

Adapted question papers in digital format for candidates with disabilities and/or additional support needs: summary report

1. Candidates with disabilities or additional support needs can request permission to use one or more assessment arrangements in SQA examinations (SQA 2004). The number of students for whom assessment arrangements have been requested has increased by over 300% in the last decade; from 3,094 in 1995, to 9,814 in 2005 (SQA, 2006). In 2005 there were requests for assessment arrangements for use in 41,454 examinations. Students may request more than one method of support for the examination (eg extra time and also use of a scribe), resulting in 74,720 individual instances.
2. The most common type of request is for extra time (33,146 requests), followed by a reader (15,740 requests) and then a scribe (14,505 requests) (SQA 2006). Each examination sat using scribe or reader requires separate accommodation, a member of staff to read and/or write, and an invigilator, and so there are significant resource costs attached to this type of support. More importantly, the student is not independent when sitting the examination.
3. Digital question papers in accessible PDF were successfully trialled in a previous project in 2004/05 (Nisbet, Aitken and Shearer, 2004). Candidates with reading or visual difficulties can click on the text or questions on the digital question paper and the computer will read it out, and answers can be typed into the question and answer papers on screen.
4. The aim of the project was to build on this experience by creating a bank of digital past question papers for schools and students to use for revision and practice. If these proved successful and practical to create and use, SQA undertook to consider offering digital question papers for students in the 2006 diet of examinations.
5. The digital question papers were produced in Acrobat PDF because of relatively low production costs for SQA, good functionality and reliability, and low cost for schools. SQA already produce question papers in PDF, and so there is no need to re-design the papers. It is necessary to manually draw 'form fields' into the question and answer papers, and to check that these form fields are accurate and functional. Each paper was also 'speech-enabled' using TextHelp Systems' *PDFAloud Publishing Toolkit*: a process which requires a single mouse click (TextHelp 2006). The PDF papers are reasonably accessible for most candidates: they can be magnified; colours altered; accessed using the keyboard instead of the mouse; and the PDFAloud text-reading software is helpful for candidates with reading and visual difficulties. Cost to schools are relatively low: to use a digital question paper the candidate must have access to a computer with Acrobat Standard (at around £25 per licence) and the free version of the *PDFAloud* text reading software installed.

6. A bank of 163 digital past papers across 28 different subject areas was created and used by 73 students in eleven centres in the 2005/06 session. Question papers were requested at all levels: Standard, Intermediate 1 and 2; Higher and Advanced Higher. Feedback from staff suggests that the students found the digital question papers very helpful for independent revision and practice.
7. Eight of the centres went on to request 152 digital question papers for use by 34 students in 111 examinations in May 2006, and SQA staff created 57 separate digital question papers across 18 subjects. SQA estimate that the production time to create digital question papers is slightly less than the time to produce large print hard copy papers.
8. 31 out of 34 students used the digital question papers in 105 examinations (three students chose to use other arrangements for six examinations).
9. SQA analysis reveals no significant difference between the estimated and actual results obtained by the candidates using digital question papers, although the small numbers of candidates involved makes analysis difficult. Digital question papers do not appear to have an impact upon results achieved compared to other types of assessment arrangement.
10. Students were asked to complete a questionnaire after each examination. 76 questionnaires were returned in respect of 92 out of 105 examinations.
11. Most of the students who opted for the digital question papers chose to use them because of reading, writing or spelling difficulties. A small number of students had physical, visual and other issues.
12. 10 students out of 31 used *PDFAloud* text-to-speech software to read 35 out of 105 question papers. The use of text-to-speech to read the question paper varied greatly between different schools: all the candidates at two schools used *PDFAloud* to read every question paper they sat whereas it was not used at all by any candidates in five schools. In one school, *PDFAloud* was used to read question papers in 25 examinations, while human readers were used for 27. If this level of use could be extended across other schools in Scotland it would have a significant positive impact upon the ability of thousands of students to demonstrate attainment more independently, and upon staffing and resources in schools.
13. In 68 of the 92 examinations, digital question papers were in question and answer format where candidates could type their answers into the question paper on screen. Candidates used this option in 60 cases. Feedback from candidates suggests that digital question and answer papers are easier to use and less confusing than using a word processor or scribe. Again, there is considerable

potential for digital question papers to increase candidates' independence and to reduce demands on resources.

14. Students were enthusiastic about the digital question papers, with 28 out of 31 stating that they would use them again (three were not sure) and all students who responded felt that SQA should provide digital question papers alongside other types of adapted question papers. Candidates found typing into the digital papers faster, easier and in some cases less painful than handwriting; more private than using a reader; and less stressful. This is what we would expect given that the students elected to use the digital question papers themselves, after practicing with past papers. Note that digital question papers will not suit every candidate who might require assessment arrangements because a reasonable degree of ICT and keyboarding/text production expertise is required, and because some candidates will feel more comfortable with other types of support.
15. Interviews were conducted with staff involved in the pilot. Most staff felt that most students were more confident, independent, motivated and skilled when using digital papers, than with traditional papers and accommodations. All felt that SQA should provide digital adapted question papers in future. Centre staff found the digital question papers to be reliable (average of 4.75 out of 5 for reliability). Some schools had difficulty finding and organising sufficient numbers of accessible computers, and this may be a barrier to increased use of digital question papers in future. Support from local authorities and senior school management is necessary to ensure that satisfactory hardware and software can be made available.
16. Overall, staff felt that the demands on resources were lower when using digital question papers compared to traditional assessment arrangements (average of 2.88 compared to 4 (on a scale of 1 to 5) in terms of staffing; 2.25 compared to 3.5 in terms of accommodation; 2.25 compared to 3.5 in terms of invigilation). There are of course increased demands for ICT resources, and for technical support.
17. Staff were positive about support and communication from SQA, giving the effectiveness of the information and guidance an average of 4.5 out of 5, and the effectiveness of support 4.875 out of 5.
18. Adapted digital question papers appear to offer considerable benefits. The question papers produced by SQA are reliable, relatively inexpensive to produce and staff estimate that demands on accommodation, staff and invigilation are lower than traditional support methods. More importantly, the students who used them in May 2006 found them effective; students using digital question papers are far more independent than those using other types of support such as scribe and reader; and results obtained using digital papers are in line with results achieved using other methods.