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Claims vs. practicalities: lessons about using learning outcomes

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The idea of learning outcomes seems to increasingly dominate education policy internationally. Many claims are made about what they can achieve, for example, in enabling comparison of qualifications across countries, improving the recognition of prior learning and improving educational quality. The claims made for the role of learning outcomes rest on the assumption that outcomes can be transparent, or that they can capture or represent the essence of what a learning programme or qualification represents. But in practice, either learning outcomes are open to dramatically different interpretations, or they derive their meaning from being embedded in a curriculum. In both instances, learning outcomes cannot play the roles that are claimed for them. I draw on insights from South Africa, where learning outcomes were a major part of curriculum and education policy reform. I suggest that outcomes cannot disclose meaning within or across disciplinary or practice boundaries. They did not enable the essence of a programme to be understood similarly enough by different stakeholders and they did not facilitate judgements about the nature and quality of education and training programmes. Learning outcomes do not carry sufficient meaning, if they are not embedded in knowledge within a curriculum or learning programme. But if they are thus embedded, they cannot play the roles claimed for them in assisting judgements to be made *across* curricula and learning programmes. The notion of transparency (or even, a more moderate notion of sufficient transparency) which proved unrealisable in practice is the basis of nearly all the claims made about what learning outcomes can achieve. In addition, the South African experiences demonstrated how outcomes-based approaches can distort education and training programmes, and lead to practical complexities, which are a direct consequence of the need for transparency, and its impossibility, and not (although this was probably also the case) the product of 'poor implementation' in South Africa.

Keywords: outcomes-based education; standards; national qualifications frameworks

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1. Introduction

Many countries around the world seem to be shifting towards a greater role for learning outcomes in their education and qualification systems (Cedefop 2008, 2009). South Africa is a clear exception, as it is officially moving away from outcomes-based education. In South Africa, an outcomes-based curriculum was introduced to the school system at the same time as an outcomes-based national qualifications framework (NQF) was introduced as a key tool to substantially reform the apartheid education system. Both have been the subject of much criticism from researchers and of extensive policy reviews. These have resulted in what has been described as an official abandonment of the outcomes-based school curriculum in 2009 (Motshekga 2009), and substantial changes to the NQF in the same year (Allais 2009). I suggest that the failures of outcomes-based education in South Africa have lessons for Europe and beyond. The problems we have experienced could be, and often are, put down to 'weak capacity'. I suggest, on the contrary, that because of the weaknesses of our systems, the conceptual problems with this type of policy reform are much clearer. The South African experiment with outcomes-based education can be seen as an extreme instance of this policy approach, which is useful in highlighting its nature and limits. Ha-Joon Chang has argued that free market advocates in rich countries found it difficult to completely implement their reform agenda – even Margaret Thatcher, he argues, found it impossible to completely dismantle the National Health Service. So, it was mainly developing countries that bore the full brunt of neo-liberal experiments. The result, he argues, has been a much more thorough implementation of free-market policies and much worse performance in terms of growth, stability and inequality than in developed countries (Chang 2010, 262). I suggest that a similar situation may pertain in education policy. It may be the case that the strong education institutions, traditions and professionals *mask* the problems of outcomes-based qualifications, in developed countries. The experiences of developing countries shed light on the key conceptual problems of this approach.

2. Learning outcomes: capturing the 'essence' of education and learning?

An influential European report suggests that outcomes-based approaches are increasingly being introduced to schools and higher education systems, and argues that

> Learning outcomes form part of an innovative approach to teaching and learning, which some have identified as part of a new learning paradigm. Learning

> outcomes are the focus, and provide a key role in organising systemic aims, curricula, pedagogy, assessment and quality assurance. Increasing use of learning outcomes is expected to have profound implications for making systems more learner-centred, organising institutions, curricula and for the roles and training of teachers and trainers. (Cedefop 2008, 11)

Many countries are starting to develop outcomes-based NQFs, in the hope that, amongst other things, this will enable them to compare their qualifications more easily with those in other countries, as well as providing clearer information to employers at home and abroad about what qualifying learners are in fact competent to do (Cedefop 2008). This is based on the belief that

> Universal approaches to reference points, based on learning outcomes, make cross-border judgements as to the level, nature and equivalence of qualifications easier and more accurate. (Adam 2008, 13)

Markowitsch and Luomi-Messerer (2008) suggest that

> The focus on learning outcomes, irrespective of learning paths, opens up possibilities for recognising non-formal and informal learning and, finally, the EQF supports the transfer of qualifications between countries, and hence mobility of learners and workers.

The quotes imply that learning outcomes somehow capture a 'sameness', or disclose an *essence* which is or could be achieved through a variety of different curricula and learning experiences, as well as learning experiences beyond formally taught learning programmes. It is because of this notion of 'sameness' that learning outcomes can, it is believed or asserted, 'cross boundaries' – between nation states, different parts of education and training systems, or between education programmes and life (especially work) experiences. Related to this, outcomes-based qualifications frameworks are often introduced as an integral component of quality assurance systems. The idea here is that national regulatory bodies will be able to measure programmes against the outcomes, and employers and educational institutions, whether at home or in other countries, will then have a good sense of what it is that the bearer of a qualification is competent to do.

In South Africa, outcomes-based qualifications and curricula were strongly supported because they were seen as a way of overhauling the inequitable apartheid education system. An outcomes-based NQF that was supposed to overarch all education and training at all levels and in all fields was legislated in 1995, the year following the first democratic elections. Shortly after this, an outcomes-based curriculum was phased into the school system. Although the stakes were higher than they are in many other countries, most of the goals were common to reform processes internationally. It was argued that outcome statements would improve quality, as all educa-

tional provision would have to meet their requirements. It was believed that course designers could design courses against the outcomes, educators teach against them, assessors assess against them and regulators evaluate against them. The outcome would, it was believed, 'hold' the standard. One of the many claims made in favour of this approach, in common with recent claims made about outcomes-based approaches in Europe as discussed above, was that it would enable learner mobility, as it would provide a clear sense of what learners had achieved to institutions of education and organisation in the job market alike. It would also enable evaluation of informal learning which was the same as or similar to that learnt in formal education. It was also claimed that an outside body could evaluate the quality of provision by using transparent procedures, without intruding too much into the autonomy of the provider or discounting their professional expertise, and that the judgements of the evaluators would be transparent, and therefore more accountable, because they would be made against clear, agreed and understood criteria. The idea of a 'design-down' approach was developed: that content should be derived from learning outcomes, which would be pre-specified. This was intended to make the aims of the learning programme transparent to the various parties who have a stake in it, as well as providing a rationale for the selection of content (SAQA 2000a, 2000b, 2000c, 2005, 2006).

All of this boils down to the idea that learning outcomes could capture the *essence* of what would be taught across different learning programmes. Claims made about outcomes rest upon this idea that there is some 'sameness' across a wide range of knowledge areas and learning experiences which can be captured and understood through statements of learning outcomes.

3. Learning outcomes and transparency

How transparent are learning outcomes? How do they cross boundaries, but still disclose meaning? Markowitsch and Luomi-Messerer (2008) reveal the complexities and difficulties involved in reaching agreement on the 'level descriptors' for the European Qualifications Framework, and the continuing differences in interpretation of the key terms. Their description shows a string of processes which attempted to reach clarity and develop common interpretations, difficulties in pinning down specific definitions and interpretations of different terms, and various reformulations when differences became apparent. This is not surprising. Wolf (1995, 104) argues that it is impossible to receive genuine agreement from all parts of any particular industrial sector on competences:

> Serious differences which relate to fundamental views of society and people, as well as to job demarcations and future trends, inhere in the process, and are not something which can be solved in a technical fashion.

Much of the critique of outcomes-based approaches suggests that outcomes, separated from any specific reference point such as a specific curriculum, are not sufficiently transparent. It is this lack of transparency that leads to practical problems. As Knight (2001, 373) argues, 'Clarification leads to complication which is why lists of outcomes grow like mould and become unwieldy'. Young (1996, 28) similarly discusses how 'attempts to increase the precision of outcomes can only lead to them becoming trivialised'. My own research demonstrates precisely how this occurred in South Africa, making the NQF unworkable (Allais 2007a), and Hall and Woodhouse (1999) discuss a similar problem in New Zealand. Wolf (1995, 55) provides a detailed empirical and conceptual critique on the National Vocational Qualifications in the UK, showing that

> … 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. The attempt to map out free-standing content and standards leads, again and again, to a never-ending spiral of specification. (Wolf 1995, 55)

In addition, various researchers (Clarke and Winch 2006; Bohlinger 2007; Brockmann, Clarke, and Winch 2008) have pointed out substantial differences in how different countries within Europe use terms such as outcomes and competencies. This may partly reflect ambiguities between different languages and partly that terms like outcomes always have to be understood in terms of the national traditions in which they are located. Clarke and Westerhuis (2011), for example, make it clear that while European countries such as France and Germany use terms with similar meanings to outcomes and competences, they are seldom considered outside of the context of a curriculum.

The ability (or inability) of outcomes to disclose the essence of a learning programme is not just a practical problem, resulting from the limitations of language. It is epistemological, because knowledge cannot be mapped onto, or derived from, learning outcomes. This is the case for theoretical, disciplinary, or practical knowledge (Gamble 2002, 2006; Shalem, Allais, and Steinberg 2004; Allais 2007a, 2007b; Young 2008; Wheelahan 2010). As Brockmann, Clarke, and Winch (2008, 102) argue,

> any curriculum that is reasonably complex, which seeks to develop abilities, knowledge, understanding, attitudes and dispositions, is bound to be difficult to encapsulate in simple, very precise, statements related to highly particular behaviours. This, however, is precisely what is required of learning outcomes when these are referred to performance outputs.

The initial form of outcomes-based education in South Africa took the logic of outcomes to its logical extreme: teachers in schools were given only lists

of learning outcomes. They were supposed to design curricula, by selecting appropriate content. When support material was developed, instead of providing teachers with guidance on content, they were given guidance on how to select content against learning outcomes. Outside of the school system, the idea was that qualifications would be composed of learning outcomes, and completely separated from educational institutions, learning programmes or curricula. In both instances, the assumption was that the outcomes themselves would provide sufficient information to the people designing learning programmes. Another assumption was that if outcomes are separated from whatever they are the outcome of, they bear sufficient meaning on their own, and therefore, different programmes, designed against the same learning outcomes would be similar, and would enable learners to achieve *the same outcome*. What is useful about the original South African policy is that it took the outcomes-based approach at face value – and thus provides a test for how it stands up on its own, in the absence of policies and systems which may support it, but which may also mask its problems and therefore make it appear as if it is working.

Practical problems with outcomes-based education in South Africa became apparent very quickly. Ministerial reviews were commissioned both of the school curriculum and of the NQF. The review of the school curriculum (Curriculum 2005 Review Committee 2000) suggested that there were fundamental problems with it, including that it was weak on conceptual coherence, with inadequate mechanisms for sequencing, progression and pacing, largely because of the attempt to avoid prescribing content, and that the curriculum documentation contained a proliferation of new terminology, used unnecessarily obtuse language, and was unnecessarily complex. Substantial revisions were proposed, although at that time the government did not formally distance itself from outcomes-based education. The curriculum later developed for the senior secondary schools and the colleges included some content specification, but was still officially based on learning outcomes. After continued criticism, however, the Minister of Basic Education declared outcomes-based education to be 'dead' (Motshekga 2009), although this of course has not led to an immediate change of the curriculum documentation available in schools. In the same year, after a lengthy review and consultation process, the outcomes-based NQF was completely changed, with the new approach being more flexible, without compulsory use of learning outcomes.

Initial criticism of outcomes-based education focused on implementation problems – inadequate training and distribution of teaching materials, as well as the unfamiliar terminology introduced with outcomes-based education (Chisholm and Peterson 2003). A subsequent critique argued that South African teachers were not sufficiently professionally equipped to do the work demanded by an outcomes-based curriculum (Jansen 2002, 1997b), and this line of argument has continued to be one of the main criticisms of

outcomes-based education. There was also increasing concern that instead of addressing inequalities between black and former white schools, the outcomes-based curriculum was increasing them (Taylor and Vinjevold 1999; Vally and Spreen 2003). Taylor and Vinjevold (1999) and Taylor (2002) showed that the lack of specification of content in the outcomes-based curriculum was disastrous, particularly in poor schools where teachers did not have a good grasp of their subject matter. The curriculum left these teachers at a complete loss as to what they should teach. But critics also showed that there were aspects of the curriculum which were problematic even for wealthy schools – such as a lack of emphasis on knowledge of basic scientific facts and concepts in the science curriculum (Howie 2001). My own research has shown how the curriculum documents produced were unworkable for teachers in practical terms, on the basis of their complexity (Allais 2010), and I have also argued that the NQF was conceptually flawed (Allais 2007a, 2007b, 2007c).

In what follows, I provide a reflection on one specific aspect of the outcomes project in South Africa: the attempt to use outcomes for quality assurance and to make judgements about educational quality. This aspect of the outcomes-based approach is related to others. For example, effective quality assurance is believed to be crucial for international mobility. Also, the role of outcomes in providing a basis for judgements about education programmes and the role of outcomes in providing a basis for curriculum development are premised on the same assumptions. I draw on insights from four different experiences: the first three were research projects, which I conducted for the state regulatory body responsible for monitoring quality in primary and secondary education (Allais 2006, 2007d; Allais et al. 2007);[1] the fourth was a higher education quality assurance process, which two colleagues and I analysed (Shalem, Allais, and Steinberg 2004).

In these experiences, it was either the case that learning outcomes were open to dramatically different interpretations, or, that they derived their meaning from being embedded in a curriculum. But in both instances, learning outcomes did not play the roles that were claimed for them. In all four cases, learning outcomes did not facilitate judgements about the nature and quality of an education and training programme. Outcomes did not disclose meaning within or across disciplinary or practice boundaries and did not enable the *essence* of a programme to be understood *similarly enough* by different stakeholders. They did not facilitate judgements about the nature and quality of education and training programmes.

If learning outcomes are embedded within a learning programme – in other words, if they are part of the specification of knowledge – they cannot play the roles claimed for them in assisting judgements to be made *across* curricula and learning programmes. The notion of transparency (or even, a more moderate notion of sufficient transparency) which proved unrealisable in practice is the basis of nearly all the claims made about what learning

outcomes can achieve. Further, the South African experiences demonstrated how outcomes-based approaches can distort education and training programmes, and lead to practical complexities such as over-specified and narrow learning outcomes, which are a direct consequence of the need for transparency, and its impossibility, and not (although this was probably also the case) the product of 'poor implementation' in South Africa.

It is important to note that while learning outcomes are frequently juxtaposed with 'inputs', which are variously conceived as syllabuses/curriculum, teaching, time and sometimes educational institutions, they are *not* the outcomes that have been *achieved*, but outcomes which have been *specified* as targets, or outcomes which should be associated with particular qualifications and learning programmes. Although the emphasis is on *outcomes*, in juxtaposition with *inputs*, outcomes which are specified in qualification or curriculum documentation are *not* measured learning outcomes; in other words, learning outcomes as they are used in most contemporary policy documents, particularly in qualifications frameworks and curriculum reform, are *inputs*, and not outputs. Unlike the other major international trend in education – achievement tests – which, for better or for worse, claims to measure what learners have *achieved* at various points, the outcomes and qualifications policies specify outcomes which learners *should* achieve, in order to be awarded a particular qualification.

4. Research into quality assurance at the secondary level

I led three research projects for Umalusi, the South African Quality Assurance Council for General and Further Education and Training. Umalusi is a statutory body under the Minister of Education, responsible for monitoring quality in primary and secondary education including adult and vocational education. Umalusi was attempting to develop insight into educational standards, and also into methodological quality assurance issues: methods and systems for evaluating and comparing the quality of education programmes. The research projects were not primarily focused on issues in relation to outcomes-based education, but shed light on the uses of learning outcomes.

The first project (Allais 2006) compared the syllabuses and examinations of subjects from different senior secondary qualifications in South Africa. Published as *Apples and Oranges? A Comparison of School and College Subjects*, for ease of reference in this paper, it will be referred to as the *2005 School/College Comparison*. A key aim of the research was to establish whether or not courses which had been 'pegged' at the same level on the NQF could be considered as 'equivalent': were they 'different but equal' or not? The research investigated the relative standards of a selection of subjects offered in colleges and schools, as well as subjects which were part of new vocational workplace-based qualifications registered on the NQF. The

research examined similar subjects (English, Mathematics, Science and Hospitality) across different qualifications.

Two groups of expert evaluators were created for each subject: a group of practitioners (teachers with long experience and consistently good results from schools and colleges) and a group of higher education experts (top disciplinary experts from universities around the country). Evaluators were given a set of guiding questions and categories to assist their work. The data consisted of documentation making up the intended and examined curriculum. For the school and college qualifications, this consisted of syllabuses, examinations, marking memoranda and a small selection of scripts. These all included prescribed content, although in most instances the documents included official statements of learning outcomes (and in some cases aims). For the two courses which had been developed against learning outcomes registered on the NQF, one in English and one in Mathematics, the data consisted of the learning outcomes and a 'course pack' of materials which had been designed to support teachers/trainers.[2] There were no assessment materials, as they were not part of the state examination system.

A second research project (Allais 2007d) compared syllabuses and examinations from senior secondary school subjects of four African countries. This project used an elaborated version of the tools developed in the earlier project. The subjects selected were English, Mathematics, Science and Biology. The countries were Ghana, Kenya, South Africa and Zambia. Documentation representing the intended and examined curricula were syllabuses or curriculum statements and the 2004 examinations from each country. Groups of four or five experts, including teachers and higher education specialists, all from South Africa, were formed. Again, the courses were not all outcomes based, and all included content specification. My focus in this paper is not the substance of the comparisons, whether of outcomes or content, or the ways in which outcomes and content were specified, but rather, an analysis of *what enabled the evaluators to reach judgements*.

The research reports for both projects argued that while judgements about standards, difficulty levels, and appropriateness of curricula and examinations are difficult and always likely to be imperfect, it was possible to make some judgements about different courses within the same broad subject area. Specifically, the research argued that judgements could be made *by consideration of the amount and type of content specified and examined, and the difficulty level of examinations within specified levels of cognitive challenge*. In both research projects, content specification (including listing, weighting and sequencing) was seen to be the most important component enabling judgements about a course.

Of course what is at issue here is only an evaluation of the intended curriculum, not of actual learner achievements. The judgements which were being made were only about the quality of the intended curriculum, and not about the level of learning or achievements of learners. As I pointed out

above, while learning outcomes by virtue of being called 'outcomes' appear to be about achievements, they are in fact a way of specifying the intended curriculum. What it at issue for the purpose of this current discussion is the nature of judgements that could be made about a course based on a consideration of the intended curriculum, and what types of specification in the intended curriculum aided the making of such judgements.

It is important, therefore, to note that evaluators found that dramatically different courses claimed to lead to the same or similar outcomes, and the outcomes themselves did not contain anything which could resolve this problem. In other words, while it was plausible that different courses could be justifiably described as achieving the outcomes in question (depending on how one interpreted the outcomes), the courses were substantially different in breadth and depth. Consider just one example from the first research project. All four English courses which we analysed in the research included similar learning outcomes for reading. However, the most challenging course, offered at 'higher grade' in schools, stipulated a specific study of three works of literature, besides a range of other types of texts, and additional non-examined books. The course offered at 'standard grade' in schools was similar, although the specific texts were considerably less challenging. The course offered in the colleges prescribed, but did not examine, one book of short stories and some South African poetry. The outcomes-based course had no prescriptions, but the course pack contained a few short newspaper and magazine articles. In addition, in the explicitly outcomes-based course, progression and differentiation were supposed to be achieved through shifts in assessment standards, because there was not prescribed content and (real or exemplar) assessment instruments. But often the assessment standards did not demonstrate discernible shifts in phrasing, and further, even where they did, the shift from, for example, 'obvious emotive language' to 'fairly subtle' to 'subtle' depends on considerable interpretation.

Evaluators also argued that intended and examined curricula need to be evaluated together; or at least in the light of each other, as far as possible, and emphasised the difficulties of evaluating courses through an analysis of the intended curriculum, *even* when there was considerable content specification. They emphasised that there are often vast differences between the intended curriculum, as represented by the official syllabus documentation, and the enacted curriculum, as represented by the full spectrum of possible classroom practices, but that assessment practices, particularly 'high stakes' assessment, have a powerful 'backwash' effect, which means that classroom practice is to substantially affected by what learners need to know and be able to do in assessments. As Rowntree (1987, 1) tells us 'if we want to discover the truth about an educational system, we must look into its assessment procedures … the spirit and style of student assessment defines the de facto curriculum'. Part of the evaluators' brief was to make judge-

ments about how cognitively demanding the different courses were. Without exception, all evaluators argued that such judgements could not be made by looking at the intended curriculum, even when there was considerable content specification, but could only be made, and then to a limited extent, by a consideration of examinations.

Evaluators were not convinced that in practice there exist clear, uncontested distinctions between the various cognitive processes specified in the tools that we had developed. For example, Science evaluators argued that it is often the *way* in which knowledge is tested which determines whether it counts as factual or conceptual knowledge, not the content on its own: to *remember a statement* of Newton's third law of Motion is simple recall, but to actually *understand the concept* embodied by this statement is challenging, since it is counter-intuitive. In Biology, there was some kind of relationship between cognitive operations, types of knowledge and levels of difficulty, but there were also differing levels of difficulty across cognitive operations and types of knowledge. For example, evaluators argued that most of the easy (level one) questions in the South African examinations were in the category *understand conceptual knowledge*, while in the Zambian papers, the easy questions tended to be *recall factual knowledge*.

None of this will be particularly surprising to educators who work in school systems or do research on school curricula or examinations. But indirectly, it raises important issues for the learning outcomes approach. To the extent that evaluators were able to make judgements about the nature and quality of the courses, it was the specification of *content* that enabled these judgments. This was not *sufficient*, and a careful analysis of examination papers was required. This in itself led to limited judgements, as, for example, evaluators could not always make judgements about the predictability of questions, particularly in other countries. Of course none of the evaluations enabled any insight into the *enacted* curriculum, or into how examination scripts were actually marked, both of which have substantial impact on educational quality. Their judgements were limited. The point is, though, that they were able to make some judgements when comparing courses that had specified content. In the absence of this, they could say almost nothing about the courses.

A third research project (Allais et al. 2007) attempted to analyse a large number of explicitly outcomes-based courses in English and Mathematics. These courses were offered as part of qualifications which were pegged on different levels of the secondary system, and had been developed on the basis of unit standards (statements of learning outcomes and other specifications which could be accumulated towards qualifications[3]). According to policy at that time, all learners had to achieve learning outcomes in Mathematics and languages. The specification of learning outcomes was seen as sufficient to ensure that all learners achieve something *similar enough* in Mathematics and languages.

The main finding was that learning outcome specifications did not appear to be an appropriate vehicle to ensure a commensurate standard. Judgements about the quality of the courses were very limited, because of serious differences in the kinds of documentation that could be acquired for each course. But to the extent that judgements were possible, it was clear that there were substantial differences between courses which were designed against the same learning outcomes. For example, in the Mathematics courses at NQF level 4 (the level of senior secondary school), in some cases the material addressed the unit standard fully and provided background information in an attempt to help learners come to grips with complex concepts. The assessment instruments then reflected the complexity of the material. In other cases, the material addressed the unit standard fully, but the assessment was reduced so that it simply asked for a recall of facts and little or no application of mathematics was required. In other cases, the material and assessment addressed the unit standard at a broad level only and did not meet the level suggested by the detail of the unit standard. While the examples above could be attributed to weak capacity of certain providers, or unscrupulous behaviour of providers, in many instances it appeared that there were dramatic differences in interpretation of learning outcomes. In language learning, the same learning outcomes could be interpreted at many different levels. Phrases like 'a wide variety of texts' were interpreted in very different ways. Evaluators in the first research project suggested that this was entirely plausible. For example, an outcome such as 'show an awareness of manipulative devices' can be displayed by primary school children (e.g. through nursery rhymes), by newly literate adults (e.g. through understanding of simple slogans) and by people using language for a high level of academic proficiency. The learning outcomes on their own were not enough for providers to know what to teach and assess.

At the same time, basing the system on learning outcomes in unit standards caused a series of identifiable difficulties and complications for both providers and quality assurance bodies. The research uncovered chaos and confusion in relation to the use of unit standards. Versions of unit standards would expire, but some providers would continue to use the old ones. Different versions would come out with substantially difference versions of credit, and credit values did not seem to be a reliable guide to programme length or content coverage.[4] Official policy in South Africa stated that unit standards should be taught and tested in an integrated way, but the research suggested that they were likely to lead to atomised teaching and testing.[5] For example, one of the Mathematics unit standards was about working with number and dealt with estimation, appropriate representation and rounding of numeric answers, and conversion between different units. Courses examined in our research taught and tested all of these in isolation. But a number of the skills are really only meaningful if they are behaviours that learners exhibit in context. For example, do they use estimation to think about what

the answer should be when doing a calculation? Do they use units appropriate to the context and can they convert them when they need to? Do they round the number or tolerate error appropriate to the context? This means that unit standards do not lend themselves towards a mastery of a body of knowledge, and instead, lead towards provision of fragmented bits of learning, which do not allow progression. Unit standards appeared to cause problems with progression, particularly in mathematics, where they appeared to cause distortions in the logic of progression of learning, especially where programmes attempted to contextualise the language or mathematics skills (e.g. mathematics for hairdressing).

There were many problems discovered with the unit standards themselves. Some had overlapping scope although the unit standards were pegged at different levels on the NQF. For example, the data and statistics unit standards for level 1 (the level equivalent to junior secondary school) and level 3 (the level equivalent to the second last year of senior secondary school) there is a very large overlap in terms of content. Compare, for example, the statement of the purpose of each of the unit standards:

Unit standard 119,364 (level 1): People credited with this unit standard are supposed to be able to:

- Collect data to answer questions related to human rights, social, economic, cultural, environmental and political matters.
- Display data in diagrams.
- Critically analyse data in tables and diagrams in order to draw conclusions and make predictions.
- Interpret and determine chance variation.

Unit standard 9012 (level 3): People credited with this unit standard are supposed to be able to:

- Pose questions, collect and organise data.
- Represent and interpret data using various techniques to investigate real life and work problems.
- Use random events to explore and apply probability concepts in simple life and work related situations.

The aims of both these unit standards state that learners are required to collect, organise and interpret data to answer real-world questions and to use probability concepts in simple situations. The overlap, both in terms of content and in terms of the stated aims, makes it quite difficult to judge what would be considered a level 1 data and statistics course vs. a level 3 data and statistics course.

Of course this last set of problems were of application, and could be put down to poor implementation, or poor capacity in South Africa. There is,

though, some difficulty in separating principle from application when researching outcomes-based education – for example, because of the problem of specification is the result of the separation of outcomes from content, and the fact that outcomes do not carry sufficient meaning on their own.

These three pieces of research were all focused on different aspects of the secondary education system. The following section presents some of the key points from an analysis (Shalem, Allais, and Steinberg 2004) of an outcomes-based quality assurance process of a higher education course.

5. An experience of outcomes-based quality assurance in higher education

A course on mentoring, proposed by the School of Education at the University of the Witwatersrand, was rejected twice by the relevant quality assurance authority, and then finally approved. The rejections were based on the fact that the course did not seem, to the panel of evaluators, to comply with the outcomes captured in the two specified unit standards. Although this was a single instance, and not a sampled research, our analysis (Shalem, Allais, and Steinberg 2004) shows that it provides an exemplification of principled or conceptual issues. We demonstrated that the internal coherence and the substance of a learning programme that are produced, in the main, by the logic of the knowledge that informs it, cannot be externally regulated by a quality assurance process that condenses knowledge into learning outcomes. Further, in our analysis of the process, we argued that starting from learning outcomes inevitably marginalises discipline content, even when there is a formal assurance to value it, and *even when peers are used in evaluation processes*.

Our analysis (Shalem, Allais, and Steinberg 2004) describes how the course was based on a conceptual framework drawn from sociology of education and international research into mentoring in schools. The trainee-mentors were introduced to a framework for understanding mentoring which follows the development of student teachers through four phases, but with concepts pertinent to the practice of mentoring inserted at key issues. These concepts diversified the focus from the 'activities' of teachers, thus creating a conceptual web through which these activities could be analysed. In other words, the trainee-mentors worked through tasks that drew on day-to-day mentoring activities, but, while these tasks worked with the familiar, they also got trainee-mentors to rethink that which felt familiar, by recruiting the new conceptual framing. This kind of course design was not allowed for anywhere in the specific outcomes of the two unit standards against which the course was measured, and was not recognised by any of the evaluation reports either. Instead, the quality assurance agency wanted to see how the course led to specific outcomes such as 'Identify learners' needs regarding

anxiety and barriers to learning', 'Provide advice to learners', 'Plan and prepare for assessment', 'Provide feedback to relevant parties' and so on. The agency wanted steps of the learning programme to be described in a specific way, starting with an active verb and *to be specific enough to be measurable*. The outcomes were presented as an 'official map' or 'script'.

An increasingly detailed attempt to demonstrate compliance with the learning outcomes eventually led to a successful completion of the bureaucratic aspects of quality assurance and yet the process did not provide information about whether or not our design and pedagogy successfully generated the access we intended to create. The core issue of what kind of understanding of mentoring and assessment is necessary in order to choose *appropriate* methods of assessment, observe with *discernment* and record *relevant* evidence, was completely silenced. What was also missing was a broader perspective on the practice of mentoring. If the course had been designed starting from outcomes, and had not given content knowledge a prominent place in the curriculum, the process of accreditation would have been short and efficient and yet the course would have lost its power to enable transformative learning in which knowledge is acquired and explored deeply.

As we argued, drawing on Carr (2000) and Beck and Young (2005) learning for 'principled knowledge' which follows a due process of reflective education is far more involved than learning for 'technical effectiveness'. Learning for 'technical effectiveness' generally does not require learners to go beyond a sense that ways of doing things are familiar and right. But course designers who want learners to acquire principled knowledge cannot rely on what appear to be consensual objects like 'tasks specifications' and 'standards of performance', but must instead initiate learners into new ways of seeing.

We argued that an outcomes-based discourse of quality assurance has false epistemological assumptions about what it takes to show a learning path with reliability. When the description of a course is aligned to disciplinary content, the line of accountability is to the schemes of perception and appreciation, key procedures and concepts that together inform the logic of a field of knowledge and the practices it adopts for socialisation of practitioners. Aims are articulated *in relation* to specific content; they do not *determine* the content (in fact, in many instances the content could determine the aims). Their appropriateness is judged in relation to the specialised demands of the content, as the point of providing a course is primarily to give learners access to this specialised content. In this view, one does not discount instrumental goals of using the knowledge for 'things' in the everyday or for the workplace. Nevertheless, one would not pretend to have the power to generate direct causal connections to skills that have to be demonstrated in the workplace (neither would one assume that the knowledge acquired is unchallengeable).

The quality assurance body in this instance sought an one-to-one causal relationship between content and outcomes, which is described by support-

ers of outcomes-based systems and NQFs as a 'design-down' approach, because, as discussed in the introduction, the content is 'designed down' from the learning outcome. This is captured in Figure 1 below, copied from Commonwealth of Learning (2008, 44).

Describing a course from a disciplinary perspective foregrounds questions such as: Is the content sufficiently representative of the field and its debates? Does the course give students opportunities to meaningfully account for what they know; using ways of seeing that are specific to the specialised content? Does the course provide a sequence of content and modes of representation that could enhance students' acquisition? Does the course help to promote scholarship of work in the institution?

When the description of a course is aligned to outcomes which are created *independently of the process of course design*, the line of accountability is to a list of specifications. In this view, alignment can only be shown by describing how the content of a course and its pedagogy *serve the outcomes*. This gives rise to a false perception that a segment of content selected from a discipline can be causally related to a specific learning outcome, i.e. the segment of content is judged to contribute directly to the attainment of the outcome. This was commonly expressed in South Africa in the phrase 'content is the vehicle through which the outcomes are achieved', which uses the same logic as the 'design-down' approach in Figure 1.

What happens to knowledge when it is described as something other than itself? In this experience, what was clear was how the course content became marginalised. In any curriculum design process, content may relate to several aims. But there is a significant difference between this notion of aim and the notion of outcomes used in the South African NQF. We therefore suggested the difference between these two notions of alignment

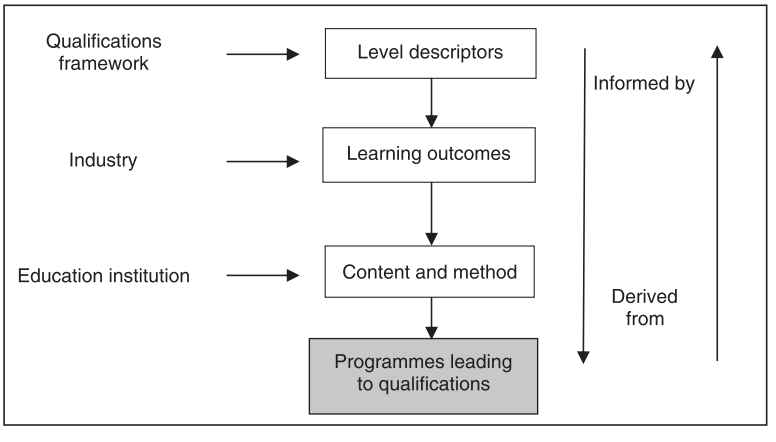

Figure 1. Designing down.

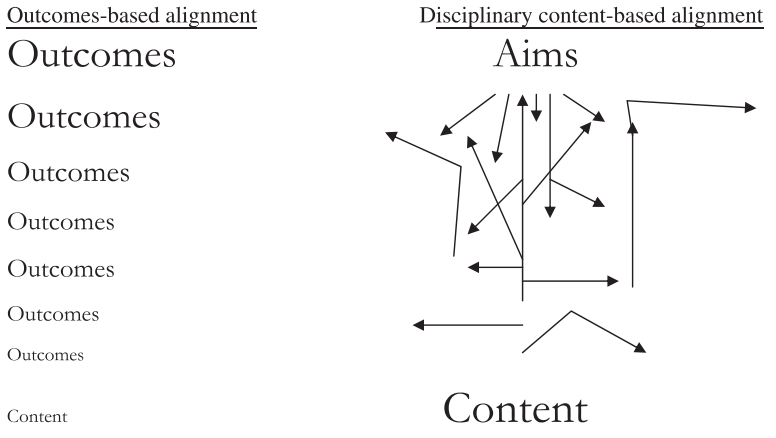

Figure 2. Outcomes vs. content-based alignment.

resembles the difference between a maze/web relationship and a Russian Doll alignment (Shalem, Allais, and Steinberg 2004, 66) (Figure 2):

This problem, the lack of a 'causal' relationship between knowledge and outcomes, and the tendency for outcomes to marginalise knowledge, must be understood together with the problem discussed above, of lack of transparency. Broadly specified learning outcomes do not express consensus. This is why so many outcomes systems lead to detailed specifications, in an attempt to achieve consensus. This over-specification, as discussed above, is counterproductive and cannot, in any case, entirely create consensus. But at the same time, the notion that learning outcomes can disclose meaning across boundaries marginalises what is specific to education programmes: knowledge. Outcomes are situated as the mechanism to capture the 'sameness' of different learning experiences, but in the process of ignoring the specifics of the different experiences, they fail to capture a meaningful 'sameness', while creating an official undervaluing of the important specifics.

6. Transparency: somewhere over the rainbow?

To further explore this issue, consider the following example.[6] The following are possible formulations of generic outcomes statements:

The learner will be familiar with the main theories of the discipline

or

The learner will conduct independent research

or

> The learner will understand the general tenets of traditional and modern sociological thinking.

Such outcomes lead to questions such as:

> How familiar is 'familiar'?
>
> Which are the main theories of a discipline?
>
> What is independence?
>
> What is research?
>
> What are the main tenets of modern sociology?
>
> How much depth would constitute an 'understanding'?
>
> Is it better to start with topics or with theorists?

Such questions in themselves are not bad: the development and acquisition of knowledge requires debates and disagreements. Debates between different interpretations enable continuous research and reflection. But in an outcomes-based approach, these outcomes must be the bearers of sufficient meaning that regulatory bodies can judge courses against them, amongst other things. The inevitable disagreement leads designers of outcomes-based standards into an inevitable downward spiral of detail specification, without reaching consensus. Consider just one outcome, 'The learner will conduct *independent* research'.

The tradition in many universities differs with regard to the amount of independence in research that is regarded as appropriate for students at different levels. Lecturer A, working in a specialised programme in an elite university, may think that at a Masters' level a good synthesis of the main research in the discipline is insufficient, and thus a good student must shape her own research. Lecturer B, who works in a less specialised programme and teaches, in the main, weaker students (whatever the historical reasons for their weakness of achievement), could claim that students should be strongly guided by the lecturer, and work only within the mainstream tradition of the discipline, on projects determined by the lecturer. And lecturer C, working in a specialised programme in one of the mainstream universities, might have a pragmatic point of view – to increase the throughput rate of her programme/university. Lecturer C could decide to juggle around between the two positions for appearances sake; she might in fact not really care about the degree of independence demonstrated by her students. There will also be substantial differences across disciplines; as Muller (2009) points out, postgraduate research in the Sciences tends to be far more

specified by lecturers than in the humanities, because of the nature of the disciplines. Each lecturer is informed by different assumptions about what research is and how best to prepare a student. There is nothing in the outcome statement itself that enables the three lecturers to reach a common decision.[7] Logically, all three (and more) readings of the standard are contained within its ambit and thus on a logical level cannot be refuted. All three lecturers can probably show how their courses do, in their own ways, meet the outcome statements. This is why, in order to limit the 'danger' of too much variability within a process of interpretations that begins at a generic level of standards, specification emerges.

Even a very specific learning outcome like 'The learner will be able to sandpaper a chair' is subject to interpretation. It therefore requires further specifications like: the kinds of wood the learner must be familiar with, the type of grains of sandpaper the student must be able to use, the types of chairs and the contexts in which the students must operate. Wolf (1995) explains how, in relation to the National Vocational Qualifications in England, while the emphasis of this kind of competence-based system has been on the clarity which it promises to assessors and learners (and, in South Africa, to employers and society as well), the creation of competence statements has lead to 'an ever more complex and complicated "methodology"'. The combination of the *need for* and *lack of* transparency leads to increasing elaboration of the 'standards', as well as the development of increasingly narrow standards. This explains why South African policy-makers ended up with 15 assessment criteria as well as detailed 'range statements' for the specific outcome of washing hands!

It could be argued that a different version of an outcomes-based approach could start with a group of people who already have a shared understanding of what the 'outcomes' or 'standards' should be. But what value, then, do the outcomes add? Perhaps none, perhaps they assist in structuring decisions and judgements or perhaps they distort judgements. Perhaps they are a useful way of generating discussion and debate, and hence, a better and more explicit understanding of standards. But if this is to be the case, they only assist those who participate in the process of creating the standards. The written standards on their own do not assist those who were not part of this process. The experience described above suggests that experts become trapped in technicist processes which are likely to distort the lens through which they look at courses. Outcome statements can force the expert or peer evaluators out of their role as expert peers, and into the role of bureaucrats, where they find themselves judging courses on the basis of requirements which are in no way internal to the tradition of their knowledge area or practice. The specificity that different experts bring may be marginalised by the genericism that is inherent in learning outcomes.

A different approach could be one which uses outcomes as useful statements of aim that enable course designers to describe their understanding of

their field of knowledge. Course designers, and not an external body, design these statements deriving them specifically from what they are trying to teach. This means that instead of starting with outcomes and designing the content down from them, this approach derives the aims from within the logic and emphasis specific to the content of the knowledge field or practice. This would make the relationship between content and aims a descriptive one and would not require speculations on which content best serves which aim. This approach may be similar to that described by Raffe (2009), in what he refers to as 'outcomes-referenced' NQFs, which use outcomes together with various 'input' factors. It is not clear, though, in this instance, what is added by the use of learning outcomes – if they merely capture content which is already specified. If outcomes are used in this way, then most of the claims made for them – that they cross borders, enable validation/recognition of prior learning, enable comparisons of different learning programmes – no longer hold. The outcomes, in this scenario, do not have a 'meaning' independent of what they are the outcome of.

How this could or will work in practice remains to be seen. The main concern of this paper has been with the lack of agreed meaning attached to learning outcomes, which can be seen in the different (and perhaps equally valid) ways in which they were interpreted by course designers, and the inability of researchers to make judgements about courses without careful consideration of content specification and assessment instruments. The discussion above showed some of the experiences of unintended consequences and difficulties for education that this approach had in South Africa. No doubt this was aggravated by a poorly designed outcomes-based approach (e.g. our research found Mathematics unit standards which contained wrong Mathematics). However, the experiences and research described above suggest that there are genuine conceptual problems with the idea of learning outcomes that are independent from content and context. The problems stem from the fact that the claims made about what outcomes can do rest on the claim that they can create (a degree of) transparency, and yet, this does not seem to be achievable. If, though, the outcomes are seen as part of, or related to the knowledge that gives education programmes their meaning, if, that is, they are limited to what they are in fact the outcome of, then the question which must arise, and has yet to be answered in research or practice, is how do they 'cross boundaries', or create transparency for 'the other' – the non-expert, the employer, the manager of a state regulator body, the 'foreigner'? As outcomes-based approaches become increasingly pervasive, this question is the one which requires an answer.

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Notes

1. All three reports are published by Umalusi, and are available at www.umalusi.org.za.
2. The courses were titled: situated communications NQF level four (including Language for Early Childcare Development and General Business Administration Practitioners), and Situated Mathematics Literacy NQF level four (Mathematics for Hairdressers) respectively.
3. Typically the unit standard titles (a unit standard title contains the main outcome of the unit standard) are formulated as in the following examples: Read/view, analyze and respond to a variety of texts' (119469 NQF Level 4). Write/present/sign for a wide range of contexts (119459 NQF Level 4). Specific outcomes are then added to each of these main outcomes which are supposed to further explain the different kinds of skills involved in reading or writing, while the range statements and assessment criteria address various features and functions of language with which the learners need to engage.
4. For example, unit standard 7451 'Collect, analyse, use and communicate numerical data' was worth two credits at level 1. This unit standard expired on 3 December 2006. The newly registered unit standard 119364 'Evaluate and solve data handling and probability problems within given contexts' was worth 5 credits at level 1. A close comparison of the two unit standards showed that although they appeared different (the later version provided far greater detail), they specified more or less the same mathematical content. One could make a case that material from one of the courses designed against the first unit standard 'covered' the second one just as well. Is it then worth five credits or two?
5. This made 'business sense' for the providers, as they were contracted to provide against different combinations of different unit standards.
6. The discussion below draws from a paper presented to the Higher Education Quality Council in South Africa by Allais and Shalem (2005).
7. Of course specifications of content are also open to interpretation, and do not necessarily lead to similar standards. The difference is in the claims made for learning outcomes, and it these that I am addressing in this paper.

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