9 TOWARDS INTEGRATED ASSESSMENT IN SOUTH AFRICAN HIGHER EDUCATION

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Assessment defines what students regard as important, how they spend their time, and how they come to see themselves as students and then as graduates. It follows, then, that it is not the curriculum which shapes assessment, but assessment which shapes the curriculum and embodies the purposes of higher education.

(Brown and Knight 1994:12)

ABSTRACT

Higher education institutions are increasingly challenged to address pressing societal needs. This has led to changes in the nature of knowledge production and the competencies students are required to develop through teaching programmes. One area in which this change is evident is in a shift from Mode 1 knowledge that refers to pure, disciplinary, homogeneous, expert-led university-based knowledge to Mode 2 knowledge characterised as applied, problem-solving, transdisciplinary, heterogeneous and network-embedded. Consequently many teaching programmes now tend to focus not only on the knowledge (foundational) component, but also on the skills (practical) and application (reflexive) components of learning. All these components are necessary to support students to not only acquire memorised factual knowledge, but also to integrate their acquired competencies in different contexts so as to fulfil roles in the world beyond higher education.

Assessment that serves as a catalyst for both teaching and learning can play a role in guiding and supporting the processes aimed at the attainment of applied competence. The response of the South African government to this challenge in higher education is to use assessment formatively and summatively in attaining applied competence. This chapter attempts to contextualise the tensions between the current assessment practices

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in higher education and what policies propose. It is argued that simply embracing these policies is problematic because the priorities of higher education and the state vary due to the different constituencies they serve and their concomitant priorities and imperatives. From an analysis of current higher education assessment practices, ways of mediating this divide are suggested, also serving as pointers for further research in this area.

INTRODUCTION

Assessment is probably the one function of higher education that produces the most apprehension amongst students and frustration amongst academics. Equally, assessment of student learning seems to be an important theme that has traditionally been under-researched in higher education. As the assessment movement has grown significantly in the last two decades, the term 'assessment' has acquired different meanings in varying contexts. Heywood (2000:9) highlights two broad trends: "On the one hand, it has been applied to the assessment of student learning, while on the other hand it has been applied to the assessment of institutions, programmes and teaching." It is precisely these diverse meanings and the many debates about issues of standards, reliability and quality assurance demands (Bryan and Clegg 2006) more particular in higher education, that make it a value-laden activity. Added to these is the concern about how well assessment supports teaching and learning in the process of preparing students for employment. Boud and Falchikov (2007) argue that "assessment should be seen as an act of informing judgement and proposes a way of integrating teaching, learning and assessment to prepare students better for a lifetime of learning".

Assessment is inextricably intertwined with both learning and teaching, because the evidence gained through a variety of assessment methods may on the one hand produce supportive learning structures for each student and, on the other hand, enhance the quality of teaching to serve the needs of individual students. While recognising the fact that students bring with them different socio-cultural capital to the education situation, the assumption is that all of them are somehow in the process of attaining the required competence as formulated in the learning outcomes. Through assessment process(es) that produce quality information about the student's progress, insight for both student and lecturer about the gap between what the [student] can achieve without help and what may be achieved with suitable help, may be obtained. From a teaching perspective, the assessment information should inform the feedback to the student as well as the scaffolding (Wood, Bruner and Ross 1976) along the zone of proximal development (Vygotsky 1986). From a learning perspective, quality

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feedback will indicate both strengths and weaknesses that students experience in the learning process. As part of feedback, feed-forward will indicate the next steps to be taken by both the lecturer and the student as they work towards realising their full potential in the context of each one's core business.

Students generally dislike the assessment component of their education, mainly because they experience it as something that is done *to* them and not something that is done *with* and *for* them. The teaching and learning mode in higher education institutions still tends to be largely lecturer-driven rather than student-driven. While research indicates the potential of formative assessment to raise standards (Black, Harrison, Lee, Marshall and Wiliam 2003) and while learning-enhancing forms of assessment such as portfolios, peer assessment, self-assessment and authentic assessment are increasingly introduced, assessment for learning is not commonplace in higher education and may even encounter resistance (Kvale 2007:57). Summative assessment and related pedagogies remain, however, the dominant practice. According to Barnett (2007:38) it is not surprising that these practices happen on a regular basis, because "summative assessment has the power to control, to classify students arbitrarily, to limit their educational development and to impair their own sense for themselves". Many lecturers who operate in such a mode would regard assessment that assesses competencies other than only knowledge as an extra responsibility that takes up too much time that could have otherwise have been spent more effectively on teaching. Furthermore, the ongoing debates around issues of fairness, reliability, validity and appropriateness do not make engagement with new forms of assessment an interesting consideration. Consequently assessment often elicits strong opinions from all concerned.

The understanding of how knowledge is produced has undergone significant change over time, from knowledge embedded in disciplines to knowledge that is produced in collaboration with and in the service of the world beyond higher education. However, to portray these types of knowledge as a dichotomy is problematic, as they are interdependent. This change in the way knowledge is produced was necessary, because the nature and the needs of the world have changed. In response to this, higher education institutions have, on the one hand, diversified their mission statement(s) so as to make them more socially relevant. On the other hand, the search for more appropriate knowledge that is much more informed by practical realities, has led to the slow, but increasing fragmentation of disciplinary knowledge. As higher education grapples with these epistemological shifts, governments have responded through policy making by, for example, introducing assessment systems that do not only address

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imperatives such as performance ability and accountability, but also systemic issues of alignment between learning outcomes/competence and assessment methods.

Consequently, teaching programmes are expected to focus not only on the knowledge (foundational) component, but also on the skills (practical) and application (reflexive) components of learning. All these components are necessary to ensure that students do not only have memorised disciplinary knowledge, but that they have also acquired the skills to construct that as well as other related knowledge and also have the ability to use the knowledge and skills in familiar and unfamiliar situations when the need arises. In order to fulfil their eventual roles in the world beyond higher education, students are expected to integrate their acquired competencies and use them effectively to the benefit of themselves, others and the natural environment. Assessment should therefore support the process of determining the ability of students to demonstrate satisfactory competence in the above-mentioned domains as well as to integrate it appropriately in the relevant contexts. the South African Qualifications Authority (SAQA) (2005:4) defines this type of assessment, called integrated assessment, as "a form of assessment which permits the learner to demonstrate applied competence and which uses a range of formative and summative assessment methods".

I suggest in this chapter that the nature of the learning outcomes on which teaching programmes are based influences the pedagogical points of departure of academics, as well as how and what students learn in higher education institutions. However, while recognising the epistemological and pedagogical priorities valued by higher education institutions, bureaucratic institutions like SAQA respond through policy-making to national educational priorities and imperatives. One such policy is that of *integrated assessment* as an assessment model to assess the acquired competence of students. An attempt is made to contextualise the tension between current assessment practices in higher education and what is proposed in terms of integrated assessment as described in national policies in South Africa. I argue that it is problematic to embrace these policies, because the priorities of higher education and the state differ. However, despite these differences, a number of critical areas of concern are highlighted in an effort to explore ways in which it may be possible to implement integrated assessment.

THE CHANGING HIGHER EDUCATION LANDSCAPE

Curriculum transformation in South Africa, especially since 1994, brought with it not only the challenge of changing educational pedagogies and perceptions, but also

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the expectation of a more just education landscape. It also necessitated continual initiatives for ensuring critical engagement with the realities of higher education in order to enhance quality and appropriateness. Despite the national quality assurance processes of organisations such as SAQA and the Higher Education Quality Committee (HEQC), aimed at infusing and strengthening the Higher Education Qualifications Framework (HEQF) in higher education and "newly" negotiated norms and standards respectively, the sector remains in a state of flux, as more pressures at a global level place even greater demands on it than ever before.

Traditionally, higher education institutions, including South African universities, have been regarded as the sole agencies of knowledge production. Consequently, these institutions have become enclaves (Le Grange 2006:369) – remaining to a large extent removed from the knowledge society in which they operate and which they serve. In response to modern-day societal and environmental challenges, this situation is rapidly changing. New economic imperatives, for example, permeate all spheres of society and put the demand for a highly educated workforce squarely on the agenda of higher education institutions as they are expected to provide graduates that have the key competencies that will enhance their employability and contribution to society and the environment. In a sense, these new pressures and demands forced higher education institutions to rethink their perception(s) of what their purpose(s) should be. According to Knight and Yorke (2003:vii) this "human capital approach gives higher education an instrumental twist which many academics find discomforting".

FROM KNOWLEDGE TO APPLICATION

Where this human capital approach may be regarded as a contemporary trend in research-oriented universities in South Africa, the focus on preparing graduates for specific areas of the job market has been a more integral and prominent part of the mission and vision of other institutions in higher education, namely universities of technology and to a lesser extent comprehensive universities. Universities of technology offer mainly practice-oriented qualifications in fields with a dedicated alignment with employment realities and demands. Comprehensive universities on their part offer a combination of this, as well as the more theory-oriented qualifications of research-directed universities.

The following mission statements, first of a university of technology and then of a research-oriented university in the same province in South Africa, help to illustrate this 'difference' in what they regard as their core business:

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- Our mission is to develop and sustain an empowering environment where, through teaching, learning, research and scholarship our students and staff, in partnership with the community and industry, are able to create and apply knowledge that contributes to development. (http://www.cput.ac.za/institution/mission.php., 2009/03/22)
- The raison d'être … is to create and sustain, in commitment to the academic ideal of excellent scholarly and scientific practice, an environment within which knowledge can be discovered, can be shared, and can be applied to the benefit of the community. (http://www.studysa.co.za/contentpage.aspx?pageid=4175, 2009/03/22)

On the one hand these mission statements confirm the primary task of knowledge production and transmission. On the other hand they reveal the differing contexts in which and for which this knowledge is produced. Universities of technology operate primarily in partnership with the community and industry to produce knowledge and human resources that will contribute to development in those sectors. Academic universities embed their knowledge production in the domains of scholarly and scientific practice with a central focus of discovering new knowledge and sharing or selling it where applicable and appropriate. This is manifested in the 'products' that are produced. Apart from contributing to human development through the academic and professional programmes, universities also produce research outputs in, for example, academic peer reviewed articles and books as well as inventions which are patented for use by society. Although these institutions represent so-called extreme positions along the higher education continuum, it is clear that there is a "shift away from the traditional liberal formulation of universities as a 'house of knowledge' – detached from the larger society … towards a conception of universities in the service of the market" (Kraak 2000:iii). Drawing on the work of Gibbons and his colleagues (1994), this shift represents a change from Mode 1 knowledge that refers to pure, disciplinary, homogeneous, expert-led university-based knowledge to Mode 2 knowledge that refers to applied, problem-solving, transdisciplinary, heterogeneous, network-embedded knowledge. However, this shift implies that there is a need, not only for adaptations in terms of programme design, but especially for assessment as it is integral to both the instruction and learning processes.

The stance of the HEQC, whose primary function it is to promote quality assurance standards and systems in South Africa, is that higher education institutions should not only focus on classic "teaching-learning and research", but also on "community service" (Berger 2005:181). This shift to a greater responsiveness to the country's developmental needs has become characteristic of the research, teaching and community involvement programmes of most university faculties. Examples of this are

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the teaching and research programmes of faculties of engineering that are to a large extent geared towards providing the necessary human resources and knowledge to address related needs and challenges in the world of work and in society in general. This gradual shift is, however, not uncontested, because there are a number of complications, as alluded to by Botha (2000:7): "Should a university simply try to meet the (idealised) needs of its customers or should it pro-actively anticipate and even create those needs? Are students, as service users, in a position to specify exactly what they need? Are academics acting in isolation in a position to determine and create the requirements and needs of all these different groups and stakeholders?" Likewise, it can also be questioned whether the way in which students are assessed at South African higher education institutions reflect the shift from focusing mainly on the acquisition and reproduction of knowledge to one where the focus is on the integration of knowledge and skills for application in familiar and unfamiliar environments.

CURRENT TEACHING, LEARNING AND ASSESSMENT REALITIES IN HIGHER EDUCATION

Emanating from contemporary theoretical insights about teaching, learning and assessment (Boud and Falchikov 2007; Gibbs 2006; Gardner 2006; Gipps 2002) as well as the technological changes that are taking place in modern societies, education is compelled to become more learner-centred and competence-based. This emphasis represents a move away from the lecturer to the student who needs to be prepared to take up his/her place not only as a future competent professional, but also as a life-long and self-regulating learner. In respect of the creation of opportunities for addressing the needs of students, Baartman *et al.* (2007:144) identify two necessary areas of change in education: (1) "changing its focus from one of transmitting isolated knowledge and skills to one of acquiring complex competences," and (2) "guiding learners in developing skills for learning and getting information from the diverse range of sources available in modern society".

In South Africa, the promulgation of the South African Qualifications Act, 1995 (Act 58 of 1995) and the implementation of outcomes-based education and training are two policy initiatives that were designed to promote the above-mentioned areas of change. These policies challenged the traditional roles of academic teachers (Olivier 1999:v), who focused mainly on discipline-specific knowledge transmission, rather than on supporting the development of vital competencies that straddle the divides of theory and practice. In a study on an appropriate assessment model for higher education, specifically health sciences and technology, Friedrich-Nel, De Jager and Nel (2005:881-883) investigated current educational practices that are characteristic

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of higher education. They concluded that for most of the 20th century, teaching in higher education was geared to exposing students to masses of facts up to the point where the facts became unmanageable. They concurred with Olivier (1999:69) that written examinations, traditionally associated with content-based education and training, remain the dominant form of assessment used in higher education in South Africa. Despite well-documented changes in educational theory from behaviourist to constructivist teaching and learning approaches (James 2006; Dann 2002), as well as the well-publicised shifts in assessment policy and practices in other education sectors in South Africa (Dreyer 2008; Maree and Fraser 2004; DoE 1998, 2005), embracing and implementing alternative assessment methodologies in the higher-education sector seem to remain limited and employed with trepidation (Kilfoil, in Dreyer 2008). Policies (structures) regarding the new emphasis on assessing applied competence and the principles underpinning outcomes-based assessment, as referred to earlier, are in place, but the translation of these policies into practice (agency) at all higher education institutions tend to remain similar to what has been the traditional practice.

Most higher education institutions tend to assess mainly propositional rather than procedural knowledge using a narrow range of assessment methods – mainly examinations or the longer coursework essays. What is therefore primarily assessed in universities is [students'] grasp of subject matter (Edwards and Knight 1995:11). Another tendency which seem to contribute significantly to the nature of assessment in many higher education institutions is the misalignment between course/module outcomes, the actual learning experiences, content and the assessment methods. Although courses/modules may be designed to promote knowledge and understanding of a topic in a disciplinary area, as well as related skills and application in known and unknown environments, the assessment methods used may only be able to assess, with an acceptable measure of validity and reliability, the disciplinary outcomes. The emphasis therefore remains on assessing mainly the foundational competence of the student and not really practical and reflexive competencies through assessment that creates opportunities for students to demonstrate competencies in all the previously mentioned spheres.

According to Leinster (2002:13), who researched medical education in England, the use of primarily traditional assessment methods of examinations and tests "encouraged a superficial learning style that promoted short-term recall but little understanding of the subject". The students understood learning to mean memorisation and rote learning even though the lecturers may have had other expectations. The most important skill that students acquired in situations like these is recall of factual knowledge which mostly

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led to a surface knowledge and understanding of the discipline, instead of crucial skills that are needed to enable students to apply their knowledge and understanding to deal with the challenges they might face in the world of work and beyond. Leinster (2002:14-15) argues that to develop competence in medical education, for example, apart from the required knowledge, emphasis is also needed in skills like clinical and communication skills, the ability to assimilate, evaluate and use information, while internalising and displaying attitudes that will sustain constructive interaction with all stakeholders including patients, as well as the ability to adhere to the ethical basis of health care. If these aspects are not all addressed through integrated learning, medical students would not develop the necessary competence to deal with expectations and challenges that the profession will produce.

Research by Baartman *et al*. (2007) indicates that learning is significantly influenced by the nature of the assessment – students tend to focus their learning on what they know/think will be assessed. If higher education institutions are therefore serious about fulfilling their mission statement of contributing to society through providing the needed intellectual and human capital, then assessment practices should be constructively aligned with instruction and learning (Biggs 1996). However, Eraut (2004:804) warns that "treating [required competences] as separate bundles of knowledge and skills for assessment purposes, fails to recognise that complex professional actions require more than several different areas of knowledge and skills. They all have to be integrated together in larger, more complex chunks of behaviour." In the following section, I will unpack competence assessment and show how it manifests in national policy.

COMPETENCE-BASED ASSESSMENT

Competence-based assessment first emerged with the promulgation of competence legislation for teacher certification in the United States in the 1970s and 1980s (Fraser, Killen and Nieman 2005:247). Later, competency-based assessment was introduced in the United Kingdom in vocational training (Thilakaratne and Kvan 2006:315). Before turning to describe how, in the South African context, competence-based assessment is given priority as the form of assessment for addressing the problems already identified, I shall start by describing how competence is defined in the literature. This is important, because the way competence is understood may influence the assessment process which is or ought to be closely related to the learning outcomes (Lizzio and Wilson 2004).

Baartman *et al*. (2007:115-116) indicate that two aspects seem to be common in most definitions of competence. Firstly, competence is defined in terms of the

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integration or performance of specific combinations of knowledge, skills and attitudes that will provide evidence of the required capability. Secondly, it is defined in terms of requirements linked to a specific profession or job situation. For these researchers the definition by Eraut *et al*. (1998, quoted in Baartman *et al*. 2007:116) captures both of these aspects when they describe competence as "competent professional behaviour within a range of relevant job situations and the knowledge, skills and attitudes it requires". What also emerges in literature is that in defining competence some scholars attach more emphasis and importance to Mode 1 knowledge, while others prioritise Mode 2 knowledge (explained earlier in the chapter). In attempting to explain this trend, Thilakaratne and Kvan (2006:318-319) suggest that the world of work is more interested in performance, while actual knowledge is valued more in academe (see earlier discussion).

According to SAQA (2000:16) the word 'competence' in an outcomes-based education system, as is in place in South Africa, is too narrow, because not enough emphasis is placed on "understanding or the moral issues surrounding the action". SAQA ascribes the scepticism and non-acceptance of the notion of assessment based on 'competence' to its behaviourist underpinnings and the fact that critical thought about action or performance in a particular context is too limited. There was, however, further development in and acceptance of the idea of assessing competence. Fraser *et al*. (2005:247), quoting Eltis (1997:130), describe these developments as follows:

> The traditional approach has been developed to become a 'new' more holistic – or integrated – approach that involves assessing a combination of attributes (knowledge, capabilities, skills and attitudes) and the performance tasks (that can be broadly defined and include professional judgement) at an appropriate level or standard, in a particular type of situation, usually practice.

It is in this context that SAQA (2000:17) proposes a broadening of the concept 'competence' to embrace the notion of applied competence. SAQA regards assessment as the process through which the applied competence of a student is assessed (SAQA 2005:3). According to the 'Norms and Standards for Educators' (RSA 2000) applied competence is the overarching term for three interconnected kinds of competence which should be used to guide qualifications and the design of courses/modules as well as the eventual assessment process. This competence is regarded as the ability to put the learning outcomes that have been developed through a learning programme into practice in the relevant context. Qualified students, therefore, must be able to understand what they have learnt and also do something useful with it in a real-world context. The notion of applied competence that becomes central in the

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assessment process suggests a broadening of the behaviourist notions of knowledge to include three dimensions of competence that are all necessary for the meaningful accomplishment of any task: (1) practical competence, (2) foundational competence and (3) reflexive competence. *Practical competence* is the demonstrated ability, in an authentic context, to perform a set of tasks – to do a particular thing, to consider a range of options/possibilities and make decisions about practice. It is grounded in *foundational competence,* which is the demonstrated understanding of the knowledge and thinking that underpins the action taken. This is integrated through *reflexive competence*, in which a student demonstrates the ability to integrate or connect performances and decision making with understanding and with an ability to adapt to change and unforeseen circumstances and to explain the reasons behind these adaptations (Rhodes University 2004:10).

Assessing applied competence thus requires not only a focus on one of these, but should be integrated into every demonstration of competence. However, this is where a major challenge for higher education institutions lies. The question arises: What should the nature of the assessment of applied competence be in order to ensure an assessment process that is characterised by practicability and authenticity (SAQA 2005:1), that will provide fair and transparent assessment moments, generate reliable evidence about the development level of the students that are measured against criteria that is aligned with all necessary competences and that will produce information from which valid inferences can be made on which feed*back*, feed*forward* and feed*out* can be based?

INTEGRATED ASSESSMENT AND ITS IMPLICATIONS FOR HIGHER EDUCATION

From a policy perspective, qualifications and related programmes based on the learning outcomes ought to be designed in such a way that the necessary opportunities are created for students to acquire applied competence and furthermore, that it provides a basis for further learning. As one of the enabling mechanisms but also the assessment method of choice for government, integrated assessment is premised as the tool higher education institutions in South Africa should use to engage and deal with the complexities of the above-mentioned assessment process. The insistence on assessing applied competence stems from the realisation that in most cases assessment focuses primarily on foundational competence, to some degree on practical competence and most of the times not on reflexive competence.

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A further question that needs to be answered is: What are the enabling mechanism(s) that should be put in place in higher education to ensure that the grand ideals embedded in integrated assessment are realised so that students will become life-long learners, self-regulated citizens and so that they will be thoroughly prepared for their profession and the challenges of life? In the last section of this chapter I shall first briefly highlight a few issues I regard as fundamental if integrated assessment in South African higher education is to be realised. I shall then conclude with the final proposition that despite perceived tensions, it might be possible to work toward a common goal of better and more integrated student learning assessment practices.

CRITICAL ISSUES IN THE WAY OF IMPLEMENTING INTEGRATED ASSESSMENT

A review of all the peer-reviewed research articles that appeared from 2004 to 2008 in the *South African Journal of Higher Education,* the only dedicated higher education journal in South Africa, shows that only two articles (Fraser *et al*. 2005; Friedrich-Nel *et al*. 2005) appeared that dealt specifically with the issues of 'competence' and/or 'integrated/authentic' assessment. A number of articles reported on aspects of alternative assessment practices as academics started to engage with outcomes-based assessment. These can be broadly categorised in three groups. The first group (four articles) focused on the engagement of the lecturer with outcomes-based education assessment, e.g. processes and challenges of constructing a formative OBE assessment tool which included issues such as constructive feedback and addressing fairness (Thomen and Barnes 2005); using continuous assessment as a tool in curriculum development (Nair and Pillay 2004); assessment methods that will be feasible in institutions for distance education (Bohlmann and Fletcher 2008); how formal professional development can refine lecturers' assessment practices (Sayigh 2006) and an argument for a repositioning of assessment in the teaching of Geography in higher education institutions (Beets 2007). The second group (two articles) focused on aspects that deal with the student, e.g. developing an assessment model that targets student learning approaches aimed at enhancing (statistical) reasoning, thinking and literacy (Kasonga and Corbett 2008) and assessment methods that have the potential to bring greater learning (Lumina 2005). The third group (two articles) reported on research dealing with the use of portfolio assessment as an assessment strategy – educational beliefs of students about this type of assessment and how it can support them in taking greater responsibility for their own learning (Tisani 2006), as well as the impact of computer-aided assessment technology in higher education (Tsibalo 2007).

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Taking into account the number and nature of research outputs in this regard and the determination with which SAQA made policy pronouncements regarding the 'new' emphasis on integrated assessment, it is clear that higher education researchers have not embraced this specific change in assessment practice. This indicates a serious policy/practice divide that exists despite insights from literature (Bryan and Clegg 2006; Gibbs 2006; Gardner 2006; Dreyer 2008) indicating that alternative assessment practices may have more significant gains for both teaching and learning. Some ways of knowing and ways of doing that may alleviate this inertia are put forward in the rest of this section. Moving towards the practice of integrated assessment will to a large extent depend on how these factors are dealt with.

Contemporary literature on assessment, teaching and learning indicates convincingly that "assessment and learning are inextricably intertwined" (Dreyer 2008:v) and that there is a "close relationship between assessment and pedagogy" (James 2006:47). However, many lecturers still regard assessment as an additional teaching responsibility that takes place after completion of the learning programme. What they fail to realise is that assessment does not only inform the both lecturer and the students about their achievements, but also creates the important and necessary reciprocal interaction between teaching and learning that opens up opportunities and possibilities to ensure the best possible pedagogy and learning. According to Mercer (2002:152) "the quality of education cannot be explained in terms of 'learning' or 'teaching' as separate processes, but rather in terms of the interactive process of 'teaching-and-learning'". Quality teaching and learning should therefore be seen as embedded in and synchronised by the valid interpretations made on the evidence gained from different forms of assessment.

While recognising that the distinction between summative and formative assessment is blurred (Taras 2005:468) since all formative assessment is based on a summative judgement, assessment in higher education is still to a large extent dominated by summative assessment practices. These end-of-learning-programme assessments are usually high-stake activities and designed to sum up achievement as a grade or mark on which promotion or certification is based. From these activities only marks are generated, which do not improve learning or teaching, but lead mostly to *feedout* (certification or promotion to the next level). The situation is aggravated by the modularisation of courses in which marks/grades obtained through in-module/course assessments that were intentionally designed to have a formative purpose (part of continuous assessment), but are eventually only used summatively to contribute to a mark on which a final competence judgment is based at the end of the study

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unit. In this sense, assessment has more to do with accountability and quality control, "almost exclusively as an act of measurement that occurs after learning has been completed, not as a fundamental part of teaching and learning itself" (Bryan and Clegg 2006:xviii). Although strong arguments have been developed for the prominent place of assessment of learning in higher education, the reality is that this dominant discourse constructs pedagogical practices within and beyond courses that do not address the essence of higher education, namely to support students in developing the acquired applied competence they themselves and the world at large needs.

Instead of continuing with assessment *of* learning as the dominant evaluative process in South African higher education, equal and greater emphasis should be placed on supporting students through assessment *for* learning to take ownership of their own learning and "to prepare them for the rest of their lives" (Boud and Falchikov 2007:3). However, this does not suggest that integrated assessment is automatically formative in nature. Assessment of learning, which is in many cases pen-and-paper-based assessment, is mainly applicable to the assessment of the knowledge (foundational competence) component of learning. This type of assessment or 'testing' is generally regarded as formal. Assessment of learning on the other hand also implies informal assessment activities which use a variety of assessment activities aimed at improving learning and teaching (Black *et al*. 2003:90). It is this range of assessment opportunities that allows lecturers to create situations in which students can demonstrate their ability to integrate their acquired foundational, practical and reflexive competence in different contexts.

The rise of the knowledge economy necessitates assessment that can provide *feedback* to students and lecturers about the quality of achievement in terms of foundational, practical and reflexive competence. But feedback *per se* is not without problems, nor is it a guarantee that integrated learning will occur. Bell (2005:129) indicates that feedback is more effective in improving learning outcomes when it is about the essence constituting the competences and not about superficial aspects. This is realised when the feedback is linked to setting outcomes, when it recognises and uses the student's strengths and weaknesses in doing the task, rather than being linked to the self in the form of praise. However, Black *et al*. (2003:122) argue that feedback can only fully serve learning if it involves both the *evoking* of evidence and a response to that evidence by *using* it in some way to improve learning. So it is in what is called *feedforward* that lecturers or supportive others can provide further steps to help the student to close the gap between what they know and can do (actual level) and what is required in terms of the learning outcomes (desired level). As the processes of feedback and feedforward

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create opportunities to focus on student strengths and weaknesses in terms of the listed competencies, they also allow space to show how they are integrated in pursuance of applied competence. Using assessment in these ways to guide the next step(s) in a continuous process of reaching increasingly higher levels of demonstrating applied competence should be part of the prevailing pedagogy and should not be experienced as an unnecessary requirement.

Developing applied competence, which is ideally assessed by integrated assessment as already explained, is closely linked not only to a specific disciplinary or interdisciplinary knowledge and understanding, but also to possible application situations in the world of work or beyond. In order to identify the assessment criteria against which the knowledge or performance of the student will be assessed a close relationship between the academic and the reality out there is needed. This creates a tension: are the programme outcomes designed based solely on the needs out there or are they also informed by what research is indicating? However, the success of addressing student needs as well as ensuring the quality of higher education programmes is embedded in maintaining a responsible balance between the priorities of the worlds of academe and the workplace. Using an example from assessing competence in teacher education, Fraser *et al*. (2005:249) state that in developing assessment criteria "it is necessary to consider both their performance in action (e.g. the teacher's ability to explain conceptual knowledge) and the quality of the products they produce to support their teaching (e.g. a learning programme developed by the teacher)". they also argue that these assessment criteria should not only be "attainable, observable and measurable", but that they should "arise directly from a consideration of authentic performance competencies".

On a programme level, the design of the outcomes is fundamental in ensuring that not only Mode 1 knowledge is eventually produced, but that the students will be exposed to the development of Mode 2 knowledge as well. Programmes at higher education institutions tend to consist of a number of different modules that have their own specific disciplinary knowledge and skills. So, for example, the Postgraduate Certificate in Education (PGCE) programme consists of a number of modules that are embedded in education-related disciplines like Curriculum Studies, Philosophy of Education, Educational Psychology, Didactics of Geography and English Medium and Information and Communications Technology. Each of these discipline-based modules collaboratively makes a contribution to the development of the acquired professional competence to be certified as a teacher. This creates a significant challenge for integrated learning and assessment. Processes need to be put in place to avoid

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fragmentation due to different lecturers focusing only on the discipline-specific learning outcomes. It is important to align module outcomes with programme outcomes so that students can experience synergy in the programme as a whole and feel that their needs are addressed as they prepare for the world beyond higher education. In this way the expectations of both lecturers and students can be accommodated (Birenbaum *et al.* 2006:65). Thus curriculum alignment is necessary, because "integrated assessment incorporates not only foundational, practical and reflexive competence but also looks to bringing overall purpose of the qualification under scrutiny – to what extent have the parts produced the whole" (SAQA 2000:22).

Changing (assessment) practices depend to a large extent on the willingness and understanding of the different role-players in agreement with Fullan's (1993:vii) argument that "[i]t is only by raising our consciousness and insights about the totality of educational change that we can do something about it". Developing a compartmentalised understanding of what constitutes applied competence or how integrated assessment should be conducted will in itself not lead to an internalised understanding of the philosophy behind the change in points of departure of the proposed teaching, learning and assessment approaches. Understanding the 'bigger picture' that contextualises the 'atomistic' pedagogical changes is a critical necessity for both academics and students. Assessing applied competence through integrated assessment is but a small dimension of the changing educational landscape – conceptually and in reality. To inculcate fairness and transparency in both the teaching and assessment processes, it remains important for students to understand how all module outcomes contribute together to guide the development of applied competence and how integrated assessment will create an opportunity for them to demonstrate their applied competence at its best. At the same time, if integrated assessment is to serve its purpose(s), lecturers should have a deep understanding of the characteristics of good assessment practice, such as validity, reliability and fairness (Killen 2005:102) and they should be able to use and apply it.

CONCLUSION

The educational landscape in South Africa has changed significantly over the last two decades. Higher education institutions, through their own processes of questioning their purpose and role, are continually redefining the epistemological relevance of their existence. Currently the pendulum is hovering above what can be classified as Mode 2 knowledge. At the same time, governments cannot ignore these developments and need to find ways of establishing 'enabling' structures that will reflect these changes.

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However, even more important for them is the need to design control measures that will put them in a position to manage the education system and demand performance and accountability.

This 'sensitive' relationship between higher education, driven by scholarly and scientific integrity, and the state, driven by political imperatives, is consequently always tainted with tension. This tension can emanate on both sides from factors that have been mentioned in this chapter. But despite these differences, both higher education with its increasing focus on Mode 2 knowledge and SAQA through its policy requirement of using integrated assessment to assess applied competence are in reality working towards a common goal. In the end both processes should have one common outcome – enhancing quality assessment to ensure better teaching and learning that will contribute to a sustainable world. It is against this background that higher educationists have identified the previously mentioned problem areas for further reflection and research. Put differently: if quality teaching, learning and assessment are the priority of higher education and government, then critical engagement, as well as cooperation of both sectors in emerging educational trends and challenges, is a much-needed responsibility.

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