

## **Delivering Quality in Assessment: A Self-Assessment Approach to Quality for Examination Boards**

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### **Abstract**

The nature of high-stakes examination systems demands a rigorous approach to quality at every stage of the assessment process.

The commitment to the delivery of quality in process and procedure may lead to the establishment of government regulation, or to the requirement for compliance with national or international standards. In some cases, such accountability is very well defined – in others, less so.

The constituent parts of the UCLES' Group operate within different contexts of 'quality regulation'. OCR, the body responsible for UK examinations, acts within the regulatory remit of the Qualifications and Curriculum Authority – but has also adopted international ISO Standards. The Division responsible for assessments in English for Speakers of Other Languages (ESOL) took the lead role in establishing the Association of Language Testers in Europe (ALTE) to develop a common approach to the regulation of language testing practice. The University of Cambridge International Examinations Division (CIE) is regulated by its own Code of Practice, overseen by the University itself.

This paper considers the role that models of quality assurance can play in ensuring quality in the design and delivery of examinations. It details approaches across the UCLES Group, and describes, in particular, the development of a new QA model, based on self-assessment, and designed for use by all examination boards. In describing the new model, the invitation to other organisations to participate in its development, and to the possible establishment of an international consortium of examination boards sharing a common approach to quality.

### **Introduction**

Publicly-funded organisations are accountable to a wide range of stakeholders: to those who use and benefit from their services and to those who provide the necessary funding. Nowhere is this accountability more strongly experienced than in the education sector where the quality of service provision touches the lives of all. The establishment of strong governance and control mechanisms is designed to safeguard standards of delivery and probity in public sector organisations and thereby build confidence in those who use and fund such public services.

This paper describes a range of strategies employed by the constituent parts of the UCLES' group to assure quality to those who use its qualifications. Such strategies span a quality continuum ranging from the development of Codes of Practice, scrutiny and the audit of compliance with external regulation, through to internal self-assessment targeted at the continuous improvement of quality. The introduction of a new quality assurance approach designed for use with other examination boards around the world and under current development in Cambridge is described in detail in the paper.

## **Background**

The University of Cambridge Local Examinations Syndicate (UCLES) was established in 1858. Its very origins stemmed from a concern with quality control and probity as its early mission was to standardise different university entrance procedures in order to ensure admission based on merit and achievement. As UCLES nears its one hundred and fiftieth anniversary it can look back upon an unwavering commitment to secure the highest standards of quality throughout its development. In the UK, UCLES has played a key role in establishing the policies and procedures which secure quality in the design and delivery of examinations. Its Codes of Practice have provided the basis of the regulatory framework currently used in the UK, and its involvement with examination boards around the world has led to the wider dissemination of practice established in Cambridge.

Conducting a broad sweep of the quality control and assurance mechanisms present in the UCLES of today demonstrates this commitment to quality. Such mechanisms include:

- Governance by the University of Cambridge
- Monitored compliance with internal and external Codes of Practice
- External scrutiny by the Qualifications and Curriculum Authority, the body accountable to the UK Government for the delivery of standards in assessment.
- Adoption of the quality standards defined by the International Standards Organisation and the British Standards Institute.
- Adoption of quality programmes such as the Crosby model and Six Sigma
- Annual reviews of performance via Memoranda of Understanding established with Government bodies around the world.
- The establishment of quality frameworks adopted by consortia of other examination boards
- The establishment of internal self-assessment processes linked to the continuous improvement of quality.

Some of these QA mechanisms are concerned with generic quality management principles; some are specifically designed for the management of examinations. All make a positive contribution to the delivery of quality across the organisation. Their synthesis has resulted in the development of a 'self-assessment' quality assurance tool which can be used to support the work of all examination boards, and which is described in some detail later in this paper.

## **A Review of Quality Mechanisms within UCLES**

### *Governance by The University Of Cambridge*

UCLES is the only examination board in the UK which is directly governed by a university body. The fact that the university in question is one which is ranked first in the UK for teaching quality, research excellence and student experience underpins the rigour of this governance function. UCLES' governing body is answerable to the Vice-Chancellor of the University, and its Governors (in Cambridge parlance, its Syndics) are required to satisfy themselves of standards achieved across the organisation and that best practice in terms of management and administration and of examination quality is secured. The governing body has encouraged the organisation in its commitment to external quality standards and regularly seeks reassurance that full compliance is achieved. It acts as a powerful driver for the achievement of high quality performance, but does not itself seek to impose the detail of individual standards.

### *Monitored Compliance with Internal and External Codes of Practice*

The processes and procedures of assessment best practice are defined within a set of professional standards – a Code of Practice. Examination boards within the UK operate within the framework of just such a Code which, while updated annually, was originally based on the Code developed in Cambridge. The UK regulatory body, QCA, approves the standards of professional practice enshrined in the Code and carries out an external scrutiny of compliance in line with its remit from the Department of Education and Skills (DfES). Self-assessment against the QCA Code of Practice by all UK awarding bodies is, in fact, built into a separate QCA regulation which states explicitly that:

“An awarding body should carry out self-assessment to demonstrate that it is regularly and effectively evaluating its quality assurance systems and quality control arrangements for accredited qualifications against the regulatory requirements”. (1)

Those parts of UCLES which are concerned with examinations outside the UK fall beyond QCA's regulatory remit, but in practice the International Code of Practice used by UCLES closely mirrors the processes and procedures operated in the UK, and due compliance is audited and reported internally.

A key focus of the UK Code of Practice is to ensure consistency between examination boards and across different qualifications. The Code is designed “to provide a basis for high standards in all aspects of the examination process and therefore to make an important contribution to upholding public confidence in these qualifications.” (2)

### *Adoption of the Quality Standards Enshrined in ISO 9001*

The establishment of a Code of professional practice is therefore the cornerstone in defining the appropriate standards. It is, however, a *statement* of the standard rather than a quality system designed to improve performance against the standard, such as can be provided, for example, by the ISO. The International Standards Organisation (ISO) is based in Geneva, Switzerland (3) but operates as a network of national standards institutions covering 148 countries. Its original focus was the development of technical and industrial standards. More recently through ISO 9001:2000 it has moved into quality management systems applicable in situations where an organization:

- needs to demonstrate its ability consistently to provide products that meets customer and applicable regulatory requirements; and
- wishes to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable regulatory requirements.

OCR, the part of UCLES responsible for examinations in the UK has adopted the ISO standard and achieved ISO 9001 certification. Key quality management principles of customer satisfaction, effective leadership and a systematic approach to management underpin the philosophy of the standard. Compliance with this standard provides confidence that the administration and management of a large organisation (OCR has over 600 employees spread over three geographically distant sites in the UK) meet best practice. This has involved the drafting and implementation of numerous policies and procedures, all formally recorded and subsequently scrutinised during external inspection. The whole process is rigorous, and has undoubtedly led to improvements in operational activities. The ISO process, however, does not necessarily touch all staff in the business, nor does it fully focus on what might be termed the 'underlying quality' aspect of the examination board's role - the production and implementation of effective assessment instruments.

An earlier initiative to develop a quality standard designed specifically for organisations responsible for “the Certification of Personnel” led to the development of the European standard, EN45013 (4). Although more targeted than the subsequent standards enshrined in ISO 9001, the approach of EN 45013 provides little of practical implementation regarding the operational detail of certificating bodies. The advice remains at the high-level of principle concerning the design and structure of certificating bodies. On probity, for example, the standard requires that:

“The certification body shall be impartial and have: a structure which requires the choosing of members of its governing board from among those interests involved in the process of certification without any single interest dominating” (clause 4)

And on transparency the standard requires that:

“The certification body shall have and make available on request an organisational chart and a description of the means by which the organisation obtains financial support” (clause 6).

Such material has a real value in terms of governance issues, but it does not provide sufficient guidance or structure to develop the practical policies required of exam boards nor to enable the precise setting of performance targets for improvement.

#### *UCLES' Other Quality Management Systems*

There are a number of other quality management systems in operation within UCLES. All espouse different approaches to the continuous improvement of quality. The University of Cambridge International Examinations (CIE), for example, employs the Philip Crosby 'Quality Improvement Process', a constructive programme which empowers individuals at all levels to contribute to organisational improvements through the formal adoption of a number of tried and tested quality tools and techniques.

The Crosby approach encourages the monitoring and measurement of performance. It builds an approach which:

- encourages continuous quality improvement through self-assessment and the internal targeting of opportunities for improvement.
- establishes data which can be used to compare performance and carry out other types of benchmarking activities
- identifies areas where improvements need to be made, thus enabling prioritised action plans to be produced
- commits the organisation to the achievement of the highest standards in examination and assessment practice.

#### *Establishment of a Quality Framework to be used with other Examination Boards.*

Recognising the need for quality management systems which more helpfully meet the circumstances of examination boards, UCLES has been involved in the development of its own quality assurance processes. The first example of this is the initiative which UCLES has taken in developing quality assurance procedures to be used by examining bodies in the area of language testing. In 1990 UCLES established the Association of Language Testers in Europe (ALTE), aimed at providers of language examinations for speakers of other languages. With 27 members across the European Union, and covering 23 languages, ALTE has been successful at promoting the teaching and testing of foreign languages in Europe.

In seeking to adopt a common Code of Practice the founder members shared a commitment to high standards of quality in operation. Quality management systems, aimed at ensuring a focus on improving quality in order to "meet customer requirements" were then co-developed. Membership of the association thus provides a 'kitemark' of quality to those who use its qualifications. The main "customers" of ALTE Member Boards are its users, and the

candidates who take its qualifications and who require high quality assessment systems in order to be treated fairly. By adopting this QM approach, it is hoped that the goal of "continuous improvement" will help to ensure that standards continue to rise.

UCLES' aim in developing the ALTE framework has been to establish workable procedures and programmes of improvement which will guarantee minimum quality standards. A key QM principle adopted by the approach is to encourage self-assessment and the monitoring of performance. It is axiomatic that if quality standards are going to be used they must be accessible to, and used by, those who operate within the standard. The importance of self-assessment or self-audit is a key part of the process. External monitoring is introduced as a secondary activity to confirm that minimum standards are being met rather than as a primary function at the beginning of the process to identify that they are not.

Of course, as a consortium of bodies operating in 23 languages it is also essential that the framework should be flexible enough to recognise the diversity of the ALTE institutions and the contexts in which their exams are used.

The ALTE framework operates with a "Checklist" approach where each checklist for performance is based on a broad area of the shared Code of Practice. Other examination boards are encouraged to use the checklists in order to measure progress in meeting previously determined standards. The checklists are quite voluntary and cover a huge range of standards: as one simple example, a single section of the "Test Construction" unit states:

"B1. Explain how the content and skills to be tested are selected (for each component of the examination?)

- i. Were you required to make reference to an official source in establishing the content of the examination, such as national curriculum guidelines? For example: from a Ministry?
- ii. Do you make use of domain or profile descriptions (skills and components?)
- iii. Is any use made of the Common European Framework of Reference? If yes, how?
- iv. Were the specific assessment goals developed by your examination body itself? If so, how?" (5)

To summarise, the ALTE system was:

- initiated by UCLES for use with language testers
- developed by UCLES and a small group of Founder members
- rolled out across Europe to a total of 23 language testing organisations linked together in an Association.
- planned specifically to operate with a self-assessment approach to quality in which each organisation monitors its own performance and sets targets appropriately
- designed to operate with a 'kitemark of quality' – with accreditation of good practice for those who meet the quality standard.

### **Towards An International Quality Consortium**

The Association of Language Testers in Europe (ALTE) has proved a positive development for the 23 participating organisations. The quality kitemark which it provides is a demonstration to all stakeholders of the organisations' commitment to high standards of operation and delivery.

The success of ALTE with foreign language testers suggests that a similar development with examination boards would be of similar value. An international federation linked by a common approach to quality enables:

- sharing best practice
- 'kitemarking' of a recognised level of achievement
- provision of various types of organisational development opportunities via quality seminars and training.

As a first step in this development, and building on its experience in designing and operating with similar quality management approaches, UCLES has begun work on an appropriate quality assurance model specifically targeted at the requirements of bodies administering public examinations. This model could be used to underpin the formation of an international consortium of examination boards.

#### *The Scope of the Model*

The quality assurance model being developed by CIE is designed to help examination and awarding bodies review their core examination processes. The model addresses the duties of an examination or awarding body in respect of:

- syllabus production
- question paper/mark scheme production
- marking
- coursework and internal moderation
- grading process
- enquiries on results and appeals
- special requirements
- conduct of examinations (including security, inspections, invigilation, malpractice)

#### *The Key Features of the Model*

The quality assurance model is based on a **self-assessment** approach, whereby staff are encouraged to meet and discuss issues relating to strategic and operational capacity. The self-assessment approach provides an opportunity for staff at all levels to engage in constructive debate about key areas of progress in core examination activities; it can also be used to measure progress over a period of time.

This concern for not only achieving the highest professional standards and practice, but also being able to *demonstrate* such achievement, underpins the CIE quality assurance model. Based on our established Code of Practice, we have followed a process that has enabled us to:

- identify and define the 'core' examining processes which are relevant to all bodies engaged in examination work
- break down the key constituent parts of such processes
- convert these parts into a series of critical questions which can act as standards of best practice
- present these questions in such a way that respondents can measure their current position in achieving these standards
- prepare users not only to indicate current progress, but identify supporting evidence which will demonstrate compliance or non-compliance

*How the self-assessment documents are constructed:*

- 1 A series of statements are presented which cover key aspects of the duties of an examination board.
- 2 Four 'descriptors' are provided against which actual performance can be evaluated.
- 3 An evidence-based approach is encouraged in identifying which descriptor is most appropriate.

*Nature of the Descriptors*

A key feature of self-assessment is that an organisation should be able to identify and substantiate its performance in particular areas. Scoring against a clear descriptor framework helps to provide clear outcomes.

The CIE model uses four descriptors:

***To be developed***

- *the issue has yet to be identified as requiring action*
- *the issue may have been identified and discussed, but at this stage there is no evidence of any appropriate action*

***Some Good Practice***

- *evidence that some useful action has taken place*
- *some improvements have been made to existing processes, but they are not being implemented systematically*
- *future activity needs to be co-ordinated*

***Good Practice***

- *clear evidence that the issue is being addressed in practice*
- *clear and measurable improvements have been made to the processes/procedures*
- *still room to improve further in order to demonstrate 'best practice'*
- *processes are subject to review*

***Best Practice***

- *evidence that the organisation has fully understood the issue, and has produced a comprehensive solution or achievement*
- *a first-class approach which can be held up as a role model for benchmarking organisations*
- *difficult to envisage any further improvement*
- *all processes are subject to regular review*

*Extracts from the Self-Assessment Model*

As an illustration of the final document, the following extract is taken from two sections of the self-assessment approach in the critically important area of "Question Paper and Mark Scheme Production":

Extracts from the Self-Assessment Model

#	Quality Review of Question Paper and Mark Scheme	Evidence/Comments	T	S	G	B
	Are policies and procedures in place which ensure that ...					
	<ul style="list-style-type: none"> <li>all quality reviewers receive, in a secure and confidential manner, a full set of instructions and other documents necessary to support the review process?</li> </ul>					
	<ul style="list-style-type: none"> <li>all quality reviewers are invited to comment on the first draft question paper and mark scheme, using an appropriate mechanism for communication?</li> </ul>					
	<ul style="list-style-type: none"> <li>the review process is managed by a member of staff from the awarding body (or other appropriate person) to support and guide the quality reviewers?</li> </ul>					
	<ul style="list-style-type: none"> <li>arrangements are made to keep a definite record of all changes to the question paper and mark scheme agreed by the reviewers, and to produce a final version of the question paper and mark scheme?</li> </ul>					
<b>F</b>	<b>To be developed</b>					
	<ul style="list-style-type: none"> <li>the issue has not yet been identified as requiring action</li> <li>the issue may have been identified but there is no evidence of any appropriate action</li> </ul>					
<b>S</b>	<b>Some Good Practice</b>					
	<ul style="list-style-type: none"> <li>evidence that some useful action has taken place</li> </ul>					
<b>G</b>	<b>Best Practice</b>					
	<ul style="list-style-type: none"> <li>clear evidence that the issue is being well managed</li> <li>clear and measurable improvements have been implemented</li> <li>efforts to improve further or to demonstrate 'best practice'</li> <li>processes are subject to regular review</li> </ul>					

  

G.	Overall Quality of Assessment Materials	Evidence/Comments	T	S	G	B
	Are policies and procedures in place which ensure that ...					
	<ul style="list-style-type: none"> <li>the intellectual challenge and level of demand of the question paper and mark scheme is equivalent to that of previous examinations?</li> </ul>					
	<ul style="list-style-type: none"> <li>the question paper and mark scheme conform to the aims, objectives, and content required by the syllabus?</li> </ul>					
	<ul style="list-style-type: none"> <li>the question paper contains clear and unambiguous instructions for teachers and candidates and (if required) an accurate list of any additional materials needed for the examination?</li> </ul>					
	<ul style="list-style-type: none"> <li>the question paper is appropriate to permit discrimination between candidates according to the grades for the qualification?</li> </ul>					
	<ul style="list-style-type: none"> <li>individual questions are clearly and precisely worded and appropriate for the ability range of candidates being targeted?</li> </ul>					
	<ul style="list-style-type: none"> <li>individual questions are valid, academically accurate and clearly related to content specified by the syllabus?</li> </ul>					
	<ul style="list-style-type: none"> <li>individual questions are free from any gender or cultural bias?</li> </ul>					
<b>F</b>	<b>To be developed</b>					
	<ul style="list-style-type: none"> <li>the issue has not yet been identified as requiring action</li> <li>the issue may have been identified and discussed, but at this stage there is no evidence of any appropriate action</li> </ul>					
<b>S</b>	<b>Some Good Practice</b>					
	<ul style="list-style-type: none"> <li>evidence that some useful action has taken place</li> <li>some improvements have been made, but they are not being implemented systematically</li> <li>further activity needs to be established</li> </ul>					
<b>G</b>	<b>Best Practice</b>					
	<ul style="list-style-type: none"> <li>evidence that the organisation has fully understood the issue, and has produced a comprehensive solution to it</li> <li>a first class approach which can be held up as a role model for benchmarking organisations</li> <li>difficult to envisage any further improvement</li> <li>all processes are still subject to regular review</li> </ul>					

## Conclusion

There are many benefits for organisations in pursuing a self-assessment approach to quality assurance. These include:

- establishing data which can be used to compare performance and carry out other types of benchmarking activities
- demonstrating a commitment to effective performance which should enhance credibility with all stakeholders and customers
- responding to domestic regulatory pressures for accountability and transparency in operations
- identifying areas where improvements need to be made, thus enabling prioritised action plans to be produced
- committing the organisation to the achievement of the highest standards in examination and assessment practice

There are many other benefits of a systematic and highly developed self-assessment approach, but perhaps the one factor often overlooked in the context of QA processes generally is the fact that they generate considerable internal debate, and engage staff at all levels in focussing on performance measures and the possibilities for improvements to be identified and acted upon; the *process itself* has intrinsic benefits for the organisation and undoubtedly leads to greater motivation of staff, and improved channels of communication.

The development of a comprehensive model for self-assessment of core examination activities is seen as an important step towards the overall goal of “delivering quality in assessment”. This paper has described the various approaches to quality assurance that have been developed throughout the UCLES group. By distilling the most relevant and appropriate practices and systems, CIE is now developing a model which could apply to other examination boards and assessment authorities. The model, based on a comprehensive self-assessment approach, is designed to provide a valuable framework in which significant organisational development can be achieved.

The model can also be used as the vehicle by which a consortium of boards which share a common approach to quality could be established. Such a consortium would offer mutual benefit to its members, and enable the sharing of best practice in all matters relating to educational assessment. CIE welcomes the views of other examination boards on the potential of its work in this area and on the future development of the model.

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