Education reform in Botswana: reflections on policy contradictions and paradoxes

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Literature on globalisation claims that changed global patterns of production and industrial organisation have intensified international economic competition, prompting nations globally to restructure their education systems in an attempt to position themselves favourably in an increasingly competitive economic environment. This is an environment that now requires a new kind of worker, what Castells terms the self-programmable worker. This has put education under pressure to produce the learner-equivalent of the self-programmable worker. This self-programmable learner is characterised by such psychosocial traits as independence of thought, innovativeness, creativity and flexibility. Botswana's Revised National Policy on Education (RNPE) of 1994 represents the country's response to globalisation. It purports to produce the self-programmable learner for an economy undergoing rapid transformation. In this paper I take a critical view of the policy's intent. By analysing two of its central constructs (pre-vocational preparation strategy and the behaviourist model adopted in the review of the curriculum), upon which the production of the self-programmable learner hinges, I conclude that it is unlikely that the preferred learner would be produced. The two constructs are identified as paradoxes in that their effects are most likely to be the opposite of what is intended.

Introduction

The past two decades have witnessed an unprecedented global attempt to attune education to the demands of the 'new' economy. This has impacted upon education in major ways, including leading to fundamental curricular reforms. One strand of this reform agenda is the production of a new kind of learner, worker or citizen. The education system is expected to develop in learners attributes such as creativity, versatility, innovativeness, critical thinking, problem-solving skills, and a positive disposition towards teamwork – attributes deemed essential in today's changed work environment. Promotion of these attributes is not new in education, though. The Progressive Education Movement of the 1960s and 1970s purported to promote these qualities in learners. As Silcock (1996, 200) states, 'Progressivists have always promised to deliver the independence of thought and action which life in modern societies demands'. However, Progressive Education retreated in the 1980s in the face of attacks from 'new right organisations and governments for supposedly reinforcing and failing to overcome the "underachievement" of many children in schools resulting in falling standards' (Usher and Edwards 1994, 197). However, interest in the attributes

stated above was rekindled in the 1990s, this time reoriented to meet the demands of the 'flexible economy' (Rassool 1993). Their desirability is now couched in the discourse of international economic competitiveness. It is alleged that new patterns of economic production and organisation, leading to a changed workplace, have emerged and require a new kind of worker. This new worker approximates to Castells' (1997) 'self-programmable' worker. This worker is a lifelong learner, one who constantly redefines his/her skills for a given task. The call in the new patterns of production is for a multiskilled, adaptable, and flexible workforce. The self-programmable worker is contrasted with the 'generic' worker (Castells 1997) who acquires his/her skills through what Clegg (1999) terms 'exploitative learning', associated with a more traditional manufacturing economy. As a result, education the world over is being reformed to endow students with appropriate skills and attitudes.

This paper critically analyses Botswana's Revised National Policy on Education (RNPE) (Republic of Botswana 1994) as the policy meant to deliver a self-programmable learner. It addresses the question: Is the RNPE and the secondary school curriculum derived from it in such shape as to be able to produce the self-programmable learner/worker envisaged in Botswana education policy texts? Through a critique of two elements of the RNPE that are at the centre of the endeavour to produce the self-programmable learner – namely, the 'pre-vocational preparation' strategy of curriculum integration and the behaviourist model of curriculum development adopted in designing learning programmes – I argue that the RNPE is poorly shaped to produce this kind of learner. The two elements are paradoxical in that while they are meant to be the vehicles for the delivery of the envisaged learner/worker, in practice, and due to their own internal logic, they are best suited for the production of a generic learner/worker.

The paper is organised as follows: I begin by looking at the global context in which the discourse of the self-programmable learner emerged. This is followed by a discussion of the RNPE as Botswana's response to this circulating discourse. Then follows consideration of the 'pre-vocational preparation strategy' that the RNPE adopted as the strategy for integrating knowledge and skills in secondary schools. It was through this strategy that education in Botswana was to be related to the world of work. Finally, the behaviourist model of curriculum development that was employed in the review of all syllabi is discussed. It is shown that the model undercut the constructivist, learner-centred pedagogy through which the RNPE wanted to produce the self-programmable learner

A new learner/worker for a 'new' economy?

Commentators have observed that work in the industrialised world has in the past two decades experienced fundamental structural reorganisation leading to 'significant changes in the practices, ethos, values and discourses of the world of work' (Johnson et al. 2003, 20). New patterns of production driven by technological and organisational changes have emerged. Some have termed these new patterns 'post-Fordism'[1] (Brown and Lauder 1992) and some 'fast capitalism' (Gee et al. 1996). Brown and Lauder (1992, 3) have described post-Fordism as a system of production 'based on adaptable machinery, adaptable workers, flatter hierarchies, and the breakdown of the division between mental and manual labour and learning'. It is a matter for debate (see Brown and Lauder 1992; Muller 2000; Johnson et al. 2003) as to what exactly caused this shift from Fordist to post-Fordist production patterns. However, there seems to be

consensus on hyper-competition in the global market resulting from deregulated national markets as a major cause of the shift.

Modern forms of production require workers who are versatile, flexible, technologically competent, predisposed to teamwork and who have problem-solving ability skills. Technological change has led to uncertainty, unpredictability and constant change in the labour market. Skills, therefore, cannot be fixed for any particular job. As Silcock (1996, 200) observes, 'the best workers, like the best learners, are those whose understanding transcends situationally gained skills'. Due to constant technological changes knowledge has become ephemeral. This constant state of flux means that workers are forever learning. One-off training is no longer adequate. Hence, the renewed interest in the concept of lifelong learning. The discourse of global competitiveness 'means that economies require a well-qualified population and that they require workers with flexible, generic and constantly up-graded skills' (Muller 2000, 95). These workers approximate to Castells' 'self-programmable workers, who are contrasted with Fordist 'generic' workers.

Unlike self-programmable workers, generic workers follow directions in hierarchically organised work environments. These workers do not have to demonstrate initiative, innovativeness and creativity since they are 'hired from the neck down' (Gee et al. 1996). In fact they are discouraged from demonstrating these qualities. Their work is alienating and deskilling. But as Hickox and Moore (1992) observe, deskilling work processes, centralised decision-making, and celebration of the dichotomy between conception and execution, all of which characterised Fordist forms of production, are being challenged.

The World Bank (1999) captures succinctly the nature of the worker suited for the 'new' economy:

> Tomorrow's workers will need to be able to engage in lifelong education, learn new things quickly, perform more non-routine tasks and more complex problem-solving, take more decisions, understand more about what they are working on, require less supervision, assume more responsibility, and – as vital tools to these ends – have better reading, quantitative, reasoning, and expository skills. (2)

Windschitl (2002, 135) avers that the 'new' economy places 'a premium on employees who can think creatively, adapt flexibly to the new work demands, identify as well as solve problems, and create complex products in collaboration with others'. Gee et al. (1996, 17) observe that this paradigm shift in the kind of the worker now required in the capitalist workplace has 'major implications for the nature of schools and schooling, as well as for society as a whole'. The dominant view is that only nations with education systems that are attuned to the changed patterns of production are the ones that are most likely to survive in a global market place characterised by hyper-competition. As a response to this likely scenario, nations the world over are restructuring their education systems in an effort to improve their economic competitiveness. A view of how the workers of the future are to be educated is also emerging (Hartley 2003). De Clercq (1997) succinctly captures the direction to which education should move:

> The education system has […] to shift from a system that differentiates and socialises students for the rigid hierarchical division of labour of modern industrial societies, to a system producing high ability-high quality [*sic*] products with the ability to solve problems, think critically and apply new skills and techniques to different situations. (156)

It is now the task of education to deliver this kind of learner/worker. It is precisely (though not solely) for this reason that education is being reformed in many countries. Since the driving force is the urge to have a competitive edge in the global market, the move is towards what King and McGrath (2002, 78) term 'a curriculum for competitiveness'.

Botswana has not been left behind in this education reform stampede. In 1994 Botswana unveiled her new education policy, the Revised National Policy on Education (hereafter the RNPE), which, in many ways, was a response to perceived changed global patterns of production and industrial organisation. Its main thrust was the development and sustenance of a 'workforce which can apply advanced technology and respond competitively to the changing demands of the international economy' (Republic of Botswana 1993, xii). Such a workforce has to possess these qualities and attributes: communication skills, interpersonal skills, work activity skills, problem-solving ability skills, creativity, innovativeness and flexibility. In short, the RNPE aimed at producing the learner-equivalent of the self-programmable worker. I shall call this learner the self-programmable learner.

The RNPE: Botswana's response to globalisation

The evolution of the RNPE was in a context of global restructuring of education spurred by globalisation. Globalisation has been defined as:

> … the intensification of worldwide social relations that link distant localities in such a way that local happenings are shaped by events occurring many miles away, and vice versa. This is a dialectical process because such local happenings may move in an obverse direction from the very distanciated relations that shape them. Local transformation is as much a part of globalization as lateral extension of social connections across time and space. (Giddens 1990, 64)

By emphasising the interplay of the global and local, Giddens' definition of globalisation eschews a deterministic relationship between the global and local in which the former is portrayed as determining processes in the latter. Although it is intensifying 'policy migration' (Edwards et al. 1999) or 'policy borrowing' (Tikly 2001), leading to a 'convergence in policy and practice throughout [the world]' (Priestley 2002, 122), globalisation does not impose the globally circulating discourses on those countries' 'borrowing' policy. That is, the relationship between the global and local is a dialectical one (Christie 1997; Arnove and Torres 1999). Internationally circulating policy discourses, Hartley (2003, 82) observes, are 'mediated by the cultural and political conditions which prevail [in any given context]'. Thus, although it is important to draw upon global influences in trying to understand educational policy directions in Botswana or anywhere else, it is essential to recognise that the ultimate shape policy assumes is also a function of local circumstances and concerns. It is this mediation of the global by the local that gives globalisation its contradictory and paradoxical character, this in turn leading to gaps, contradictions and paradoxes in policies that emerge as a response to it. As I shall demonstrate, formulation of the RNPE, as an education policy determined to refashion out a new learner, was not immune from these gaps, tensions, contradictions and paradoxes. These contradictions and paradoxes have implications for the production of the envisaged learner.

The RNPE was published against the backdrop of a harsh global economic reality that saw Botswana's revenues decline owing to a depressed world diamond market.

This resulted in an upsurge in the unemployment rate, especially amongst the youth. In the face of massive youth unemployment concerns were raised about the relevance of the education being provided. Government instituted the Kedikilwe Commission (named after its Chairman) in 1992, whose mandate, amongst others, was to 'identify problems and strategies for [the education system's] further development in the context of Botswana's changing and complex economy' (Republic of Botswana 1993, v). The Commission submitted its report, the Report of the National Commission on Education (RNCE), in 1993. Government's reaction to the Commission's recommendations came in April 1994 in the form of Government White Paper No. 2, the Revised National Policy on Education (RNPE). The text, together with other policy documents, reflects major discourses associated with globalisation, such as 'economic competitiveness, 'lifelong learning', and 'world of work'.

The thrust of this policy text was the aligning of education to labour requirements of the economy. This discourse of the economy – education nexus – was emphasised in the RNPE and associated texts: 'The level and type of education that is offered is partly responsible for the speed with which industrialization can proceed' (Republic of Botswana 1993, 8). The education system was extolled to 'offer individuals a lifelong opportunity to develop themselves and to make their country competitive internationally' (Republic of Botswana 1993, 4). To prepare the workforce for higher productivity, education was urged to provide a 'high level of technical and scientific skills' (Republic of Botswana 1993, 8). To justify this policy direction, the Commission invoked the much-touted economic success of the Asian Tigers (Taiwan, Singapore, Hong Kong and South Korea), attributing their success to heavy investments in education and workforce training.

Given its concern for the economy–education dislocation it is not surprising that the RNPE attributed growing youth unemployment in the country to the perceived dislocation. The Botswana Democratic Party (BDP) government insisted that the economy was in good shape. It was the education system that was failing to produce people with the requisite skills to take up available opportunities in the local labour market: 'In the past decade rapid economic growth and the resulting changes in the structure of the economy have resulted in shortages of skilled personnel. However, the education system was not structured to respond to the demand' (Republic of Botswana 1994, 3).

This pronouncement needs to be treated with some scepticism. Given that Botswana was badly affected by the global economic depression of the late 1980s and early 1990s, it smacks of disingenuousness to argue that the country's economy was in good shape. However, to pronounce otherwise would have been potentially suicidal on the part of government given that the 1994 general election was just around the corner. It seems to me that the party ingeniously appropriated or 'bought into' the circulating global education discourse (of the economy–education dislocation) to deflect attention from the state of the economy as the source of youth unemployment. The perceived global economy–education dislocation offered a less controversial explanation for youth unemployment, an explanation that struck a chord with the electorate – the education system was not responsive to the new demands of a changing economy. It needed reforming.

But what were those 'new' demands and how was the economy changing? How was education to respond to these changes and new demands? The Report of the National Commission on Education (RNCE) of 1993 observes that: 'Manufacturing techniques are changing and there is a general movement away from low skill, mass

production assembly techniques towards higher degrees of automation and flexible specializations which require higher level of skills' (Republic of Botswana 1993, 8).

Clearly, a claim is being made here that Botswana's economy is to some extent post-Fordist and globalised. Could this be a true reflection of the nature of the economy? The truth is that Botswana's is a minerals-led economy with a poorly developed manufacturing base. Surely it would be disingenuous to associate, even remotely, manufacturing techniques in the country with post-Fordist work processes. If, as has been suggested by some commentators (e.g., Kraak 1995: Chisholm 1997; King and McGrath 2002), the adoption of post-Fordist work processes has been limited in South Africa (perhaps the only sub-Saharan economy integrated into the world economy) it would be absurd to talk of flexible specialisation in Botswana. Should not Botswana then concentrate on low skills associated with a pre-industrial economy instead of concentrating on high skills deemed essential for post-industrial economies? Why produce skills for a non-existent economy, one may ask? Botswana's education and economic policy texts acknowledge that in the short-to-medium term the country will need the low skills necessary for labour-intensive manufacturing. In the long term, however, the country harbours ambitions of 'leapfrogging the industrial stage of development into a high value added knowledge economy' (Tikly et al. 2003, 79). Economic diversification from reliance on raw mineral exports to value-addition (manufacturing) and services sector is high on the national agenda (Gaolathe 2007). If these goods and services are to compete favourably in an increasingly 'quality' demanding global market, a high-skilled workforce is needed. Oman (1996), cited in Tikly et al. (2003), suggests that although low-skilled labour is still necessary in sectors of the economy that are still 'Taylorist', in the long-term, however, 'flexible' forms of production (post-Fordist production processes) are the surest way of achieving effective participation in the global economy.

Given these arguments the RNPE's emphasis on high skills (in view of the fact that Botswana's is not yet an industrial economy) clearly reflects Botswana's present and future economic aspirations. Furthermore, since the 1990's Botswana has aggressively pursued neo-liberal economic policies related to privatisation, cost recovery, deregulation and liberalisation. These are deemed essential if the country is to move away from the periphery of the global economy and be integrated into that economy. Botswana is involved in the 'scramble' for Foreign Direct Investment (FDI), and so she has had to do everything necessary to position herself as an attractive destination for global capital. Amongst the demands of global capital are an open 'market' economy and a skilled workforce which displays attributes associated with a post-Fordist dispensation. Thus the RNPE's emphasis on attributes associated with post-Fordism, in spite of the fact that Botswana's economy is not post-Fordist, should be understood in terms of the country's desire to be competitive, especially in attracting foreign investment. As Stewart (1996) observes, education in the era of globalisation is pivotal in enhancing productivity and attracting foreign capital.

There are other ways policy texts reflect general post-Fordist thinking. Pedagogically, the RNPE explicitly espoused a learner-centred pedagogy based on social constructivism. Constructivism is an elusive concept to define precisely because it has a number of variants.[2] Its key features as summarised by Hyland (1994) are its:

> ... emphasis on learning as a continuous process grounded in experience, on the idea of a holistic process of adaptation through the resolution of conflicts and opposing viewpoints, and on the notion that learning needs to be regarded as a means of creating

> knowledge rather than merely the regurgitation and reinforcement of existing norms and traditions. (54)

Social constructivism implies democratic social relations. In some sense, therefore, constructivism resonates with post-Fordism in that flattened hierarchies that characterise post-Fordist production processes are said to demand democratic work relations. In the context of the RNPE it is believed that through activity-oriented teaching and learning methods such as 'project-work, fieldwork, group discussions, pair-work, class presentations…' (Republic of Botswana 1999, iii), learners would develop the capacities to think autonomously and work collaboratively with others. In fact, the homology between the RNPE's preferred skills and those deemed essential in a post-Fordist setup is striking; just like the latter, the RNPE identified the following attributes as central to a reformed education in Botswana: critical thinking skills, individual initiative, interpersonal skills and problem-solving ability skills. It is also telling that the Botswana Confederation of Commerce, Industry and Manpower (BOCCIM) recommended these attributes to the Kedikilwe Commission. Learner-centred pedagogy was identified as the 'vehicle' by which these workplace-related attributes would be inculcated in the learners. Given learner-centred pedagogy's resonance with post-Fordist production processes it is not surprising that the RNPE declared it the official pedagogy in schools.[3]

Learner-centred pedagogy has been described as 'democratic in action' (Rowell, 1995). I have argued elsewhere (Tabulawa 2003) that this pedagogy has, since the fall of the Berlin Wall, attracted the attention of international and bilateral aid agencies. The fall of the Wall not only symbolised the rise of a unipolar geopolitical setup dominated by the United States of America, it also elevated the political democratisation project to a global scale. As a liberal democracy, Botswana too has endeavoured over the years to use formal education to entrench a democratic ethos. For example, in the 1980s it embarked upon major education projects such as the Primary Education Improvement Project (PEIP) and the Junior Secondary Education Improvement Project, both of which heavily emphasised a learner-centred pedagogy. The RNPE formalised adoption of the pedagogy across the entire education system. Thus, the pedagogy is viewed in Botswana as a vehicle for developing a preferred kind of society and citizens. It (learner-centred pedagogy) is the nexus between education and the broader political principle of democracy. This aspect of the pedagogy is not unique to Botswana. Citing Leyendecker (2003) and the Ministry of Education and Culture of Namibia, Chisholm and Leyendecker (2008) state that in Namibia learner-centredness was chosen as the vehicle to drive the process of political reform and to achieve access to education for all, equity, education for democracy, and democracy in education. To the extent that both post-Fordism and the learner-centred pedagogy exhibit strong democratic tendencies, and also that they are central tenets of the RNPE, one can conclude safely that the latter, therefore, reflects economic and political aspirations of Botswana society. Analysing curriculum reform in sub-Saharan Africa, Chisholm and Leyendecker (2008) conclude, 'learner-centred education is considered the vehicle to drive societies and economies from mainly agricultural bases into modern and knowledge-based societies with the attendant economic benefits' (202). Thus learner-centredness is more than just an educational ideal; it is also an economic and political artefact.

In the light of these global and local economic developments, the RNPE envisaged a new role for education – the refashioning out of a new kind of learner and, by

extension, a new kind of worker and citizen. Changing classroom practices therefore is at the core of the RNPE initiative. And the RNCE has no illusions about the radical nature of the initiative since it would 'require a transformation in the curriculum, school organization, teaching approaches, teacher training.…' (Republic of Botswana 1993, 40). Riddell (1996) also echoes the need for a radical reorientation of education when he argues that developing the capacities of the self-programmable learner/worker will demand more than just more schooling and revision of the formal school curriculum. It will require a new form of schooling, one with a new ethos and new demands on the teacher. To this end the RNPE set into motion two major curriculum initiatives aimed at delivering the 'new', self-programmable learner. These were (1) vocationalisation of the curriculum through a strategy of curriculum integration it termed 'pre-vocational preparation' and (2), adoption of a behaviourist model of curriculum review. What prospects are there for these initiatives to deliver the preferred kind of learner is the question I address in subsequent sections. After a detailed analysis of each of these initiatives, I posit them as paradoxes that are antithetical to the production of a self-programmable learner. I argue that rather than produce the preferred learner the initiatives can be expected only to produce individuals best suited for Fordist production processes.

'Pre-vocational preparation': a strategy of curriculum integration

On the curriculum front, the RNPE expressed disillusionment with the separation of general 'academic' education and training. Because of this divide, education was criticised for producing people who did not have adequate knowledge of the workplace. What curriculum arrangement then, was expected to deliver the new kind of learner? The RNPE suggested an integrated curriculum. The policy settled for a strategy of integration it termed 'pre-vocational preparation strategy'. It was this strategy that was to guide all curriculum reviews, including the drawing up of new syllabi.

But what is meant by integration? Integration has a long and contentious history. It is a concept that has defied certain definition. Beane (1997) and Semali (2000) aver that integration is better defined by what it is *not* than by what it is, for the latter is difficult to pin down. Clearly, it is different from the separate subject approach. Also, it is not the same thing as interdisciplinary and multidisciplinary curriculum arrangements, two approaches it is often confused with. The latter approaches are anchored firmly on discrete subjects whereas integration dissolves disciplinary boundaries. Although just like integration, interdisciplinary and multidisciplinary approaches are thematic, they differ from the former in that in their case content and skills used to address the theme are identified within disciplines, whereas in integration themes are drawn from life as it is being lived and experienced (Semali 2000). In Beane's (1997, 19) view, integration is a 'curriculum design theory that is concerned with enhancing the possibilities of personal and social integration through organization of curriculum around significant problems and issues…without regard for subject-area lines'. An integrated curriculum encourages students to find 'connections between school and home, academic work and play, subject matter and daily problem solutions' (Semali 2000, 43). Integration avers that skills development, for example, cannot take place in isolation from content. Life experiences, it argues, confront the learner in a holistic way, not as isolated phenomena. As such, integration challenges both the subject–based curriculum and the academic–vocational dichotomy. The former presents knowledge as discrete entities whilst the latter isolates skills from content. For a

variety of reasons that cannot be rehearsed here, in the contemporary knowledge economy both these curricular arrangements are viewed as dysfunctional – hence the call for curriculum integration which, in this context, means integration both of subjects and knowledge and skills.

The Kedikilwe Commission was well aware of the pitfalls of a subject-based curriculum: 'Compartmentalization of subjects should be avoided and every effort should be made to establish linkages between the subjects in a holistic way' (Republic of Botswana 1993, 156), adding that 'The development of the curriculum and instructional materials should reflect the world of work by promoting integration across subjects' (174). This integration of subjects and of knowledge and skills was to be achieved through the 'pre-vocational preparation' strategy. There is here an implied necessary connection between integration generally and post-Fordist relations of production. Both are antipathetical to hierarchy; integration abhors subject hierarchies and the academic-vocational dichotomy. Post-Fordism abhors top-down controls in production as well as the conception-execution dichotomy, which characterise Fordist production. There is, therefore, (at least theoretically) in both subject integration and post-Fordism a commitment to democratic social relations. Let us illustrate this point by considering the concept of teamwork, an all-important aspect of post-Fordist relations of production. Collapsed subject boundaries, it is argued, permit subject specialists to come together to work on cross-curricular issues. In short, it fosters teamwork. Post-Fordist production, on its part, demands cooperation between designers and craft workers – that is, it demands the blurring of the divide between conception and execution, between thinking and doing. Teamwork characterises flexible specialisation. As Rassool (1993) puts it, teamwork 'decentralizes power controls within the production process and is seen also [*sic*] having contributed to an increasing pluralisation of control within the work context' (229). Decentralised power favours democracy. There is, therefore, affinity between subject integration, post-Fordist relations of production and political democratisation. This relationship is significant in the context of Botswana in that not only is the RNPE aimed at bolstering the country's economic prospects; it also has a political democratisation agenda.

It should by now be clear to the reader that curriculum arrangements such as integration, separate disciplines and interdisciplinarity/multidisciplinarity are inherently imbued with power relations. Wherever each one obtains it serves certain interests. Because of their political nature, the shape they take in any environment depends on socio historical circumstances. For this reason, integration, for example, of subjects and/or knowledge and skills, will differ from one context to another depending on local circumstances. Even where two countries have advocated integration, unique historical and cultural backgrounds have ensured differing conceptualisations of the phenomenon.

For example, both Botswana and South Africa have adopted curriculum integration as a way of articulating formal education to the needs of their economies. But largely due to local conditions, integration seems to have meant different things to each country. In South Africa curriculum integration was heavily influenced by the legacy of apartheid. Under apartheid the academic–vocational divide was linked to 'well-entrenched patterns of class and race inequality' (Christie 1997, 119). This divide, just like all other modernist dichotomies, involves power relations, for the first term always dominates the second. In the case of South Africa, Whites enjoyed the academically oriented education while the vocational-oriented one was for Blacks, and was of inferior quality. This division was part of the racial segregation policy of

the Apartheid State. It was difficult to maintain this in a new democratic, non-racial South Africa after liberation. So, proposals for the reform of education had to eliminate the education (academic)/training (vocational) dichotomy through what King and McGrath (2002) have referred to as 'total integration'. So radical was curriculum integration in South Africa that it involved 'breaking away from strict boundaries between traditional school subjects' (Cross et al. 2002, 179) in preference for Learning Areas. Education and training, which were previously separate under different departments of government, were integrated and brought under one department. Overall, integration was viewed as a way of addressing issues of equality and access. In some sense therefore, integration in South Africa had an explicit reconstructionist agenda (Christie 1997).

A different set of concerns, themselves embedded in the country's history and traditions, informed the choice of pre-vocational preparation strategy of integration in Botswana. I would describe the strategy as 'minimalist' or 'restricted' in that it did not intend to change profoundly or radically the status quo. All that it involved was a non-radical reorientation of the obtaining curriculum arrangement. McGrath (1997) observes that this approach to integration involves only:

> … a shifting of the balance between knowledge and skills that would replace any bias in favour of education with one in favour of training. In such a model, emphasis on skills such as problem-solving, communication and social skills, and the use of competencies would be elements of a narrow behaviourist view of learning that would make all subjects more 'relevant'. (172)

The Commission's commitment to a subject-based curriculum is evidenced by its contradictory position both on the issue of subject integration and integration of general education and training. While expressing its dissatisfaction with a compartmentalised subject-based curriculum, the Commission, at the same time, applauds Botswana for being 'correctly aligned in concentrating on the academic disciplines' (Republic of Botswana 1993, 172), and advocates the separation of general education and training by arguing that a comprehensive 'training system should be developed distinct from general education, with its own goals, content, organization and identity' (Republic of Botswana 1993, 24).

This reverence for the subject-based curriculum in Botswana is historically rooted. It was inherited from the British, and ever since then it has shaped public definitions of 'quality education' and what it means to be educated. For this reason the curriculum has never been a subject of serious controversy in Botswana. Whenever moves have been made to alter the curriculum in any fundamental way, the public's opposition has been clear. For example, the weakening of boundaries in some subjects (e.g., replacing geography and history with social studies at the Junior Certificate level) that accompanied the first National Policy on Education (of 1977) was partially blamed for the perceived fall in standards and quality of education (Tabulawa 2002). To many, integrated subjects represented a dilution of disciplinary knowledge and a lowering of 'standards'. Given this public perception of education it is understandable why the RNPE would have been uncomfortable with a radical reorganisation of the subject-based curriculum along the lines, for example, of South Africa's Curriculum 2000. Under these circumstances, a minimalist strategy of integration, one that would give the appearance of significant change, but in reality changing very little of the status quo, sufficed – hence the option of the pre-vocational preparation strategy. The strategy permitted review of subjects with the aim of giving them vocational orientation

without interfering in any significant way with their boundaries. In a sense, the RNPE's avowed commitment to integration amounted to symbolic action (Jansen 2002), the outcome of which was a façade of change, a well-developed policy rhetoric not meant to change things significantly. But by merely 'tinkering' with the traditional curriculum the pre-vocational strategy ensured that the curriculum remained 'academic' in orientation with strong subject boundaries. This presents a paradox as far as production of the self-programmable learner is concerned.

Paradox one: because it is inherently minimalist and conservative, the pre-vocational preparation strategy of integration (rather than challenge) supports a strongly classified and framed curriculum

In the contemporary world a strongly classified and framed curriculum is seen as inflexible, hierarchical, but worst of all, premised on the academic/vocational dichotomy, the very dichotomy that, as we have seen, separates knowledge from its application (skill), an arrangement clearly anathema to post-Fordist production patterns. In a world where the dividing line between knowledge production and knowledge application is blurred, 'Increasingly there is a tendency for knowledge to be produced in the context of application by trans-disciplinary groups, or teams' (Cloete and Bunting 2000, 39). Growth in applied knowledge is thus a threat to a 'collection' curriculum, favouring instead an integrated curriculum. It is difficult to justify context-bound knowledge in an era characterised by rapid knowledge decay. The changed nature of knowledge, it is argued, encourages what Young (1996) terms 'connective specialisation', referring:

> … to the importance of specialists, whether physicists, designers or guidance staff…sharing an overall sense of the relationship between their specialization and the whole curriculum. In other words, whereas divisive specialists see the curriculum from the point of view of subjects, connective specialists see their subjects from the point of view of the curriculum. (121)

Connective specialisation, therefore, resonates with integrated curriculum, especially with the latter's concern for cross-curricular issues. Such curriculum setting democratises work relations, flattens subject hierarchies and encourages teamwork and greater flexibility, all these being qualities required by the workforce for a successful post-Fordist economy (Usher and Edwards 1994. 'Academic' specialist knowledge is viewed as problematic in a fast-changing world. Senge (1991), writing from the perspective of management, captures this sentiment succinctly:

> The 'compartmentalization of knowledge' creates a false sense of confidence. For example, […] traditional disciplines…divide the world into neat subdivisions within which one can often say, 'This is the problem and here is the solution'. But the boundaries that make the subdivisions are fundamentally arbitrary… Life comes to us whole. It is only the analytic lens we impose that makes it seem as if problems can be isolated and solved. When we forget that it is 'only a lens', we lose the spirit of openness. (283)

Thus, rather than being places where students are inducted into static disciplinary knowledge, schools become places where students learn how to learn. A compartmentalised, discipline-based curriculum such as Botswana's is thus antithetical to the demands of the new work order with the latter's 'huge stress on the need for lifelong learning and the need continually to adapt, change, and learn new skills' (Gee et al.

1996, 6). It is therefore doubtful that such a curriculum will deliver the self-programmable learner envisaged in the RNPE. This situation is worsened by the highly selective secondary education assessment regime. Teacher and learner autonomy under such a curriculum arrangement is constrained, and yet it (autonomy) is a prerequisite for the development of initiative, creativity and innovativeness, all being qualities required by the changed workplace. Commenting on teacher and learner creativity, Craft (2003, 119) observes that the way:

> ... curriculum is presented and organised within the time available in a school day may offer greater or fewer opportunities for fostering learner and teacher creativity. For it might be argued that where the curriculum is taught as discrete subjects, this may constrain learner and teacher creativity, in discouraging thinking about themes which cross the subject boundaries.

To the extent that it calls for the flattening of subject hierarchies, and by extension, for curriculum 'flexibility', there is little doubt that the rhetoric of integration as espoused in the RNPE is post-Fordist in orientation. However, by settling for the conservative 'minimalist' strand of integration (the pre-vocational preparation strategies), and given that the latter poses no threat to the subject-based curriculum arrangement, the RNPE perpetuates the status quo of a curriculum based on discrete subjects, an arrangement Fordist in orientation. It is clear therefore that the conservative pre-vocational preparation strategy undercuts efforts to integrate school subjects as recommended in the RNPE. It is paradoxical that a strategy that was aimed at the construction of an integrated curriculum ended up maintaining a collection curriculum with all its consequences for the production of the self-programmable learner.

The behaviourist curriculum review model and processes

As already stated, the RNPE settled for the constructivist learner-centred pedagogy as the official pedagogy in schools, and by extension, as the pedagogy that was to deliver the self-programmable learner. Although it had always been the Ministry of Education's position that teaching and learning in schools should be learner centred, it was not until the advent of the RNPE that learner-centredness was declared the official pedagogy in schools. I have elsewhere (Tabulawa 1997, 1998a, 1998b) critiqued learner-centred pedagogy, pointing out that it is value-laden and embeds epistemological assumptions that may not be congruent with the sociocultural context of Botswana, making it difficult for teachers to adopt it. In this section I want to add another dimension to this critique, namely that under the present curriculum arrangement it would be almost impossible for the teachers to adopt this pedagogy. My doubts emanate from the fact that a behaviourist model of curriculum development was adopted in the review of all subject syllabi, tending to undercut the preferred constructivist pedagogy. Constructivism and behaviourism are worldviews that engender in human subjects actions or practices that are not necessarily compatible (Tabulawa 1998a). Whilst the constructivist learner-centred pedagogy stresses process, dialogue, cooperative learning, and the constructedness/situatedness of knowledge, behaviourism stresses, on the other hand, product and an atomised view of knowledge (Weber 2002). Clearly, behaviourism and constructivism are at odds with each other. But how is conflation of such apparently contradictory constructs possible? Possibly, there are many reasons, key amongst them being that: (1) often policy-makers in Botswana are not adept at critically analysing concepts (such as learner-centredness and behaviour-

ism), isolating the values that inform each one of the concepts. If they were skilled in that they probably would have realised that there is tension between the two concepts; and (2) it is seldom the case that learner-centredness is attractive to policy-makers for its educational value. As noted earlier learner-centredness has social, economic and political appeal. Ordinarily, this is more attractive to policy-makers than any avowed educational value of the pedagogy. As a matter of fact the RNPE and associated policy texts do not advance any robust arguments for the cognitive/educational efficacy of the pedagogy. But social and political arguments for the pedagogy abound in the texts. Thus casting the value of learner-centredness in educational terms in the RNPE was more of a symbolic gesture than anything else. Its real import lay in its value as a legitimating device or justification for linking general education to the world of work. Under such circumstances one does not expect much attention to be paid to (epistemological) assumptions underpinning concepts such as constructivist learner-centredness and behaviourism. Conflating them, therefore, is hardly viewed as problematic. However, at a conceptual level, conflating them sends 'mixed messages' to teachers and can be expected only to lead to pedagogical confusion. Whilst it would be disingenuous to suggest a deterministic relationship between behaviourism and didactic teaching, it should, nonetheless be observed that prospects for such a relationship to develop are enhanced by a tightly framed assessment regime such as the one Botswana has.

Following publication of the RNPE, task forces for the various subjects were established to carry out syllabi reviews. The task forces were broad-based, comprising academics, teachers, Ministry Officials in charge of curriculum development and Non-Governmental Organisations (NGOs). Guided by the secondary school Curriculum Blueprint they were to develop 'skill-based syllabi' for all subjects. It was through these syllabi that Botswana's industrial concerns sketched in the preceding sections were, hopefully, to be realised. Although there was vagueness regarding what qualified as a 'skill', essential employability skills – as identified by the Botswana Confederation of Commerce, Industry and Manpower (BOCCIM) – guided the review of syllabi. These generic/transferable skills included critical thinking skills, individual initiative, interpersonal skills and problem-solving ability skills (Republic of Botswana 1993). Task forces were expected to subordinate knowledge/content to these skills. Content was not to be covered just for its own sake. It was to act as a medium through which the learner acquired these skills. Thus content that could not demonstrate potential to promote a particular set of skills related to the world of work was not to be included in the syllabus. The pitfalls of this approach are very clear: how were the task forces to determine what constituted a skill in any particular context? How were they to identify content that was vocational in nature? How were they to balance vocational elements (where they could be identified) with academic ones? These practical constraints were worsened by the lack of clear practical guidelines on how the task forces were to carry out the reviews.

To illustrate the syllabus review process being discussed here I shall take the case of the geography task force. Elsewhere I have indicated that the development of the Botswana General Certificate of Secondary Education (BGCSE) geography syllabus was a deductive process that was based on the behaviourist objectives model of curriculum development (Tabulawa 2002). The task force was presented with the senior secondary Curriculum Blueprint, which stipulated the goals and aims of the senior secondary education programme. The task force then generated general aims of the subject (geography), aligning the aims with the aims of the senior secondary

TOPIC	GENERAL OBJECTIVE	SPECIFIC OBJECTIVES
Weather	Understand and appreciate the elements of weather	- **Distinguish** between weather and climate. - **Demonstrate** the ability to measure, record and analyse weather statistics of temperature, rainfall, humidity, air pressure, cloud cover, sunshine, wind speed and wind direction. - **Describe** factors influencing weather. - **Analyse** synoptic charts and interpret weather photographs. - **Explain** the atmospheric process that leads to difference in air pressure. - **Identify** global wind patterns. - **Describe** and explain the formation of relief, frontal and convection rainfall with reference to Botswana. - **Define** the concepts of El Nino and La Nina. - **Describe** and explain the effects of El Nino and La Nina to human activity in Southern Africa

Figure 1. Extract from the *Botswana General Certificate of Secondary Education Geography Teaching Syllabus* (Republic of Botswana 2000) (emphasis added).

programme, as laid down in the Curriculum Blueprint. Then specific topics (content) were suggested. Every suggested topic was discussed, focusing mainly on identifying the vocational skills the topic would most likely promote. Once agreement had been reached on its appropriateness, then general objectives pertaining to the topic were generated. These defined in general terms what the student should be able to do after completing a topic. Specific objectives were then generated from the general objectives. These were specific skills that the learner should be able to demonstrate as a result of having undergone instruction, and to be stated in assessable and measurable behavioural terms (Tabulawa 2002). Figure 1 illustrates the general arrangement of topics in the Botswana General Certificate of Secondary Education (BGCSE) geography syllabus.

This syllabus displays four features redolent of the behavioural objectives movement – knowledge is atomised; skills are understood as narrow technical competencies; content is tightly specified; and outcomes are pre-specified/pre-determined as well as cast in measurable behavioural terms. This approach to curriculum development has attracted criticism, one of which is that it embeds a model of teaching and learning that is mechanistic, reductionist and that it neglects the 'examination of inaccessible and unobservable mental events' (Tennant 1988, 107) such as critical thinking, creativity, independence of thought, innovativeness and flexibility, the very attributes of the self-programmable learner. It is in this sense that the use of the behaviourist model of curriculum development in designing a curriculum aimed at delivering a self-programmable learner in Botswana constitutes a paradox.

Paradox two: the use of the behaviourist model of curriculum development in the review of the secondary school curriculum undercut the constructivist learner-centred pedagogy, thus undermining efforts to produce a self-programmable learner

How does this paradox play out in the Botswana context? Hyland (1994, 54) observes that: 'If behavioural objectives…are constructed in highly specific terms or are pursued to the exclusion of all else, they can easily become educationally counter-productive and vulnerable to all the weaknesses of behaviourism…'

Furthermore, use of behavioural objectives in curriculum design has been criticised for fragmenting 'learning into narrowly conceived categories of behaviour' (Tennant 1988, 117) and for leading to an atomised, 'tightly constrained curriculum with closely specified content' (Naish 1996, 73). The holistic and contextual nature of knowledge is lost. In the case of Botswana (with its highly centralised education system) this knowledge decontextualisation is accentuated by the fact that the teacher receives the curriculum sealed with the Teacher's Guide to assist them implement it. The highly specified content (as illustrated in Figure 1) leaves absolutely no room for the teacher to determine what to teach. The teacher's role is reduced to that of a technician who dispenses pre-packaged chunks of knowledge without any ethical consideration of what they are doing. In short, the curriculum is teacher-proof. What gets lost as a result is the social nature of learning and skill acquisition. This situation, in Purpel and Shapiro's (1995, 109) words, 'robs [teachers] of the opportunity to think creatively about how they teach or what it is that should be taught…' But as Knight et al. (1998) observe, to promote and develop creativity, independence, innovativeness and critical thinking some degree of student and teacher autonomy is a prerequisite. Thus the very skills that the RNPE is aimed to promote and which the constructivist learner-centred pedagogy is aimed to inculcate appear, at least in theory, to be undercut by a behaviourist model of curriculum development.

Moreover, emphasis on measurable behavioural objectives ensures effective marginalisation of the more humanistic concerns of education in favour of the instrumental. Figure 1 above displays this quality; it is clear that it is only the cognitive aspect that is accommodated. 'Fuzzy' achievements such as teamwork, independence and autonomy, which are part of the affective, are excluded effectively. Performance outcomes are therefore valued over process, leading to a 'monocultural view based on the satisfaction of narrow performance criteria [directed] towards fixed and predetermined ends' (Hyland 1994, 54). The result may be a 'limited model of teacher-student interaction' (Bull 1985, 79). In Botswana this problem is accentuated by a tight assessment regime. With the revised curriculum, assessment is strictly per the highly specified behavioural objectives. That is, in the examinations students may not be assessed on an objective that is not reflected in the syllabus. Although teachers are encouraged to go beyond the syllabus objectives, there is no incentive to do so, given the spectre of too many objectives to cover in a year. In conversations with them, teachers confessed that the emphasis on measurable performance outcomes encourages them to 'teach to the objective'. Treated in this manner, knowledge assumes an objective existence, far removed from student experiences. This has implications for classroom pedagogical practices: teachers 'spoon-feed' students with the information they need to pass examinations. 'Delivery' of information to meek and passive students becomes the teacher's preoccupation. The social nature of learning is lost, leading to diminished prospects for the development of generic skills such as interpersonal, communication and teamwork skills. In Botswana this situation is accentuated by the recent emergence of the League Table – that is, the ranking of schools by performance in public schools examinations results, with its attendant threats of punitive measures against non-performing schools. The school's position on the League Table matters more than anything else. With the ends justifying the means, teachers adopt didactic and authoritarian teaching and learning practices (see, for example, Prophet 1995 and Tabulawa 1997), the very practices that are antithetical to the production of a self-programmable, self-regulating learner. Thus, although at the level of policy rhetoric the RNPE promises

a radical transformation of classroom pedagogical practices, in practice it may just serve to perpetuate extant didactic pedagogical practices.

While the case has been made above for the deleterious effects (on the possible production of the self-programmable learner) of features (such as atomisation of knowledge and skills, pre-specification of content and the focus on performance outcomes) characterising the RNPE, it is important to point out that the features do not in themselves compel certain classroom practices. Their effect on classroom practices is contextual. For this reason it is necessary to explain why our second paradox plays out in the Botswana context in ways that are similar to or different from the way it plays out in other education systems.

A comparative perspective would be helpful here. For example, the use of behaviourist objectives in both New Zealand's Competence Based Education and Training (CBET) approach to unit standards and the United Kingdom's (UK) General National Vocational Qualifications (GNVQs) had different and contrasting effects on teaching and learning. In the case of New Zealand's unit standards, the use of behaviourist objectives led to didactic teaching, while in the case of the GNVQs (though competence-based just like the unit standards in New Zealand) evaluations of the programme (see e.g., Bates 1999 and Knight et al. 1998) confirmed a relatively easy co-existence of learner-centred pedagogy and a competence-based assessment. The reason for the deterministic relationship between behaviourist objectives and didactic teaching in the case of unit standards had to do with the fact that standards were tied to content, leading to tightly framed assessments. The GNVQs, on the contrary, explicitly tried to separate pedagogy from curriculum and assessment leaving room for a high degree of procedural autonomy. The case of Botswana is akin to that of the unit standards in New Zealand. As already observed, curriculum in Botswana is centrally orchestrated and is prescriptive to the point of being teacher-proof. When this aspect of the Botswana curriculum is dove-tailed to a tightly framed assessment regime in which tests and examinations precisely reflect the myriad of the specific objectives, it is not difficult to see how behaviourist outcomes are likely to contrast with learner-centred pedagogy. Thus, whether the use of the behaviourist model compels or not certain classroom practices will depend on how tightly or loosely outcomes are tied to content, this in turn leading to tightly or loosely framed assessments.

The strongly classified and framed curriculum in Botswana ought to be understood in terms of the state's ideology of monoculturalism. Officially, Botswana is a monocultural society. In the National Policy on Education of 1977, education was tasked explicitly with the responsibility to build a united nation on the basis of the history and values of the dominant Tswana-speaking groups. It was only their language, Setswana, which was given the status of a national language. The curriculum was to be based on the values and norms of these groups. Unity through assimilation of the other groups into the dominant Tswana culture was the state's preferred model of nation building. In the education arena this model translated into a centralised education system with a standardised national curriculum. Through such a curriculum teachers' work could be regulated and controlled to ensure that they did not deviate into activities running counter to the promotion of a monocultural view of society as espoused by the state. The highly prescriptive curriculum that emanated from the RNPE represented a further tightening of the framing and classification of the curriculum, leading in turn to intensified teacher surveillance and control (Bates 1999). Studies (e.g., Broadfoot and Osborn 1988; Fuller 1991; Stevenson and Baker 1991) indicate that centralised, prescriptive education systems tend to favour a more didactic

teacher-centred pedagogy. And as already stated, it is difficult to imagine how 'fuzzy' achievements such as creativity, innovativeness and independence can be promoted where both student and teacher autonomy is heavily constrained. Thus while the rhetoric of the RNPE is generally post-Fordist the curriculum development approach is top-down, hierarchical and therefore inherently concerned with regulation, surveillance and control, all these being qualities of Fordist production processes.

If the above analysis is plausible, then it is highly improbable that the new curriculum will produce the self-regulating and programmable learner envisaged in the RNPE. Paradoxically, the curriculum can be expected only to produce people suitable for the nineteenth-century factory floor, the very opposite of the self-programmable learner. This paradox has its genesis in the internal contradictions of the RNPE itself: constructivism and behaviourism, in their conflated form, are expected to deliver the self-programmable learner, yet the two are epistemologically diametrically opposed. Conflating them can only lead to conceptual (and ultimately pedagogical) confusion, thus creating a dilemma for classroom teachers – on the one hand, policy requires them to use learner-centred methods in their lessons, while on the other, the skills-based syllabus constrains them from doing so. Given the pedagogical past (of didactic practices) of both the teacher and students, the constraining nature of the skills-based curriculum, and the strongly framed assessment regime in Botswana, these classroom actors are most likely to resolve the dilemma by adopting didactic, undemocratic and authoritarian classroom practices, the result being diminished prospects for the production of a self-programmable learner.

Conclusion

The world of work is said to have experienced fundamental transformation in the past two decades. The old hierarchically organised workplaces in which workers simply followed rules have been or are being replaced with more flexible, flattened and democratic ones that are aligned with post-Fordist production processes. It is argued that while the former were deskilling, the latter are empowering. This transformation has put pressure on the education system to produce people with the desired psychosocial traits of independence of thought, innovativeness, creativity and flexibility. These are deemed essential for the 'new' economy. Botswana's RNPE represents the country's response to this global discourse: it purports to produce the self-programmable learner now required by the 'new' economy. However, I have argued in this paper that a critical evaluation of the policy and its attendant learning programmes (curricula) points in the opposite direction: in practice it is more likely to produce conformists fit only for outdated Fordist production processes. By analysing two constructs of the policy (pre-vocational preparation strategy and the behaviourist model of curriculum development) upon which the production of the self-programmable learner seems to hinge, I have arrived at the conclusion that it is highly unlikely that the preferred learner will be produced. The two constructs are identified as paradoxes in that their effects are likely to be the opposite of what was intended. My main argument in the paper can best be summarised in Knight et al's (1998, 65) statement (when GNVQ is substituted for RNPE) that, 'the rhetoric of [the RNPE] is post-Fordist, emphasizing the importance of "fuzzy" achievements such as independence. However, these concepts are operationalised in Fordist or Taylorist language…'

Exactly how this contradiction plays itself out in practice remains to be seen. This is largely an analytical paper and so the views expressed here need to be tested on the

ground. They need to be corroborated by observations of the curriculum-in-use. Detailed ethnographic studies of teachers and learners in action are required. What are these participants' experiences with the new curriculum? Do they find it as constraining as it is claimed here? This paper sets the context for studies that address these and many more other questions.

Notes

1. 'Post-Fordism' is not without definitional problems. Carter (1997, 45), for example, observes that the term combines 'a number of diverse frameworks, applications and conclusions, [and] also composites different levels of definitional coherence… The result is that these different meanings become collapsed and the term itself swamped by overuse'. Literature on post-Fordism abounds (see e.g., collections in Gilbert et al. 1992 and Amin 1994).
2. Nola (1997), for example, identifies more than a dozen different 'constructivisms'. For variants of constructivism that have relevance to education, see Windschitl (2002) and Terhart (2003).
3. Commentators (e.g. Ball 1993; Usher and Edwards 1994), adopting Foucauldian analysis, debunk progressivism's claim to teacher and learner empowerment, freedom and democracy. This supposedly empowering pedagogy, they argue, in fact disciplines, normalises and controls. Progressive pedagogy, through its confessional strategies, causes learners to put their inner lives on display, thus making their own disciplining and surveillance easier.

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