

SQA Digital Question Papers 2010 Report

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PROJECT TEAM

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We are once again grateful to staff and pupils at all the schools and centres who have been involved in this and previous projects investigating the potential of SQA Digital Question Papers.

Maggie Quinn distributed and analysed the responses to the 2010 Feedback Questionnaire in the section entitled 2010 Digital Question Papers – Feedback Questionnaire.

Our best wishes to Sheila Rennie, Manager of Assessment Materials and Publications, who retired in 2009. Sheila, along with Patricia McDonald and Maggie Quinn, has been a key player in the development and implementation of Digital Question Papers and her commitment and professionalism has contributed to the remarkable increase in use of digital papers and the many favourable comments from staff and candidates.

As one teacher said in 2009:

"Thank You – I can only guess at the amount of time, effort and energy that has gone into getting the option of digital papers up and running as smoothly as it is."

How true!

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2010 Assessment Arrangements

The total number of Assessment Arrangement (AA) requests for the 2010 diet was 48,416, submitted on behalf of 13,962 candidates (Table 1). This represents an increase in the total number of requests (up 5.7%) and candidates (up 6.5%) on the previous year.

Table 1: Number of candidates and requests for AA, 2007 - 2010

Year	Number of Candidates requesting AA	Number of AA requests
2007	11,400	42,194
2008	12,284	44,356
2009	13,041	45,612
2010	13,962	48,416

The profile of AA requests by level is broadly the same as for previous years (Table 2). Just under half of the requests were on behalf of Standard Grade candidates; however, this proportion has continued to drop over the past few years. On the other hand, Table 2 reveals that Intermediate 1, 2 and Higher requests as a proportion of all AA requests have increased. This mirrors the changing profile of overall entry numbers.

Table 2: AA requests by examination level, 2007 - 2010

Level	2007		2008		2009		2010	
	Number of requests	% of requests	Number of requests	% of requests	Number of requests	% of requests	Number of requests	% of requests
Standard Grade	23356	55.4%	23945	54.0%	23404	51.3%	23770	49.0%
Intermediate 1	4297	10.2%	5010	11.3%	5403	11.8%	6015	12.4%
Intermediate 2	5790	13.7%	6481	14.6%	7245	15.9%	8068	16.6%
Higher	7995	18.9%	8098	18.3%	8758	19.2%	9669	19.9%
Advanced Higher	756	1.8%	822	1.9%	802	1.8%	894	1.8%

Table 3: AA requests as a percentage of total examination entries, 2007 – 2010

Level	2007	2008	2009	2010
Standard Grade	5.8%	6.1%	6.5%	6.9%
Intermediate 1	8.0%	8.2%	8.2%	9.0%
Intermediate 2	5.4%	5.6%	5.9%	6.1%
Higher	5.0%	4.9%	5.2%	5.3%
Advanced Higher	4.2%	4.3%	4.1%	4.2%

Table 3 presents AA requests as a percentage of all examination entries, over four years. Requests for AA have increased proportionately across all levels except for Advanced Higher.

Each Assessment Arrangement request relates to one examination entry. An entry consists of two or sometimes three separate papers; for example Standard Grade English consists of two Reading Papers (Foundation and General, or General and Credit) and a Writing Paper, while Higher Chemistry, for example, has two papers.

Requests for Assessment Arrangements are made by the school according to the nature of the candidate's difficulty, and the assessment: a candidate might request a different type of support in different examinations.

Each request may comprise more than one type of support, and so the 48,416 requests made in 2010 can be broken down into 117,102 individual component requests (Table 4). Most requests are for Extra Time together with another type of support, such as Reader, Scribe, use of ICT, or an adapted paper.

Table 4: Type of Assessment Arrangements requested

Assessment Arrangement	Number of Requests, 2009	Number of Requests, 2010	% change 2009 to 2010
Extra Time	35,636	36,962	3.7%
Separate Accommodation	26,381	28,689	8.7%
Reader	16,554	16,863	1.9%
Scribe	14,197	14,313	0.8%
Use of ICT	6,253	7,622	21.9%
Prompter	2,099	2,404	14.5%
Coloured Paper	2,050	1,964	-4.2%
Rest Period	1,434	1,636	14.1%
Enlarged Print Question Papers	1,305	1,209	-7.4%
Transcription with correction	1,179	1,110	-5.9%
Digital Question Papers	1,167	2,000	71.4%
Calculator	660	684	3.6%
Transcription without correction	626	590	-5.8%
PA Referral	540	465	-13.9%
Modified Content -	277	267	-3.6%
Adapted Cert	119	139	16.8%
Question Paper signed to candidate	57	52	-8.8%
Candidate Signs Responses	42	38	-9.5%
Live Presentation	37	36	-2.7%
Braille	31	59	90.3%
	110,644	117,102	

Apart from Extra Time and Separate Accommodation, Reader/Scribes continue to be the most commonly requested types of support. It is interesting to note that while overall number of requests for Readers has increased slightly over the past five years (Table 5, Figure 1), requests for scribes have fallen, and there has been a considerable increase in requests for use of ICT or digital papers. (Requests for use of ICT include requests for digital papers.)

Table 5: Requests for readers, scribes and ICT 2005-2010

	2005	2006	2007	2008	2009	2010
Readers	15,740	16,798	16,122	16,936	16,554	16,863
Scribes	14,505	15,046	14,121	14,811	14,197	14,313
ICT including Digital Papers	2,388	3,063	3,560	4,741	6,253	7,622
Digital Papers	0	65	265	514	1,167	2,001
ICT only	2388	2998	3295	4227	5086	5621

If we look at requests for reader/scribes and ICT as a percentage of the total number of requests (excluding Separate Accommodation which was not counted in 2005 and 2006), we find that the use of reader/scribes has fallen proportionately, while use of ICT has increased significantly (see Table 6, Figure 2).

This suggests that ICT is becoming a more popular option for candidates who require assessment arrangements. This is an encouraging trend, given that use of ICT offers candidates greater independence, and has lower cost and resource requirements for schools.

Table 6: Requests for readers, scribes and ICT as percentage of total (excl. separate accomodation) 2005-2010

	2005	2006	2007	2008	2009	2010
Readers	21.2%	21.7%	21.1%	20.8%	19.6%	19.1%
Scribes	19.5%	19.4%	18.5%	18.2%	16.8%	16.2%
ICT including Digital Papers	3.2%	4.0%	4.7%	5.8%	7.4%	8.6%
Digital Papers	0.0%	0.1%	0.3%	0.6%	1.4%	2.3%
ICT only	3.2%	3.9%	4.3%	5.2%	6.0%	6.4%

Figure 1: Requests for readers, scribes and ICT 2005-2010

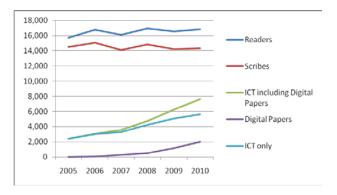
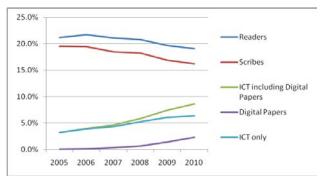


Figure 2: Requests for readers, scribes and ICT as percentage of total (excl. separate accommodation) 2005-2010



Digital Question Papers

The number of requests for Digital Papers, the number of centres and the number of candidates for whom papers were requested have all increased again in 2010 (Table 7). There was a 71% increase in the number of requests; the number of centres increased by 38% and the number of candidates by 60%.

Table 7 shows that the mean number of candidates in centres using digital papers has increased by 50% from 2008 to 2010: from 4.43 in 2008 when the papers were first offered, to 6.68 in 2010. The mean number of requests made per candidate has increased by 17%, from 2.52 in 2008, to 2.96 in 2010.

Centres are therefore making more requests for digital papers for more candidates year on year.

Table 7: Digital Question Papers 2008 - 2010

	2008	2009	% change 2008-09	2010	% change 2009-10
Number of requests	514	1,167	127%	2,000	71%
Number of centres making requests	46	73	59%	101	38%
Number of candidates	204	422	107%	675	60%
Mean number of candidates per centre	4.43	5.78	30%	6.68	16%
Mean number of requests per candidate	2.52	2.77	10%	2.96	7%

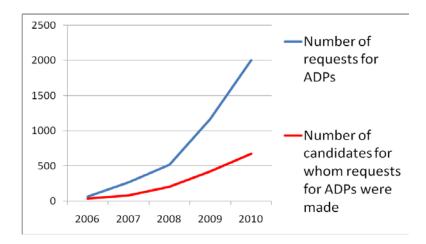


Figure 3: DP requests and candidates 2006 - 2010

Number of requests per candidate

On average, a candidate using digital papers in 2010 requested the papers for around three entries (2.96, to be exact - Table 7).

Table 8 provides further breakdown of the number of requests made on behalf of candidates. Candidates requesting one digital paper comprised 207 or 30% of all digital paper candidates in 2010; with the number of requests varying up to six candidates making requests each for 6 digital papers. Compared to 2009, there are smaller percentages of candidates requesting papers for one or two entries, but a larger percentage of candidates making three, four, and six requests (the percentage of candidates requesting five papers is the same, while there is a drop in the percentage of candidates making seven requests).

Again, this shows that candidates are requesting more digital papers from one year to the next.

Table 8: Numbers of candidates for whom different numbers of requests were made

	Number of candidates 2009	% of candidates 2009	Number of candidates 2010	% of candidates 2010
One request for DQP	149	35%	207	30%
Two requests for DQP	75	18%	116	17%
Three requests for DQP	66	16%	114	17%
Four requests for DQP	49	12%	97	14%
Five requests for DQP	45	11%	72	11%
Six requests for DQP	19	5%	46	7%
Seven requests for DQP	17	4%	21	3%
Eight requests for DQP	2	0%	6	1%

Requests from Centres

The number of requests from each of the 101 centres ranged from one request (made by 13 centres) to 233 requests from one school. The mean number of requests in 2010 was 19.8 per centre (for 6.7 candidates) compared to 11.1 in 2009. In most centres, there has been an increase in both the number of candidates for whom Digital Papers were requested, and the number of papers requested for each individual candidate: more candidates are using more papers as their use is becoming established.

Figure 4 gives a breakdown for the number of centres which requested different numbers of papers.

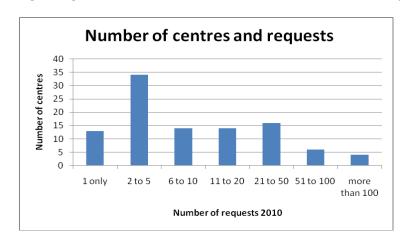


Figure 4: Numbers of requests from centres, 2010

Fifty-eight of the 101 centres requested digital question papers for the first time in 2010. 15 (20%) of the 73 centres that used digital papers in 2009 did not use them in 2010. It would be interesting to investigate why the centres did not use them again in 2010.

Table 9 lists the fifteen centres which made the largest number of requests in 2010, with comparison figures given for 2009. Thirteen of the centres requested more papers in 2010 and two requested fewer; the mean increase across these centres was 91% (i.e. the number of requests for digital papers almost doubled).

These fifteen centres (15% of 101) were responsible for 62% of the requests. The mean number of requests from these centres was 82.

Table 9: Centres from which most requests were made

Centre Name	Number of requests 2009	Number of requests 2010	% change 2009 to 2010
Queen Anne High School	122	233	91%
Campbeltown Grammar School	37	122	230%
St Paul's RC Academy	32	114	256%
The Royal High School	82	111	35%
Kinross High School	59	100	69%
Stranraer Academy	62	89	44%
Prestwick Academy	60	89	48%
Ashcraig School	37	69	86%
Mintlaw Academy	48	61	27%
Bo'ness Academy	68	54	-21%
Harris Academy	20	46	130%
Holy Rood High School	30	41	37%
West Calder High School	23	39	70%
St John's RC High School	9	34	278%
Peebles High School	35	33	-6%

Extrapolating these figures may give an indication of future growth:

- if the 101 centres who used digital papers in 2010 had made the same number of requests (82), on average, as the 15 biggest users, there would be 8,282 requests.
- if every centre in Scotland made 19.8 requests (the mean number across all centres that used digital papers in 2010), there would be around 10,000 requests.

More detailed analysis of the trends across centres is needed in order to determine the likely uptake by centres that have not used the digital papers to date.

Analysis of requests from local authority, FE, and Independent sectors

Table 10 lists the number of requests from each sector (local authority, FE college or independent school) and the number of centres within each sector that requested digital papers.

Centres in Fife made the largest number of requests (with Queen Anne High generating 233 (76%) of the 306 requests). This year, digital papers were requested by 30 of the 32 local authorities: only East Lothian and Orkney did not use them.

Table 10: Local authority, FE and independent sector requests, 2010

Authority/sector	Number of requests 2010	Number of centres 2010	Authority/sector	Number of requests 2010	Number of centres 2010
Fife	306	6	North Ayrshire	30	4
Dundee City	201	5	FE College	28	5
Edinburgh City	175	4	Angus	23	4
Argyll and Bute	122	1	East Renfrewshire	21	2
Aberdeenshire	115	7	Inverclyde	20	1
South Ayrshire	108	2	Aberdeen City	19	2
City of Glasgow	102	5	Shetland Islands	16	2
Dumfries and Galloway	102	4	South Lanarkshire	16	5
Perth and Kinross	100	1	Midlothian	14	1
Falkirk	98	4	East Lothian	13	2
Highland	65	8	Renfrewshire	12	2
Scottish Borders	64	3	East Ayrshire	8	3
West Lothian	59	4	East Dunbartonshire	4	1
Stirling	58	2	Eilean Siar (Western Isles)	4	1
Independent	55	5	North Lanarkshire	2	2
Moray	39	2	Clackmannanshire	1	1

Table 11 tracks the number of request from each local authority or sector since the papers were first offered in 2008. 23 local authorities used the papers in 2008 and 27 in 2009.

As shown in Table 11, there has been an increase in requests from most (28 out of 32) sectors from 2008 to 2010: the number of requests more than doubled in 22 of 32 sectors. The number of requests from Inverclyde, Aberdeen City and North Lanarkshire dropped from 2009 to 2010, with the largest decrease in Aberdeen City (from 52 down to 19).

Table 11: Local authority requests 2008 – 2010

Authority	Number of requests 2008	Number of requests 2009	Number of requests 2010	Difference 2008 to 2010
Fife	12	149	306	294
Dundee City	8	62	201	193
Edinburgh City	82	122	175	93
Argyll and Bute	40	38	122	82
Aberdeenshire	62	65	115	53
South Ayrshire	35	60	108	73
City of Glasgow	19	42	102	83
Dumfries and Galloway	31	89	102	71
Perth and Kinross	32	59	100	68
Falkirk	27	97	98	71
Highland	20	22	65	45
Scottish Borders	6	41	64	58
West Lothian	0	45	59	59
Stirling	13	36	58	45
Independent	10	22	55	45

Totals	514	1167	2000	
Clackmannanshire	8	0	1	-7
North Lanarkshire	2	15	2	0
Eilean Siar (Western Isles)	0	2	4	4
East Dunbartonshire	0	7	4	4
East Ayrshire	0	1	8	8
Renfrewshire	8	13	12	4
East Lothian	0	0	13	13
Midlothian	0	4	14	14
South Lanarkshire	18	1	16	-2
Shetland Islands	18	18	16	-2
Aberdeen City	20	52	19	-1
Inverclyde	13	33	20	7
East Renfrewshire	0	4	21	21
Angus	3	0	23	20
FE College	5	21	28	23
North Ayrshire	4	16	30	26
Moray	18	31	39	21

The percentage of schools or centres from each sector that requested digital papers in 2010 is given in Table 12. It is clear that the use of digital papers in some local authorities has had greater uptake than others. Feedback from practitioners suggests that demand for digital papers has so far been driven by staff in individual schools, although we know that some local authorities are developing authority-wide strategies including for example purchase of software (PDFaloud or Read and Write Gold); ICT support; and CPD for staff. It will be interesting to update Table 12 in 2011 and beyond to reveal trends.

Table 12: Percentage of schools and centres using Digital Papers

Authority / sector	Centres using digital papers 2010	Total number of centres	% of centres using Digital Papers	Authority / sector	Centres using digital papers 2010	Total number of centres	% of centres using Digital Papers
Dundee City	5	9	56%	Moray	2	8	25%
Falkirk	4	8	50%	Independent	5	22	23%
Angus	4	8	50%	Shetland Islands	2	9	22%
North Ayrshire	4	9	44%	Renfrewshire	2	11	18%
Aberdeenshire	7	17	41%	Edinburgh City	4	23	17%
West Lothian	4	11	36%	City of Glasgow	5	30	17%
Scottish Borders	3	9	33%	Aberdeen City	2	12	17%
East Lothian	2	6	33%	Midlothian	1	6	17%
East Ayrshire	3	9	33%	Inverclyde	1	7	14%
Clackmannanshire	1	3	33%	East Dunbartonshire	1	8	13%
Fife	6	19	32%	FE College	5	46	11%
South Lanarkshire	5	17	29%	Argyll and Bute	1	10	10%
Stirling	2	7	29%	Perth and Kinross	1	10	10%
East Renfrewshire	2	7	29%	Eilean Siar	1	10	10%
Highland	8	30	27%	North Lanarkshire	2	24	8%
South Ayrshire	2	8	25%	East Lothian	0	6	0%
Dumfries and Galloway	4	16	25%	Orkney	0	6	0%

Subjects

Table 13 lists the number of requests for Digital Question papers across each of 39 subjects. These totals are across all examination levels, so for example the 503 requests for English are for Standard Grade as well as Intermediate, Higher and Advanced Higher entries. English continues to be the most popular digital paper, accounting for over 25% of requests.

Table 13: Number of requests by subject, 2010

Subject Name	Number of requests 2010	Subject Name	Number of requests 2010
English	503	Home Economics	13
History	155	Human Biology	12
Biology	153	Science	11
Geography	133	Information Systems	11
Chemistry	108	Religious, Moral and Philosophical Studies	10
Modern Studies	108	Product Design	8
Computing Studies	101	Accounting & Finance	8
Physical Education	98	Music	8
Craft & Design	83	Care	7
Physics	78	Religious Studies	7
Administration	67	Technological Studies	6
French	49	Music: Performing	5
Drama	47	Home Economics: Health and Food Technology	4
Mathematics	41	Classical Studies	4
Business Management	37	Media Studies	3
German	33	Psychology	3
Computing	29	Sociology	3
Art and Design	23	Philosophy	2
Mathematics: Maths 1, 2 and 3	15	Accounting	1
Social & Vocational Skills	13		

The same fifteen subjects have been most commonly requested since the papers were first offered in 2008 (Table 14). In 2010 these 15 subjects accounted for 88% of the total number of requests.

Table 14: 15 most popular subjects for Digital Question Papers

Subject Name	Number of requests 2008	Number of requests 2009	Number of requests 2010
English	149	284	503
History	25	92	155
Biology	42	98	153
Geography	40	76	133
Chemistry	33	50	108
Modern Studies	10	37	108
Computing Studies	35	91	101
Physical Education	8	36	98
Craft & Design	17	50	83
Physics	22	42	78
Administration	22	48	67
French	13	39	49
Drama	10	28	47
Mathematics	9	42	41
Business Management	15	28	37
Totals	450	1041	1761

Requests by difficulty

Table 15 shows underlying disabilities or impairments associated with requests for digital papers. The majority of candidates have dyslexia or a specific learning difficulty (60%). The next largest groups are those with moderate learning difficulties and physical or motor impairments (both 13%).

Table 15: Digital paper requests by pupil difficulty

Nature of difficulty	Number of	%
	requests	
Dyslexia	765	38%
Other Specific Learning Difficulty	439	22%
Other Moderate Learning Difficulty	259	13%
Physical or Motor Impairment	257	13%
Autistic Spectrum	75	4%
Physical Health Problems	63	3%
Visual Impairment	46	2%
Learning Disability	37	2%
Social Emotional Behavioural Difficulty	36	2%
Hearing Impairment	11	1%
Language or Speech Disorder	11	1%
Mental Health Problems	2	0%
Blind		0%
Deaf		0%

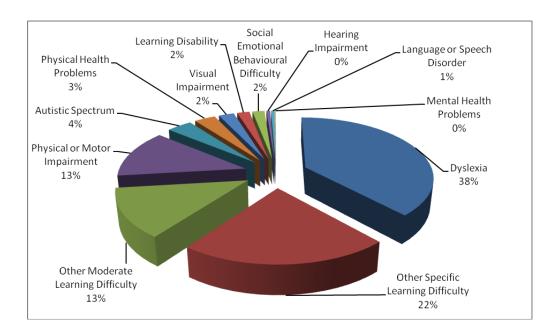


Figure 5: Digital paper requests by pupil difficulty, 2010

2010 Digital Question Papers - Feedback Questionnaire

As well as quantitative analysis, it was important to establish the views of various stakeholders who used digital papers. A feedback questionnaire was sent by email to the 101 centres that requested digital question papers in 2010. Thirty-six returns were received (35%) although the candidate at one school decided not to use digital question papers and so the comments below are based on 35 returns.

Question	Yes	No	Comments
Was the format and quality of the digital papers acceptable?	34 (97%)	1	* There seemed to be some mix up the paper was not set up digitally * Acceptable except for English General Text – PDFaloud didn't
			work with this paper
2. Were there any errors in the	3 *	32	* Text to speech programme did not work with English SG General
papers?		(91%)	Text paper. * Missing field in Craft and Design Foundation
3. Was the delivery of the CDs	33	2 *	* One student didn't have one of the digital papers delivered
at your centre satisfactory?	(92%)		* Wrong paper was sent (wrong subject). No proper way to check
			inventory against actual content of package
4. We provided one CD-ROM	35	0	A couple of centres commented that this provision was enough as
for each subject/level plus	(100%)		they only had a few candidates this year.
one back-up copy. Was this			
provision acceptable to you?			
5. Does the SQA Guidance	33	2 **	* Guidance material gives adequate information but the school
material adequately cover	(94%) *		also required an ICT specialist teacher available at all times/ Had
the arrangements that need			support from Authority IT team/Very helpful/ICT coordinator
to be put in place in order to			found it easy to follow and use
use digital papers?			** More information would be useful on what to do if difficulties
			arise, also network/computer specifications needed for digital papers and speech option
			** Perhaps information about graph work and use of diagrams
			** Yes in terms of setting up, perhaps more detailed guidance for
			invigilators involved in DQPs would also be helpful
			** Yes but we provided a simplified in-house version for issue to
			invigilators who are not generally familiar with the network
			environment
6. Did you use standalone or			Standalone = 11
networked machines (or			Networked = 21
both)?			Both =3
7. Did you use the text-to-	17	18	PDFaloud = 13
speech feature?			Read and Write Gold = 4
Which text-to-speech			Other = 0
program did you use??			

In general, the accuracy and quality of the papers was felt to be very good, and the delivery arrangements were in most cases satisfactory.

2010 Focus Group meeting

A Focus Group meeting was held on 29th October 2010 at CALL Scotland in the University of Edinburgh. Centres which used digital papers in 2010 were invited and 14 staff from 13 schools attended together with SQA and CALL Scotland staff. One teacher from the Gordon Schools was involved via Glow Meet.

The purpose of the meeting was to review the uptake and use of digital papers in 2010 and discuss the issues raised by the feedback questionnaires in order to inform possible developments to the papers and to arrangements.

Feedback on changes to 2010 papers

At the 2009 Focus Group meeting a number of developments were suggested by the group and implemented by SQA. These developments were reviewed by the 2010 Focus Group.

Answer Booklets

Prior to 2010, candidates sitting papers in 'question-only' format would use a word processor to write their answers and the 2009 Focus Group suggested that it would be helpful to provide answer booklets in PDF. SQA made these available for download on the Assessment Arrangements web pages. Candidates in 2010 then had the choice of using the PDF Answer booklets or using a word processor such as Microsoft Word.

The advantage of the PDF booklets is that the same software (Adobe Reader and PDFaloud) can be used to access both question paper and answer booklet. The disadvantage of the PDF answer booklets is that the amount of text on one page is constrained by the size of the text box and text does not flow over to the next page; and it is not easy to type in symbols or format text.

The advantage of using a program such as Microsoft Word is that text does flow from page to page; symbols, equations and chemical formulae can be typed in, and the word processing tools and facilities are more sophisticated.

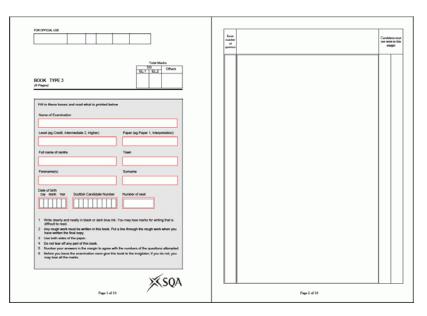
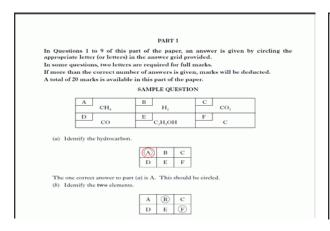


Figure 6: Digital Answer booklet

Tick boxes for Chemistry Standard Grade multiple choice

The Focus Group noted that pupils found it relatively slow and awkward to use drawing tools to mark up answers to the multiple choice section of the Standard Grade Chemistry papers. SQA agreed to insert tick boxes which should be easier and faster to use. The Focus Group confirmed that this was a better method for candidates.



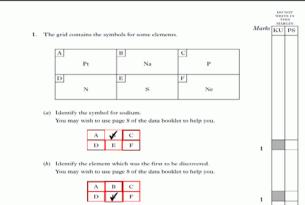


Figure 7: Multiple choice paper (left) with tick boxes inserted (right)

Digital papers with spellchecker enabled/disabled

Candidates are not permitted to use a spellchecker unless it has been requested, and the 2009 Focus Group suggested that SQA should provide two copies of each digital paper: one with spellchecking enabled and one without. The 2010 Focus Group confirmed that this had been helpful.

Issues and suggestions for 2011 Digital Papers

Comments and suggestions given in the Feedback Questionnaires are recorded below, with a corresponding summary of the discussion at the 2010 Focus Group. A number of useful points were made.

Comments from Feedback Questionnaire

Text to speech

- PDF aloud didn't work with English SG General level reading text. The reading script was set out in columns and this made a difference to how it worked.
- Text to speech doesn't read every word accurately, 1928 would be read as one thousand nine hundred and twenty-eight. Words are mispronounced, in particular names and places, which can affect the smooth reading of longer passages. Words containing an apostrophe are not read correctly. Use person to read long pieces of text then use text to speech to read follow-up questions or re-read sections.
- The text to speech was a bit clunky and awkward to use. The candidate elected just to read the instructions and questions himself.
- Improved text to speech software needed. Too much clicking on individual words on diagrams required.
- PDFaloud only read one line at a time despite candidate asking for a sentence. Misread grid references.
- Prefer better gaps between spoken sentences

Focus Group discussion / solutions

Text to speech

- The problem with the SG English paper was because PDFaloud does not read an A3 page, and so SQA will split the paper into two A4 pages (which can be read) in future.
- In order to provide papers that can be spoken out with 100% accuracy, SQA staff would need to listen to every paper, identify mispronunciations and then either:
 - CereProc could update the 'Heather' voice accordingly; or
 - it may be possible to create and distribute a new PDFaloud 'pronunciation dictionary'.
- CALL will investigate the technical options for creating and distributing a PDFaloud pronunciation dictionary.
- CALL also undertook to work through science past papers, identify mis-pronounced words, and liaise with CereProc to update the voice.
- CALL have added a 'Teach Heather' page to the Scottish Voice web site. Staff who identify mis-pronunciations can use this page to add to a database of words which will periodically be passed on to CereProc.

Another issue is that some text embedded in images (e.g. maps, tables) is not read out because it is an image of text rather than readable text. The only way to address this is for SQA desktop publishers to re-draft these images with text, so that it can be read out (assuming the text is required to answer the question).

Digital Answer Books

- Front page of answer books downloaded from SQA web site would not allow a 0 to be entered at the start of a date/number.
- Some answer booklets did not have the Comment/Markup tools activated
- Not possible to insert extra text if returning to a previous page.
- Suggestion that answer books could be included on disk with DQPs.
- The issues with the Answer booklet were resolved by SQA.
- It was agreed that SQA would remove the 'question number' column and to fill the entire page with one text box to address the difficulties of lining up the question number with the answer.

Printing

- Printer problems are the biggest headache.
- Papers could not be printed directly from computer so copied to pen drive to print.
- Problem printing due to amount of drawing but centre believes this was due to their system.
- Schools and centres are recommended to use networked computers and printers for more flexible printing.

Other

- A continuing problem is providing pupils with digital papers for practice especially prelims; it would be helpful if commercial producers such as P&N produced digital versions
- Useful if exam paper could be seen 2 pages at a time with text large enough to read easily
- Geography difficult in this format as one question spanned 3 pages and candidate either had to scroll backwards/forwards or refer to hard copy
- Useful if spell check could be viewed for whole document rather than just the highlighted box
- Wanted to use a digital paper for Higher Chemistry but didn't as it was not possible to enter Chemical formulae except by hand – too confusing for candidate. Would be helpful if software was recommended to enable formulae to be written easily.
- Would like to see on USB rather than CD as some PC CD readers do not work and have to save them onto USBs anyway

- P&N state that "PDFs for adapted digital exams are available on request".
- It was noted that the instruction to 'look at the picture opposite' when the Standard Grade English Writing paper is viewed with two pages on screen was confusing and so SQA will insert another blank page in future so that the instruction and image correspond.
- Issues with viewing papers on screen cannot be resolved without re-designing the complete paper. Centres could consider using larger monitors which are becoming less expensive.
- <u>Efofex</u> is a popular tool for generating chemical formulae on computer and free licences are available for pupils with disabilities who cannot write by hand. CALL will add more advice on Efofex to the Digital Papers web site.
- The USB solution may not be appropriate because some local authorities restrict usage.

Issues and suggestions for Examination Arrangements

- Installing so many digital papers (15+), checking performance, setting up tools, printer options etc in less than an hour is proving increasingly difficult
- Current arrangements are okay for a single candidate
 not so if there were a large number of candidates
- There was discussion about the challenge of installing digital papers one hour before the start of the examination. SQA would consider the issues.

•	sitting multi-level examinations Intention to increase numbers — although possible restrictions would include accommodation arrangements if multi level exam cannot be installed simultaneously Problem with time involved in setting up and recovering info for printing out elsewhere Setting up digital papers only one hour before the start of an exam created a challenge and significant anxiety as English, for example, has number of candidates in double figs. Would like a change to this ruling to allow papers to be set up on the evening before a 9 am start with multiple candidates. Happy to work with SQA to		
	created technical protocols to guarantee security.		
ח	elivery		
•	If DQPs sent to school rather than Invigilator, staff could start loading files when any invigilator arrives — not wait for the one who has been sent the DQPs — who may not be there an hour before the exam.	•	Digital Papers are sent to the school or centre.
Ir	ivigilation		
•	Invigilators a bit worried as their computer skills were poor but they were happy when they realised the technician had it all under control	•	Centres should liaise with invigilators to ensure they are familiar with the Assessment Arrangements.

Positive Feedback from staff

with technology

- The candidates who use digital papers feel they work well only concern is with text to speech facility (Anderson HS)
- We find digital papers a useful additional tool for certain pupils and will continue to use them (Arran HS)

SQA will issue guidance for invigilators.

• Look to expand usage next year (Banchory Academy)

Our invigilators are quite elderly and not up to speed

- We will definitely continue to use digital papers. Pupils and staff feel confident with them (Carnoustie HS)
- Next year access and uptake of DQPs will be greater and increased access to Read & Write Gold (Carrick Academy)
- Hoping to offer more candidates next year. Can only be used with candidates whose computer skills are sufficiently good. (Dumfries Academy)
- Plan to expand and use text-to-speech. Feedback from staff... is that it creates independence in the candidates and allows them to keep the pace up when writing extended answers (Lochgelly HS)
- We did not use speech or draw but intend to do so next year we are confident of further development next session – intend to introduce digital from S1 for internal assessment (Lourdes Secondary)
- Using digital paper from S1... so pupils familiar with the set up and can use effectively when it comes to SQA exams ... would love to have a designated room for digital papers due to the success of digital papers in meeting pupil' needs in our school (Mintlaw Academy)
- 2nd year of use haven't encountered any difficulties many thanks! (Plockton HS)
- 4th year of use made a big difference to pupils and ourselves in terms of increasing independence, and allowing us to provide appropriate arrangements for all pupils who require it (Prestwick Academy)
- We are hoping to present more candidates in future years as we have had such positive feedback (Woodfarm HS)

Engagement and CPD

CALL and SQA have organised and presented at a number of awareness-raising and CPD events, which has helped to develop interest and uptake of the digital papers. Table 16 gives the list of events from 1 April 2009 to 31 March 2010.

Table 16: Engagement and CPD events 2009-10

Date	Topic	Event & Venue	Number of participants
16/6/09	Books for All & SQA Digital Papers	ICT & Inclusion, Dingwall	20
17/6/09	Books for All & SQA Digital Papers	ICT & Inclusion, Edinburgh	30
18/6/09	Books for All & SQA Digital Papers	ICT & Inclusion, Glasgow	25
10/9/09	SQA Digital Papers	CPD, CALL Scotland	35
23/9/09	Books for All & SQA Digital Papers	Scottish Learning Festival	40
1/10/09	Creating Digital Prelims	CPD, CALL Scotland	25
7/10/10	SQA Digital Papers	East Renfrewshire Principal Teachers of Support for Learning	15
8/10/09	SQA Digital Papers	East Lothian Digital Papers planning group, Haddington	6
9/10/09	SQA Digital Papers	CPD, South Lanarkshire	8
30/10/09	SQA Digital Papers	CPD, Forfar, Angus	22
6/11/09	Digital Papers Focus Group	CALL Scotland	12
7/11/09	Digital Papers and Books for All	Dyslexia Ayrshire	60
11/11/09	Creating Digital Prelims	CPD, South Lanarkshire	14
24/11/10	SQA Digital Papers	CPD, Kemnay Academy, Aberdeen	12
26/11/09	Creating Digital Prelims	CPD, CALL Scotland	26
16/3/10	SQA Digital Papers	CPD, Balfron High & Stirling High	12
			362

SQA published two case studies by Fran Ranaldi at Kinross High School, describing how digital papers and resources can be used in school. These are available from the SQA web site at http://www.sqa.org.uk/sqa/30030.1259.html.

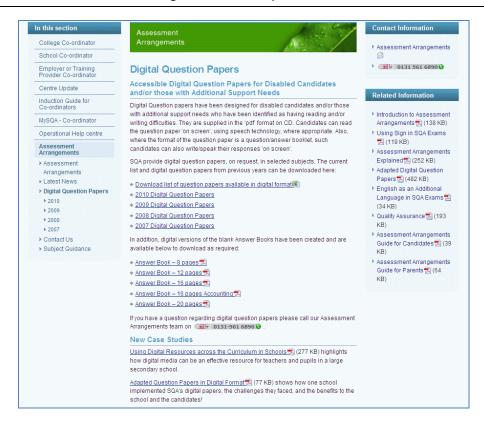


Figure 8: SQA Digital Question Papers web pages

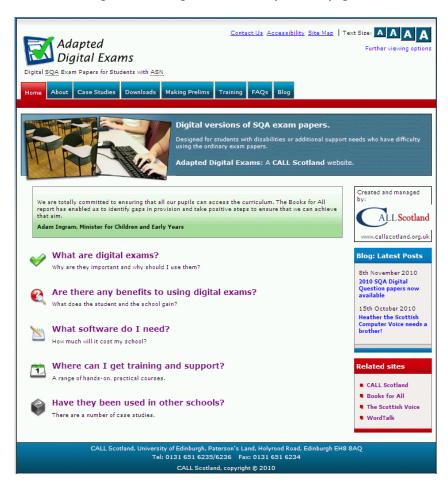


Figure 9: CALL Scotland Digital Question Papers web site

Digital Question Papers 2010