment policy. Teacher education is marked by heterogeneity with regard to educational attainment and professional training (Bennell, 2004). Teacher policies differ from one country to another and sometimes they differ even within the same country, for example, in the United States this is true. However, countries are moving toward making teacher education a university competence. According to Bennell, in most African primary schools teachers with certificate-level training predominate.

Initial teacher education or preparation has two prevalent models of structure or organization; concurrent models and consecutive models. Concurrent models involve a three or four year course where academic subjects are offered alongside educational and professional studies throughout the duration of the course (Coolahan, 2002; OECD, 2005; Musset 2010; Schmidt et al. 2011). Consecutive models are a predominant model for secondary school teachers. In this model students study a first degree in a field other than education and follow this up with a one year diploma in teaching (Coolahan, 2002; OECD, 2005; Musset 2010; Schmidt et al. 2011).

Most countries train teachers over 4 years in a university, a college or a normal school. In other countries, teacher training takes longer than 4 years, for example, in Taiwan and in Germany. Taiwanese programs are among the most intense and competitive (Schmidt et al. 2011). Only candidates with strong qualifications are admitted into teacher preparation, teaching is a high status profession and salaries are equally attractive. Each country has unique professional requirements to enter teaching.

In some countries there can be a surplus of teachers while in some there can be a shortage. Teacher shortage may be general - in the sense that it can be in all types of schools and all types of teachers can be in shortage - ; it can focus on locations – rural or impoverished areas -; or focused on certain types of subjects – mathematics, languages etc. -; or special kind of

teachers – special needs. In some cases there may be qualitative instead of quantitative shortages and teacher policies have to cater to all these problems.

There is no single teacher education curriculum even within the same country. There is a large degree of commonality in the general content of teacher education programs which tends to comprise of the following essential components:

- Academic subjects
- Studies in educational sciences
- Methodologies
- Teaching practice

Research studies and literature point to the fact that there are variations in the organization of program contents even though the basis is the same (Schmidt et al. 2011).

Some studies identify in-service training and overall teacher support as playing a dominant role in influencing teacher retention. The need for supportive mechanisms includes mentoring, conference opportunities, and partnerships with colleagues from other areas in order to improve teaching competencies have been identified (Darling-Hammond 2000, 2004; Ball and Bass 2000, Bennell 2004). Collaboration has been isolated as a significant issue, with other 'successful' teachers in specific curricular areas proving an invaluable supportive mechanism. In addition, the replication of experiences and success strategies in neighbouring schools forms an important component for sharing and support.

Teacher education restructuring, and research development

The way education transformation played itself out made research a huge part of it. The first group of education studies post-apartheid was policy studies followed by implementation studies. These studies followed global trends and patterns (Samoff, 1997). Following restructuring of teacher education and the standardization of qualifications and curriculum, universities and other South African institutions took ownership of research. 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.

Teacher education has expanded to include or accommodate other orientations and to incorporate international perspectives. The field has opened up even with regards to research methods. Research collaboration and mixing of methodologies or using multi-disciplinary approaches is very common now. Research collaborations 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) provided valuable demographic information for planning and management purposes with regards to the profile and quality of the teacher education workforce. Cosser (2009) added 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 in the future. 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.

There is consensus about using research as one of the pillars to provide more and better teachers (DoE, 2007). The calls may be motivated by different goals and traditions but being dissimilar does not mean these goals are mutually exclusive, **t**herefore, 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.

Success over the years

Restructuring and transformation

- First and foremost, the ANC-led government has managed to develop a national system of education underpinned by democracy, equity, redress and transparency. Second, it has developed a system that would respond to individual and economic development needs in the context of global economies and globalization (DoE, 1996).
- Restructuring of higher education has been the single most important change in the higher education landscape. Institutions were reduced from 36; (21) universities and (15) technikons to 22 new institutions; consisting of universities (11), universities of technology (5) and comprehensive institutions (6).
- Teacher education was aligned with international teacher education policies and thereby S.A. became part of the global teacher education community. As a country we have 69ulfil69d the international order by moving teacher education to higher education, thereby making it a national competence and removing the various governance systems and structures that were prevalent during apartheid (DBE & DHET, 2011).
- The teacher education policy prioritizes IPET and CPTD; none is given prominence over the other. The government recognizes that both systems have capacity to provide teachers to the system. South Africa has a large pool of teachers in reserve and they become a source of supply when there is demand. There are attempts to even attract them to retrain and teach in the areas where there is need.
- Steps have been taken to formalize and control CPTD. Provincial departments of education are the agents for CPTD. To deal with problems in the practice of teaching, in 2011, the DBE and DHET released the Integrated Strategic Planning Framework for Teacher Education and Development in South Africa 2011 – 2025 (DBE & DHET, 2011). This framework mainly gives clarity on continuous professional teacher development and is the bible to be used by provinces, regions and districts.
- The country is in possession of a system of institutional providers, programmes and teacher development centres to ensure that in-service training of teachers does not lag behind. There are 75 teacher development institutes and education resource centres nationally. Teachers do take advantage of the opportunity. Those who are in

employment are constantly improving their qualifications. Many of them use distance education mode.

Democracy and governance

- As a country we have matured in policy making and implementation. The first policy studies that came out post 1994 were followed by implementation studies and when problems were picked up at the implementation stage policies were reformulated to respond to the challenges.
- Under the new dispensation, policy making and governance is participatory and inclusive. There are multiple statutory bodies that enable the system to function democratically such as the Council on Higher Education (CHE), the various inter-governmental forums, like the Council of Education Ministers (CEM) and the Heads of Education Departments Committee (HEDCOM). All of these work collaboratively with the Minister of Basic Education and Higher Education on developing education structures and policies (Parker, 2003; DoE, 2005; DoE, 2001). In addition to that, there is a lot of collaboration and consultation between various stakeholders. This happens with all the tiers of governance right up to the school level.

Research

- Research is a huge part of contemporary teacher education. It provides valuable information about the system to improve education. It has the potential to improve and strengthen education significantly and thus contribute to DHET and DBE's vision to produce sufficient and better-quality teachers.
- The up-take and use of research is commendable. DHET and DBE commission studies and more often than not pay close attention to recommendations.

Information management

- Since 1994 and 2006, the DHET has improved the information management systems. But they are not as well developed as they should be. They still fail to provide up to date vital information regarding certain areas of interest like ECD and special needs. The problem is huge at the provincial level. When fully developed, the databases should be able to track teacher attrition, staffing requirements, and recruitment by learning area, subject, phase, and location of teachers.

Dedicated funding schemes

- Funding is a huge part of making sure that teacher education and development succeed. One of the negatives about the restructuring of higher education is that

teacher education is ranked low by universities in the order of importance and thus allocated very little funding compared to other schools or faculties. The decrease in student enrolments in this field and its increase in other areas, especially for Africans, led the government to put different funding schemes in place as means to entice recruits. Getting the funds is even easier if a student is willing to teach in critical learning areas, foundation phase and rural or remote schools. Funds are also provided for students or who are needy.

How to become better

- The ANC conference held in Polokwane, in December 2007, revisited teacher policies, especially the issue of teacher demand and supply. The thrust of the discussion was whether to reopen teacher training colleges. This discussion happened because the rationalization of universities, technikons and colleges favoured certain areas over others. This left students in rural and impoverished areas underserved. Yet, the rural provinces are the provinces that used to supply the country with the bulk of foundation phase teachers. The need for increasing the number or recruits training to become foundation phase teachers, particularly Africans is glaring. While it is accepted that South Africa has relative and absolute shortages, the country needs to respond to the provisioning and supply challenges. The supply of teachers is fast getting to a point where, unless drastic steps are taken, we will not meet the demands of the system adequately. Focused recruitment must be prioritized and the learning areas and phases that have acute shortages must be treated as very special. The current incentives are not enough. Other fields such as economic sciences, where enrolments are increasing, can be used as case studies of how incentives in teacher education should be redesigned. To be relevant, competitive and to meet the 21st century economic and individual demands in a global environment, there is a great need to attract the best quality of recruits into the profession, especially for the areas that have been identified to have critical shortages. Teaching, just like in countries such as Korea, must be made to become the first choice for students who go to universities.
- The system is not responsive enough to equity issues. Foundation phase teachers are still mainly females. Of the few trainees registered in foundation phase programmes throughout the country, only a very small percentage of them are Africans. The majority are White females. As a country, we must aim to overcome the continuing

inefficiencies and broaden the social base of teacher education in terms of gender, age and racial profile to be reflective of the country's needs and population. Youth in rural areas are possibly a good source of recruits to 72ulfil most of the supply needs but with the right attraction strategies. They need to be targeted while still in high school to the extent that partnerships can be formed with Business forum to ensure that best candidates are attracted and provided with scholarships.

- Information management systems have some way to go. They need to provide information that can be used to determine and respond to demand issues.
- Institutions need to go beyond training teachers in traditional areas of study and embrace the new learning areas that schools offer in order to respond to the qualitative shortages identified.
- Training in ECD must not be treated as an afterthought. It must be given the same status as general education and training, if we want to see improved performance in learner assessment.
- Despite the policy, CPTD is not getting the seriousness it deserves. Induction, mentoring and assessment of teachers are areas that seem to be chaotic and underdeveloped.
- Research studies favour IPET and very few of them focus on CPTD. This is not a good message.

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Democratisation and Labour Rights for Teachers

Logan Govender

Abstract

The development of teachers' labour rights in South Africa has mirrored the broader context of socio-political change, an integral part of which was the ideological tension between teacher professionalism and unionism. With the legal recognition of teachers' labour rights in the 1990s, teacher unions became a key partner with government in the education policy making arena. However, contestation over ownership and control of policy remains a major source of tension between teacher unions and state. This tension has become exacerbated in the face of continuing challenges to improve education quality, and unions' tendency to embark on strike action. An important development, nevertheless, has been the re-examination of traditional ideological views among teacher unions resulting in a potential trend towards 'professional unionism' in shaping relations with government. This has opened the way for more constructive teacher union-state relations, with the potential to capacitate both the state and teachers to address current education challenges.

Introduction

The democratisation of teachers' labour rights has formed part of the broader political democratisation of South African society since 1994. Prior to that, labour rights for teachers were limited to government's recognition of "professional associations" only as teacher unions were banned alongside the ANC-led liberation movements. The struggle for teachers' labour (or 'union') rights formed part of the historical struggle for democracy and freedom in South Africa, particularly since the late 1970s with the emergence of the progressive/militant teacher unions, which eventually led to the formation of the South African Democratic Teachers Union (SADTU) in 1990. In essence, the recognition of teachers' labour rights in South Africa, as opposed to recognition of teachers' professional role, was non-existent prior

to 1994. The formal recognition of teachers' labour rights, therefore, was a post-1994 phenomenon.

Journey since 1994: Historical endowment

Historically, the development of teachers' labour rights in South Africa mirrored the broader context of socio-political change, an integral part of which was the ideological tension between teacher professionalism and unionism. At an ideological level, teacher organisations that espoused a professional approach to education had been privileged by the pre-1994 apartheid state. This situation changed drastically after 1994 when teacher unionism, non-racialism and democratic policy making became institutionalised. However, the fractured teachers' union movement still reflected the ideological tension between unionism and professionalism resulting in the establishment of two major teachers' formations: SADTU and the National Association of Professional Teachers Organisations of South Africa (NAPTOSA), despite efforts to establish a single, united teachers' body during the late 1980s.

Three key factors contributed to the collapse of the unity initiative: failure to reach consensus on the question of party political alignment, of which a strong undercurrent was differences over the 'political' role of teachers, both within and outside the classroom; disagreement on whether a unified body should be based on unionism or professionalism, encapsulated by SADTU's insistence on the teacher's right to strike as opposed to NAPTOSA's emphasis on the learner's entitlement to uninterrupted learning; and, whether a united organization should be a federal or a unitary structure.[5]

The legacy of this history continues to this day, given SADTU's continued militancy and involvement in broader political issues, as evidenced by the union's call for the dismissal of Basic Education Minister, Angie Motshekga and her Director-General. Moreover, a strong undercurrent of the education labour turbulence in 2013 is the increasing public perception that SADTU, as the largest union in the country, has been unable to make the transition from a liberation-era union to one that prioritises education quality and the interests of learners in the face of ongoing education challenges. Linked to this, is the issue of SADTU's continuing

[5] In the event, SADTU constituted itself as a unitary structure, with members from all four of SA's main racial groups, while NAPTOSA became a federal organization with its affiliates retaining their racial and ethnic identity.

alliance with the ANC ruling party, and the challenge of 'state or union cooptation' posed by this alliance.

Transition dynamics/trends

Below is an outline of some key developments/dynamics relating to teachers' labour rights that characterised South Africa's transition to democracy since 1994:

New labour legislation: An important development post-1994 was the new ANC-government's recognition of teacher unionism as part of a democratic labour dispensation, thereby guaranteeing teachers' rights as workers (Govender 2004). Besides recognition of workers' rights in South Africa's new, democratic constitution, teachers' rights to collective bargaining and strike action were guaranteed in the Labour Relations Act of 1995. With the passing of the Education Labour Relations Act in 1993, a formal mechanism for collective bargaining and determination of labour policies, the Education Labour Relations Council (ELRC), had been instituted. This marked the institutionalization of teacher trade unionism in SA, resulting in a favourable labour relations environment and more flexible approach to teacher unionism and professionalism by government and teacher unions alike.

Significantly, the government also invoked the notion of teacher professionalism through the establishment of professional bodies, notably the South African Council for Educators (SACE) responsible for the professional registration of teachers and developing a professional code of conduct *(SACE Act [No.31 of 2000])*. Moreover, the ELRC, although established to deal primarily with labour matters, also serves as a forum for broader policy discussion and debate. These structures, arguably, contained teachers' activism within the confines of the boardroom, and as a result curbed, to some extent, teacher resistance and militancy in comparison to the pre-1994 period.

Modern hegemony of neoliberalism: Specifically, the government's adoption of neo-liberal economic policies beginning with the ANC's Reconstruction and Development Programme (RDP), 1994, and its more decisive successor, the Growth, Employment and Redistribution Programme (GEAR), 1996, emphasising privatization schemes and cost-cutting measures, gave rise to tensions with the labour movement (especially COSATU) and other civil society constituencies. The government's social transformation agenda had moved national policy

sharply to the right, thereby subjecting the goals of equity and democratisation in education to the rationale of market-led fiscal and governance policies (Motala & Singh, 2001). One of the consequences of South Africa's embracing of neoliberal policies was the ANC-led government having to compromise on its democratic impulse to foster more meaningful participation in policy work by citizens and key civil society interest groups, including teachers. Simultaneously, there was a revival of human capital theory in which teachers' roles were narrowly conceived as producers of human capital for economic growth; and the introduction of new policies promoting new forms of management, teacher accountability and outcomes-based curricula (Chisholm, 1999). The resulting pressures these developments generated on teachers' work were to create conditions that were favourable to the exercise of their labour rights, and fuel tensions between teacher unions and government in the years to come.

Changing policy environment: As part of the new government's programme of economic and social transformation, several new education policies were introduced, notably the National Qualifications Framework (NQF), 1995, the South African Schools Act (SASA), 1996, and new curriculum policies from 1997 onwards. The corresponding policy development processes tested the resources and expertise of teacher unions. Arguably, NAPTOSA was able to respond to the challenge of contributing to policy development far more effectively than SADTU during the transition. Its historical focus on 'professional' matters held it in good stead, as it was able to draw on technical and policy expertise from within its own ranks. SADTU's strength, on the other hand, was its keen awareness and responsiveness to the political dynamics in education. The country's largest union, however, soon realized that its neglect of 'professional' matters was a source of weakness, and it set about rectifying this deficit in the latter half of the 1990s. (Govender, 2009)

An important development during this period was the involvement of teacher unions in policy making processes, for example, in relation to SASA and curriculum development (specifically Curriculum 2005 or outcomes-based education (OBE)). Teacher unions served on the Committee to Review the Organisation, Governance and Funding of Schools, appointed by government in 1995, which kick-started the SASA process. Teacher union representatives served on the Learning Area Committees (LACs) relating to Curriculum 2005, which were the key forums deliberating the new subject areas. While the development signaled a new era in joint/cooperative policy making between unions and government, it also

underlined the contested and political nature of policy making. For example, the national education department was mindful of too strong an influence in the process by the teacher unions, and thus ensured that departmental officials and external stakeholders would be represented on an equal basis on the Review Committee that was set up to review Curriculum 2005 following sustained teacher union and public criticism of the new curriculum proposals. In this way, the Department managed to maintain its grip on the direction and outcome of the process, although unions had some influence by ensuring that the curriculum was more workable, secular and responsive to poorer constituencies (Chisholm, 2005). In spite of substantial involvement by teacher unions, the balance of power in the curriculum development process tended to favour government (Govender, 2004).

Summary of current situation following twenty years of democratisation

In the early years of the period under review, teacher unions, particularly SADTU, were concerned with securing a stable labour relations climate, which was facilitated by the new government's enabling constitutional and legislative framework. At the same time, there was a significant rearrangement of the existing power relations between teacher unions and government, which played itself out in unions' struggle over membership recruitment, organizational development and ideological reappraisal, resulting in a marked improvement in the status of teacher unions. As a *quid pro quo* and as part of their professional role, teacher unions have worked in close cooperation with government, for example, in the establishment of SACE and in the development of curriculum, performance management and other policies. Nevertheless, contestation over ownership and control of policy making remains a major source of tension between teacher unions and the state. Linked to this has been the increasing pressure on teacher unions to pay greater attention to teacher development and improving classroom performance - there is still no agreement on an independent 'teacher performance appraisal system', with SADTU to which about two thirds of the country's 390 000 teachers belong rejecting in 2011 the DBE's attempt to introduce such a system to help assess and improve teacher performance (SAIRR, 2012, 12).

Although SADTU and NAPTOSA had historically been identified with seemingly opposing ideologies, from the mid-1990s, their experiences in the policy making domain led to a re-examination of traditionally-held views, resulting in a potential trend towards 'professional unionism' in determining the nature of teacher union-state relations in South Africa

(Govender 2004). Professional unionism places emphasis on collaboration, and urges teachers and their unions to put aside confrontational industrial unionism, along with the too narrow focus on bread-and-butter issues, and instead focus on quality learning for students, acceptance of responsibility for school management, and teachers' professional development.

As noted above, an important development during the first ten years of democracy was the involvement and cooperation between teacher unions and government in policy making processes. In this context, the challenge for SADTU was to develop an identity that blended traditional unionism with a more professional approach in developing its policy intervention strategy as a result of the changed nature of teacher union-state relations post-1994. Given its strong unionist background, its initial focus was on labour-related issues, such as salaries and better conditions of service. By 1995 and during the policymaking processes of SASA, SADTU became quite concerned over its narrow unionist and political focus. As a result, the Union began paying more attention to building policy capacity to meet the numerous policy challenges of the day. This included the appointment of an Education Officer in 1994, an Education Administrator in 1996, Education Specialists and a Researcher in February 1998, followed by the establishment of a Legal Department[6]. While embracing the 'professionalism' rhetoric, however, SADTU struggled to translate that into concrete programmes of professional development, for example, improving members' policy analysis skills, which remained a challenge for the Union for several years (NALEDI 2006). More recently, the union claims to be giving greater attention to professional development of teachers with the launch of the Chris Nkondo Professional and Development Institute (Maluleke 2012).

NAPTOSA's policy intervention strategy, on the other hand, was shaped by a broader concern to modify its organisational identity to the new, emerging democratic ethos in South Africa without forgoing its traditional organizational roots. The federation thus began to embrace tenets of unionism once it had become apparent that the ANC government would legalise trade unionism in South Africa. Thus, in addition to its resistance stance during the formulation of SASA, NAPTOSA clashed with government in 1997 when it forced an agreement over partisan behaviour during collective bargaining; and then, for the first time in August 1999, affiliates of NAPTOSA joined forces with SADTU in strike action over salary

[6] Interview, Jon Lewis, 18 October 2002; SADTU Congress Report, 2002.

increases (Govender 2004). Overall, the federation attempted to strike a balance between professionalism and unionism as it grappled with the changed socio-political realities of the day. Today NAPTOSA and smaller unions, such as SAOU, are more willing to join SADTU in strike action, especially over salaries and conditions of service, but not always. These unions still prioritise the interests of learners over those of teachers as far as possible. The same cannot be said for SADTU.

While the trend towards professional unionism of teacher union-state relations was evident during the 1994-2003 period, there has seemingly been a retreat from this progressive development in the more recent period, 2004-2013. Thus, in the present conjuncture, while SADTU recognises the need to develop its policy expertise and professional profile, its policies and actions are shaped primarily by a unionist ethos. For NAPTOSA, while adopting unionist strategies and tactics, such as public protests and strike action from time to time, its engagement with the state is influenced essentially by adherence to teacher professionalism through consultation and persuasion. Importantly, while teacher unions continue to cling to their traditional ideological roots of unionism and professionalism, they are being forced to account by both education authorities and the public as concerns over education quality increase. Thus, given South Africa's development trajectory, especially the demands placed on the education system to produce a high-skills and scientifically innovative labour force, the emphasis has shifted to teachers' roles in enhancing learner performance and achievement. This has thrown into sharp focus the historical legacy whereby SADTU is still perceived has focusing narrowly on improving teachers' conditions of service and paying scant attention to teachers' roles in the classroom, while NAPTOSA and other smaller unions appear to have a more balanced approach. The current stand-off between SADTU and DBE is symptomatic of the ongoing tension between government and teacher unions underpinned by contestation over teachers' labour rights versus their professional obligations.

Country comparisons

A key point emerging from the literature is that the granting or extending of labour rights to teachers has often resulted in the weakening of teacher union autonomy, and in some cases serving as handmaidens of state organs. For example, prior to the early 1960s, many members of the National Education Association in the United States were viewed as "handmaidens" of the state and functioned as agents for the preservation of the status quo.

Similarly, the national teachers' unions in Korea and in Mexico were regarded as serving to legitimate the decisions of state elites and not the interests of educators (Ginsburg et al 1995 and Murillo 1999). In the case of Mexico, which bears a strong resemblance to the relationship between SADTU and the ANC-led government (see Govender, 2009), the National Union of Education Workers (SNTE) was established with strong backing from the Institutional Revolutionary Party and later served as a political machine for the party at elections. In return for their close relationship with the governing party, union leaders were rewarded with management positions in the educational bureaucracy and appointed to key positions at the legislative and executive levels (Murillo 1999, 40).

In many parts of Africa, teacher unions are seen to be too close to government, a situation that seriously compromises their independence and influence (J. Samoff, personal communication, June 7, 2004). The Uganda Teachers' Association (UTA), for example, had been criticized by its rival, the more militant Uganda Teachers Union (UTU), for being "*in the pockets of the officials of the Ministry of Education*" (Tiberondwa 1977, 51). One of the consequences was that the UTA was recognized by the Ugandan government, while the UTU was not. In Malawi, teachers portray the state's agenda to be a "modern state", and are expected to advance the state's development and legitimization project (Fuller 1991, cited in Welmond 1999). On the other hand, Welmond's analysis of teacher-state relations in Benin suggests that while superficially Beninese teachers become the representatives of the education state apparatus, in reality, the state ruptures and deflects teachers' political potential, resulting in their isolation from other parts of society (Welmond 1999, 171-173) – it is difficult not to draw comparisons with the current tense relations between SADTU and the DBE, and if not resolved, could also result in state policies to limit teacher unions' 'political potential'.

A related comparative point, 'state cooptation', is worth noting. Cooptation in this context implies the "inclusion in the network of state and regime. It also brought greater opportunities to be officially consulted or participate at one level or another in national decision making and other political processes" (Gyimah-Boadi 1994: 127). Teacher-state relations, therefore, display contradictory tendencies: close cooperation, even cooptation, on the one hand, and political conflict and contestation, on the other. In South Africa, the potential not only of state co-optation of teacher unions, but the co-optation of organs/elements of the state by teacher unions to promote the unionist agenda looms large.

Reflection on Achievements

As part of the democratisation of South African society since 1994, including the recognition of workers' rights in general, several key achievements relating to teachers' labour rights and their professional role can be identified in the period under review. Key among these are the establishment, both in law and in practice, of a structured education labour relations dispensation, which has given rise to more widespread public acceptance of teacher unionism and teachers' labour rights, as well as greater involvement of teacher unions in policy making mechanisms and processes.

On the flip side, a structured labour relations dispensation has not resulted in a stable education sector, given ongoing teacher union militancy, sometimes perceived as more intense and adversarial than previously. As a result, a significant unintended consequence of a more liberating education labour dispensation is its adverse impact on efforts to improve the quality of teaching and learning. Concerns over the loss of teaching time as a result of teacher strikes have heightened in recent years. This is underlined by research findings in 2011 by the HSRC and the DBE showing that 'teachers commonly do not complete the curriculum…come late to school, leave early, spend only 46% of their time teaching each week, and hardly teach at all on Fridays' (SAIRR, 2012, 12). In short, the recognition and extension of teachers' labour rights in South Africa have come at a high cost. It has empowered teacher unions, such as SADTU, to such an extent, that it can be argued that teachers' labour power is being used as a bargaining chip to advance parochial union agendas, with the ultimate effect of undermining the state's capacity to achieve its primary aim of delivering quality education services. Specifically, uneven capacity across provincial, local education authorities and schools, to deliver quality education services has emerged as a key challenge.

It is in this context that in February 2013, President Jacob Zuma announced the establishment of the Presidential Remuneration Commission to investigate improved salaries for state-employed teachers and to design a strong performance system for teachers. He also clarified earlier announcements on making teaching an essential service, stating that this did not mean "taking away the constitutional rights of teachers as workers, such as the right to strike" (Brown 2013). These announcements, which came in the wake of public calls for addressing

the failure of South Africa's education system in providing quality education, echoed the professional/reform unionism refrains that have stressed teacher accountability and responsibility, and teacher union-state relations based on cooperation rather than confrontation.

Capacitating the state to deliver more effectively

A key question that needs to be posed is whether state structures, such as the ELRC and SACE, intended to provide appropriate fora for teachers and their unions to exercise their labour and professional rights, are able to effectively and efficiently deliver on their mandates. The same applies to the education bureaucracy at all levels (national, provincial and local), as well as to the various policy-specific committees established from time-to-time to investigate and make recommendations to policy makers. It is therefore imperative that such state structures are subjected to regular performance monitoring and evaluation with regard to their contributions and impact on improving education quality. This is over and above the obvious imperative of supporting optimal teacher performance in the classroom.

In addition, given the current political and economic conjuncture, characterized by high unemployment, low skills base and poor service delivery, the biggest challenge is for teacher unions and the state to foster a working relationship that prioritises education quality above parochial interests. This might be possible if these key education partners rediscover the partnership based on professional unionism which showed much promise during the 1990s, but which has since failed to realize its full potential. One mechanism to foster more cooperative rather than adversarial relations between unions and the education authorities is "trust agreements". These agreements refer to a legally binding bilateral accord functioning outside the collective bargaining mechanisms that characterise traditional teacher union-state relations as is currently the case in South Africa, the USA and elsewhere. Whereas collective bargaining focuses on conditions of employment, the trust agreement centres more around professional issues – school organization, peer review, professional development and school-site collaboration agreement and decision-making (Jacoby and Nitta 2012, 538). The aim is to anticipate and address issues before they become adversarial, creating space to agree on implementable policies making full use of teachers and their unions. Thus the level of cooperation is extended beyond economic union concerns, creating conditions for ongoing

consultation without resorting to collective bargaining processes that end in strike action, a scenario often blamed for the deterioration of education quality in South Africa.

A critical challenge remains the question of the use of strike action by teachers, especially in a context where the education system is seen by many stakeholders as failing its citizens and learners. One possible approach, which seeks to balance teacher unions' right to strike (private interests) with learners' right to education (public interests) is the recommendation of the International Labour Organisation (ILO). The ILO suggests a "minimum-service profession" approach, whereby, during strikes at least a core of minimum staff would continue to provide teaching services (Kloppers-Lourens, 2012). This recommendation is worthy of consideration and consistent with the professional unionism framework already highlighted. An alternative approach would be to negotiate for a moratorium on strikes for the next five years to enable all education stakeholders to work towards improving education quality, but this can only come about if there is mutual trust between teacher unions and education authorities, something that is not prevalent at present.

Conclusion

While having a structured, legislated labour relations environment is cause for celebration, this has not necessarily translated into a stable education sector since 1994. There are still too many disruptions to school programmes and loss of teaching time due to teacher strikes and other forms of protest, all of which point to a serious breakdown in the social compact between teacher unions and the state. Unless the ongoing impasse especially between SADTU and the education departments is resolved, the democratisation achievements for teachers over the last two decades will remain an achievement only in legal terms, and will not be seen as contributing to improving learning and teaching.

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PART TWO

Post Schooling developments

Further Education and Training

Simon McGrath

Abstract

The FET college sector in South Africa has grown considerably in the past twenty years and has gone through a process of transformation that is far more profound than in schooling or higher education. Yet, as a direct result of this, its institutions and structures are still relatively young and fragile and in need of nurturing.

The performance of the sector must be judged primarily on learning and labour market outcomes and there is room for considerable improvement in both areas, notwithstanding the responsibilities of others that also contribute to underperformance. At the heart of the learning challenge are issues of curricula and their fitness to learner, employer and national needs. DHET have acknowledged the need for a major review of the NCV programme but this needs to be more far-reaching in its consideration of the purposes of the sector and the curricular and programme needs that emerge from such purposes. On the labour market side, the possibilities for colleges, beyond better curricula, lie most obviously in improved relationships with employers and better support for learners in accessing the labour market. Placement units appear vital in this respect. Yet, as the Shanghai Consensus notes, the sector also needs to move beyond the economic to a wider contribution to human development in South Africa.

The situation in 1994

In 1994 South Africa had a small and strongly racially-divided technical college sector. Data from 1991 (the best available at the beginning of the Mandela Presidency) showed some 76 000 learners in the system; two-thirds of whom were white (Fisher et al. 2003). Whilst the Wiehahn Commission (Wiehahn 1982) and the Manpower Training Act of 1981 (RSA 1981) had opened up the apprenticeship system to all racial groups, a major decline in apprenticeship numbers during the 1980s meant that there had not been a radical racial transformation of vocational learning. White, state-aided colleges enjoyed much high levels of autonomy than black state colleges, and most black learners were located in townships or

homelands, often far from major industrial areas. Gender segmentation of learners was very strong, with the low numbers of female students predominantly studying on business programmes. Staffing was overwhelmingly white and male.

The growth of non-apprentice student numbers in the late 1980s brought a major challenge for programme delivery. Colleges had previously been responsible for theoretical learning alongside practical experience in the apprentices' workplaces, but now found that this link to practice was far less secure.

Although the collapse in apprenticeship had seriously weakened relationships with industry, a number of colleges had been able to take advantage of rising corporate social responsibility funding to equip some workshops. Moreover, the sector was characterised by some real excellence and a growing progressive leadership. Indeed, several of the white principals from that time went on to work in SAQA and DoE structures and were important to the early years of the transformation process.

The evolution of FET in the past twenty years

The evolution of South African FET colleges relatively neatly maps on to the five year cycles of South African government. Indeed, most of the tensions that are current today either were engaged with in the first policy phase of the late 1990s or else emerge out of key decisions made at that time.

Many of these issues relate to the particular place vocational education occupies between learning and work. Whilst the ANC's plans for education and training at the time of the 1994 elections made a clear case for the skills development function of the Department of Manpower to be integrated into the Department of Education, the complexities of the political settlement in 1994 resulted in this being abandoned. Thus, the Mandela Presidency saw the development of separate agendas for skills development and vocational education by two Departments, with attempts to manage this at an inter-departmental level largely proving unsuccessful. There was some hope that SAQA might be an agent of such management but, in retrospect, this was an unbearable burden for a new organisation that was answerable to the Ministers in question rather than to a higher authority, such as the Presidency.

At the same time, the decision to locate the erstwhile technical colleges into the same further education and training band as senior schooling also has had major long term implications for the college sector. Much of college provision has been in the NATED 191 programmes N4-N6, which mapped onto the NQF at level 5. Yet, the strong emphasis of the Department was on programmes upto level 4. Funding for a redevelopment of these core college programmes, therefore, has been neglected, as have issues of FET to HE progression and institutional straddling of and collaboration across the FET-HE boundary.

This decision was coupled with a resolution to make both school and vocational parts of FET a provincial rather than national competence. This had the consequence that FET colleges, at both national and provincial levels, were very small, and relatively less politically sensitive, aspects of much larger portfolios dominated by schooling issues.

The other major policy issue that was debated in the late 1990s saw a continuation of NEPI discussions around whether technical colleges should evolve into institutions more akin to North American community colleges, or into something like British further education colleges. As can be seen from the name decided upon, a broadly British vision triumphed, although without many of the breadths (including growing HE and workplace training components) that characterised that model.

Nonetheless, the Mandela Presidency did see important work done on establishing a new system, with the Further Education and Training Act of 1998 (RSA 1998) outlining a vision for the new public colleges, which was to be implemented under the first Mbeki Administration. Private provision was also addressed in the Act, although relatively little detail was given regarding the policy and legislative vision in this area.

The key to the policy vision of the 1998 Act was an institutional transformation that was based on mergers in a far more radical way than the reforms in the school and HE sectors. At the heart of the vision was a desire to have a single system of large, multipurpose colleges. The implementation of this vision was the main FET focus of the 1999-2004 period. From 152 deeply racially-segmented campuses across a range of state and state-controlled colleges, the New Institutional Landscape process (which reported in 2001) developed 50 new colleges (DoE 2001). Except in one case, these were built through the merging of multiple institutions, with the decisions regarding specific mergers being supported by a large programme of

institutional and economic analysis conducted by the Human Sciences Research Council and the National Business Initiative. The merger process is one of the most significant successes of the sector over the past twenty years.

The next task was institution building and the system was supported here by a number of non-governmental initiatives most significantly from the Business Trust, which funded the NBI's College Collaboration Fund programme. As part of its institutional support programme, the NBI also made a significant contribution to knowledge about the system through three quantitative analyses of the sector from both before and during the merger process.

Notwithstanding the major achievements of the merger process, by the time of the Ten Year Review it was clear that the systemic transformation of FET was still only partially completed. It was clear that there had been slow development of systemic capacity. At the national level, the colleges team in the DoE remained small, whist only those provinces with a strong Apartheid-era investment in technical colleges (i.e, Western Cape and KwaZulu-Natal) had any significant capacity. There had been slow progress in creating new national organisations for principals, lecturers or councils. Systems for initial and continuing professional development of college lecturers remained underdeveloped. Whilst both the NBI and HSRC had produced a range of policy-related research outputs, the FET knowledge system remained weak, with insignificant HEI involvement and a lack of a functioning MIS. Relationships with SETAs and involvement with others aspects of the skills development system instituted by parallel reforms by the Department of Labour were minor. Strikingly, a new curriculum, linked to the NQF, was still not in place.

The development and implementation of a new curriculum became the core activity of policy work in the 2004-9 period. A new set of National Curriculum (Vocational) programmes were developed for NQF levels 4-6. These were supported by a major recapitalisation programme to update college infrastructure; whilst a new Act (RSA 2006) supported the process of institutional development, with the bulk of its provisions being focused on matters of governance. A new post of Registrar of private FET providers was also introduced.

The post-2009 period has seen a major reviewing of policy directions from the previous 15 years. Most significantly, the failure to integrate vocational education and skills development

in 1994 has been acknowledged by the establishment of a new Department for Higher Education and Training and this has led to the Green Paper on post-school education and training (DHET 2012), marking a return to a debate last really engaged with back at the time of NEPI twenty years earlier.

The Green Paper reiterates a long-standing commitment to a massive expansion of the sector (but it should be remembered that promises of a million learners in public FET colleges date back to Minister Asmal more than a decade ago). However, it is far more critical than previous policy documents regarding the capacity of the sector to achieve this, both in terms of colleges' institutional development and the appropriateness of the curricular offer. Staff development is highlighted as a continuing concern and a new South African Institute for Vocational and Continuing Education and Training is proposed as a tool for strengthening systemic capacity. DHET has also moved to support funding for students through the extension of NSFAS to FET college students., and has invested in a major research and intelligence process through the Labour Market Intelligence Project.

An appraisal of the current state of FET

It is important to stress that public FET has grown considerably since 1994. The 315 000 learners in public institutions in 2011 represent a more than four-fold increase over the period, with most of the acceleration happening in the second decade.

Table 1: Enrolment growth in public FET Colleges (1991-2011)

Year	Enrolments
1991	76 435
2002	143 918
2011	315 817

Sources: Fisher et al. 2003; Akoojee, McGrath and Visser 2008; Akoobhai, Gewer and Shindler 2011

There is no reliable data on private FET enrolments, which are also very hard to turn into full time equivalents. Estimates from Akoojee (2003) and World Bank (2011) put the sector as being between 700 000 and 750 000 headcounts in size, with little apparent change over the past decade.

Returning to public provision, it is appropriate to celebrate the fact that learner demographics have been transformed from an overwhelmingly white to overwhelmingly African learner

body. New legislation and new policies have resulted in new, larger and stronger colleges having been created, and with them, new governance structures, new leaders and new programmes / curricula. There are signs of improvement in staff qualification levels and in facilities, including for practicals. Linkages to employers are improving, as are relationships with HE institutions and SETAs. Moreover, work in progress points to the transformative effect colleges are having on at least some of their learners. Finally, a major review of the system has been started through the Green Paper process and subsequent work around the HRD Council.

On the other hand, it is evident that colleges face major challenges, as the 2012 Green Paper made clear in a very honest and robust manner. The state of the wider economy and its weaknesses in job creation seriously limit the employment outcomes of college graduates. Equally, the effects of failings in the schooling system, especially with regards to mathematical achievement, mean that colleges face very great obstacles to delivering quality learning outcomes. The blame cannot all be placed on schools and the economy, however. With some exceptions, colleges are poor at supporting learners into work. They also lack structures and systems to develop work experience for their students; problems exacerbated by health and safety and insurance concerns by employers.

Most seriously and unacceptably, there are major quality issues regarding the new NCV awards. Whereas N1-3 pass rates were 53% in 2000 (Fisher et al 2003); the 2009 pass rates for NCV2-4 were between 10 and 23% (Akoobhai, Gewer and Shindler 2011). Yet these are far more positive than the throughput rate of the first cohort of NCV students. Of those beginning NCV2 in 2007, only 4% completed NCV4 successfully in 2009 (SADC/UNESCO 2013). Even where students are completing, there are widespread complaints of delays of over a year in getting certificates.

Part of the debate about the problems with the NCV has focused on its appropriateness as a qualification, whether in terms of industry acceptance; lecturer capacity to deliver; or learner cognitive capacity to meet its theoretical demands. However, there is a need also to consider whether the decision to focus colleges entirely on delivery of NCVs, as was the old Department of Education's approach after the 2006 FET Act and the introduction of NCVs in 2007. As of 2010, over 50% of learners were still on unrevised NATED courses; whilst another 10% were on learnerships and skills development programmes (Akoobhai, Gewer

and Shindler 2011). Yet, funding of colleges and curriculum and staff development have privileged NCV to the neglect of other routes.

Table 2: Enrolments in public FET by programme type, 2011

Programme	FTEs	Percentage of all FTEs
NATED	164 700	52
NCV	120 053	38
Learnerships	15 980	5
Skills programmes	15 137	5

Source: Akoobhai, Gewer and Shindler 2011

Moreover, there are questions as to the appropriate learner population upon which colleges are supposed to focus. The rise of the imported notion of NEETs and rhetoric from HE commentators about the impossibility of HE meeting the demand of school graduates have led to arguments that colleges should be about those school leavers who are not suitable for HE. Yet, this is contrary to global debates about the rising knowledge component of skilled work. Instead of sending a message that colleges require learners with strong practical and cognitive skills (something that the NCV design arguably did address), concerns to reduce youth employment and pressure on HE places have led to arguments that colleges should be for the failures of the schooling system. There are real dangers, therefore, in policies that target rapid expansion of colleges without addressing issues of quality and likely labour market outcomes. There are questions also about whether colleges should be directed at one group at the expense of others. There is evidence, for instance, that colleges are attracting significant numbers of learners wanting to access HE and continuing cadres of learners who already have a school certificate at level 4.

Benchmarking with comparator countries

Benchmarking at the FET level is made very difficult by the poor state of international statistics in this area. However, some sense of South Africa's comparative performance can be derived from a SADC review of 2011 (SADC/UNESCO 2013). In terms of its policy reforms, South Africa generally rated towards the middle of SADC countries when national stakeholders self-rated their systems on a range of policy areas such as:

- Quality assurance
- Governance

- Employer involvement
- Management information systems

Although, national data on FET expenditure as a proportion of the official national expenditure on education must be treated with considerable caution, it was also noteworthy that South Africa was spending below the SADC average.

Analysing the factors behind the key achievements and failures of the past twenty years

Where success has happened in the period, it has been driven by a clear policy lead from the centre. The New Institutional Landscape process was a particularly fine combination of strong policy direction and the creation of a viable implementation process. There was important private sector buy-in through the Business Trust, leading to the importation of strong project management skills from the NBI. The whole process, though South African-led, was supported at important moments by external partners, especially the British Council. Moreover, whilst the initial direction was values-driven, based on a political imperative to overcome the Apartheid legacy, the details of the approach were strongly evidence-based, with considerable inputs from both the NBI and the HSRC.

The decision to incorporate vocational education and skills development into one Department and the major review instigated in the 2012 Green Paper and related processes suggest the beginnings of a new phase of major reform, with clear Ministerial leadership. This has been accompanied by a re-emphasis on strong national structures to effect change, notably the HRD Council and its task teams. Moreover, it is being supported by a massive commitment to developing better system-wide knowledge capacity through the LMIP, which is very large in international terms.

Other reform processes during the past twenty years, however, have been far weaker. NCV, for instance, never benefitted from a clear evidential grounding in either a well-worked out account of the learner constituencies to be targeted or detailed work on the specific curricular needs of learners, colleges and employers with respect to particular programmes. Equally, decisions to allow NATED programmes to wither have proved poorly grounded in any evidential basis on learner views of programme attractiveness.

The process of building capacity at all levels has also proved longer and harder than anticipated. There appears to be no viable model in operation of how to develop capacity, although the plans to develop SAIVCET probably represent the most concerted effort since the work of the College Collaborative Fund a decade ago. It will be important to integrate SAIVCET into the workings of DHET in a way that was never fully achieved with CCF.

Moreover, the sector still suffers from image problems. In part, this relates to its poor grounding in the experiences of the African majority. It should be remembered that in 1991, there were only 14 000 African learners in the sector, as compared to more than 100 000 in higher education (Fisher et al. 2003). Colleges have only had a generation to become owned by the population, yet this has needed to take place at the same time as their massive rebranding in terms of institutional identities and programmes, and at a time of employment stagnation. Whilst attractiveness of colleges must be grounded in their delivery of quality learning and employment outcomes, there has been a persistent failure to articulate and publicise an attractive brand image for the sector.

Key outstanding challenges

As noted above, there is a pressing need for a better understanding of multiple types of actual FET learners. Colleges take learners who have been counselled out of schooling after grade 9 as failures but also others who have actively chosen the college route at that point because of vocational aspirations. They take grade 12 graduates frustrated in their initial plans for higher education, who both see the college as a second chance pathway to HE and as a way of finding an alternative to dreams thwarted. They take older returnees whose life trajectories offer or require a moment of transformation in which a college programme comes to be seen by them as essential. All these learners are likely to end up in NCV and NATED programmes, but colleges also offer routes to senior certificate, ABET, learnerships and skills programmes and various forms of HE programmes. Yet most of these programmes and the needs and aspirations of the learners undertaking them are invisible to the policy gaze. This needs to be addressed.

The Green Paper has made clear the initial weaknesses of the NCV and the need to review its fitness for purpose. A radical increase in the size of the FET college population, as envisaged by the Minister, especially if this leads to the desired pro-equity shift in enrolments, logically

requires a reconsideration of NCV's fitness for purpose. More broadly, the place of NCV alongside other qualifications remains a matter of uncertainty within the sector. A properly designed upgrading or replacement of N4-6 is very overdue as it links crucially to the need to develop larger numbers of technicians and technologists. The fit of programmes and pathways for progression across the college – university of technology boundary will be crucial here.

Another major criticism of colleges at present is the limited access to practical training facilities, notwithstanding past state efforts such as recapitalisation. Improving learning quality and successful labour market insertion during the envisaged accelerated growth of the sector would be seriously compromised logically if practical training facilities fail to reach acceptable levels. Moreover, this is an equity issues, as access to practical learning in college and community is likely to be unevenly distributed.

There appears to be relatively little scope for major productivity and efficiency gains from college lecturers teaching much larger classes effectively. Rather, there are concerns about the pedagogical capabilities of existing staff and of newly appointed lecturers. This points clearly to a challenge of delivering high quality continuous professional development programmes. Internationally, such programmes have been designed in ways that focus strongly on linking CPD with quality improvement in teaching and learning. This will probably need to be a medium-term goal in South Africa as it requires that initial progress be made in strengthening the capabilities of staff. To date, higher education has not responded adequately to this challenge and this is a major block on FET quality enhancement. Local HEIs need to be far more engaged in such work so that they build up a capacity to engage with FET pedagogies as well as those relevant for schools.

The international education literature is full of evidence about the importance of leaders who can ensure that the teaching and learning in their institutions is effective. Whilst the college sector has some outstanding leaders, the leadership cadre is uneven in quality and lacks the capacity to cope with radical growth of numbers, improvements in equity and transformation of quality of learning and labour market outcomes. Building sustainable leadership capacity is important, therefore.

The Minister has spoken of the imperative of reaching out to the poor. Internationally, though looked down upon by the rich, public vocational colleges do not tend to be particularly good at reaching the poorest. Work by the UN Special Rapporteur on the Right to Education has argued that we need to go beyond policy commitments to access, stressing the importance of practical access (Tomasevski 2001). In South Africa, three approaches may be particularly pertinent in supporting practical access:

- Financial support
- Academic support programmes
- Lifeskills programmes

Without adequate financial support, many potential learners will never get to college; whilst others will struggle in their learning or drop out for want of funds. This goes beyond what NSFAS was established to support.

Academic support programmes can be crucial where they acknowledge the ways in which the learning pathways of the poor may be particularly compromised, as a direct result of poverty rather than lack of cognitive ability. Yet, there is unevenness in the coverage and quality of such programmes that seriously undermines equity.

The 2012 Global Monitoring Report by UNESCO (2012a) highlights how learners may also be disadvantaged because of their lack of the dispositions and behaviours that make them attractive to employers. There is clear international evidence that life skills programmes are most useful to learners from impoverished backgrounds. Taking these insights into curriculum development is crucial. However, there is a further challenge of bringing lecturer and employer understandings of employable dispositions into the design of a learning programme, whether standalone or embedded across the curriculum.

As noted above, international evidence makes it clear that access must be built practically. This will necessitate an approach to student support that is focused more strongly on ensuring quality learning and labour market insertion. This must link forward to placement services and focus on the particular needs of disadvantaged students in ensuring that they have the correct support to be attractive to employers. It must also link backwards to quality learning, through appropriate academic support but also through addressing the issue that it is often the most disadvantaged learners who most lack access to practical learning, whether in their

colleges or their communities. Above all, it is essential that new approaches should focus on empowering performance and maximising outcomes, and that responsibility should be seen as clearly lying both with the colleges and their students.

Labour market outcomes are particularly challenging for DHET and the college sector to address, as they are only partially amenable to their influence. Assuming growing opportunities for decent work for FET graduates, the sectoral focus would need to be on improving the transition from college to work, and at a scale never before even imagined within the sector. Beyond improvements in teaching and learning quality, the most obvious area for intervention is around placement of learners, as most colleges are poor at playing a brokerage role between students and employers, although there are some important exceptions.

If enrolments increase as planned, the existing pressure on colleges to support successful labour market insertion will become even greater. As noted above, there is evidence of successful use of placement services in some colleges but it will be imperative to deepen this approach and to replicate it across the sector.

The heart of such structures initially must be a brokerage role between college and employers so that the college becomes far better enmeshed in the local labour market and establishes itself as the preferred provider of intermediate skills. This would require an investment in staffing and, particularly, in senior enough leadership within such units to manage the responsibility of being the key interface between college and employers. As such units develop, there would be opportunities for them to be the core of wider developments. These could include being the contact point for wider links to employers, including in the informal sector; and a creator of college-level databases on both graduates and local labour markets. In playing their core role, such units would need to develop processes for preparing candidates for applications and interviews. This role can contribute significantly to colleges building relationships of trust with employers. It can also play a crucial pro-equity role by using the college's social capital to overcome inequalities in such resources amongst students from more disadvantaged backgrounds. Strategically, such units could also help colleges to better engage with major initiatives such as SIPS, and with SETAs. Over time, it would be desirable for such units also to develop programmes of work experience for current students. This

would need to be supported by state funding to address the issue of student insurance whilst on placement.

The LMIP represents a very positive step from government in identifying the research and data issues of system development as crucial. There is a need for the HE sector to engage far more positively with such developments than has been the case thus far. FET research has been dominated by short term policy and implementation needs and has tended to focus on systemic failures. However, there is a dearth of research looking at the purpose of the sector or that has sought to understand the lived experiences and aspirations of learners, communities and lecturers regarding what further education and training does to transform lives.

The Third International Congress on Technical and Vocational Education and Training in Shanghai, at which the Minister spoke in 2012, argued that FET systems should not just build economic outcomes but should be concerned with human development, equity and social transformation. Whilst the focus of FET reform has understandably been overwhelmingly on the economic dimension, there are clear challenges to the sector from the "Shanghai Consensus" (UNESCO 2012b).

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Learnerships and apprenticeships

Glenda Kruss and Angelique Wildschut

Abstract

Within a globalized community where development and economic growth relies heavily on the skills of a country's workforce, the skills development of its population must be at the centre of any government's consciousness. Additionally, given the socio-economic history of our country, the overriding impetus in any social intervention should be redress. In other words, it is imperative to increase the overall levels of skills for broader economic development and advancement, but in South Africa, this needs to happen concurrent to increasing access to opportunities for previously disadvantaged groups. Vocational and occupational certification and capability building via learnership and apprenticeship programmes were placed firmly at the core of such a new inclusive skills development policy in South Africa after 1994. Thus, almost two decades later, an assessment of their impact would be critical.

Introduction

Skills development is currently top of the national development agenda, and will remain so for the foreseeable future. The *National Development Plan of 2011* highlights the role of good quality education and training to lead to innovation and economic and social development. It advocates for an expanded system that offers clear and meaningful education and training opportunities for young people at various stages of skilling, as well as older people who wish to develop their skills further. In this regard, it is in synergy with the *New Growth Path of 2010*, which recognises that skills development is a fundamental prerequisite and a key component of our economic development trajectory. Recognising the critical role of technical skills in moving our country along this trajectory, the *New Growth Path* called for a review of the skills development system to address shortfalls in artisanal and technical skills.

Drawing on large-scale longitudinal studies, tracking the characteristics of individuals participating in learnership and apprenticeship systems over time (HSRC, 2007; Kruss et al,

2012) this paper aims to contribute to such a review. Analysis of existing skills development programmes that have been rolled out for the past decade can inform our understanding of what is possible to achieve critical national goals for skills development. We can consider whether and in what ways such programmes are succeeding in linking qualifications more effectively to the labour market and in what ways they are limited and experiencing constraints. Can they provide models for expanding employability on a wider scale, particularly to those who are most vulnerable?

For example, earlier findings on the learnership system raised concerns around its ability to contribute to skills enhancement, in that participants were found to undertake the qualification at lower skills levels than that of their highest qualification. However, the most recent assessment, of both learnerships and apprenticeships raise hope in that these systems are both found to lead to employment. In this paper thus, a review of the impact of learnerships and apprenticeships is used as a case to investigate the success of our skills development mechanisms to promote employability in South Africa.

National skills development context

In the South African context, various factors impact on the extent to which skills development can be successful. Relative conditions in the economy include high rates of unemployment (particularly youth unemployment), shortages of critical skills and skills mismatches in key sectors, not to mention the impact of the global economic recession (roughly in 2008). Furthermore, our post-school education and training system is fragmented and uncoordinated, and the formal opportunities for young people are extremely limited. The scale and nature of demand for education and training credentials exceeds the capacity of the formal post-school public sector institutions, the 50 further education and training colleges and the 23 universities and universities of technology. The promise of higher education for enhancing employability and high-status careers has led to heightened expectations and increased demand for access, even from those who do not possess the requisite entrance qualifications. Historical and new patterns of inequality continue to determine who has access to education and skills development and the opportunity to become employable. The further education and training college system is also grappling with institutional restructuring and multiple shifting mandates to become a viable route to vocational and occupational certification. Moreover, vocational education and training credentials, in the popular

imagination, are viewed as a low-status last resort (Allias 2003; Watson 2001; Young et al. 1997).

The opportunities for credentials funded by the state go beyond these formal public education systems to include a wide range of skills development mechanisms. Formerly under the auspices of the Department of Labour, driven by the National Skills Development Strategy (NSDS), and managed by the Sector Education and Training Authorities (SETAs), these include both employment- and employability-oriented interventions, such as workplace learning, apprenticeships, learnerships, internships, experiential learning and adult education programmes. The most significant investment has been focused on developing the learnership and apprenticeship systems over the last decade. These interventions aim to promote more effective relationships between education and training programmes and the labour market at multiple skills levels.

A new policy framework for skills development programmes after 1994

'Skills shortages' have been recognised as a critical constraint since at least the 1970s in South Africa, prompting the apartheid government's attempts during the 1980s to create new systems of 'manpower' training. These policies aimed to provide training that matched the changing skills needs of the economy, but maintained the racialised system of provision.

The debate shifted dramatically after 1994, as South Africa's new democracy was aiming to chart a course towards greater equality amongst its populace, especially for those who had previously been marginalised under the apartheid government. The discourse around skills was concerned with what new policies could best address the 'skills crisis' and, at the same time, promote equity and widen access. Concern was not simply with skills shortages, but with addressing the changing nature of demand for high-level skills. It was increasingly recognised that in the South African context, however, a differentiated, multilevel skills strategy is required to take into account the nature of the economy, focused on mining and resources, but also, advanced manufacturing and high skills technologies (Kraak 2005).

An evolving set of policy interventions and funding mechanisms were organised under the rubric of the NSDS since 2001, which aimed at addressing the structural problems of the labour market inherited from the past, and transforming the South African labour market from one with a low skills base to one characterised by rising skills and a commitment to

lifelong learning. The NSDS also seeks to ensure that through responsive education and training the labour market is better able to cope with the social development challenges in our country such as poverty, inequality, disease and unemployment. (Department of Labour 2005: 1)

A key role was allocated to new sector education and training authorities, SETAs, in partnership with employers and a range of public and private training providers. It was in this policy context that the new, more 'modern', system of learnerships was instituted in 2001. A steady decline in the number of apprentices, growing concern about the quality of workplace training and the technical skills produced, and the limited reach of the apprenticeship system in terms of race, gender and industrial sector, informed the creation of learnerships. Learnerships were viewed as a key vehicle to enhance employability in an inclusive manner across all sectors and skills levels. The Department of Labour was responsible for driving and managing the new learnership system, which it did by instituting a set of targets and success indicators, to be determined on a sectoral basis.

Shifting national policy priorities shaped the fledgling learnership system in complex ways over a concentrated period of time. The South African skills development policy context has been shaped by the crisis of a high rate of youth unemployment and the challenge of improving efficiency and enhancing progression between the different sub-sectors of a fragmented post-schooling system. High levels of youth unemployment are increasingly a concern globally. In developed economies since the 1990s (OECD 2010), youth unemployment rates range widely from 7 per cent in Austria and Japan to 34% in Italy and Spain (Breen 2005). The scale of youth unemployment in South Africa tends to the upper range and, relative to most OECD countries, is severe (CDE 2008; Marock 2008). More complex analysis of shifts over time suggests that the growth in youth unemployment results from school leavers who are not able to access the labour market (Burger & Woollard 2005). It is then understandable that at the growth and development summit of 2003, concern centred on promoting learnerships as an intervention to address the high rate of youth unemployment. National skills targets were set for each SETA, driving strategies to enrol large numbers of unemployed youth under the age of 35.

One unintended consequence of target setting was that SETAs began to focus on achieving numerical targets rather than on the quality or nature of skills developed, or the skills and

capabilities required in specific sectors to meet changing technologies and production processes in firms. A shift in priorities was evident, away from a demand-led skills intervention mechanism, towards a stronger emphasis on learnerships as a mechanism to promote youth transitions to the labour market (Grawitzky 2006; Visser & Kruss 2009).

Within a few years, in the period of NSDS II (2005–2010), the emphasis shifted back to a focus on upgrading critical and scarce skills, which led to a renewed interest in the declining apprenticeship system. Regulations governing apprenticeships had remained in place with the introduction of learnerships, but the relationship between the two was not clearly defined. The apprenticeship system had continued to decline in importance as a skills development mechanism. A period of economic growth in the mid-2000s made it evident that there was a growing critical shortage of artisanal skills, a key constraint on economic development, that neither the new learnership nor the old apprenticeship system could address efficiently.

In the national policy arena, the Accelerated and Shared Growth Initiative for South Africa (Asgisa) proposed to leverage a set of interventions as catalysts towards new economic development objectives, particularly to halve unemployment and poverty by 2014. One vehicle was the Joint Initiative on Priority Skills Acquisition (Jipsa), which promoted the expansion of intermediate artisan and technical skills as imperative for the growing economy (Mukora 2009). From 2006 onwards, with Jipsa as a catalyst, attempts were made to revive the apprenticeship system as a specific mechanism to produce intermediate level skills and to address the shortage of artisans.

In general, this new skills development system has not yet had sufficient time to mature and implementation is beset by many problems (Akoojee et al. 2005; Badroodien & McGrath 2005; Kraak 2008a, 2008b). Both learnerships and apprenticeships are administered by SETAs, newly created institutions that have yet to develop capacity to drive skills development effectively and efficiently (Marock 2008). The SETAs have suffered failures such as bureaucratic, rigid and inefficient management, low standards of training and a lack of information on student needs and firm demand. An abiding problem is a narrow short-termism that prevails, in that despite incentives, many companies remain reluctant to invest in training. The learnership system and the revived apprenticeship system are thus inserted into complex and increasingly bureaucratised qualifications and quality assurance institutional structures (DHET 2012).

Against the backdrop of such contexts, this background paper assesses the achievements of learnerships and apprenticeships. There are many who are extremely critical, arguing that learnerships are untested and that apprenticeships are outdated and still need to be modernised. However, our analysis shows the achievements to be celebrated, contrary to widespread negative perceptions, and the low status generally accorded to these skills development programmes. We highlight blockages that need to be addressed to build on these achievements so that learnerships and apprenticeships can become viable institutional routes in the post-school education and training sector.

Learnerships and apprenticeships have high completion rates and lead to employment

Reaching official targets for enrolment and completion

Aggregated across the system, we found that official targets set by SETAs and the Department of Labour for learnership and apprenticeship enrolment have in general been met, and in some cases even exceeded. Not only are targets for enrolment being met, but participants are also successful in the completion of these programmes (Kruss et al, 2012). Analysis of learnership population data for example shows that those who do enter the learnership system have a high chance of succeeding. More than two two-thirds, (65%) of a sample of those who had first registered for a learnership in the first year 1 of NSDS II (2005), had completed the qualification by 2007. By 2010, 86% of the cohort had completed the qualification. These completion rates are high, particularly in comparison with the higher education sector, where drop-out rates are high and completion takes extended periods. As a comparative example, an average university graduation rate for South Africa in 2008 was estimated to be at 15% (Letseka & Maile 2008) and during the period of 2004 – 2007, roughly 16%.

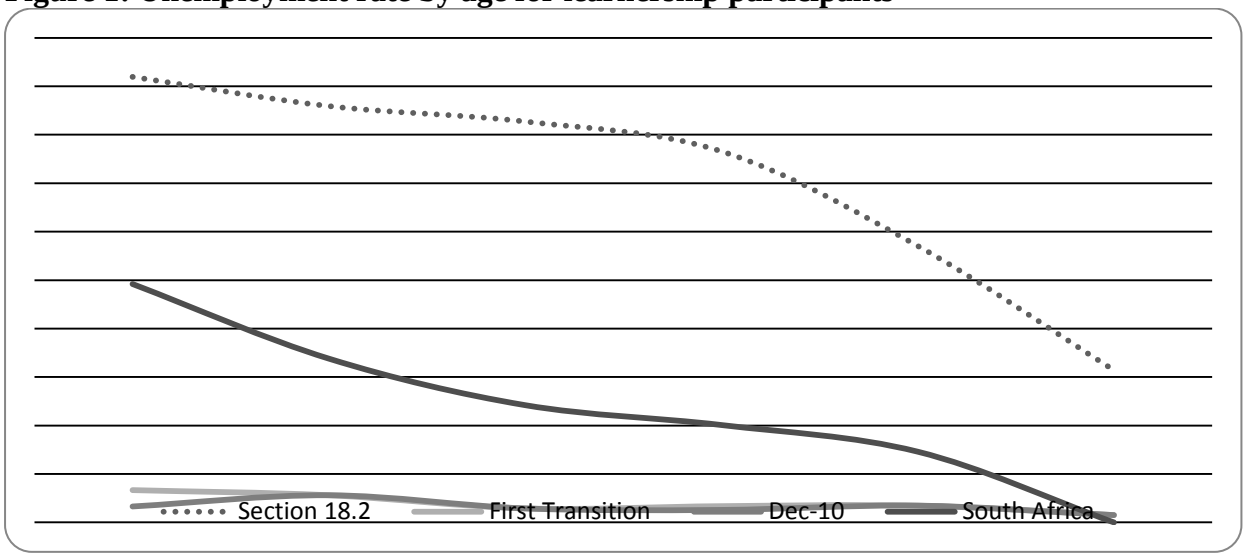
In general, a high proportion of participants saw sufficient value in their learnerships and apprenticeships, so that they completed the qualification. While these trends are promising, the question remains whether these young people were misguided in such an assumption, or whether employment or employability is enhanced through completion of a learnership or apprenticeship qualification.

Leading to employment

We tracked the trajectories of individuals after completing these intermediate level skills qualifications, speculating that it might be difficult for them to access the labour market immediately or in a linear manner. In fact, it was evident that the majority of apprenticeship (70%) and learnership (86%) participants who completed their qualification experienced a smooth transition directly into stable employment.

Our analysis demonstrates a link between employment outcomes and the successful completion of a learnership or apprenticeship qualification. We found on aggregate that participation in both systems decreased the unemployment rate of young participants, although the learnership system appears to have a more significant impact. Figures 1 and 2 show the unemployment rate relative to the national age norm for three groups – those who entered a learnership or apprenticeship as unemployed (Section 18.2), those unemployed after their first transition on completion of the learnership or apprenticeship, and those unemployed as their final labour market outcome, at the time of our survey in 2010. In general, it emerged that these skills development systems are producing employable individuals – or at least, equipping individuals to enter employment.

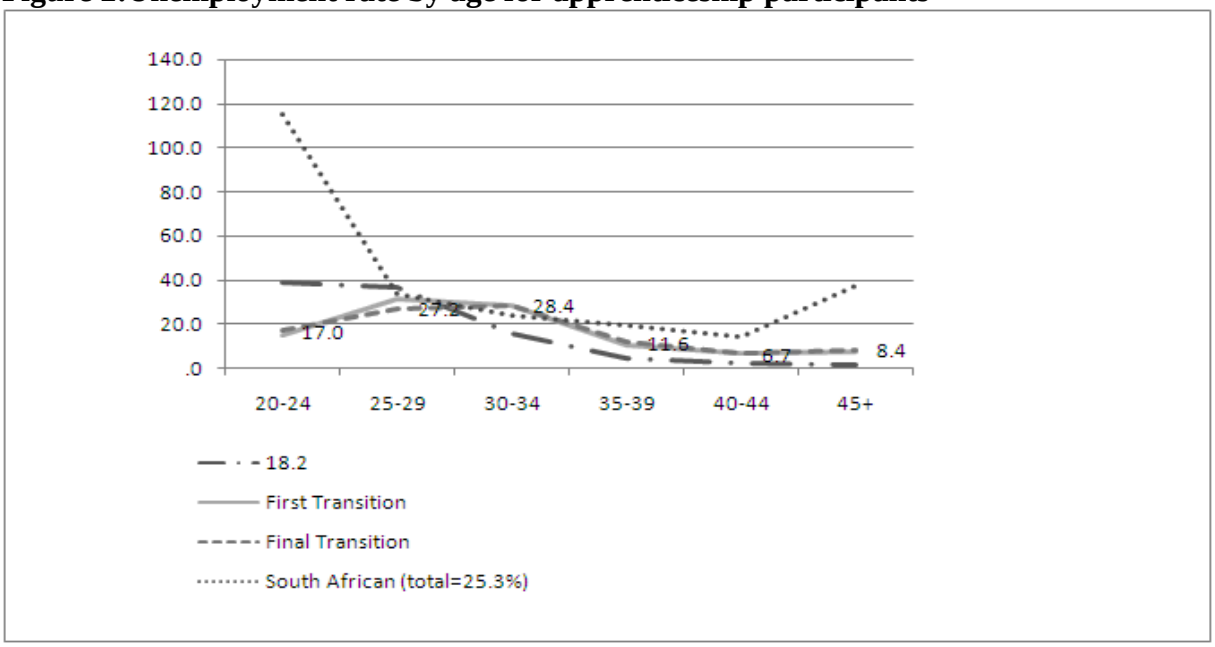
Figure 1: Unemployment rate by age for learnership participants



Source: Kruss et al (2012)

It is evident that these participants have successfully shifted from a disproportionately high unemployment rate to a rate of employment higher than the equivalent national population. This is despite the context of global recession and economic downturn in South Africa by 2010. It stands in contrast to low formal employment rates (48 per cent) recorded in 2009 for individuals completing a qualification in the FET college sector (Gewer 2010).

Figure 2:Unemployment rate by age for apprenticeship participants



Source: Kruss et al (2012)

What these findings highlight is the need to consider the viability of extending the scale of learnerships and apprenticeships to offer substantive and alternative skills development pathways to a larger proportion of the youth than at present. However, while these systems appear successful in expanding skills development opportunities that lead to employment, it is critical to assess whether these opportunities are offered to the scale and reach that is required in our country.

Limited reach of opportunities

Indications are that currently, the learnership system caters for a total of 44 000 to 55 000 learners, while the apprenticeship system is much smaller, catering for approximately 9 000 to 12 000 learners per year. The total registration for the two systems per year, approximately 54 000, is insubstantial if we compare it with other education and training systems in the post-school sector. The total enrollment in public higher education institutions was approximately 840 000 and in FET colleges, it was approximately 42 000, for the same year. These figures highlight how small the learnership and apprenticeship systems still are relative to the mass demand from young people for certification to enhance labour market access.

While the targets for enrolment and completion are being met, our evidence confirms the claims of other researchers, that there has been a high degree of SETA compliance to meet

performance targets and numbers, without sufficient consideration for the quality of the training and skills developed (Badroodien & McGrath 2005; Grawitzky 2006; Kraak 2008). In sum, although many who obtain these qualifications are accessing the labour market, these skills development systems still appear limited in their reach and impact, they do not always function effectively and they need to be refined and better targeted, if they are to be extended to include more young people more effectively to support economic growth.

The nature of capability building leading to employment

Lall (2001) presents the argument that it is not simply the case that more individuals should have qualifications at higher levels, but that at *each level of the workforce*, new kinds of skills are required for technological advancement and moving the economy as a whole to higher levels of development. Hence, what is equally important is whether learnerships and apprenticeships are producing not only sufficient qualifications, but also whether they are developing new kinds of skills and capabilities through the integrated training offered, at basic, intermediate and/or high skills levels.

Low-skills bias and skills mismatch

Our analysis reveals that these skills development qualifications are not spread across skills levels, in relation to firm demand for skilling and upskilling across all levels of the workforce. The majority of learnership enrolments are at the basic and intermediate skills levels and there has been a shift in the past decade towards enrolment at a *lower* National Qualifications Framework (NQF) level. SETAs tend to provide occupational certification at *lower* skills levels than participants may already have and the learnership system provides more basic skills levels certification opportunities. Here the implication for policy would be to shift the balance of learnership programmes offered at basic and intermediate levels towards more opportunities at the intermediate and high skills levels, in order to facilitate better articulation in the post-school system.

A better match between company demand and apprenticeship provision could be expected, given the recent prioritisation of artisanal training. Our study confirmed that the overwhelming majority of apprenticeship programmes are in the Jipsa priority areas, clearly aligned to artisanal skills needs. However, if the total artisan-related training during NSDS II was estimated at 37 800 (Elliot 2009), apprenticeships contributed roughly a quarter of the

training. The apprenticeship system thus remains small and is not yet capable of attracting or registering sufficient numbers annually to meet the projected critical shortage of 50 000 to 60 000 artisans.

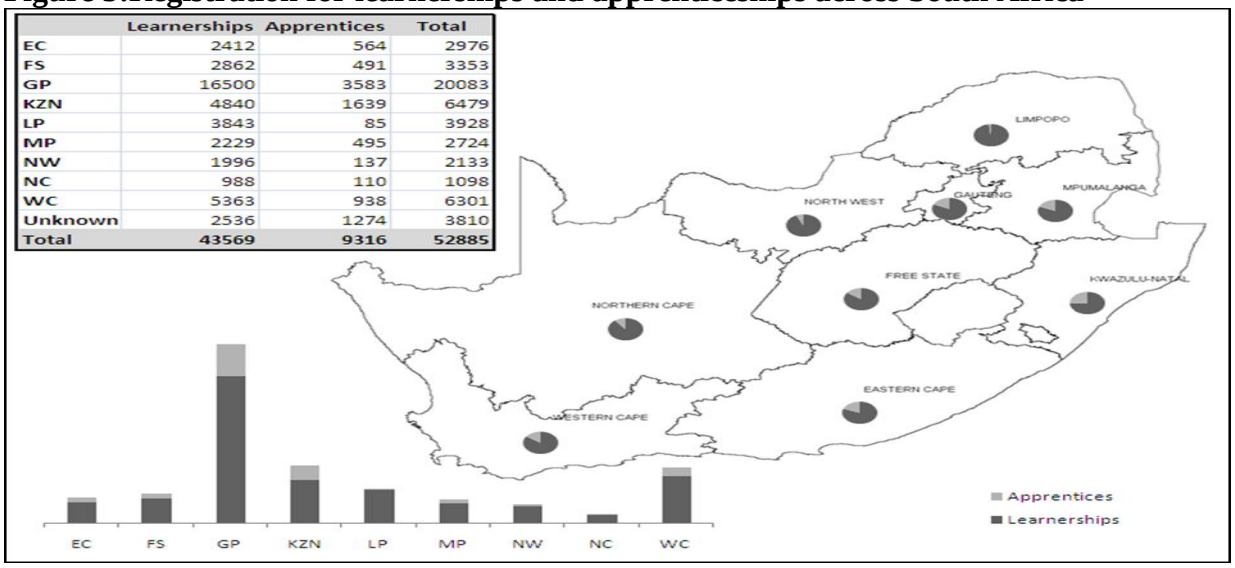
A poor focus on vulnerable constituencies

A major limitation is that the two skills development systems may enable labour market access for most of those who complete the qualification – but not for all participants, particularly vulnerable constituencies and those who experience inequality on the basis of race, gender and class.

The data confirmed a limited geographical spread of learnership and apprenticeship opportunities, concentrated in metropolitan areas in three more densely populated and affluent provinces – almost 60 per cent are provided in Gauteng, Western Cape and KwaZulu-Natal (see Figures 3 and 4). There is very little provision of or access to programmes in the poorer provinces where they may be needed most, in order to contribute to regional, and particularly rural, economic development.

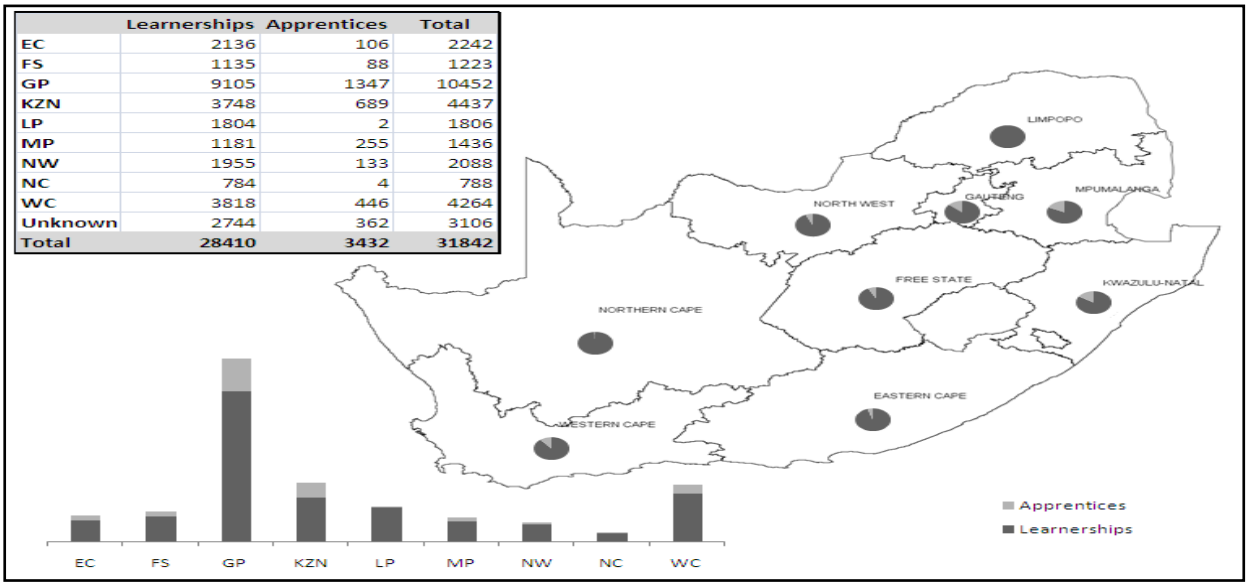
Figure 3:Registration for learnerships and apprenticeships across South Africa

	Learnerships	Apprentices	Total
EC	2412	564	2976
FS	2862	491	3353
GP	16500	3583	20083
KZN	4840	1639	6479
LP	3843	85	3928
MP	2229	495	2724
NW	1996	137	2133
NC	988	110	1098
WC	5363	938	6301
Unknown	2536	1274	3810
Total	43569	9316	52885



Source: Janse van Rensburg et al (2012)

Figure 4:Completed qualifications across South Africa



	Learnerships	Apprentices	Total
EC	2136	106	2242
FS	1135	88	1223
GP	9105	1347	10452
KZN	3748	689	4437
LP	1804	2	1806
MP	1181	255	1436
NW	1955	133	2088
NC	784	4	788
WC	3818	446	4264
Unknown	2744	362	3106
Total	28410	3432	31842

Source: Janse van Rensburg et al (2012)

Generally, there has been a move towards more equal racial and gender representation within these systems, but they have not been as successful in shifting past patterns of inequality and social exclusion. The evidence is that those participating in high-level skills learnerships and those employed at registration are more likely to be white and male, and gender and racial differentiation between sectors still largely reflect traditional occupational patterns. African learnership participants complete a qualification at a significantly lower rate and have more complex trajectories than other race groups, and socio-economic status continues to be closely related to earnings potential. These trends confirm assertions that we are more likely to find a pattern of 'interrupted transitions' and cyclical relocations for those who are most socially disadvantaged (Simmons 2009).

Our analysis points to the possibility that access to the labour market is moving away from former race-based to a class-based form of discrimination, as the socio-economic status of participants is found to be a strong predictor of employment and labour market success. However, the continuing close intersection between race and socio-economic status confounds a clearer assessment. Our analysis of both skills development systems thus illustrates the continued impact of race, gender and socio-economic status on access to different types of education and training opportunities, on the nature of trajectories and on employment outcomes. It is clear that in conjunction with expanding access to educational opportunities, we need to deepen the shifts towards more equitable gender, racial and socio-

economic status patterns of participation, particularly in priority sectors and at higher skills levels. These are challenges well recognized in the *National Skills Development Strategy III*.

Conclusion: The need to expand and strengthen as viable skills development pathway systems

Our study of these skills development interventions can inform current national policy goals to create 'a skilled and capable workforce to support an inclusive growth path' (National Development Plan 2011). The evidence and analysis illustrate the potentially valuable contribution these systems can make to skills development in the country, but equally, the complexity of the relationship between qualifications and labour markets that need us to reflect more strategically on the role of government. Our research illustrates the dangers of simplistic policy assumptions, of an overemphasis on target setting as a policy mechanism and of a reliance on aggregated measurement of performance and outcomes.

Taken as a whole, the learnership and apprenticeship pathway systems are meeting national aggregate performance targets set by SETAs. They have increased access to vocational training and skills development for female, black and individuals of low socio-economic status, whose participation in these two systems is proportionately greater than their participation in FET or higher education systems.

However, these national performance targets themselves are limited – they do not take the demand for new kinds of skills and capabilities from specific sectors sufficiently into account. Nor do they take into account the high demand for education and training on the part of very large numbers of young (potentially unemployable) school leavers. Aggregate measures across the system mask the complex patterns of access and success highlighted by an analysis of individual and group trajectories.

These trends suggest that there is value in extending the scale and reach of the skills development systems. To do so, the limitations and constraints of the learnership and apprenticeship systems will need to be addressed: to encompass more young people on a more equitable basis and in a more effective way. A major limitation is that most of these vocational and occupational qualifications are concentrated at the basic and intermediate skills levels, particularly at lower skills levels. It may be that learnership and apprenticeship

pathway systems play a potentially critical role in enhancing employability at these levels, to complement public and private higher education and further education pathway systems. Thus this constraint points to the need for better articulation, progression and individual advancement in the post-school sector.

A critical constraint is that historical patterns of exclusion and inequality are not sufficiently shifting. Positive employment outcomes are least likely and more complex 'zig-zag' trajectories are most likely for women, those with low socio-economic status, those who are African and those with low educational levels, in low status occupations and sectors. These constraints point to the importance of more nuanced and more strategically targeted interventions, in specific sectors. Setting targets informed by analysis of sectoral, spatial and equity trends is required. There needs to be a stronger alignment between SETAs, education and training providers and companies in determining and regularly updating curricula frameworks and assessment standards so that they match industry demand, and particularly, to keep pace with shifting global technological developments.

Our analysis illustrates that the institutional and structural arrangements between education and skills development, the labour market, the production system and other social and economic institutions do not always facilitate appropriate, responsive and up-to-date development of skills and capabilities. These trends point to the significance of strengthening labour market institutions and the interaction between them. Critically, the trends in learnership and apprenticeship participation emphasise the importance of identifying better mechanisms to support the labour market transitions of those who are most vulnerable in terms of race, gender and socio-economic status, to shift patterns of exclusion and enhance equity. The *New Growth Path* for example, requires the "country to train 50 000 new artisans by 2015" (Wait, 2012) in line with the demands flowing from the *Industrial Policy Action Plan II,* as well as the demand that government's big infrastructure investment push would create. Thus, the constraints highlighted are critical areas for improvement of our technical and vocational education system that will need to be engaged with as indications are that the demands for such skills are set to increase.

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Workplace skills development

Andrew Paterson and Lizzie Mabotja

Abstract

This paper presents a review of workplace skills development from 1994 to 2013. It is structured in four parts. First, phases in the evolution of skills development and training in South Africa are identified to provide a framework according to which this paper will proceed.. The second part of this paper presents a detailed overview of the key features of skills development from 2000 to 2007, until shortly before the onset of the global financial crisis. This is justified on the basis that this period is the only phase in our post 1994 democracy where we are fortunate to have access to research that addresses skills development on a national basis. In the third part of this paper attention will be given to understanding factors affecting skills development from 2008 to the present. The impact of the global crisis on skills development activity will be considered. Also, the principles and objectives of the first three National Skills Development Strategies will be analysed for signs of how skills development strategy has shifted more towards programs aimed at raising employability and employment readiness and comparatively less on skills development in the workplace.

Introduction

The post-school education sector must meet diverse education and training needs of citizens with different education backgrounds, life experiences and employment status. In South Africa, the post-school sector has a relatively complex institutional arrangement that includes: higher education (HE), FET Colleges, Technical High Schools, Adult Education and Training Centres, and Learnerships, Apprenticeships, Internships, which offer learning opportunities relevant to all sectors of the economy, and may be accessible through public and private sector enterprises as well as community-based providers. There are also Small Enterprise Development, community and youth development programs and the Department of Higher Education and Training has plans to Community Education and Training Centres.

The post school sector also incorporates skills development opportunities offered to workers by enterprises and organisations across the economy.

The importance of this sector is affirmed by the National Development Plan as follows:

> 'The post-school sector needs to meet the wide range of education and training needs of people over 18. Together with the higher education system it will play a significant role in producing the skills and knowledge the country needs to drive its economic and social development. It will also be an inclusive system that provides opportunities for social mobility, while strengthening equity, social justice, and democracy.'(NPC,2011,264)

The Post-School Green Paper conveys the DHET's vision for an expanded system of higher education(HE), Further Education and Training(FET) and skills development where curricula can be formulated to meet learning needs for work (and life) opportunities and challenges. The focus of this paper will be on how skills development and training has evolved in the South African context.

The intention in this paper is to lightly trace the evolution of skills development over the past 20 years and in addressing this task, to provide some perspective on the following central questions:

- What were the characteristics of skills development and training that South African private sector employers provided to the workforce in the period?
- Did the quantity, quality, and distribution of workplace training vary over time, and if so, in which dimensions?
- How was skills development treated in three successive National Skills Development Strategies (NSDS), and two Human Resources Development Strategies(HRDS) issued by government in the twenty years?
- Have the SETAs been mandated to retain a core focus on skills development, and if not, what functions are currently requiring SETA attention?
- Over time, has skills development strategy prioritised workplace training and skills development as compared with employability skills, or workplace readiness?

This paper will be structured in four parts. First, phases in the evolution of skills development and training in South Africa are identified to provide a framework according to which this paper will proceed. The second part of this paper presents a detailed overview of the key features of skills development from 2000 to 2007, until shortly before the onset of the global financial crisis. This is justified on the basis that this period is the only phase in our post 1994 democracy where we are fortunate to have access to research that addresses skills development on a national basis. In the third part of this paper attention will be given to understanding factors affecting skills development from 2008 to the present. The impact of the global crisis on skills development activity will be considered. Also, the principles and objectives of the first three National Skills Development Strategies will be analysed for signs of how skills development strategy has shifted more towards programs aimed at raising employability and employment readiness and comparatively less on skills development in the workplace.

Phases in the Evolution of Skills Development and Training in South Africa from 1994 to 2013

It is important to examine skills development within a broader historical canvas, since skills development is understood, conceived, planned, and implemented by enterprises within particular sectoral and global economic conditions, and is also subject to the influence of national policies guiding schooling, post-school education and training, workplace learning as well as lifelong learning.

Table 1 below provides a historical view of skills development in South Africa from shortly before 1994 up until 2013. In the table and attempt is made to identify and map skills development and training 'events'. In this instance 'events' refer mainly to policy measures, institutional modernisation, changes to existing institutions, and key interventions in support of skills development systems improvement. Reference is also made to 'significant events' that have direct or indirect impact on skills development institutional arrangements or practices, such as changes in industrial policy, government interventions into labour market functioning, reconfiguring of government departments, and local or global economic shocks.

Creating a periodization, is a useful technique as it requires judgements to be made about when and why change takes place, or when there is stability in a system. The following periodisation is suggested as a means of making sense of skills development over the last 20 years:

Late-apartheid period up to 1994:

The periodisation has to acknowledge the deep and lasting impact of apartheid on skills development, notwithstanding gradual reforms that took place after 1981.

Creating a Legislative Framework, 1994 to 1999:

The second period, coinciding with democratic rule presented the challenge of developing a more equitable and effective skills development environment. The South African Qualifications Framework symbolised the intention to systemically structure education and training as an accessible, open system of learning and progression. The latter part of this period features the fundamental building blocks of government incentivised skills development through a skills levy and supporting institutional arrangements – the Sector Education and Training Authorities (SETAs) - intended to counteract stagnant investment in human resources, declining productivity and low industrial growth associated with apartheid from the mid-1970 onwards.

Developing Strategy & Implementing, 2000-2007:

Both the National Skills Development Strategy (NSDS) and the Human Resources Development Strategy (HRDS) were tabled in 2001, the former setting performance benchmarks for skills development and the auspices of the Department of Labour. The apparatus for administering the grants system and providing strategic direction for skills development, the Sector Education and Training Authorities, National Sklls Authority & National Skills Fund were put in place early in the millennium but becoming fully functional took some time. In this period, three national surveys of enterprise skills development and training that were commissioned by the Department of Labour in 2000, 2003, and 2007. This research provided indications of progress in skills development by enterprise size, sector, occupation and in respect to equity in South African workplaces.

Responding to the global jobs crisis & re-shaping the post-school sector, 2008-2012:

In the year 2008, the brief period of five years in which the skills levy system became embedded and could be assessed for impact was over. The onset of the global financial crisis

contributed to large-scale job losses in South Africa as elsewhere. Economic growth stalled and for South Africa the recovery has been slow and halting. The impact of this shock on skills development in South Africa has not been investigated on a national scale. In 2009 following the fourth democratic general election, the new administration reshaped the mandate of the former departments of Education and Training, through creating a new Department of Higher Education and Training that would be responsible for the entire terrain of post-school education and training - including skills development which was removed from the mandate of the Department of labour. It is highly likely that these new administrative and economic circumstances would have impacted on skills development.

Planning & expanding

The economic crisis has exacerbated South Africa's problem of pervasive unemployment especially among young people between the ages of 18 and 24. The needs of this constituency are juxtaposed against an underdeveloped system of post school education and training opportunities which must be expanded urgently. A key target for expansion is the Further Education and Training colleges.

The South African government's January 2010 Cabinet Lekgotla agreed to pursue twelve national outcomes across various fields of service delivery including education and skills. These goals have since then become core drivers of government service delivery. Outcome Five which envisaged achieving "*A skilled and capable workforce to support an inclusive growth path*" became the responsibility of the Minister of the recently shaped Department of Higher Education and Training. The SETAs and enterprises remain the key vehicle to approach this aim through driving various programs such as Learnerships and skills development.

Each SETA administers training grants and therefore functions as a skills information hub that is supposed to collate enterprise skills demand and supply information to develop a Sector Skills Plan. A sub-outcome of Outcome Five requires the DHET to establish "a credible institutional mechanism for skills planning*"* Commitment Eight of the 2009 HRDSSA II reflects a similar stance: "We will establish effective and efficient planning capabilities in the relevant departments and entities for the successful implementation of the

HRDSSA II."[7] In this function the SETAs are expected to play a major role in encouraging enterprises to participate in the Levy-Grant process and submit valid and reliable training data.

[7] DHET (2009) Human Resource Development Strategy for South Africa (HRD-SA) 2010 – 2030. p.21

Table 1: Phases in the Evolution of Skills Development and Training in South Africa from 1994 to 2013					
	Phase	**Year**	**Skills training and development events from 1994**	National Skills Development Strategy & Human Resources Development Strategy	**Significant influences**
1	**Late-apartheid period**	Pre-1994	**1981Manpower Training Act, of 1981** 1991 COSATU joined National Training Board & participated in the National Training Strategy Initiative negotiations		Racial discrimination shifting to apartheid reformism, & negotiations with trade-unions
2	**Creating a Legislative Framework**	1994	**New Constitution**		- Reconstruction and Development Plan
		1995	**South African Qualifications Authority Act (SAQA)** **Act (No 58 of 1995) promulgated**		
		1996			- Growth Employment and Redistribution Strategy (GEAR) announced by Dept of Finance
		1997	**Green Paper on Skills Development**		
		1998	**Skills Development Act (SDA)** **(Act No. 97 of 1998) promulgated**		- Signals Active Labour Market Policy orientation which intervene in the labour market
		1999	**Skills Development Levies Act** **(Act No. 9 of 1999) promulgated**		
		2000*	Sector Education and Training Authorities,		

			National Skills Authority & Fund to address NSDS targets. 2000 Survey of Industrial Training			
		2001		***NSDS I (2001-05)***	***HRDS (2001-10)***	
		2002	Learnership Allowance introduced			- SETAs slow to deliver on mandate
3	**Developing Strategy & Implementing**	2003*	National Skills Survey, 2003			- Growth and Development Summit resolutions promote Learnerships and support to raise SETA functioning.
		2004	Employment Skills Development Lead Employer (ESDLE) pilot project Skill Development Planning Unit (SDPU) established in Dept of Labour			- Expanded Public Works Program initiated
		2005	Joint Initiative on Priority Skills Acquisition (JIPSA) est. March by ASGISA	***NSDS II (2005-10)***		
		2006				
		2007*	National Skills Survey, 2007			
		2008	SDA and SAQA Acts Amended. ETQA removed from SETA mandate, standards setting moved from SETAs			- Commencement of first Industrial Policy Action Plan by the Department of Trade and Industry - Global economic crisis impacts.

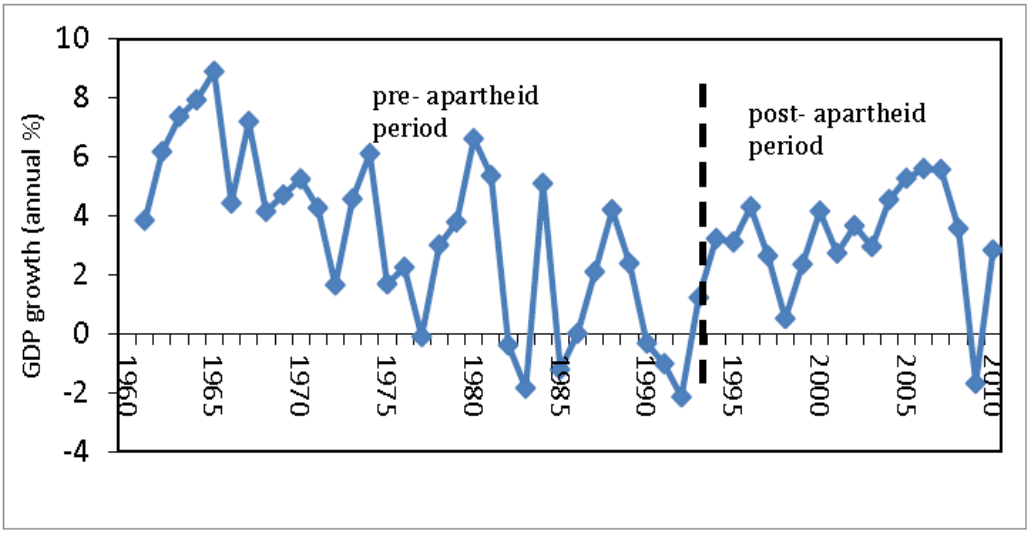
4	**Responding to jobs crisis & re-shaping the post-school sector**	2009	**Department of Higher Education and Training (DHET) established**			- In SA about 1 million jobs lost in 12 months - Training Layoff Scheme announced
		2010		***NSDS II extended***	***HRDSA (2010-30)***	- National Planning Commission appointed - Youth Wage Subsidy mooted
		2011		***NSDS III (2011-15)***		- Jobs Fund announced in State of Nation Address - New Growth Path: Framework published by Economic Dev't Dept.
		2012	**Green Paper for Post-School Education and Training**			- National Development Plan, Vision 2030 published - Skills Accord - New SETA Grant Regulations (Government Gazette no. 35940)
5	**Planning & Expanding**	2013				- Youth Employment Accord, April

Skills training conditions in South African enterprises and economic sectors before 1994

Long after the apartheid economic boom of the late 1960s to the early 1970s, access to education and training was allocated on the basis of race until the Manpower Training Act,1981 was proclaimed to effectively deracialise Apprenticeship training. The same Act established Industry Training Boards which covered only certain industries and were based on voluntary participation. Organised worker involvement in training matters was ruled out until 1991 when COSATU was invited to meet with the National Training Board.

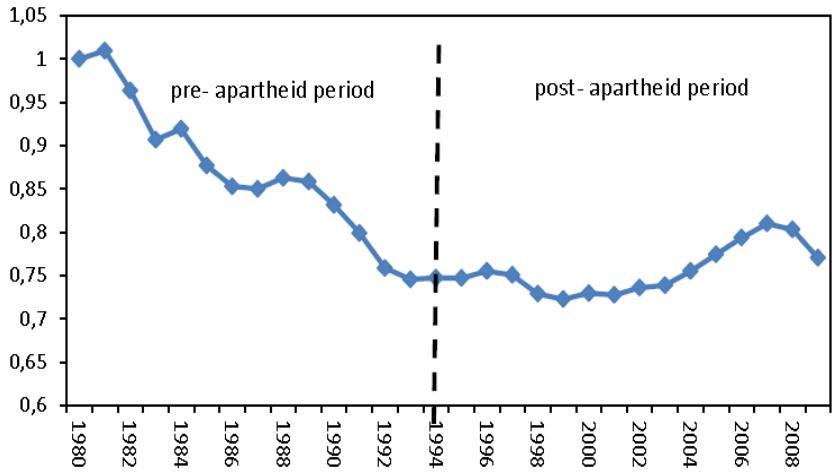
The South African economy was characterised by primary industrial activity, particularly mining and depended on commodity prices to support economic growth which was volatile and in decline. For some time South African enterprises had been disinclined to invest in training or tangible resources. Faulkner and Loewald (2008) show that 'investment declined, employment growth slowed down and competitiveness worsened' between 1970 and 1994.[8] International trade and financial sanctions imposed by the international community further weakened the economy. Figures 1 and 2 show how the patterns of GDP growth and labour productivity of South Africa follow similar trajectories.

Figure 1: : Trends in real GDP growth in South Africa, 1960-2010[9]



[9] Cited in: Ncube, Shimeles,& Verdier-Chouchane (2012)p.7; Faulkner, D. and C. Loewald (2008) "Policy Change and Economic Growth: A Case Study of South Africa", Commission on Growth and Development, Working Paper No 41 (http://www.growthcommission.org/storage/cgdev/documents/gcwp041web.pdf)

Figure 2: Trends in total factor productivity in South Africa, 1980-2010[10]



Survey of industrial training 2000

Although soon after 1994, the Democratic government took the initiative to promulgate 1995 legislation giving formal status to the unifying National Qualifications Framework, there was a gap of three years before government introduced legislation in 1998 and 1999 that impacted directly on workplace training through the introduction of the skills levy. By 2000 the Department of Labour (DoL) commissioned to the HSRC to conduct a baseline survey of skills training in private sector enterprises. By this stage, the institutional framework of Sector Education and Training Authorities (SETAs) and the National Skills Fund (NSF) was still in the making, so the skills development and training environment still reflected a low skills equilibrium that carried over from Apartheid. In this context the 2001 HRD Strategy document summarized the state of training in that period as follows:

> "… HSRC Baseline Survey of Industrial Training (2000) drew the following more nuanced conclusions about the rate of training - training was likely to benefit between 20-30% of the formal workforce .... However, the quality and depth of this training is questionable. The majority was part-time, in-house, and primarily shortcourse in orientation. Much of it entailed activities such as brief training sessions on industrial

[10] Source: AfDB database (2011) Ncube, Shimeles,& Verdier-Chouchane (2012)p.8

relations, health and safety issues and basic computer skills. Little of it was externally accredited nor did much of it substantively upskill this percentile of the workforce.[11]

The Baseline Survey afforded the first opportunity to generate an overview of skills development in post-1994 South Africa. It was followed by two further surveys also commissioned by the Department of labour which followed in 2003 and 2007. The latter surveys were more sophisticated in their design which meant that the data produced would be more reliable than the 2000 survey.

The analysis that follows takes a comparative approach that highlights changes in skills development activities in enterprises between 2003 and 2007, rather than dealing with the two surveys separately. All told, the three surveys therefore provide a reasonable picture of improvements in enterprise training performance until just before the financial market crash in 2008 and the subsequent downturn in the real economy and global and national and regional levels. As can be seen from the previous discussion which periodises skills development and training over the 20 years, these three surveys actually coincide with the period under the administration of the Department of Labour from after implementation of the skills levy legislation to just prior to the world financial crisis. And the new Department of Higher Education and Training in 1999 took over responsibility for skills development in the immediate aftermath of the global crisis.

Features of enterprise skills training and development: a comparison between the National Skills Survey of 2003 and 2007

Enterprise size and training

The average training rate increased substantially between 2002/03 and 2006/07 from 25% to 53% - in effect a doubling took place. Measuring the incidence of training in enterprises is not an easy task, and international comparisons are known to be difficult on account of methodological differences between surveys.[12] Nevertheless, data on participation rates of adult workers in training in OECD countries are recorded at 65% and higher. In so far as

[11] HSRC (2000) cited in DoL & Doe (200?)p.36 HSRC (2000) Baseline Survey of Industrial training in South Africa, A report commissioned by the Labour Market Skills Development Programme of the Department of Labour and the European Union, Pretoria, HSRC Printers.

[12] Ok, W & Tergeist, P (2003) Improving worker's skills: Analytic evidence and the role of the social partners Employment, Labour and Social Affairs Committee, Directorate for Employment, Labour and Social Affairs DELSA/ELSA/WD/SEM(2003)10 Annex Table A1.

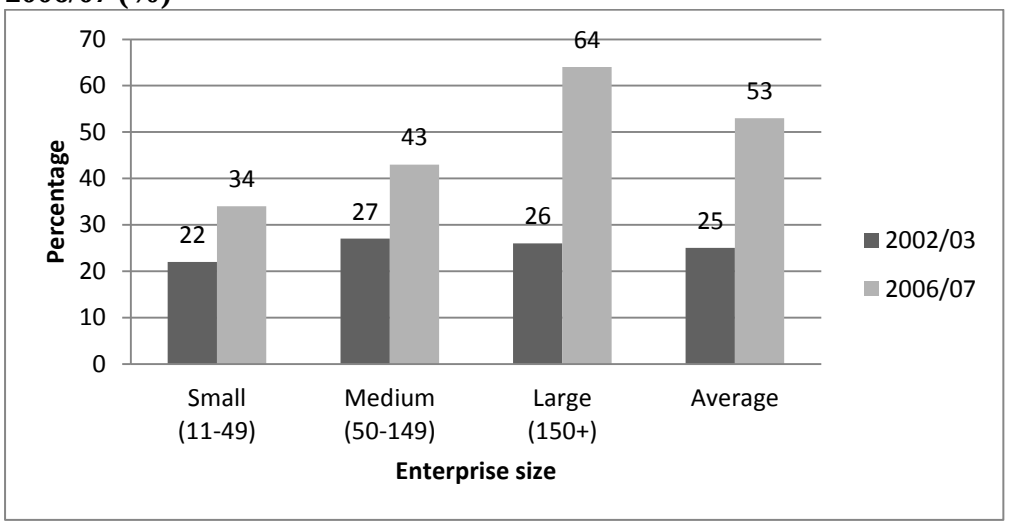
fluctuation of training rates are concerned, this is not a particularly unusual phenomenon. Among OECD member countries, Denmark, Finland, Germany and the United Kingdom's training rates are more stable, whereas for countries like Portugal, Italy, Greece, Hungary, Luxembourg and Netherlands have seen a training rates fluctuate substantially between years.

The margin of improvement between National Skills Survey of 2003 and the National Skills Survey of 2007[13] was large by enterprise size. Even though the training rate of small and medium enterprises[14] increased by 55% and 59% respectively between 2002/03 and 2006/07, this was eclipsed by a massive 146% training rate increase in large enterprises. In 2007, small enterprises trained one-in-three workers, medium size enterprises trained more than two out of five workers and large firms trained two in every three workers (Figure 9).

[13] The National Skills Survey of 2003 (NSS2003) and the NSS2007, were commissioned by the Department of Labour, and share strong methodological similarities and a similar questionnaire. The NSS2007 utilised the November 2006 South African Revenue Services' (SARS) database of skills levy-paying enterprises for sampling and contact purposes. It was the most comprehensive and accurate sample frame of private enterprises available. The dataset was refined by removing the records of all enterprises that were estates, de-registered, dormant, could not be traced, or had closed down leaving 103 277 enterprises. A call-centre contacted a sample of these enterprises (stratified by SETA and large medium and small enterprise size) to request their participation, which generating a sample of 9 500 participating enterprises. The survey was distributed by post, and 1 557 completed questionnaires were received at a 16.4 per cent response rate (In the NSS2003 1 374 completed questionnaires were received yielding a 22.9 per cent response rate from 6 000 enterprises surveyed). For the NSS2007, response rates between SETAs ranged between 11 and 23 per cent. An independent data management service provider captured and verified all completed questionnaires. Researchers cleaned data fields in the database of captured questionnaires by means of logical tests. Weights were calculated for each sample cell to adjust the number of responses in a particular cell to the actual number of enterprises in the sample frame.

[14] The discussion in this text refers to a population of 42 655 enterprises in 2006/07 consisting of 29 686 small, 10 534 medium and 2 435 large enterprises with a total employment count of 6 198 086 employees of whom 5 117 857 were identified as permanent and 1 080 228 as non-permanent workers The numbers of enterprises as well as any numbers of employees given in this text are derived from a statistical weighting procedure. In the weighting procedure, data from the returns of the sample survey are adjusted proportionately to reflect the actual enterprise numbers in the sample frame. In this way the results of the survey can be compared with the actual population of enterprises described by the sample frame. HSRC(2008)pp.26,67

Figure 3: Training ratio by enterprise size and occupational category in 2002/03 and 2006/07 (%)



Only four percentage points separated the training rate of small, medium and large enterprises in the 2002/03. What this means is that enterprise size generated small differences in aggregate training rates in 2002/03, whereas training exposure differed considerably between occupational categories and SETAs. Four years later in 2007, the training spread across enterprise size expanded to thirty percentage points between small and large enterprises.

At the same time, the difference between highest and lowest training rates by occupational category was 20%, and across SETAs this difference was 58%. The analytic challenge in 2007 is therefore that much more complex.[15]

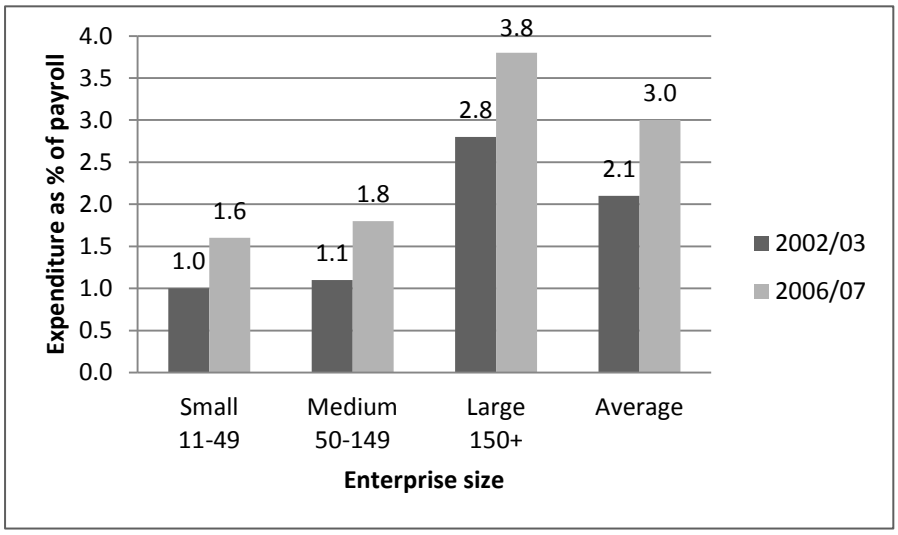
Training expenditure as a percentage of payroll

Training expenditure in an enterprise is reflected as a percentage of payroll. Across all enterprises, training expenditure as a percentage of payroll increased from 2.1 per cent in 2002/03 to 3.0 per cent in 2006/07 - a 43% increase (Figure). This is a positive finding because it shows that enterprises in general and especially large enterprises had increased their investments in training beyond the 1 per cent benchmark stipulated in the skills levy legislation. But the commitment varied among the enterprise size groups. Between 2003 and 2007, small and medium enterprises raised their spending by 60% and 64% respectively, whereas large enterprises increased their investment by a less spectacular 36% though off a

[15] HSRC(2008)p.35

high base. By 2007, the skills levy contribution from large enterprises had escalated to 3.8% of payroll.

Figure4 :Training expenditure as a percentage of payroll by enterprise size



Evidence from the NSS2007 leads to the conclusion that in large enterprises access to training increased at a much faster rate than training expenditure did in the same period. Specifically, among large enterprises, expenditure increased by 36% over the four years since the NSS2003, while training opportunities increased by 146%. By contrast, in small and medium enterprises, increased expenditure modestly exceeded increases in training in 2007. This analysis suggests that the basic premise governing training in large enterprises was to expand access while maintaining a tight rein on expenditure. How did these conditions impact on the quality of training resources, how they were distributed, in what quantities, and to which workers by SETA or sector, occupation, or according to population group, gender and disability.

SETAs and training

Between 2002/03 and 2006/07, all SETAs improved their training rate except for the MQA which dropped 5 per cent over the period off a high base. The SETAs which achieved the sharpest increases in training rate were: INSETA, BANKSETA and HWSETA.

Training rate variance between a low of 31 per cent for TETA[16] and a high of 89 per cent for BANKSETA generated a range of close to 60 per cent between highest and lowest SETA training rates in the NSS2007. The training rate variance in the NSS2003 was almost as high with a difference of 52 per cent between the MQA (training rate of 61 per cent) and

[16] The lowest training rate was recorded for LGSETA (10 per cent). However, because of the low number of private firms registered in LGSETA and participating in the NSS2006/07 survey, we view it as a unique case and refer instead to TETA as having the lowest training rate (31 per cent).

HWSETA (training rate of 9 per cent).[17] Variation between SETA training rates may be ascribed to unique micro-economic circumstances within sectors or their sub-sectors, in combination with changes in the business cycle, as well as how successfully SETAs and firms cooperate to improve the quality and access of training per sector-SETA.

Table 2: **Training ratio by SETA in 2002/03 compared to 2006/07**

SETA	2002/03	2006/07	Difference between
FASSET	35	62	27
BANKSETA	24	89	65
CHIETA	23	55	32
CTFL	27	34	7
CETA	13	35	22
ETDP	26	64	38
ESETA	13	33	20
FOODBEV	15	57	42
FIETA	26	68	42
HWSETA	9	60	51
ISETT	23	48	25
INSETA	11	83	72
LGSETA	Not sampled	10	-
MAPPP	16	36	20
MQA	61	56	-5
MERSETA	21	49	28
POSLEC	29	Now	
PAETA	18	Now	
SETASA	21	Now	
SASSETA	[9]	43new	-
AGRISETA	[19]	42new	-
SERVICES	44	58	14
THETA	26	41	15
TETA	24	31	7
W&RSETA	28	42	14
Total	25	53	28

Training and Occupations

In 2006/07 training rates of permanent employees by occupational group ranged from a low of just over four-in-ten trained among 'community and personal service workers'(43%) to the highest training ratio with over six-in-ten trained of 'technicians and trade

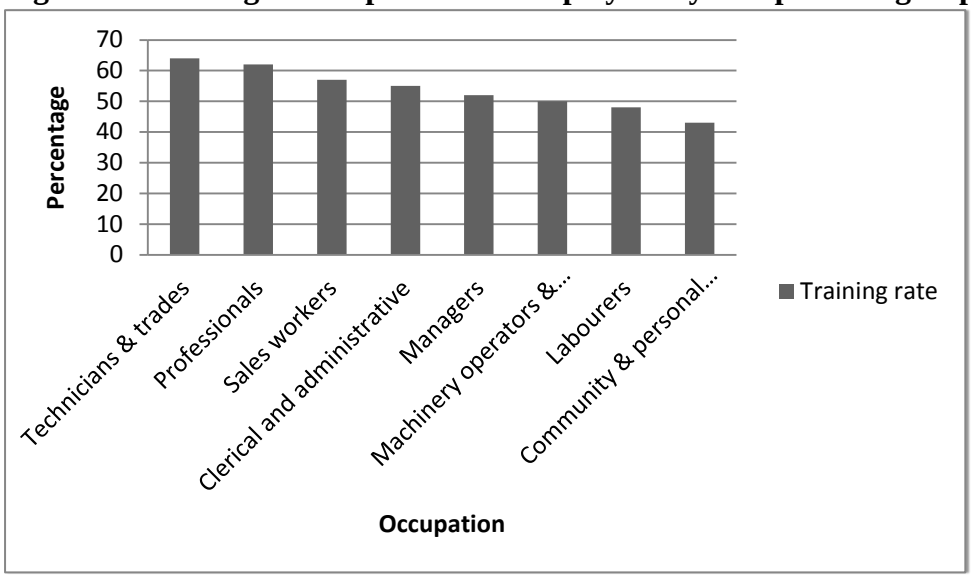
[17] HSRC(2008)pp.35-36

[18] HSRC(2008)p.29

[19] SETA structures were altered: (a) POSLEC SETA + DIDETA → SASSETA. Previously, Police, Private Security, Legal and Correctional Services Education and Training authority, amalgamated with Diplomacy, Intelligence, Defense, and Trade and Industry Sector Education and Training Authority DIDETA to form Safety and Security (SASSETA, code 19); (b) PAETA + SETASA → AGRISETA. Previously, Primary Agriculture Education and Training Authority, amalgamated with Secondary Agriculture Sector Education and Training Authority to form AGRI Sector Education and Training Authority (AGRISETA, code 20). HSRC(2008)p.38.

workers'(64%). This emphasis on 'technicians and trade workers', suggests that employers across economic sectors were improving technical and trade-related skills in response to: acquisition of new or upgrading current technologies driven by investment in infrastructure, and innovation in business processes.

Figure 5: Training rate of permanent employees by occupational group in 2006/07 (%)[20]



Higher training rates were evident in skilled and high skilled occupations where six out of every ten 'professionals' (62 per cent) and 'technicians and trade workers' (64 per cent) received training. Ranking the occupations in order of training shows that a reprioritisation of occupational training took place between 2003 and 2007. 'Technicians' moved up six places from 2003 to receive highest levels of training in 2006/07 and likewise, 'professionals' rose up six places after receiving the lowest training input in 2002/03. Other occupational categories benefiting from exposure to training above the mean included 'sales workers' (57 per cent) and 'clerical and administrative workers' (55 per cent), which suggests that across sectors, businesses intended to improve sales and customer service, and back-office functions. Perhaps the higher emphasis on these functions contributed to somewhat unexpected low training exposure to 'managers' (52 per cent). The new category of 'community & personal service workers'[21] reflected the lowest training rate (43 per cent) which may be attributable to unfamiliarity among respondents and should be observed carefully in future.

[20] HSRC(2008)p.31

[21] Community and personal service workers "assist health professionals in the provision of patient care, provide information and support on a range of social welfare matters, and provide other services in the areas of aged care and childcare, education support, hospitality, defence, policing and emergency services, security, travel and tourism, fitness, sports and personal services". ANZCO (2006), INSETA (2008) (See Appendix for a list of sub-occupations)

The 2007 skills regime clearly lacked alignment towards low-skill categories of worker, 'machinery operators and drivers' (50 per cent), and 'labourers' (48 per cent) received the lowest exposure to training. This is clearly undesirable. Historical policies of racial discrimination in education and in occupational access have produced a persistent pattern of association between race and low skill occupations. This legacy presents a standing challenge to policy dealing with racial equity in the conjunct fields of training and occupational opportunities.[22]

Training according to national and international standards

Training according to external training standards, can ensure local training processes meet quality requirements, are harmonised with international practice, and provide for the accreditation of employee competencies.

Between 2003 and 2007, the large enterprise category increased its contribution to aggregate training opportunities for permanently employed workers and its contribution to standards based training, so that by 2007 large enterprises trained 67% of employees receiving training and 65% of all employees who received training according to standards. This was achieved in the same years that the national system of skills training expanded, generating substantial increases skills training opportunities. The number of employees exposed to training, and within that, the number of employees exposed to standards based training increased by 133% and 137% between 2003 and 2007.

The supply-side of the equation deserves consideration. This hike would have placed pressure on supply institutions to meet the demand, especially the suppliers of accredited training programs.

[22] HSRC(2008)pp.78-79

Table 3:Permanent employees in training according to standards by enterprise size 2002/03 and 2006/07

	2002/03			2006/07		
Enterprise size	**All employees trained**	**Total trained to standards**	**% of all employees trained to standards**	**All employees trained**	**Total trained to standards**	**% of all employees trained to standards**
Small (11-49)	130	50 468	39	229 932	85 015	37
Medium (50-	149	54 995	37	322 936	96 456	30
Large (150+)	443	111	25	1 129	333 259	30
Total	723	217	30	1 682	514 730	31

Notwithstanding the impressive gains, training to standards as a share of all training opportunities did not change markedly between the NSS2003 and the NSS2007, employees trained to standards as a proportion of all trained was 30% in 2002/03 and 31% in 2006/07. This means that questions regarding the quality of two thirds of training in South African workplaces still needs to be pursued. Given that the proportion of training to standards has not advanced more speedily, we must first consider: whether this reflects a constraint on the supply side where training service providers are not geared up to provide more standards based opportunities, whether enterprise demand is not forthcoming among small and medium providers, whether large enterprises are better positioned to exploit standards based training opportunities or whether other factors in the SETA system are relevant.

Second, it is worth looking more closely at changes between the different standards types, in particular to assess the impact of the South African NQF initiative in skills training. The percentage of training according to SAQA/NQF standards as a proportion of all standards based training increased significantly from 30 per cent in 2002/03 to 72 per cent in 2006/07. This increase is attributable to the significant uptake of SAQA/NQF training within large and medium enterprises between 2002/3 and 2006/07, from 28 per cent to 85 per cent, and from 36 per cent to 61 per cent respectively. This gives evidence of strong buy-in among enterprises for SAQA benchmarked programmes, driven by the regulations which provide for reimbursement of training expenditure for SAQA accredited courseware.

As a result, the proportional of training to other nationally recognised standards, ISO 9000 and other internationally recognised standards declined in real terms from 151 329 to 142 775 in the 2003 to 2007 period. [23]

Figure 6 Permanent employees in training according to standards by enterprise size in 2002/03 (%)[24]

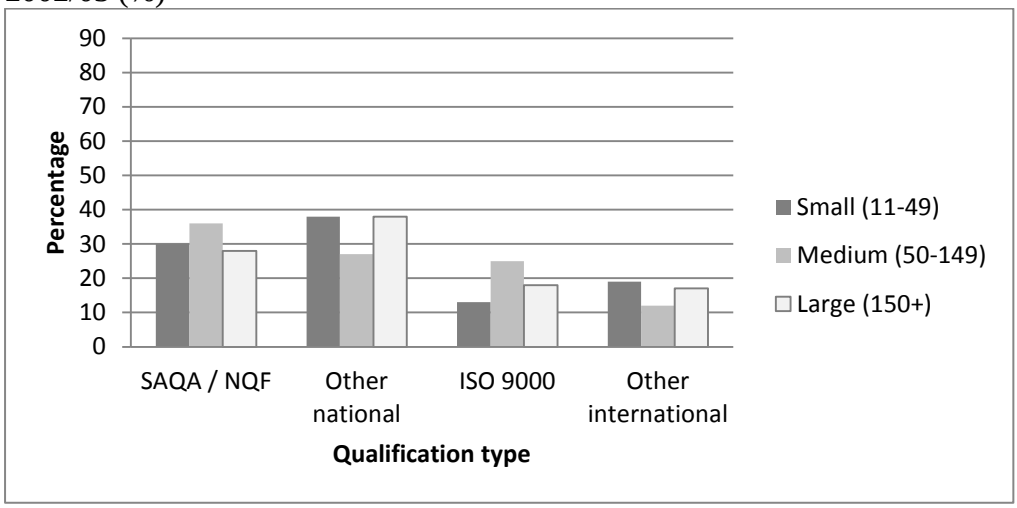
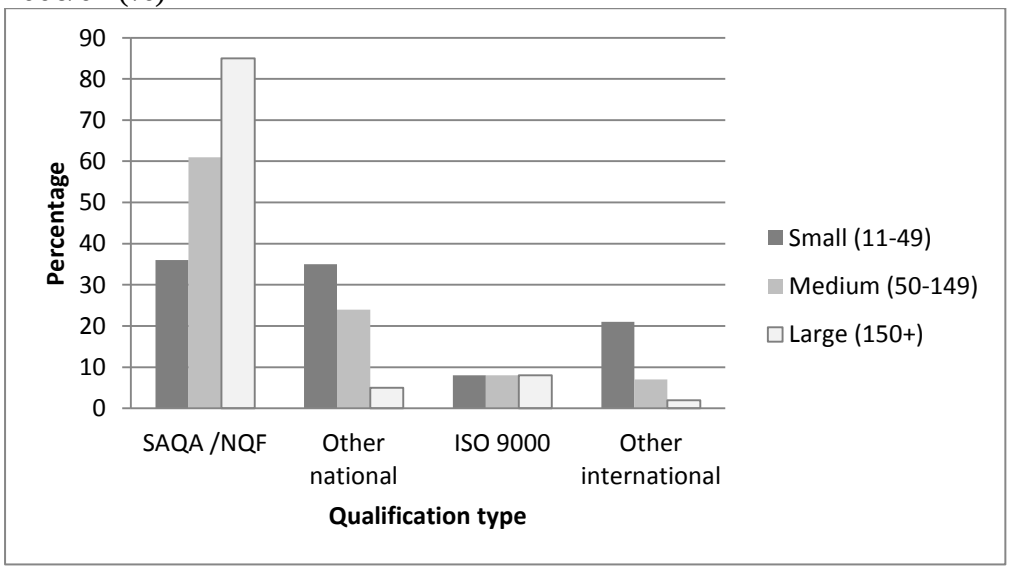


Figure7: Permanent employees in training according to standards by enterprise size in 2006/07 (%)



The pattern of SETA 'affiliation' to different structured training benchmarks was diverse. This suggests that sectors differ in how they met their training needs through taking recourse

[23] HSRC(2008)pp.40-41

[24] Note: SAQA/NQF and ISO were isolated out as currently the two largest standards frameworks referred to in South African training. ISO9000 refers to certificates conferred by the International Standards Organisation with numbers in the 9000 range for quality control purposes. Other international standards include Pitman, Microsoft, City and Guilds etc.

to a combination of different standards that apply to different occupational groupings, skills levels and skills needs. In 2006/07 however, the pattern of SETA affiliation to the SAQA/NQF framework was more evident in the banking, mining and services sectors, but less so in the wholesale and retail, construction, and hotel and tourism sectors.

If training according to a national or international standards is taken as a proxy for a 'structured learning programme' as specified in NSDS target 1.2, then the number of employees trained to standards more than doubled from 217 106 in 2002/03 to 514 730 employees in 2006/07. This represents 16.1 per cent of all permanently employed workers (3 198 045) in the enterprise population of the NSS2007. A small proportion of those receiving training according to standards would have participated in programmes that ran over more than one year. Therefore, in 2006/07 the total of those completing a structured learning programme would have been less than the 514 730 recorded as being engaged in 'structured learning'. [25]

Population group and training

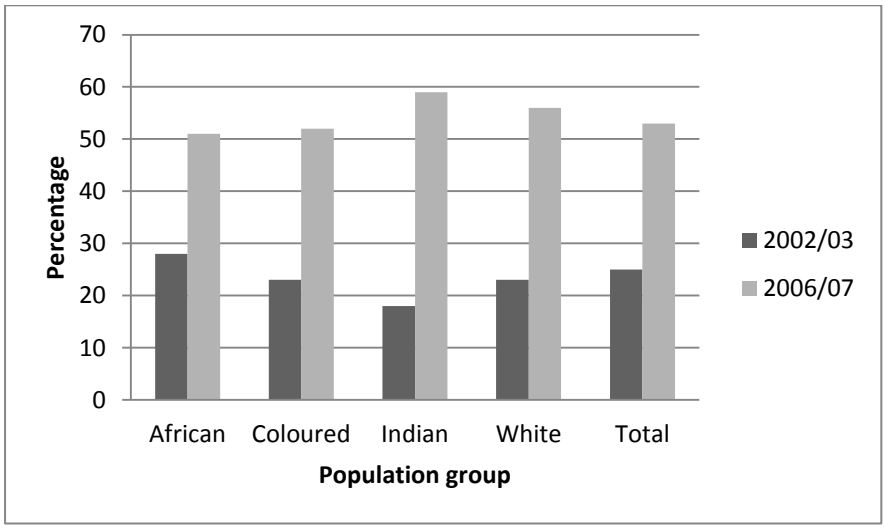
In terms of the need to redress past unequal treatment according to race - which continues to influence the current demography of occupational access - it is important to expand training access to formerly disadvantaged groups to ameliorate the situation. Given that training access doubled from 2003 to 2007 what impact did this substantial increase in aggregate training have on access by population group?

In aggregate terms, training ratios increased for all race groups across all size categories in the period, 2002/03 to 2006/07 (Table). There was a 10 per cent difference between the race group with the highest and the lowest aggregate training rate in 2002/03. In 2006/07 the difference in aggregate training rate between race groups was marginally reduced to 8 per cent. This meant that overall inequity of access to training on the basis of race was slightly smaller in 2006/07 than it was in 2002/03.

However, this result is paradoxical. Though on aggregate the differential in race access to training was reduced, African workers who experienced the highest training rate in 2002/03 had the lowest training rates in 2006/07. The rank order of training rate for 2002/03 by race (African then Coloured then White and then Indian) became Indian (59 per cent) then White (56 per cent) then Coloured (52 per cent) then African (51 per cent) in 2006/07. Reversal

[25] HSRC(2008)pp.42-43

Figure 8: Training ratio by population group in 2002/03 and 2006/07 (%)



By far the largest increase in training access in each race group was experienced among workers in the large enterprise category and the smallest training increase according to race group was among workers within the small enterprise category.

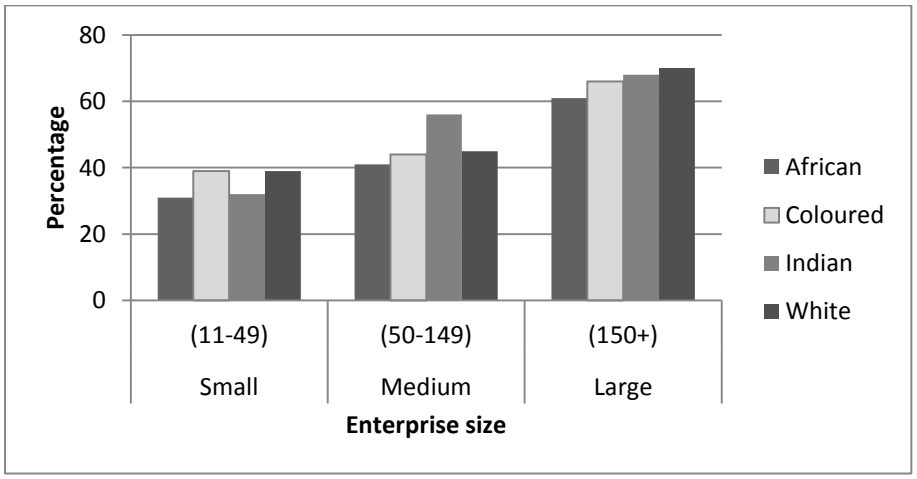
Even though training increased on aggregate, differences in training access increased between workers of the same race group but who were employed in different enterprise size categories. Thus African workers employed in large enterprises with the lowest training rate by race in that enterprise category (61 per cent) had practically double the opportunity to receive training than their contemporaries who were employed in small enterprises (31 per cent).

In 2006/07, the difference in training rate by race group *within* the large enterprise category was 9 percentage points, and the difference in training rate by race group *within* the small enterprise category was 8 percentage points. Yet the difference between the group with the lowest training rate by race and enterprise size (African workers in small enterprises at 31 per cent) was 39 per cent lower than the group with the highest training rate by race and enterprise size (White workers in large enterprises at 70 per cent). The difference between the training rate of White workers in large enterprises (70 per cent) as compared with White workers in small enterprises (39 per cent) was 31 per cent. Likewise, the difference between the training rate of African workers in large enterprises (61 per cent) as compared with African workers in small enterprises (31 per cent) was 30 per cent – a very similar magnitude.

Notwithstanding the substantial overall increase in training opportunity, what the shift in training rates between 2002/03 and 2006/07 reveals, is that the gap between training in small enterprises and large enterprises stretched drastically. And further that this gap exacerbated the decline of African worker access to training relative to other race groups particularly in the medium and large enterprise size categories. This reversal is most evident in large enterprises where African workers received the highest opportunities for training in 2002/03 but by 2006/07 received the lowest opportunities for training by race group.[26]

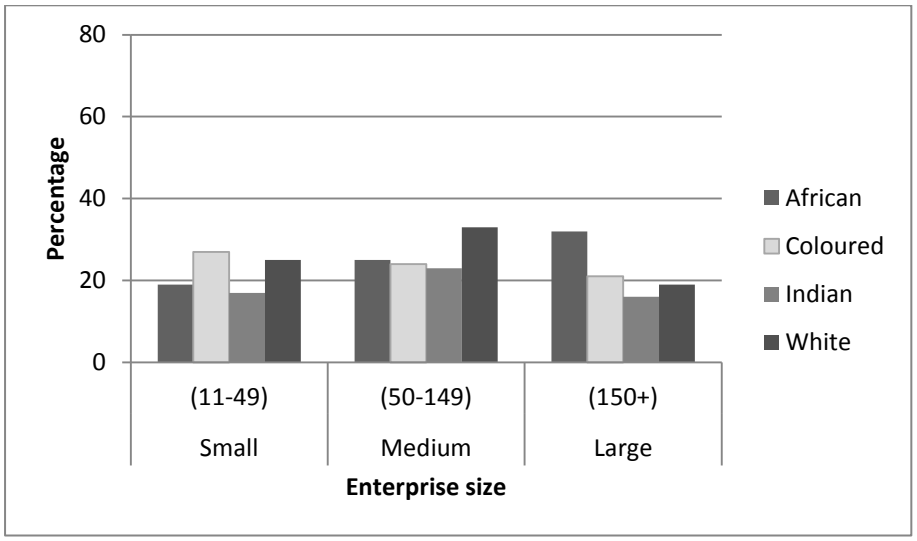
There is a clear pattern of racial differences in training access between small, medium and large enterprises. African workers in small enterprises (31 per cent) were exposed to the lowest training rate, whereas White workers in large enterprises (70 per cent) were exposed to the highest training rate. Clearly, firm size emerged in 2007 as a critical determinant of training rate as experienced by race group. This means that for every race group, access to training is better in larger enterprises. [27]

Figure 9 : Training ratio by race and enterprise size in 2006/07 (%)



[26] HSRC(2008)pp.65-66
[27] HSRC(2008)pp.78-79

Figure 10: Training ratio by race and enterprise size in 2002/03 (%)



Gender

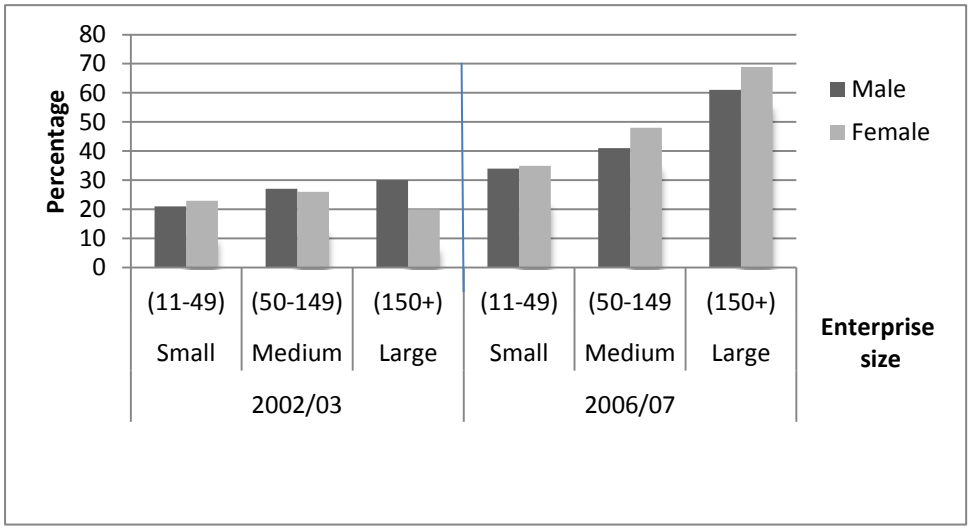
Between 2002/03 and 2006/07 the distribution of training according to gender altered substantially. In 2002/03, 22 per cent of females and 28 per cent of males received training (Table 24). Four years later, in 2006/07, 56 per cent of females received training as compared to a 51 per cent training rate for males.

With an aggregate training rate in the twenty's in 2002/03, the difference between male and female training rates of 6 percentage points signalled that on aggregate males received 27 per cent more training than females. In 2006/07, the 5 percentage points advantage on aggregate training in favour of females (56 per cent to 51 per cent) translated into 9.8 per cent more training than males. This means that training rates in 2006/07, though favouring females, were nonetheless more equitable than in 2002/03.

Although all enterprise size groups experienced higher training rates, the magnitude of the increase rose with enterprise size, where small enterprises experienced the smallest increment and large enterprises were beneficiaries of the largest increment. Simultaneously, the differential in training rates between males and females increased with enterprise size, such that males and females in large enterprises experienced a 31 per cent and a 49 per cent increase in training rate respectively between the NSS2003 and the NSS2007. Therefore females working in large enterprises were by far the biggest beneficiaries of a changed distribution of access to training by gender. However, because training rates in large

enterprises in 2006/07 were much higher than in medium and small enterprises, male employees in large enterprises received far more opportunities for training than males or females in small and medium size enterprises.[28]

Figure 11: Training ratio by gender and enterprise size in 2002/03 and 2006/07 (%)



Disabled employee participation in training

Between 2002/02 and 2007/07 the training rate of disabled workers increased from 16 per cent to 24 per cent. Notwithstanding generally improved training opportunities the situation of disabled workers relative to the general workforce actually worsened over the period. The 24% rate at which disabled workers were trained in 2006/07 in relation to 51 per cent for all workers gives disabled workers a 27 per cent disadvantage in training access .[29]

Participation in the levy grant scheme

The levy grant system is the central mechanism within the NSDS that drives enterprise training. Therefore the extent to which the levy grant system encourages participation of enterprises is an important measure of success. The following sections address indicators of enterprise participation.

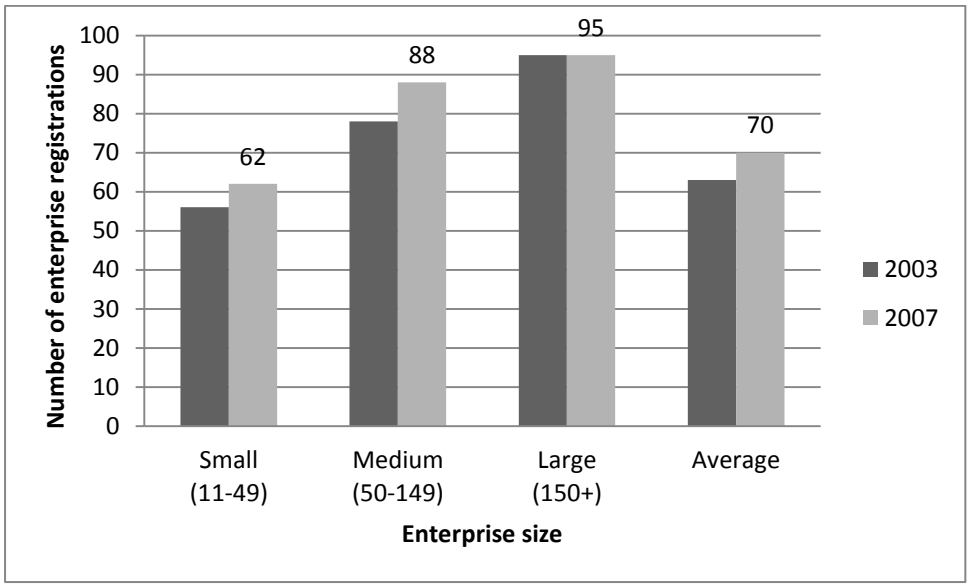
Registration

Enterprise registration with a SETA is an important measure of engagement in the levy-grant system and more broadly in the NSDS. This is necessary because the SETA administers the

[28] HSRC(2008)p.63
[29] HSRC(2008)p.33

reimbursement of grants only to registered enterprises. The NSS2007 data reflect that the system has been successful in bringing large (95.1 per cent) and medium (87.7 per cent) enterprises to register with the SETAs but registration was much weaker among small enterprises (61.6 per cent).

Figure 12 : Enterprises reporting as registered with a SETA by size in 2002/03 and 2006/07 (%)

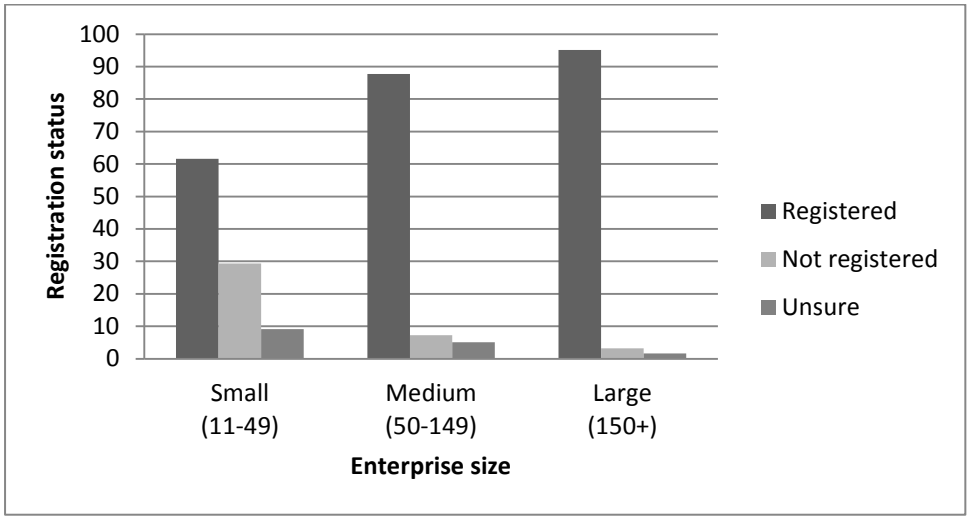


Overall, 70% of all enterprises had registered with a SETA in 2007. The outstanding challenge was to make inroads among the 30% of enterprises which paid the levy but were either unregistered (22.3%) or were 'unsure' of whether or not they are registered with a SETA (7.7 per cent).[30]

A substantial proportion of small enterprises - nearly three in ten - were not registered with a SETA, which means that at the time of the survey, this group could not claim rebates for training. In effect, the levy was operating as a tax as far as they were concerned. If the levy is treated passively as a 'tax', it will not achieve the policy intention to have a positive impact on enterprise training behaviour.

[30] HSRC(2008)p.135

Figure 13: Enterprises reporting registration status by size in 2006/07 (%)

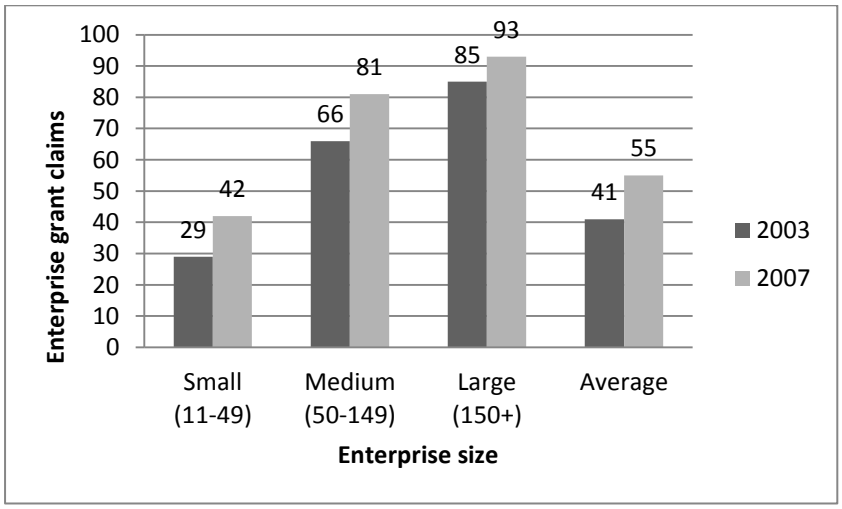


Enterprises claiming grants

Through the levy-grant scheme enterprises are meant to be incentivised to provide training opportunities for employees. The proportion of enterprises that claim for grants against their levy payments is an important measure of 'buy-in', as this is the mechanism that ultimately causes enterprises to deliver training.

A glance at the percentages of enterprises claiming grants against levy payment reveals wide variation in grant reimbursement claims by enterprise size ranging from 93 per cent to 78 per cent to 42 per cent in large, medium and small enterprises respectively. Clearly the levy-grant system was operating with success among large enterprises but it had not yet succeeded in mobilising skills development in the majority of small levy-paying enterprises. Nevertheless, when 29 per cent of small enterprises reported having claimed grants in 2003, which had already exceeded the NSDS target of 20 per cent set for 2005.

Figure 14 : Enterprises claiming grants by size in 2002/03 and 2006/07 (%)[31]



With regard to SETAs there were strong SETA related differences in the proportions of enterprises claiming grants, ranging from financial services where 80 per cent claimed, to the tourism sector where 27 per cent claimed. There was also wide variation between the pattern of SETA grant claims in 2002/03 and in 2006/07.

Comparison of enterprise registration and grant claims claiming grants

We can compare the proportion of enterprises reporting registration with the proportion of enterprises claiming grants What this comparison suggests is that large enterprises were better able to convert their registration (95 per cent) into the financial gains associated with claiming grants (93 per cent). For small enterprises the proportions successfully submitting a grant claim (42 per cent) was much lower than those which registered (62 per cent). The key issue will be to establish how small enterprise characteristics and how SETA characteristics contributed to the differential.[32]

Enterprise participation in types of training

Enterprise skills planning involves complex decisions with regard to the allocation of scarce training resources which involves consideration of immediate opportunity costs, trade-offs between alternative training decisions, and correct assessment of beneficial outcomes down the line. Even though each training intervention should ideally be fit to purpose, this is not always the case, and for each enterprise the combination of training measures selected is relevant. In these circumstances the types of training employed in enterprises is of interest

[31] HSRC(2008)p.49
[32] HSRC(2008)p.54

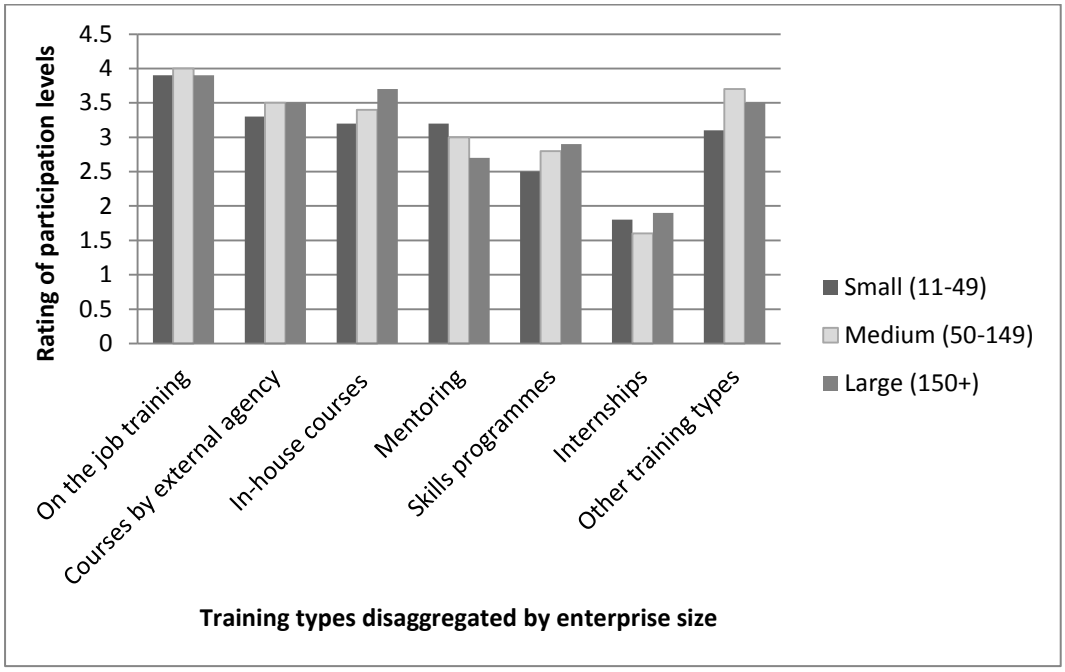
'On the job training' (3.9) emerged as the type most commonly employed in South African workplaces. As an informal form of learning and teaching, on the job training is flexible and can serve as a medium for profound learning through interaction with a colleague in the work environment. However, there are also challenges associated with 'on the job training': it is difficult to assure quality, to assess progress, and new skills acquired are not formally recognised through the award of a qualification. Because of the informal nature of 'on the job training', and difficulties in measuring this activity, it is likely that the amount of training especially in small enterprises is underestimated. Furthermore, measuring how much has actually been learned, through what effort, and with what cost to the worker and the enterprise is a major challenge. This is an especially important hurdle for planning training strategies since the impact of 'on the job training' cannot be easily specified.

Formal training methods which involve the presentation of courses either by external service providers (3.4) or by own staff (3.3) were most often implemented as a vehicle for training in South African enterprises. Employees participated to a greater extent in courses that were presented by external agencies than courses presented by own staff. Small enterprises are far less likely than medium or large enterprises to possess the facilities for hosting formal types of training in-house.

Mentoring (3.1) featured higher on the list of training types used in small enterprises, confirming the importance of less formal in these environments. 'Skills programmes' - rated 2.6 - are levy-grant qualifying, unit-standard based programmes, that can cumulatively lead to a Learnership qualification. On the other hand, 'Internships' are semi-structured programmes which focus on providing the intern - who may or may not have a qualification – with particular work and occupational experience. Relative to other forms of training and skills development, Internships were not widely implemented in enterprises in 2007, but skills development policy has shifted towards this modality recently under the Department of Higher Education and Training. [33]

[33] HSRC(2008)pp.116-117

Figure 15 : Participation of permanent employees in types of training by enterprise size, 2006/07



Learnership programmes

It is important to show how the Learnership programmes have evolved. In order to achieve this, we first generate a map of enterprise involvement. This is important because the institutional unit of implementing Learnerships is the enterprise.

Altogether, nearly 10 000 enterprises had registered Learnerships in 2006/07 of which approximately 6000, 3000 and 1000 were small, medium and large enterprises. However, per size category, the firms hosting Learnerships represented 20%, 28%, and 45% of all small, medium and large enterprises respectively. The distribution of learners registered for Learnerships followed a similar pattern to the distribution of enterprises involved in Learnerships. That is, for the proportion of learners of and enterprises involved in such programmes to rise with increasing enterprise size. Overall, large enterprises hosted 42 per cent of learners on Learnership programmes as compared with 36 per cent in medium enterprises, and 22 per cent of learners in small enterprises

With respect to the types of Learnership programme: there was a far stronger enterprise involvement in the Learnerships for current employees (18.1), than the Learnerships for new employees (18.2). Of the total number of enterprises (9 908) that offered a Learnership, 86

per cent and 41 per cent of enterprises were committed to the 18.1 and 18.2 Learnerships respectively.[34]

Factors causing enterprises to increase training in the 2006/07 financial year

Respondents were asked to what extent certain factors caused them to increase enterprise training during the 2006/7 financial year. The responses aggregated by enterprise size suggest that several factors that drove increased training. By far the strongest influence was the need to improve 'quality standards and consumer service objectives' (3.5), a finding which corroborates the strong emphasis on increased training rates in the service and sales worker occupational category.

The second most powerful factor was 'productivity targets'(3.1), while 'Increase in demand for products / services' (3.0) and 'Increased competition' (2.9) were rated third and fourth most important factors causing increased training. The combination of these three factors suggests that enterprises were increasing training in response to buoyant but also competitively demanding market conditions. The fifth factor 'technology change' (2.8) implies that South African enterprises were taking up new technologies into their value chains and needed to improve the skills of their workforce to better exploit the complementarities between technology and skills.

Lastly, among the top-ranked factors, 'employee expectations'(2.7) appeared which may be interpreted as a positive sign that employers were becoming more aware of, and open to meeting employee expectations that their employers should create or expand opportunities for upskilling and career advancement.

[34] HSRC(2008)pp.57-59

Figure 16 : Factors causing enterprises to increase training in the 2006/07 year by enterprise size

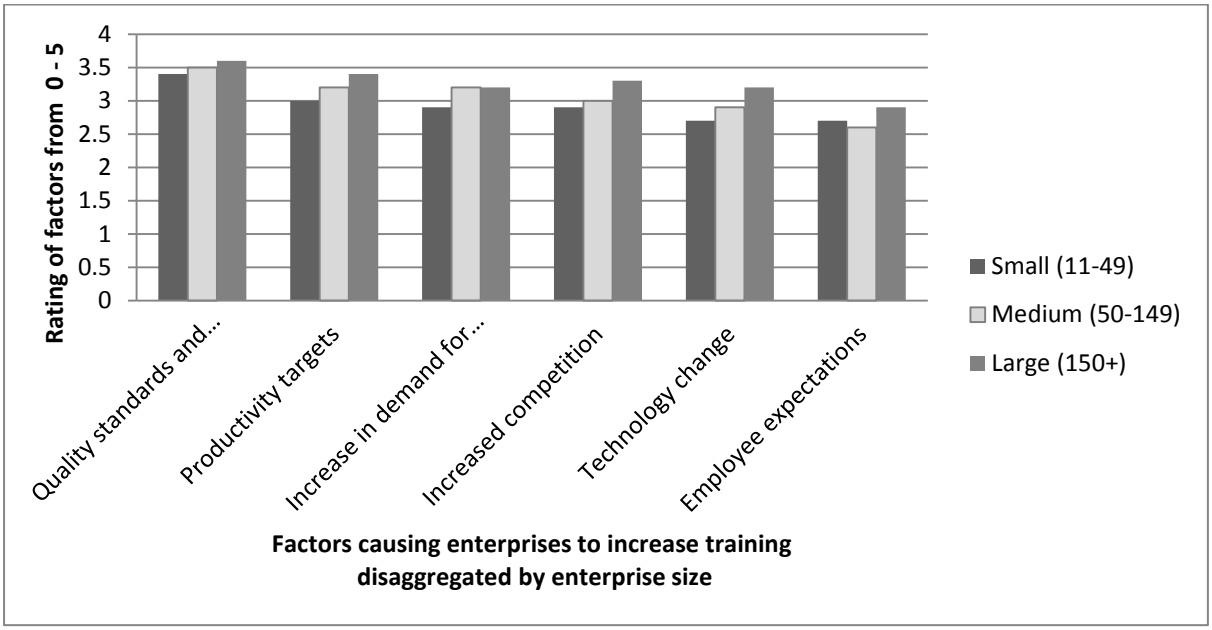


Table 4: Factors causing enterprises to increase training in the 2006/07 year by

Factors	Small (11-49)	Mediu (50-	Large (150+)	Total
Quality standards and customer service	3.4	3.5	3.6	3.5
Productivity targets	3.0	3.2	3.4	3.1
Increase in demand for products / services	2.9	3.2	3.2	3.0
Increased competition	2.9	3.0	3.3	2.9
Technology change	2.7	2.9	3.2	2.8
Employee expectations	2.7	2.6	2.9	2.7
Employee turn-over	2.1	2.4	2.9	2.3
Organisational restructuring	2.1	2.2	2.7	2.2
SETA initiatives	2.1	2.3	2.4	2.2
Waste reduction	2.1	2.2	2.4	2.2
Delays in developing new products / services	1.9	2.0	2.2	2.0
Levels of employee illness	1.7	1.7	1.9	1.7
New national government initiatives (for	1.6	1.9	2.0	1.7
Trade Union initiatives	1.3	1.4	1.7	1.4
Other factors	3.7	3.9	3.2	3.8

Factors ranked less powerful in causing enterprises to do more training included 'SETA initiatives' (2.2) national government initiatives such as ASGISA (1.7), and trade union initiatives (1.4). The pattern described suggests strongly that enterprises see themselves as

responding primarily to market pressures, rather than at the behest of government related initiatives. This conclusion raises a further question that concerns the perceived low impact of the SETA, ASGISA and other national government initiatives in incentivising and supporting enterprise training. Referring in particular to the SETAs as bearers of the mandate to increase skills training, could relatively low levels of influence attributed to SETAs be attributed to SETA service levels?[35]

SETA services

The impact of SETA services on enterprise training performance and grant claiming frequency has been raised above. In the NSS2007 as in the NSS2003, enterprises were required to rate SETA services on a 5-point scale ranging from 'poor' (1) to 'excellent' (5). Between 2002/03 and 2006/07, there was no shift in the overall rating which remained at the mid-point of 2.5 which suggests that over the four years there was no change in overall SETA performance.

Table 5: Enterprise rating of SETA services by size in 2002/03 and 2006/07

Enterprise size	2002/03		2006/07		2002/03 –
SETA service	Mean	Std dev	Mean	Std dev	Diff between
Advice and support concerning Learnerships	2.5	1.3	2.4	1.2	-0.1
Internet site and web pages	2.7	1.2	2.7	1.2	0
Promptness in paying grants	2.7	1.2	2.8	1.3	+0.1
Provision of information about courses, programmes and training	2.5	1.3	2.4	1.2	-0.1
Provision of information about	2.6	1.3	2.5	1.3	-0.1
Provision of sector skills plans	2.5	1.3	2.3	1.2	-0.2
Provision of free training	2.2	1.2	2.1	1.2	-0.1
Responsiveness to queries	2.8	1.3	2.5	1.3	-0.3
Submission procedures	2.8	1.2	2.7	1.3	+0.1
Other	1.7	1.2	2.1	1.5	+0.4
Total	2.5		2.5		-

Note: the mean rating and standard deviation of enterprise scores is given for each SETA service.

[35] HSRC(2008)pp.113-114

Turning to enterprise size, in 2006/07 the mean ratings of SETA services differed clearly according to size with large, medium and small enterprise rankings declining from 2.9 to 2.7 to 2.3 respectively. The 2007 ratings of small enterprises of most services were on average 0.5 mean points below the ratings of large enterprises. This gradation in enterprise training from large to small was similar in 2003.

It is important to ask why small enterprises rated SETA services more poorly than large enterprises. SETAs may provide a better service to large enterprises simply because large enterprises have more resources and more specialised personnel to engage with SETAs and to extract value from the levy-grant process. At the same time, it is probable that SETAs found it difficult to provide an equivalent service quality to the small enterprises because of a variety of administrative, logistical and other difficulties.

Enterprise ratings of SETA services by SETA identified BANKSETA, FASSET, INSETA, CTFL and FOODBEV SETAs with positive (above average) ratings. FIETA and ESETA on the other hand will have to work hard to improve their services given that they were rated poorly by their clients in comparison to other SETA ratings.

A point of concern for the levy grant scheme is why enterprises that have paid the levy do not make grant claims against that levy. The reasons given by non-claiming enterprises sheds some light into the interactions between SETAs and enterprises.

Table 6: Enterprises reasons for not claiming grants against levy payment (%)

Do not know about them	23.2
Not worth the effort financially	23.1
Applications too complicated	17.3
Do not train	14.8
Do not have time	8.7
Other	13.0
Total	100.0

There was no strong differentiation by enterprise size in the reasons given by respondents for why their enterprises did not make claims. Nearly one in four enterprises put forward that that it was ‘not worth the effort financially’ (23.1 per cent) to claim, or asserted that they ‘(did) not know about them (the grants)’ (23.2 per cent).

That nearly one in four respondents claimed that they did not know about the levy-grant system is a matter of concern. Given the number of years that have elapsed since the Skills Development Levies Act (1999) was passed, questions may reasonably be asked as to whether the policy is appropriate in particular to the circumstances in a small business environment, or whether the SETA infrastructure has failed the policy in its implementation.

Nearly one in five respondents indicated that the grant application process was 'too complicated'. In the light of this response, a further nine per cent of small and medium enterprises indicated that they '(did) not have the time' to complete the applications. Under time constraints, the ease with which a prospective grant applicant can complete the form becomes an important consideration. Assuming that SETAs have the powers to amend documents and to improve the user friendliness of processes, the question is why this type of problem still negatively affects such a large proportion of respondents.

In response to the 'Other' category, enterprises complained that there was a lack of 'accredited' or 'approved' courses against which they could make claims. This suggests that in some sectors, there were simply not enough training providers which could provide the needed courseware, or that training providers - and or their courses - were not being accredited quickly enough by the SETAs.[36]

Overview of Developing Strategy & Implementing in the period 2000-2007

By 2007, enterprise compliance with the levy-grant system improved significantly and training rates had doubled since 2003

Satisfaction levels with SETAs did not improve over the four year period. Yet despite the lackluster service performance of the SETAs, it is quite apparent that enterprises recognised the importance of training. The main casual factors driving this marked improvement in training performance are probably related to the impact economic pressures of globalization as experienced in the national economy.

These findings suggest that the SETA infrastructure played a far less influential part in the increased training rates than might have been expected. The impression is that the improvement in training rates was driven less by the SETAs as service providers and driven more by a combination of the compliance requirements of the levy grant system and the

[36] HSRC(2008)pp.136-137

realisation among enterprises that training in response to economic signals would serve their own quality and competitive imperatives.

It is important to pursue analysis that contributes toward a better understanding of how government interventions articulate with other factors in producing a particular training propensity. Care should be taken not to credit recent gains solely to government policy interventions when training rates rise and by the same token not to attribute blame solely to government interventions when training rates fall. Thus the point is to understand workplace training in a more complete way.

Wide disparities in training rate by enterprise size opened up despite the substantial aggregate increase in training rates between 2003 and 2007. Small and to some extent medium sized enterprises were less able to supply training in the volume and with the financial backing that large enterprises are able. In contrast, already wide disparities between SETAs remained stable between 2003 and 2007, suggesting that differences between SETAs were unaffected by changes in training rates.

The aggregate increase in training rate failed to reduce levels of inequality in access to training by occupation, race, gender and disability. Differences in training by enterprise size exposed the working population to wide variation in access to training according to race. In the same year, females were at a slight advantage in accessing training vis a vis males, while disabled workers fell behind the aggregate increase.

Increased recourse to training according to standards among enterprises was achieved through a substantial increase in the numbers completing a standards based learning program, but the proportion of workers trained to standards remained largely unchanged. Training according to SAQA/NQF standards rapidly expanded in the 2003 to 2007 period, but this massively favoured large enterprises.

A continuous trend that was replicated virtually throughout the indicators developed from the NSS2007 data was the difference in performance between large, medium and small enterprises. Large enterprises were located within a band of high training activity and high participation within the NSDS whereas small enterprises were located in a band in which the impact of the NSDS was uncertain or non-existent.

The NSS2007 data suggest that the value proposition underlying the establishment of the SETAs been exploited sufficiently – but only from the perspective of large enterprises which rate SETAs slightly higher, have very high levels of interaction with SETAs, and have achieved much high levels of aggregate training. Small enterprises may argue that the instruments (legislative and institutional) for achieving a better skills development regime are not yet properly aligned to the conditions in which small businesses operate. The DoL made adjustments to the system including raising the threshold for levy payments.

Clearly, the conditions which cause enterprises not to participate in the scheme are multifaceted. Some reasons given refer clearly to a failure among SETAs to make transactions easier to their enterprise clients. Other reasons seem to suggest that the levy-grant scheme and the SETA support system must be adapted in order to more effectively impact on the training behaviour of small enterprises.

This analysis has addressed the relative impact of different factors or institutions on training, arguing that what is required is an assessment of the impacts that are directly attributable to government - such as through skills development legislation, and the SETA infrastructure - and the impact of economic factors outside of direct government influence that may be local and global in origins. This discussion should be taken forward to moderate expectations of what government can be expected to achieve when training conditions improve and when training conditions decline.

Attention was drawn to how analysis of the current training regime focuses more on demand aspects of training and the administration of training levy-grants. Very little is known about the nature of the supply-side market and how well SETAs service the needs of providers (ie: transactions, accreditation etc.). It may be a valuable exercise to explore how to streamline the training supply value chain.

The National Skills Surveys of 2003 and 2007 add value to analysis of national patterns in skills development because they include enterprises that do not pay levies, or that pay a levy but that do not comply with NSDS obligations, or that do not participate in the SETA system. The NSDS surveys present the opportunity to obtain additional data to requirements of the Workplace Skills Plan. Also, the NSS surveys complement the SETA's administrative data

and provide a methodologically sound and analytically useful alternative point of reference for analysis of the skills development system as a whole.

Responding to the global jobs crisis & re-shaping the post-school sector, 2008-2012

In 2007 the report on the National Skills Survey raised the issue of how to plan to entrench training gains achieved in such a way that they remain elements of enterprise behaviour that are relatively impervious to economic cycles. Shortly thereafter, the financial crisis unfolded. According to the National Skills Survey (NSS) of 2007, the four years in between 2003-2007 showed a doubling of training exposure for permanent employees in the South African private sector workplaces. This was a positive move for workplace training in a period of economic expansion, however as the global decline affected the country how would firms adjust their training investments if at all? In 2008 the world economy experienced a severe downturn. "The global financial crisis of 2008-2009 has severely impacted South Africa due to its financial and trade links with the rest of the world."[37] GDP growth slowed down, unemployment was shot up and consumer demand decreased sharply as the entire world economy suffered due to the financial turmoil. South Africa, as a globally integrated economy has also been hit hard by the crisis. This placed additional pressures on the country's already struggling economy and labour market. In this period the GDP growth was -2.1 per cent.[38]

Although the tracking of employment changes is important, it is equally important to consider the impact of the crisis on workplace training investments by firms. Recessions are times of "cleaning up", outdated or unprofitable techniques and workers. In the South African context as elsewhere, young workers are more at risk while older and more experienced workers it are less likely to lose their jobs. As the recession grinds on, companies began to apply the "first in first out" principles to reduce cost. Young people, whom were newly employed, inexperienced and not protected by labour laws that cover permanent employees, became the target for layoffs. Research shows that South Africa's population is amongst the youngest in the world with the average age being 24.9 years. Therefore In South Africa the population of young people neither in education, employment or training – the so-called NEETs are particularly vulnerable

[37] Impact of global financial crisis on South African unemployment ILO 2010

[38] See IMF World Economic Outlook October 2009, Sourced at: http://www.imf.org/external/pubs/ft/weo/2009/02/weodata/index.aspx Date accessed: 11 April 2013

Limited analytical attention has been paid to the impacts of a recession on training. It is generally assumed that in times of economic downturn, training would be the first to go from most firm budgets. However, the assumption that training moves up and down in line with the economic cycle is questionable. There are a number of reasons why training might actually increase even in times of recession for firms. Firms that experience a mild recession may be confident about the possibility of surviving the recession period; and take advantage of slow business conditions to expose worker to further training with the expectation that they would be more productive once business conditions improve. When the recession is short, firms tend to plan for the recovery. From the perspective of the employees, it is also beneficial to receive more training in times of recession. Bad economic conditions encourage workers to seek further improvement in their skills to be better equipped for the recovery. Provided there is adequate funding, more training is beneficial especially for those employees that have not yet entered the labour force permanently. Finally, in a recession period, firms may be faced with greater competition for business and thus have a greater need to apply new strategies that may require new skills and thus more training.

It is thus not to be taken for granted that recessions mean less training in all cases. However during prolonged recessions, training investment and the incentives to training may fall, as with more and more uncertainty is becomes difficult to predict when the economy will recover. This situation makes firms less willing to spend money on worker training, thus reducing training budgets. Enterprises has also in all probability opted for cheaper in-house training alternatives or encouraged informal learning from within the firm.

Training Layoff Schemes and the Jobs Fund

In order to address big strategic policy questions relating to the labour market changes in times of recession, large-scale empirical data, as well as responsive policy frameworks are needed that can help smooth over the economy through economic shocks. One such policy response is the Training Layoff Scheme. President Zuma announced the formation of a R2.4 billion National Jobs Fund to avert job losses. It is a scheme aimed at offering employers in vulnerable sector an alternative to retrenchments. In order to retain skills and possibly protect employees from job losses, this strategy, financed by the SETAs and the national Skills Fund, provides an opportunity for employees, to up their skills or gain new skills during this period of uncertainty.

Employees facing retrenchment are given 50 per cent of their wage while being trained in new skills, pending a return to their positions in the workplace when the effects of the recession have eased and companies are able to take on workers again. Employers fund the social cost (pension, medical aid, death etc.), a training allowance is paid to the workers through the schemes and the SETAs in collaboration with the Mining Qualifications Authority (MQA) ensure that the training provided is accredited, relevant and cost efficient. Even in cases where the employer is through the recession forced to retrench, workers that participated in the training layoff scheme would have gained new skills and upgraded their existing skills allowing possible mobility in the sector.

However, the Director-General of the Labour Department, Nkosinati Nhleko, recently reported that the National Training Layoff Scheme spent only R40.2 million of and provided only 6 000 workers with new jobs. The Scheme spent only 1.6% of its funds to create new opportunities, even though 902 000 South Africans have become unemployed since the economic downturn. These results a disappointing especially bearing in mind the importance of such a scheme in assisting recession recovery for vulnerable employees. However the scheme is a temporary strategy and only caters for the already employed. It works towards the development of skills for those already in the labour market, does not make provisions unemployed people.[39]

The Job fund is aimed at complementing existing employment strategies targeted at creating jobs. Its aim is to increase the demand for labour and improve the quality of labour supply. It does this through the supporting job seekers, enterprise and infrastructure development as well as institutional capacity building geared towards job creation. The objective of the Jobs Fund in South Africa is to co-finance projects by public, private and non-governmental organisations that will significantly contribute to job creation. It is implemented through the national treasury and administered by the Development Bank of Southern Africa (DBSA).

This involves the use of public money to catalyse innovation and investment on behalf of a range of economic stakeholders in activities which contribute directly to enhanced employment creation in South Africa. One of its main objectives is to create 150,000 sustainable jobs in three years, from its inception in 2011. Although some progress has been made through the Job Fund, so far its impact seems to be limited and its reach was not as wide as planned. These challenges have been ascribed to complex administration procedure

[39] Recession and Recovery: Transformation Audit 2009

that is both costly and time wasting. In total, 3 614 applications have been received, and 65 projects approved. Grant funding of R3.3 billion has been approved, matched by a further R3.1 billion in funding raised by the private sector.

Shifts in the objectives of the National Skills Development Strategy documents between 2001 and 2015

The National Skills Development Strategy (NSDS) has influenced the direction of skills development in the past 15 years, through different combinations of guiding principles and in each of the three iterations. Furthermore the NSDS must also balance the objectives that are selected in each five year span. It is illuminating to examine the combinations of principles and objectives expressed in the successive strategies, in attempting to gain a sense of whether the NSDS has favoured particular tasks or targets.

First, a scan of the guiding principles reveals a set of themes that occur or recur, such as equity, quality, responsiveness, and the pursuit of ideas or concepts: such as lifelong learning, economic growth and development, and work integration (Table 7 below).

Second, a scan of the objectives similarly reveals a set of recurring elements including: quality, responsiveness, lifelong learning , growth and development, skills development, skills planning, and capacitating the public sector.

For NSDS 2001/05, the emphasis was on responsive demand driven and flexible skills opportunities, that could enhance employability in the formal economy, especially support to new entrants into employment, and skills development in small businesses. Quality and equity were also recognised in this period.

For NSDS 2005/10, the quality of provision was strongly prioritised with an emphasis on skills for growth, development and poverty eradication, to promote participation in work-based programs leading to self-employment and sustainable livelihoods.

For NSDS 2010/15, clear primacy of importance was given to different routes to employment. Work integrated, occupationally oriented, career focused skills for gaining entry into the formal workplace or self employment were emphasised. A parallel focus highlighted support for NGO, SMME, Co-operative training initiatives utilising lifelong

learning as one option, while another route to supplying skills needs emphasised the public FET colleges supported by career and vocational guidance; a fourth domain of training mentioned was increasing public sector capacity for service delivery. Quality was again raised as an important criterion in this period.

Coming out from this exercise, it seems apparent that the emphasis of NSDS three is more towards formal learning according to occupationally directed programs. This seems to accord with the implementation of the PIVOTAL programs which are intended to lead to occupational qualifications that are quality assured by the QCTO, and would normally be delivered at a FET College or University and would include workplace learning. This orientation cannot be faulted as an attempt to deal with the needs of large numbers of young people who need places in educational institutions to obtain qualifications and employability skills. It is nevertheless important to keep a strategic balance between the aforementioned programs and skills development needs in the workplace which may be of shorter duration, less formalised and highly focused on workplace skills needs.

Table 7: Comparison of the guiding principles and objectives expressed in the three National Skills Development Strategy documents		
2001 to 2005	2005 to 2010	2010 to 2015
Guiding principles:	**Guiding principles :**	**Key driving forces:**
Lifelong learning – continually upgrading and improving LIFELONG LEARNING	Support economic growth for employment creation and poverty eradication GROWTH AND DEVELOPMENT	* Promotion of basic numeracy and literacy LIFELONG LEARNING
Flexible – Employers, both Public and Private as well as the workers are best placed to make judgements about priorities RESPONSIVENESS	Promote productive citizenship for all by aligning skills development with national strategies for growth and development GROWTH AND DEVELOPMENT	* An explicit commitment to encouraging the linking of skills development to career paths, career development and promoting sustainable employment and work progression. WORK PROGRESSION
Demand Driven to support and enhance productivity RESPONSIVENESS	Advance the culture of excellence in skills development and lifelong learning QUALITY	* NSDS III seeks to encourage and actively support the integration of workplace training with theoretical learning WORK INTEGRATION
Partnership and cooperation between and amongst the social constituencies COOPERATION BETWEEN CONSTITUENCIES	Support, monitor and evaluate the delivery and quality assurance systems necessary for the implementation of the NSDS QUALITY	* Emphasis is placed on training to enable trainees to enter the formal workforce or create a livelihood for themselves. FIND GAINFUL WORK
Efficiency and effectiveness in delivery leading to positive outcomes for all those who invest in training and skills development QUALITY/RESPONSIVENESS	Accelerate Broad Based Black Economic Empowerment and Employment Equity. Learners with disabilities to be provided with reasonable accommodation … EQUITY and support for DISABILITY	* The improvement, effectiveness and efficiency of the skills development system QUALITY
The promotion of equity – Opportunities for disadvantaged as well as advantaged EQUITY		
Five objectives	**Five objectives**	**Eight objectives**
To develop a culture of high quality lifelong learning QUALITY/ LIFELONG LEARNING	Prioritising and communicating critical skills for sustainable growth, development and equity GROWTH & DEVELOPMENT	Establishing a credible institutional mechanism for skills planning SKILLS PLANNING

To foster skills development in the formal economy for productivity and employability PRODUCTIVITY /EMPLOYABILITY	Promoting and accelerating quality training for all in the workplace QUALITY	Increasing access to occupationally-directed programmes OCCUPATIONAL
To stimulate and support skills development in small businesses SMALL BUSINESS	Promoting employability and sustainable livelihoods through skills development EMPLOYABILITY AND LIVELIHOODS	Promoting the growth of a public FET college system that is responsive to sector, local, regional and national skills needs and priorities FET COLLEGES RESPONSIVENESS
To promote skills development for employability and sustainable livelihoods through social development initiatives EMPLOYABILITY AND LIVELIHOODS	Assisting designated groups, including new entrants to participate in accredited work, integrated learning and work-based programmes to acquire critical skills to enter the labour market and self-employment WORK BASED LEARNING FOR EMPLOYMENT	Addressing the low level of youth and adult language and numeracy skills to enable additional training LANGUAGE & NUMERACY SKILLS
To assist new entrants into employment NEW ENTRANTS	Improving the quality and relevance of provision QUALITY	Encouraging better use of workplace-based skills development WORK BASED SKILLS DEVELOPMENT
		Encouraging and supporting cooperatives, small enterprises, worker-initiated, NGO and community training initiative Support to SMMEs, CBO/NGOs
		* Increasing public sector capacity for improved service delivery and supporting the building of a developmental state PUBLIC SECTOR
		* Building career and vocational guidance CAREER & VOCATIONAL GUIDANCE