Survey on Principles of e-Regulation project

March 2009 – March 2010

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ACCA

AQA

CCEA

CIM

EAL

EDEXCEL

SQA

WJEC

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Summary

The Regulatory Principles for e-assessment (RPeA) were published by the UK qualifications regulators in 2007[1]. A survey of Awarding Organisations[2] (AOs) responses to the Regulatory Principles and follow-up interviews were carried out during 2009, leading to this report and the development of case studies of AO practice of e-assessment in the light of the principles. The survey was carried out by the four country qualifications regulators; Ofqual, SQA, DCELLS and CCEA[3].

The main findings from the survey show that some AOs are investing heavily in the development of qualifications using e-assessment and the systems to support them. Further investigation and development of case studies show effective practice of e-testing, use of e-portfolio and the development and administration of e-assessment.

Qualifications regulators should consider re-visiting the Regulatory Principles for e-assessment, and developing a better understanding and greater confidence in the assessment methods and supporting systems used. This will support the future regulation of how e-assessment is used as an assessment method in qualifications.

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[1] Regulatory Principles for e-assessment, QCA, SQA, WAG and CCEA, April 2007.
[2] Awarding Organisations in this report is the term used to include Awarding Bodies operating in the National Qualifications Framework and Awarding Organisations operating in the Qualifications and Credit Framework, and awarding bodies approved to offer accredited qualifications in Scotland by SQA Accreditation.
[3] Ofqal, SQA Accreditation, DCELLS and CCEA are referred to as the UK qualification regulators in this report.

Introduction

There is an increasing use of technology for the development, delivery, administration and reporting of assessment in qualifications offered by AOs. The UK qualifications regulators published Regulatory Principles for e-Assessment in April 2007. This publication set out regulatory principles to address developments in e-assessment activity, where regulation is needed to take account of the specific nature of this mode of delivery, whilst ensuring flexibility and encouraging innovation. Regulation of e-assessment systems will be incorporated into the qualification regulators' monitoring and self assessment processes.

The UK qualifications regulators have carried out a survey of AOs response to the use of these regulatory principles in order to inform future regulatory and quality assurance processes. All AOs were invited to take part in the survey; eight of these were selected for follow up visits and production of case studies of e-assessment practices.

The aim of this project was to ascertain where and how the e-assessment principles are being implemented and to outline areas of good practice to support and guide their implementation, including;
- AO response to the RPeA;
- a check for their appropriateness;
- an outline of areas of effective implementation and development of case studies;
- to inform other regulatory documents, particularly the QCF regulatory arrangements.

Methodology

A survey was carried out by email questionnaire to all AOs to ascertain their use of the principles . This survey was formatted as a writable PDF, and sent as an attachment to an email to AOs' contacts for regulatory communication held by Ofqual, with a duplicate letter sent by post. Respondents were invited to complete and submit the attached questionnaire by post or email, or through the portal on the CCEA website.

From the responses to this survey, AOs were selected from across the UK for individual interview to gather further information that could be used in case study materials. A matrix of visits was drawn up to include AOs working across the four nations that provide a range of qualifications type using e-assessment.

Outcomes from Survey

Responses were received from 10 AOs out of the 34 organisations registered as providing qualifications with e-assessed components. Short responses were also received from some AOs not currently offering qualifications with e-assessed components.

These responses were from a range of sizes of AOs in England, Scotland, Wales and Northern Ireland offering qualifications using e-testing, e-portfolio and e-marking. All responses contained valuable qualitative information on AO responses to the RPeA. AOs representing those offering qualifications in England, Scotland, Wales and Northern Ireland were selected for in-depth interview based on their size, number of qualifications being offered using e-assessment and the types of qualifications using e-assessment.

Findings

Varying experiences were expressed on the use of the Regulatory Principles, including those who found the principles easy to understand and implement and those who found the principles not specific enough and difficult to use. The majority of respondents welcomed the Regulatory Principles and how they were written, with some wanting more specific detail included. Detail was requested on the use of adaptive testing, the conditions for e-assessment and use of new technologies in assessment, such as PDAs[4].

Some very interesting examples of developments included on-screen testing for GCSEs, Functional Skills, National and Higher National qualifications, vendor specific testing, action research and use of game based assessment for Skills for Work qualifications in Scotland. These are further investigated through the interviews and case studies produced from this paper. AOs recorded their continuing commitment to the development of e-assessment

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[4] Personal Digital Assistant – see glossary

through new qualifications development and review of their portfolio of qualifications, and alongside the revision and updating of current specifications.

When considering validity and reliability of e-assessments, AOs responded that similar or comparable development and verification of assessments were carried out by subject specialists trained in the delivery methods, to ensure the same level of coverage and complexity as paper alternatives. Security on an AO level and centre level is carried out and monitored by the AO. Data integrity is ensured by regular back-ups, limit on user login-ins, and eligibility checks for candidates, and high level data encryption. AOs made reference to the Regulatory Principles and also the e-Assessment Guide to Effective Practice[5] when discussing the operation and integrity of e-assessment systems.

Awarding organisations operate e-assessment systems and carry out checks on integrity of these systems in conjunction with third party providers or with in-house development teams. In both cases delivery systems are under high levels of scrutiny through assessment administration, procedures and dedicated support addresses the system familiarisation for a variety of assessors.

It is considered that e-assessment is an enabler for access to assessment opportunities for candidates and AOs work to avoid barriers for candidates through formative access to sample tests and Disability Discrimination Act compliance. Ofqual is carrying out further work in this area. Most of the e-assessed qualifications discussed also had paper and pen counterparts, which in the main were not being used for anything other than back-up. Item banking is used by some AOs, and commissioning of new questions, exam construction rules and monitoring of statistics ensure that tests are fairly

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[5] E-Assessment Guide to Effective Practice, QCA, SQA, WAG and CCEA 2007

administrated and assessed. The use of e-assessment as an enabler of Controlled Assessment[6] for General and other qualifications is also an issue.

AOs requested that the Regulatory Principles be revisited in the light of recent legislation and that further research be carried out on the equivalencies between pen and paper and on-screen testing, and further detail and guidance be provided on adaptive testing.

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[6] Controlled Assessment regulations for first teaching in 2009

Outcomes from interviews

Profile of Awarding Organisations

Seven AOs were selected from those operating in the four nations, providing a range of qualification types, representing organisations of varying size and those providing a large number and small number of qualifications. The discussions at these interviews were held in the light of e-assessment in the wider sense to include e-testing, e-portfolio and the administration of e-assessment including e-marking and e-moderation. AOs' activities and development matched this wider sense of e-assessment.

AOs expressed and demonstrated support for the development of e-assessment in qualifications. This support included budgetary support through substantial financial investment in research and development, senior management and Chief Executive support for development and operation of e-assessment, and integration into company strategy. AO experience of providing e-assessment in qualifications ranged from smaller numbers of learners in pilot situations to large cohorts of learners using e-portfolio and e-testing and where assessment happened electronically through e-marking and e-moderation.

Rationale for development of e-Assessment

Several rationales were shared for the development of e-assessed components or whole qualifications. These varied in emphasis between AOs, which may be influenced by the type of qualifications they offer and the nature of the market for the provision of qualifications.

Savings and efficiency for operating assessment procedures were recorded as a driver for these developments, including the use of administration of e-assessment, e-marking and e-moderation of e-tests and e-portfolio evidence. It should be recognised that AOs discussed savings as key to their operational costs and perhaps more long-term savings, with significant development costs up-front. Best practice, innovative methods and

responding to the market demand were also recorded as drivers for these developments. Training of centres was an additional cost to the operation of these e-assessment systems.

One AO described their preparation for e-assessment with the phrase that they were 'getting ready for when the market was ready' – which perhaps encapsulates a common willingness and appetite to get involved and lead the way. Awarding organisations often recorded the need for development to happen to meet existing customer demand in the first instance and perceived future demand for innovative forms of assessment, including a wider variety in forms of e-assessment.

e-assessment methods used by Awarding Organisations

e-assessment is providing many opportunities for assessment development. Some of the on-screen and adaptive e-testing methods provide opportunities for increased participation of candidates with learning difficulties, allowing adaptation to the colours, font sizes etc for the interface used for assessment. Other uses were recorded, including that of time limited for virtual and actual invigilation, 'hover-over' for language interpretation, and the extended use of avatars to support the learners' needs.

Some AOs have extensive international markets, and so the introduction and development of e-assessment have additional benefits for those particular organisations. However, all organisations were keen on the development of e-assessment as a wider way of increasing access and participation.

On-screen testing is used as an alternative to a pen and paper approach to assessment by some AOs. Whole qualifications and units of qualifications use e-testing via bespoke software and in-house assessment tools. A mixture of bespoke, bought-in and freely available packages are used for e-portfolios.

Issues

A perceived change in sensitivities of e-assessment 'dumbing down' standards was recorded by AOs, where candidates were undertaking assessment at schools, colleges and through work-based assessment. AOs discussed the changing cultures of the assessment environment through assessment centres and 'digital native' candidates. e-assessment had particular appeal for the AOs offering qualifications to learners in work based learning settings, where these methods were perceived as providing the flexibility to meet customer demand.

Regulatory Principles for e-Assessment

In general AOs had received the RPeA well, some having been involved in their development. However, some requested that consideration be given to the revision of the Principles in the light of more recent legislation and also technological change. Specific reference was made to further development of the principles in light of the consensus statement on item banking, for adaptive testing, for more low stakes assessment and conditions for e-assessment. AOs requested reassurance from regulators that systems being used matched the requirements of the Regulatory Principles. The key to any revision should concentrate on enabling innovation for qualification and assessment developers.

Case study developments

AOs visited were asked to participate in the development of case studies of e-assessment practices and developments. These would then be used as part of the resource to support the development of innovative assessment. AOs were encouraged to produce an account of e-assessment practices or developments which would show the use of the principles in their development.

Conclusions and recommendations

e-assessment, including e-testing and e-portfolios, is a significant aspect of qualifications provision for some AOs. There is considerable investment in the development of various forms of e-assessment for a range of qualifications.

AOs had responded well to the introduction of the RPeA as a way of guiding AOs activities within a regulatory framework. Most AOs considered the Regulatory Principles to be appropriate for the development of e-assessment, although a need to revisit the principles in light of changes in technology and legislation was recorded. Any further development of the principles should be taken forward with enabling flexibility in mind.

Qualification regulators should consider taking forward further work on research and development into the regulation of e-assessment, including looking at the issues for on-demand testing, adaptive testing and for controlled assessment.

Glossary

e-assessment   The end-to-end electronic assessment processes where ICT is used for the presentation of assessment activity and the recording of responses. (e-assessment.org.uk, April 2010)

e-testing   An assessment presented to the candidate on screen(e-assessment.org.uk, April 2010)

e-portfolio   An electronically based file store and information management system which is modelled on the working method used for paper portfolios, but which takes advantage of the capabilities of ICT. (e-assessment.org.uk, April 2010)

PDA   A personal digital assistant (PDA) is a mobile device which functions as a personal information manager and connects to the internet. The PDA has an electronic visual display enabling it to include a web browser, and may employ touch screen technology and have audio capabilities. (adapted from Wikipedia, April 2010). More recently smart phones are used.

Appendix 1

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