

## IAEA Conference 2002

### **Using Assessment for Quality Assurance:** *Systemic indicators in the context of education and training in South Africa*

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#### **1. THE CONTEXT**

South Africa has undergone a rapid systems change in education and training across both schooling and skills training contexts. Three major features of transformation were:

- the shift to outcomes-based education and training;
- the development of a National Qualifications Framework (NQF)<sup>1</sup>, aiming to bring all learning under a single framework of outcomes-based standards and qualifications; and
- the establishment of new regulatory bodies to oversee and implement the quality assurance of new education and training outcomes, standards and qualifications.

This paper focuses on the role of assessment as a key indicator of quality in education and training. Identification of the main players in the quality assurance environment follows.

The system is founded on a concept of cascading levels of implementation. At the first level is the overseeing body, responsible for the development and implementation of the NQF. This is the South African Qualifications Authority (SAQA), a statutory body appointed by the Minister of Education in consultation with the Minister of Labour.

At the second level quality assurance is structured into two sectors:

- Economic sectors, responsible for professional and workplace education and training. Identified sectors (e.g. mining, agriculture, tourism, construction etc) are monitored by Sector Education and Training Authorities (SETAs). Each of the 28 SETAs has a quality assurance function in relation to training within its ambit.
- Education sector, responsible for general, further and higher education. There are two 'band' education and training quality assurance bodies in this sector, one responsible for general and further education in (schools, adult basic education and technical colleges), and one responsible for higher education (universities and technikons).

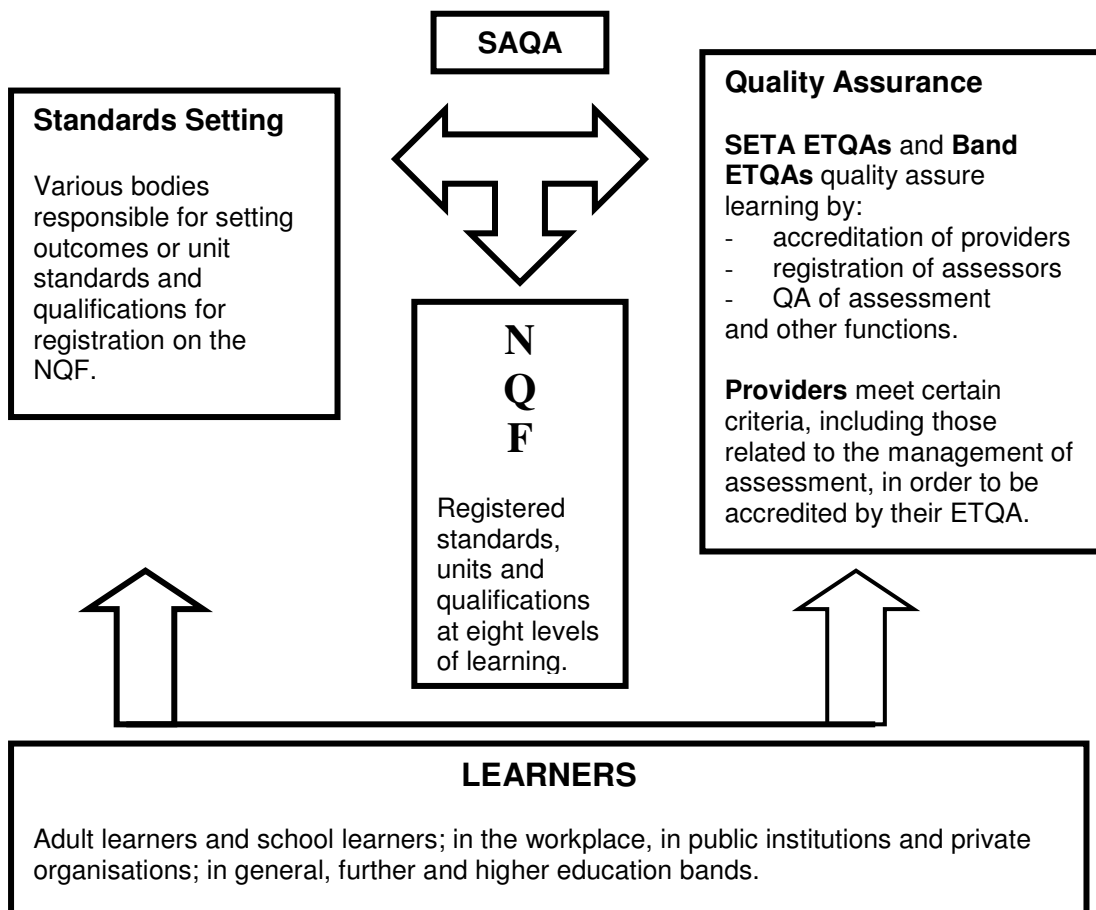
All these bodies are responsible for putting systems into place to monitor and check provision in their sectors.

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<sup>1</sup> See Appendix 1 for an overview of the NQF structure and principles.

At the third level are the providers, those responsible for the delivery of education and training. These range from public sector providers in schooling and higher education, to private sector providers in a range of areas, and commercial workplace training agencies.

### The Quality Assurance Environment



## 2. THE CONCEPT OF QUALITY ASSURANCE

### What is Quality Assurance?

As is evident from this brief overview, the concept of quality assurance is a cornerstone of the NQF paradigm. Quality assurance is the system that is put in place to make sure that the education and training received by learners is of good quality: that is, it is effective, relevant and consistent across different delivery sites.

But what are the components and parameters of such a system? One of the interesting dynamics of South Africa's transformation processes in education and training has been the 'elasticity' of terminology, whereby different definitions and understandings of parameters have come into being in different sectors. (Indeed, we might say that contestation around terminology has reflected specific agendas on the part of different players.) The term

'Quality Assurance' has not been exempt from this dynamic. On a continuum of views, at one end a quality assurance system might simply involve sampling selected aspects of provision (e.g. courses or assessment practices), while at the other end a quality assurance system involves 'total quality management', checking on every aspect of a provider's delivery of education and training.

It is the latter view that dominates policy documents. SAQA defines 'the quality cycle' as

'... all the critical points in the quality process, namely:

- **The product or outcome:** awards, achievement of standards or qualifications; accreditation.
- **The inputs:** learning provision; programmes; learning and learner resources; life and experiential learning.
- **The process:** the quality of the learning and assessment interactions; the quality of the monitoring and auditing interactions.<sup>2</sup>

In addition, SAQA's guidelines for the accreditation of providers include such categories as financial, administrative and physical resources; policies and practices for staffing; learner services etc.

Quality assurance bodies are currently trying to translate this view into practice through their criteria and processes for accrediting providers. As the system develops, two kinds of concerns are emerging.

- First, that the system becomes a paper chase in that quality assurance bodies will not have the resources to check up on all the designated components of a provider.
- Second, that large and well-established providers are the ones which are able to put systems in place to meet the criteria for accreditation, while struggling, under-resourced providers, often the very ones serving the most impoverished groupings of learners, will not be able to do so.

Whatever form and shape the system takes once it is fully functioning, one thing is clear. In the end, quality assurance must involve checking whether the education and training provided enables learners to meet the national standards registered on the NQF. Assessment thus plays a crucial role in the system. Quality assurance bodies need to look at how learners and their learning achievements are assessed and certificated, and to this we now turn.

### 3. QUALITY ASSURING ASSESSMENT PRACTICES

Acceptable '... policies and practices for the management of assessment'<sup>3</sup> is one of SAQA's stated criteria for the accreditation of a provider by a SETA ETQA or band ETQA. Different ETQAs have unpacked this in different ways in setting up criteria for accrediting their providers. Essentially there are three possible components of quality assurance of assessment, and different

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<sup>2</sup> SAQA. Criteria and Guidelines for ETQAs. Policy document. October 2001. Page 15.

<sup>3</sup> SAQA. Criteria and Guidelines for Providers. Policy document. October 2000. Page 21.

bodies tend to focus on these to different degrees, depending on their provider contexts.

The three components are:

- A provider's assessment **system**
- The learners' **results**
- The use of **registered assessors**.

### **3.1 Quality Assuring Assessment Systems**

In most accreditation criteria the following range of assessment system categories<sup>4</sup> appear in one form or another.

<b>ASSESSMENT SYSTEM CATEGORIES</b>	
<b>1.</b>	<b>Assessment Principles and Policies</b>
<b>2.</b>	<b>Assessment Practices:</b> <ul style="list-style-type: none"><li>• Design of instruments/ processes</li><li>• Implementation of assessment events/ processes</li><li>• Scoring/ resulting</li></ul>
<b>3.</b>	<b>Moderation Cycle</b>
<b>4.</b>	<b>Use of Registered Assessors</b>
<b>5.</b>	<b>Communication with clients and learners</b>
<b>6.</b>	<b>Communication and liaison with QA body</b>
<b>7.</b>	<b>Record Keeping and Reporting</b>
<b>8.</b>	<b>Evaluation, review and adaptation of assessment systems, instruments and procedures</b>

Quality assurance bodies have to address a number of questions in translating quality assurance of assessment into practice. How do features of an assessment system become indicators against which a provider's performance can be judged? Would such indicators apply equally across different kinds education and training that one provider might offer? How is compliance against the indicators to be checked?

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<sup>4</sup> This list is based on work done by the writer for three different quality assurance bodies, namely the Education, Training & Development Practices SETA, the Local Government, Water and Related Services SETA, and the South African Certification Council (SAFCERT, now Umalusi).

It is obvious that there will be different dynamics in different sectors. Sectors such as schooling and Higher Education (HE) have pre-existing quality assurance systems, the quality of which has been subject to much debate, which need to be integrated into NQF-aligned approaches – again, the degree to which this needs to happen is highly contested. Old industry training boards which have become SETA ETQAs are trying to move from an old-fashioned ‘imitation’ model, whereby workplace assessment depended on an immediate supervisor with little or no educational and assessment expertise, to a far more explicit and standardised assessment approach. In some areas entirely new standards and qualifications are being developed, and in others there has been little regulation of provision – these quality assurance bodies are often starting from scratch. There are also financial variables, and thus resource variables, across ETQAS, depending on which employer sector is paying a levy and who the learners are. SETA ETQAs or band ETQAs have come up with different approaches, ranging from minimal checking of documentary evidence submitted to an ETQA, to site visits conducted by appointed verifiers, to peer group review. The degree to which some of these planned approaches are feasible and implementable will only become apparent once a cycle of quality assurance has taken place.

Below is a generic example, based on the categories given above, of an ideal set of criteria and evidence requirements<sup>5</sup>:

### **1. Assessment Principles and Policies**

- The organization has a written assessment policy, including an appeals procedure.
- Both assessment systems and practices address the assessment of theoretical and workplace/ practical components of the learning programme.
- The assessment cycle includes some opportunities for formative assessment and feedback to learners.

#### *Evidence Examples:*

- Statement of Assessment Policy
- Any descriptive documentation/ reports on assessment approach

### **2. Assessment Practices**

- *Assessment Design*
  - Assessment design addresses both theoretical and workplace/ practical components as appropriate.

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<sup>5</sup> This example is collated and adapted from work done by the writer for three different quality assurance bodies, namely the Education, Training & Development Practices SETA, the Local Government, Water and Related Services SETA, and the South African Certification Council (SAFCERT, now Umalusi).

- The design of the instrument or process (test, written assignment, portfolio, practical demonstration and tasks, observation, interviews, combination of tools etc) is appropriate: that is, it meets the requirements as specified in standards or qualifications, is at the right level of competence, and suits the learning objectives and learner context.
- Instructions to learners are clear and unambiguous, and mediated (e.g. translation) to learners if appropriate. Evidence requirements are clearly set out.
- Time frame for gathering and presentation of evidence (whether in one sitting or over time) is sufficient.
- There is a relationship between course methodology and content and the assessment.
- Scoring format and design (balance of assessment criteria, issues of weighting, format of judgements etc) is done concurrently with instrument/ process design, and is compatible with the instrument. Explicit instructions for allocating a result (establishing competence, for marking, recording on observation sheets, making a judgement, evaluating a product, compiling scores etc) are given.
- *Assessment Implementation*
  - The application of the instrument or process (practical demonstration, exam sittings, interviews, observation sessions, portfolio evaluations etc) is carried out consistently across different sets of learners.
  - Learners should be informed of the purposes for which assessment information is being collected, and be familiar with the criteria on which their performance will be judged.
  - The assessment environment should be conducive to fair assessment (it is physically acceptable; security measures are in place where appropriate).
  - Appropriate resources are provided (e.g. technical equipment; resources specified by assessment requirements.)
  - Procedures should be in place to record and to deal with any irregularities that may occur during assessment.
  - Procedures should be in place for learners with special needs.
- *Scoring/ Resulting*
  - Procedures for scoring/ resulting are built into the design of the assessment instrument or process.
  - All assessors work to common and explicit grading instructions. Guidelines on indicators such as the following are provided:
    - Validity: what kind of evidence is acceptable?
    - Authenticity: what indicators confirm or refute that the evidence is 'real', and is the learner's own work?
    - Sufficiency: is there a sufficient range of kinds of evidence to ensure that criteria are met?
    - Currency: is the content of the evidence up to date and appropriate for the given context?

- Assessors use appropriate and standardized documentation (mark memos, assessment grids, observation checklists etc).
- A system for recognizing and dealing with irregularities is in place.
- The recording of results is done accurately, and there are checks in place for this.
- Results are processed in an appropriate time frame.

*Evidence Examples*

- Documentary evidence describing procedures and roles for design, implementation or scoring.
- Actual examples of assessment instruments or process descriptions, or scoring tools.
- Site visits to observe processes during any of these stages.

### **3. Moderation Cycle**

- Moderation applies to both theoretical and workplace/ practical elements of assessment.
- The design of the assessment instrument or process and its scoring system must be checked by at least one other person with the appropriate expertise, and any feedback incorporated into final design.
- Scoring/ resulting procedures must be moderated. This will depend on the nature of the programme and its assessment. Where assessment is based on observation of performance by an individual assessor, a moderator will attend a particular assessor's sessions to compare judgements. Where assessment is based on a 'marking event' bringing together a team of assessors and sub-assessors, moderator(s) must be present to check that there is consistency across individual judgements, and that consensus agreements are applied. Sample moderation of other forms of scoring is also required.
- Moderators will produce moderation reports, noting problem areas and commenting on the consistency (in relation to quality and efficiency) of the assessment cycle over time.

**Evidence Examples**

- Documentary evidence describing procedures and roles for moderation.
- Site visits to observe moderation processes.

### **4. Use of registered assessors**

- Assessors and moderators should be registered assessors. Until such time as the system is fully operational, those carrying out assessment and moderation should:

- have expertise in a specified field or sub-field;
- have some training or proven experience in assessment.
- Plans for the training and appointment of registered assessors should be in place.

**Evidence Examples**

- Data on registered assessors used by the provider
- Training plans

**5. Communication with Clients and Learners**

- Standards and qualifications to which the assessment procedures for a learning programme refer are clearly stated.
- Certification procedures are clearly communicated.
- Assessment requirements and procedures are clearly stated. This includes information about:
  - assessment instruments: type of evidence required, linkages to course.
  - scoring system: assessment criteria, judgement formats etc.
  - clear and explicit instructions for the gathering and presentation of evidence (e.g. for the compilation of portfolios).
- Time frames such as calendars and due dates are provided.
- Penalties for irregularities in gathering and presenting evidence are spelled out.
- The conditions and steps for appealing results are set out in accessible documentation.
- All costs/ fees are clearly indicated.

**Evidence Examples**

- Any communications with clients/ learners (appeals policies and procedures, fee schedules, calendars, brochures etc).

**6. Communication with the quality assurance body**

- There is a designated individual with responsibility for liaison with the ETQA.
- All required documentation (pre- and post assessment of learners, and submissions for the award of credits) is submitted to the ETQA.
- Any interventions (site visits, sampling of assessment etc) or agreements required by the ETQA are facilitated by the provider.

**Evidence Examples**

- Documentation submitted to the ETQA

## 7. Record Keeping and Reporting

- All assessment results for individual learners (including those that do not form part of the summative record) are securely recorded for a specified period.
- Data capture systems must be suitable for:
  - registering learners with the organisation;
  - resulting, and submitting learner results to the ETQA in the required format, so that these can be uploaded to SAQA;
  - undertaking the kinds of data analysis that might be required by the internal moderator or by the ETQA.

### Evidence Examples

- Statements of results
- Data analysis reports
- Site visits to view data capture and record keeping systems

## 8. Evaluation, review and adaptation

- Assessment systems, instruments and processes are evaluated and reviewed on a regular basis, in the light of feedback from:
  - the LGW SETA ETQA
  - assessors and moderators
  - clients
  - learners.

### Evidence Examples

- Feedback questionnaires to clients, learners.
- Assessor and moderator reports.
- Evaluation reports and action plans.

## 3.2 Quality Assuring Learners' Results

The accreditation cycle, which looks at a provider's assessment *system*, is only one side of the quality assurance of assessment coin. The other side is the checking of the quality of the *results* awarded to learner performance.

Providers submit their learner results to their quality assurance body, who will validate/ verify<sup>6</sup> these so that learners may be awarded certificates. Validation of submitted results means that the quality assuring body is satisfied that:

- the learner results submitted to it reflect genuine learner competence against the relevant standards at that level; and

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<sup>6</sup> At the time of writing the term is used differently by different bodies.

- the assessment that yielded these results has been valid, fair and reliable.

Validation consists of a set of procedures and steps using selected mechanisms, such as sampling of evidence or statistical analysis.

Quality assurance of assessment, then, relies on two possible monitoring points:

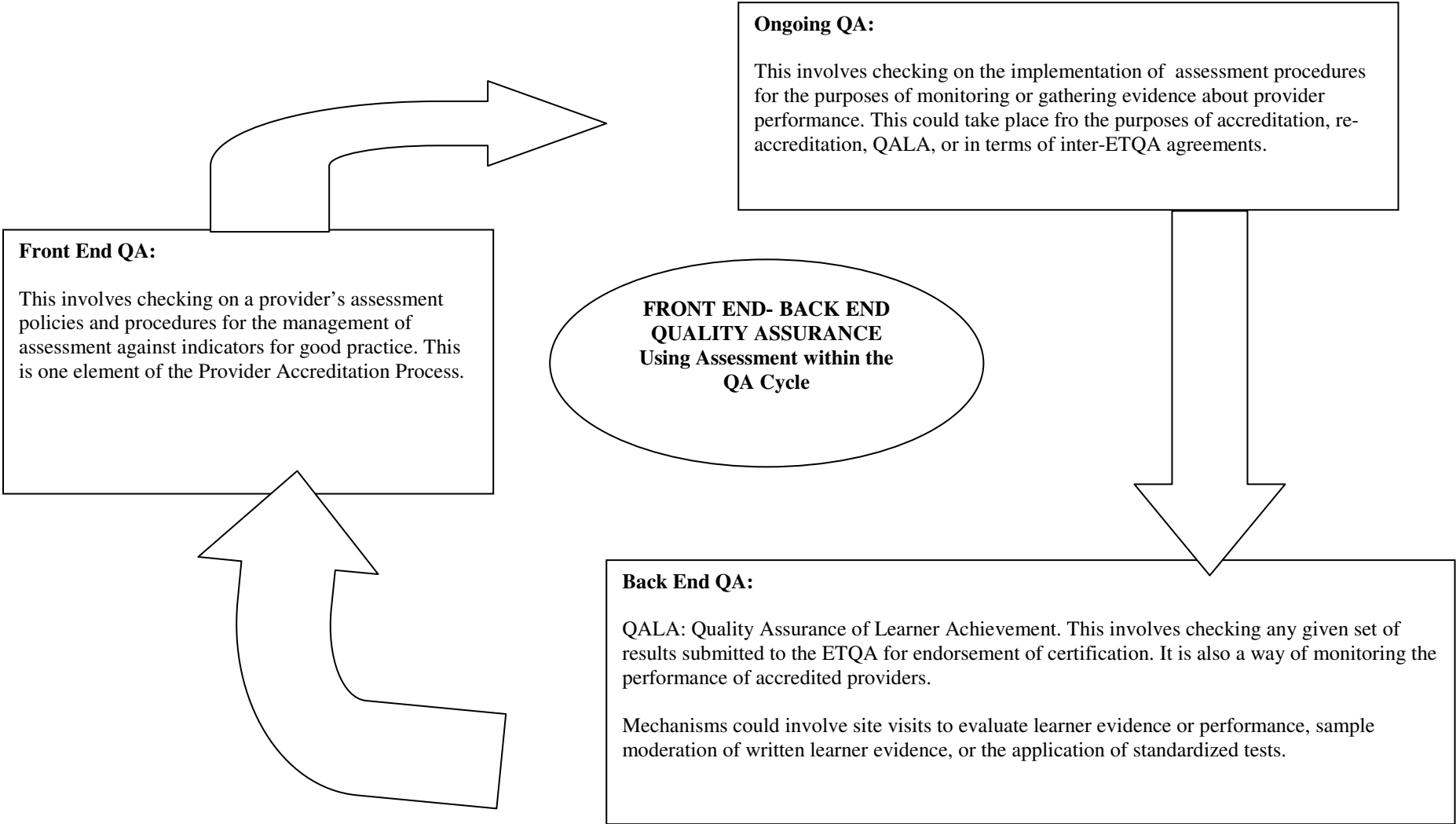
- A provider's assessment system can be checked before any results are ever submitted to the ETQA (as in the initial phases of accreditation of providers).
- The validity of a set of results can be checked through various mechanisms. This is called Quality Assurance of Learner Achievement (QALA)<sup>7</sup>.

These inter-related approaches can be described as 'front end' quality assurance processes, followed by a 'back end' quality assurance process focusing on learner results. They give the ETQA different focus points against which to gather evidence of good (or bad) practice assessment. The diagram below summarises this approach<sup>8</sup>.

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<sup>7</sup> The term has been used in writings for Umalusi.

<sup>8</sup> This diagram is based on work done by the writer for Umalusi and for the LGWS SETA.





### 3.3 The use of registered assessors

As we have seen, 'assessment' is one of the key terms in NQF-speak. We talk about an 'assessment-led' system and we talk about micro- and macro assessment strategies for the NQF. We agonise over the roles of formative and diagnostic, continuous and summative, internal and external assessment in all their guises in relation to outcomes-based approach to education and training. We remind practitioners of their responsibilities for assessing, and then worry about quality assurance systems. And we do all this because assessment is in fact a central tool in achieving some of the aims of the NQF, and because of the limited and limiting ways in which assessment was used in the past.

The role the assessor has thus become another key element in quality assurance. SAQA's direction has been to ensure that anyone who has a responsibility for assessing learners for the award of credit must have assessment expertise, formalised through a process of becoming a registered assessor. There is in fact a generic unit standard covering assessment in any context, from general, technical, workplace or professional education and training. This standard is entitled '*Plan and conduct assessment of learning outcomes*' and contains the following outcomes:

- *Plan and prepare for assessment*
- *Prepare candidates for assessment*
- *Conduct assessment and document evidence*
- *Evaluate evidence and make assessment judgements*
- *Provide feedback to relevant parties*
- *Review assessment*

In order to become a registered assessor, an educator or trainer must meet the requirements of this standard, and meet any other requirements set in place by their own constituent ETQA. Registered assessors are registered to assess specified standards and/ or qualifications in which she/he has proven competence.<sup>9</sup>

Most SETA ETQAs have made the use (or planning towards the training and use) of registered assessors an accreditation requirement. In the schooling sector it is likely that this unit standard will be incorporated into teacher training, and many qualified teachers have received in-service training against the assessor standard. The HE sector (in this case the universities rather than technikons) has however raised some objections to this requirement. At the time of writing this issue has not been resolved. A report evaluating SAQA and the implementation of the NQF produced the following recommendation:

*Registration as assessors should not be*

- Required of individuals employed by an accredited institution or accredited workplace provider and the requirement should be amended accordingly.<sup>10</sup>

<sup>9</sup> Summary of SAQA requirements as set out in SAQA, Criteria and Guidelines for the Registration of Assessors. Policy Document, October 2001. Page 6.

<sup>10</sup> Department of Education and Department of Labour. Report of the Study Team on the Implementation of the National Qualifications Framework. April 2002.

#### 4. CONCLUSION

South Africa has set up an ambitious programme for the transformation of education and training across all sectors and contexts, driven by principles relating to redress of past inequalities and by identified needs regarding skills development<sup>11</sup>. Implementation of some of the new features of the system is at an early stage, and must be viewed through a developmental lens. It is becoming apparent that some policies will have to be reviewed, and some accommodations for different sectors will have to be made.

This paper ends with a brief and personal selection of emerging trends:

- There is a growing recognition that quality assurance may have to be more selective in order to be efficient and affordable.
- While the initial debates around setting up the NQF focused on using 'outputs' (e.g. learner assessment results) as key indicators, the system appears to have shifted to a very detailed focus on inputs. While there are valid reasons for this (e.g. a proliferation of unstable providers), there are fears that this could seriously disadvantage providers such as NGO and community based organizations working in rural and under-developed areas.
- There are fears that the system may become overly bureaucratic, resulting in a 'paper chase' for technical compliance which does not foster the aims of the NQF.
- One of the aims of the NQF has been the integration of education and training. Industry argues that schooling and, to some extent, universities, do not prepare people for the workplace. We have inherited a legacy of strong differentiation between academic education, vocational training, and workplace training. While some portability and integration has been achieved through a new approach to standards and qualification development, control issues over these areas are forcing them apart rather than closer together. One illustration of this is the debate over the registration of assessors.
- An emerging trend is a recognition that a rigid 'one size fits all' approach is not appropriate, although interestingly different stakeholder have very different perceptions regarding how this is applied and 'whose size' is dominant. One example of this is in relation to current proposals for common assessment for adults and school children at NQF Level 1. The counter argument is that the purposes of school education and adult education are very different, and that therefore assessment systems need to be different.

There is undoubtedly a long way to go in the development of an affordable and realistic system of education and training in South Africa, in which the component parts talk to each other in constructive ways. Equally clear, however,

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<sup>11</sup> See Appendix 1 for an overview of the objectives and principles of the NQF.

is the fact that we have made great strides in understanding some key variables in improving the quality of education and training, and in developing systems for promoting these improvements. The central role allocated to assessment echoes an international recognition of the powerful effects that good assessment can have on the quality of a nation's education and training systems, and on the skills and productivity of its people.

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## APPENDIX 1: The National Qualifications Framework

<b>Structure of the National Qualifications Framework</b>
<p style="text-align: center;"><b>NQF LEVELS 5-8:</b> This is the <b>HIGHER EDUCATION</b> band of learning. Learners receive certificates, diplomas and degrees.</p>
<p style="text-align: center;"><b>NQF LEVELS 2-4 (FETC):</b></p> <p>This is the further education band of learning which leads to a <b>FURTHER EDUCATION and TRAINING CERTIFICATE (FETC)</b> at the end of Grade 12. Learners receive national certificates, including occupational and trade certificates.</p>
<p style="text-align: center;"><b>NQF LEVEL 1/ ABET LEVEL 4 (GETC):</b></p> <p>This marks the end of compulsory schooling with a <b>GENERAL EDUCATION AND TRAINING CERTIFICATE (GETC)</b> at the end of Grade 9. In adult education it is called ABET Level 4 as it marks the end of the pathways through adult basic education. Learners receive national certificates, including occupational and trade certificates.</p>
<p>The ABET levels below NQF Level 1/ GETC give learners benchmarks for progress through the Adult Basic Education system. The levels are roughly equivalent to schooling levels as follows:</p> <p>ABET Level 3: Grade 7 ABET Level 2: Grade 5 ABET Level 1: Grade 3</p>

### Objectives of National Qualifications Framework

From the SAQA Act, 1995 (Act No. 58 of 1995)

The vision towards which SAQA strives is:

“Reconstructed and re-developed education and training which reflects the objectives of the National Qualifications Framework (NQF), which are to:

- create an integrated national framework for learning achievements;
- facilitate access to, and mobility and progression within, education, training and career paths;
- enhance the quality of education and training;
- accelerate the redress of past unfair discrimination in education, training and employment opportunities; and thereby

- contribute to the full personal development of each learner and the social and economic development of the nation at large.”

### Principles of the NQF

From SAQA. Criteria and Guidelines for ETQAs. Policy Document. October 2001. page 12

Principles	Definition
Integration	... form part of a system of human resources development which provides for the establishment of a unifying approach to education and training
Relevance	... be and remain responsive to national development needs
Credibility	... have national and international value and acceptance
Coherence	... work within a consistent framework of principles and certification
Flexibility	... allow for multiple pathways to the same learning ends
Standards	... be expressed in terms of a nationally agreed framework and internationally acceptable outcomes
Legitimacy	... provide for the participation of all national stakeholders in the planning and co-ordination of the standards and qualifications
Access	... provide ease of entry to appropriate levels of education and training for all prospective learners in a manner which facilitates progression
Articulation	... provide for learners, on successful completion of accredited prerequisites, to move between components of delivery system
Progression	... ensure that the framework of qualifications permits individuals to move through the levels of national qualifications via different appropriate combinations of the components of the delivery system
Portability	... enable learners to transfer their credits or qualifications from learning institution and/ or employer to another
Recognition of Prior Learning	... through assessment, give credit to learning which has already been acquired in different ways, e.g. though life experience
Guidance of Learners	... provide for the counseling of learner by specially trained individuals who meet the nationally recognised standards for educators and trainers

## **APPENDIX 2: REFERENCES**

South African Qualifications Authority: *Criteria and Guidelines for ETQAs*. Policy Document October 2001.

South African Qualifications Authority: *Criteria and Guideline for Providers*. Policy Document. October 2001.

South African Qualifications Authority: *Criteria and Guidelines for the Assessment of NQF registered unit standards and qualifications*. Policy Document. October 2001.

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