

Knowledge, Curriculum and Qualifications for South African Further Education

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and Jeanne Gamble

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Abbreviations and acronyms

CHE	Council for Higher Education
FET	Further education and training
FETC	Further Education and Training Certificate
GENFETQA	General and Further Education and Training Quality Assurance Council (now Umalusi)
GNVQ (UK)	General national vocational qualification
HSRC	Human Sciences Research Council
NATED	National Education
NCVQ (UK)	National Council for Vocational Qualifications
NEPI	National Education Policy Investigation
NQF	National Qualifications Framework
NSB	National standards body
NVQ (UK)	National Vocational Qualifications
OBE	Outcomes-based education
ORF	Official recontextualising field
PRF	Pedagogic recontextualising field
SAQA	South African Qualifications Authority
SAUVCA	South African Universities Vice-Chancellors' Association
SGB	Standards generating body
SETA	Sector Education and Training Authority

Introduction: Setting a context for debates about the senior secondary curriculum

Michael Young and Jeanne Gamble

The increasingly globalised world economy puts a premium on the easy movement of capital and the flexibility of labour, together with pressures for the constant upgrading of the skills and knowledge of the labour force of all countries. The international division of labour means these pressures act differentially on industrialised and developing countries to the persistent disadvantage of the latter. However, the ‘flexibilisation’ of both labour markets and systems of education and training is widely endorsed as necessary for any country aiming to survive economically and produce saleable commodities that compete in the global marketplace. In such a context, it is the multinational corporations rather than governments that make investment decisions and define the priorities for growth, with varying degrees of regulation by international agencies. National governments are increasingly limited to trying to make their countries as attractive as possible to investors through a combination of stabilising their currencies, minimising commercial and legal constraints, keeping taxes low and raising the skills and knowledge of their national labour forces. It is the last of these strategies that increasingly underlies and shapes educational reforms, especially but not only in the post-school sector. This is the context and these are the reforms with which we are concerned in this book, primarily in the case of South Africa.

Government approaches to educational reform are influenced by these global economic pressures, and have the example before them of successful multinationals such as Microsoft, BMW and Sony. As a result, they tend to assume that they must treat the labour force, skills and knowledge as commodities, or ‘things’ to be bought and sold in at least a ‘quasi-market’. In other words, in countries such as the United Kingdom (UK) and South Africa, education and training policy is driven by a human resource development agenda or, what amounts to the same thing, a national skills strategy. In both

countries, it is not, as in the past, just vocational and technical education that are informed by human resource priorities, but all education – general and higher as well as vocational. In the face of economic pressures that are largely global, not national, in origin, such a response is seen by many governments as the only strategy.

This ‘economy-led’ trend in educational policy has two implications. First, significant areas of education and training are handed over to private business,¹ which, as the expert domain in producing saleable commodities, is seen as likely to be the most efficient. Second, state provision is increasingly designed to take the form of a ‘quasi-commodity’,² where the product is an outcome or a qualification that is chosen, valued and exchanged by students (or learners increasingly seen as consumers) in a ‘quasi-market’. These trends pose difficult questions for those responsible for educational policy, as well as for educational professionals in schools and colleges. What then are the questions that this new human resources agenda raises? The first is the political question about whether economic priorities should have such a major role in shaping educational policies. The second is to ask what the educational implications of such priorities are; in other words, if such a trend is followed, is it likely to realise the claims made for it of promoting growth and equity? The third question is whether there are viable alternatives that might, in the long run, make a more successful contribution both to economic growth and greater equality. It is this third question that frames the concerns of this book.

The economically-driven trends in educational reform suggest a number of options for education policy makers. One option is to accept that the new global circumstances do require a radically new approach to education policy and that we have no alternative but to respond to global economic pressures as fundamental shapers of education policy. As the UK Prime Minister Tony Blair once put it, ‘education is the best economic policy that we have got’. The idea that human resource-led education policy is the best kind of economic policy is less absurd when one bears in mind that UK governments long ago gave up the idea that they could have an economic or an industrial policy. With varying degrees of explicitness, and with a greater or lesser emphasis on combining a global economy-led approach with support for promoting social inclusion or redress, this is the argument of most international organisations, such as the European Union, the World Bank and the International Monetary

Fund, the Organisation for Economic Co-operation and Development, the International Labour Organisation and the World Trade Organisation, and it is endorsed by a growing number of individual countries.

In countries such as the UK and South Africa, this ‘commodification’ of education is increasingly expressed in a new currency of transferable, portable outcomes and qualifications that provides the logic for a qualifications and outcomes-driven approach to educational reform. In this process, educational institutions and curricula lose their specificity and become delivery mechanisms for ‘products’ (in this case, outcomes, standards and qualifications). Schools and colleges become little more than providers of outcomes, competing in the market like the providers of any other commodity. Giving priority to outcomes and separating them from the teaching and learning contexts which can lead to them is seen as the best use of public money and the most likely way of promoting greater equality. Expressing education as outcomes measurable in terms of a currency (the National Qualifications Framework or NQF) is the nearest that education gets to being like a commodity. The problem, as the chapters of this book argue, and as is ably demonstrated by Colin Crouch (2003) for schools and by Allyson Pollock (2005) for health, is that the attempt to commodify education by equating it with outcomes is ultimately counterproductive. Bernstein describes the separation of learning from its outcomes most evocatively in the following terms:

A new concept of knowledge is [emerging]...Knowledge, after nearly a thousand years, is [becoming] divorced from inwardness and literally dehumanised...what is at stake is the very concept of education itself. (Bernstein, 2000: 86)

In Marx’s terms, the commodification of education produces exchange values (with more students getting more qualifications) but it does not produce use values – the knowledge, understanding and skills needed to be productive. As a result, even the so-called exchange values, such as outcomes, may not be exchangeable. With employers complaining about the lack of knowledge and skills, a further round of privatisation is seen as the only answer. The most likely consequences are credential inflation, disillusion by many young people and a loss of confidence in the whole educational enterprise and the claims that it makes. The fundamental flaw in the commodification of education as outcomes, as the chapters in this book return to again and again, is that in

such a one-dimensional approach to commodification, both production and education are misconceived.

The second option is to recognise that the processes of commodification and marketisation that are increasingly associated with globalisation inevitably accentuate the differences between the rich and the poor both within and between countries and undermine any emancipatory potential that public education might offer. The logic of this position is to oppose all attempts such as commodification and marketisation that involve adapting to globalisation. Supporters of this form of anti-globalisation oppositionism such as Hardt and Negri (2000) invoke popular protests across the world, however diverse and however fragmentary, as sources of an alternative. However, there is little about education or anything as substantial as the economy or politics in their alternative world, and so they end up in the familiar position of all anarchists – in opposition for opposition's sake.

The third option, which is broadly the one adopted in this book, is to reject the argument that the embracing logic of commodification and the market must necessarily spread to all areas of social and public life. Where successful industrialisation has occurred, there is no point in denying that it *has* involved the commodification of industrial production and the extension of the range of goods and (in some cases) services that take the form of commodity relations. However, this successful commodification process has in most cases been dependent on quite different approaches to education, health, welfare and other 'public goods'. The remarkable economic success of Japan, for example, *was* based on the increasingly efficient production of 'commodities' but not on the commodification of its education system. Japanese education, like that in Singapore, Taiwan and South Korea (and increasingly in China), and in somewhat different ways in continental Europe, has continued to be based on assumptions that are fundamentally at odds with commodification. Education in such countries is not bought and sold, it is not measured in 'outcomes', and qualifications do not drive educational reform.

Education is about the acquisition of knowledge and understanding, processes that cannot be 'commodified' or expressed in terms of 'outcomes' without destroying their distinctiveness. This does not mean that countries can avoid trying to extend the range of products they make that are saleable in the global market. Nor does it mean that they can avoid trying to be more efficient in using their limited educational resources, or that partnerships and

frameworks shared between different sectors in both vocational and general education, which in the past could afford to remain autonomous, do not need to be built. Most successful countries across the world recognise that producing commodities for the global market is an inescapable feature of their survival in the modern world. However, successful commodity production relies on the specificities of a high-quality system of education and training; it does not imply that such a system should itself be modelled on the idea of commodification.³

The aim of this book is critical, in that it tries to show what happens if the features of education that are distinctive to it are neglected or given a secondary place. This idea of distinctiveness is not the same as being either traditional or universal. An education system is not independent of the society of which it is a part; as societies change, so does education change. How an education system changes partly reflects social changes, but it is no less important that it reflects an educational logic that is concerned with what is distinctive about education in all its forms – the acquisition, transmission and production of knowledge. If such a logic is forgotten, we may have welfare, care, participation, leisure or community politics in our schools and colleges, but we do not have education.⁴

This book is also critical in the positive sense of showing that there are alternatives and what they may be. Furthermore, these alternatives are far from being utopias; they can be found both in the history of South African education (albeit often deformed by apartheid) and in that of other countries. It is a book largely about reforms in South African post-compulsory education in the last decade. However, in arguing that the problems facing South Africa arise from the globalisation of all national economies rather than only from (a) South Africa's own history, and (b) the particular responses in South Africa to this globalisation process, the implications of the book are much wider. There is nothing remotely country-specific about commodification or policy responses to it. Furthermore, South Africa is not only dealing with its colonial legacy, with institutions and provision often modelled on the UK, but it has adopted UK, New Zealand and Australian approaches to reform in its attempt to overcome this legacy. In so far as the policies adopted from overseas represent wrong turnings, they raise questions for their countries of origin as much as for South Africa.

Whereas it is almost a truism that all educational provision is shaped by economic pressures, it is in the further (senior secondary, or post-compulsory) education phase that the dilemmas posed are most acute. In many countries, compulsory school education is still governed by a national curriculum geared to intellectual and social development of each learner. Universities still retain a large degree of autonomy from economic pressures, however much this is now in question. It is further education which is at the interface of school and the world of work and employment (and, of course, often unemployment). Further, senior secondary or post-school education never has a single purpose. It is always involved in providing access to higher education, albeit for a minority of each cohort, and in preparing young people for the labour market as well as developing them as citizens. Democratic as well as economic pressures accentuate both these sets of demands, as well as the extent to which they pull in opposite directions and whether they are realisable within a single system. A second characteristic of further education, which is often only recognised implicitly, is the vast range of learners for which it provides. This is not a feature of either school or higher education. This again raises questions about the feasibility of any single or unified system and the wide range of demands on teachers.

In common with a growing number of countries, South Africa's first democratic government turned to an NQF as its main instrument for supporting reform and for resolving some of the problems of diversity that are particularly characteristic of further education. The NQF, with its single set of levels and comprehensive range of knowledge domains and occupational fields, appeared to offer a set of benchmarks that could be used to drive improvement, facilitate portability or transfer across a wide range of previously separate progression pathways and stimulate learning in all sectors, even those historically dominated by people with low skills or no qualifications at all. The idea of an NQF also seemed to provide a single vision for the whole country and a genuine alternative, in South Africa, to the old system that was based on racist divisions. It also offered a vision that blurred distinctions between academic and vocational curricula and suggested that students would be able to move seamlessly between an increasingly integrated set of pathways. Such a vision not only captures a set of possibilities that are readily endorsed by progressives within the education community and the labour movement, but it is appealing to any government seeking an instrument for steering provision

in such a complex and diverse field as further education and training (FET). Furthermore, NQFs are very much part of a global agenda supported by international organisations and aid agencies, and are being explored by a growing number of countries, developed and developing (Young, 2005). An NQF offers a way for an emerging democracy to feel that it is part of the 'leading edge'. This overall vision, especially for a country with such a divided past as South Africa, is one that is endorsed by the contributors to this book.

However, there is an enormous difference between a broad political vision and the instrument that is developed to realise it. The NQF itself as well as SAQA (the South African Qualifications Authority), the agency responsible for it, have received an increasing amount of critical attention which has led to a succession of reviews and reformulations. The Ministerial Study Team and the Joint Task Team Reports, and the recent proposals from the Council for Higher Education and the Qualifications Authority for General and Further Education (Umalusi), as well as a range of articles in academic journals, are examples of the breadth and range of the criticisms. The government has yet to respond finally to these reports and the consultations to which they have given rise. However, despite the critical and often polarised debates, the underlying assumptions of a qualifications-driven approach to reform and, as we suggest in this book, its link to the wider process of commodification of education have been little examined. This partly reflects the close association of the NQF with the politics of post-apartheid transformation. As Allais (2003) commented, criticising the NQF could be seen as the same as being critical of the whole project of post-apartheid transformation.

This has had at least two consequences. First, in the South African debates, there has been little recognition of the diverse forms that NQFs take and of the diverse roles for a qualifications framework that have emerged internationally. To be aware of the options, one has only to compare the top-down, rigid and over-bureaucratised NQF that was initially introduced (and almost collapsed) in New Zealand with the case of Scotland, where reform has been far more curriculum- and institution-led and where the Scottish Credit and Qualifications Framework has played a much more modest role (Raffe, 2006, forthcoming). Second, as Allais points out in Chapter 2, there has been a strange reluctance to acknowledge the common roots of an NQF based on national standards and the outcomes-based education (OBE) curriculum that was launched quite separately in schools. Undoubtedly, the two ideas – an

outcomes-based curriculum for schools and the NQF – had somewhat different histories in South Africa. It was the Congress of South African Trade Unions and some of the leading trade unions that supported a unit standards-based NQF, following visits to Australia in the early 1990s. The beginnings of OBE are probably to be found somewhere in the links between the adult education community and the South African Democratic Teachers' Union at a similar time. Furthermore, whereas the OBE-based Curriculum 2005 and the revised curriculum statements were launched by the Department of Education, the NQF was developed by SAQA.

The important point that is discussed by Allais in Chapter 2 is that, conceptually, OBE and the NQF are identical.⁵ It follows that their educational implications complement each other. Both represent the radical replacement of a syllabus-based, institution-led approach to educational reform by an approach based on outcomes or standards. Linking back to the analysis developed at the beginning of this chapter, both treat education as an end product or commodity measurable in terms of standards or outcomes. Both the standards of the NQF and the outcomes of the OBE curriculum are modelled on the idea of international standards that were necessarily developed to standardise the products of mass production. Superficially, the idea of outcomes or standards looks to be a simple and obvious way of assuring that quality is maintained in education. It undoubtedly has a well-tested track record in fields such as engineering, electronics and building, upon which all of us, whether consumers or producers, depend. However, the extension of the idea of commodification that involves the transferring of ideas such as standards and outcomes from physical products (such as electric light bulbs and plugs) to teaching and learning turns out to be far more problematic than its advocates supposed. It is a problem of non-transferability, this book argues, that is the root cause of all the implementation problems faced by the NQF and the outcomes-based curricula in South Africa and elsewhere. Furthermore, the problems faced by the NQF were not, as the remit for the Ministerial Review supposed, problems of implementation; they were fundamental errors in imagining that it was possible to transfer a perfectly adequate mechanical model to a process such as teaching and learning that is not mechanical. Whereas an electric plug is directly testable by seeing whether it fits a socket and the light goes on, regardless of how it has been made, a learning outcome, if it is to be meaningful, is inescapably linked to

the teaching and learning that leads to it. Why has this flaw not been noticed in other countries? There are two possible answers. The first is that it has only been tried in a comprehensive way in New Zealand where it has largely been dropped, albeit quietly, for the same reasons that it has not worked in South Africa. The second is that in England, the other country in which it was relatively systematically introduced, it was only applied to provision for those on vocational courses who had failed in the mainstream system. Policy makers, at least in the UK, have always been willing to try experiments on those with little status and power in society.⁶

Two features of outcomes and standards set them apart from other ways of organising education and training. First, while both involve levels, their underlying principle is one of non-differentiation between learning and knowledge. The same criteria and level descriptors are assumed to apply to all learning and all knowledge. Second, outcomes and unit standards are criteria for assessing performance, and as such they refer to what people can do rather than what they know; this is as true when what they have to do is 'to analyse a poem' as when they have to 'weld together two pieces of metal' – the content or the 'what' they need to know is implicit. Both assumptions appear radical but have troubling educational implications. The assumption of non-differentiation is associated with the claim that the NQF can provide a way for all qualifications at a given level to be compared or transferred. The second assumption gives priority in terms of progression to the principle of access as opposed to the stipulation of content by a group of specialists. In a country where the right to define content was used in the past to protect racial privileges, the objection to the misuse of the role of syllabuses is understandable. However, there is a clear distinction, as several chapters in this book show, between the misuse of syllabuses to preserve privileges and exclude some people, which was a feature of the apartheid era, and the crucial role of syllabuses in maintaining quality, guiding learners and examiners (or assessors) and ensuring that those beginning a programme have the knowledge base to do so. In most successful systems, the specification of knowledge content and the differentiation of types of learning are seen as necessary conditions for promoting progression and expanding access, and therefore for achieving greater equality.

These two issues, the necessity of differentiation and the centrality of a clear concept of knowledge, lie at the heart of the difficulties faced by educational

reforms that attempt to disregard them both in South Africa and elsewhere. In this introduction we have argued that they also are the logical, albeit contradictory, outcome of the process of commodification of education. The idea of a single currency of standards and a single set of levels and the abstraction of outcomes from both their institutional and knowledge bases are the conditions for treating education as a commodity. As this book seeks to show, this is not just another critique of the NQF and its proneness to bureaucracy and jargon. The ideas of differentiation and knowledge lie at the heart of a genuine alternative. Before introducing the chapters, it is necessary to say a little more about these two issues, why they are related and why we see them as so crucial.

Differentiation is a fundamental principle of human and societal development and of all education systems. It refers to the different domains of knowledge and to the knowledge and skills related to different occupational fields. It also refers to levels of understanding and skill in knowledge domains and within occupations. Loosely defined level descriptors that apply across different fields and domains are found in all systems. However, it is the level descriptors that are generated from and gain their meaning from the specific domains of knowledge, not vice versa. Differentiation applies to the distinction between teaching and learning and to the limitations of participation as a metaphor for learning. It is also expressed in the difference between theoretical knowledge (or learning that requires systematic study), and practical 'know-how' that can usually be acquired 'by doing'. This is not a judgement of value, that one is better or more difficult than the other, but a social reality on which a system of further education must be based.

Modern systems of FET are highly differentiated, and differentiation, by definition, creates problems of selection and progression. Two approaches to the problem of differentiation and selection can be distinguished. One might be called the access approach, which tries to minimise differentiation by reducing the number of levels, blurring the distinction between 'theoretical' and 'practical' and, most important, assuming that selection and progression can be provided for by a ladder of levels. Reaching a level, on this basis, assumes both the right and capability to study at the next level. In the interest of promoting access, such a system is unable to discriminate between the performances needed to reach a level and those needed to study at a higher level (see Chapter 4). An alternative approach, proposed by the authors who

contributed to this book, might be referred to as a pedagogy-based, as opposed to access-based, approach to selection and progression. This approach argues that these processes cannot be located in a qualification framework alone; they need to be institution-based, and specialist pedagogies need to be developed that support progression between levels (and if necessary across domains at the same level).

The chapters in this book are drawn mainly from contributions to a short research project on the FET curriculum in South Africa, funded by the Human Sciences Research Council in the first quarter of 2004. At the time, education policy proposals centred on a post-compulsory FET band on the NQF that would offer students the choice of three pathways of further learning after the end of the compulsory phase of general schooling (Grade 9). A *general academic route* (Grades 10 to 12 in schools), a *general vocational route* (NQF Levels 2 to 4 in public FET colleges) and an *occupational route* (that would be workplace-based but could also be offered by FET colleges) would all culminate in a Further Education and Training Certificate at Level 4 of the NQF. This proposed qualification quickly became known as the FETC.

A common qualification at the end of the senior secondary phase threw the putative similarities and differences between general academic and vocational education into stark relief. As all routes would, in theory, offer access to both higher education and the workplace and would thus give purchase to the notion of 'equivalence', a momentary space was created to explore convergences and divergences in what had hitherto been oppositional areas of academic work. The arrangement of the chapters reflects the 'double lens' that was cast on issues of qualifications reform, knowledge differentiation and curriculum.

Since then, new policy developments have occurred, such as a new Senior Certificate (commonly referred to as 'matric') which is to be introduced in Grade 10 in 2006, with the first students reaching Grade 12 in 2008. This school-leaving qualification at the end of senior secondary schooling will be known as the National Senior Certificate – a nomenclature that bears no obvious resemblance to the NQF, unlike the proposed FETC (Vocational) that is to be offered in FET colleges. The moment of joint interrogation of the FETC has thus passed but, even though issues raised by the various contributions are contextualised within the immediate policy moment at the time of writing, this does not detract from the salience of the book as a

whole. The range of contributions bears testimony to the fact that, contrary to common wisdom about the taken-for-grantedness of the relation between vocational education and work (and therefore, by implication, to the market), standards-based approaches to qualifications are as much of a concern in the vocational domain as they are in general formative education. The general academic curriculum in schools also remains an area of contestation, for all the reasons already discussed in this chapter.

After the introductory chapter, the book is divided into three sections, each of which gives priority to questions of knowledge and the curriculum but with a somewhat different focus. The broader argument is that it is the curriculum that must be reflected in the qualification structure, not vice versa. Part 1 focuses on qualifications and curriculum reform to provide the context for the chapters in the rest of the book. Allais's chapter (Chapter 2) does this by setting out alternative approaches to the further education curriculum, within the tensions of recent South African education policy and within the problems generated by policies adopting an outcomes-based approach. In Chapter 3, Young locates the options discussed in later chapters in a broader international and comparative perspective, drawing largely but not only from the UK experience.

Part 2 focuses on knowledge differentiation, beginning with a chapter by Muller (Chapter 4). In relation to proposals for the reform of the Senior Certificate, he shows that a programme of de-differentiation (in terms of both content and levels) has been adopted in the interests of widening access and opportunity. The result, he argues, will be to limit progression in key subjects, especially for those groups that have been historically disadvantaged in South Africa. In Chapter 5, Gamble takes up the issue of knowledge differentiation in relation to the vocational curriculum. She argues that the distinction between theory and practice that characterises curricular arrangements in FET colleges should be understood as fundamentally different kinds of knowledge, and that the current trend towards viewing the college curriculum purely in practical terms, which follows from a unit standards-based approach, leads to downward rather than upward vocationalisation and blocks possible progression to higher education. Even though knowledge has to be tied to practical work experience to give the vocational pathway a distinctive character, knowledge has to feature as prominently in the vocational route as it does in the general academic route. Young's chapter in this section (Chapter 6), although not

specifically commissioned for the project of which this book is the result, adds significantly to an understanding of different knowledge forms. The chapter argues that debates about the reform of vocational education have invariably neglected the question of vocational knowledge, and critically discusses the three approaches to knowledge that have characterised debates and reforms of vocational education and training in the UK up to now. It then proposes a framework for analysing these approaches to vocational knowledge that draws on two traditions of sociological theory, namely social constructivism and social realism. Having identified the relationship between power and different concepts of knowledge that is made explicit by social constructivist approaches, the chapter examines the social realist approach and its distinction between types of knowledge that were developed by Durkheim and Bernstein. Finally, it suggests some implications for the conceptualisation of vocational knowledge.

The two chapters in Part 3 offer different perspectives on the making of curriculum. Ensor (Chapter 7) explores the links between school subjects and university disciplines. She argues that the role of universities as legitimators of knowledge is being challenged – by the pressures of globalisation and the knowledge economy, which undermine the position of universities internationally and, in South Africa, also by the particular requirements of the NQF. The chapter maps out significant shifts in the shape and content of the proposed FETC and shows the direct and indirect role of the universities in this process. Ensor argues that, while the struggle over the FETC is significant in its own right, it also signals fundamental realignments in the intellectual field. The final chapter, by Michael Barnett (Chapter 8), takes up the issue of the vocational curriculum. Barnett argues that vocational pedagogies have to ‘face both ways’ in terms of a mix of disciplinary knowledge and situated workplace knowledge. He emphasises the links between occupational progression and academic progression and draws on examples from a range of qualifications offered in the UK to show how the constraints on pedagogic framing imposed by the standards-based format of National Vocational Qualifications inhibit curriculum development that takes both knowledge forms seriously. We are grateful to Professor Barnett for generously making this chapter available to the project. Curriculum developers in South Africa and elsewhere are only in the beginning stages of exploring the particular nature and challenges of vocational pedagogy and the chapter makes a valuable contribution to what is still a severely under-theorised field.

Taken together, these chapters provide a coherent critique of the growing tendency to treat education as a market commodity, but, perhaps more importantly, they also show that educationalists have something to say about their own territory in their own language – the language of education.

Notes

- 1 The private universities and colleges and the involvement of the private sector in the Sector Education and Training Authorities (SETAs) in South Africa (and similarly in Sector Skills Councils in the UK) are the most obvious examples. In England, the most recent example of this trend (and under a Labour Government!) is the proposal to 'sell' the probation service, which has responsibility for the aftercare of prisoners and advising the courts, to private bidders.
- 2 We use the term 'quasi' because in most cases there are not actual buyers and sellers in the sense implied by private education or by voucher schemes.
- 3 This does not mean of course that these countries will not enter the market for overseas students, for example, but that this is a secondary purpose.
- 4 This is not to say that in these processes people do not learn or that they may not in a sense 'be educated'.
- 5 This was of course noted most positively by Jessup (1990) in a modest example of conceptual imperialism. He claimed that an outcomes model, launched initially for vocational qualifications in the UK, could be the basis of a reformed education system.
- 6 Any attempt to introduce an outcomes-based model for university entrance would have had quite different consequences.

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Part 1

QUALIFICATIONS AND CURRICULUM REFORM

Problems with qualification reform in senior secondary education in South Africa

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Introduction

Reform of senior secondary education is a concern of governments internationally. This chapter discusses the problems that South Africa has experienced in its attempted reforms of senior secondary education or, as it is known in South Africa, Further Education and Training (FET). It looks specifically at qualifications at the end of secondary education and how outcomes-based education (OBE) was introduced to solve various problems with these qualifications.

The chapter starts by discussing the problems that South Africa was trying to solve – problems that were similar to those of other countries, but which were exaggerated by the legacies of the iniquitous apartheid system. It then explores two problematic aspects of the reforms introduced: first, the conceptual flaws in the outcomes-based qualification-driven approach that was adopted to drive reform and, second, the contradictions and confusions in the qualification reform process at the senior secondary level. It discusses how these two different sets of problems have reinforced each other. It concludes with a description of the latest developments, in which it looks as though the latter set of problems may be starting to be addressed, but the former still needs to be understood.

OBE has been central to the attempts to reform the curriculum in South African schooling. South Africa developed a National Qualifications Framework (NQF), which aimed to reform the entire system of education and training through outcomes-based qualifications. Some analysts (see for example Muller, 2004) have focused on the differences between, on the one

hand, OBE as it has been implemented in the schools in South Africa, and, on the other hand, the NQF, with its associated structures and processes. The notion that the two approaches are different has also been fuelled by disagreements between the Department of Education, which implemented OBE in the school system, and the South African Qualifications Authority (SAQA), which developed the NQF. While there certainly are differences, I use the term ‘outcomes-based qualifications-driven reform’ to capture what these two approaches have in common.

The outcomes-based qualification-driven approach combines the idea of using qualifications as the primary instruments of reform with the notion that learning outcomes should be the drivers of all educational processes. Thus, qualifications are composed of statements of ‘learning outcomes’ or ‘competencies’ which do not involve reference to specific inputs or programmes, and are defined independently of the route that learners take to become qualified. This type of approach is believed, among other things, to ensure that education programmes are relevant, engaging, likely to build needed skills, and are of the required standard. The focus in educational reform is thus on getting the learning outcomes, which are specified in the qualifications, right. It is believed that the rest will follow from the learning outcomes.

The chapter argues that the outcomes-based qualification-driven approach to reform has created more problems than it has solved in the South African senior secondary system, but that the underlying problems with it have been masked by perceived differences between different role-players, as well as lack of clarity on roles and responsibilities within the system. This has been aggravated by the linking of outcomes-based qualifications with the project of increasing social equality: critics of the approach have at times been labelled as enemies of transformation.

Background: Senior secondary education internationally and in South Africa

After the transition to democracy in 1994, South Africa urgently needed to reform its education and training system. However, the problems that South Africa was trying to solve were not unique. In many countries around the world, it is a recent phenomenon that large numbers of young people are

completing secondary education, mainly in systems that were designed for small numbers of largely middle- and upper-class students. The recent and rapid expansion of secondary education has led to a questioning of its role, as well as fundamental questions about its nature and the structure of education systems. In the same period, the world has experienced significant changes in the global economy as well as in industrial organisation in many countries. Education has increasingly become the focus of policy attention of many governments, as senior secondary education is presented by governments as the solution to unemployment. Another effect of changes in the global economy has been an increasing preoccupation of governments with reducing state expenditure and creating 'efficient' public services, which in turn has led to attempts to measure educational outcomes and make the education provided more 'relevant'.

These are some of the reasons why assessment and certification of learner achievement in secondary education are the focus of so much interest and attention from governments, which are grappling with a number of sometimes intractable and often conflicting problems. Governments internationally are trying to find ways to ensure that young people stay in school, to provide secondary education for a far wider range of learners than the existing systems were designed for, to prepare a much higher proportion of learners for higher education, to meet the (usually conflicting and always hard to establish) needs of the economy, and at least to appear to be combating unemployment. A quick survey of education policy reform internationally reveals that, since the 1990s, many governments have been trying to change, reorganise, improve, and reform senior secondary education (see, for example, the special edition of *Assessment in Education* 8(3) and discussion in Allais, Welch & Van Voore, 2003). But rhetorical pronouncements about relevance, efficiency, outcomes, and skills as solutions to unemployment are easy to make; understanding exactly how education systems should and can be changed is a much harder task.

One of the most intractable problems in reforming upper secondary education has been the extent to which academic education and vocational education are separated and what the appropriate relationship between vocational and general qualifications should be (Allais et al., 2003). Many governments believe that, at this level, the majority of young people should be studying vocational courses which, governments believe, are more likely to lead to employment. However, this is often official rhetoric which is not based in

reality. As Gill, Fluitman and Dar (2000: 15) explain, the most common objectives of vocational education internationally are 'first, to keep less gifted students out of higher education and off the streets; second, to keep them temporarily out of the labour market; and third, to provide employers with skilled workers and technicians'.¹ Despite the attempts of governments, general education is usually seen as preferable by both parents and students, and vocational education programmes are seldom their first choice (Nherera, 2000; Wolf, 2002). Thus, one of the aims of more recent reforms has been to try to convince reluctant populaces that vocational programmes should be seen as equivalent in status with general (academic) education.

The global phenomena described are all magnified in South Africa. Where, internationally, trends have been towards the increasing massification of senior secondary education, in South Africa this trend was magnified by the fact that after 1994 the state needed, in a very short time, to overhaul an education system that was deliberately designed to cater only for a small white elite. While other countries struggled to find their place in the new global economy, South Africa started from a position of greater isolation, as well as with more structural problems in the economy, than many other countries. While the 'efficiency' of education systems was becoming an increasing concern for governments internationally, South Africa had to overhaul an astonishingly inefficient system, comprising separate education departments for different racial groups as well as for the so-called independent homelands. And finally, while the South African government was particularly keen to encourage learners into vocational programmes, and to raise the status of such programmes in society, vocational education was particularly weak and of extremely low status, seen as a last choice even for weaker learners.

The links between secondary and higher education are an important focus of policy reforms geared to improving the status of vocational education, as secondary programmes that lead to higher education generally have higher status. However, vocational programmes in many countries have often been designed for students who are not coping with academic education, and have often included very little of the kind of learning that prepares a student for higher education. This was very much the case in South Africa, where vocational programmes were designed in such a way that it was almost impossible to gain access to higher education from them.

What was needed in South Africa was a policy reform that would not only enable a complete change from apartheid education, but would also solve these difficult problems that dog senior secondary education internationally, and which were exaggerated in South Africa. Raising the quality and the status of vocational education was seen as particularly important. The solution was seen to lie in outcomes-based qualifications. It was claimed that introducing OBE in the school system as well as an NQF that overarched all education and training would achieve the following:

- Ensure that learning was 'relevant' and of high quality;
- Produce learners who were competent in the workplace;
- Provide access to those previously excluded, while also recognising the learning that they had achieved informally;
- Ensure that all qualifications were of equal status;
- Ensure that assessment was transparent and fair.

However, these claims turned out to be little more than a wish list, more rhetorical than substantial.

The next section looks in more detail at the qualifications that have been the main focus of reform and contention, as well as at the way in which outcomes-based qualifications were introduced to replace them and solve the problems listed earlier.

The South African reform attempts

The old qualifications

In South Africa, senior secondary education was historically organised into separate institutions for general and vocational education: schools, technical schools, and technical colleges. The approximately 150 racially segregated technical colleges have recently been merged to form 50 multi-campus institutions known as FET colleges, which are supposed to offer vocational education at senior secondary level. Schools that were previously segregated are now multiracial, but fundamental curriculum change at a senior secondary education level has not occurred, and is only to be introduced in 2006.² There was also a small, largely white, apprenticeship system linked to the technical colleges. By the 1990s the apprenticeship system was in decline, and

the government has tried to replace apprenticeships with what are known as learnerships.

The Senior Certificate, predominantly obtained in schools (including technical schools), is the qualification which is by far the best known, has the highest stakes, and is taken by the vast majority of learners who complete their senior secondary education. Other qualifications at this level have been generally defined by comparison with the Senior Certificate. These are vocational qualifications, which include the National Senior Certificate, National N-Certificates, and National Integrated Certificates, and are offered in the colleges. They are usually referred to as the 'NATED' (National Education) qualifications, because they are regulated by a list of subject statements and qualification rules which was designated by this name. These qualifications were centrally examined by the Department of Education. In addition to the qualifications offered in the public sector, there is also a vast range of qualifications offered by private providers, sometimes linked to international franchises, and sometimes merely internally designed and certificated (Allais et al., 2003).

The Senior Certificate has been widely and harshly criticised from a wide range of quarters – for being too narrowly focused on preparing learners for university, but at the same time for not doing a particularly good job of it. On the other hand, the college qualifications have been criticised because on the one hand they don't lead to higher education but on the other they are also not sufficiently practical. The problem with these qualifications is thrown into stark relief by research showing that these qualifications do not seem to lead to employment (Cosser, McGrath, Badroodien & Maja, 2003). It seems increasingly clear that college-based vocational qualifications will continue to have very little currency if they don't in some way provide access to higher education. In England, one of their major roles, not initially planned by government, has been as an alternative route to higher education for people who do not have the normal university entrance requirements (A levels) (Young, 2003a; Wolf, 2002). Despite being officially designated as vocational, these qualifications have been much less successful in providing a progression route to employment.

Outcomes-based qualifications to the rescue

The National Qualifications Framework

With the development of the NQF in South Africa, all senior secondary qualifications were to be overhauled, as well as a range of new ones introduced in areas which previously had not had formal qualifications.

The NQF was initially divided into eight levels (a recent proposal divides it into ten levels, although this change has not yet been put officially into policy) and three bands – the general education and training band, equivalent to primary and junior secondary school; the further education and training band or FET band, equivalent to senior secondary school; and the higher education band. The FET band included Levels 2, 3, and 4 of the NQF. At Level 4, the level equivalent with the end of senior secondary education, the qualification type that was initially designated for all learners was called the Further Education and Training Certificate (FETC). This would replace all the qualifications described earlier, and embrace other areas of learning as well.

The NQF was conceptualised as an open framework of levels, on which a potentially limitless number of outcomes-based qualifications could be developed. The idea was that each level of the NQF would be defined by 'level descriptors', which would 'describe the nature of learning achievement, its complexity and relative demand at each level of the NQF, distinguishing between the learning demands at each level' (SAQA, 2001: 11).

An example of a level descriptor for Level 4 (school-leaving level) qualifications is, 'A basic ability in gathering relevant information, analysis and evaluation skills.'

It was assumed that qualifications at every level could be designed to meet all the requirements of the level descriptors at that level (SAQA, 2001). This, it was assumed, would create parity between all qualifications at a particular level.

The concept of parity is of course a contested and problematic one, but the idea behind the outcomes-based qualification-driven approach was that, because all qualifications would meet the same requirements of 'learning achievement', stipulated in outcomes descriptors, they would be describing comparable levels of complexity of learning (SAQA, 2001), and it would

follow that all qualifications at each level would be substantively equivalent in terms of breadth and depth of knowledge and skills.

'Designing down' from outcome statements

The idea introduced earlier of designing learning programmes and assessments against learning outcomes has been described in documents associated with the NQF as 'designing down'. The 'design down' idea is that, with the level descriptors as the starting point, 'standards' in the form of outcome statements are created. The learning outcomes must in some sense be sub-outcomes of the level descriptors, although designed by experts and 'stakeholders' in specific areas; as such they are supposed to be manifestations of the level descriptor requirements such as the one cited on the previous page, but within particular fields or areas. The emphasis is on competence statements in the learning outcomes; knowledge was relegated to a category called 'essential embedded knowledge', which was supposed to mean the knowledge that underpins the particular competence that had been specified in the learning outcome. Knowledge cannot, in this approach, be the starting point; the 'essential embedded knowledge' is derived from the outcome, and not stipulated as part of a body of knowledge worth mastering.

The idea is that learning programmes should then be 'designed down' from these 'standards' – the content, learning methodologies and assignments must be selected in order to achieve the 'standards' (outcome statements) of which the qualification is composed. The outcomes, not the content, would need to be stipulated. Learning programmes should not be designed based on the internal requirements or logic of a knowledge area; instead, knowledge areas should be selected on the basis that they can lead to the competence in question, or that they 'underpin' it.

Thus, the outcomes-based qualification-driven approach is based on the idea that 'setting standards' means defining learning outcomes and associated assessment criteria. A 'standard' here is seen as a clear and fixed statement of competence that a learner must achieve. This is important to note, as it is very different from the way the word 'standard' has been used traditionally in education; the traditional use refers to levels of difficulty or cognitive challenge as well as breadth of learning.

The 'design down' idea, which is essential to the outcomes-based qualifications-driven reform approach, is based on a belief that all knowledge is the same in nature, that there is no difference between scientific and everyday knowledge, and, by the same token, no difference between vocational and academic knowledge. It is thought that there is no substantial reason why any piece of knowledge should be selected over another. It does not acknowledge that knowledge areas are structured in particular ways which themselves must to some extent dictate the design of learning programmes. The level descriptors are supposed to be able to describe any kind of knowledge and so provide the basis for achieving parity, quality, relevance, and redress. Parity will be achieved because, as long as any particular programme is 'designed down' from these outcome statements that meet the requirements of the level descriptors, it will in an important sense be equivalent to another programme 'designed down' in the same way – both will be testing the same level of 'competence' in different areas, and both will be testing the same 'generic competencies', such as problem solving. These generic abilities, it is thought, can be defined separately from particular knowledge or occupational areas.

By achieving parity between different qualifications in this way, it was believed that the status of vocational qualifications would be raised – the elusive policy goal of many governments. At the same time, it was believed that overall quality could be improved. Instead of having qualifications that did not guarantee access to either higher education or employment, the new qualifications would be specifically designed to enable learners to achieve these outcomes, and it followed that the learners would be 'competent'. Similarly, it was thought that qualifications would be more 'relevant', because programmes 'designed down' from outcome statements would produce learners who had appropriate competencies; these programmes, it was thought, would thus be more likely to lead to employment.

Furthermore, through 'designing down' from level descriptors to outcome statements to learning programmes, the outcomes-based qualification-driven approach was believed to be a way of achieving parity of 'complexity of learning', and of solving the problems of articulation. It would also improve overall quality, thereby solving all the other problems of the old qualifications described earlier, as qualifications would all now be designed to meet the requirements of various levels of outcome descriptors.

One of the assumptions behind this approach is that descriptors and outcome statements at every level of specificity are transparent; in other words, their meaning is clear and unambiguous to anyone: 'They [the descriptors] must provide a clear understanding of the meaning of learning attainment corresponding to each level on the NQF' (SAQA, 2001: 33). Thus, descriptors provide a way of guiding the development of outcome statements. Outcome statements ('standards') become the basis for designing learning programmes, and, as explained, content is selected and sequenced according to the principle that it enables learners to achieve the outcome specified in the outcome statement.

The transparency of 'standards', expressed as outcome statements, was assumed to solve the problems of articulation of different qualifications, because once 'standards' had been defined for each area of learning, learners could be assessed against them as either competent or not yet competent, and it would thus be clear to anyone (employer, parent, or admissions officer at a new institution the learner was applying to) exactly what a learner had achieved in any specific instance (Departments of Education and Labour, 2002). Redress, it was assumed, would be achieved because learners who had in fact learnt important things in the workplace or in the course of life would be able to have this learning evaluated against learning outcomes, and thus be officially recognised as qualified. At the same time, assessment would be fair and transparent, because it would be done against clear statements of learning outcomes and clear assessment criteria. In addition, because of the clear statements of learning outcomes, learners would have a clear idea of what it was that they needed to learn.

Whole qualifications versus unit standards

In the development of the NQF, there has been heated contestation between two variants of this approach. There are those who support unit standards-based qualifications whereby the qualification is composed of a group of individual 'standards' called unit standards, which are developed according to a highly specified format, and which contain various learning outcomes and assessment criteria. Others argued that this would make learning too atomised, and supported 'whole qualifications' instead. However, the approach that was adopted to 'whole qualifications' was still that qualifications should

be composed of learning outcomes. The supporters of ‘whole qualifications’ generally still accepted the ‘design down’ approach, and created qualifications starting with the level descriptors and listing the learning outcomes and associated assessment criteria in one ‘whole’, as opposed to separate units. The heated debate between these two different approaches has created the impression of a fundamental debate, when in fact the two approaches are strikingly similar.

As an example, consider the language learning outcomes for two qualifications currently registered at Level 4 of the NQF. The National Senior Certificate, the qualification designed to replace the old Senior Certificate as the school qualification, is registered as a ‘whole qualification’, and contains the following Language outcomes:

- Listen and speak for a variety of purposes, audiences and contexts;
- Read and view texts for understanding and to critically evaluate and respond to a wide range of literary and non-literary texts;
- Write and present for a wide range of purposes and audiences using conventions and formats appropriate to diverse contexts;
- Use language structures and conventions effectively.

The FETC: Performing Arts is registered as a unit standards-based qualification. It includes unit standards for the following learning outcomes (amongst other Language outcomes):

- Engage in sustained oral communication and evaluate spoken texts;
- Read, analyse and respond to a variety of texts;
- Use language and communication in occupational learning programmes;
- Write for a wide range of contexts.

In both qualifications,³ language is specified as a collection of outcome statements. In both, the outcome statements are broken up into more detailed outcome statements, which have assessment criteria associated with them. They are both based on the idea that these outcome statements should be the basis for the design of learning programmes.

Thus, while there are some important differences between qualifications composed of unit standards and ‘whole qualifications’ or qualifications composed of learning outcomes which are not broken into unit standards, both are still examples of the outcomes-based qualification-driven approach.

The essence of the approach, then, was the idea that qualifications should be the key driver of educational reform, through the creation of qualifications that consist of outcome statements and that are designed against level descriptors. This outcomes-based qualification-driven approach was to be the driver of the reform of the school system, and is also the underpinning idea of the NQF, which was to be the overall driver of the reform of education and training. The NQF would reform the way education and training related to each other as well as the way they both related to the economy and society, through clear and transparent outcome statements that would be 'designed down' from level descriptors, and from which learning programmes could be developed.

Problems with the outcomes-based qualification-driven approach

Programmes cannot be 'designed down' only from outcome statements

The outcomes-based qualification-driven approach sounds clear and appealing. It offers a clear sense to learners of what is expected of them, a clear idea for society of what learners have learnt, clear outcomes that educators can design programmes against, the eradication of the difference between high- and low-status qualifications or education programmes, and the creation of relevant and high-quality programmes. It is probably the strong appeal of these claims, with their common-sense logic, that ensured very wide support for this approach. Linked to this is the strong association in South Africa of notions such as learner-centredness and OBE with an egalitarian social project (Allais, 2003a).

The approach, however, despite its common-sense appeal, is flawed. Outcome statements cannot be the basis for programme design, and they do not provide a meaningful basis for comparison of qualifications. As discussed earlier, two of the important assumptions on which the 'design down' idea rests are that outcomes provide a better basis for selection of learning content and pedagogy than is provided from a subject or discipline, and that they are transparent (they have a clear meaning independent of the context of a learning programme). Essential to this idea and the outcomes-based qualification-driven approach is an approach to knowledge that assumes that all knowledge

is the same – what Muller (2004) refers to as monism. It is this assumption that enables proponents of the approach to argue that it will achieve parity between different programmes, because any given stipulated outcome can be obtained through formal, informal, or non-formal learning.

But knowledge is not all the same. There is a significant difference between knowledge that is organised into disciplines, on the one hand, and the knowledge available to people through everyday life experiences on the other. The former kind of knowledge has greater power of explanation and prediction through its ability to abstract from everyday situations. Subjects or disciplines ‘take the form of a coherent, explicit and systematically principled structure’ (Bernstein, 2000: 157, in Moore, 2004: 144). They can be hierarchically organised as in the natural and physical sciences, or organised as a series of specialised languages with ‘specialized modes of interrogation and specialized criteria for the production and circulation of texts’ as in the social sciences (Moore, 2004: 144). Studying subjects that have a theoretical and conceptual base (in other words, disciplines) enables or facilitates further study.

Many vocational subjects as currently taught (as well as many of the subjects offered within schools) do not have a considerable disciplinary knowledge base (Young, 2003b), which is partly what caused them to have lower status in the first place. They do not, in fact, provide learners with access to knowledge that significantly expands their horizons, but rather to knowledge that traps them in the world they already know. The challenge of education reform is to improve vocational programmes by increasing the extent to which they offer learners opportunities to acquire disciplinary knowledge meaningfully, as well as practical knowledge; the outcomes-based qualification-driven approach, on the other hand, assumes that all knowledge is the same, once it has been mapped against outcome statements.

Thus, outcomes cannot provide the basis for designing learning programmes. Instead, as in a ‘traditional’ or non outcomes-based syllabus design process, experts must select and sequence the key content and concepts from the subject domain in question. Outcome statements could play some role in providing guidelines, as aims and objectives, but they cannot on their own provide any meaningful basis for the design of learning programmes. An idea of outcomes is important, and should play a role in the design of educational programmes but, as Young (2003c) explains, the problem with outcomes-

based qualification-driven approaches is that they place more weight on outcomes than they can bear.

Outcome statements are not ‘transparent’ and they do not have an inherent meaning independent of a particular context. Consider one of the Language outcome statements mentioned earlier to illustrate this point. The standard stipulates that all learners must be able to ‘Read, analyse and respond to a variety of texts’.⁴

The idea is that all programme developers in educational institutions will design ways in which to ensure that their learners learn to ‘read, analyse, and respond to a variety of texts’; the learners will thus, in some meaningful sense, all have acquired the same ‘competency’. Instead of all learners having to follow a standard English syllabus and write a standard exam for certificates at senior secondary level, in this model there can be as many language courses as there are fields of learning. Because each of them will be designing its course down from this outcome statement, whether learners are doing English at school, English for Hairdressers, or English for Engineers, they will be learning the same ‘skill’ – reading, analysing and responding to a variety of texts.

But clearly, the selection of which texts are included in a learning programme, how great the ‘variety’ is, what is understood by analysing and responding and how these things are tested will be what determine the substance of a programme. The outcome on its own means very little.

The outcome statement mentioned earlier for the National Senior Certificate is slightly more detailed, stipulating that learners must be able to ‘Read and view texts for understanding and to critically evaluate and respond to a wide range of literary and non-literary texts’.⁵

But it is the fact that learners currently doing English higher grade (for ‘matric’) at a South African school are examined in their final year on either two novels or one novel and one Shakespearean play, ten seen poems, a selection of unseen South African poems, and a film or some short stories, that determines the ‘wide variety’ of texts that they are taught. In better schools, learners will read a number of similar texts in earlier grades, and extensively study the prescribed texts in Grade 12 to prepare them for this examination. In weaker schools, learners may read less, and may only be taught specifically the texts which are to be examined. These differences are extremely significant. However, they are less significant than the differences

would be if no texts were prescribed, and each school decided what the 'wide variety' of texts should be.

On the other hand, learners currently doing Business English as part of a vocational programme in a South African FET college are, according to the syllabus, expected to read some short stories, news or magazine articles, and poems. In the examinations, however, no reading is tested, other than an unseen short story; the examination is of a comprehension type, and does not look at the short story as a genre. As such, the reading component is unlikely to be taught.

'Matric' English and Business English are both courses that are taught against a prescribed syllabus and tested through a centralised examination. There is, however, a flurry of new English courses that have been designed against outcome statements, including the outcomes mentioned earlier. For these programmes, there is no prescribed syllabus or central examination, so, without looking in detail at them one by one, it is difficult to know anything about them other than that they have been designed according to the outcomes. However, an example of what learners might learn in one of these new programmes can be seen in a textbook designed against the three Language unit standards, including the standard under scrutiny here, 'Read, analyse, and respond to a wide variety of texts' (Robertson, 2004). The textbook, although thoughtful and well written, contains only the following texts: four news/magazine articles by the same author, a further three similar columns by a different author, one extract from a novel, one short book review, and a few advertisements and cartoons.⁶ Clearly, the wide variety of texts in the three courses mentioned is very different both in terms of width and nature of variety – learners examined on prescribed novels are doing exponentially more extended reading.

Programme designers from all three courses could claim that their learners have achieved the prescribed outcome of critically responding to and evaluating a variety of texts.⁷ However, these three different Language programmes, all of which are at Level 4 of the NQF, are clearly substantially different in breath and depth. The outcome statement itself does not have a meaning, outside of the content which is prescribed and tested.

As Wolf shows, 'standards' or outcome statements are never precise enough to enable clear and unambiguous judgements to be made against them, and

‘the more serious and rigorous the attempts to specify the domain being assessed, the narrower and narrower the domain itself becomes, without, in fact, becoming fully transparent’ (Wolf, 1995: 55). Wolf supplies examples of outcome statements that could be equally appropriate for a child psychologist or for a child minder; for an MBA candidate, or for a porter. She provides evidence from empirical studies which showed that assessors don’t in fact assess against stipulated outcomes, but instead use their accumulated experience both of the field/subject matter and of learner performance and then fit these *post hoc* into the outcomes for assessment purposes. She goes on to argue that outcome statements make assessment more technical, not more accurate.

Thus, outcomes and the ‘design down’ approach do not provide a meaningful basis for designing programmes, for comparing programmes and qualifications with each other, and for improving assessment.

Diverting energy

A different type of problem is that this type of approach directs energy to the wrong part of the system (Allais, 2003b), and deflects energy away from the important parts of the system. An outcomes approach directs all its efforts into the setting of standards and the specification of outcomes rather than designing the curriculum and finding ways of improving teaching.

A major weakness of the South African education system is the absence of well-designed learning programmes and well-prepared teachers who can teach the required knowledge and skills. Qualifications and standards that are developed separately from provision are not a meaningful basis for improving an education system: outcomes can only give a limited guide to what needs to be learnt and assessed. In addition, the institutional context in which learning takes place, as well as the content which is prescribed or chosen to be taught, has a huge effect on what a learner is in fact likely to learn. The outcomes-based qualification-driven reform focuses attention away from all of these things, because it believes that by solving the problem of ‘standards’ – statements of learner attainment, or outcome statements – the rest of the education system will follow.

Thus, the problem is not just, as I have argued elsewhere (Allais, 2006), that the slow resolution of qualifications has blocked progress on curriculum and learning programme development. The danger of the outcomes-based mechanism is not just that it fails as a means of qualification reform, but that its claims so dramatically outweigh what it can possibly do. Because it claims to be the basis of curriculum design, as well as of ensuring quality in the system, for over ten years since the election of the first democratic government in South Africa, no real (thorough, consistent, rigorous) work has gone into designing learning programmes. The energy of the system has been taken up in processes to set outcome statements and assessment criteria, as well as in resolving minor (but detailed and intricate) aspects of this approach, instead of doing any of the real work of education reform, but within an approach that creates a belief that curriculum issues are being resolved through the setting of outcome statements.

What has seriously aggravated this problem is the lack of clarity in terms of roles and responsibilities between the different main role-players in senior secondary education or FET.

Conflicting processes and policies

Conflicts over roles and responsibilities

There is a range of different organisations and structures that impact directly on qualifications in the FET band, particularly with regard to vocational and occupationally specific qualifications. Among these are the Departments of Education and Labour, provincial departments of Education, SAQA, the General and Further Education and Training Quality Assurance Council (GENFETQA known as Umalusi), and the Sector Education and Training Authorities (SETAs). A range of other bodies impact in more indirect ways; these include the South African Universities Vice-Chancellors' Association, the Council of Technikon Principals, the Council for Higher Education, the National Skills Authority and National Skills Fund, and the National Board for Further Education and Training. Many of these structures have been created since 1994, but there has been little clarity over the jurisdictional boundaries and 'rules of engagement' between them (Departments of Education and Labour, 2003).

SAQA, through the *South African Qualifications Authority Act*, No. 58 of 1995, as well as the associated regulations of 1998, is the body which registers qualifications and standards, and which should take decisions on qualifications in the FET band. In terms of how SAQA and the NQF were conceptualised, SAQA should be the body which oversees all other parts of the education and training system, because it would register qualifications consisting of outcome statements against which providers would provide education, and it would accredit bodies to monitor the quality of this provision and issue certificates for these qualifications. In theory, SAQA would occupy a space parallel to the Department of Education, as both would fall under the Minister of Education. The Department of Education would, along with other private providers, be providing education against qualifications designed through SAQA's processes and policies and registered by SAQA, and would have its provision monitored and certificated by bodies accredited by SAQA.

However, in practice, SAQA could not occupy a position in which it directed the Department of Education, or in which the department accounted to it, or even followed its processes and policies. First, the department had its own policy, regulated through legislation, which made it unnecessary for it to work through SAQA. The *National Education Policy Act*, No. 27 of 1996, enables the Minister of Education to determine national education policy with regard to curriculum frameworks, core syllabi, education programmes, learning standards, examinations, and the certification of qualifications. Second, the minister acts through the department, and the Department of Education has exercised this power in the ways in which the National Senior Certificate was created, and has shown that the real as opposed to the legislative power of SAQA is, to some extent, insignificant. This Act also establishes the process whereby educational policies are created: by the Minister giving notice within the *Government Gazette*, and tabling a policy instrument in Parliament. So, for example, while SAQA has processes and criteria for developing and registering qualifications, the Department of Education gazettes qualifications to give them legal status. This renders 'policy' documents of organisations other than the Department of Education, such as SAQA's FETC 'policy', rather toothless.

The fact that these two pieces of legislation are in some senses at odds with each other has meant that there has been no explicit hierarchy, and few mechanisms to resolve conflicts. A host of other Acts and regulations has not

assisted in providing clarity to the sector. The *Further Education and Training Act*, No. 98 of 1998, creates great confusion in terminology, in its definition of 'FET Institutions', and implies that FET is what happens in these institutions. This has led to a situation in which many people think and talk about FET as 'what happens in the colleges'. This is in direct contradiction to the meaning given to FET in the NQF, which refers to everything which happens at Levels 2 to 4, including education in schools.

The complex and sometimes conflicting ways in which these different structures have related to each other, and the lack of a clear and explicit hierarchy between them in certain instances, has created a high degree of uncertainty, as well as a certain amount of paralysis. Much energy has been spent in trying to resolve relationships between different structures. However, some provisions of the legislative framework are ambiguous, some overlap, some are inconsistent with others, and some have been overtaken by events (Departments of Education and Labour, 2002). Notable here are the different emphases of the *National Education Policy Act* and the *SAQA Act*.⁸

Who issues which certificates on what basis?

Perhaps the biggest problem at this level is that of certification. The *General and Further Education and Training Quality Assurance Act*, No. 58 of 2001, established the GENFETQA, known as Umalusi, which quality-assures qualifications registered on the NQF.

The *GENFETQA Act* defines Umalusi's powers and functions: to provide for quality assurance in general and further education and training; to provide, among others, for control over the norms and standards of curriculum and assessment; to provide for the issue of certificates at the exit points; and to provide for the conduct of assessment. The Act defines Umalusi as the quality assurance body for all institutions that have been established, declared or registered under the *South African Schools Act*, the *Further Education and Training Act* or the *Adult Basic Education and Training Act*.

But a complicating factor for senior secondary education has been the establishment of the SETAs. The *Skills Development Act*, No. 97 of 1998, created the SETAs to reimburse a payroll levy and to provide quality assurance for education and training within their jurisdiction. The SETAs fall under

the Department of Labour. It has been very unclear where the boundaries of authority for quality assurance lie and which body will issue which certificates, and on what basis. This inevitably affects colleges' attempts to be able to offer certain kinds of programmes. The existence of both sectoral and band quality-assurance bodies means that quality assurance is divided both vertically (in terms of bands and levels of the NQF) and horizontally (in terms of sectors and types of education programme). Vocational qualifications inevitably fall into both a band and a type. It has proved very difficult to reach agreement as to which qualifications and programmes should fall under which quality-assurance bodies.

Now consider the total picture of the reform in senior secondary education: on the one hand a series of qualifications composed of outcomes, designed against level descriptors, and which are supposed to form the basis for the design of programmes and assessment; on the other hand, a body which is supposed to issue qualifications at this level, Umalusi, and a series of other bodies which are also supposed to issue qualifications at this level in each different sector of the economy.

SAQA, as the body charged with the development and implementation of the NQF, developed an FETC Policy Document, which was to provide a set of parameters within which all Level 4 (senior secondary) qualifications should be designed. This document argued that all Level 4 qualifications would be FETCs, and that all FETCs must conform to certain requirements. One of these was that all FETCs must include two Language courses, which had to be 'designed down' from specified Language outcome statements. Another compulsory (or, in South African terms 'fundamental') component of all FETCs would be Mathematics or Mathematical Literacy; again, it was assumed that different courses could be 'designed down' from specified outcome statements. In other words, what was compulsory was not specific courses, but simply sets of learning outcomes against which different courses could be developed.

The idea was that both the Language and the Mathematics courses could be customised for each occupational field (for example, English for Hair Care, Zulu for Early Childhood Development, and Mathematical Literacy for Air Conditioning). It followed that there could be as many different Language and Mathematics courses as there were qualifications or learning fields. The assumption was that the mathematical and language competence that learners

would develop in all these different courses would be the same, as all the courses would be 'designed down' from the same outcome statements. The flaw underpinning this approach has already been discussed.

SAQA has created a large number of FETCs through its structures set up to do 'standard setting'. At the time of writing this chapter, there were some 70 registered FETCs, mainly in highly specific areas, such as:

- Air-conditioning, Refrigeration and Ventilation;
- Cigarette Filter Rod Production Technology;
- Cigarette Packaging Technology;
- Dry Pet Food Advanced Processing Technology;
- Mail Supervision; and
- Seed Processing and Packaging Control.

FETCs were also registered in such intriguing areas as Measurement, Control and Instrumentation, and Statutory Intelligence.

These qualifications could all be obtained through institutions or workplaces with no centralised assessment mechanism and only site-based assessment undertaken by a 'registered assessor'.

A further 422 qualifications and 8 316 unit standards have been registered at Level 4; the qualifications are not FETCs, despite the fact that the SAQA FETC Policy Document was clear that all Level 4 qualifications should be FETCs.

The Department of Education has developed a new certificate for schools, which it originally called the FETC (Schools) but later changed to the FETC (General). At the very last minute, after the qualification had in fact been registered by SAQA on the NQF, the department changed the name of the qualification to the National Senior Certificate. This qualification is designed to replace the Senior Certificate, as the new high-stakes and publicly known school-leaving qualification. Not surprisingly, much energy, both from the policy community and the public, has focused on this qualification, but very little on the 70-odd FETCs that SAQA has registered on the NQF.

In August 2005, the Department of Education published for public comment a draft FETC (Vocational), to be the new qualification in the college sector, replacing the National Senior Certificate (RSA, 2005).

While the Department of Education has made it clear that Umalusi will issue the National Senior Certificate, the new certificate in schools (Umalusi

currently issues the Senior Certificate), the situation in vocational education is far more complex, and far from resolved. The draft document for the FETC (Vocational) says that Umalusi will issue this certificate. The programmes which will lead to this qualification are vocational, in areas such as Tourism, Marketing, and Electrical Engineering. These programmes will be offered mainly by the FET colleges, and an FETC (Vocational) will be issued for them by Umalusi. On the other hand, a range of other vocational qualifications exists, and some colleges have started to develop learning programmes against them. What these qualifications will be worth, as well as how they will relate to either the National Senior Certificate or the FETC (Vocational), is unclear. It is also not clear whether there will be a relationship between the National Senior Certificate and the FETC (Vocational), as there are many vocational subjects in the school qualification.

Although the initial idea was that all FETCs could potentially lead to higher education, as long as they included the compulsory Language and Mathematics courses (based only on the specified learning outcomes), at this point the draft higher education admissions document specifies only the National Senior Certificate as a certificate which will lead to higher education.

Umalusi's model for awarding certificates is very different to that of the SETAs – it issues certificates against programmes which are assessed both internally and externally through examinations, and this is unlikely to change (Young & Allais, 2004). The SETA model is one of decentralised assessment – as long as a provider is accredited to offer a programme against a qualification registered on the NQF, the provider can conduct its own assessment. The problems with this model should be clear from the preceding discussion, as there can be no basis for standardisation (Young & Allais, 2004).

Underlying similarities

The irony is that, despite the enormous and public differences between the various role-players in the education and training system, the outcomes-based qualification-driven approach has been adopted by all of them. At the same time, confusion caused by conflicting policies and a large number of role-players has obscured the underlying problems of the approach, as discussed.

The Department of Education has used a slightly looser version of the outcomes-based approach in the qualification for schools, which consists of curriculum statements that are mainly composed of learning outcomes, but which are accompanied by a short list of designated content. Another way in which the Department of Education's understanding of outcomes-based qualifications is 'softer' than that of SAQA is that, while the intention in terms of assessment behind the SAQA unit standards was for learners to be assessed only as either 'competent' or 'not yet competent', the Department of Education introduced a six-scale (now a seven-scale) rating system to include more differentiation in terms of learner achievement.

Although the processes of the Department of Education ignored the 'standards setting' structures of SAQA (Departments of Education and Labour, 2003), and although its interpretation of outcomes-based qualifications is 'softer' as there is at least a bit of content stipulated and there is more differentiation allowed in assessment, its design process relied on a similar logic, in terms of which subjects must be 'designed down' from learning outcomes. For example, the following is one of the four learning outcomes for History: 'The learner is able to evaluate and use historical concepts in order to analyse social change.'⁹

There is then a one-page list of content topics for each of the three years of senior secondary schooling. As discussed, the Language outcome statements are essentially the same as the Language unit standards developed by SAQA, although with more specification of assessment criteria. However, it is likely that the external examinations which the department will continue to set will in the end mean that stipulated content is brought back in, and the outcomes-based approach will prove to be nothing more than rhetoric.

Further uncertainty caused by the review of the NQF

Ongoing and protracted processes of reviewing the NQF have created further uncertainty in the system. A limited review of the NQF was commissioned in 2001, and produced a report in May 2002. The Departments of Labour and Education took over a year to produce their response, which was made public in July 2003. Public consultation on this document has resulted in a long silence, during which the two departments tried to reconcile their differences, as well as the conflicting suggestions, demands, and analyses of

the various stakeholders. In the meantime, SAQA has continued to operate as it has done since its original conceptualisation, with the same processes and structures for developing outcomes-based qualifications and unit standards, and has continued to register new 'standards' and qualifications, including new FETCs. Thus, the various organisations and structures that play a role in the FET system are operating in a fluid environment in which their roles and powers might change considerably.

Conclusion: The urgent need for a different approach

In summary, there has been for some time no overall sense of a new set of Level 4 qualifications which, together, are to replace the Senior Certificate as well as the National Senior Certificate and other vocational qualifications. There has also been little clarity on who will make decisions about these qualifications and through what processes. There has also been confusion about who will issue certificates and which quality-assurance bodies the colleges and other vocationally oriented providers must relate to. A proposal has been made by the Departments of Education and Labour that Umalusi should be the body which will be in a position to take the lead in terms of providing an overall map of qualifications in the FET band, and thereby giving some degree of coherence to the band (Departments of Education and Labour, 2003). However, this is not yet official policy, and has been in the air since 2003.

The preceding discussion has shown some of the problems with the outcomes-based qualification-driven reform approach which has had very wide support in South Africa. The chapter has also described the enormous confusion in the reform of secondary education in South Africa because of a plethora of bodies and processes which, ironically, have all subscribed to the outcomes-based qualification-driven approach. Thus, the mechanism which was to make relevant, high-quality, high-status vocational qualifications that would be useful and clearly understood in the labour market has in effect produced the opposite: confusion and even greater fragmentation and incoherence. At the same time, ongoing disagreements and lack of certainty about roles have had the effect that the underlying problems with the outcomes-based reform approach have not really been interrogated.

On the basis of a review of international literature (Allais et al, 2003), it does not appear to be the organisation of education and training per se, nor the degree of integration, which creates success or failure, let alone the organisation of qualifications. While conditions for success in education are not easily isolated from broader aspects of any society and economy, it does not seem that focusing either on the organisation of institutions or on the organisation of qualifications is sufficient for the success of a system. If there is no attention given to the next crucial steps of developing quality curricula, programmes and learning materials, to training educators, and to the improvement of facilities, there is little chance of improving the quality of educational provision.

Qualifications are enablers rather than drivers of quality. If more energy and effort were to be focused on good centrally developed learning programmes in different subjects within the band, it would seem less important to develop frameworks which claim that different qualifications are equivalent. However, the outcomes-based qualification-driven approach is not just a flawed approach to the reform of qualifications. Its pernicious effects are far broader, because it claims to solve problems of curricula, learning, teaching, and assessment, and proper attention is therefore not paid to these aspects of education, which are ultimately more important in improving quality than is the alignment of qualifications.

I argued in this chapter that South Africa was trying to address similar problems to those confronted by other countries, but that the problems were exaggerated in South Africa by the stark inequalities created by apartheid. Similarly, the cost of failure or the net effect of a bad policy will be magnified, because of the highly uneven and in most cases very weak educational base from which South Africa started, with many weak and under-resourced institutions, a large cohort of very inadequately prepared teachers, and learners with low levels of basic education. Furthermore, expecting vocational programmes to provide a realistic alternative to general secondary education in a situation where the basic general education of learners is very poor is highly unrealistic.

When there is more clarity in terms of the roles and responsibilities of different bodies, it is to be hoped that underlying problems in the outcomes-based reform approach can be understood and a new approach developed. The problems will not go away. While it is important that a way of resolving the

confusions about new qualifications is found, it is also important to understand the limitations of seeing qualifications as a major reform mechanism, and the dangers of thinking that curricula and learning programmes can be ‘designed down’ from outcome statements. What is needed in particular is a step back from the idea that all knowledge is equally valuable, and critical attention to be focused on thinking about the knowledge requirements for specific vocational areas, in order to strengthen the knowledge base of vocational programmes.

Notes

- 1 Gill et al. (2000) also point out that job search assistance and more general education might prove cheaper goals for the state than trying to improve vocational education. They stress that provision of vocational education is at least three times more expensive than general education; provision of it should not be seen as a quick fix to unemployment problems, and governments should think carefully about trying to get students out of general education and into vocational education. Similarly, Wolf (2002) looks at real access to the labour market, as well as long-term pay differentials for learners with higher levels of general academic education, and suggests that subsidising employment places might be cheaper and more likely to lead to employment than training schemes for the unemployed.
- 2 The much publicised Curriculum 2005 reform (in both its original and revised versions), through which OBE was introduced into the school system, was aimed only at primary and junior secondary education. The senior secondary band has remained more or less untouched except for minor changes in some subjects, but an outcomes-based certificate is being phased in starting in 2006.
- 3 Available at www.saqa.org.za
- 4 Available at www.saqa.org.za
- 5 Available at www.saqa.org.za
- 6 Note that this is based on a review of the texts prescribed in the module designed against the unit standard in question; other similar short texts are probably found in the rest of the book, which is designed against the unit standards: ‘Engage in sustained oral communication and interpret spoken texts’ and ‘Write for a range of contexts.’
- 7 Note that the Business English course does not formally claim to be designed against the outcomes, although it is supposed to be formally equivalent to the Senior Certificate course.

8 See Allais et al. (2003) for a more detailed discussion of this problem.

9 Available at www.saqa.org.za

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Reforming the Further Education and Training curriculum: An international perspective

Michael Young

Introduction

For the first time in its history, South Africa has the possibility of treating senior secondary schools, Further Education and Training (FET) colleges, and work-based learning as a single sector or band.¹ The FET sector has its own quality assurance agency (Umalusi), which is also responsible for the general education and training band, and its own deputy director general in the Department of Education; provinces increasingly have FET departments. In terms of qualifications, the FET band includes the Senior Certificate as the main access route to higher education (HE) and the national certificates and diplomas offered by the recently merged FET colleges. Under current proposals, the Senior Certificate is to be replaced by a National Senior Certificate. It is expected that the FET colleges will offer a Further Education and Training Certificate (FETC [Vocational]) which will provide routes to employment and to higher education (HE).

The National Curriculum Statements for the FETC (General) – what is now known as the new National Senior Certificate – endorse an outcomes-based approach to education and are elaborated in the learning programmes and assessment guidelines. However, they provide only limited indications of the kind of curriculum that might be developed for the new sector and its institutions.

Parallel with the development of FETC subject guidelines by the Department of Education, a large number of unit standards have been registered on the National Qualifications Framework (NQF) by Sector Education and Training Authorities (SETAs). The international experience in countries such as New Zealand and England indicates that unit standards are not an adequate basis

for the vocational curriculum; there are fundamental conceptual problems in what is sometimes referred to as ‘designing down’ or deriving specifications of knowledge content in the form of a syllabus from unit standards (see Chapters 2 and 8 for a more detailed discussion).

The starting point for thinking about the FET curriculum in this chapter is not outcomes or unit standards but the distinction between general, general (vocational) and work-based learning pathways² similar to that proposed by the Joint Task Team in their document *An Interdependent Qualifications Framework*. This threefold distinction captures much of the diversity of FET provision and is widely used in the international literature.

The historical origins and development of the three learning pathways

The three learning pathways and their differences are not fixed or given. They have their origins in most countries in the process of industrialisation and the emerging 19th-century division between academic and vocational education. Even by the 1950s, the general (or academic) pathway included less than 5 per cent of each cohort in many countries. The vocational route was limited to occupations such as engineering in which entry was gained through craft or technician apprenticeships, supported by part-time study. Until the 1960s, the majority entered the labour force in all countries without qualifications or further education of any kind. With the decline of apprenticeships and part-time study and the broadening of the general (academic) pathway, the original division between academic and vocational learning was transformed but did not disappear.

The third – the general (vocational) – pathway emerged in the 1980s. It was not based on the academic disciplines associated with general education, nor linked to apprenticeships, and it did not lead directly to employment. In some countries, this pathway became a strong college-based alternative to the academic route (the French *Baccalaureate Technologique*, and, to a lesser extent, the *Baccalaureate Professionnel* are good examples). In others, such as England, a variety of versions of general or pre-vocational programmes have been introduced to provide opportunities for students with low attainments in the compulsory phase of schooling who previously would have left school without qualifications. At the same time, partly in response to the decline of

traditional apprenticeships and the lack of jobs for school leavers, and partly as a reaction to criticisms of traditional apprenticeships as time-serving, new state-led versions of the occupational or work-based pathway were introduced in a number of countries. Initially launched in the United Kingdom as Youth Training, they are now all known as apprenticeships.

Despite the emergence of *three* pathways (and the three types of qualification associated with them), the trend in FET systems since the late 1990s has been towards bi-partite rather than *tri-partite* systems. Four features distinguish the new forms of bi-partism from the old, as follows:

- Unlike the earlier forms of bi-partism based on academic schooling and apprenticeships, the new pathways are (or at least seek to be) inclusive of all learners in the post-compulsory phase.
- Modern vocational pathways are, like academic or general education pathways, increasingly institution based. In other words, they are located in and led by schools or colleges, not by employers.
- Both pathways, in theory, allow learners to transfer between them and to progress to HE.
- Each pathway is increasingly differentiated into strong and weak forms in relation to the knowledge content of the programmes.

Notwithstanding much government rhetoric stressing the importance of work-based learning, the reality in most countries is not only that more and more FET students are opting for a college-based route, but that this is consistent with the changing nature of work and employment. Employers (even those in Germany where a work-based apprenticeship route is still the main form of vocational education) are increasingly reluctant to recruit school leavers as apprentices. Furthermore, state-led work-based programmes, such as the Modern Apprenticeship in the United Kingdom, have proved highly uneven across different sectors as pathways for achieving higher-level qualifications. The evidence on occupational change suggests that, with the increasing use of technology, workplaces are becoming less rather than more appropriate sites for the acquisition of knowledge by young learners. Not only can relatively few workplaces be described as genuine learning environments, but the kind of knowledge increasingly demanded by employers cannot be readily accessed at work. At the end of this chapter I will return to the implications for South Africa of these trends towards bi-partism and institution-based FET.

The Joint Task Team document distinguished between general (academic), general (vocational), and trade and occupational pathways. However, it recognised that this threefold distinction is an oversimplification when it comes to curriculum and learning issues. There are at least four ways in which FET curricula are likely to differ, which cut across the three pathways. These are:

- The purpose of learning;
- The site of learning;
- The knowledge base of learning; and
- The prior attainment of learners that is assumed.

Each of these ways in which programmes differ has crucial implications for curriculum policy. The next section considers these implications.

Ways in which FET curricula vary

Purposes of learning

Below are two features that distinguish FET from the compulsory phase of schooling in all countries:

- It represents the beginning of specialisation for learners (and therefore of student choice or tracking).³
- It is a dual-purpose system. It prepares learners for HE and the labour market. Less openly acknowledged, it also serves to keep learners off the labour market and thus limits youth unemployment.

These two features of FET systems, specialisation and conflicts of purpose, inevitably interact to form divisions. FET always focuses in two directions (see Chapter 8), towards progression to HE and towards employment. The implications of these dual purposes and the tensions between them are not always recognised by governments, which tend to stress only the importance of employability as a goal. Furthermore, official purposes may be at odds both with their unofficial purposes and with the aspirations of learners. Whereas governments emphasise the link between the curriculum and future employment (or at least employability) in general vocational courses, growing numbers of students, regardless of the programme they are on, aspire to HE – an example of the phenomenon known as ‘academic drift’.

This tension between different purposes within the different pathways can be represented diagrammatically as follows:

Table 3.1 Differing purposes for different qualifications/pathways

		Purpose of qualification/pathway	
		Official	Unofficial
Type of qualification/pathway	General academic	Progression to higher education	Progression to employment (long term/post HE)
	General vocational	Employability	Progression to HE
	Occupational	Employment/ Employability	Reducing unemployment statistics

Comments

- General (academic) curricula in most countries have changed little in structure or purpose in 50 or more years. Expansion of the proportion of those on general or academic pathways has followed the expansion of the proportion of each cohort progressing to HE and a shift in recruitment by employers from school leavers to graduates. The dilemma that most countries face, whether the proportion progressing to HE is 15 per cent or over 50 per cent, is how far, even in the most modern versions of general education curricula, the two purposes of preparation for HE and for employment (or even employability) can be reconciled.
- General vocational curricula are usually offered by colleges rather than schools, and are increasingly seen by students as an alternative route to HE. As a result, the pressure from universities has been for the pathway to have (a) a stronger disciplinary knowledge base, and (b) external examinations as the best guarantee of standards. Both developments are at odds with the typical government goal of promoting smoother transfer to the world of work.
- As already mentioned, the demise of employer-led apprenticeships saw the emergence of state-led work-based training programmes of a learnership type as the main route within the occupational pathway in many countries

from the 1980s. However, outside the group of European countries following the German tradition, the record of such programmes has been extremely poor in terms of the proportion of those on the programmes (a) gaining permanent employment, (b) completing a qualification, and (c) progressing to HE. There is little evidence that the workplace, except in the case of the small range of industries that still maintain traditional apprenticeships, can create opportunities for learners to strengthen their general education or develop their vocational knowledge. Many countries – examples are those in South-East Asia, continental Europe and the USA – have not persisted with a work-based occupational route and have supported a higher proportion of students on full-time college-based programmes. In other words, the international trend, from labour market pressures and student demand, is from occupational to general and general vocational pathways. In broader terms, it can be argued that there is pressure from students for a shift from the vocational to the educational purposes of the FET curriculum.

Site of learning

A second distinguishing feature of the FET band is that, in contrast to school and university curricula which are almost without exception institution based, FET curricula vary widely in their dominant site of learning. This variation is represented in Table 3.2.

Table 3.2 Dominant site of learning

	School only (Type 1)	College only (Type 2)	College + workplace (Type 3)	Workplace + college (Type 4)	Workplace only (Type 5)
Type of quali- fication/ pathway	General academic	General vocational (and general academic)	General vocational	Occupational	Occupational

The variation is from Type 1 where the curriculum is entirely defined by educational purposes (in South Africa this refers to the present Senior Certificate and the proposed National Senior Certificate) to Type 5 (in South Africa this would refer to programmes defined by SETA-generated unit standards) where a work-based curriculum is defined (at least in theory)⁴ by the needs of employment.

The distinction between Types 1 and 2 refers to the institutional differences between schools and colleges and the kind of curriculum opportunities they offer. These differences relate to the very different histories of schools and colleges in the development of mass education systems. Examples of such differences are:

- The qualifications and experience of teaching staff;
- The availability of workshop, laboratory and other specialist facilities; and
- The links with local industries and employment.

The differences between schools and colleges in part explain the widespread failure of school-based vocational courses that is reported in both developed and developing countries, and which has been widely publicised by the World Bank.

Few countries outside England and Wales have developed general (academic) programmes in colleges. The continuation of college-based general programmes is repeatedly questioned on account of their relatively lower pass rates. However, these lower success rates reflect the lower prior attainment of the students and the shortage of college staff specialising in academic subjects, rather than anything intrinsic to colleges.

Type 3 refers to college-led general vocational programmes that are strongly knowledge based but include a significant proportion of work experience. In many cases, this type of programme has replaced the college-based programmes designed to support traditional technician and craft apprenticeship schemes. They are becoming a major route to intermediate skilled and lower level professional employment, as well as for progression to HE. They could well be the direction in which the existing college National Certificate courses should be reformed in South Africa.

In some cases, colleges have offered 'simulated' occupational pathways, either where they have facilities for practical workshop training or at college 'companies'. However, the evidence is that these programmes are not highly

regarded by employers, who prefer to train for such skills themselves in company-specific programmes.

Type 4 refers to the modern version of the traditional day- or block-release model where the nature of the college provision is substantially controlled by the employer. It is the model that has been attempted within the United Kingdom's scheme for Modern Apprenticeships. The evidence is that, because it is heavily dependent on employers, the success of this model varies widely between sectors in terms of quality, take-up and completion rates. Some employment sectors seek to minimise the time they make available for trainees to be released to go to college. Such approaches still retain many of the features of the discredited Youth Training scheme; in other words, for many it is more a form of welfare than a form of vocational education.

In its strong, albeit declining version, Type 5 refers to the original 19th-century apprenticeship model. In its weak version that is not linked to explicit learning opportunities, it refers to the experience of most unskilled workers until the 1970s and now to the small numbers who still get jobs on leaving school without any qualifications. In some cases it may include employers offering in-house training, leading to occupationally specific qualifications.

Comment

The overall international trend is towards institution-based courses of two types: Type 1 (school-based general academic programmes) and Type 3 (college-based general vocational programmes involving some work experience).

The knowledge base of learning

The Joint Task Team paper distinguished between learning that is discipline based (and institutional) and that which is acquired in workplaces and is competence or standards based. It also recognises that general vocational pathways involve both types of knowledge. The threefold distinction can be represented diagrammatically as in Table 3.3.

Table 3.3 Knowledge base of qualifications

	Discipline-based knowledge	Occupationally recontextualised disciplinary knowledge	Knowledge implicit in performance at work
Type of qualification/ pathway	General academic	General vocational	Occupational

General (academic) curricula are based on subjects that are derived from university-based disciplines modified to take account of the pedagogic problems of teaching younger learners. This reflects their origins and dominant role in programmes preparing students for university and their importance in ensuring progression for students from school to HE. Where there have been attempts to develop subjects that are not based on university disciplines, as in the case of Technology in the United Kingdom, they have not been successful and have been taken up by very few students. General (academic) curricula vary in the following ways:

- Typical number of subjects taken;
- Range of subjects;
- Degree of student choice/compulsion;
- Nature of the core (referred to in South Africa as Fundamentals);
- Extent to which subjects are modularised; and
- Structure of assessment.

Strong and weak variants, typically associated with FET systems in continental Europe and South-East Asia on the one hand and the USA high school on the other, can be distinguished, with the United Kingdom somewhere in the middle. Developing countries tend to follow a variant of one of the ex-colonising countries.

Typical characteristics of the strong and weak types of the general education pathway are represented in Table 3.4.

Table 3.4 Forms of general academic pathway

Strong	Weak
3–6 subjects	Number of subjects variable
Limited range of subjects	Unlimited range of subjects
Linear not modular curriculum	Modular structure
Subject-based core	Minimal or no core
Constrained student choice	High degree of student choice
External examinations ⁵	Teacher-based assessment

General vocational curricula lie at the heart of the dual purposes of the FET curriculum. Unlike general academic curricula, general vocational curricula are not shaped directly by academic disciplines; however, this does not mean that they have developed or can develop independently of these disciplines, which played a critical role in the process of industrialisation. The vocational curriculum involves two steps in the recontextualisation⁶ of disciplinary knowledge. The first is usually undertaken by members of professions, such as engineers, managers and medical workers, who transform the sciences (or social sciences) into applied sciences or technologies that take account of the specific needs of different types of manufacture and service. The second stage is the pedagogic recontextualisation that takes into account what can be taught and to whom; this is usually undertaken by ex-professionals who specialise in teaching. These processes of recontextualisation do not mean that the disciplinary knowledge that is drawn on in general vocational curricula differs from that included in academic curricula. Physics for physiotherapists is still physics. However, different topic selections are made, and the coherence and sequencing of the knowledge are different.

A distinctive feature of vocational knowledge is its sectoral or occupational basis. Unlike general (academic) subjects, which are only shaped by the institution of schooling, vocational subjects have to take account of the occupational sectors they relate to, not just the institutional context of colleges. Sectors such as engineering, finance, health care and the retail trade are differently organised and make quite different types of knowledge demands on learners. One problem facing those who develop vocational programmes based on an NQF is that, while the latter assumes that a standard set of levels

applies to all sectors and occupational fields, the reality of different fields is not the same. For example, the higher-level knowledge demands of financial services and engineering are far more explicit than those of customer service or beauty care. Furthermore, not all occupations and sectors offer the same potential for progression or access to higher or professional qualifications.

Like general academic curricula, general vocational curricula can also be distinguished in terms of strong and weak forms. Strength here refers to a number of criteria that are usually but not always clustered. The following are some examples:

- Proportion of general education in the curriculum;⁷
- Degree to which general education 'core' is subject or skills based;
- Disciplinary basis of vocational subjects;
- Opportunities for accredited work experience; and
- Reliance on external assessment (examinations).

The differences between sectoral traditions pose several problems for those seeking to develop high-quality general vocational curricula. For example, some vocational curricula, as in the case of engineering, build on a substantial and widely agreed body of engineering knowledge and a long tradition of block- and day-release courses that were linked to the old forms of apprenticeship. Quite different problems face those who attempt to develop vocational programmes in fields such as customer service and security, which are either very new or have no tradition of any kind of training or qualifications and no professional association to draw on.

Occupational pathways have two origins, as has been suggested – the old apprenticeship systems and the state-led traineeships introduced since the 1980s that were designed to replace them. South African learnerships rely more on the latter model than the former. Both are declining internationally as a result of similar global economic changes. The development of technology within capitalist industries led to the contraction of craft occupations and to the split between those jobs requiring routine manual skills and those requiring conceptual work. Whereas the first type of job almost denies the possibility of a learning pathway, the second type requires knowledge that cannot be acquired in workplaces. As a result, occupational pathways for those with sub-degree qualifications have largely disappeared, and employers increasingly seek to recruit those with higher-level qualifications for jobs demanding conceptual work.

Comment

Three trends can be identified internationally in the shifting knowledge base of FET.

- First, the general academic pathway is likely to continue to expand as the main route to HE, which itself is expanding. As a result, there is likely to be a tension, on the one hand, between university and employer demands for stronger versions of the general academic curriculum that emphasise greater differentiation and increased attention to knowledge content and, on the other hand, populist demands for greater diversity and access 'at any price'. One consequence of responding to the latter pressure is likely to be an undervaluing of the common school-leaving examination (A levels in England and the new National Senior Certificate in South Africa), and parallel calls for separate university entrance examinations or some form of American-style national testing.
- The second trend is a greater emphasis on the knowledge base of the general education component of the vocational curriculum. This trend arises from changes in the occupational structure associated with what is referred to as 'the knowledge economy' and the growing aspirations of those on general vocational programmes to progress to university. This trend is in tension with a parallel trend to widen participation to those previously excluded from middle-level qualifications.
- A third trend is a strengthening of the knowledge base of specialist vocational courses. On the evidence of the United Kingdom experience, programmes based solely on competence or unit standards such as National Vocational Qualifications (NVQs) are not consistent with broader changes in the occupational structure. As a result, despite considerable government support in the United Kingdom, they have become a marginal route for approximately 6 per cent of each cohort. Unit standards seem unlikely to be a long-term basis for developing the vocational curriculum. They can have a role in setting broad occupational benchmarks, but their role in developing a curriculum is far more problematic. The United Kingdom experience in fields such as engineering and financial services suggests that it is not the specification of standards by sectoral bodies but the involvement of professional bodies with their expertise in recontextualising disciplinary knowledge that is crucial in developing a vocational curriculum of high quality.

The prior attainment of learners

A crucial but often neglected factor determining the FET curriculum is the wide range of prior attainments of students entering the band. FET institutions include students likely to achieve A grades in the higher grade of the senior certificate and those who have difficulties in acquiring the basic skills of literacy and numeracy. For the purposes of this chapter, learners are divided into three groups according to their prior attainments – high, medium and low. Their distribution across the three pathways can then be represented diagrammatically as in Table 3.5.

Table 3.5 Types of qualification/pathway

		General academic	General vocational	Occupational
Prior attainment of learners	High	X		
	Medium		X	
	Low			X

This table represents a set of probabilities found to varying degrees in all countries. The distribution of prior attainment across the pathways has its history in the process of industrialisation. Whereas originally entry to the academic pathway (and also the apprenticeship pathway) was determined largely by birth (and therefore social class and, in South Africa, race), this is changing. The expansion of secondary schooling, as well as of the general academic pathway in FET, and the more recent creation of the general vocational pathway have meant that prior attainment is now more important than social category as the most reliable predictor of the pathway on which a learner will be placed.

The distribution across pathways in terms of prior attainment (often taken as a measure of ability) is reflected in widely held assumptions about low achievers in modern FET systems. These assumptions are as follows:

- They will find it easier to learn in curricula that relate explicitly to their everyday lives and their primary interest in getting a job.
- They will find vocationally oriented curricula more motivating than academic curricula.

The development of core skills programmes in communications and numeracy that focus on applications of numerical and communication skills in everyday and working life contexts in the United Kingdom are paralleled by the development of sectorally or occupationally specific forms of Fundamentals in South Africa; both follow from these assumptions. These developments raise a number of questions. First, do learners with a limited knowledge of language or mathematics in practice find it easier to apply such knowledge than to acquire it in the first place? Research on the implementation of a core (or key) skills curriculum in the United Kingdom suggests that they do not. Second, are students who take programmes in 'key skills' rather than subject knowledge able to progress to higher-level qualifications and even HE? Again the United Kingdom experience suggests that they are not. Third, what do students learn through such approaches to general education? Do they offer alternative ways of acquiring the intellectual capacities associated with the study of language and mathematics, or do they result merely in more elaborate representations of what students already know about work and everyday life?

There is a wide international debate concerning the tendency to assume that developing a new vocational curriculum will solve the problems of finding appropriate programmes for slow and disadvantaged learners. It may be that this assumption has more to do with masking the social and economic roots of underachievement and with traditional middle-class prejudices about the capabilities of working-class children than with the findings of any reliable research. It seems likely that accepting uncritically the role that vocational education can play for slow learners will perpetuate its low status and, by assuming that low attainment is primarily an educational problem, will do little to overcome it.

Conclusions and implications for reforming the FET curriculum

Based on the threefold distinction between general, general vocational and occupational pathways, this chapter has examined a number of ways in which FET curricula can differ and cut across these pathways: they are purpose, site, knowledge base, and prior attainment of learners. In each case a trend has been identified. Together, these trends suggest the need for a greater emphasis in policy on the following:

- The *educational* purposes of the FET curriculum as a whole and of the vocational pathways in particular;
- The *institution* as the core site of learning and the acquisition of knowledge in the 21st century;
- The *distinctive differences* between schools and colleges as sites for learning;
- The *subsidiary role* of the workplace (and hence of employers and trade unionists) in vocational education as people are expected to reach higher levels of general education before completing vocational courses or seeking employment;
- The importance of *disciplinary knowledge* in both its academic and its occupational (or vocational) forms;
- The importance of focusing on the pedagogic and curriculum problems of teaching slow and disadvantaged learners and not assuming that they will necessarily be solved by a more vocationalised curriculum; and
- The importance of stressing the differences between college-based and workplace knowledge and at the same time recognising the crucial importance of both in the vocational curriculum.

From the point of view of the three pathways, the main conclusions of this chapter are as follows:

- Academic drift will continue and should be welcomed, provided the importance of knowledge content of programmes is recognised;
- A major challenge for South Africa is the creation of a college-based vocational curriculum that is both general in knowledge content and specific to the needs of particular occupations and sectors;
- Work-based learning and the occupational pathway (and hence SETAs in South Africa) are likely to have only a limited role in the FET curriculum, at least in relation to initial vocational education.

The old occupational pathway typified by craft apprenticeship is no more except in an increasingly limited number of fields. The new occupational pathway, associated in the United Kingdom with Youth Training, has removed young people from unemployment. It has not proved a viable educational route leading to progression or regular employment.

At the level of policy, this analysis points to a number of questions for research and policy. It has stressed the centrality of *institutions* in both general and vocational education for South Africa. This suggests a shift in priorities, of

which there are already signs, from the focus since 1995 on qualifications and standards. It is beyond the scope of this chapter to examine what such institutional support might involve except to note, in the case of the FET colleges especially, but the FET sector generally, the limited contribution of the universities in relation to both research and professional development.

A second argument has been that the primary purpose of the new National Senior Certificate is to extend access to disciplinary knowledge. Below are the questions that arise from this:

- What role should the National Curriculum Statement of principles and critical and developmental outcomes have relative to the importance of subject knowledge in the form of syllabuses, exemplar examination papers and marking criteria?
- To what extent should the development of the FET curriculum in Geography (for example) be the responsibility of specialists in geography and the teachers of geography rather than a wider constituency of non-specialists?
- What should constitute fundamental or core learning? To put it another way, what should be the nature of post-compulsory general education in the 21st century and how should it be taught? If languages are seen as crucial to progression to HE and employment, what knowledge of language is to be acquired and for what purposes? Are grammar and literature critical, as has traditionally been assumed, and if so how should they be specified?
- How are the two purposes of the general academic curriculum in the FET sector to be reconciled? Is access to the disciplinary knowledge that equips a student for study in HE the best general education, even for those not going to university?

In relation to the vocational curriculum to be offered in colleges, the primary questions are as follows:

- Where does vocational knowledge come from?
- Can it be in some way derived from unit standards as statements of performance?

This was tried in the early 1990s in the United Kingdom with NVQs and, a decade later, in a more flexible form as Technical Certificates.⁸ In each case, the task proved virtually impossible. In fields with a strong vocational tradition like engineering, it was straightforward to develop knowledge specifications,

but they had at best a loose relation to the specification of performance by standards. In new or weak occupational areas such as customer service, the specifications were arbitrary and had little support among employers or teachers.

A final point

There is an alternative basis for the vocational curriculum; it involves two strategies. One draws on the *systematic procedural knowledge* developed in industries and services that are not science based in the formal sense. In such sectors, vocational knowledge refers to the established rules and practices for the organisation of work (in sectors such as construction, hospitality and administration, for example). The second strategy relates to what I have referred to as *occupationally recontextualised disciplinary knowledge* – examples are physics for engineers or physiotherapists and biology for nurses. In many workplaces and occupations, knowledge is central to either of these two strategies: the reordering and applying of some form of scientific knowledge, broadly defined (more explicitly so in engineering, less so in banking or nursing) and the bringing together of procedural knowledge that is not science based (for example, how to plan the conversion of a design or an architect's plan into a building). These ideas are further elaborated in Chapter 8.

Elements of these two approaches to vocational knowledge can be found in the existing FET college curriculum in South Africa. It follows that reform needs to build on the past and be incremental (except in sectors where no systemic vocational knowledge exists). It has to start from a rigorous analysis of the existing curriculum based on the national certificates, including their syllabuses, their examinations and the textbooks and other resources used by teachers. This analysis will need to be informed both by the new goals of South African education that are expressed as critical and developmental outcomes and by the pedagogic and curricular demands involved in maintaining and improving the quality of learning. It is a major agenda.

Notes

- 1 This chapter is not directly concerned with the last type of provision or with the implications of the analysis for private FET provision. However, I would argue that the broad argument developed in the chapter does apply more widely.
- 2 I am explicitly avoiding here any discussion of the contentious issue concerning where to locate professional curricula and pathways. Some of the problems that arise from locating professional education in the occupational pathway are explored in my paper reviewing the Joint Task Team's report prepared for the Council on Higher Education (Young, 2003).
- 3 Although policy makers in all countries increasingly emphasise the importance of student choice, in practice choice is largely determined by a student's prior attainments. Very few learners with attainments that qualify them for further general education choose the vocational route. It follows therefore that all FET systems exhibit varying degrees of tracking.
- 4 The United Kingdom experience is that learning demands specified by standards-generating bodies and the learning demands of actual employers are only rarely consistent.
- 5 Germany is a key exception, with a strong system based on teacher assessment rather than on external examinations.
- 6 See Chapter 8 for a discussion of this concept.
- 7 For example, most general vocational curricula in continental Europe include 30+ per cent of general education in the form of languages, mathematics, science and civics. A student on a similar programme in the United Kingdom might easily take none of these subjects.
- 8 Technical Certificates were introduced as a way of strengthening the knowledge content of the vocational curriculum that had been the main weakness of standards-based vocational qualifications.

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Part 2

KNOWLEDGE DIFFERENTIATION

CHAPTER 4

Differentiation and progression in the curriculum

Johan Muller

Introduction

This chapter will inquire into the vexed question of curriculum differentiation. It is vexed in a number of ways, but particularly because curriculum differentiation (more precisely, a particular form of curriculum differentiation) was a principal instrument of Bantu Education, so designed to limit the labour market opportunities of racially defined population groups. It was thus inevitable, from the outset of the new South Africa, that curricular differentiation would be regarded with deep suspicion and often seen as the instrument of social injustice. This chapter investigates the broader project of *strong integration*, of curriculum de-differentiation. In order to do this, I shall proceed by locating the original fault line in epistemological thinking which has led to such a great divide in contemporary thought about knowledge; show how such views of knowledge structure entail curriculum structure; show how strong integrationist thinking, or what I shall henceforth call curricular de-differentiation, disguises the need for differentiation and progression in key subjects; and conclude by demonstrating the results in the draft proposals for the then-named Further Education and Training Certificate.¹

Knowledge structure and progression

The foundation of the Cartesian revolution in the 17th century was the axiom that 'true' knowledge was characterised by *progression*, that that 'which had once been established did not need to be proved again, that is to say, in which scientific progress, universally recognised as such by rational thinkers, was possible' (Berlin, 2000a: 28).

There are a number of entailments to this view. First, Descartes believed that only in a bona fide branch of knowledge can we find ‘clear and distinct ideas’ (Berlin 2000a: 28):

The paradigm of true knowledge, according to the Cartesian school, consisted in beginning from truths so clear and distinct that they could be contradicted only on pain of falling into absurdities; and in proceeding thence, by strict deductive rules, to conclusions whose truth was guaranteed by the unbreakable rules of deduction...

This was indeed a lofty aim for knowledge in the 17th century, and it meant that he viewed the knowledge array then available in a particular way. For Descartes, for example, the human sciences might generate edification and improvement, but were otherwise of little enduring social value because they could not produce ‘strict deductive rules’. Here lies the foundation of the distinction between science and all other symbolic ensembles, and it rests on the notion of what may be called *strong progression*.

No one today is a thoroughgoing Cartesian, and thus no one today believes in strong progression. Challenges to Cartesian rationalism have come from both within and outside of science. One challenge to this idea of strong progression from within science has culminated in the generally accepted position in science today of what may be called *weak progression*, probably most parsimoniously stated by Popper’s theorem of *revisability* and *provisionality*. This is a revision that accepts the postulate of progression (and hence of the division of the field of representations into ‘true’ or progressive knowledge and belief or mere narrative), but which recognises at the same time that the ‘true’ in true knowledge does not equal absolute knowledge, and that progress in knowledge, if in the long run ineluctable, can always and in principle be revised – hence, weak progression.

The dominant challenge to strong progression from outside science has sought to overturn the distinction between knowledge that progresses (‘science’) and knowledge that does not. The first brilliantly original formulation can be traced back to Giambattista Vico who, with his 7th inaugural lecture in 1708, and later with the publication of the first edition of *Scienza Nuova/New Science* in 1725, rejected the fundamental premise of Cartesian rationalism, the distinction between the true (*verum*) and the artificial (*factum*). He begins

by arguing their essential unity: 'We demonstrate geometry [not because it is true or progressive but] because we make it' (Berlin, 2000a: 31). What he meant by this was that we can be said to fully know something not only because we know what it is (i.e., through rational reconstruction) but because we know how it came to be (i.e., through historical or genetic reconstruction), which he called *per caussas*. By this logic, we only know what we create. If we did not create it, we cannot know it, because it then has no human history. 'The true (*verum*) and the made (*factum*) are convertible' (2000a: 35), or, 'The criterion of truth is to have made it' (2000a: 36). In other words, with this argument, truth becomes a human artefact, and Vico becomes the first constructivist. This form of the argument yields a hierarchy of knowledges, with mathematics at its head (the most artificial of knowledge systems for Vico), leading with arithmetic, algebra and geometry, then mechanics, physics (contra the Cartesians who put this at the head), down to psychology, morality and history (here Vico and Descartes are at one). The hierarchy is one of 'make-ability', with the least made knowledge the most opaque to our minds. Although far from Vico's intent, this reasoning buttresses that of the humanists of the Trivium, who sought to keep the humanities and hermeneutics sovereign, against the claims of physics and the Quadrivium as the paramount font of knowledge (Durkheim, 1977). How things have changed.

We may sum this up by saying that, whereas Descartes with his criterion of 'clear and distinct ideas' fundamentally sundered *verum* from *factum*, Vico fundamentally subverts it by reuniting them.

Vico's careful revolt has come to be the mere dress rehearsal for the more thoroughgoing romantic revolt of the 19th century (and the postmodern one, now on its last legs in the 21st). The European romantics took up Vico's insistence on the make-ability of truth and of the world: '...the common assumption of the romantics that runs counter to the *philosophia perennis* is that the answers to the great questions are not to be discovered so much as to be invented. They are not something found, they are something literally made' (Berlin, 2000b: 202, 203). Amongst the romantics and their contemporary successors there are strong and weak traditions of make-ability. Common to all, however, is the following:

Hence that new emphasis on the subjective [the maker] and ideal rather than the objective and the real, on the process of creation

rather than its effects, on motives rather than consequences; and, as a necessary corollary of this, on the quality of the vision, the state of mind or soul of the acting agent – purity of heart, innocence of intention, sincerity of purpose rather than getting the answer right, that is, accurate correspondence to the ‘given’. (Berlin, 2000b: 203)

There are a great many implications for education of this enduring dispute in the philosophy of knowledge which starts here. For the purposes of this chapter, the following is paramount: If the Enlightenment, following Descartes, thus assimilated all knowledge, including human knowledge, to the Enlightenment paradigm, the counter-Enlightenment did the converse; it assimilated all knowledge to the counter-paradigm. Both traditions of thought have had a vast influence on our stock of human understanding. Both have yielded a model for curricular organisation. We have had our Enlightenment curricula, with rigid progression, sequencing and pacing criteria for all subjects, and our counter-Enlightenment curricula which, by placing exclusive emphasis on skills and activity at the expense of knowledge, dispense with prescription and thereby dispense with progression and hence curricular differentiation altogether. What a dispassionate survey of these must reveal is that such assimilations invariably privilege some knowledge forms as they deform others. To see why this is necessarily so, a brief look at knowledge structure and its link to curriculum structure is useful.

Knowledge structure and curriculum structure

The dichotomous view of knowledge sketched earlier is particularly hard to transcend. The first theoretical priority is to break this dichotomous stalemate. Resources to do so can be found in the late theorising of Basil Bernstein (1996; 1999). He approaches the matter in the following way. First, he distinguishes between horizontal and vertical discourse. For our purposes, horizontal discourse is a form of sense making that is segmental and has no recontextualising principle – that is, it has no principled way to extend the knowledge structure vertically. All forms of vertical discourse have recontextualising principles, and have thus what Bernstein calls knowledge structures. These recontextualising principles differ, though Bernstein did not pursue their difference. He does give us a clue, however: knowledge

structures vary as to whether their verticality is hierarchical or horizontal. At the hierarchical pole, the *locus classicus* is the triangle of physics; at the horizontal pole, we find knowledge structures that proliferate sideways into multiple languages rather than cumulating into type/token trees as with physics. Although Bernstein does not say this directly, we can surmise the following: the hierarchical knowledge structures have long chains of type/token syntheses (that is, relatively higher pyramids of abstraction) than the horizontal knowledge structures, which are prone to extension as much laterally (into alternate languages) as vertically into ever more abstract logical trees.

To conclude this brief theoretical excursus, we may say that knowledge structures vary as to their vertical extensiveness, or progression. If knowledge structures vary across a continuum of progressiveness, it is plausible to assume that the curricular correlates of these knowledge structures do so as well. Let us agree, for the purposes of the present discussion, that school subjects vary commensurately along a continuum of progressiveness. How then may we characterise the way in which this progressiveness, for curriculum purpose, differs?

Curricular subject structures differ as to their requirement for stipulation of knowledge/subject *content*. This is not as trivial as it sounds. Recall Descartes' first requirement for *verum* – namely that conclusions (we may call them content) should rest on piles of deductive rules. From this Descartes concluded that those conclusions/contents, once 'proved', were left behind. What is here 'left behind' is a content trail of proliferating content as the abstraction sequence extends vertically. Modifying Descartes appropriately, we may say that, in the more vertical kinds of curricular subject, content is more important than in the more horizontal kinds of curricular subject, in a number of ways.

First, in the content-rich subjects, let us say in Mathematics, Physics and the other natural sciences, because there is more content in the progression chain, content sequence becomes of paramount pedagogical importance. Midway along the vertical/horizontal continuum (let us take Literature and History as examples), sequence of content is less important, though conceptual progression remains critical. We can note that the more horizontal the subject, the more the same knowledge can be recurrently used: in History, chronology aside, the Second World War is conventionally repeated at different levels

of explanatory abstraction. On the horizontal end of the spectrum, in Life Skills for example, it sometimes seems as if HIV/AIDS is the only discernible content.

In the vertical subjects, then, sequence counts: if learners in content-rich subjects encounter content of a level of abstraction above that which they have already mastered, it will be unlearnable because unrecognisable. Sequence of content (though not necessarily of concept) becomes increasingly less critical as subjects approach the horizontal pole. At the far end of the pole, content is a collection of topic segments that can be traversed in virtually any order. Without pursuing the matter further here, it is plausible to suggest that it was this end of the spectrum that the curriculum planners implicitly had in mind when they conceived the idea to unit standardise the curriculum.

Second, in content-rich subjects, if amount of content – because of the progression–abstraction chain – is more extensive, it is clear that, in curricular and pedagogical terms, *coverage* of the necessary content is all the more crucial than it is in subjects that have a lesser content chain needing coverage. We know from numerous international studies (Smith, Smith & Bryk, 1998, for example) that, of the factors that threaten coverage, the pre-eminent one is *pacing*. Teachers who move too slowly through a content-rich curriculum simply do not cover it. Reasons for too-slow pacing are numerous, but the first place to look is whether there are any pacing guidelines given in the curriculum; that is, whether teachers are given clear enough benchmarks for the pace at which they must proceed to ensure coverage of the requisite content.

Third, in content-rich subjects there is a greater *linkage between content and concept* than there is in content-poor subjects. In the latter, the same content can convey different concepts, leading to a necessary circulation of the same content through the curriculum. In the former, certain content is so tightly identified with its conceptual freight that content and concept are conterminously progressed in the ideal curriculum. In more horizontal knowledge structures – again, in Life Skills, for example – the same content is refracted successively through different explanatory languages, giving perhaps an illusion of progression, but in reality simply multiplying possible explanatory frameworks without providing any way in which the student might grasp any explanatory priority or accumulation in the knowledge store.

To sum up this part of the discussion: at the vertical end of the spectrum, subjects require strong progression; in roughly the middle of the spectrum, there is moderate progression; at the horizontal end of the spectrum, content is segmental and sequence is of lesser importance.

Some tentative generalisations:

- The more vertical the parent knowledge structure of the subject (eg. Physics), the greater is the importance of content and the sequence of content, over cognitive skills. The conceptual syntax is carried by the sequentially transmitted content, not vice versa.
- In such subjects, coverage is thus all important, since the content sequence makes manifest the conceptual path to be covered.
- The weaker the internal grammar of the knowledge structure, the weaker the connection between content and conceptuality. Practically, this means that the same concept can be elucidated by different content and, vice versa, the same content can be used to bring home not only different concepts but different levels of concept. This is a function of weak grammaticality, but it is also a function of plural specialised languages, so that the same content can be differently recontextualised into different language concepts. The learning path here is thus not vertically up a single conceptual ladder, but horizontally across specialised languages with different grammars. It may even be pedagogically appropriate to use the same content.
- At the progression-weakest end of the curricular spectrum, content and concepts are indistinguishable, although sometimes an artificial distinction of 'cognitive skills' is made. Both are segmentally arranged. Sequence and content specification requirements are here at their least specific.

The appropriate lesson to be drawn here is that different knowledge structures have different curricular specificatory requirements. If this point is grasped, it follows that any sensible curriculum policy will *distinguish and differentiate* between the structural needs of the different curricular knowledge structures. Any policy that favours one or the other side of the knowledge continuum will distort and subvert the needs of the other side. South African curriculum policy has, since 1994, recoiled from differentiation for political rather than pedagogical reasons. The impact on progression and on the learning of learners has become quickly apparent.

Differentiation past and present

All countries in the design of their education system grapple with the tension between contending social goods: between freedom of choice and social prescription, sometimes couched in terms of a trade-off between what is good for democracy and what is good for development, between allowing burgeoning inputs and consequences and managing those inputs and their social impact. In an important recent study, for example, Carnoy, Gove and Marshall (in press) show that the reason Cuba's learners outperform their Latin-American peers, especially in the content-rich subjects and, more importantly, why social class has almost disappeared as a stratifying factor in outcomes, is because Cuba takes a firm line in curtailing choice and managing, but not trying to eliminate, differentiation.

South Africa seems about as far from the Cuban option as it is possible to be, with its stress on choice, but it was not always so. It is instructive to recall the way that the National Education Policy Investigation (NEPI) considered the matter of differentiation. Writing in 1991/92, the Framework Report of NEPI argued that differentiation was one of four systemic features whereby education systems, or subsets of these systems, might vary. As a systemic feature, there are pros and cons attached to either high or low differentiation. The question is: which pros were most important, and which cons the least?

The strongest argument *against* education differentiation...is that, by providing different education experiences for various children, we run the risk of offering an education that is better for some (that is, of higher quality) than for others: that is, it runs the risk of producing inequity. In a society such as South Africa, which has gross social inequalities, education differentiation tends to accentuate them.

The strongest argument *for* education differentiation is that specialist skills require differentiation (of curriculum, perhaps of institution, probably of finance). Since such skills are said to be vital for an economy which aims to be competitive in world markets, education differentiation is said to be essential for development. (NEPI, 1993: 21)

Since it was assumed that attention to development was unavoidable, the Framework Report also assumed that some kind of differentiation was inevitable. The question then became how to deal with the tension between the equally desirable but divergent social goods of equity and development:

More than any other aspect of the education system, differentiation highlights the potential tension between the values of equity and development. We assume that most significant policy players will agree that the policy challenge is to find ways of maximising development while improving equity, to *manage differentiation* in such a way that the social programme of education equity is not seriously compromised (1993: 21, emphasis added).

In other words, the way to deal with the potentially undesirable side effects of differentiation is not to avoid them but to regulate them. I shall return to this point in the Conclusion. It would not have occurred to the NEPI writers that decreasing or eliminating differentiation was an option. Yet, as this chapter will argue, this is the strategy adopted by the Ministerial Project Committee in their draft further education and training (FET) proposals. As I will go on to argue, the strategy of de-differentiation will do the opposite of what is intended; that is, de-differentiation itself becomes a threat to equity and social justice.

I can summarise the discussion so far as follows:

- Education systems are designed to pursue various social goals and priorities;
- These goals may be equally desirable, but they may be, and often are, divergent;
- This divergence must be managed in order to ameliorate the impact of potentially undesirable effects;
- Attempting to deal with tensions between social goods by favouring one at the expense of the other is hardly a desirable strategy;
- Where a policy of de-differentiation is pursued, negative unintended consequences are likely to ensue.

It is this last feature that this discussion seeks to elucidate.

We may characterise the draft National Curriculum Statements and the policy document *Qualifications and Assessment Policy Framework Grades 10–12*

(*General*) (DoE, 2003) as a de-differentiating policy proposal with three de-differentiating features: of the grading continuum, of the qualification and learning areas, and of subject content.

De-differentiation of the grading continuum

The Framework proposes that the eight bands which served to grade and signal achievement level in the old Senior Certificate be shrunk to six (see Table 4.1).²

Table 4.1 Proposed codifications for Senior Certificate grading bands

Band	New code	Old code
80–100%	6	A
60–79%	5	B/C
50–59%	4	D
40–49%	3	E
30–39%	2	F
0–29%	1	FF/G

It should be plain that the main difference here is a collapse of the previous B and C categories into one, and the lopping off of the old bottom G category. On the face of it, this seems inimical to higher education purposes, for it is usually exactly in the B and C range that higher education institutions would like to be able to discriminate competence in key content-rich subjects such as Mathematics. With this system, they will be unable to use code 5 as a selector if, for instance, entrance was to be restricted to what would previously have been a B. To put that another way, the grade bands, bands 1 and 5 in particular, are now so broad that their usefulness for benchmarking has been reduced. At a time when international literacy and numeracy competency comparisons are on the increase (for example, the Third International Maths and Science Study, the Monitoring Learner Assessment Study, and the Southern African Consortium for Monitoring Educational Quality study), de-differentiation of the grading continuum seems to avoid rather than to grasp the problem.

There are two further features of the new grading policy worth commenting on. First, the awarding of marks that can be aggregated (norm-referenced assessments) has been scrapped and replaced by relevant assessment standards (criterion-referenced attainment standards). As a consequence, it is now unclear whether and how attainment levels on a series of assessment standards can be aggregated to give an overall assessment that is sufficiently discriminating for personnel managers and higher education admissions officers to make fair judgements in a crowded field. Second, subject assessments will no longer be aggregated together to form a single overall assessment for the school-leaving certificate. The award of the certificate will now depend upon a number of different attainment combination rules:

- Scores 4 or better in four subjects at National Qualifications Framework (NQF) Level 4;
- Scores 4 or better in three subjects at NQF Level 3, where a pass at Level 3 is achieved through a process of 'condoning'.

What this means will be far from clear to many company personnel officers, and it seems a fair guess that many of them, in practice, will simply take attainment in one or two subjects (say Mathematics or Language) as a proxy for employment potential. Over time, this may come to mean a downgrading of the other learning areas (such as History, for example) in the mind of corporate commerce, the public sector, the tertiary sector, and perhaps even in the mind of the public.

De-differentiation of the qualification and of learning areas (Mathematics as an example)

The new proposals collapse the distinction between a higher grade (matriculation endorsement) and a standard grade (Senior Certificate). There will from now on be only a single level FET qualification.³ It is plain that the intention here will be to eliminate the social hierarchy between the two old qualifications, a hierarchy, moreover, obdurately marked by race. Once again, though, the strategy to eliminate the difference, by making the differentiation invisible, masks but does not solve the larger problem. The problem is this: the two distributions for the current two qualifications (matriculation and Senior Certificate) overlap hardly at all (think of the two partly interlocked circles of the MasterCard logo). The South African Universities Vice-Chancellors'

Association (SAUVCA)/Council of Technikon Principals (CTP) memo to the minister on 11 June 2003 puts the point as follows:

...against the standard grade syllabus an achievement at 90% would translate into outstanding achievement; but the same attainment measured against the complexities of the higher-grade syllabus/subject would probably score between 40 and 49% and translate into adequate achievement. (SAUVCA, June 2003)

Imagine now that all students will come under the same assessment umbrella. The first question, which remains to be answered, is 'Where will the benchmark (normative reference) be set?' Let us say it is set at the matriculation level. As the example implies, this will mean that the very best students on standard grade will get a barely passing mark (now, a Level 3 grade). And, if the majority of learners doing standard grade were black, the majority of learners at the bottom end of the distribution, all other things being equal, will be black. Presumably, to make this sleight properly invisible, the minister will have to decree that race not be a reporting category for results. But we will still know which schools get what results, and we will still know which serve the poor and which the middle class. Those results will still tell the same story. Assume, however, that the department sets the norm for the FET certificate at the old standard grade level. This will push all the learners for whom higher education might have an interest into the top two bands, if not into the top band alone, further exacerbating the problem of discrimination discussed earlier. In other words, for the strategy of qualification elision to work, there has to be a far more articulated grading procedure. In short, grading and qualification de-differentiation, together, further compound the problem.

A particular feature of qualification de-differentiation is learning area de-differentiation, in particular, the elision between standard grade and higher grade Mathematics. SAUVCA has been particularly vocal about this feature (SAUVCA, September 2003). One sees the problem that the department is trying to solve by this de-differentiating feature: as the stakes are increased, so school principals have tended to counsel struggling learners into standard grade Mathematics in order to minimise the higher grade failure rate and maximise the overall pass rate to accede to exhortation from the various departmental head offices in the provinces. The concern is real, but the flaw in the logic lies in regarding this as necessarily a bad thing. The department takes the view that this is not fair to the learners so treated. There are three

comments to make. First, to allow learners to write the more arduous exam and to fail is not necessarily more fair, since a pass at the standard grade level has more exchange value in the marketplace than a fail at higher grade. If the learner is soundly judged to have a minimal chance to pass at the higher grade, it is simply irresponsible to leave her at the top level to fail. Second, the principals' practice is arguably more efficient than wholesale higher grade registration and failure. Third, it is plain that the de-differentiating strategy, in seeking to render the problem less visible, leaves untouched the root of the problem, which lies with the dearth of trained teachers in Mathematics, and with the under-specification of the curriculum, discussed later. In any case, far from dealing with the issue, the creation of Mathematical Literacy as a subject offers learners the opportunity to register for a subject that offers them no access to higher education in Science, Engineering, Health Sciences and Commerce. At least learners who had standard grade Mathematics were afforded access to some courses in the technikons. Now, arguably a larger pool will either write Mathematics and fail (since all agree that the bar in the Mathematics curriculum statement is now raised even higher than it was in the old higher grade syllabus) or write Mathematical Literacy and find access to higher education further curtailed. Fairness, in other words, is not served by this de-differentiating strategy either.

De-differentiation of subject content

The matter of content in the proposed curriculum, indeed in an outcomes-stipulated curriculum, is a contested one. Popular wisdom has it that, in the original apartheid curriculum, content was prescribed and children learnt by rote, thus stunting their problem-solving capacities and capabilities. Consequently, with the new Curriculum 2005, an outcomes-based curriculum, the stipulations were stated in skill terms and the content left by and large to the discretion of the teachers. As the President's Educational Initiative research so plainly showed (Taylor & Vinjevold, 1999), the majority of teachers simply do not have the requisite content knowledge of the subjects they teach in order to exercise this discretion effectively. The result is that learners are learning less and less, and consequently falling behind their age cohort benchmarks. The evidence we have shows that Grade 3 readers are a full year behind where they should be, and Grade 6 learners a full two years (Taylor, Muller & Vinjevold,

2003). With the review of Curriculum 2005 (DoE, 2000), it was argued that this learning shortfall was not the fault of the teachers, but rather a design flaw of the curriculum. This is how they made the case:

The Report argued that subjects in the curriculum differed as to their curricular coherence requirements, and they differed as to the optimal way in which content and skills should be stipulated. Some subjects, like Mathematics and Science, were content/concept-rich, with content and concepts building upon one another. In such subjects, not just any content will do, nor can any content be paired with the desired skills. Here, there is a defined body of content that must be covered in a specific sequence in a specified time period. If the content is not specified, and the sequencing and pacing requirements not clearly marked, teachers with a shaky content knowledge would not necessarily choose the right content, in the right order, at the right pace. The inevitable consequence would be learners with knowledge gaps. When these learners progressed to later grades, especially in subjects that required a strict sequence of development, they would lack the requisite foundation to progress in that subject. The result would be learners who were structurally stunted in their learning progress in these subjects, by a curriculum that came close to denying would-be citizens the right to knowledge safeguarded in the Constitution.

The Report contrasted this cluster of subjects with those at the other end of the spectrum, like Life Skills and Technology, which were defined in a far more skills-based way, and where the knowledge to be paired with the skills was not as obligatorily laid down by the sequencing requirements of the subject. Here, a skills-based curricular stipulation would suffice for both strong and weak teachers, though once again we could expect the weaker teachers to expose their learners to a more impoverished array of knowledge. In the middle of the spectrum were content-rich subjects, like History, where the content to be covered needed to be signalled, but the order was not as crucial, since the conceptual ladder of the subject was not as steep. Here, the knowledge to be paired with the skills was more optional, and a curriculum could safely suggest content and leave a degree of discretion open to the teachers.

A curriculum like the original Curriculum 2005, which was skills-stipulated but which was under-stipulated in terms of content and where the progression requirements were under-signalled, was thus clearly undesirable in general,

because it disguised from both teachers and learners the progression route or road map. The better trained teachers sometimes found a way to cope; with lesser prepared teachers this was far less likely. The consequence could only be that those already disadvantaged would be further disadvantaged by the state's curriculum, a social injustice of major proportions. The Report thus strongly urged government to stipulate content, sequencing and pacing requirements for the content/concept-rich subjects. The Revised Curriculum Statements show that this has been adequately done in some cases, like Mathematics, but not in others, like Natural Sciences. Here are the progression paths analysed for four subjects in the new Curriculum Statements:

Table 4.2 Progression paths in the draft National Curriculum Statements for General Education and Training Mathematics

	Content stipulation	Skill stipulation	Content/skill links
Progression within grades	YES	NO	YES
Progression across grades	YES	NO	YES
Progression across phases	YES	NO	YES

Mathematics progression is strong, explicit and content led; there is no strong skill progression stipulated, but skills and content are coupled.

Table 4.3 Progression paths for Natural Sciences

	Content stipulation	Skill stipulation	Content/skill links
Progression within grades	NO	NO	NO
Progression across grades	NO	YES	NO
Progression across phases	YES	YES	NO

Science progression is weak, poorly stipulated, and skills led only; there is weak content progression; skills and content are not coupled.

Table 4.4 Progression paths for Social Sciences

	Content stipulation	Skill stipulation	Content/skill links
Progression within grades	NO	NO	NO/weakly in Geography
Progression across grades	Chronological progression	YES	NO/weakly in Geography
Progression across phases	Ditto	YES	NO/weakly in Geography

Social Sciences progression is by chronological content, and is largely skills led; skills and content are not, or only weakly, coupled.

Table 4.5 Progression paths for Languages

	Content stipulation	Skill stipulation	Content/skill links
Progression within grades	NO	NO	NO
Progression across grades	More complex texts, but by teacher discretion	YES	NO
Progression across phases	Ditto	YES	NO

Languages progression is skills led; content stipulation is by genre and text suggestion only; skills are not genre linked. This means that a teacher following the skill progression stipulation only is able to omit entire genres she dislikes or in which she does not feel confident (eg. poetry, drama, novels, etc.).

The tables show that Mathematics has exemplarily followed the route denoted by the Report, that Social Sciences has partly followed the route, that Languages has not and, most disturbingly, that Natural Sciences have not. The latter is probably the most worrisome.

The draft National Curriculum Statements show that in key content-rich subjects like Natural Sciences, there is a level of under-specification which

is worryingly similar to that of the original Curriculum 2005. The higher education institutions are clearly concerned mainly about the knowledge gaps with which learners may come into higher education. Not only are learners likely to have knowledge gaps, they are likely to have conceptual gaps as well. These are unlikely to be usefully pinpointed either by the highly individualised assessment procedures prescribed or by the de-differentiated signalling capacity of the six-band grading system. The learners won't know what they don't know, their teachers won't know what they don't know, and the higher education institutions are unlikely to know what they don't know until it is too late. It is quite clear why the higher education institutions have a sectoral concern about the de-differentiating matrix of the proposed curriculum.

The concern propelling this chapter, however, is less with the difficulties that higher education institutions will have than it is with social justice. The argument made is that equitable knowledge and hence equitable learning opportunities for disadvantaged learners are seriously threatened in the new proposed curriculum by de-differentiating features that will do the opposite of what they appear intended to do. Just because differentiation was associated in the apartheid curriculum with inequalities, it does not follow that differentiation per se is a policy evil to be avoided at all costs. As we have known since NEPI, managing differentiation, not doing away with it, is the appropriate strategy for dealing with the tension between equity and development. Yet the department seems intent on differentiation avoidance at all costs. The only possible policy advantage to be gained is a symbolic one (Jansen, 2001; see also Muller, Maassen & Cloete, 2004), and it is sad that we are not yet out of this phase of political policy-making, at least as far as schooling goes. The cost will be high, and the price paid will be a breach of social justice for already disadvantaged learners.

Conclusion

I have endeavoured to show that, ever since Vico in the 18th century and the romantics in the 19th, a nostalgia for a creative, active and practice-centred account of social life has periodically welled up to oppose the more propositional, knowledge-centred account of the mainstream *philosophia perennis* (see also Muller, 2000). The merits of the respective cases aside, I have argued that the romantic current in curricular thinking, as exemplified

in South Africa by Curriculum 2005, the skills-based emphasis in outcomes-based education (OBE), and the FET curriculum and assessment proposals, has always come with a cost: the avoidance of differentiation, the suppression of progression, and the consequent dumbing-down of the content/concept-rich subjects.

It is disquieting to note further that the valorisation of activity central to the romantic impulse has found a fortuitous bedfellow in the ideology of choice that accompanies the marketisation of social life globally today, including education. Steven Ball (2003) has recently made evident the staggeringly expanded arena of choice that has infused especially middle-class schooling. In so far as romanticism infuses progressivism – the middle-class curriculum and pedagogy of choice as it were – choice looms large in Curriculum 2005 and the further education proposals. Teachers are given discretion over choice of content, choice of progression, and choice of pace. Without exploring this strand any further here, two comments are apposite. The first is that here, as elsewhere where the market penetrates social forms of life where it does not belong, the result is invariably *inappropriateness*. This is the lesson that Cuba has so exemplarily learnt (Carnoy et al., in press). Extension of choice to areas of social life that have social destinations decided upon by social values not made in the market – here, the necessary progression path of content/concept-rich subjects – is not so much freedom as irresponsibility; in Hegel's ominous term, 'negative infinity'. The second is that extending choice to a teacher corps that is differentially capacitated to exercise it can only lead to inappropriate, that is to say inadequate, choice. It is depressing, but that is just what we find confirmed in recent research (Reeves, 2004; Hoadley, 2003).

Curricular differentiation cannot be avoided or suppressed, nor can it be abandoned to the vicissitudes of choice. It must be managed and regulated. The first step here would be to acknowledge structural differences between curricular subjects – between their content stipulatory requirements, their content/concept linkage requirements, their pacing stipulatory requirements, and their progression requirements. This cannot be done without relaxing the 'one-size-fits-all' dead hand of OBE and progressive pedagogy that so infuses official curriculum documents, and which favours one side of the curriculum continuum at the expense of the other. Once we have got this far, the professional knowledge communities must be pulled in to find appropriate stipulatory levels and progression paths for each subject. Only then will we be

able to see exactly what it is we expect our teachers to teach and learners to learn; and only then can we delineate a realistic reform for redress and equity of outcomes. Everything else puts the cart before the horse.

Notes

- 1 This commentary was written in 2003, on the basis of the draft proposals put out for comment in 2003 (DoE, 2003). The National Senior Certificate and the National Curriculum Statement published in 2005 (DoE, 2005) have substantially revised the rules of combination and the assessment requirements commented on in this chapter.
- 2 Much of the public comment has focused on the band descriptions, as if these would replace categorical grading altogether, or as if this were the main difference from the previous grading practice of As to FFs.
- 3 Again, it is worth pointing out that this comment applies to the draft proposals (DoE, 2003), not the ones adopted (DoE, 2005).

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Theory and practice in the vocational curriculum

Jeanne Gamble

Introduction

In many countries, reforms aimed at more ‘demand-driven’ education and training have led to a separation between the outcomes of education and the educational processes of teaching and learning. For a number of years now the South African policy spotlight has fallen on the development of national standards, with Standards Generating Bodies regulated by National Standards Bodies charged with the task of developing and registering standards on the National Qualifications Framework (NQF). Emphasis has been placed on specifying as clearly as possible the human capabilities required for various work practices and broader occupational fields. In schooling, the shift to outcomes-based education has followed a similar if not identical trajectory, with learner-centredness linked to a requirement for application of knowledge to real-world problems.

A fundamental curriculum issue that flows from these reforms concerns the relationship between knowledge, pedagogy and workplaces or real-world application. Whether standards and learning outcomes should serve as guidelines to curriculum development or whether they should simply become the curriculum has consistently been a vexed question. The view that it is observable performance that counts as the desired outcome of teaching and learning is especially prevalent in the vocational domain. In this formulation, knowledge is viewed as ‘embedded in’ or ‘supporting’ performance, rather than as a distinctive component of curriculum. The theory + practice combination that has long been the hallmark of the vocational curriculum could thus potentially be transformed into ‘practice’ only. In curriculum terms, further education and training (FET) colleges (previously known as technical colleges) are being encouraged to transform their classroom-based

curricula to unit standard-based programmes, with continuous assessment against assessment criteria stipulated in the unit standard taking the place of national examinations. While some colleges are reluctant to abandon an established curricular system, others are embracing the new dispensation as a way of making the college curriculum more practical and more closely related to workplace practices.

The aim of this chapter¹ is not to play off one curricular dispensation against the other. The chapter aims to explore the similarities and differences between the three proposed pathways in FET, namely general academic, general vocational (career-oriented) and occupational (career-specific). In order to do so, knowledge is retrieved from its 'embedded' or 'supporting' status in standards-based curriculum formulations and made the focal point of investigation. The first section puts forward a vocabulary or a conceptual model with which to think about knowledge in the FET curriculum. The second section uses the model to identify similarities and differences in the knowledge bases of the different pathways. The final section explores some of the implications of the findings for the three FET pathways.

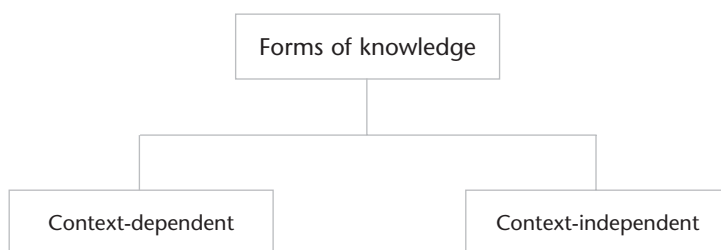
Placing knowledge at the centre rather than at the periphery of what counts as curriculum may not currently be considered a popular position. It is, however, a necessary one in terms of finding a way out of the conundrum that is posed by distinguishing between the proposed pathways to the new FET certificate on the basis of more or fewer credit points in the foundational component of an NQF qualification. Bureaucratic measures cannot provide a satisfactory rationale for the choices that students and their parents have to make at the end of compulsory schooling.

How to think about knowledge?

When one thinks about knowledge, or how meanings come about, one is immediately confronted by two kinds of meaning: those that are tied to a particular context and those that are not.² Philosophers and historians of science argue that it was the Greeks who in the sixth century BC moved from the measurement of space as a manual operation to geometry as the grasping of quantitative laws of number or of abstract space as concepts wholly independent from any practical task or purpose (Sohn-Rethel, 1978;

Zilsel, 2000). Pure mathematics became the unbridgeable dividing line between two forms of meaning generation, namely meanings generated in a 'context of thought' (context-independent meanings) and meanings generated in a 'context of human action' (context-dependent meanings). Context-independent meanings refer to that which exists only in abstract form. Context-dependent meanings refer to meanings that derive from concrete events or experiences that have actually happened in a specific time and place.³

Figure 5.1 The first level of distinction between different forms of knowledge



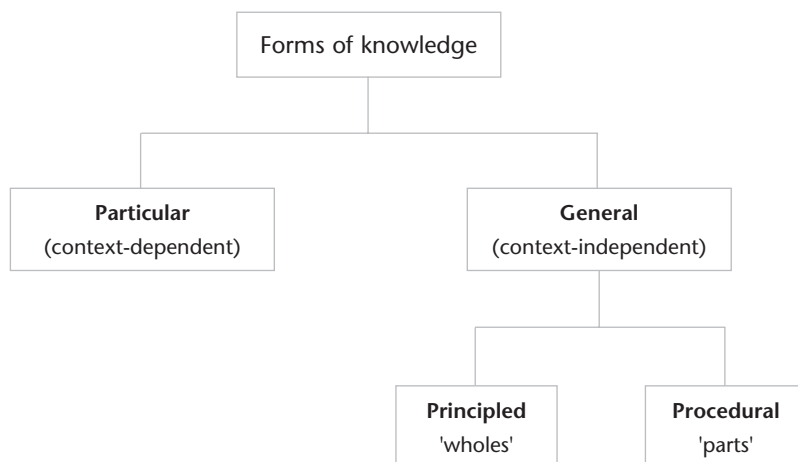
This is roughly the distinction to which we refer when we talk about 'theoretical or conceptual knowledge' and 'practical knowledge'. These terms, however, require further exploration before they really become useful.

Context-independent knowledge

If we go back to history, we see that the development of the humanities and natural and social sciences is based on two forms of investigation. Some kinds of general or universal knowledge are arrived at through a process of logical deduction, to reach conclusions that go far beyond what can be observed or touched or experienced. Here we can think of Einstein's theory of relativity that was conceived long before it could be empirically proved. Inductive methods of investigation, on the other hand, lead to abstract generalisations that are based on evidence of particular results. In Figure 5.2, the terms 'principled' and 'procedural' are used to describe the two kinds of investigation. Together they refer to a relationship from 'part' to 'whole' and/or from 'whole' to 'part'

that is expressed as general theorems or laws that determine particular results. Although these general theorems or laws are abstract in nature and cannot be seen or observed, they tell us a great deal about how things work in the world.

Figure 5.2 A second level of distinction between different forms of knowledge



If we think about how general or academic knowledge is transmitted, we can immediately see how principles and procedures work together. It is difficult to grasp something that cannot be observed. The pedagogic route is therefore one of procedural repetition. Principles are often taught through procedures. To understand this point one need only think of the drilling exercises common in most school subjects. Teachers often work out numerous examples on the board. Students copy down those examples and are given more examples to do as homework. Through this repetition students are gradually inducted into the conceptual logic (a general principle or rule) that underlies a range of related problems. The argument is not that repetition is intrinsically a sound pedagogic method. It becomes pedagogically sound when it is undertaken as a necessary step towards understanding an abstract concept *through use*. A concept such as, for instance, 'percentage' (%) makes

little sense when introduced in words but, by doing percentage calculations over and over again, we eventually grasp what it represents and we use the concept with confidence.

Context-dependent knowledge

Context-dependent knowledge is always tied to the 'real world'. It is the kind of knowledge that is developed in and through human action. This is the experiential world to which craft and work practices belong. It may come as a surprise to find that context-dependent knowledge can also be described as a combination of principled and procedural knowledge, albeit of a *particular* rather than a *general* kind. If we remind ourselves of the history of craft, it becomes possible to understand why this is so.

In craft, the idea of something to be made and the *ability to make it* are held by the craft worker as what is often called a personal unity of head and hand. This cannot be better explained than in an oft-cited passage.

We presuppose labour in a form in which it is an exclusively human characteristic. A spider conducts operations which resemble those of a weaver, and a bee would put many a human architect to shame by the construction of its honeycomb cells. But what distinguishes the worst architect from the best of bees is that the architect builds the cell in his mind before he constructs it in wax. At the end of every labour process, a result emerges which had already been conceived by the worker at the beginning, hence already existed ideally. (Marx, 1976: 283–284; also cited in Sohn-Rethel, 1978: 84–85)

The concept or idea in the mind of the worker represents a picture of the 'whole' to be created. In the 16th century, the introduction of movable type revolutionised printing. Printed pattern books and plans enabled conception to be separated from execution. After the invention of the mechanical clock, craft activities began to be separated and costed according to the precise amount of time they consumed (Lucie-Smith, 1981). These two inventions worked together to make labour standardised and therefore universal in a way that is today represented in quality-assurance systems such as ISO 9000, which specifies the parts of production processes separately. Personal unity

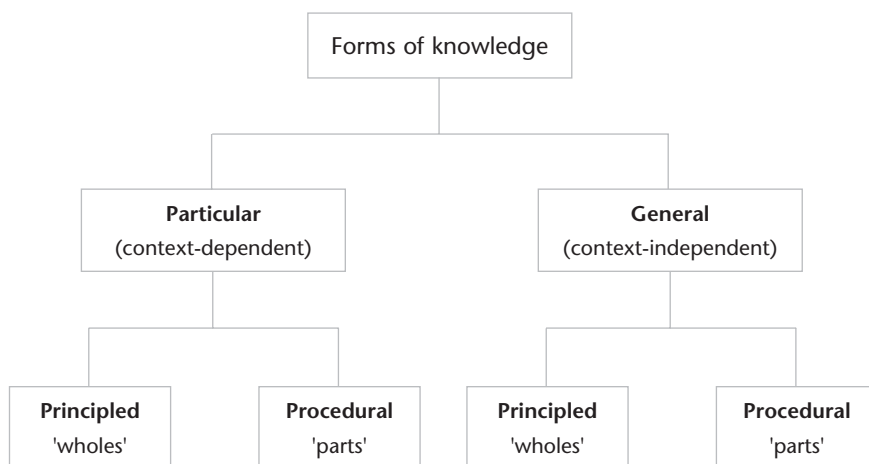
of head and hand had always been 'knowledge of how one *does*', conveyed by demonstration, modelling and repetition. Now, knowledge of 'how one *explains* things' could circulate easily, thereby allowing work of the hand to be set out in procedural terms. This process was accelerated by a new consciousness of time and its value.

Work can therefore be thought of in two ways. The first is as a relation between parts and wholes. The part-whole relationship is often grasped visually (through diagrams or drawings) rather than through formal reasoning, talking, reading and writing. Workers understand the particular principle of arrangement in a practical manner, and they pass on this knowledge through modelling rather than through verbal instruction.

The second way of thinking about work is as a series of parts that have no necessary relation to a whole. This kind of work is found in standardised mass-production processes. I read once that the workers who made the various parts of the atom bomb did not know what it was that they were making. Each part was made separately with assembly only happening right at the end.

The diagram presented in Figure 5.2 can now be extended to a second level on both sides.

Figure 5.3 A conceptual model of forms of knowledge



What Figure 5.3 shows is that, although context-dependent and context-independent knowledge refer to *fundamentally different* kinds of knowledge, each consists of a relationship between ‘parts’ and ‘wholes.’ They are also similar in the sense that, although principles and procedures belong together on both the general and particular side of the branch structure, in each case procedures can be separated from principles and taught on their own. When this happens, the parts are separated from the whole. In the case of practical knowledge, the part-whole relationship that is held as tacit knowledge (knowledge that cannot be put into words but is nevertheless acted upon) is destroyed. ‘Parts’ can be described explicitly in procedural terms as occurs in separate unit standards, but the ‘whole’ of which they are composite parts is no longer present. Workers often do not recognise their own jobs when they see them described in words in a step-by-step manner.

In the case of formal academic knowledge, this happens when procedures are taught without reference to the principles from which they take their meaning. There is sufficient research evidence to show that lower ability students are often taught only at the level of procedure (rote learning without coherent meaning) and higher ability students are taught at the level of principle and procedure combined, which enables them to grasp abstract concepts and to achieve levels of understanding not tied to a particular context.⁴

In the next section, the model developed in this section is used to show both similarities and differences between the proposed learning pathways in FET.

The knowledge base of the vocational curriculum

Any curriculum, whether academic, vocational or occupational, makes decisions about what should be taught (selection), the order in which things should be taught (sequencing), and how much should be taught in a particular period of time (pacing),⁵ and here we can think about a class session, a term, a trimester, a semester, a year, or more than one year. We also decide upon criteria to be used for evaluation or assessment (what counts as good work and what counts as poor work) and we decide which forms of assessment to use. The question is what form of knowledge provides the basis for these decisions? If we answer the question in relation to the general academic curriculum, it is clear that the curriculum is based on knowledge of the general or context-independent kind. The general academic curriculum has

induction into formal principled knowledge as its prime purpose, in order to prepare students for progression to higher-order reasoning. The vocational curriculum must face in two directions (see also Chapter 8). It must prepare for employability as well as for further study. It must therefore contain both the general (theory) and the particular (practice). This is a complex relationship and, as will be seen below, different formulations of the theory + practice combination have historically characterised the vocational curriculum.

Theory as theory

Although formal craft apprenticeships have virtually disappeared, history tells us that the educational route that developed from craft apprenticeship was always one that was based on a form of principled knowledge.

In their original form, trade apprenticeships were work based and centred entirely on a master–apprentice relation. The ‘master’⁶ artisan performed all the operations required to make the various articles produced by a trade,⁷ so the apprentice was always in the presence of both ‘parts’ and ‘whole’. There was no formal theory involved, but documents that describe this kind of apprenticeship talk about the ‘theory and practice of the trade’ (as described in Lewis, 1984: 26). This refers to what we would call particular procedures and their principle of arrangement acquired through practical activity where both ‘parts’ and ‘whole’ are present.

Later, increased mechanisation resulted in a more specialised technical division of labour that often deprived apprentices from getting exposure to all aspects of a trade. Limited practical experience was supplemented with instruction in general scientific principles to enable the apprentice to have a conceptual understanding of the full work process even if, in practice, they only performed partial operations (McKerron, 1934). This theory + practice combination jumped across the dividing line between context-dependent and context-independent meanings. An important feature of this curriculum form was that the relationship between theory and practice was *not specified*. The application of scientific knowledge was left to apprentices and employers and not included in college tuition. It was assumed that a scientifically grounded knowledge base would enable apprentices to engage in the kind of problem solving required by more advanced levels of technology while still relying on tacit knowledge and competence that could be acquired only through

practical work. This curricular form has been in use for many years and has produced scores of well-prepared artisans.

This kind of ‘theory’ is still taught in trade-related courses in Engineering Studies that colleges offer, either as part of an apprenticeship or on a full-time basis. It involves Mathematics, Science, Technical Drawings and a more context-specific subject called Trade Theory. In this kind of teaching, the textbook remains a dominant curriculum resource. Textbooks provide a conceptual progression, and the content covered in, for instance, N1, N2 and N3 or N4, N5 and N6 as trimester courses transmits a general knowledge base that requires students to progress along an upward chain of having to understand one concept first before moving to the next.

The rationale for ‘theory as theory’ comes from changes in the nature of work itself. In highly automated technology, machines come in sealed units. Artisans can no longer open the machines to figure out how they work; they require an understanding of scientific and mathematical principles to understand the logic on which advanced technology is based. The aim of teaching this content is therefore concept formation and the development of abstract reasoning.

In accounting-related subjects, students similarly need to be able to grasp the general rule or principle on which calculations are based. In art and design, History of Art and Drawing are compulsory subjects that give students access to the formal conventions of art. This helps them to connect their individual artistic endeavours to an established body of knowledge in the formal field of art and design.

Theory without practice

It is commonly acknowledged that problems are being experienced with regard to ‘theory’ as it is currently taught in colleges. The problems do not stem from the lack of immediate applicability of such knowledge, as is often assumed, or from extensive use of prescribed textbooks. They arise because many students who are currently undertaking college studies do so without access to practical work. They are full-time students and not indentured apprentices who attend college on a block-release or part-time basis. Without access to practical work, these students learn theory as theory, mainly for examination purposes and for access to further study. Research undertaken

on behalf of the Human Sciences Research Council (Lundall, 2002) shows, for instance, that engineering students who have proceeded to N5 or N6 level are often disinclined to 'get their hands dirty' in workshops. They want rather to continue their studies at technikon or university level.

Practice as theory

Originally, technical colleges offered a 'theory' component to work-based apprenticeships. The later expansion of college provision introduced new fields of study. Many of these fields are practice orientated with no particular body of principled knowledge as a foundation. They may also have no history of apprenticeship but, because the theory–practice combination has become entrenched in the college curriculum, all study areas tend to be cast in this format. What happens is that what is called 'theory' often requires students to memorise and reproduce written versions of practical work procedures. Such forms of 'theory' set up obstructions for students who are better at practical activity than at what they would call 'book knowledge'.

There is an explanation for this that extends further than student resistance to anything that is not practical. Bloch (1998) argues that practical knowledge is not only non-linguistic but also non-language like. Such practical knowledge does not follow the logic of words in sentences but is organised into multi-stranded networks of meaning that are rapidly accessed when a practical problem crops up. Bloch argues that when people are asked to explain their actions they reinvent a hypothetical, quasi-linguistic, linear, rational thought process that appears to lead satisfactorily to the conclusions reached but it is in fact a *post hoc* rationalisation.

What follows from this is that, in study areas that are predominantly practically orientated and where there is no formal basis in general principled knowledge, it is inappropriate to use the curriculum model of theory + practice. Setting the student a practical project that relates better to the production of a complete item enables a practical grasp of the relationship between 'parts' and 'whole', even if students cannot talk about what they are doing or write it down. Practical tuition of this kind returns to the knowledge base of traditional work-based apprenticeships even though the practical work now occurs entirely in the college and no longer in the workplace. Michael Young points out in Chapter 6 that learning and teaching are returning to institutions. The

conclusion drawn here is in keeping with this argument. It also fits with the trend of introducing simulated opportunities for holistic work practices into colleges.⁸ While longer periods of class time may be required to make such programmes optimally effective, they provide helpful models about what can be achieved within the college itself.

Similarities and differences

Table 5.1 summarises the discussion so far and sets out the forms of knowledge transmitted in different curriculum modes.

Table 5.1 The relation between principled and procedural knowledge in different types of curriculum

General academic tuition	General principles (context-independent)	THROUGH	General procedures (context-independent)
Traditional work-based apprenticeships	Particular principles (context-dependent)	THROUGH	Particular procedures (context-dependent)
Subject-based college tuition + practical work, as found in previous modes of apprenticeship	General principles (context-independent)	AND	Particular procedures (context-dependent)
Subject-based college tuition only (general examinations-based vocational education as it currently exists)	General principles (context-independent)	OR	General procedures (context-independent)
Unit standards-based college tuition + practical work in the college or in the workplace (full NQF qualifications, as well as learnerships as a new mode of apprenticeship)			Particular procedures offered as both theory and practice

Two important points emerge from the summary table. First, the *general* in ‘general academic’ and ‘general vocational’ can be understood as referring to the inclusion of context-independent knowledge in the curriculum. In the academic pathway, the whole curriculum and, in some study fields in the vocational pathway, the theory component, is based on general principled knowledge. The argument for its presence is that it is precisely the abstract nature of this form of knowledge that develops a capacity for problem solving in a wide range of contexts (in other words, this is what makes the knowledge ‘portable’). It is also the presence of general principled knowledge that gives these routes the potential to provide a basis for further study in higher education.

Second, what is now called the ‘occupational pathway’, or preparation for a specific occupation, has always been characterised by a theory/practice combination. In terms of the historical trajectory, a distinction between ‘general vocational’ and ‘occupational’ is not sustainable. If such a distinction is to be based on ‘practice without theory’, this route will invariably lead to a ‘downward vocationalisation at precisely a time when all indications point to the need to establish the vocational route as a viable alternative to schooling, without restricting the occupational chances of those who take this option’ (Gamble, 2004b: 192).

Rethinking theory + practice in the vocational curriculum

In the final section of this chapter, the preceding conclusions provide a set of conceptual tools for revisiting the vocational curriculum.

Holding two kinds of knowledge together

The argument of this chapter has been that the vocational curriculum needs both conceptual knowledge (context-independent) and practical (context-dependent) knowledge. These two kinds of knowledge are wholly different, and their combination depends on the manner (or not) in which a particular study field draws on formal conceptual or disciplinary knowledge. At the same time, we need to bear in mind that, in policy terms, the vocational route faces in two directions (further study and employability). It therefore cannot offer theory without practice. This statement may seem self-evident,

but the relationship between the two components is actually a complex one. The relationship between theory and practice cannot be specified directly because each refers to a different kind of knowledge. If the relationship is too direct, there is a danger that one kind of knowledge becomes the other. In order to make conceptual knowledge easier for students, it may become too 'contextualised' and lose its context-independent nature. In order to lift the knowledge base of practical knowledge, it may become too theoretical and lose its context-dependent nature. A shift in the opposite direction destroys the intrinsic nature of each kind of knowledge.

We have also seen that a problem arises when a theory component is offered that is based on procedural rather than principled knowledge. This becomes a stumbling block for students who are good at practical work but cannot easily say or write down what they do. When they are asked to do so, they have to convert their practical knowledge to discursive knowledge and they often do not succeed. The *general* part of their course of study therefore needs to relate to a second meaning of 'general', namely proficiency in languages, social studies and other subjects that build a wider understanding of the world. Such general subjects make students more versatile, as well as potentially offering a basis for further study.

Reuniting the general vocational and the occupational

We have seen that it is a misconception to think that the general vocational pathway includes context-independent meanings but that, in the occupational pathway, everything must be contextualised. The occupational pathway is often thought of as being skills directed rather than knowledge orientated, but such a distinction does not hold. What was particularly noticeable in a description that appeared in a local newspaper⁹ of an intensive six-month training programme undertaken by 15 young people being trained as tour guides in the Constitution Hill precinct in Johannesburg was the strong knowledge component included in the programme. Topics such as history, geography, human rights and constitutional principles featured prominently. This was clearly an occupational course because these young people were being prepared for a specific job, but the spread of subjects shows how being an informed tour guide relies crucially on a general knowledge base.

Sitting in a college class where students were being prepared to work in travel agencies, I was struck by the skilful manner in which the lecturer led the students to understand not only how to fill in a particular flight voucher but also to grasp the general rules that helped them to distinguish between different kinds of information. This was again clearly an occupational programme, but the lecturer understood the knowledge base and taught his students how to reason rather than just how to fill in forms.

Where people are already employed in a particular job and then sent on FET programmes, one might be able to sustain a distinction between 'general vocational' and 'occupational'. I would, however, argue that it is more feasible to take 'general vocational' as the main category and to recognise that this is a route that combines conceptual as well as practical knowledge with actual experience of work, whether in the workplace or in the college. Our resources are too limited to make distinctions that do not necessarily hold up in practice.

The role of work experience

Socialisation to work and introduction to the ethics and values that underpin a professional knowledge base come through work experience itself. Whether such work experience is acquired within a simulated environment in the educational institution itself or through periods of job shadow and work placement depends on the field of study and on institutional capacity to set up work placements with proper mentoring and debriefing processes in place, not only for students but also for host employers.

Colleges have little experience in setting up and sustaining such systems. This component of the vocational curriculum has enormous potential, and it is not something that should be regarded as related to learnerships but not applicable to other parts of college provision. Banks train tellers by placing them in a simulated banking environment for sustained periods of time. The professions train their new practitioners by making them work alongside more experienced practitioners in hospitals, law practices, accountancy practices, etc. It is a tried and tested manner of vocational or occupational preparation, and one that the colleges are going to have to embrace, now that they can no longer rely on employers of apprentices to provide opportunities for work-based experience.

Conclusion

Current views about how the curriculum practices of FET colleges should be reformed are based on opposing positions. Some argue that programmes with a curriculum that is centrally controlled and examined by the national Department of Education (commonly referred to as NATED programmes) are outdated and should be replaced as soon as possible by NQF-related programmes based on unit standards and governed by decentralised assessment practices. The contention is that programmes that are not rigidly examination driven can more easily be tailor-made to the needs of employers. Others argue that NATED programmes are better suited to knowledge transmission and that centrally controlled public examinations ensure a consistent standard across colleges and lead to qualifications that are understood by the public, as well as being consistent with the way the general academic pathway is organised.

Arguments tend to be of an 'either-or' variety, and show little recognition of the particular needs of different study fields and the distinctive characteristics of different kinds of knowledge. This chapter has strived to provide a vantage point that illuminates similarities and differences between general academic and general vocational/occupational pathways. Our educational system will only be successful if the pathways that are developed are equally strong and if the public has as much faith in the vocational route as they currently have in the general academic route. To realise this, knowledge has to feature as prominently in the vocational route as it does in the general academic route, but knowledge also has to be tied to practical work experience to give the vocational pathway a distinctive character. If this is not achieved, the promise that the vocational route leads to employability as well as offering opportunities for further study will be a false one.

Notes

- 1 An earlier version of this chapter was presented as a paper entitled 'A knowledge perspective on the vocational curriculum' at a Human Sciences Research Council (HSRC) Colloquium on the FET Curriculum in Pretoria (21 April 2004). I also drew on empirical observation in college classrooms during a study that was funded by the HSRC and Ntsika, and which is contained in an unpublished research report, 'FET Colleges in Action: South African Case Studies' (2003), and a series of impact

assessments, done by the HSRC and funded by Danida, that relate to the Support to Education and Skills Development Programme.

- 2 This section draws on the work of Gamble (2004a).
- 3 The distinction drawn by Basil Bernstein (1996; 1999; 2000) between horizontal and vertical discourse elaborates this distinction in greater detail.
- 4 See for instance Paul Dowling's (1998) study of differential distribution of mathematics education.
- 5 Selection, sequencing, pacing and evaluation criteria are terms which derive from the work of Basil Bernstein (1990; 1996; 2000) as distinctive features of his use of the term 'framing' of the instructional discourse.
- 6 The term 'master' is used here in its historical sense. I attach no gender specificity when I use the term.
- 7 Here we can think, for example, of the trade of cabinet making that involves the making of numerous free-standing items of furniture, such as tables, chairs, cabinets, beds, wardrobes, etc.
- 8 The SIMSA practice firm in Business Studies and the DASSIE programmes in Engineering Studies are examples encountered in colleges in the Western Cape.
- 9 Unfortunately I did not note the correct reference at the time of reading the article.

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Conceptualising vocational knowledge: Some theoretical considerations

Michael Young

Introduction

Critical commentaries on the system of vocational education in the United Kingdom that have resulted from reforms can be traced back to the late 19th century. However, since the end of World War 2 and especially since the early 1980s, both criticisms and proposals for reform have recurred with ever-increasing frequency. At the same time, the focus of reforms has varied widely from institutions and curricula to, more recently, national agencies and qualifications. Where responsibility for failure is placed has also varied. In the 1980s, governments blamed trade unions, which were seen as blocking changes that appeared to weaken their bargaining power (Raggatt & Williams, 1998). At the same time, they also criticised the further education sector for its ignorance of industrial realities and for its academic conservatism. Social scientists, on the other hand, have tended to blame employers for weaknesses in the provision of VET. Too many, they argue, take a short-term view of the costs and benefits of training. However, they have also located the weaknesses of the English system of vocational education and training (VET) in its wider social and political context (eg. Finegold & Soskice, 1988). Some point to the anti-industrial and elitist culture that has pervaded English governing classes and its tendency to value knowledge as a mark of status rather than as an instrument of economic transformation (Weiner, 1981). Others have highlighted the peculiarly voluntarist role of the state that emerged in England in the 19th century (Green, 1990) and that is reflected in the continued reluctance of governments of both left and right to extend either the legal obligations on employers to guarantee training or the range of occupations that require some form of 'licence to practice'.

Reforms of VET have of course related highly selectively to these various critiques. In the last decades, the focus has been almost entirely on the supply side of the 'VET market'. However, two major issues have been given little attention. The first, now increasingly acknowledged, is the lack of employer demand for improved skills and knowledge and the dependence of demand on the form of work organisation and product strategy adopted. The second, less acknowledged issue is the question of vocational knowledge and the VET curriculum.¹ It is the latter that is the concern of this chapter.² The chapter seeks to locate a number of policy issues concerning the control and content of vocational education within a theoretical framework drawn from the sociology of knowledge. It argues that, in contrast to the centrality of the curriculum in school policy debates, the question as to what knowledge those on VET programmes should acquire has at best been treated superficially.

The chapter distinguishes between three approaches to knowledge in proposals for the reform of VET which have broadly followed one another historically. It argues that, in different ways, each avoids fundamental epistemological issues that need to be addressed if an adequate concept of vocational knowledge is to be developed. In order to tackle the question of vocational knowledge, the chapter distinguishes between the two main social theories of knowledge – *social constructivism* and *social realism*.³ It argues that, while social constructivism provides an important critical perspective on VET knowledge policy, it is unable to deal with the question of vocational knowledge itself. The chapter then introduces two key contributions to a *social realist* approach to knowledge: Durkheim's early distinction between the 'sacred' and the 'profane' and Bernstein's distinction between vertical and horizontal 'knowledge structures'. It argues that these distinctions, modified by a social constructivist critique that makes explicit the relations between knowledge and power, provide an important basis for conceptualising vocational knowledge. The chapter concludes by suggesting some possible implications of the analysis for debates about the future of VET.

Knowledge and the vocational curriculum: Three approaches

The inadequate knowledge and skills that are acquired by many of those taking a vocational course – even those who succeed in achieving a qualification –

have been recognised since the decision in the late 1880s to establish the City and Guilds of London Institute (CGLI) as the first major attempt to promote and organise VET on a national scale (Gay, 2000). A more recent example of this issue being recognised is in the proposals for introducing Technical Certificates as part of the reform of Modern Apprenticeships. Three distinct approaches to vocational knowledge can be identified, which have followed one another historically. I shall refer to them as knowledge-based, standards-based and connective approaches.

The knowledge-based approach was launched in the late 19th century in response to a now familiar anxiety that British industries were becoming less and less competitive with those in other countries, especially Germany (Donnelly, 1993). The reformers recognised that skills and knowledge needed in the new science-based sectors such as engineering, chemicals and the new electrical industries could not be developed on the basis of traditional work-based apprenticeships. Employees in craft and technician occupations in these emerging industrial sectors needed access to knowledge of the sciences on which these industries were based and which they could not acquire 'on the job'. It was logical, therefore, that the major focus of the new curricula and examinations launched by the CGLI was on the Physics, Chemistry and Mathematics relevant to the various industrial sectors. Two significant features of this emerging vocational curriculum were to survive in somewhat modified form for almost a century. These were as follows:

- The curriculum explicitly excluded the *application* of knowledge in workplaces or any form of 'trade knowledge'. This was partly because there are intrinsic difficulties in developing and assessing curricula that focus on the application of knowledge. However, of even greater significance was the fact that application of knowledge was always likely to involve the 'trade secrets' of individual companies. As a result, learning how to apply the new scientific knowledge in specific workplace contexts was left to the apprentices and individual employers.
- The curriculum assumed that the natural sciences were important for their specific content and that they provided the appropriate body of reliable, objective knowledge needed by apprentices. However, the natural sciences, and their tendency to assume that knowledge could be treated as given, objective and reliable, were also seen as a model for non science-based fields such as Business Studies, which expanded from the 1960s and have since come to dominate the vocational curricula of further education colleges.

It was not until the late 1970s and early 1980s that the assumptions of this knowledge-based approach to the vocational curriculum began to be seriously challenged. In retrospect, a number of developments appear to have been behind this challenge. They were the following:

- The number of those employed in those science-based industries where there was a relatively clear link between the science content of the vocational curriculum and its role in the different industrial processes was steadily declining;
- There was a growing concern about the absence of qualifications among the majority of the workforce and a recognition that this might account for the inability of UK industries to compete with the emerging Asian economies;
- The possibility was increasingly recognised that the traditional knowledge-based vocational curriculum acted as a barrier to successful learning for the new cohorts of young people entering further education colleges or work-based training programmes, many of whom had achieved very little in the school curriculum;
- There was an emerging belief, shared increasingly by governments and employer organisations, that the knowledge-based approach to the vocational curriculum had lost contact with the main purpose of vocational education – developing workplace competence.

In giving primacy to bodies of knowledge in the form of subjects, the knowledge-based approach was seen by its critics in government in the 1980s as providing a rationale for the continuing control of the vocational curriculum by the educational establishment in colleges. These criticisms extended to a highly negative view of any off-the-job component of programmes of vocational education and what became described as a ‘provider-based’ approach to the vocational curriculum. The alternative proposed was what I refer to as a *standards-based* approach. This involved a number of assumptions. The most important ones, which continue to remain highly influential, were:

- The vocational curriculum needed to be controlled by the key users (the employers), not the providers (further education colleges);
- The skills and knowledge needed by employees *in workplaces* must determine all provision for off-the-job learning in colleges;
- Vocational qualifications need to give priority to the assessment of competence, or what can be learned in the workplace, not the knowledge acquired off the job in colleges;

- The traditional provider-based vocational curriculum that was based on bodies of knowledge organised and selected *for teaching* needed to be reformed. It was seen as stressing what students or trainees *needed to know* and not paying enough attention to what they would *need to do* when they were at work.

It was argued by key civil servants in the Employment Department at the time that the best way of establishing a vocational curriculum that gave priority to employer needs was not to base it on the expertise of vocational subject specialists in the colleges, but to derive it from national occupational standards agreed to by employers. The standards would be established by employers in the different sectors, organised into what were initially known as Industry Lead Bodies.⁴ These ideas were widely shared by the government and employer organisations such as the Confederation of British Industry, as well as the National Council for Vocational Qualifications (NCVQ) that was established in 1986. They represented a completely new approach to vocational education in which (at least in theory) outcomes replaced the curriculum and workplace assessors replaced teachers. In practice, it proved unpopular with most employers and completely unworkable by further education college lecturers who found themselves having to use the standards to construct a curriculum (or at least a learning programme).⁵

The premise of the late 19th-century reformers had been that, as industrial change was primarily knowledge led, or more specifically science and engineering led, it was appropriate that the relevant sciences should be the core of the vocational curriculum. The reformers of the 1980s noticed two unintended outcomes of the 19th-century reforms, which they saw as being at odds with a modern vocational curriculum. The first was the emergence of a tension between changes in the learning demanded by employers and the relative lack of change in the college-based curriculum; each appeared to be based on a very different form of specialisation. Changes in the demand for workplace skills were being expressed in the increasing differentiation of skills and knowledge needed in different workplaces, together with a growing awareness of the importance of generic or common skills. In so far as there were changes in the college curriculum, they were expressed in the proliferation of new subjects in response to changes in student demand that were not necessarily congruent with changes in the organisation of work. In theory, this educational specialisation was meant to complement changes

in the learning demands of workplaces. However, in practice, it appeared to have a kind of logic of its own, reflecting the wider trend of academic drift associated with all educational institutions, even those with specific vocational purposes.

The standards-based approach to the vocational curriculum on which the new National Vocational Qualifications were based was seen as a way of countering what the reformers saw as the academic drift of most college-based vocational courses. Using a method known as functional analysis, which was developed by occupational psychologists concerned with job design, the standards-based approach began by identifying and stating curriculum outcomes in terms of what an employee would be expected to do, not what he or she needed to know. Knowledge came second and was only important in so far as (in NCVQ language) it *underpinned* performance. In the early days of NCVQ, the standards-based approach was developed in an extreme form and assumed that all vocational knowledge was implicit in competent workplace performance. It followed that there was no need to consider knowledge separately at all. If someone was assessed as performing competently, it was assumed that he or she must have the adequate (underpinning) knowledge. This position was later modified when it was recognised that in many cases there was knowledge that employees needed that could not necessarily be acquired in workplaces or identified by observing performance. The need to assess knowledge separately led to attempts to provide criteria based on the occupational standards for identifying what became known as underpinning knowledge and understanding (UKU).

A major concern of NCVQ consultants such as Mansfield and Mitchell (1996), who were given the responsibility for developing the criteria for UKU was to avoid allowing the traditional syllabus-based approach to knowledge to return. It was assumed that if this happened the vocational curriculum would be reclaimed by the colleges, and the NCVQ's mission, to disseminate an outcomes-based approach based on the belief that occupational competence could be acquired 'on the job', would be undermined. What emerged, therefore, was a tension between two distinct approaches to knowledge. One was college based and expressed in terms of subjects and disciplines. This approach was based on the idea that knowledge is produced by researchers (mostly based in the universities) and that subjects are developed from research-based knowledge by school and college subject specialists with

their links to subject teaching associations. The traditional vocational variant of this academic approach to knowledge consisted of developing curricula related to broad occupational fields such as business and administration rather than academic subjects or disciplines; it was based on links between vocational teachers in colleges, professional bodies and university faculties in applied fields such as engineering and business studies. At the higher levels of fields like law, medicine and engineering these two approaches became virtually indistinguishable; both have strong roots in the universities and links with professional bodies. The three crucial features shared by both the academic and professional/vocational variants of the college-based approach to the curriculum were (a) they provided clear progression routes between lower levels (eg. A levels and National Certificate courses) and higher levels (degrees, Higher National Certificates and professional qualifications), (b) they depended for their validity on the understandings and values shared within different communities of specialists, and (c) they maintained quality by relying on a combination of established external examinations and trust within the specialist communities. They did not rely on any formally explicit criteria or specification of outcomes. The standards-based approach to vocational knowledge rejected what was seen as an overemphasis on these features on the basis of such features being exclusive and backward looking. It aimed to replace examined syllabuses, agreed by groups of specialists, with criteria for national standards common to all fields (and, in principle, all subjects) defined in terms of outcomes at five levels.

There were attempts in the early 1990s to develop a systematic methodology for deriving knowledge criteria from standards and hence to provide an explicit alternative to the older knowledge-based approach. However, they were discontinued by the mid-1990s before NCVQ was merged into the Qualifications and Curriculum Authority (QCA). Despite much criticism, the QCA retained the standards-based approach to vocational qualifications but relaxed its rigidities. Vocational qualifications are now required to be 'influenced by' rather than 'derived from' occupational standards. Despite this official 'loosening up', which reflected a recognition that the standards-based approach had failed to provide criteria for vocational knowledge, its basic assumptions remain and continue to influence the more recent reforms such as the proposal that Technical Certificates should be incorporated into Modern Apprenticeships as a way of strengthening off-the-job learning. The

idea that employer-led bodies (now Sector Skills Councils) should take the lead in developing the vocational curriculum has been retained, despite the reality that in many sectors employers are reluctant to take on such a role and frequently lack the necessary expertise. As a consequence, little advantage has been taken of the more flexible approach to standards. What has emerged is considerable diversity between sectors and a largely ad hoc approach to specifying underpinning knowledge. This can take the form of lists of topics which either amount to little more than what anyone would know after a few weeks in a workplace (as in the case of sectors like retail and distribution), or involve a combination of everyday workplace facts (what tools are needed or where to find them) together with some scientific or highly technical topics with little idea as to what depth they should be studied at. Not surprisingly, some sectors, such as accountancy, electrical installation, and engineering, in which the acquisition of off-the-job knowledge is vital, resisted the excesses of the standards-based approach. Furthermore, not only did the standards-based model fail to take off at higher levels but the demand for more traditional types of knowledge-based vocational courses has continued to grow.

The limitations of the standards-based approach, with its emphasis on accrediting workplace competences, are at least implicitly recognised in the recent proposals for Technical Certificates. Technical Certificates are an attempt to reinstate the importance of off-the-job learning in work-based programmes, such as Modern Apprenticeships. They aim to strengthen the knowledge-based component of apprenticeships at the same time as enhancing its relevance to the demands of workplaces. Although not entirely new, it does imply a much greater emphasis on off-the-job learning and its links with on-the-job learning. It is for these reasons that Technical Certificates can be described as a *connective approach*⁶ to vocational knowledge. In contrast to the knowledge-based approach initiated at the end of the 19th century, Technical Certificates stress the importance of knowledge acquired at work and, in contrast to the standards-based approach, they explicitly recognise that knowledge acquired at work is often inadequate on its own, especially in knowledge-intensive workplaces. While proposals for Technical Certificates emphasise the importance of systematically organised off-the-job learning for apprentices, the responsibility for identifying this knowledge remains the responsibility of the employer bodies that were funded by the government to develop course outlines and rationales for off-the-job learning. However,

Technical Certificates still retain two problematic features of the previous standards-based model. First, despite the failure to develop a methodology in the early 1990s, Technical Certificates still rely on the idea that UKU can be generated from occupational standards. Second, Technical Certificates are still based on a 'competing interests' view of vocational knowledge. In other words, it is assumed that the key issue is not the content of the vocational curriculum but who controls it – employer-led bodies or educationists. The employer-led bodies are advised to consult and negotiate with college-based vocational curriculum specialists in their development of course outlines, but are under no obligation to do so. Within these constraints it is difficult to see how Technical Certificates, despite their ambitious aims, will lead to a significant advance on the previous approach or provide indications as to what a genuinely connective approach to vocational knowledge might involve.

VET reforms and concepts of vocational knowledge

The account of attempts to reform the vocational curriculum in the previous section suggested that, although each reform arose from a recognition of problems in existing provision, there remained issues with which each was unable to deal. In this section of the chapter I want to consider the different meanings given to vocational knowledge that are implicit, but are not explicitly discussed in the reforms and the critiques that led to them. My argument is that, in their attempts to develop a distinct vocational curriculum, each approach avoids the issue of how vocational knowledge can be distinguished from school or academic knowledge, on the one hand, and the skills and knowledge that can be acquired in the course of work, on the other hand. The knowledge-based approach recognised the crucial role of science in a vocational curriculum geared to the new science-based industries but failed to consider how this new knowledge could be recontextualised in the workplace. As a result, it became the inevitable victim of academic drift; many technical curricula were little more than inferior versions of similar academic curricula. The standards-based approach tried to relate vocational knowledge to workplace practice by claiming to be able to derive it from outcomes-based analyses of various occupational roles. However, this not only failed to lead to a practical methodology but it also neglected the extent to which only some of the knowledge relevant to particular workplaces has its origins beyond those workplaces. The connective approach associated with Technical

Certificates is an explicit attempt to bring these two approaches together by making links between off-the-job and on-the-job learning. However, it still relies on at least the rhetoric of the standards-based approach to identifying both on-the-job and off-the-job knowledge. It fails to acknowledge that there may be fundamental differences between these types of knowledge and how they relate to differences between the codified knowledge of subjects and disciplines and implicit and sometimes tacit knowledge acquired in workplaces. If there are important differences in content, structure and purposes between off-the-job and on-the-job knowledge, there are likely to be problems in attempting either to rely on one type, as in the knowledge-based approach, or in collapsing these types of knowledge as in some way both derivable from occupational standards. Both approaches mask crucial epistemological differences between types of knowledge and assume that the only differences that are relevant to the vocational curriculum are around the question of control (whether it is employers or educationists who decide) and not content. The idea of 'connecting' off- and on-the-job knowledge and grounding the connection in national occupational standards as implied by the proposals for Technical Certificates does little more than avoid the issue. It is the connections between the codified knowledge of the college-based curriculum and the tacit and often uncodifiable knowledge that is acquired in workplaces that is the basis for what is distinctive about vocational knowledge. However, in order to be clearer about what such connections might involve, we need a more rigorous way of differentiating between types of knowledge. The next section therefore takes a step back from specific curriculum issues and considers different approaches in the sociology of knowledge that might provide a framework for addressing this issue.

Sociology and vocational knowledge

The importance of the sociology of knowledge for the issues of concern to VET reformers (and indeed those involved in education policy more generally) is that, in its premise, it captures what Muller (2000) refers to as the *fundamental sociality* of knowledge. It rejects the view that knowledge is either intrinsically 'in the mind' (idealism) or in the world (materialism), or in any sense given. All knowledge, it asserts, in that it is produced by human beings, is inescapably social in origin. The sociality of knowledge refers not only to how it is shaped by external societal influences, but also to how all our

categories, theories, concepts and symbols are inescapably social in origin. It is useful to distinguish between two aspects of this sociality of knowledge, which have led to two very different sociologies of knowledge that I referred to in the introduction of this chapter as *social constructivism* and *social realism*.

By *social constructivism* I refer to that tradition of social theory which has had a long and varied history since Hegel and Marx in the 19th century and the American pragmatists in the early 20th century. It takes its most familiar contemporary forms in the work of the French sociologist, Pierre Bourdieu, and in the variety of perspectives often referred to as postmodernism.

Social constructivism argues that all knowledge is the product of social practices; it is therefore inescapably knowledge from a standpoint or perspective. No knowledge in this view is privileged or, in any strong sense, objective. It follows that the specialised, codified, or discipline-based knowledge associated with the college curriculum (and any off-the-job learning) is in principle no different from everyday common sense (or on-the-job) knowledge – it is just some other people's knowledge. There is a somewhat ironic link between the epistemological reductionism of postmodernism and what might be called the behaviourist reductionism of the standards approach discussed earlier (Moore & Young, 2001). There are two interpretations of the very general principle of social constructivism that have important implications for the case of vocational knowledge. They might loosely be described as those that focus on the interests underlying all knowledge and those that focus on knowledge production and acquisition as a process. 'Interest-based' social constructivism has its intellectual roots in Marx's theory of ideology. Whereas Marx was concerned with class interests, the approach has been generalised more recently to refer to any social group – by feminists to include women and by multiculturalists or postcolonialists to include different ethnic groups. Interest-based approaches to knowledge have an important critical role in reminding vocational educators that any selection of knowledge may be an expression of a social interest or embody a particular set of power relations. The vocational curriculum is always likely to be in some part a power struggle between employers, educators and the state. 'Process-based' versions of social constructivism can be traced back to the pragmatism and symbolic interactionism of social theorists such as Dewey and G. H. Mead. Their strength is the emphasis they give to the contextual or situated character of knowledge. Knowledge is always produced or acquired 'in a context' – it

is never entirely context free. Given the importance of learning on the job in vocational education, it is not surprising that process-based approaches have been taken up by VET researchers and lie at the heart of one of the few attempts to conceptualise vocational knowledge (Billett, 1995).

The problem with these interpretations of social constructivism is that they are at best partial perspectives. The interest-based approach on its own can lead to a reductionist view of all knowledge as power relations; hence the only question this leads to is who has the power. In the case of process-based approaches, they can fail to distinguish between the degree of situatedness of knowledge. For example, the 'knowledge' needed by a receptionist or a call centre operator is almost entirely situated or related to a specific context, whereas the knowledge needed by an engineer or accountant is not. Although this context specificity is a feature of the knowledge required for all jobs, many jobs also require knowledge involving *theoretical* ideas shared by a community of specialists that are not tied to specific contexts; it enables those who have acquired it to move beyond specific situations. In focusing only on either the interests or the practices involved in the processes of acquisition and production of knowledge, knowledge can easily be reduced to or equated with the interests or the practices of groups of knowers; as a result, content becomes arbitrary (at least in theory). Thus, social constructivism, while rhetorically powerful both in exposing the power relations that are embedded in all knowledge, and in cautioning researchers to be sensitive to particular contexts, is limited in what it can say directly about the vocational curriculum, where the differentiation of knowledge is the crucial issue.

Social realist approaches to knowledge stress that, although all knowledge is historical and social in origins, it is its particular social origins that give it its objectivity. It is this objectivity that enables knowledge to transcend the conditions of its production. It follows that the task of social theory is to identify these conditions. Furthermore, social realist approaches address epistemological issues that are involved in the differentiation of knowledge that social constructivism does not (and in my view cannot) engage with. Partly as a result of an unwillingness to recognise the social realist argument, decisions about the VET curriculum have been left to a combination of tradition and pragmatism. I turn therefore to brief accounts of two leading exponents of social realist approaches, Emile Durkheim and Basil Bernstein.

Durkheim's social realist approach

A social realist approach to knowledge can be traced back to the French sociologist Emile Durkheim, who began writing in the last decade of the 19th century. He wanted to emphasise the 'sociality' of knowledge, but, in contrast to social constructivism, he stressed the *differences* not the *similarities* between different types of knowledge and explored the different types of social organisation associated with them. Durkheim's ideas were based on contemporary studies of religion in primitive societies (Durkheim, 1961). His starting point was a distinction between *profane* and *sacred* orders of meaning that he found in every society that he studied. The profane refers to people's response to their everyday world – it is practical, immediate and particular (with similarities to 'on-the-job' learning in the terms of this chapter). He distinguished the profane from the sacred world of religion that he saw as invented, arbitrary and conceptual; the sacred was a collective product of a society and not related directly to any real-world problem. Originally exemplified by religion, the sacred for Durkheim became the paradigm for all the other kinds of conceptual knowledge, including science, philosophy and mathematics, which, for him, were equally social and removed from the everyday world. In relation to the issues that are of concern in this chapter, the sacred has parallels with 'off-the-job learning' that is not constrained by the immediacy of practical problems or getting the job done.⁷

Muller (2000) makes the important point that, for Durkheim, the sacred, whether exemplified in religion or science, is an order of meaning characterised by what he refers to as the 'faculty of realisation.' This, for Durkheim, has two aspects:

- The ability to make connections (in its modern form this is one of the capabilities identified by Reich [1991] as needed by those he refers to as the symbolic analysts of today's knowledge economies);
- The ability to predict, project beyond the present and conceive of alternatives.

Both these aspects of the sacred are easily neglected in vocational curricula and even sometimes in general education. It follows that Durkheim's analysis provides an explanation for the problems of the standards-based approach to knowledge that collapses the distinction between the sacred and the profane and inevitably denies learners opportunities either to generalise or to envisage

alternatives. Furthermore, his analysis also suggests why achieving 'parity of esteem' between academic and vocational learning is so difficult and why attempts to 'vocalise' general education have been open to the charge that they are little more than forms of social control.

The sacred and the profane as two distinct orders of meaning are for Durkheim inevitably in tension. However, he emphasises the differences between the two; he is not implying a judgement about one type of meaning being superior to the other. Everyday activity such as work would be impossible on the basis of the sacred alone. Likewise, workplaces restricted to the profane would preclude the possibility of envisaging alternatives and leave the organisation of work where it was in pre-industrial societies. Durkheim is making an argument for specialisation; in other words, he is emphasising the distinctive roles of both orders of meaning.

There are two further lessons for vocational education that can be drawn from Durkheim's distinction between the sacred and the profane. The first is that they are not just distinctions between orders of meaning or forms of knowledge; they are also different forms of social organisation. Second, by distinguishing between their distinct roles and purposes, Durkheim provides a way of avoiding a simplistic opposition between the two that has characterised many arguments about the VET curriculum. He is asserting that there are different types of knowledge with different purposes that are based on different forms of social organisation. One cannot be reduced to the other. It follows that they are not interchangeable or in competition with each other; they are complementary.

There are, however, some problems with Durkheim's analysis, which reflect his assumption that modern societies have evolved in a linear fashion from earlier societies. The first is that, in complex modern societies, the sacred and the profane are no longer homogeneous categories; each pervades the other as in the case of the embedding of science in work. Second, as a result of extrapolating from small-scale undifferentiated societies with little stratification, Durkheim plays down the extent to which the different orders of meaning are unequally distributed and themselves become stratified. The theoretical problem to which this leads is that relations of power are marginalised in Durkheim's analysis. Despite his insistence that the sacred and the profane only differentiate between different orders of meaning, in practice they become the basis of divisions between academic and vocational

qualifications and more generally between mental and manual labour. Third, as Muller (2000) points out, the sacred and the profane are never as distinct as Durkheim portrays them. They are, in Max Weber's terms, *ideal* not descriptive types and are always, to some extent, enmeshed in each other. This dichotomising leads Durkheim to take for granted the problem of crossing the boundaries between different types of knowledge – an issue that is fundamental to the vocational curriculum in explicating the relationship between off-the-job and on-the-job learning.⁸ Bernstein's last work (Bernstein, 2000) develops Durkheim's social realist approach to knowledge in his distinction between vertical and horizontal knowledge structures. I turn next to a brief discussion of Bernstein's ideas.

Bernstein's vertical and horizontal knowledge structures

Bernstein (1999; 2000) reconceptualises Durkheim's distinction between sacred and profane orders of meaning by distinguishing between vertical and horizontal discourses. Horizontal discourses, for Bernstein, are local, segmental and context bound. In contrast, vertical discourses are general, explicit and coherent. They are expressed in either hierarchically organised bodies of knowledge such as the natural sciences or in bodies of knowledge that are segmentally organised into specialised languages, as in the case of the humanities and the social sciences. Work-based or on-the-job knowledge can be seen as a form of horizontal discourse; it embodies no explicit principles for transferring meanings across 'segments' (whether these are sites or occupational sectors) except by analogy that one segment or occupation is 'similar' to another. Furthermore, on-the-job knowledge is usually acquired experientially without relying on any overt pedagogic intervention and/or following any explicit rules or sequences. In contrast, vertical discourse is expressed in bodies of codified knowledge. It is typically acquired off the job and, for Bernstein, in accordance with the principles of recontextualisation and strict rules of distribution associated with specific subjects and academic disciplines.

Bernstein argues that horizontal discourses cannot generate vertical knowledge because they embody no principles of recontextualisation. By this he means the rules for making explicit the grounds for an explanation. In other words, if we accept, with Bernstein, that one criterion of vertical knowledge is whether it embodies a *principle* of recontextualisation, it is important to distinguish

between vertical knowledge and common sense, practical or everyday knowledge. Put simply, there are rules that govern both the production and acquisition of vertical knowledge.

Bernstein's distinction between horizontal and vertical discourses explains the inability of the standards-based approach to vocational knowledge, discussed earlier, to generate any systematic methodology. It fails to recognise that one kind of knowledge (vertical) cannot be derived from the other (horizontal). The horizontal or tacit cannot be made explicit because it is its tacitness, its immediacy in relation to everyday or working life, that gives it its power. Similarly, it is not possible to *apply* vertical knowledge directly to specific everyday workplace problems where knowledge is needed that is sufficiently flexible to deal with immediate practical problems.

Bernstein argues that vertical discourse can be expressed in the form of two distinct types of knowledge structure, and again he invokes the vertical/horizontal distinction. Vertical knowledge structures are pyramidal, and are expressed in their purest form in the physical sciences in which knowledge growth involves ever-higher levels of generalisation and abstraction. Horizontal knowledge structures, on the other hand (Bernstein's examples are the social sciences), involve a number of non-comparable specialised languages but without any overarching principles for linking them. The growth of horizontal knowledge, for Bernstein, consists of the development of new specialised languages. For Bernstein, both these types of knowledge structure are expressions of vertical discourse. Both have explicit principles of recontextualisation, and those who have acquired them can provide the grounds of their explanations in terms of a shared set of rules.

Bernstein's analysis highlights the extent to which previous debates about vocational knowledge have limited their focus to the different interests of those defining what is to count as vocational knowledge, and have not considered the different types of knowledge themselves. These debates have been about whether it should be the employers, as the standards-based approach claims, or the educators (in line with the knowledge-based approach) who should define what is to count as vocational knowledge. Boreham (2002) suggests that reforms within the dual system of apprenticeship in Germany provide an example of how the two sets of interests are combined; it represents an interesting attempt to develop the kind of connective approach referred to

earlier. Bernstein's theory, on the other hand, suggests that all such approaches neglect questions of the internal structuring, contents and purposes of the different forms of knowledge and what implications these questions may have for how knowledge is acquired. The importance of Bernstein's theory for conceptualising vocational knowledge is found in his concept of re-contextualisation and the pedagogic strategies to which it points. Breier (2002) draws on his ideas to develop the useful distinction between *generalising and particularising* pedagogic strategies.⁹ The former refers to explanations and the latter to the location of specific instances. Distinguishing between types of pedagogic strategy raises questions about how the two kinds of strategy relate to each other, the different kinds of explanation and procedure that may be found in vocational education programmes, and how they may be expressed in differences between industrial and service sectors.

Bernstein, like Durkheim, tends to favour dichotomous categories. However, he develops his dichotomies by what Abbott (2000) and later Moore and Muller (2002) refer to as fractal divisions. He is therefore able to conceive of vertical knowledge structures, including elements of horizontality and vice versa. One of the limitations of his analysis for the concerns of this chapter is that he gives almost all his attention to varieties of vertical knowledge – in particular the differences between the social and natural sciences. Any attempt to conceptualise vocational knowledge requires equal attention to the differentiation of horizontal discourses and knowledge structures across different occupational sectors and types of work.

Bernstein's distinctions can be applied to a number of trends in recent VET curriculum policy. For example, Foundation Degrees and Technical Certificates are attempts to increase the knowledge component of work-based programmes; however, by failing to distinguish between types of knowledge, they may well reproduce the problems that they were designed to overcome. Vocational GCSEs (General Certificate of Secondary Education) and vocational A levels, on the other hand, seek to incorporate practical workplace knowledge into the vertical structures of the school curriculum. However, as Breier (2002) points out, the inclusion of everyday practical knowledge into the school or college curriculum does not necessarily promote access to vertical knowledge. It can reduce the vocational curriculum to little more than a strategy for improving the students' functioning as employees.

Conclusion

In this chapter I have argued that debates about the reform of vocational education have invariably neglected the question of vocational knowledge. I have suggested that there are approaches in the sociology of knowledge that are relevant to the reconceptualisation that is necessary. I draw on the relationship between power and knowledge that is made explicit by social constructivist approaches and the focus on the differentiation of knowledge that arises from the social realist approach developed by Durkheim and Bernstein. Whereas Durkheim's distinction between sacred and profane provides a way of analysing the differences between theoretical and everyday (or workplace) knowledge, Bernstein's analysis allows distinctions to be made between types of theoretical knowledge and types of everyday knowledge, as well as the problems of bridging the gap between them through the process of recontextualisation. His analysis highlights the weakness of attempts to base the vocational knowledge on national occupational standards. By treating all knowledge as potentially explicit and vertical, the standards-based approach fails to recognise the fundamental differences between theoretical and everyday or workplace knowledge. As a result, vocational programmes that rely on the standards-based approach deny learners access to the rules governing the production of knowledge by the scientific and professional communities. Greater clarity about what knowledge is to be acquired by students on vocational programmes is crucial to wider debates about more effective vocational education and any possibilities of a move towards parity of esteem with general education. The argument of this paper is that the sociology of knowledge developed by Durkheim and Bernstein offers a powerful way of beginning to tackle such questions.

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Notes

- 1 A highly relevant paper (Boreham, 2002) that explicitly focuses on the question of vocational knowledge, and follows a somewhat similar line of argument to the earlier part of this chapter, came to my notice after completing my revisions of this chapter. It draws on a comparative study of recent reforms in the UK and Germany. However, in the terms used in this chapter, it addresses contextual rather than epistemological issues in the sociology of vocational knowledge.
- 2 An earlier version of this chapter appeared in Rainbird, Fuller and Munro (2004).
- 3 I use the term *social realism* in the quite specific way that has emerged in the work of sociologists such as Collins (1998). Its relevance for curriculum research and policy is discussed in some detail in Moore and Young (2001). In contrast to much sociology of knowledge, social realist approaches refer to how forms of social organisation which provide the grounds for the objectivity of knowledge can be identified. It has no connection to social realism as a genre of painting and literature that claims to 'capture' social reality.
- 4 These bodies have undergone many changes since they were first established in the early 1980s; the current National Training Organisations are in the process of being merged into a smaller group of approximately 25 Sector Skills Councils.
- 5 The continued popularity among employers of the more traditional knowledge-based qualifications is an indication of the extent to which the standards-based approach, though in theory employer led, is better described in practice as funding based.
- 6 The term *connective* refers here to explicit links between on-the-job and off-the-job learning. A distinction needs to be drawn between its use in Young (1998) and in Griffiths and Guile (2001).
- 7 For a more detailed discussion of Durkheim's analysis and a comparison between his ideas and those of the Russian psychologist Lev Vygotsky, see Young (2003).
- 8 The issue of boundary-crossing is addressed by Van Oers as a process of recontextualisation (Guile & Young 2002).
- 9 See also Gamble's distinction between *general* and *particular* knowledge forms in the previous chapter.

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Part 3

BETWEEN THE WORKPLACE AND
HIGHER EDUCATION: MAKING THE CURRICULUM

Universities and the shaping of the Further Education and Training Certificate

Paula Ensor

Introduction

The purpose of this chapter is to trace shifts in the design of the South African school-leaving certificate, the Further Education and Training Certificate (FETC), over a ten-year period (1994–2004) and to discuss the role of the university sector in particular in this unfolding process. This account is both simple and at the same time ambitious. The simplicity of the task lies in the fact that universities everywhere, historically, have played a role in the shaping of the school curriculum, especially in the senior years of schooling. The task is made more complex because the role of universities in fashioning the school curriculum must be seen against an international and national backdrop that has significantly changed the position of universities in the intellectual field, a positioning which affects the ability of the sector to intervene in curriculum change. South African universities, like their international counterparts, have been challenged as both knowledge producers and knowledge reproducers, not only by the pressures of globalisation and the knowledge economy, but also by the more local pressures of a country undergoing political transformation. In South Africa, the pressures of globalisation and the knowledge economy converged in the construction of the National Qualifications Framework (NQF), which has shaped educational policy and planning since its inception in the mid-1990s. This framework explicitly denies the favoured status of universities (and formal education generally) as both producers and reproducers of knowledge. Political transformation has brought a new social elite to dominance in government, one that looks to the universities to expand its influence and control. It is at the same time suspicious of universities because of their perceived complicity with apartheid and their role in social

and economic reproduction. If universities were regarded as amplifiers of social inequality in the past, they are now expected to serve as interrupters of this process of reproduction.

The contestation over the hegemonic position of universities in the intellectual field can be particularly well illustrated in South Africa by the contestation over the school-leaving examination. This examination distils the elements of what Bernstein (1990; 2000) refers to as the pedagogic device: the power relations and systems of control that determine who should get what knowledge, and how this knowledge should be organised in terms of subjects, the content of these subjects, and their mode of assessment. The debates in South Africa over the further education and training (FET) curriculum exemplify a particular struggle over the pedagogic device. Until the late 1980s, the domination by universities of the school curriculum (and of the intellectual field generally) in South Africa was largely unchallenged. From 1994, this position has shifted and changed, and a mapping of the successive iterations of the school-leaving certificate reveals struggles between university and state over what constitutes official knowledge within schools, and also over the constitution of the intellectual field and the role of universities as legitimators of knowledge.

The extreme nature of the differences in position (in the first instance, between state departments and the universities) on curriculum design, which is a measure of the intensity of the debate around school curriculum reform, is most starkly revealed in two policy statements, set out below, which are separated in time by only two years.

- Document 1: In May 2000 the national Department of Education published a discussion document on the FETC that proposed a school-leaving certificate radically different from any such qualification in the past. The FETC, according to this plan, was to be a unit standards-based qualification, allowing for credit accumulation and transfer, with the proviso that a certain number of compulsory credits were to be obtained through the study of Language, Mathematical Literacy and Life Skills, with further credits being made up from core and elective subjects. The design of the FETC reflected the logic of the NQF.
- Document 2: Two years later, in November 2002, the Department of Education published another document on the FETC, a draft which constituted a radical departure from the May 2000 document. This document abandoned the unit standards approach in favour of three

distinct pathways towards the achievement of the qualification: a general academic pathway, located in schools and offering the FETC as a whole qualification; a general vocational pathway offered in technical schools and colleges, which was to be unit standards based; and an occupational pathway offered in colleges and industry-based providers, which would also be unit standards based. No rationale was provided in the 2002 document for this dramatic shift in curriculum structure from the 2000 document. It is clear, though, that the proposals in this document were in alignment with proposals to reform the design of the NQF that were circulating at the time the 2002 curriculum document was published.

This chapter attempts to grasp the significance, first, of shifts in curriculum design from the old Senior Certificate to the credit-exchange FETC (described in Document 1) and, from the latter, back to a whole qualification (described in Document 2). Second, it attempts to map out the impact, if any, of universities and their priorities upon the emergent shape of the FETC. The chapter argues that influence of the university sector upon the FETC has been both direct and indirect: direct, in that universities explicitly engaged with the overall form and detailed content of the FETC and its modes of assessment, and indirect in that universities engaged with the background framework for educational policy in South Africa, the NQF. The chapter suggests that the FETC has emerged as the result of a series of contests within the state apparatus, between the Departments of Education and Labour, and between the state and the universities.

State, universities and schooling

Universities establish hegemony over schooling in general through their dominant position in the intellectual field, and more specifically through the organisation and valorisation of disciplines and school subjects, control that has been exercised historically through the school-leaving examination. In a great many countries, South Africa included, the school-leaving examination was, probably until the 1970s, predominantly determined by the universities, and shaped by them in terms of entrance requirements into higher education (Trumpelmann, undated). Goodson illustrates how, whether developed from the ground up, as in the case of Geography as a school subject in the United Kingdom, or from the top down (the location of subjects in the school

curriculum that mirror university knowledge fields), university admission criteria ultimately shape subject formation and the relative status of subjects in the school curriculum (see Popkewitz, 1987; Goodson, 1988, 1989; Milburn, Goodson & Clark, 1989; Goodson & Marsh, 1996). Moon (1986) shows this in relation to the school Mathematics curriculum, tracing the 'new maths' curriculum reform and the dominant role, internationally, that university academics played over time in the shifts and changes in the curriculum. Goodson (1989) argues that one of the ways in which the university establishes its dominance over schooling is by closely linking school subjects to university disciplines. These more academic, abstract subjects, usually offered to 'able children', enjoy high status and preferential access to resources.

The dominance of universities over school curricula is explicit in differentiated school systems; that is, systems that designate different types of school for different types of learner. In the United Kingdom, for example, the difference between grammar schools and secondary modern schools was produced and reproduced through the alignment of grammar schools with the universities. In the past in South Africa, the school curriculum for white people was shaped according to the admission requirements of the universities. The move away from differentiated to integrated schooling systems (for example, comprehensivisation in the United Kingdom, the formation of a single education authority in South Africa and attempts here to establish parity in schooling) is usually associated with the development of national curricula for all children up until school-leaving age. In some cases, and South Africa is one, the shift to mass schooling and national curricula is accompanied by the displacement of universities from their direct role in determination of the school curriculum. While university academics may be employed as consultants in the development of a national curriculum, its design becomes largely a state matter. This in itself is not necessarily problematic, but in South Africa it has become contentious for a complex set of reasons which will be discussed later in this chapter. As I hope to show, the school curriculum has emerged as a result of pressures from the academy and the state, and it is for this reason, in the discussion that follows, that it has been necessary to look not only at university priorities and the shaping of the FETC, but also at the relationship between universities and the state in South Africa, or rather, particular sections of the state apparatus, organised within the Departments of Labour and Education.

Recontextualising fields

Bernstein (1990) makes the useful distinction between two fields implicated in the production of pedagogic discourse, which is the knowledge domain of schooling. The first, the official recontextualising field (ORF), is shaped by the principles of the dominant fraction within the state, which are also reflected in legislation and departmental policy. The ORF comprises officials from relevant state departments, agents from the educational system and others deemed appropriate for giving effect to the dominant educational principles of the state. The ORF is a primary recontextualising field in that it delocates and relocates knowledge drawn from the academy in the construction of the school curriculum. The pedagogic recontextualising field (PRF) comprises university education departments, colleges of education, textbook producers and other agents interested in the translation of the syllabus (established in the ORF) into a curriculum for teaching, and in the training of teachers. The relationship between ORF and PRF is variable across countries and within a single country over time. The ORF is regulated in the last instance by the state apparatus, but the degree of intervention by the state apparatus in the field depends to a large degree on the relationship between the dominant social class, the universities and schools. When this alignment is close, universities tend to take the lead in syllabus development, and curricula are closely tied to university entrance requirements. When the alignment is less close, the state is likely to intervene more directly in curriculum development.

In South Africa up until the early 1990s, the state established the dominant educational principles but allowed the ORF to be significantly shaped by the universities. The role of education in the production of the apartheid hierarchy was simple. Higher education was differentiated along racial lines, as were schools. The university sector was partitioned between the knowledge producers (the research universities such as the Universities of Cape Town, the Witwatersrand and Stellenbosch) on the one extreme, and the knowledge reproducers (the teaching universities that were set up to educate black civil servants, such as the Universities of Zululand, Venda, etc.), on the other. The school sector reflected the differentiation within higher education, with schools for the middle classes operating as feeder schools for elite universities, and schools for the poor offering a meagre diet of education, if anything at all. This distribution of symbolic wealth mirrored and reinforced the distribution of material wealth.

The ORF was, until the late 1980s, dominated by the universities through the Joint Matriculation Board. The function of the Joint Matriculation Board was to determine, on behalf of all universities, a joint set of standards for university admission. The functions of the Board, as set out in Act 61 of 1955, section 15 (as amended), were to control and conduct the matriculation examination of the universities and establish the conditions of exemption. It had the authority to issue certificates to successful candidates, provide exemptions, school-leaving certificates and certificates of success in individual subjects. Maintenance of standards was ensured by control of departmental syllabi and curricula, through joint moderators, and by analysing the results of the various exempted bodies. This Act contained a provision that university members on the Joint Matriculation Board should outnumber the total of all other representatives by five, a provision which proved impractical to implement, but which shows the dominance of the university sector. At its meeting of 1988, for example, there were 46 members – 22 from white universities, 2 Committee of University Principals members, 4 from coloured universities, 1 from black universities, 9 from education departments, 6 representatives from government schools and 2 from private schools. By 1990, there were 11 observers from the ‘black universities and states’ (Transkei, Bophututswana, Venda and Ciskei [TBVC]). The Joint Matriculation Board set its own examination but, more crucially, moderated those of the various departments.

The official recontextualising field was thus shaped by apartheid education policies that stipulated differential educational provision for different groups of learners. The shaping of school subjects and their legitimisation, as well as the determination of entrance requirements to university, were regulated by the Joint Matriculation Board. The pedagogic recontextualising field was subordinated to the ORF in that textbook production was in effect strictly controlled by the state, but there was a degree of autonomy, exercised especially on English-speaking campuses, in materials development, school intervention and the in-service and pre-service education of teachers.

Policies post 1994

After the 1994 election, the government put in place a series of policies to effect educational transformation of this racially divided educational system.

Key amongst these policies was the NQF and its logic of credit accumulation and transfer. In its original form, the NQF was a unit standards-based system, giving rise to an ornate architecture that separated assessment, provision and curriculum development. Fundamental to its logic was a challenge to a key assumption that shapes formal education, namely, that the 'sacred' and the 'profane' should be institutionally separated within the overall division of labour, with the sacred embodied within critical masses of experts and housed within formal educational settings, such as universities, colleges and schools. In terms of the original logic of the NQF, universities and schools would have no special status as educational providers, and would form part of a universe of different kinds of provider, across whom expertise is distributed (see Ensor, 2002; 2003). This move against the academy was valorised in terms of a discourse (see for example Gibbons et al., 1994, and Scott, 1995) which suggested that universities internationally had lost ground as the prime producers of knowledge, and that knowledge-producing activities had become distributed across a range of sites. If knowledge production was spread in this way, why not the reproductive functions of teaching?

International scepticism about the role of universities was coupled in South Africa with a view held by many in the new elite that South African universities were compromised by their previous complicity with apartheid. Notwithstanding the often heroic efforts of members of the academy to oppose apartheid in all its forms, the university system was deemed to be closely complicit with the apartheid state's educational policies. The universities had, after all, legitimated school knowledge, and decided upon the academic criteria for entry through their portals. The higher education system was to be reformed, and a number of measures were put in place to do so. In the space of this chapter it is not feasible to present the range of measures introduced to regulate governance, financing and so forth in higher education. Mention will therefore be made of key policies that shaped the universities' engagement with the school-leaving certificate.

The most significant measure was, as mentioned earlier, the NQF, with its emphasis upon credit accumulation and transfer. The South African Qualifications Authority (SAQA), the authority charged by statute with the responsibility for implementing the NQF and overseeing its various agencies, pronounced that registered qualifications could either take the form of whole qualifications or qualifications based on unit standards. This was a concession

to the universities (and to formal education as a whole), which had hotly contested the introduction of the unit standards idea from the inception of the NQF.

Notwithstanding this victory, the concession over whole qualifications did not relieve universities of the burden imposed upon them by the NQF. Although whole qualifications had been conceded, the architecture and modus operandi of the NQF rested upon a unit standards methodology. This ran into conflict with the discipline-based ways of working within the academy. The undergraduate bachelor degree, for example, typically draws on disciplines across a wide field. Qualifications, however, had to be registered with bodies located in organising fields which were neither disciplinary nor occupational. To simplify the process of registration of whole qualifications, the university sector, through the South African Universities Vice-Chancellors' Association (SAUVCA), drew up a system of nested qualifications which would establish the requirements of generic bachelor degrees and their variants. Their proposals fed into a National Academic Plan developed by the Council for Higher Education (CHE), which was an effort to establish some autonomy for the higher education sector in the registration of qualifications. This move, as we shall see, has impacted on the overall structure of the NQF, and on the FETC.

The NQF came into conflict with the higher education sector, and especially the universities, from its inception. The universities took exception to the unit standards approach, the complicated system of registration of qualifications, and the Byzantine webs of structures involved in accreditation and quality assurance. The universities resented their displacement as key agents in curriculum development and knowledge legitimisation. The ORE, which had previously been dominated by the university sector, became reconfigured after 1994, with the introduction of officials from the Departments of Labour and Education and with dominance accorded to SAQA, upon whose Board the university sector as a whole had only one representative. Most important, though, the universities took exception to an educational framework that not only undermined their position at the apex of the educational system but challenged a view of education which saw provision, and expertise, as dispersed rather than concentrated in institutions specialised for the purpose of teaching and learning.

It is unlikely that opposition from the university sector alone caused the government to shift its position on the implementation of the NQF. Rather, it was opposition from within the state apparatus, from within the Department of Education and, indeed, within the SAQA Board, that brought matters to a head. The ORF became a site of conflict involving the Departments of Education and Labour, SAQA and the universities. Ultimately, the ministers of Education and Labour were persuaded to constitute a review team, not to investigate the NQF itself, but its implementation. The study team published its report in May 2002, and responses were called for. It was over a year later that the ministers finally produced a consultative document, which constituted a radical departure from the NQF as originally envisaged. While the document has the formal status of a consultative document, it seems that in practice it has already become policy, since the new FETC framework clearly bears its stamp.

The consultative document took hold of the nested qualifications idea of SAUVCA and the CHE and suggested that this be used as a template for all qualifications registered on the NQF. These qualifications could be unit standards based or whole qualifications. The document proposed the removal of the old NQF architecture of National Standards Bodies (NSBs) and Standards Generating Bodies (SGBs), and substantially reduced SAQA's role. Three pathways would now characterise the NQF: a general pathway (located in universities); a career-focused pathway (located mainly in universities and technikons); and a trade, occupational and professional (TOP) pathway (located in the workplace). Each pathway would be coordinated by a Qualifications and Quality Assurance Body.

On the face of it, it would appear that the universities in particular achieved their ends through this consultative document, certainly as far as the design of curricula was concerned. However, on closer scrutiny, it is clear that the consultative document simply resurrected in a different form the fundamental logic of the original NQF. While the latter explicitly legitimated educational provision across a range of sites through the unit standards approach, the new framework would do the same thing, but less explicitly. The consultative document placed no restriction on the level of qualification offered by the TOP stream, which meant that, in theory, PhDs could be offered in every stream, running against international practice that research degrees should be offered in institutions specialised for that purpose. Although the document

recognised the distinctiveness of education and training, it nonetheless asserted the possibility of achieving equivalence between qualifications awarded across different sites, an ongoing bone of contention between the state and the universities.

If we look at the contestation between universities and sections of the state apparatus, and contestations within the latter, it is clear that the universities have indirectly shaped the final outcome of the FETC through their opposition to the NQF. By establishing three pathways, the government has guaranteed to schools that they will continue to offer whole qualifications as they have in the past. The question of how these qualifications will articulate with the other pathways has yet to be determined.

In addition to this indirect influence, the universities have attempted to shape the emerging FETC for schools directly, in terms of which subjects are legitimated, how these are constituted and assessed, and what restrictions should be placed upon them to serve for university entry. The following sections of the chapter discuss briefly the evolution of the FETC and then specifically the debates between the universities and government over its shape and content.

Evolution of an FETC policy framework

Rather than trace the evolution of the policy through the different policy documents, I will focus on the key features of the May 2000 document. All prior documents are consistent with the evolution of the FETC to this point. The broad concerns and overall framework do not change, but as successive documents emerge, greater attention is paid to micro issues, such as numbers of credits for the qualification and how these are to be made up.

The key documents in the evolution of the FETC until May 2000 are as follows:

- The ANC's discussion document, January 1994: 'A policy framework for Education and Training' (African National Congress, 1994, produced by its education department);
- Green paper, 15 April 1998, chapter on 'Further Education and Training: Preparing for the 21st century through education, training and work' (Republic of South Africa, 1998a);

- Education white paper, August 1998, Chapter 4: 'A programme for the transformation of Further Education and Training. Preparing for the twenty-first century through education, training and work' (Republic of South Africa, 1998b);
- Draft document: 'National curriculum framework for FET, May 2000' (Department of Education, May 2000);
- SAQA FETC discussion document, 1 September 2000 (Republic of South Africa, 2000);
- FETC policy document, February 2001 (Department of Education, 2001);
- National curriculum statement Grades 10–12, October 2002 (Department of Education, 2002).

These documents devote considerable attention to the context in which the FETC was to develop: the pressures of globalisation, the need for economic development, the expansion of opportunities for employment and prosperity, social cohesion and social justice. These concerns are cast against the reality of growing unemployment, the collapse of the youth labour market, and the combination of high unemployment and low skills among school leavers. The FETC sector, the largest after the general education and training sector, and the most complex, is required to cater for three million learners plus a further two million 16- to 27-year-olds who have completed nine or more years of schooling but lack employment or appropriate qualifications. In other words, the FETC caters for pre-employed, employed and unemployed citizens of any age. The sector, which costs the state R10 billion annually, is served by 8 000 providers (excluding employer companies) within four main sectors, namely senior secondary schools (private and public), technical and community colleges, private providers and NGOs, training and industrial training centres, and labour market schemes.

In its 1994 discussion document, the ANC established the broad framework of educational policies which were to guide the new government. Great emphasis was placed at all levels of the system on credit accumulation and transfer, especially in FET and higher education. A range of policies were proposed to overcome fragmentation, broaden access and ensure democratic control of education by all stakeholders. The national curriculum of the FETC was to be based on differentiating between core general subjects and optional vocational and academic subjects, and was thus considered a necessary device to integrate education and training. The curriculum of the FETC was to be

modular and based on an outcomes approach to maximise horizontal and vertical flexibility. This idea was developed in subsequent documents.

A consistent thread running through all the policy documents up until 2000 was the requirement that the FETC prepare young people for higher education, for work and for citizenship. The early vision for FET was for a single certificate to be offered by a range of providers – public schools, public colleges, independent schools, independent colleges and on-the-job trainers – with permeable boundaries between them. Colleges were deemed to be too narrowly vocational, and the school curriculum too academic and non-specialised for work.

The ‘National curriculum framework for FET’ May 2000 draft document provided the first template for a future FET certificate. This recognised the 12 organising fields of SAQA in terms of which the unit standards that would make up the FET certificate would be constituted. NSBs and SGBs were to be responsible for the registering of unit standards. Provincial education departments and FET providers would then use these registered unit standards to develop curricula and programmes. The FETC was to be made up of at least 120 credits, divided into three categories of learning – fundamental, core and elective. This was a fully modular approach, with the potential for providers to determine rules of combination subject to the credit. It was intended to be flexible, with multiple entry and exit points and opportunities for recognition of prior learning.

The ‘National curriculum statement Grades 10–12 (Schools)’ October 2002 document began by reiterating the broad policy concerns flagged in previous documents. However, it constituted a decisive break with the previous policy documents. Instead of a fully modularised system, the document proposed an FETC that could be achieved by any of three pathways: general academic (a whole qualification located in schools and some colleges), general vocational (whole qualification and unit standards based, located in colleges) and occupational (unit standards based, located in the colleges and offered by industry-based providers). Although the qualification had a somewhat different structure across the three pathways, it was intended to have a number of key elements in common, namely a fundamental learning component that included two languages, one of which had to be the language of learning and teaching, Mathematics or Mathematical Literacy and Life Orientation, as well as core and elective components. Curriculum differentiation on the basis of

higher, standard and lower grade was not recommended, and differentiation would occur instead on the basis of the subjects chosen for their cores and electives, and through different levels of achievement. To obtain the FETC, learners would have to pass each subject, but could get one condonation of partial achievement (a score of less than 50%) on one non-fundamental course.

Universities and the FETC

The university sector, through SAUVCA and other agencies, objected to the unit standards approach of the 2000 policy document. Its stance in relation to the 2002 document centred on the following issues:

- Displacement of universities from their traditional role in the development of school curricula;
- The selection of content for various learning areas;
- The issue of differentiation of curricula; and
- Issues of access and admission requirements.

While not making too much of the point in its public documents, the university sector, or parts of it at least, drew attention to the fact that the subject panels that drafted the curriculum statements for the different subjects of the FETC did not have strong university representation. Scrutiny of the membership of the subject panels bears this out. This was linked to the problematic design of curricula in some subject areas, with problems of coherence, appropriate content, and design features. The greatest area of controversy, though, was around the issue of differentiation and access and admission requirements for entry into university.

In the past, the Joint Matriculation Board, or Matriculation Board as it became known, set down the criteria for university admission. These criteria related to the level at which subjects were attempted (higher or standard grade), the grade achieved on each, the combinations of subjects taken, and their presentation in a single sitting examination. Only if these criteria were met did students obtain the Senior Certificate with matriculation endorsement, which made them eligible for entry into universities. Access to individual faculties was determined by specific entrance requirements (for Mathematics, for example).

The matriculation system, determined by the universities to regulate entrance, obviously impacted on the Senior Certificate as a whole, in terms of what counted as a school subject and what counted for university admission. The hierarchy of subjects within the examination was stamped likewise upon a hierarchy of schools. The 2002 FETC was intended to change this arrangement. Although there have been sharp shifts in the conceptualisation of the FETC, there has been a consistent commitment to change a situation that allows university entry requirements to fundamentally shape the school-leaving certificate. Policy documents argue that, in 1999, only 12 per cent of all Grade 12 candidates qualified for entry to universities. Given the high dropout rate along the way, closer to 6 per cent of learners who should have been in the school-leaving cohort actually gained a Senior Certificate with exemption. An even smaller percentage included Mathematics at any level. Furthermore, the numbers of students with matric endorsement failing at university suggests that success at tertiary level does not depend only on academic ability, so success on the matriculation examination is not considered to be a reliable indicator of success, except in the higher grades.

A report of the ministerial investigation into the Senior Certificate noted that the Senior Certificate served three different purposes, and failed to achieve any of them successfully. First, it was a school-leaving certificate, but was not attained by the majority of learners leaving school. Second, it served as a university screening mechanism, but was only effective as a predictor of success amongst high-scoring students. Finally, it served as an employment screening mechanism, but did not address work-related competences and was not regarded by employers as a particularly good indicator of success.

The 2002 FETC document did not resolve the issue of university admission, and this remains a debating point between the Department of Education and the university sector. Not only did the 2002 version of FETC (Schools) not specify subject combinations (except for the selection of subjects from core and elective categories), but it also eschewed the distinction within subjects between higher and standard grade. All subjects were to be offered at the same level, although performance would obviously be differentiated. Universities for the most part did not raise issues about the cognitive demand of the content, although they did express unhappiness about lack of coherence in some instances. However, the lack of differentiation poses problems for admission, especially in relation to Mathematics. The 2002

proposals eliminated differentiation in Mathematics and Science, and made Mathematics or Mathematical Literacy compulsory for all learners.

Conclusion

This chapter has considered the impact of universities upon the emergent FETC in South Africa. Two key iterations of the FETC are marked out – a unit standards-based curriculum proposed in 2000 for all learners, and a differentiated FETC proposal in 2002, with a whole qualification for those in the school sector. A mapping of these iterations suggests that universities have played an indirect role in school curriculum reform by contesting the aims and structures of the NQF and by providing key arguments for shifting the NQF away from its initial foundation upon unit standards. Changes in the conceptualisation of the NQF have in turn affected the shape of the FETC. Universities have also played a direct role in shaping the FETC through their engagement with overall curriculum design, content and modes of assessment.

These different proposals are likely to have very different implications for access, success and equity. The old Senior Certificate was abandoned because it was deemed to have served a rich white elite under apartheid. The 2000 version of the FETC, closely aligned to the original logic of the NQF, claimed to open access and to erode social class and racial divisions through the integration of education and training. The 2002 version of the FETC, with its differentiation of provision into three pathways, is likely to embody a distributive principle implicitly rather than explicitly based upon social class. For the children of the middle class, and those working-class families who manage to get their children into senior secondary school, the school-leaving certificate provides the opportunity of gaining access to universities. However, for the children of the poorest of the poor, the most likely route will be from primary schools to vocationally oriented colleges and workplace sites, where the emphasis will be on unit standards rather than whole qualifications, and on market-related forms of knowledge. So, perhaps in not such a different way than before, we have the reinstatement of a mechanism that distributes high-status knowledge to powerful groups in society (be they black or white) and low-level skills to the poor. We have a curriculum structure that has been stripped of the explicit racial bias of the past but that will nonetheless inevitably produce socially differentiated outcomes.

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Vocational knowledge and vocational pedagogy

Michael Barnett

Introduction

The review of vocational qualifications in the United Kingdom, carried out in the mid-1980s, initiated reforms that centred on the accreditation of workplace performance. It is hardly a matter of dispute that this spotlighting of workplace performance has relegated knowledge to the shadows. A less widely noticed or acknowledged effect, which is, if anything, more pernicious, has been the marginalisation of pedagogy as an issue in vocational education. The National Council for Vocational Qualifications' (NCVQ) version of 'employer-led' training was premised on a deliberate divorce between outcome and process. The ends, varieties of workplace capability, were paramount and could be specified without regard to possible means – the learning pathways that might lead to capability. The exercise of specifying Technical Certificates within Modern Apprenticeships should have been the occasion for more 'joined-up thinking' about knowledge, pedagogy and workplaces but, in reality, served to highlight the damaging dislocations in the system. The decision to entrust to ill-prepared National Training Organisations in the newer vocational areas the responsibility for generating not only the 'learning programmes' but also the 'course guidelines' to be handed down to colleges and other training providers well illustrates the low priority which is currently accorded to questions of vocational pedagogy.

Governments and academics alike have, over the years, systematically underestimated, if not completely discounted, the problems of vocational pedagogy. There is little evidence, for example, that the movement to identify Centres of Vocational Excellence is much concerned with excellence in vocational pedagogy. For the City and Guilds of London Institute (CGLI), however, whose remit and business role positions them between consumers

and providers of vocational education, the health or otherwise of vocational pedagogy cannot fail to be of ongoing significance. Geoff Stanton, in his briefing paper for the July 2003 CGLI Research Seminar on this theme, called for a national debate to establish, *inter alia*:

...the criteria for excellence in vocational provision, how these are similar to and different from those for academic provision, and the implications for inspection, performance indicators, area reviews, and teacher training. (Stanton 2003)

He also raised the question of what is distinctive about effective vocational learning and teaching, and raised as a matter of concern the fact that the generic nature of Further Education National Training Organisation (FENTO)¹ standards led to a situation where 'the preparation of a teacher of catering or electrical installation may not differ much from that of a teacher of history'. The aim of this chapter is to contribute to the debate that Geoff Stanton called for; to explore the particular nature and particular challenges of vocational pedagogy; and to establish a perspective on vocational education which may help to clarify the distinctive characteristics of vocational pedagogy.

Vocational curricula: A sociological perspective

The sociologist Basil Bernstein (1990; 1996; 2000) wrote extensively about pedagogy and its social setting, and a number of the analytical categories that he employed have gained a degree of currency among theorists of education. Bernstein was mainly concerned with academic and general education, particularly at secondary level, but his work includes a number of conjectures and interesting, albeit fragmentary, discussions concerning vocational education. My intention here is to extend and develop Bernstein's work in the latter area, making use of three concepts that occur a good deal in his writing, namely *classification*, *recontextualisation* and *framing*.

Roughly speaking, classification refers to the way in which knowledge gets divided up and how these knowledge boundaries are sustained or challenged. Recontextualisation refers to the appropriation and transformation of knowledge for various purposes. Framing refers, among other things, to the structuring of programmes of study and to the formatting of courses and learning materials.

Obviously, vocational education must relate to the practicalities of occupations or groups of occupations, but, beyond the most limited training schemes, it must also relate to bodies of knowledge that may well not be occupationally specific. Indeed, if a vocational learning programme is to contribute to the possibility of the student progressing to higher education (as is explicitly required of Technical Certificates), some degree of non-specificity is desirable and perhaps essential. When viewed in this way, figuratively speaking, vocational pedagogy occupies a space between subjects and jobs, and academic subjects do not map onto jobs in any very straightforward manner.

We can obtain important insights into the basic issues of vocational pedagogy by an examination of the details of the framing of vocational learning programmes (syllabus sub-divisions, sequencing and pacing of delivery, structuring of learning support materials, etc.). Should the framing of vocational courses be largely determined by job structures or by knowledge structures? Is this an either/or question? Is it unrealistic to want it both ways? The doctrine of the late NCVQ was that, unrealistic or not, it was wrong to want it both ways and actually unnecessary, since knowledge structures could be collapsed into job structures. According to this view there is no tension. Job competence involves having the appropriate knowledge by definition.

Before examining detailed questions of framing, we should analyse the general context of vocational pedagogy a little more closely in terms of the concepts of classification and recontextualisation. Vocational pedagogy, the content and process of vocational learning and teaching, is influenced on the one hand by workplace activities, and on the other – though at a considerable remove at lower levels – by disciplinary knowledge. Communities of researchers and scholars create the various classes of disciplinary knowledge; typically, the classification boundaries between the classes or subjects (Physics, Chemistry, Biology, History, etc.) are quite strongly defined. Many of these demarcations are carried over into the academic curricula of the university and of the secondary school. The transformation of disciplinary knowledge, however, wherever created, into academic subjects to be studied at various levels and in various institutional and non-institutional settings is a process of selection, simplification, exemplification and paraphrase – metaphorically (and just occasionally, literally) a process of translation. Primary sources are rarely appropriate for pedagogic purposes. To take an extreme example, Newton's ideas are central to classical mechanics teaching in physics and engineering,

but no one would dream of serving up raw chunks of the *Principia* (even when translated from Latin into English) in school or university courses. Only specialist scholars now study Newton in the original, and not for the purpose of learning mechanics. In the humanities, teaching materials are sometimes created by a process of cutting and pasting from primary sources which, together with an exegetic commentary, serve as 'Readers' or 'Source Books'. But, in general, textbooks are constructed from multiple sources by quite radical processes of adapting, recasting and rewriting to suit the needs of particular groups of learners or the requirements of particular examination syllabuses. This pedagogising of disciplinary knowledge – making it more readily teachable and learnable in particular educational contexts – is an example of a type of recontextualisation that could be named *pedagogic recontextualisation*.

The relationship between disciplinary knowledge and academic pedagogy is familiar, and, subject to the stated qualifications, relatively direct. However, before any notional links can be made between disciplinary knowledge and vocational pedagogy, consideration must be given to the operational demands of workplace activities. Workplaces generate technological and organisational problems which, given the enormous sectoral diversity, are usually sector-specific, but which often transcend the details of particular jobs or particular organisational settings. These generic problems are highly significant, but vocational pedagogy also has to make some accommodation for the *situated knowledge* that is usually closely associated with particular job tasks. Situated knowledge is essential for getting anything done, but may have no significance outside very particular contexts: Who is my line manager? Imperial or metric? etc. It is often quite fragmentary and heterogeneous, the job providing the only connection between the fragments. It can, however, be quite complex, such as 'the knowledge' of the London taxi driver – very elaborate but highly 'situated' and useless in another city.

Situated knowledge often does not readily mix with, or easily relate to, disciplinary knowledge. It is often trapped within its context of application, while disciplinary knowledge generally aspires to some degree of context-independence, to rising above particularities, to some measure of general applicability. Situated knowledge is frequently tacit and difficult to put into words, sometimes even tactile in terms of how it feels to do a job correctly, and therefore it is hard to codify. Even when codified it may be of little direct

use. One can learn a set of instructions off by heart, but this will not even approximate to the 'know-how' that is crucial for adequate performance. Hence, where highly situated knowledge is concerned, emulation and trial and error are important learning strategies.

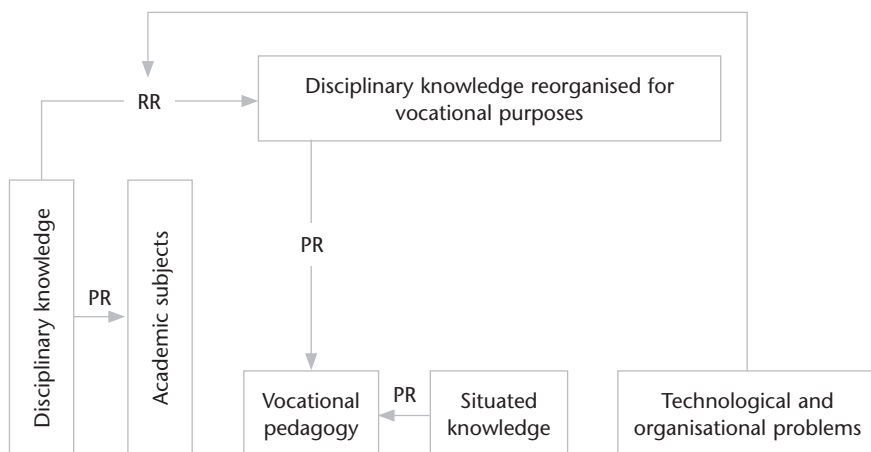
'Sitting by Nellie' is, however, of little use in acquiring other more abstract knowledges, for example of molecular structures or of financial regulations, which may be vital to particular occupations. Therefore we need to conceptualise the links between workplace activity and disciplinary knowledge. For this purpose, we need to invoke a further and different process of recontextualisation in which disciplinary knowledge or knowledges are selectively restructured, having regard to the technological or organisational problems encountered in specialised work settings (see Figure 8.1).

The 'problems' which people construct from their experiences do not map neatly on to existing scientific disciplines and pedagogical organizations of knowledge. What is needed for solving a technological problem may have to be drawn from diverse areas of academic science at different levels of abstraction and then synthesised into an effective instrumentality for the basic task in hand. (Layton, 1993: 58)

This process of reclassificatory recontextualisation creates what might be characterised as a 'toolbox' of applicable knowledge. This is how the knowledge bases of professions such as engineering and medicine are assembled.

The strategies governing such recontextualisations derive from the demands of professional practice, not from any considerations of teachability or learnability. For this recontextualised knowledge to be incorporated into vocational pedagogy, a further process of pedagogic recontextualisation is required. An important point following from this is that, whereas academic pedagogy involves a single, albeit complex and multiply-determined process of pedagogic recontextualisation of disciplinary knowledge, the pathway between vocational pedagogy and disciplinary knowledge involves two distinct recontextualisation processes (see Figure 8.1).

Figure 8.1 Knowledges, recontextualisation and vocational pedagogy



Note: PR = pedagogic recontextualisation
RR = reclassificatory recontextualisation

Other links within this network should be acknowledged. Technological and organisational problems have, from time to time, been powerful drivers to progress in established academic disciplines. For example, in the context of 19th-century Physics, thermodynamics and electromagnetism owe much to attempts to solve problems associated with steam engines and submarine telegraph cables. The abstract nature of much modern scientific knowledge enables it to be, so to speak, portable between particular practical contexts.

Science frequently advances by the simplification of complex real-life situations. Its beams in elementary physics are perfectly rigid; its levers rarely bend; balls rolling down inclined planes are truly spherical and unhampered by air resistance and friction. Decontextualisation, the separation of general knowledge from particular experience, is one of its most successful strategies. Solving technological problems necessitates building back into the situation all the complications of 'real life', reversing the process of reductionism by recontextualising knowledge. What results may be applicable in a particular context or set of circumstances only. (Layton, 1993: 59)

A further link into vocational pedagogy, already referred to, is from varieties of situated knowledge which need to be subjected to a single (possibly somewhat problematic) process of pedagogic transformation. This relates particularly to forms of codified non-tacit knowledge, for example of practical operating procedures, effective designs and design strategies or, more generally stated, empirically derived systematic practical knowledge which has not (or not yet) been brought into relationship with the formal analytical structures which tend to characterise disciplinary knowledge.

The framing of vocational knowledge

We can now focus more closely on vocational pedagogy and consider the question of the framing of vocational knowledge for the purposes of teaching and learning. How are courses to be structured; what determines their scope, their duration; how is the knowledge to be subdivided and sequenced? Obviously one big practical factor in this is how much time can be set aside for teaching and learning and over what period, as well as the possibilities for structuring the available time. But given these constraints, how is the knowledge to be carved up? This is a very important pedagogic question and the criteria for framing knowledge can reflect fundamental beliefs and choices in terms of how the subject and its relationship to the wider world are perceived.

School History, for example, as memorably parodied in *1066 and all that*, used to be broken down into dynasties and reigns with events and personalities ('he was a good king and a good thing') evaluated from a very particular Anglocentric perspective. Sequencing was chronological and age-related – the youngest children got to study Romans, Saxons and Vikings, etc. In so far as we have moved away from this time-honoured pedagogic framing of our knowledge of our past, this is as a function of fairly fundamental (though by no means uncontested) reassessments of the nature of History and its role in the curriculum. Another time-honoured framing that has shifted significantly over the last half century is that of school Physics, which used to consist of mechanics, heat, light, sound, electricity and magnetism but now is more likely to be divided according to categories such as particles, fields, energy and waves.

A fundamental question is why one should strive to create, or to discern, any particularly strong structures for knowledge in the first place. Why not list a large number of topics and take them in alphabetical order in the manner of a modern encyclopaedia? This comes down to the difference between a textbook and a dictionary: broadly speaking, a dictionary of subject knowledge would not be learner friendly because alphabetical lists are a means of ordering information which suppresses any knowledge structure that the subject may possess. In knowledge terms, it is an arbitrary form of sequencing which arbitrarily separates things that belong together and conceals, rather than reveals, significant patterns. Any author of a substantial learning resource needs to consider carefully how it is to be divided up and sequenced: Should it be divided up into parts? What should the chapter headings be? Which are the major topics and which are the minor? These are all framing decisions and are of particular significance in new areas of pedagogy where the basic question of how to choose the structures to frame learning programmes may be a very open one. What structures are available, and why choose one rather than another? Can two different principles of framing coexist?

Some of these issues can be illustrated by careful scrutiny of two contrasting CGLI Progression Awards, one in the 'new' vocational area of Care and the other in the fairly long established area of Electrical/Electronic Servicing and Repair. In each case, it is the relationship of the Progression Awards to the corresponding National Vocational Qualifications (NVQs) that is of interest.

The Care Progression Award is a case where the framing of knowledge is in large part derived from the job structure as expressed in the occupational standards, and is an example of pedagogy that faces just one way – towards jobs. The framing within the Level 2 Progression Award largely shadows the element and unit structure of the NVQ. In defence of this, it can be said that it is not immediately obvious that any other structural principle was available, particularly since this was a 'green-field' Progression Award with no previous vocational qualification (VQ) tradition on which to fall back. It is also worth remarking that CGLI appear to have worked hard at the difficult task of pedagogising the standards. The resulting syllabus looks a good deal more teachable, learnable and assessable than the knowledge specifications from which it was derived. Furthermore, there is no problem about the Progression Award 'covering' the NVQ knowledge. One qualification maps quite simply onto the other.

This is in marked contrast to the Progression Awards in Electrical Servicing. These are based, not on the NVQs, but on pre-existing VQs, and the framing is derived from a well-established tradition of electrical science pedagogy. These syllabuses encapsulate what is clearly important practically-related knowledge for apprentices – knowledge that is almost certainly best acquired in a systematic, laboratory-based, off-the-job programme. However, the ‘coverage’ of the NVQ by the Progression Award is very partial, and the linkages, where they exist, are very complex and obscure. So here we have a framing derived, albeit a little indirectly, from disciplinary knowledge, which is quite incompatible with a job-related framing.

It is already clear that, in considering the structures available to guide the framing of vocational learning programmes, different sectors are rather differently situated. A one-size-fits-all strategy is unlikely to succeed. It is quite fanciful to imagine that the NCVQ ‘functional analysis’ version of job structure is an appropriate jumping-off point for structuring learning programmes. As Geoff Stanton pointed out, there are some NVQ units, derived from functional analysis, which are neither teachable nor assessable as they stand. In some sectors, however, typically characterised by complex technological artefacts or production processes, it is clear that there are alternative workplace-related structures which could act as references. In Motor Vehicle Maintenance, for example, the vehicle itself, with its sub-systems, engine, transmission, brakes, etc., can act as a template for pedagogy. Of this, Geoff Stanton remarks:

With regard to Motor Vehicle Maintenance...learning and assessment inevitably take place in subdivisions that correspond to the parts of the vehicle, not least because that is how the workplace is organised. Thus, the trainee spends some time on the body shop, then in the section that does brakes and steering, and so on. However, the NVQ Units cut across all this, since they go under the headings of ‘routinely service’, ‘identify faults’, ‘rectify faults’, etc...This approach was adopted because these functions will be more timeless than the parts of the vehicle, which may change as the technology moves on...but it does not work easily as part of a training programme. (Stanton, 2003)

The CGLI Progression Awards in Motor Vehicle Maintenance, which take the vehicle itself as the template for framing, do not suffer from this weakness, but they do not readily map onto the NVQ units.

Framing and progression

The main argument for developing vocational pedagogies that ‘face both ways’ is of course in terms of progression. Inevitably, the base-level activities in many workplaces largely involve situated knowledge, but in progressing to higher levels, a more even mix of situated and disciplinary knowledge becomes necessary. How, for example, in terms of pedagogic strategy, do you link the worlds of bedsores and lifting-and-turning techniques with those of Biology, Psychology and Sociology? How, in other words, is the framing of programmes to be coordinated between the different levels? The newer vocational areas are even now in the process of trying to construct what in time may become a ‘tradition’ of vocational pedagogy. One might reasonably expect that, within such emerging practices, the coordination between levels is, at present, less than what it might become.

If pedagogic framing of vocational learning programmes is to reflect aspirations to occupational progression, then it also has to provide opportunities for academic progression. This means that vocational courses must be designed to ‘face both ways’, and a more strategic approach to co-ordination between levels must be adopted. This is by no means easy, but relaxing the close links to the details of the occupational standards could well be a step in the right direction. There are already off-the-job courses and course materials in Health and Social Care at various levels in terms of a Vocational General Certificate of Secondary Education (GCSE), Advanced Vocational Certificate in Education, and degree-level programmes offered by the Open University, which provide examples of alternative conceptualisations of the occupational area, and hence of pedagogic framing (see the Appendix to this chapter).

In order to move towards a coordinated pedagogy in the newer vocational areas, it is useful to take note of features of the existing provision at the different levels.

Level 4 and above

There are large numbers of vocationally oriented degree courses that aspire to provide a 'facing-both-ways' curriculum. This extensive activity seems to have been systematically ignored in recent debates about qualifications frameworks. The pedagogic strategies of these courses in the various sectors deserve serious study and critical evaluation since they may yield lessons for pedagogy at lower levels.

Level 3

General National Vocational Qualifications (GNVQs) were obviously and explicitly designed to face both ways and, while claiming a relationship to occupational standards, they framed vocational knowledge in a rather different manner from NVQs. In Advanced GNVQ Health and Social Care, for example, this allows learning materials to make modest excursions into disciplinary knowledge, such as Biology, Psychology, and Sociology. However, the constraints on pedagogic framing imposed by the standards-based format inhibit imaginative curriculum development, and it could be asked whether there might not be better strategies for guarding against uncontrolled academic drift.

Level 2

In contrast to the higher levels, and indeed to the more traditional Level 2 subjects, practice is not much influenced either by disciplinary structures, or by the 'reach-down' from university pedagogy. The approach of the Health and Social Care GCSE seems to have some affinity with the pre-existing pedagogy of 'Personal and Social Education', an area of low academic esteem. This is also a reminder that the pedagogy of general education in secondary schools also habitually faces two ways – towards subject knowledge and towards what some might call socialisation. Vocational pedagogy in schools is located in a particular curricular setting and this differs from the curricular setting of a Modern Apprenticeship² programme. But this raises the question, at least in principle, of whether vocational pedagogy ought not to face three ways rather than two. There are precedents overseas for this. Health and Social Care, by stressing the centrality of questions of values and the ethics of occupational

practice, seems to stand out from the generally utilitarian bias of the Anglo-Saxon tradition of vocational education.

Generally, given the size of the Care sector, the provision of educational material seems quite meagre, its quality highly variable, and its mutual coherence dubious. This perhaps reflects the relative youth of the sector, its genesis during an 'anti-educational' phase of government policy on VQs, and the lack of a well-organised 'community of practice' of vocational teachers in Personal and Social Care. In academic settings, this task is the responsibility of the subject associations.

Recontextualisation and pedagogy

Vocational pedagogy necessarily involves 'boundary crossing', and the difficulties which this poses for pedagogic recontextualisation should not be underestimated.

Similar difficulties are experienced in academic pedagogy where lecturers may be called upon to teach 'service courses' for other departments, such as Physics for Chemists or Statistics for Geographers. The ways in which some of these problems affect vocational pedagogy are well encapsulated in the preface to a contemporary textbook on Accounting for Non-accounting Students:

Accounting books written specifically for the non-accountant are often very demanding. Non-accounting students (such as engineers, personnel managers, purchasing officers and sales managers) are sometimes unable to understand why they are required to study accounting...The subject needs to be covered in such a way that non-accounting students do not become confused by too much factual information [but] some books specifically written for non-accountants go to the opposite extreme. They outline the subject so superficially that they are of no real help either to exam candidates or to those non-specialists requiring some guidance on practical accounting problems. (Dyson, 1987)

Boundaries are not just between so-called 'bodies of knowledge'; they are boundaries between languages, people and identities. As Bernstein might express it, they are boundaries between 'discourses'. The 'discourse' of

Physics differs from that of Chemistry, and that of Engineering from that of Accounting.

The titles of texts for vocational students often contain the preposition 'for', such as Geography for Travel and Tourism, English for Business, and Electricity for Marine Engineers.

Incorporating disciplinary knowledge into vocational programmes (such as Biology for Nurses and Economics for Accountants) poses particular re-contextualisation problems. How does, or should, Biology for Nursing differ from Biology for Biologists, or from Biology for Doctors?

This is obviously quite a tough question but, with Nursing being much the largest 'associated profession' in the Health and Social Care sector, a very significant one. Biology for Nurses used to be drawn from Anatomy and Physiology, but over the last few decades the knowledge base of Biology has been revolutionised and the occupational role and status of nurses has been undergoing transformation. The boundary-crossing process can be likened to constructing a bridge between two unstable land masses. How is one to arrive at the principles or criteria on which the recontextualisations are to be based?

There are also particular pedagogic problems in areas (such as Nursing) into which several disciplines may feed. This strictly limits the time that can be devoted to each discipline, and therefore creates difficulties in that disciplines are difficult to 'dip into' or acquire piecemeal, without some previous foundation study. The question then becomes, how much (or how little) disciplinary knowledge is enough? What are to be the assumptions that guide the selection and 'packaging' of disciplinary knowledge?

There are therefore tough choices to be made in constructing learning programmes, but there are also correspondingly tough demands on teachers. A teacher involved in 'boundary-crossing' pedagogy needs reasonable familiarity with the 'discourses' on either side of the divide, and the recontextualisation strategies that have been used to create the new 'pedagogic discourse' in the available learning support materials and texts. She or he needs a degree of insight into the scope and nature of the 'reservoir' of disciplinary knowledges on which the particular syllabus has drawn, as well as some of the realities of the workplace settings to which this (appropriately refashioned) knowledge is deemed to be relevant. This is a considerably more demanding agenda than that which confronts the subject teacher in general education.

This is not to say that vocational and academic/general pedagogy has nothing in common – all teachers need some facility in the day-to-day tactics and strategies of pedagogic recontextualisation needed to ‘make sense of’ a variety of topics to a variety of learners. Nor is it to say that one sort of pedagogy cannot learn and borrow from another. However, it should be clear by now that vocational pedagogy has distinctive (and distinctively complex) features in terms of the construction, coordination and delivery of learning programmes, which justify Geoff Stanton’s unease, referred to at the outset, at the apparent homogenisation of approaches to teacher training.

Notes

- 1 FENTO was recently merged into a new Sector Skills Council for Lifelong Learning. It was responsible for developing National Occupational Standards (known as the FENTO Standards) for Further Education teachers in the UK.
- 2 Modern Apprenticeships in the United Kingdom are the equivalent of learnerships in South Africa.

Appendix: Examples of framing of Health and Social Care knowledge at different levels

Level 2: Vocational GCSE (Edexcel) – Health and Social Care (Double Award)

Unit 1 Health, social care and early years provision

Unit 2 Promoting health and well-being

Unit 3 Understanding personal development and relationships

Level 3: Advanced GNVQ – Health and Social Care

Unit 1 Equal opportunities and individuals’ rights

Unit 2 Interpersonal interaction in health and social care

Unit 3 Physical aspects of health and well-being

Unit 4 Psycho-social aspects of health and social well-being

Unit 5 Structure and development of health and social care services

Unit 6 Health and social care practice

Unit 7 Educating for health and social well-being

Unit 8 Research perspectives in health and social care

Level 4: Open University K100 – Understanding Health and Social Care

Block 1 Who cares?

Block 2 People and places

Block 3 Care and communities

Block 4 Working with life experience

Block 5 When care goes wrong

Block 6 Information, involvement and accountability

Block 7 Care policies in context

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