

Developing e-assessment to Support SQA's Qualifications

Awareness Raising Events — Summary of feedback

Background

This report contains the feedback from SQA's recent e-assessment events. It comprises:

- a.** a summary of the main issues raised across the four events, and
- b.** a more detailed record of the points raised during the plenary session at each event.

A summary of the evaluations of the events is in Appendix A.

The events were held on the following dates and locations: A total of 164 delegates attended.

- ◆ 18 March — Glasgow
- ◆ 21 March — Stirling
- ◆ 24 March — Aberdeen
- ◆ 29 March — Edinburgh

At these events through a combination of presentations and discussion groups SQA:

- ◆ outlined the reasons why it believes e-assessment will be increasingly important, including the potential benefits it offers to learners, centres and SQA
- ◆ explained some of the e-assessment work that SQA has been involved in to date
- ◆ provided details of its planned programme of work to develop e-assessment
- ◆ explored some of the issues that will need to be addressed by SQA, centres and others in increasing use of e-assessment
- ◆ sought feedback on its plans and views on the benefits and challenges presented by e-assessment

The events were not aimed specifically at staff with a background in ICT or existing knowledge of e-assessment, but anyone with an interest in finding out about how e-assessment can help contribute to effective teaching, learning, and assessment.

Overall feedback from the events indicated that most delegates recognised the potential benefits of e-assessment. Based on completed evaluations, 87% of delegates supported SQA's approach to its development. This support was balanced by recognition of the issues raised by e-assessment. Prominent amongst these issues were: staff training in use of ICT, funding, security and authentication and questions of equity in running dual paper and e-assessment systems.

Summary Report of Feedback

This report summarises the key issues and points raised across the four events around the SQA e-assessment vision and strategy. This page provides an overview: detailed comments from each event are on the following pages.

Benefits

The general response was positive and most appeared to be in favour of e-assessment. Most delegates believed it would enhance learning opportunities. Some agreed it would motivate candidates, especially those with learning disabilities but others were not convinced. There was enthusiasm for e-portfolios, especially amongst those centres delivering SVQs.

Most felt e-assessment would also ease moderation and management issues and save time on marking. Use of e-assessment for internal and formative assessment was strongly supported; however the majority of delegates were unsure whether it would be appropriate for external assessment.

Implementation

There was general agreement that e-assessment should be developed as a natural follow-on from e-learning and that e-assessment must be an integral part of learning and teaching. It was felt that it should be rolled out in all centres simultaneously, cautiously and in collaboration.

Implementation raised the following issues:

- ◆ where the funding would come from (most agreed this should be from the Scottish Executive)
- ◆ whether centres should budget for costs themselves
- ◆ if e-assessment would be appropriate for all levels and subjects and how this would be decided
- ◆ the time necessary for preparation and training in use of e-assessment

Some wondered how the mixed economy of paper-based and e-assessment (dual-system) would work and what the costs of this would be. Some were eager to know who is driving demand for e-assessment and what support SQA would provide. Delegates felt that examples of e-assessment in action would be helpful.

Staff training

The need for staff training in use of e-assessment as an effective part of teaching and learning was a prominent issue at all four events, along with issues of equity for candidates. It was stressed that any e-assessment system should be accessible for all levels and standards of IT experience, and SQA should therefore aim for the lowest level of knowledge and competence of users. Delegates felt it was important that they should be prepared to deal with technical problems.

Security and authentication

Malpractice, hacking, firewalls and storage were some of the concerns around security. With respect to authentication, it was thought that passwords could easily be passed between candidates. 'On demand' assessment was believed to pose particular authentication issues: how would centres monitor that candidates sitting the assessment are who they say they are? Who will police the provision of 'assessment on demand' and is this type of assessment realistic?

Technical issues

It was strongly emphasised that good access to technical support will be essential and that a minimal technical specification will be necessary for any e-assessment system. Built-in technical support was also suggested. However, the expense of managing and maintaining computers in centres was a main concern. As feedback plays an important role in assessment, the issue was raised as to whether feedback will be personalised enough for pupils.

Specially adapted equipment or programmes for learners with disabilities is desired.

Delegates would also like more information on SSDN (Scottish Schools Digital Network).

Resources

Location would play a part for some centres situated in remote areas, as they may have limited access to broadband. Small centres may lack space for accommodation of computers and resources can differ between local authorities. A major question was where e-assessment should take place. If within the centre, should it be in the classroom or an IT section? If externally, what would the cost of external assessment be? Will a booking system be necessary?

Future

Delegates expressed a desire for SQA to undertake further pilots and felt that more examples of e-assessment in action would be helpful. Many would also like more information available on SSDN (Scottish Schools Digital Network). A separate event for centres delivering SVQs and for external assessment was suggested.

Feedback from plenary session: Glasgow

Benefits

- ◆ Excellent tool for learning and development.
- ◆ Would save time in marking.
- ◆ Motivating for candidates, especially special needs learners.
- ◆ E-portfolios present benefits for candidates as a means of allowing them to know where they are in their own learning, ie. Units attained.

Implementation

- ◆ To varying extents, this is new territory for everyone and there is a need to find effective mechanisms to showcase and encourage best practice.
- ◆ How will e-assessment fit in with learning structure?
- ◆ Who will fund training and implementation (SQA/Scottish Executive)?
- ◆ Schools will need to have a feeling of ownership of any new system and to know that they have an acceptable level of control over what is coming into and out of the school.
- ◆ Will e-assessment work for all subjects?
- ◆ May be wiser to start with formative and Unit assessment before attempting to implement summative course e-assessment.
- ◆ Be wary of a 'hybrid' system. If some subjects were to set the pace and others hang back this could result in a plethora of different assessment arrangements and could create problems for centres trying to manage system.
- ◆ Will technology alter the balance of what is being assessed and therefore what is deemed important, eg less 'production' and more 'comprehension'?
- ◆ Timescale of five years realistic? Some would like to see it happen sooner.
- ◆ Should start with student. Not convinced it will motivate all candidates, although students do appreciate instant feedback and this can be motivational in some instances.
- ◆ ICT skills may be barrier to access to e-assessment for candidates with poor computer skills.
- ◆ Will it change nature of subjects?
- ◆ Should be implemented in all centres at the same time, with caution and in collaboration.
- ◆ Could be a significant contributor to a more effective and cost-efficient model of delivery in the workplace sector.

Staff training

- ◆ Some staff are still reluctant to use ICT.
- ◆ When and where will staff training take place?
- ◆ Need for training requires analysis to identify what staff need to do before training.
- ◆ There should be opportunity for all involved to undertake training — in SQA as much as in centres — to access additional training and support.
- ◆ IT skills amongst pupils-would they need training?

Security and authentication

- ◆ Malpractice, distraction, hacking are a concern.
- ◆ What authentication measures would be taken for 'on demand' assessment?
- ◆ Who will police the provision of 'sitting on demand'?
- ◆ How would staff know that candidates don't cheat and if the person sitting the assessment is who they say they are?
- ◆ Questions about the security of examination and candidate materials held electronically.
- ◆ Randomised generating of questions was suggested as measure to reduce the potential for malpractice during the assessment.

Technical Issues

- ◆ Who in school responsible for technical downloading of assessments?
- ◆ What technical support can be expected from SQA?
- ◆ Location; remote areas have limited access to broadband.

Resources

- ◆ Small centres lack space for computers. Are laptops an option?
- ◆ Resources differ between local authorities.
- ◆ Results from SQA.net are already available to schools, soon to candidates?

Future

- ◆ Separate event useful for SVQ centres.
- ◆ More examples of e-assessment would be helpful, ie working examples/case studies.
- ◆ Pilot sessions for some subjects, ie the sciences.

Feedback from plenary session: Stirling

Benefits

- ◆ Enhanced learning opportunities.
- ◆ Easing of moderation and management issues.
- ◆ Provision of standardised feedback — questions and responses could be analysed to identify faulty questions and poor responses.
- ◆ The use of sound was commended as a medium.
- ◆ Less paperwork for teachers.
- ◆ Consistency and continuity of marking an advantage.
- ◆ Motivation for students.
- ◆ Positive about e-NABs, blends in with teaching in future.

Implementation

- ◆ All agree that e-assessment should be natural follow-on from e-learning.
- ◆ E-assessment approach has to involve every teacher/lecturer in a centre.
- ◆ May be some staff apprehension regarding this fairly hi-tech assessment approach.
- ◆ E-assessment should be seen principally in the context of formative assessment rather than summative.
- ◆ Psychology/familiarity issues, ie need to stress the importance of an e-assessment to students who are familiar with the processes: they might not recognise the assessment environment.
- ◆ All levels and all areas requested. Some subjects are however, more appropriate than others.
- ◆ Conditions should be same in dual-system, standardised. What would system cost?
- ◆ Who are drivers? SQA, Scottish Executive, centres?
- ◆ Roll out should be done for all centres together.
- ◆ How would summative assessment for NQs be implemented?
- ◆ How do SQA and centres ensure quality assurance for e-portfolios?
- ◆ New generation of learners with more ICT experience will provide more pressure to use ICT.

Security and authentication

- ◆ The use of an e-portfolio raises a number of issues relating to availability, storage, costs, security and authentication.
- ◆ Students should have control if exams are designed to find out what they can do.
- ◆ SQA Co-ordinator is only person with access to secure site in larger schools, can this be expanded to extra designated staff?
- ◆ Randomised tests/itembanking for formative assessment.
- ◆ On demand assessment: how can a student's own work be guaranteed? How can 'closed-book' conditions be achieved without access to media such as 3G mobile phones and the system server?

Technical Issues

- ◆ A minimal technical specification and built-in tech support is necessary.
- ◆ Guarantee of internet access is a concern.
- ◆ Need ready available access on server. Storage, cost?
- ◆ What would SQA provide? System, support?
- ◆ Would all students be able to do assessments on demand? Is this realistic?
- ◆ How would teachers edit or customise system with authoring tool? Model needs to be adaptable for special needs learners.
- ◆ Feedback from reporting system can be lacking. How useful do teachers find breakdown of information?
- ◆ SQA as sole provider would be best for continuity.

Resources

- ◆ Is external e-assessment possible?
- ◆ Geographical limitations to technology; lack of broadband in some areas.
- ◆ Small centres will not have enough computers or space for more.
- ◆ Delivery of products, platform chosen by SQA?
- ◆ E-assessment would put burden on centres with ICT-heavy courses.

Feedback from plenary session: Aberdeen

Benefits

- ◆ E-assessment would be useful for identifying problem areas of pupils.
- ◆ Streamlines assessment and frees up time for teaching.
- ◆ Instant feedback from e-assessment to inform teaching (built-in reporting system).
- ◆ Health & Safety — virtual office better than learning from book.
- ◆ E-portfolios would be good for personal learning and planning.
- ◆ Time saved can be put towards actual teaching.

Implementation

- ◆ Early adopters stage — may need routine tool. Support early-adopters: these are the people who will help to integrate the new approach and act as models for others to follow.
- ◆ Scottish Executive should consider costs so that there is a level playing field for all centres.
- ◆ A policy is required in order that all various players can align themselves and prepare for the changes to come.
- ◆ E-assessment should be used where valid and appropriate, this should be defined in a policy.
- ◆ Teachers can invigilate in a classroom for e-assessment, but not in distance learning.
- ◆ Will not improve learning experience for candidates struggling with report writing.
- ◆ Will it be possible for all schools, or less accessible for some? How will parents react to this when choosing schools?
- ◆ Will most effective subjects be prioritised?
- ◆ Should start at high-impact areas, ie Access, lower levels may have more benefit from motivation and engagement.
- ◆ Funding; focus on base line developments and quality assurance, this could assist in NABs assessment.
- ◆ Should have possibility of opting for different formats beside e-assessment.
- ◆ Formative assessment is the key area where this kind of approach could make its greatest impact.
- ◆ If summative assessment is to be included, teachers need to have confidence in the technology, resources need to be adequate and the systems compatible.
- ◆ Platform should be collaborative. Must be integral part of learning and teaching.
- ◆ Constructed response especially in modern languages, will this discourage speaking? It should be educationally driven.
- ◆ Retain central role of teacher but bear in mind advantages of self-study.
- ◆ Not convinced that it will provide student motivation, especially for more capable candidates who show as much interest in paper-based.
- ◆ Skills such as report writing may not be encouraged by e-assessment.
- ◆ What collaboration is there between SQA and universities?
- ◆ Need to ensure that Core Skills development is aligned with the new skills required for e-assessment.

Staff training

- ◆ Some more mature staff may be reluctant to undertake training.
- ◆ Allow time to prepare candidates in order to support equity.
- ◆ Staff must be prepared for technical problems.
- ◆ Careful not to debar students who have no access and familiarity with computers.

Security and authentication

- ◆ Security and cost issues around developing itembanks for on-demand assessment.
- ◆ E-portfolio- plagiarism and authentication. How to maintain security and storage facility?

Technical Issues

- ◆ Diagnostic element needed within programme, has flexibility but need teacher support for formative assessment.
- ◆ Current issue with SQA.net. Technical support necessary for e-assessment, experiencing problems with accessibility.
- ◆ Need more than multiple choice. This is a good starting point, and SQA could build from there. Use of open-ended questions for flexibility of text input.
- ◆ Subject-specific fora would be useful.
- ◆ Reliability and validity in e-assessment should be established, as shifting medium is difficult.
- ◆ Hardware and software requirements, software systems probably have to interface with SQA. This requires a policy.
- ◆ Feedback for teachers and pupils important. Will feedback be personalised for pupils? Automatic feedback will not be as good, eg Interactive Maths feedback not specific enough (topic but not problem identified).
- ◆ System has to be accessible for all levels and standards of IT experience amongst staff and candidates.
- ◆ Standard of machine required is a major issue. What are technical requirements?
- ◆ Maintenance and update of PCs are concern but wireless is less secure.
- ◆ If assessment on demand is pursued, this would appear to require large item banks.

Resources

- ◆ Currently resources are allocated based on subject needs, e-assessment will require a re-evaluation.
- ◆ Need flexibility. Where will it take place, in classroom or IT section?
- ◆ Will a booking system be necessary?
- ◆ Turn off for candidates if used a lot.

Future

- ◆ Core Skills —worthwhile looking at experience in England in this area.
- ◆ Would like to see research to back up need for e-assessment.

Feedback from plenary session: Edinburgh

Benefits

- ◆ E-portfolios would be fairer, provide progress account for parents and reduce report writing for teachers.
- ◆ E-portfolios would also be useful for students who leave school without qualifications.
- ◆ Reporting system good way for senior management to ensure quality teaching and reduce current administration process for HMIE.
- ◆ On-demand assessment received positive feedback.

Implementation

- ◆ Careful not to lose social and writing skills as pupils are already spending a lot of time on computers. Communication skills are a necessary part of education.
- ◆ Keep opportunity for pupils to give free responses as skills could be lost if over-emphasis on objective testing.
- ◆ Use of itembanking would reduce opportunities to 'teach to the assessment'.
- ◆ Is mixed economy of paper-based and e-assessment appropriate? Parents could chose schools based on use of e-assessment. It was suggested that a transition period was necessary.
- ◆ Potential for summative and formative assessment.
- ◆ Implementation has to be easy for everyone.
- ◆ Agreed funding would have to come from Scottish Executive. Funding should go direct to centres. Others wonder if they should budget for implementation, ie resources/software and hardware.
- ◆ Multi-media opens a wider range of assessment (3D).
- ◆ Not suitable for all subjects, use e-assessment only when appropriate.
- ◆ Who is driving demand?
- ◆ Is it motivating for pupils? Enthusiasm from centres already using interactive technology.

Staff training

- ◆ Candidate training; some learners find computers frightening, some candidates will have computers at home, others won't.
- ◆ Staff development; concern that there is no spare time for teachers to undertake training.
- ◆ Who will be responsible for staff development in e-assessment?
- ◆ Social networking and quality networking between teachers.
- ◆ How can teachers improve current practice when analysing reports to give effective feedback?
- ◆ Harder to absorb information from screen — may need specific training for this.

Security and authentication

- ◆ Passwords can be passed between candidates.
- ◆ Webcams to ensure correct candidate is sitting assessment?
- ◆ How do DVLA ensure authentication for online driving theory test?

Technical Issues

- ◆ Would it be an idea to have NABs with formative assessment on DVD? Does not rely on system.
- ◆ CPD could help with cultural change while technical issues are on-going.
- ◆ SQA should negotiate with local authorities (particularly IT departments).
- ◆ Teachers would be more interested if involved in the authoring.
- ◆ Managing/maintaining computers very expensive.
- ◆ SQA should aim for lowest level of knowledge/competence of users.
- ◆ Need good access to technical support. National policy? Would be no use to have technician two days a week.
- ◆ Some centres have system contracts making it difficult to react quickly to changing ICT requirements.
- ◆ Learners with disability, specially adapted equipment/programmes necessary.
- ◆ Will assessments be allowed past firewalls? How will systems communicate?

Resources

- ◆ Resources will be easier to access for some subjects, ie Business and Computing.
- ◆ E-assessment within centre or externally? Cost of external?

Appendix A SQA e-assessment events — Summary of evaluation forms

Q1	How successful was the event in achieving the purpose set out in the invitation?	
		Percentage
	Very satisfied	35
	Quite satisfied	60
	Quite dissatisfied	3
	Very dissatisfied	2

How satisfied were you with:

Q2	The main presentation?	
		Percentage
	Very satisfied	42
	Quite satisfied	52
	Quite dissatisfied	4
	Very dissatisfied	2

Q3	The discussion group?	
		Percentage
	Very satisfied	53
	Quite satisfied	41
	Quite dissatisfied	4
	Very dissatisfied	1

Q4	The feedback and plenary discussion?	
		Percentage
	Very satisfied	31
	Quite satisfied	62
	Quite dissatisfied	6
	Very dissatisfied	1

Q5	The planning and organisation of the event?	
		Percentage
	Very satisfied	56
	Quite satisfied	37
	Quite dissatisfied	6
	Very dissatisfied	1

Q6	The venue and arrangements on the day?	
		Percentage
	Very satisfied	63
	Quite satisfied	33
	Quite dissatisfied	3
	Very dissatisfied	1

Q7	Based on what you have heard today do you support SQA's plan for e-assessment?	
		Percentage
	Yes	88
	No	1
	Don't know	11