The Quality Assurance of Certification processes – Discussion paper

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Scope

- The certification process only and quality assurance as it applies
- Quality assurance of TVET certification pays attention to optimising the consistency of application of standards used when assessments of technical and vocational learning are compared to the requirements of a qualification or certificate
- TVET is a broad process
  - technical education, vocational education and vocational training (as defined by earlier in this chapter);
  - on the job training, apprenticeship training;
  - formal and non formal learning arrangements
  - all modes of delivery including online, face to face, distance;
  - all types of settings such as schools, colleges, apprenticeship training centres, worksites and private enterprise;
  - all types of provider/regulator including public (e.g. government funded schools and training centres), private (e.g. companies, churches, NGOs and private colleges)
  - offerings at secondary and post secondary levels;
  - provision of initial training, continuing education and training and training for unemployed persons; and
  - training delivered at any length of frequency and time.

Discussion paper is written to raise issues

- Paper is in rough draft – being finalised by UNESCO – should be ready before Xmas
Trends in qualifications systems

- Expansion of certification
- Internationalisation
- Regional qualifications frameworks
- National qualifications frameworks
- Regional quality assurance frameworks
- International sectoral qualifications
- Learning outcomes
- Scope of learning recognised
- Remote certification
Major contextual influences

- Political, economic, social, cultural
- Financial
- Institutional
Forms of assessment

Objective response items
- Where candidates are required to provide a highly defined response, such as adding a line to a diagram, completing a number sequence, completing a statement.

Multiple-choice items
- A specific form of objective response item, where the candidates’ responses are constrained to a given list of alternatives, selecting the response which best completes a statement or answers a question.

Short answer items
- Where candidates have to provide succinct, specific responses to questions, but where the marking scheme allows some variation in those responses.

Extended response items
- Where candidates have to create a given amount of text and/or working, and which allow candidates to organise their responses and present material in an original way.

Coursework/controlled assessment and teacher assessment
- Where candidates produce written reports or complete structured activities that are typically marked by teachers and tutors who are also responsible for delivering the learning programmes in which the assessment is located.

Performance assessment
- Where performances in work tasks, or activities such as laboratory work are observed and scored/rated by a teacher or qualified assessor. Assessment in work contexts typically is guided by occupational standards.

Evidence accumulation
- Where candidates are responsible (with appropriate levels of support) for gathering evidence of performance in a range of activities and for assembling this evidence into a portfolio/record of evidence. This is then scored/rated by teachers or qualified assessors and subject to external moderation/verification.
Management models for the assessments

**Banked items**
- This can be characterised as a ‘data accumulation’ model. Items are designed, validated and pretested, the pretest data and the item then can be placed in an active ‘item bank’.

**Awarding-based assessments**
- This can be characterised as a ‘review and award’ model. Items typically are not subjected to pre-testing, and the total score in an examination or examination component is scrutinised in awarding processes, principally designed to align the standard in any session with the standard applied in earlier sessions.

**Performance-based assessments**
- This can be characterised as an ‘evaluation’ model. Assessment is based on simulated or naturally-occurring activities which allow assessment against stated standards or assessment objectives.

**Note**
- Individual qualifications – for engineers, for care assistants, etc – can use a mixture of these different types of assessment. A specific qualification typically includes rules or regulations on how the different assessment ‘components’ can be used and combined, in order to trigger successful completion. The combination of outcomes from the component assessments thus also carries implications for QA.
Discipline in assessment

Discipline refers to the propensity of assessors and candidates to act in accordance with the spirit and intention of the assessment – to be self-motivated in respect of compliance with the aims and procedures involved in a specific assessment.

- A high discipline setting is characterized by assessors who see themselves as guardians of entry to the specific profession. They actively monitor their own assessment for errors of commission or omission; seek feedback, advice and professional development; and are alert to any failings in the assessments of others. They are highly intolerant of any assessor who breaches regulations or who works against the spirit of the qualification. It is characterized by candidates who respect the need for formal assessment and understand its role; who strive to meet or exceed the standard required; and who do not seek to subvert the formal requirements of the assessment by cheating, substitution of material or identity, or seek undue support.

- A low discipline setting is characterized by assessors who do not identify with the qualification and who do not see themselves as protecting the standards implied in or embodied in the assessments. They are not concerned about breaching the letter or spirit of regulations; and they are not alert to the issue of other assessors breaching the assessment regulations, and tolerate such breaches. They are more driven by ‘local’ incentives and drivers than the values associated with the function of the qualification in society and the economy. It is characterized by candidates who find assessment irrelevant and burdensome; who see ‘minimum standard’ and instrumentalism in the learning as the means to qualification.
Quality assurance and assessment

QA probes different aspects of assessment and collects distinctive data on these different aspects:

Detection of features of the assessment itself (design, format etc.) which result in bias, poor discrimination, lack of validity, etc. The focus of QA can be the performance of single administration of an assessment, and/or accumulation of data over time regarding the performance of different groups or classes of candidate.

Detection of errors and other problems in the administration of the assessment including deliberate maladministration. The focus of QA is on determining whether administration protocols have been followed, including whether the operation of on-line assessment has corresponded to protocols.

Detection of lack of dependability caused by bias, inefficiency, leniency/harshness, or erratic assessment by the person making judgements. The focus of QA is on gathering data and information from all stages and aspects of the assessment in order to establish overall assessment accuracy, fairness and dependability.
QA and specific assessment methods

**Closed response paper or onscreen tests, questions put to candidates whilst undertaking work activities**

Closed response items can be subject to pre-testing, can be treated as secure items and reused; scoring is consistent. On screen tests can include adaptive testing and can be based on pre-tested, banked items - can possess high validity regarding cognitive components such as recall of knowledge and analytic thinking, but can also include skills of extraction of information, observation, classification/discrimination, graphical interpretation.

**Open response paper or onscreen tests, questions put to candidates whilst undertaking work activities**

Can possess high validity regarding analysis and synthesis of material, can include the assets listed in closed response, plus the facility to assess facility in language. Can be marked-scored by trained and monitored markers.

**Simulations – structured practical assessment, including on-screen simulations**

Can possess high validity in respect of authentic work performance. Some closure and control of features of the assessment can be cognitively engaging to the extent that candidates forget that the activity is a simulation. Due to control of key features and dimensions, marking and scoring can be constrained, increasing reliability. Can be marked-scored by trained assessors – reasonable reliability.

**Observation of natural performance**

Can possess high validity since it is embedded in real work processes, although the verbal basis of standards used as metrics in assessment are a threat to reliability. Assessors constrained essentially by training, and by use of highly generic control documentation - under-determined reliability, labour-intensive, expensive QA methods, such as pairing up assessors in order to reach consensus judgements; submission of elaborate reports; direct scrutiny of assessors either whilst assessing or de-briefing from assessment.
Level of assessment and certification

Assessment and certification needs to take account of ensuring that the whole system:

- Is clearly fit for purpose: the construct base of the qualification and its link to its use, it has equity of access, does not discriminate between uses on any grounds other than performance, acknowledges the various learning modalities (e.g. formal, non formal and informal) as being equally important in a TVET system

- Includes knowledge gathering by monitoring the processes and measuring the impact of the certification process

- Is watchful for the nature and scale of potential failing and the (remedial) quality assurance techniques that might be required.

- Awareness of the pressures acting on all actors in the development, administration, and use of the qualification so that the process runs smoothly and fairly

- Building high trust through mechanisms which can lead to high quality and the features of society and the labour market (return, currency) which indicate that this is being secured.
The focus of QA in TVET

Quality assurance within the TVET generally focuses on:

- the TVET product through the approval processes of achievement standards;
- the training providers through approval processes based upon quality standards or criteria;
- monitoring processes through the auditing (or other strategies) of provider processes and outcomes, including student learning and employment outcomes and student and user satisfaction levels;
- the TVET outcomes through control, supervision or monitoring of assessment and graduation procedures and outcomes;
- system wide evaluations of TVET quality; and
- the provision of public information on the performance of providers such as program and unit completions, student and employer satisfaction.
Risk based systems

- Coverage of institutions
- Sanctions and support

Pyramid of Support

Pyramid of Sanctions

- National and/or international recognition or rankings
- Best practice mentors
  - Increased access to grants and prizes
    - State and national training awards, increased grant funding based on performance
  - Grants and prizes
    - State and national training awards, grant funding, reduced monitoring, increased autonomy
- Acknowledgements
  - Remain registered, eligible for funding, public risk rating

- Education
  - Legislation, legislative instruments, guidelines, information workshops, publications, determinations, directions, information sheets

- Loss of licence
  - Final outcome of appeal or court
- Prosecution
  - State and national tribunals (cycle of appeal) Supreme/national courts
- Harder sanctions
  - Restrictions to practice, fines, increased monitoring
- Sanctions
  - Restrictions to practice, fines, increased monitoring
- Shaming
  - Public notifications, restrictions to practice, public decisions registers, public risk rating
- Education
  - Legislation, legislative instruments, guidelines, information workshops, publications, information sheets
QA management systems

- The quality management system within a provider is often focused on the inputs and strong review, evaluation and implementing change.

- High performing providers implement a quality management system that includes: strong and systematic data collection for key indicators, feedback from employers and other stakeholders, and feedback from students and graduates and destination analysis. It is also focussed on the continuing professional development of trainers and assessors.
Some important challenges

- Weak understanding of the diversity of TVET
- Lack of awareness of the contexts in which TVET operates
- Partial view of quality assurance of certification
- Institutional arrangements that challenge the effectiveness of quality assurance
- Assessment methods that are not fit for purpose
- Inadequate assessor training
- Real and perceived weaknesses in performance based assessments
- There is inadequate direct evidence on the dependability of performance-based assessment in vocational qualifications
- The increasing emphasis on ‘outcomes’ in policy on vocational qualifications runs a risk of naïve opposition of knowledge versus skills leading to an opposition of formal testing and performance-based testing, and a false view that formal tests cannot play a role in predicting performance.
Some general findings

- The function(s) of specific qualifications must be clearly defined, and matched to form(s) of assessment and accompanying QA.
- The structural characteristics of assessment in different settings – in schools, higher education, TVET – are distinctive and give rise to different QA challenges.
- Contextual issues – culture, funding, labour market incentives, accountability - strongly affect the dependability of assessment in TVET.
- There are distinct trends in assessment and certification – demand for certification, labour migration – which impact on the need for, and form of, QA in TVET certification.
- Development in assessment and certification and in QA can affect the locus of control.
- There are distinctive pathways to certification, with many opening access to learning and assessment, but inequalities in access remain a serious issue and should be subject to continuous scrutiny.
- New forms of QA, such as statistical monitoring, are being developed around the world.
- QA should be seen as diverse and broad – from design of assessment (including concepts of competence) through specific active QA, to overall evaluation activity, including consideration of long term indicators such as return rates and currency.
- An overall model for QA should encompass the following dimensions:
  - Purpose - the construct base of the qualification and its link to its use.
  - Detection - the nature and scale of potential failing and the QA techniques thus required.
  - Interest - the pressures acting on all actors in the development, administration, and use of the qualification.
  - Trust - the mechanisms which result in impetus towards high quality and the features of the labour market (return, currency) which indicate that this is being secured.