

What are skills? Reflections on policy in South Africa in the light of international debates

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Stephanie Allais

Education Policy Unit, University of the Witwatersrand

INTRODUCTION

Azeem Badroodien (2004, p. 40) cites a report on vocational education produced shortly after the official introduction of apartheid, which argues:

Vast numbers of 'non europeans' are not equipped for life or work. They live at a low level, and are inefficient workers. Many become a burden upon the state as offenders or paupers. It is of paramount importance that steps be taken at once to prevent this waste of the country's human resources by providing some sort of training.

(Union of South Africa 1949, p. 247)

Remove the term 'non-europeans', modernize the language, and how different does it sound from official discourse today? Vocational education is still seen as salvation in terms of getting a job, and a job is seen as salvation in terms of being a citizen and an adult. Our economy's woes are blamed on low levels of 'skills', and 'skills development' is in the policy spotlight, and education is increasingly redefined as 'human resource production', the development of 'human capital', or 'useful knowledge and skills'.

But the notion of 'skill' is a highly contested one. Sociologists who study the labour market argue that it is socially and politically constructed. For example, Charles Tilly (1988, pp. 452-3) classically argued,

As a historical concept, skill is a thundercloud: solid and clearly bounded when seen from a distance, vaporous and full of shocks close up. The commonsense notion—that "skill" denotes a hierarchy of objective individual traits—will not stand up to historical scrutiny; skill is a social product, a negotiated identity. Although knowledge, experience, and cleverness all contribute to skill, ultimately skill lies not in characteristics of individual workers, but in relations between workers and employers; a skilled worker is one who is hard to replace or do without, an unskilled worker one who is easily substitutable or dispensable.

An example of this is, as Christopher Winch (2011, p. 94) argues, that in informal labour markets, skills are usually not formally recognized, and hence workers tend not to be classified as belonging to a recognized category of skilled labour, "even when the know-how required to carry out the work requires a high degree of manipulative and co-ordinative ability that is difficult to acquire, and the task concerned necessitates a low degree of tolerance for error".

In this paper I consider the notion of ‘skill’, and South African policy for ‘skills development’ through an exploration of two studies on wealthy capitalist countries. The first (Brockmann, Clarke, and Winch 2011) explores different notions of ‘skilled’ labour, and how they are shaped by the nature of the labour market, how different qualifications are produced, understood, and valued, and how they correspond with different occupational divisions of labour. The second (Iverson and Stephens 2008) is located in the literature on ‘varieties of capitalism’. The study distinguishes three regimes of skill formation, each reflective of a particular underlying class coalition and political–economic institutional structure. Reflecting on South African policies in the context of these two studies, I critique firstly, the narrowness of the idea of ‘skills development’, which usually refers to narrow occupational training (in other words, skills as ‘tasks’), and secondly, the decontextualized ways in which skills are separated from power, social policy, the structuring of labour markets, and the organization of occupations and jobs.

I argue that education policy, particularly but not exclusively in so far as it has been concerned with vocational and occupational education, or ‘skills development’, has been trapped in a paradigm of ‘self-help’, ‘employability’, and labour market flexibility that works against the possibility of achieving improved levels of education and skills. I do not contest the need for considerable expansion of both general and vocational education, for economic reasons and human rights reasons. But I suggest if we are to have any chance of improving vocational education in South Africa, there are two important agendas for research and policy development. The one is locating vocational education policy in broader social policy—a better regulated labour market, job security, more egalitarian social welfare, and an expanded vision of citizenship. The other is, ironically, that in order for education to meet the long term needs of employers and the economy, there should be less focus on what employers say they need in the short term, and more focus on strengthening the educational side of vocational education—building strong curricula based on well defined areas of knowledge, and developing a better understanding of how to assist students to acquire this knowledge.

A BRIEF OVERVIEW OF SKILLS DEVELOPMENT IN SOUTH AFRICA

The basic elements of skills development under apartheid are well established: low skills production, voluntarism on behalf of employers, artisan training for white men through state-owned enterprises, and a highly unequal public education system (McGrath 1996; Gamble 2004a; McGrath et al. 2004). As in many countries, work-related curricula have been associated with low achieving learners, and the control of ‘social deviancy’ (Badroodien 2004). Overtime a system emerged which was highly racialized, low status, fragmented, and separated from the rest of the education system (Gamble 2003).

In response to economic difficulties, the late apartheid state attempted to transform the skills regime by moving the system away from its apartheid ‘low skill’ origins towards a framework based on free market regulation, a revived apprenticeship system, and a new institutional environment structured around Industry Training Boards (Kraak 2004). The Industry Training Boards were established in all industries, and given control over administration and certification of training. Jeanne Gamble (2004a) describes how the shape and form of the apprenticeship system followed changes in work organization, with the move to mechanisation prompting the teaching of Mathematics and Science in colleges, and later, with a move to standardization in mass production, the introduction of competence-based modular training. Andre Kraak (2004) describes this change, through which the time-based training system was converted into a competency-based

one, as a key innovation. Ironically, as I will show later, these features were also key to the reforms which the democratic government (re-)introduced.

In 1994, when the first democratically elected government came to power, education and training were split between a Ministry of Education (responsible for schools, adult education, colleges, and universities) and a Ministry of Labour that was in charge of 'skills development'.

The Department of Labour (1997) introduced a national *Skills Development Strategy*, to replace the apartheid 'skills' system. Sectoral Education and Training Authorities (Setas) were set up, to replace the Industry Training Boards. Setas are stakeholder bodies, with employer and trade union representatives on their boards. They were set up through a levy-grant system, through which employers pay 1% of payroll costs, 80% of which goes to the Seta. The Setas distribute grants back to employers upon receipt of training plans and reports. The hope was that this would create an incentive for employers to train, and supply information that would build an understanding of the training needs of each sector. The remaining 20% of the skills levy goes to a National Skills Fund, which was intended to fund training for disadvantaged groups, particularly the unemployed.

Underpinning the skills development strategy as well as broader education policy was a National Qualifications Framework (NQF), which was intended to replace all existing qualifications in the country with a set of new outcomes-based qualifications designed by new stakeholder-based structures (Republic of South Africa 1995; SAQA 2000a; 2000b).

The system as a whole was intended to be "a demand-led enterprise training policy ... underpinned by appropriate supply-side measures" (Kraak 2004, p. 126). It was also hoped to lead to new provision as well as to many individuals getting qualifications based on existing knowledge and skills. The idea was to ensure that a regulated market of provision of training would ensure that training was responsive to employers' needs. Stakeholders, including employers, would define the competences (learning outcomes) that they required learners to have. These would be registered as qualifications and unit standards (part qualifications) on the NQF. Providers could then apply to Setas and other quality assurance bodies to be 'accredited' to offer programmes leading to qualifications or unit standards of their choice.

In South Africa is that the term 'skills' is frequently used to refer to the training that happens under the Setas and the National Skills Fund. This is sometimes seen as a separate 'sector' of educational provision, with general education in schools, vocational education in colleges, and higher education in universities being the other sectors. This is misleading, as the Setas are not *providers* of any kind of education or training, and the education that they support and fund includes programmes in different sectors of the system. Nonetheless, Setas have tended to support a programmes linked to new qualifications and unit standards on the NQF, within a particular logic of provider accreditation and decentralized assessment conducted by 'registered assessors'. It is the logic of this qualification model which, I argue below, is the cause of many of the problems of the original *Skills Development Strategy*.

Kraak (2004) argues that the levy-grant scheme gave the state leverage in the economy and in the formation of skills, and describes the National Skills Fund as an "important innovation that cedes real leverage to the state over the market" (Kraak 2004, p. 125). Kraak (2004) also suggests that the *Skills Development Strategy* of the Department of Labour is good example of a model which emphasizes simultaneous upskilling in the

low, intermediate and high skill sectors, getting away from an economy trapped in 'low skills', but also not focusing exclusively on training for 'high skills'¹

As part of the National Skills Development Strategy, the Department of Labour announced the phasing out of the apprenticeship system, to be replaced by 'learnerships', which would be 'demand-led', in the sense that they would be offered in response to social or economic needs, including, but not only, formal sector needs. The main institutions that had historically been the sites of theoretical training for the apprenticeship system were the FET colleges, formally technical colleges. In the past, college lecturers taught a nationally prescribed curriculum in three-month blocks, preparing learners for national examinations which, coupled with work experience for the remainder of the year, were requirements for sitting a trade test, and becoming a qualified artisan. When the apprenticeship system to which these colleges' main learning programme contributed was officially designated as due to be terminated, the then Department of Education developed a new curriculum, and a new qualification for the colleges to offer. This qualification, the National Certificate (Vocational) was designed as a 'general vocational qualification'. The intention was for the curriculum to be broader and more substantial than the old courses for the apprenticeships system.

The levy-grant system has been much criticized. One line of argument has been that many employers simply treat the levy as an additional tax. Although 65% of employers who should pay the levy are paying it, by 2004, only 10% of levy paying employers were participating effectively in the system (Kraak 2004). Some blame overly bureaucratic and incompetent Setas for this, and others argue that employers do not want to train their staff. There are many other criticisms of the Setas. For example, they are supposed to be the key intermediaries in the relationship between training and economic and social requirements, but they have not played this role well. One weakness is argued to be the fact that their labour market analysis is based on reports from workplaces, and not research (Erasmus 2009). Public perception (as reported in the media) suggests concern with the large amounts of money in the system, particularly where this has remained unspent, such as in the National Skills Fund. On the other hand, while corruption and poor governance in the Setas has received much media coverage, evaluations (for example, Singizi Consulting 2007) suggest that in general they receive better audits than most government departments. And Kraak (2011, pp. 98-99) argues that

The Learnerships system has survived its bad publicity rather well over the past ten years as some of the HSRC 2008 survey results show. Completion rates were 65%, and 57% of completed learners found employment (HSRC 2008a). In a difficult youth labour market, these are extraordinarily good outcomes and they should be embraced and built upon.

The research that he cites did not, though, evaluate the substance of the learning programmes, or the nature of the jobs found. All that it really can say is that in terms of its own (arguably questionable) targets, the system has not been a *total* failure. There is no doubt, however, that levels of training for artisans and other mid-level skills remain extremely low (Mukora 2009). Numbers enrolled in vocational and occupational education programmes are low. The quality of provision is very erratic. Throughput rates of the colleges are very low.

¹ The debate around 'high skills' routes for reforming vocational education and improving economic performance was one which grabbed the imagination of South African policy makers, like policy makers in many other countries (see Ashton 2004; Kraak 2004).

There is confusion about learnerships and apprenticeships, and the old college courses (the theory component of apprenticeships) have been reintroduced; it now seems as if apprenticeships will continue to operate in parallel to learnerships. Despite the weaknesses of these old courses, it seems that many employers still have more faith in the old pre-1994 apprenticeship system (Marock 2011). An ongoing problem is a lack of qualifications and curricula for artisan training, despite the proliferation of new qualifications through the NQF. Through the NQF, over 787 new outcomes-based qualifications and over 10 000 unit standards have been created, but there has been very little provision to correspond to this proliferation of qualification documentation. By 2007, 172 unit-standards based qualifications and 2,211 unit standards had awards made against them, to a total of 37,841 and 562,174 learners respectively (Allais 2011a). While learnerships are based on the new qualifications developed through the NQF, the formal education and training system has largely ignored the new qualifications (Allais 2011a).

In 2009 a new President was sworn into office. A new Cabinet was announced, with substantial changes for education and training. Instead of a single Minister of education, there is now a Minister of Basic Education, and a Minister of Higher Education and Training. Skills development has been moved from the Ministry of Labour to the Minister of Higher Education and Training. The creation of this Ministry has, for the first time, located the entire post-school education and training system in a single Ministry, including workplace-based training, and the complex host of institutions surrounding a levy-grant system. There seem to be some fairly significant shifts which have accompanied this new arrangement. The Department of Higher Education and Training seems to be moving away from the 'regulated market' approach, and more focused on building and supporting education institutions. It is also attempting to create more national coherence, and bring the Setas under greater central control, and to direct Seta funding to formal public institutions (DHET 2011a). State-owned enterprises have committed themselves to take on apprentices again (DHET 2011b). Also in 2009, the original design of the NQF, as well as much of the quality assurance system built around it was completely changed (Allais 2011a).

These changes have coincided with a dramatic (if perhaps largely rhetorical) shift, in the broader political and economic realm, away from the neoliberal notions of a regulatory state, and towards a (again, perhaps rhetorical) project of a 'developmental state'. Although this government replaced a government led by the same political party, the African National Congress, dramatic shifts within the configuration of party leadership enabled the new government to present itself as leading a substantial shift in economic and political policy (Marais 2011). Hein Marais (2011) argues that there have been some shifts in economic policy, although they may pre-date the change of government in 2009: in the 2000s fiscal parsimony started to be replaced with infrastructure rehabilitation and expansion, redrawn industrial policy, and more generous social protection.

To gain some perspective on South African skills policy, I consider two international studies, and explore some implications of their conclusions.

SKILLS, LABOUR MARKETS, AND QUALIFICATION REFORM

The first (Brockmann, Clarke, and Winch 2011) is a European study (focused on England, France, Germany, and the Netherlands) which compared how different qualifications are produced, understood, and valued, and how they correspond with different occupational divisions of labour. An important point which emerges is the idea of division between two main systems of vocational education. Michaela Brockmann

(2010), drawing on the work of Felix Rauner (2007), distinguishes between vocational education and training systems which focus on education for an occupation, such as the German dual system, and education aimed at ‘employability’. In the former, vocational education and training is

integrated into a comprehensive education system, and is designed to develop the ability to act autonomously and competently within an occupational field. Qualifications are obtained through the successful completion of courses developed through negotiation with the social partners, integrating theoretical knowledge and workplace learning.

Here, vocational education aims to develop vocational competence and identity. Students are expected to develop a high level of autonomy, an understanding of the entire work process and of the wider industry, and an integration of manual and intellectual tasks. They are prepared for careers in an occupational labour market which relates occupations to the corresponding tracks of vocational education. An occupation is a formally recognized social category, with regulative structure concerning qualifications, promotion, and range of knowledge (theoretical and practical) required (Clarke 2011). Because the employment relationship is a long term one, it is founded on abilities that are multi-dimensional and holistic.

Thus, Clarke (2011, p. 108) argues that in Germany, France, and the Netherlands, “VET is provided through comprehensive programmes that are part of the national education system and thus constitute the continuation of ‘education’ (commonly based on a curriculum, with a broad content) rather than ‘training’ as more narrowly focused on the labour market and the job”. There is concern with ability to plan, carry out, and evaluate, based on professional judgement and responsible decision-making. For example, bricklaying in Germany is an occupation which involves project conception and execution.

In the second model, which is prevalent in Anglo-Saxon (liberal market) countries,

a ‘market of qualifications’ enables individuals to enhance their employability through continuing vocational education or certification of sets of competencies acquired either through work experience or modularized courses” (Brockmann 2010, pp. 120-121).

In this model, individuals can compose their own qualification profiles, according to what they think will improve their position in the labour market (Brockmann 2010). Vocational education is regulated through this ‘market of qualifications’. Rauner (2007, p. 118) argues that

When competence development is disconnected from occupationally organized work and the related vocational qualification processes, the relationship between vocational identity, commitment and competence development becomes loose and fragile. In which case, modularized systems of certification function as regulatory frameworks for the recognition and accumulation of skills that are largely independent from each other and disconnected from genuine work contexts.

In this second approach, the labour process is fragmented into discrete work processes, and employers are interested in skills for the immediate job at hand. Intellectual functions (planning, coordinating, evaluating, controlling) are sharply separated from execution. Wages for labourers are based on outputs, generally at variable rates (Clarke

2011). Training is aimed more at ‘jobs’ than at ‘occupations’². Winch suggests that the prominence of the word ‘skill’ in labour markets, policy, and discourse may reflect growing dominance of fragmented and casualized labour force. Brockmann et al (2011) show that subcontracting, and outsourcing are a serious problem for work-based learning and the acquisition of qualifications. As Standing (2011, p. 40) asks, rhetorically, “Why invest in an occupational skill if I have no control over how I can use and develop it?”

The ‘market of qualifications’ approach is associated with qualification reform and qualifications frameworks (except in the USA which has not tried to regulate qualifications in the same way, or use them as a tool for reform). The starting point is an analysis of a ‘mismatch’ between skills ‘supply’ and ‘demand’. This is seen as largely the fault of the education system, even though there may be many other reasons for it.³ One assumption of this model is that education and work have become too ‘far away’ from each other, and need to be brought closer together. Another assumption is that qualifications comprised of statements of competence (or learning outcomes) created with employer involvement provide a mechanism to bring the two worlds closer.

The English⁴ model, introduced in the 1980s, was the “the first national attempt to base vocational qualifications on the idea of competences” (Young 2009, p. 6). A framework of National Vocational Qualifications (NVQs) was introduced as an attempt to solve Britain’s relative economic decline (Hyland 1994). The idea was that the curriculum was out of touch with the needs of industry, and did not contribute to an ‘enterprise’ minded population. This has been a dominant theme in UK education reform, and was particularly prevalent in the 1980s (Moore and Ozga 1991; Dale et al. 1990; Wolf 2002; Young 2008). Some reformers from left wing political perspectives also supported the competency/ outcomes approach, because it seemed to offer possibilities to open up

² The word ‘occupation’ itself is used in different ways across different contexts. Winch (2011) distinguishes between a restricted sense, usually used in Anglophone contexts, in which an occupation is considered to be occupational standards and series of skills (in other words, a set of related tasks bundled together) and the broader German notion of *Beruf*. The concept of a *Beruf* in Germany structures the labour market, mainly at the level of intermediate qualifications (setting demarcations with unqualified/skilled workers, and academically qualified workers), and the vocational education system (Hanf 2011). This organizes and reduces competition in the labour market, and protects those who have a *Beruf*. To pursue a *Beruf*, an individual needs a systematic combination of formal knowledge, skills, and experience-based competence, and their deployment is not linked to a specific workplace. *Berufe* are strongly linked to the collective bargaining system as well as the welfare system. It is also part of a broader concept of ‘cultivated and qualified’ labour, and the idea of dignity in work, as opposed to humiliating forms of work (Hanf 2011, p. 55).

³ For example, Breier (2009, p. 127) argues that while, in overall terms, we are training enough doctors in South Africa, “There can be little doubt that there is a shortage of medical doctors in South Africa, concentrated in the public and rural service. Nowhere in the country do we achieve the doctors-per-population norms of even middle-income countries internationally. ... At the same time, many thousands of our doctors – estimates range from one-fifth to one-third of our medical workforce – are working abroad”. The problem here, then, is not a training problem. Chang (2010) points out that bright Koreans are increasingly becoming doctors, rather than engineers or scientists, not because there is no need for the latter two professions in industry, but because, the government has reduced already low social security nets, and many companies retrench or otherwise get rid of older people. Because this is not a threat for doctors, medicine is seen as a more secure profession. These are merely two examples of a whole host of complicated reasons why education systems may not ‘produce’ according to ‘demand’. Further, the structure of professions and occupations is shaped by a complex combination of factors. For example, in Germany, where the ratio of GPs to nurses is high, there is a stronger division between the caring and medical professions, with implications for training.

⁴ Also Northern Ireland and Wales.

access to education institutions which were seen as overly academic and self-interested, (Wolf 1995; Young 2009). Reformers hoped that the ‘new standards’ would provide a rigorous and more ‘relevant’ alternative to the ‘knowledge-based’ approach to standards associated with written examinations (Young 2009). Qualifications would not be linked to a curriculum, but would rather be derived from an analysis of work functions, and rely on assessment in the workplace.

The outcomes-based approach was also intended to make a break from two main elements of qualification design prior to the 1980s: the specification of time for an apprenticeship, and the specified syllabus (Young 2009). Apprenticeships had been linked to specified time-periods, sometimes as long as seven years, which governments in the 1980s saw as leaving too much control to the trade unions (Wolf 1995; Raggat and Williams 1999). The specification of the syllabus as the basis for teaching programmes and the assessment of off-the-job learning were seen as giving too much control to teachers, colleges and Awarding Bodies (Young 2009). Instead, the new standards would specify the expectations and requirements of employers, in terms of expected work performance, expressed as outcomes (Stewart and Sambrook 1995, p. 98). This is the essence of the ‘market of qualifications’ approach in the UK, very different from that of the coordinated market economies, as discussed above, which have not used qualification reform in anything like the same manner⁵. And this model has been replicated in many countries around the world, with assistance from UK-based agencies and organizations, as well as international organizations.

The South African, Botswana, and Mauritian NQFs, Australian competency-based training, NQFs in the Caribbean and some Asian countries, and labour competence frameworks in Latin America all drew on the English NVQs, and all generally follow the model of getting stakeholders, particularly representatives of employers, to develop qualifications, which individuals can then select, to enhance their ‘employability’ (Allais 2010). The focus is on the creation of a framework of qualifications, using employers (and other stakeholders) to define ‘competences’ or ‘learning outcomes’ that are the basis of the qualifications. Individuals can then choose from this framework, to enhance their ‘employability’. The state regulates both private and public providers against the outcomes captured in the qualifications. This leads to a model dominated by ‘arms-length’ state institutions “...whose aim is to facilitate employer needs, when employers are often reluctant to articulate these, not least because their needs are, in many cases, extremely limited” (Winch 2011, p. 85), drawing on Keep (2007).

This is a quintessential neoliberal type of reform, because it is focused on state regulation of service delivery, instead of the state providing public goods (Allais 2007)⁶. As I argue elsewhere (Allais 2011b), outcomes-based qualifications frameworks have a similar logic

⁵ This may be changing, with the introduction of the European Qualifications Framework (Brockmann, Clarke, and Winch 2011). Also, notions of competence and learning outcomes are used across countries, although they may have very different meanings. The English notion of competence is seen as narrow and ‘task-based’, as opposed to a broader, more holistic notion in continental European countries. Méhaut (2011) argues that the ‘kernels’ of competence in France are bigger than they are in the English model. Clarke and Westerhuis (2011, p. 146) argue that, “In its almost exclusive focus on skills, the English meaning of competence ... is almost incomprehensible in most countries”. However, there are overlaps and commonalities, and, if countries in continental Europe continue to shift to a more ‘Anglo-American’ style of capitalism, their education systems may also start to converge.

⁶ It is no coincidence that early qualifications frameworks emerged in countries preoccupied with new public management as a way of reforming their civil services, as the logic is essentially the same (Strathdee 2011; Allais 2007; Phillips 1998).

to neoclassical economics—they are built on the notion of rational individuals making rational choices about investments in ‘human capital’, as well as notions of market imperfections due to information asymmetries. By specifying learning outcomes, qualifications frameworks are supposed to improve information in the market, thereby improving individual choices, and governments’ ability to regulate and support markets to supply education and training. Further, the ‘market of qualifications’ approach rests on a notion of ‘choice’ and of ‘employability’ which is at heart about blaming individuals for the lack of jobs⁷.

Despite the many differences between South Africa and the European countries considered above, what is clear is the strong contrast between bundles of skills, usually called competences, which are really descriptions of task-related activities, and the skill and knowledge associated with regulated occupations and professions. Technical occupations rely on systematic knowledge as well as operational experience and ability. Professions are regulated by charters, with a defined knowledge base, controlled entry, and well-understood and longstanding qualifications based in higher education, with relatively independent disciplinary and accountability arrangements. Our NQF has entrenched the former, narrow notion of skills, despite the good intentions of policy makers⁸, because the outcomes-based qualification framework model (as well as competency-based training) are located in, and reinforce, a narrow notion of skills. Winch (2011) argues that the notion ‘skill’ partly derives from fragmentation of the labour process, which is why countries with broader occupational categories tend to use it less: “When reference to workplace ability is almost exclusively centred around skill, it becomes difficult to allow for the concept of occupational integration, as skill is a fragmenting rather than an integrating concept” (Winch 2011, p. 92). Drawing on Braverman, Winch goes on to point out that, ironically, ‘skill’ is suited to conceptualizing the segmentation of the labour process into particular episodes of work or tasks, but at the limit this fragmenting removes any aspect of personal ability, or skill, from an operation. This is the dilemma of casualized and precarious work, and it is the dilemma of the ‘market of qualifications’ approach. Reform of vocational qualifications in the UK in the 1980s was designed to legitimate constantly shifting, job-type specifications, by making them easier to accredit (Winch 2011). This, arguably, is the reason there is such a strong emphasis on the development of separate ‘units of competence’ or, in the South African terminology, unit standards, which can be awarded to learners. A problem which dogs these approaches is that in order to provide sufficient clarity to the range of possible users, the outcomes/ competences tend to become both very narrow and very overspecified (Wolf 1995; Allais 2007; 2010).⁹

⁷ Neoliberalism “represents a new modality of government predicated on interventions to create the organizational and subjective conditions for entrepreneurship—not only in terms of extending the ‘enterprise model’ to schools, hospitals, housing estates, and so forth, but also in inciting individuals to become entrepreneurs themselves [...] This process of ‘responsibilization’ often goes hand-in-hand with new or intensified invocations of ‘community’ as a sector ‘whose vectors and forces can be mobilized, enrolled, deployed in novel programmes and techniques which encourage and harness active practices of self-management and identity construction, of personal ethics and collective allegiances.” (Marais 2011, pp. 137-138) citing Hart (2006).

⁸ For a discussion on why the initial intentions of policy makers were much broader than this, see French (2009).

⁹ Further, the process of designing the learning outcomes frequently leads to arcane and complex disputes over terminology that become increasingly opaque to people not involved in the processes—which then contradicts the aim of increased transparency and improved supply of information. The English National Vocational Qualifications (Young 2009) and the South African National Qualifications Framework (Allais

It is a particular irony and tragedy in South Africa that the NQF, together with the skills development strategy, was supposed to overcome the atomized and low-level skills that were produced by the apartheid system. As we have seen, citing Kraak (2004) the late apartheid state in South Africa introduced similar reforms, following a similar logic—industry lead modular competence-based training through a regulated market. Although there were many significant differences between the policies of the democratic government and those of the apartheid state, this reliance on employer specified competencies, and the breaking up of learning programmes into smaller pieces, is the same. The irony is that, as in many countries around the world, the same solution is introduced, and its role in the failures of the previous system are not seen¹⁰. A further tragedy is that this approach creates new barriers for workers without formal education. Consider, for example, one of the many very low-level unit standards which were developed, this one for workers at check-out counters in shops. The unit standard is titled: ‘Pack customer purchases at point of sales’, and contains the following three specific outcomes:

- Explain factors impacting on the packing of customer purchases.
- The importance of packing customer parcels correctly is explained.
- Pack customer purchases.

A worker who is perfectly competent in packing groceries, and has been doing so for years, may well not be found competent against these outcomes. Further, being found competent against them will not assist them in anyway—they will not be able to do anything other than continue to pack groceries.

I suggest that one of the key problems faced by the Setas, and other organizations which have been attempting to build vocational and occupational education in South Africa, is this underlying model, which, despite rhetoric to the contrary, is based on, and reinforces atomized skills provided through a marketized system for fragmented jobs. The ensuing qualification model has been cumbersome and difficult to use, because of the tendency of competency-based systems to lead to narrow but lengthy and overspecified qualification documentation, which has made the work of government institutions as well as providers difficult, and ironically, has made it harder for providers to be responsive to employers’ needs. Of course not all education and training operates in this manner—mainly because most formal providers have not worked within the logic of the original model of the NQF. This has led to two parallel worlds: formal education and training institutions that continued to use their own qualifications (cosmetically rewritten into outcomes-based format) and workplace-based providers, as well as providers attempting to offer learnerships, which have used the new qualifications developed through the NQF, and have operated according within the logic of its quality assurance and accreditation systems.

2009) provide particularly stark demonstrations of this. In South Africa, the unit standards became lengthy and unwieldy, new provision did not emerge, and existing education institutions were burdened with additional bureaucratic requirements. Outcomes-based qualifications frameworks for vocational education in Mauritius and Botswana, and for workplace training in Mexico, experienced similar problems (Allais 2010).

¹⁰ The pattern of competence-based training being introduced over and over again is common; in my study of 16 countries (Allais 2010), I found many examples where competence- or outcomes-based, modular systems, were being introduced to replace competence- or outcomes-based systems.

I suggest, then, that regardless of the institutional strengths and weaknesses of the Setas, a key problem with the levy-grant system is the underpinning model of qualifications. This model made it impossible for the *National Skills Development Strategy* to contribute to the development of a training system, because of its focus on regulatory systems instead of building and developing education institutions. The irony is that reliance on the market to expand provision may make it less likely that education is responsive to the needs of the economy or society. Loose (2008) argues that one of the biggest problems with the promotion of competency-based training in developing countries is that what these countries actually need is the creation of an effective training system—the development of institutions, programmes, and curricula. These are just the things that competency based training does not address: it provides “*the definition of competencies and the methodology for assessing them*”, but it failed to provide the “I” in CBET, a learning process as the basis for the creation of *training itself*” (Loose 2008, p. 76, emphasis in original).

While policy makers may believe they are creating a ‘demand-led’ system, it is focused on employers’ short-term labour market needs, rather than long term educational needs of young people or long-term needs of the economy. Employers build on the ‘skills of yesterday’. Ironically, this leads to lack of labour market currency for many occupational qualifications:

If a qualification seeks only to mimic a traditional, restricted and shrinking area of labour market activity, then it will inevitably have low labour market currency and become quickly out of tune with changes in the labour market. It is the educational element, in particular the integration of the theoretical knowledge component with practice, which gives a qualification its longer-term value and which can in turn facilitate rather than impeded the development of the labour process.
(Clarke and Westerhuis 2011, p. 143)

This may explain why the ‘industry-led’ Australian competence-based training system has “weak links between vocational education and training and employment” (Cooney and Long 2010, p. 29). A further irony is pointed out by Brockman et al (2011, p. 6):

... countries with co-ordinated market economies, characterized by high levels of social partner involvement in VET, have been able to reform their VET systems in line with new economic challenges and as a strategy for innovation. By contrast, initial VET in liberal market economies has been marginalized and increased emphasis placed on general and higher education, albeit often of a vocational nature.

This section has looked at how different approaches to labour market organization and regulation produce/enable different approaches to vocational education and skills training. I turn now to a body of literature which looks more broadly at the relationship between the state, the economy, and social policy, and particular regimes of vocational education and training.

‘VARIETIES OF CAPITALISM’ AND SOUTH AFRICAN SKILLS POLICIES

Bosch and Charest (2010, p. 22), in a comparison of vocational education across different countries, argue that

.... developments in vocational training cannot be understood solely by examining the inner dynamics of education and training systems. They do not acquire their societal significance and their value for companies and trainees until they are embedded in the labour market. In particular, differences in industrial relations, welfare states, income distribution and product markets are the main reasons for the persistently high level of diversity in vocational training systems.

Iverson and Stephens (2008), working with in the ‘varieties of capitalism’ literature, as well as drawing on Esping-Anderson’s (1991) classic *The Three Worlds of Welfare Capitalism*, compare different ways in which advanced capitalist economies are organized, to posit ‘three worlds of human capital formation’.

The ‘Varieties of Capitalism’ literature is primarily an attempt to understand and compare the institutional basis of different production systems in the advanced economies. It considers labour market structures (as in the literature discussed above), but also looks more broadly at other social policies. Elaborated by Hall and Soskice and collaborators (Hall and Soskice 2001), it distinguishes between two different models of political economy in the rich democracies of the OECD. The first model, ‘liberal market economies’, includes capitalist economies which operate more closely to the textbook model of the unfettered ‘free market’ (United States, the United Kingdom, Australia, and Canada). The second, ‘coordinated market economies’ includes countries like those in Western Europe whose capitalist systems rest on multiple mechanisms of institutional coordination, including tight coupling between the financial and industrial wings of big business, collective wage determination, and strong and well supported systems of general and vocational education, supported by the state.

A key point is that different systems of social protection, and different ways of organizing education and training, are efficient complements to distinct modes of capitalist production. As Iverson and Stephens (2008) explain, high levels of social protection in the coordinated market economies encourage individuals to acquire specific skills. This supports a training system that enables firms to specialize in international niche markets—often with quasi-monopolistic competition, and high mark-ups. Workers at the lower end of the achievement distribution have strong incentives to work hard in high school to get into the best vocational schools or get the best apprenticeships. This raises skills at the low end, and supports a more compressed wage structure. In liberal market economies, by contrast, where there is little redistribution of wealth to public schooling and social insurance, the middle and upper-middle classes self-insure by attaining high levels of general education, generally through private institutions. Students who expect to go to higher education, and have strong incentives to work hard. Vocational education is weak, so learners in the bottom third of the achievement distribution have few incentives to do well in school, and few opportunities to acquire skills. Skills at the bottom end are therefore low, and workers end up in poorly paying jobs with little prospect for advancement. Manufacturing uses mainly low and general skills. It is difficult for unions to gain bargaining leverage, as they are easily replaced, which in turn weakens unions, as incentive to join them is low.

Iverson and Stephens (2008) have built on and refined this argument by distinguishing between two major types *within* the coordinated market economies—those that have been dominated mainly by centre-left coalitions (the Scandinavian countries) and those that have been dominated by Christian Democrat-led coalitions (continental European countries). Based on an analysis differences in the organization of capitalism, electoral institutions, and partisan politics, with different implications for inequality and labour

market stratification, they argue that there are three worlds of skill formation, each reflective of a particular underlying class coalition and political–economic institutional structure (Iverson and Stephens 2008). What they add to the debate is interesting differences *between* the different coordinated market economies.

Iverson and Stephens argue that in coordinated market economies which are dominated by centre-left coalitions¹¹, there is redistribution of wealth, as well as heavy investment in public education (including high quality public day care and preschool) and industry-specific and occupation-specific vocational skills. This model encourages both high levels of general skills and high levels of industry-specific skills, and allows flexibility in the labour market through extensive spending on retraining. The combination of heavy spending on general education and well-developed vocational training creates a compressed skill structure, as workers at the bottom have specific skills that the workers at the bottom in liberal market economies do not have, but they also have better general skills. This makes them more able to acquire more technical skills. This enables high value-added production in international niche markets, as well as enabling these countries to cope with the rise of services (because of the high levels of general education). Provision of public day care provides jobs, allows parents to enter the workforce or increase their working hours, provides early childhood education which is particularly important for children of less educated parents, and facilitates higher fertility rates (which enable more stability in the long-term funding of the welfare state).

On the other hand, Strong Christian Democratic parties tend to create alliances across class lines. This lessons demands for redistribution in coordinated market economies dominated by them. Support for heavy public spending on preschool and primary education is lower than in the Scandinavian countries, and overall education, higher education, and day care spending is similar to the liberal regimes. Nonetheless, general skills at the bottom are significantly higher. Most continental European countries have well functioning vocational training institutions, which offer opportunities for reasonable levels of general education, as well as strong collective bargaining systems. High social insurance and job protection, as well as strong vocational training in firm-specific and industry-specific skills, have facilitated acquisition of firm-specific and industry-specific skills. However, skilled workers are favoured, and the interests of low-skilled and semiskilled workers are not addressed as well.

Of course there are many critiques of the varieties of capitalism literature, with and without the expanded version that distinguishes between types of coordinated market economies. A major critique is that power relations are not sufficiently addressed, and the role of trade unions in building the welfare state is downplayed. Further, the model is somewhat static, and seems to leave the various countries trapped in their models. And of course, it is a model of advanced capitalist countries. Nothing in the analysis helps developing countries to work out how best build their general and vocational skills systems.

Nonetheless, what is clear from this study, and of great interest in a consideration of South African policy, is that there are mutually reinforcing relationships between systems of social insurance, systems of skill formation, and spending on public education. Specifically, Iverson and Stephens argue that *social equality* fosters the development of high levels of both general and specific skills, especially at the bottom end of the skill

¹¹ Which they attribute to proportional representation electoral systems

distribution, which in turn reinforces social equality. Specific and general skills at the bottom of the distribution are strongly linked to *employment protection and unemployment replacement rates*. General skills at this level are also strongly related to active *labour market policy* and *day care spending*, as well as to vocational education. Finally, Iverson and Stephens argue that ‘information age literacy’ (including reasonably high levels of general literacy as well as information technology ability) is “extremely strongly and negatively related to the degree of inequality” (Iverson and Stephens 2008, p. 621).

What this study brings to the forefront when juxtaposed with South Africa is the insufficient linkages between education and training policy and social policy. Despite the dominant view in the media of a ‘skills shortage’ coupled with an inflexible labour market, the inadequacy of our social security system and the high levels of job insecurity make it almost impossible to develop robust and coherent skills development.

South Africa is one of the most unequal countries in the world. The South African economy has a historic and current built-in dependence on cheap labour as well as on the exploitation of primary resources, and a bias towards importing technology solutions (Marais 2011). All of these factors are unfavourable to the development of skills in the general population. The broader political and economic context in South Africa has been strongly determined by neoliberalism (Marais 2011; Bond 2000; Bond 2005). Among the various factors that have affected vocational education and skills training since the transition to democracy, one was that there was no industrial policy in this period—the logic was that comparative advantage would emerge by ‘getting the fundamentals’ right. Macro-economic policy focused on attracting foreign investment has in fact led to deindustrialization, and a shrinking manufacturing sector (Mohamed 2010). Further, as Giovanni Arrighi et al argue (2010, p. 435), by ‘betting’ on capital, the South African government “forfeited the kind of investments in the welfare of the population (housing, public transport, health and, above all, mass lower and higher education) that would have been key developmental objectives in themselves and may well be the most essential, though by no means sufficient, condition of renewed economic expansion.”

Job insecurity, otherwise known as labour market flexibility, is on the rise¹². Despite a vigorous debate about the alleged inflexibilities of the South African labour market, our economy is characterized by extremely high unemployment and extreme job insecurity for many workers¹³. Marais (2011) points out that there are so many exemptions to wage agreements that in many cases they are empty shells: out of the entire workforce of 13

¹² Of course this is an international phenomenon, as well documented by Standing (2011). As Chang (2010, p. 58) argues, “Job security has always been low in developing countries, but the share of insecure jobs in the so-called ‘informal sector’ - the collection of unregistered firms which do not pay taxes or observe laws, including those providing job security - has increased in many developing countries during the period, due to premature trade liberalization that destroyed a lot of secure ‘formal’ jobs in their industries. In the rich countries, job insecurity increased during the 1980s too, due to rising (compared to the 1950s-70s) unemployment, which was in large part a result of restrictive macroeconomic policies that put inflation control above everything else.”

¹³ As Marais (2011, p. 180) argues “Indeed, if labour laws were a major underlying cause of unemployment, job growth should be most vigorous in those sectors where the laws have the least impact, such as agriculture, domestic and formal work. The opposite seems to be true.” Further, as Sully (2011) demonstrates, current wage earners in the middle and lower sections of the income distribution do not earn enough to provide for their households’ livelihoods, and depend, in addition to their wages, on broad networks of support, including government grants, top-down subsidies from other households, and the bottom-up subsidies provided by unpaid reproductive work, within their own household and from other households. Expanding low wage work would simply put additional strain on these already burdened livelihood networks, without adding to net well-being.

million, 2.7 million did not have employment contracts, and 4.1 million did not have paid leave entitlements, in 2008. Further, the numbers of working poor have increased dramatically: “Vast numbers of workers earn low wages and do so on such insecure terms and so often without attendant benefits that their jobs do not shield them against poverty. Even formal sector employment is increasingly insecure, wages and benefits poor and less easily distinguishable from informal-sector employment” (Marais 2011, p. 181). He documents how low-skilled workers’ real wages dropped by 19% from 1995 to 2003, and those of self-employed people by 62%. In 2005, a substantial portion of workers in the agricultural, service, and domestic sectors in the formal economy were being paid an average of R1012 a month. Almost half of domestic workers earned less than R500 a month in the mid-2000s, as did one third of other workers in the informal sector. But in the formal sector, nearly a fifth of workers earned less than R1000 a month. Within sectors, gaps between the top and bottom have grown. The average real wage is propped up by small numbers of high-skilled high-salaried workers, and even then, the median wage in 2009 was R2500 per month.

The South African state has rolled out a social welfare system which is the largest in Africa, and considerable by the standards of any developing country. This system has done more to provide relief from poverty than any other policy (Marais 2011). But it consists of grants which are targeted and means-tested. Able-bodied people capable of work are given nothing, although they cannot work, because there are no jobs. A basic income grant, even at extremely low levels, has been rejected as encouraging a state of dependency. As Franco Barchiesi (2011, p. 134) argues, South African social policy:

The seeming contradictions of postapartheid social policy ultimately fit the government’s view of the poor as a Janus-faced creature, constantly lured into laziness and sloth, but also in possession of a natural economic ambition that the state has a duty to nurture and guide.

All these factors are diametrically opposed to the factors described in the literature above, which have, in developed countries, led to high levels of both general and vocational education, with considerable economic and social benefits. Instead, skills training, public works, workplacements, and apprenticeships are posited as a ‘bridge’ into a world of formal employment which firstly, does not exist, and secondly, where employment does exist, does not lift people out of poverty. This is despite serious contention about the relationship between education and economic development (e.g., Chang 2010), and serious debate about the role of education in increasing productivity (e.g., Phillip Brown, Lauder, and David Ashton 2011). In a neoliberal policy environment focused on self-help and responsabilization, education, and particularly vocational education and skills, is part of how policy makers avoid addressing structural problems in the economy. Ironically, though, this approach makes it less likely that people will attain general or specific skills and knowledge: it is almost impossible to build ‘successful’ vocational education in a context of extreme job insecurity and casualization.

A RESEARCH AGENDA: SKILLS, KNOWLEDGE, AND EDUCATION

How can vocational education strengthen knowledge production and innovation, at the same time as providing students with knowledge that increases their power and fulfillment in the workplace and in society? I suggest that there are two key areas that need focus from researchers, activists, and policy developers, if we are going to improve vocational education. The first is making linkages with social policy, specifically pushing for an expanded vision of citizenship, greater levels of social welfare and greater

regulation of the labour market. These factors are not ‘nice-to-haves’, on top of a well-functioning vocational education system. They are part of what will make our vocational education system work. The alternative is for education policy to be used as part of employability programmes which “divert attention from the hard work needed to create jobs and have the added disadvantage of making the unemployed appear solely responsible for their plight” (Unwin 2004, p. 245). I suggest a key question for research is: how can education policy support, and be supported by, improved social policy?

Clearly, we are not going to have regulated occupational labour markets, and social welfare overnight. What else can we do to improve vocational education? Gamble (2004b; 2011) points out that improving vocational education needs a focus on the education side of it: building strong institutions, curricula, and lecturers. These are just the features that the ‘market of qualification’ model neglects, and which have been, accordingly, neglected in South Africa. The collapse of the original model of the NQF will not, on its own, lead to a shift away from a ‘market of qualifications’. It does, though, open the space for more coherent policy on qualifications and curriculum. I have discussed the problems with the assumption that bringing vocational education closer to employers will improve its relevance and quality. Protecting vocational education from the *immediate short-term* needs of employers and from a *narrow* labour market focus may be the best way of improving it, in the absence of strong social policy and well regulated occupations. Having a strong sense of curriculum, developed through a clear knowledge base, is key to strengthening educational institutions, as it is the only way they can have a distinctive identity, instead of being service providers whose ‘product’ is redefined for each ‘client’. But our understanding of what the knowledge base of vocational qualifications is weak. One of the problems with the learnerships is that they were created in areas without an established knowledge base. Will the inclusion of Maths and language courses ensure a broader and more empowering orientation? These are important, but do not seem to be sufficient. Should we include lots of theoretical and background information about technical areas being studied? For example, a current qualification in the construction industry in South Africa includes information on the geohistory of soil formation. This does not seem to provide an answer.

Contemporary debates around the ‘knowledge society’ have “brought to the forefront questions of what knowledge is for, and have re-opened the debate about the relative merits of relevant knowledge on the one hand, and knowledge for its own sake on the other” (Muller 2008, p. 1). Some argue that modern society is increasingly postindustrial, and postindustrial society is organized around theoretical knowledge (Bills 2004). Others argue that mechanization and de-industrialization may have made knowledge less, not more important—because of the growth in low skills services (Chang 2010).

Bernard Charlot (2009) argues that education must treat the world as an *object* and not as an *environment* or *place of experience*. It is about introducing students to intellectual worlds made up of objects whose meaning does *not* derive primarily from a relationship with the world *as it is experienced*. Objects must be seen in the relations that they maintain with other concepts, and not by a direct connection with a referent, as is experienced in the world of experience, and this leads to the acquisition of systematized ways of thinking. Gamble (2011), drawing on Bernstein (1999), Beck and Young (2005), and Sohn-Rethel (1978) suggests that the trend in contemporary curriculum, in both vocational and general education, is to drive curricula ever closer to the “concreteness of ‘the world’, or what refers to as a ‘context of human action’ where meanings derive from concrete events or experiences that have actually happened in a specific time and place”. By definition, she argues, “curricula may also tend to be driven farther away from a ‘context

of thought' where meanings exist only in abstract or symbolic form, independent of the time-space context of their production." Key to Gamble's position is that we must stop separating 'theory' (aka knowledge) from practice (aka skill) and understand that practices are always knowledge-based. The implication of her argument is that there is no such thing as 'skills', only different relations between a knowledge base and a practice.

I suggest, then, that researchers should be asking: what is the knowledge which is the basis of vocational qualifications and occupations? How it is produced, understood, and valued? What are its relationships with different occupational divisions of labour? What are the relationships between the regulatory framework of vocational qualifications, the structure and content of provision, understandings of knowledge and fields of knowledge, the labour process and deployment of labour in the labour market, and the currency of qualifications in the labour market? Answers to these questions need to be located broader debates about knowledge and the curriculum. This will help us understand how to improve vocational and occupational education. It will also contribute to understanding what education is for, and what its intrinsic value is in the 21st century.

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References

- Allais, Stephanie. 2007a. "Education Service Delivery: the disastrous case of outcomes-based qualifications frameworks." *Progress in Development Studies* 7 (1): 65-78.
- . 2007b. *The Rise and Fall of the NQF: A critical analysis of the South African National Qualifications Framework*. Doctoral thesis, University of the Witwatersrand.
- . 2009. *The Changing Faces of the South African National Qualifications Framework*. In *Learning from the Early Starters*, ed. Stephanie Allais, David Raffae, Rob Strathdee, Leesa Wheelahan, and Michael Young, Employment Sector Working Paper Number 45:139-182. Geneva: ILO.
- . 2010. *The Implementation and Impact of Qualifications Frameworks: Report of a study in 16 countries*. Geneva: International Labour Office.
- . 2011a. "The Changing Faces of the South African National Qualifications Framework." *Journal of Education and Work* 24 (3-4): 343-358.
- . 2011b. "'Economics imperialism', education policy and educational theory." *Journal of Education Policy*: 1-22.
- Arrighi, Giovanni, Nicole Aschoff, and Ben Scully. 2010. "Accumulation by Dispossession and Its Limits: The Southern Africa Paradigm Revisited." *Studies in Comparative International Development* 45 (4): 410-438.
- Ashton, David. 2004. High skills: the concept and its application to South Africa. In *Shifting Understandings of Skills in South Africa. Overcoming the Historical Imprint of a Low Skills Regime.*, ed. Simon McGrath, Azeem Badroodien, Andre Kraak, and Lorna Unwin, 98-115. Cape Town: HSRC Press.
- Badroodien, Azeem. 2004. Technical and vocational education provision in South Africa from 1920 to 1970. In *Shifting Understandings of Skills in South Africa. Overcoming the Historical Imprint of a Low Skills Regime.*, ed. Simon McGrath, Azeem Badroodien, Andre Kraak, and Lorna Unwin, 20-45. Cape Town: HSRC Press.
- Barchiesi, Franco. 2011. *Precarious Liberation. Workers, the State, and Contested Social Citizenship in Postapartheid South Africa*. Albany and Scotsville: SUNY and UKZN Press.

- Beck, John, and Michael Young. 2005. "The assault on the professions and the restructuring of academic and professional identities: a Bernsteinian analysis." *British Journal of Sociology of Education* 26 (2): 183-197.
- Bills, David B. 2004. *The Sociology of Education and Work*. Oxford: Blackwell Publishing.
- Bond, Patrick. 2000. *Elite Transition*. London: Pluto Press.
- . 2005. Neoliberalism in Sub-Saharan Africa: From Structural Adjustment to NEPAD. In *Neoliberalism: A Critical Reader*, ed. Alfredo Saad-Filho and Deborah Johnston. London: Pluto Press.
- Bosch, Gerhard, and Jean Charest, eds. 2010. *Vocational Training. International Perspectives*. London and New York: Routledge.
- Breier, Mignonette. 2009. Doctors. In *Skills Shortages in South Africa. Case studies of key professions.*, ed. Johan Erasmus and Mignonette Breier, 113-131. Cape Town: HSRC Press.
- Brockmann, Michaela. 2010. Higher Education Qualifications: Convergence and Divergence in Software Engineering and Nursing. In *Knowledge, Skills and Competence in the European Labour Market. What's in a vocational qualification?*, ed. Michaela Brockmann, Linda Clarke, and Christopher Winch, 120-135. Abingdon and New York: Routledge.
- Brockmann, Michaela, Linda Clarke, Christopher Winch, Georg Hanf, Philippe Méhaut, and Anneke Westerhuis. 2011. Introduction: Cross-national equivalence of skills and qualifications across Europe? In *Knowledge, Skills and Competence in the European Labour Market. What's in a vocational qualification?*, 1-21. Abingdon and New York: Routledge.
- Brockmann, Michaela, Linda Clarke, and Christopher Winch, eds. 2011. *Knowledge, Skills and Competence in the European Labour Market. What's in a vocational qualification?* Abingdon and New York: Routledge.
- Brown, Phillip, Hugh Lauder, and David Ashton. 2011. *The Global Auction. The broken promises of education, jobs, and incomes*. Oxford: Oxford University Press.
- Chang, Ha-Joon. 2010. *23 Things They Don't Tell You about Capitalism*. London: Allen Lane.
- Charlot, Bernard. 2009. School and the pupils' work. In *Silva. Educational Sciences Journal*, 10:87-94. February 12.
- Clarke, Linda. 2011. Trade? Job? Or Occupation? The Development of Occupational Labour Markets for Bricklaying and Lorry Driving. In *Knowledge, Skills and Competence in the European Labour Market. What's in a vocational qualification?*, ed. Michaela Brockmann, Linda Clarke, and Christopher Winch, 102-119. Abingdon and New York: Routledge.
- Clarke, Linda, and Anneke Westerhuis. 2011. Establishing Equivalence through Zones of Mutual Trust. In *Knowledge, Skills and Competence in the European Labour Market. What's in a vocational qualification?*, ed. Michaela Brockmann, Linda Clarke, and Christopher Winch, 136-148. Abingdon and New York: Routledge.
- Cooney, Richard, and Michael Long. 2010. Vocational Education and Training in Australia: The Evolution of a Segmented Training System. In *Vocational training: international perspectives*, ed. Gerhard Bosch and Jean Charest. Abingdon and New York: Routledge.
- DHET. 2011a. *National Skills Development Strategy 3*. Pretoria: Republic of South Africa, Department of Higher Education and Training.
- . 2011b. *National Skills Accord*. Pretoria: Republic of South Africa, Department of Higher Education and Training.
- Dale, Roger, Richard Bowe, David Harris, Mark Loveys, Rob Moore, Chris Shilling, Pat Sikes, John Trevitt, and Vicki Valsecchi. 1990. *The TVEI Story. Policy, practice and preparation for the work force*. Milton Keynes: Open University Press.

- Erasmus, Johan. 2009. The identification of scarce and critical skills in the South African labour market. In *Skills Shortages in South Africa. Case studies of key professions.*, ed. Johan Erasmus and Mignon Breier, 22-33. Cape Town: HSRC Press.
- Esping-Anderson, Gosta. 1991. *The Three Worlds of Welfare Capitalism*. Princeton: Princeton University Press.
- French, Edward. 2009. *The NQF and its Worlds*. Pretoria: SAQA.
- Gamble, Jeanne. 2003. *Curriculum Responsiveness in FET Colleges*. Cape Town: HSRC Press.
- . 2004a. Tacit knowledge in craft pedagogy: a sociological analysis. Doctoral thesis, University of Cape Town.
- . 2004b. A future curriculum mandate for Further Education and Training colleges: recognising intermediate knowledge and skill. In *Shifting Understandings of Skills in South Africa. Overcoming the Historical Imprint of a Low Skills Regime.*, ed. Simon McGrath, Azeem Badroodien, Andre Kraak, and Lorna Unwin, 175-193. Cape Town: HSRC Press.
- . 2011. Why improved formal teaching and learning are important in vocational education and training (TVET). Draft background paper for forthcoming UNESCO World Report on TVET. Unesco.
- Hall, Peter A., and David Soskice, eds. 2001. *Varieties of capitalism: The institutional foundations of comparative advantage*. Oxford: Oxford University Press.
- Hanf, Georg. 2011. The Changing Relevance of the Beruf. In *Knowledge, Skills and Competence in the European Labour Market. What's in a vocational qualification?*, ed. Michaela Brockmann, Linda Clarke, and Christopher Winch, 50-67. Abingdon and New York: Routledge.
- Hart, Gillian. 2006. Beyond Neoliberalism? Post-apartheid developments in historical and comparative perspective. In *The Development Decade? Economic and Social Change in South Africa, 1994-2004*, ed. Vishnu Padayachee, pp. 13-32. Cape Town: HSRC Press.
- Hyland, Terry. 1994. *Competence, Education and NVQs. Dissenting Perspectives*. London: Cassel.
- Iverson, Torben, and John D. Stephens. 2008. "Partisan Politics, the Welfare State, and Three Worlds of Human Capital Formation." *Comparative Political Studies* 45 (4/5): 600-637.
- Kraak, Andre. 2004. Training policies under late apartheid: the historical imprint of a low skills regime. In *Shifting Understandings of Skills in South Africa. Overcoming the Historical Imprint of a Low Skills Regime.*, ed. Simon McGrath, Azeem Badroodien, Andre Kraak, and Lorna Unwin, 46-70. Cape Town: HSRC Press.
- . 2004. The National Skills Development Strategy: a new institutional regime for skills formation in post-apartheid South Africa. In *Shifting Understandings of Skills in South Africa. Overcoming the Historical Imprint of a Low Skills Regime.*, ed. Simon McGrath, Azeem Badroodien, Andre Kraak, and Lorna Unwin, 116-157. Cape Town: HSRC Press.
- . 2004. Rethinking the high skills thesis in South Africa. In *Shifting Understandings of Skills in South Africa. Overcoming the Historical Imprint of a Low Skills Regime.*, ed. Simon McGrath, Azeem Badroodien, Andre Kraak, and Lorna Unwin, 212-268. Cape Town: HSRC Press.
- . 2011. *The post-school system and its contribution to Human Resources Development and Vision 2025*. Research Report commissioned by the National Planning Commission. Pretoria: Research Report commissioned by the National Planning Commission.
- Loose, Gert. 2008. Can We Link and Match Training in the "Duel System" with Competency-Based Education and Training (CBET)? In *"Re-Engineering" Dual*

- Training - The Malaysian Experience*, ed. Gert Loose, Georg Spottl, and Yusoff Sahir, 75-78. Frankfurt: Peter Lang.
- Marais, Hein. 2011. *South Africa Pushed to the Limit. The Political Economy of Change*. Cape Town: UCT Press.
- Marock, Carmel. 2011. *Considering key themes relating to the objectives of the NQF and the post-school objectives*. Johannesburg: Centre for Education Policy Development.
- McGrath, Simon. 1996. Learning to Work? Changing Discourses on Education and Training in South Africa, 1976-96. Doctoral thesis, University of Edinburgh.
- McGrath, Simon, Azeem Badroodien, Andre Kraak, and Lorna Unwin, eds. 2004. *Shifting Understandings of Skills in South Africa. Overcoming the Historical Imprint of a Low Skills Regime*. Cape Town: HSRC Press.
- Mohamed, Seeraj. 2010. The state of the South African economy. In *New South African Review 2010. South Africa in Crisis: Development in Decline?*, ed. Devan Pillay, Prishani Naidoo, John Daniel, and Roger Southall. Johannesburg: Wits University Press.
- Moore, Rob, and Jenny Ozga, eds. 1991. *Curriculum Policy*. Oxford: Pergamon Press.
- Mukora, Jeffy. 2009. Artisans. In *Skills Shortages in South Africa. Case studies of key professions.*, ed. Johan Erasmus and Mignon Breier, 219-245. Cape Town: HSRC Press.
- Muller, Johan. 2008. *In search of coherence: A conceptual guide to curriculum planning for comprehensive universities*. Report prepared for the SANTED Project. Johannesburg: Centre for Education Policy Development, January.
- Méhaut, Philippe. 2011. Savoir - The Organizing Principle of French VET. In *Knowledge, Skills and Competence in the European Labour Market. What's in a vocational qualification?*, ed. Michaela Brockmann, Linda Clarke, and Christopher Winch, 36-49. Abingdon and New York: Routledge.
- Phillips, David. 1998. The switchment of history: the development of a unitary qualifications framework. Doctoral thesis, University of Wellington.
- Raggat, Peter, and Steve Williams. 1999. *Government, Markets and Vocational Qualifications. An Anatomy of Policy*. London and New York: Routledge.
- Rauner, Felix. 2007. Vocational Education and Training--A European Perspective. In *Identities at Work*, ed. Alan Brown, Simone Kirpal, and Felix Rauner, 115-. Dordrecht: Springer.
- Republic of South Africa. 1995. *South African Qualifications Authority Act*. Pretoria: Government Gazette, October.
- Republic of South Africa, Department of Labour. 1997. *Green Paper on a Skills Development Strategy for Economic and Employment Growth in South Africa*. Pretoria: Department of Labour.
- SAQA. 2000a. *The NQF: An Overview*. Pretoria: SAQA.
- . 2000b. *The National Qualifications Framework and Standards Setting*. Pretoria: SAQA.
- Singizi Consulting. 2007. *Seta Review*. Pretoria: Employment Promotion Programme, Presidency, Republic of South Africa.
- Standing, Guy. 2011. *The Precariat. The New Dangerous Class*. New York: Bloomsbury.
- Stewart, Jim, and Sally Sambrook. 1995. "The Role of Functional Analysis in National Vocational Qualifications: A Critical Appraisal." *Journal of Education and Work* 8 (2): 93-106.
- Strathdee, Rob. 2011. "The implementation, evolution and impact of New Zealand's national qualifications framework." *Journal of Education and Work* 24 (3-4): 303-321.
- Tilly, Charles. 1988. "Solidary Logics: Conclusions." *Theory and Society* 17 (3, Special Issue on Solidary Logics): 451-458.

- Union of South Africa. 1949. *The Report of the Commission on Technical and Vocational Education of 1948: The De Villiers Commission*. Pretoria: Government Printer.
- Unwin, Lorna. 2004. Towards economic prosperity and social justice: can South Africa show the way for policy-making on skills? In *Shifting Understandings of Skills in South Africa. Overcoming the Historical Imprint of a Low Skills Regime.*, ed. Simon McGrath, Azeem Badroodien, Andre Kraak, and Lorna Unwin, -268. Cape Town: HSRC Press.
- Winch, Christopher. 2011. Skill - A Concept Manufactured in England? In *Knowledge, Skills and Competence in the European Labour Market. What's in a vocational qualification?*, ed. Michaela Brockmann, Linda Clarke, and Christopher Winch, 85-101. Abingdon and New York: Routledge.
- Wolf, Alison. 1995. *Competence-based Assessment*. Ed. Harry Torrance. Buckingham: Open University Press.
- . 2002. *Does Education Matter? Myths about education and economic growth*. London: Penguin.
- Young, Michael. 2008. *Bringing Knowledge Back In: From social constructivism to social realism in the sociology of knowledge*. London and New York: Routledge.
- . 2009. NVQs in the UK: their origins and legacy. In *Learning from the Early Starters*, ed. Stephanie Allais, David Raffe, Rob Strathdee, Michael Young, and Leesa Wheelahan, Employment Sector Working Paper no. 45:5-29. Geneva: ILO.