CALL Scotland

SQA Digital Question Papers

2012 Report

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THE UNIVERSITY *of* EDINBURGH

SQA Digital Question Papers

2012 Report

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Contents

Summary

The purpose of this report is to review the use of SQA Digital Question Papers throughout the academic session 2011-12 and to discuss uptake and areas where the papers or the delivery and administration of the papers can be developed.

The report collates information from several sources:
- SQA data on requests for assessment arrangements and for Digital Question Papers;
- questions and feedback from practitioners who have contacted CALL Scotland or SQA with specific questions or comments throughout the session;
- feedback obtained via an SQA online survey in June 2012 following the exam diet;
- feedback from practitioners attending a Focus Group day on 31/10/12.

The key points from the report are:
- The number of candidates using Assessment Arrangements, and the percentage of the total number of candidates, continues to increase. In 2012, 16,537 candidates (10.3% of the total) requested Assessment Arrangements for 57,821 examination entries (7.9% of the total number).
- This represents a 7.7% increase in the number of requests from 2011 and a 30% increase from 2008.
- The most popular methods of support are Extra Time, Separate Accommodation, Reader, Scribe and ICT.

- The number of requests for ICT and Digital Question Papers has continued to increase (by 659 (10%) and 862 (30%) respectively, compared to 2011. 38% of centres (44% of schools) used Digital Question Papers in 2012.
- The number of requests for scribes has remained roughly constant over the past five years (at around 14,500 requests), whereas use of ICT and Digital Question Papers has more than doubled (from 4,471 to 10,656). This shows that ICT is providing a viable alternative to scribes for many candidates.
- The number of requests for readers has risen by 11% over the same period, from 16,936 to 18,814. It is not clear how many candidates are using Digital Papers with text-to-speech (TTS) software rather than human readers, because this data is not collected by SQA, but feedback from schools suggests that around half the centres use TTS, and that around 28% of candidates who use Digital Question Papers use TTS.
- From August 2013, the use of human readers and scribes in literacy unit assessments will not be considered as a reasonable adjustment, while ICT and text-to-speech will be permitted. Therefore it is important to ensure that candidates have access to appropriate ICT and that new Curriculum for Excellence assessment materials are accessible using ICT and TTS.

- Feedback from centre staff regarding the quality and delivery of Digital Question Papers is good. Digital Question Papers offer candidates greater independence and reduce administrative load and costs:

"We are delighted with the advancement of digital presentations. Pupils have a far greater sense of independence and achievement. As far as logistics are concerned, it is an invaluable development in the smooth delivery of additional support."

[Comment from teacher]

2012 Assessment Arrangements

There were 57,821 requests for Assessment Arrangements made to SQA in 2012, on behalf of 16,537 candidates, representing 10.3% of the total number of entries and 7.9% of the total number of candidates. The number and percentage of candidates using AA continues to increase, together with the number of percentage of examination entries for which AA are requested (Table 1).

Table 1: Number of candidates and requests for AA, 2007 – 2012

Year	Number of Candidates requesting AA	% of candidates requesting AA	Number of AA requests / entries	% of entries with AA
2008	12,284	7.2%	44,356	5.9%
2009	13,041	8%	45,612	6.2%
2010	13,962	8%	48,416	6.5%
2011	15,412	9.75%	53,705	7.32%
2012	16,537	10.30%	57,821	7.90%

A request for permission to use AA for a particular entry usually specifies more than one type of support and so the 57,821 requests made in 2012 can be broken down into 139,595 separate requests for specific types of support (Table 2). The most common types of support requested are Extra Time and Separate Accommodation followed by reader, scribe and then ICT (including digital papers): 89% of requests include one or other of these arrangements.

Trends 2011 to 2012

The overall number of requests increased by 4,116 (up from 53,705 to 57,821) between 2011 and 2012. Leaving aside Extra Time and Separate Accommodation, requests for ICT or digital papers saw the largest increases (1,521) followed by a Reader (782). The largest reductions in numbers of requests were for coloured paper (down by 569) and scribe (down by 271).

Table 2 gives the percentage change between 2011 and 2012 for each type of support. There was a 7.7% increase in the total number of requests from 2011 to 2012, and arrangements that increased rose by a greater percentage (i.e. which are more common than the 'average') are identified in the table with bold text.

The arrangements that saw the greatest percentage increase in 2011-12 were: use of signing; an adapted certificate; digital question papers; rest periods and use of ICT. Changes in the number of requests for signing and adapted certificates are most likely to be the result of fluctuations in the needs of the candidates for this particular year rather than a general trend, given the very small numbers of candidates who use these support methods.

The support methods that showed the largest percentage reduction in number of requests were: the paper printed on coloured paper; taped transcription and referral of script to the Principal Assessor.

Trends 2008 to 2012

Over the last five years, the total number of requests has increased by 32,439, from 107,156 to 139,595: a 30% increase. Table 2 gives the numerical and percentage changes in the number of requests from 2008 to 2012 and again, methods that have become more common than this average are indicated in bold.

Table 2: Number and type of Assessment Arrangements requested 2008-2012

Assessment Arrangement	Requests 2008	Requests 2009	Requests 2010	Requests 2011	Requests 2012	% change 2011 to 2012	Diff. 2012 - 2008	% change 2008 to 2012
Extra Time	34,530	35,636	36,962	40,800	44,997	**10.3%**	10,467	30%
Separate Accommodation	25,793	26,381	28,689	31,950	34,744	**8.7%**	8,951	**35%**
Reader	16,936	16,554	16,863	18,032	18,814	4.3%	1,878	11%
Scribe	14,811	14,197	14,313	14,962	14,691	-1.8%	-120	-1%
Use of ICT (including digital papers)	4,741	6,253	7,622	9,135	10,656	**16.7%**	5,915	**125%**
Digital Question Papers	514	1,167	2,000	2,832	3,694	**30.0%**	3,180	**619%**
Prompter / Practical Helper	1,879	2,099	2,404	2,622	2,798	6.7%	919	**49%**
Coloured Paper	1,523	2,050	1,964	2,713	2,144	-21.0%	621	**41%**
Rest Period	1,517	1,434	1,636	1,664	2,036	**22.4%**	519	**34%**
Transcription with correction	1,215	1,179	1,110	1,255	1,402	**11.7%**	187	15%
Enlarged or Adapted Print Question Papers	1056	1,305	1,209	1,305	1,280	-1.9%	224	21%
Transcription without correction	751	626	590	721	736	2.1%	-15	-2%
Calculator	556	660	684	653	604	-7.5%	48	9%
Referral of script to the Principal Assessor	781	540	465	398	361	-9.3%	-420	-54%
Modified Content (e.g. text description of images)	202	277	267	316	307	-2.8%	105	**52%**
Adapted Certificate (e.g. in Large Print / Braille)	181	119	139	91	118	**29.7%**	-63	-35%
Question Paper signed to candidate	43	57	52	43	87	**102.3%**	44	**102%**
Candidate Signs Responses	40	42	38	23	51	**121.7%**	11	28%
Braille	57	31	59	35	40	**14.3%**	-17	-30%
Taped transcription - Live Presentation	30	37	36	40	35	-12.5%	5	17%
	107,156	**110,644**	**117,102**	**129,599**	**139,595**	**7.7%**	**32,439**	**30%**

Figure 1 shows the most popular methods of support over the past five years, from 2008 to 2012 (excluding Extra Time, Separate Accommodation and Rest Period on the grounds that these are changes to the conditions rather than methods of support). Readers and scribes are by far the most common methods of support, but use of ICT and digital question papers have shown the largest increases over this time (an increase of 5,915 requests compared to 1,878 for readers while scribes reduced by 120).
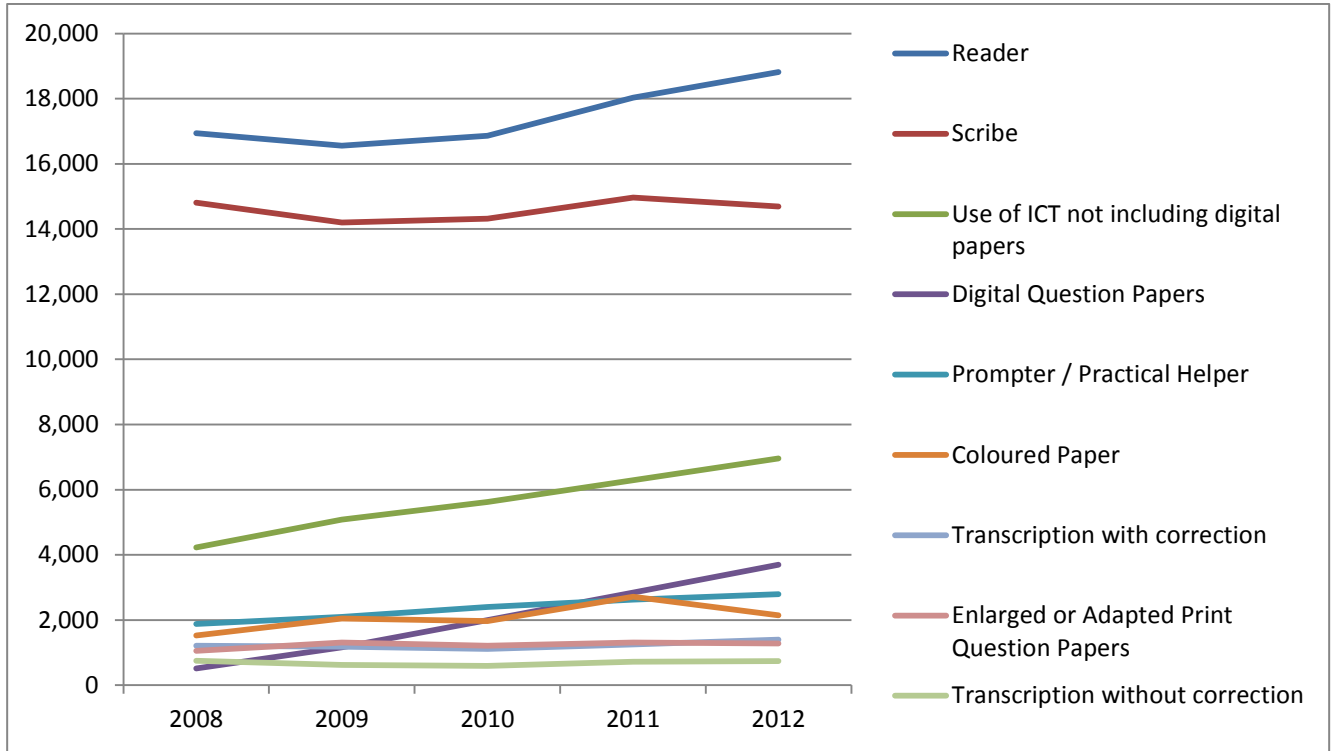

Figure 1: Number of requests for most popular methods of support, 2008-2012

Readers and scribes compared to ICT and digital papers

The pilot studies and previous feedback from staff suggests that some candidates choose ICT and digital papers instead of readers and/or scribes because they feel greater independence and confidence, and that technology requires fewer staff and accommodation resources. We are therefore interested in tracking use of ICT compared to human support.

Requests for a reader rose by 1,878 between 2008 and 2012 (11%) which is a lower rate of increase than the average and of the other methods that support candidates with reading impairments, such as use of digital, coloured and enlarged papers. The 'Prompter/Practical Helper' option was introduced as a category in 2007 – prior to that, helpers would have been counted as a reader or scribe. The number of requests for a Prompter or Practical Helper has increased over the period and this may therefore reflect a re-categorisation of readers/scribes as prompters/practical helpers.

 The proportion of the overall number of requests that includes a reader has dropped from 38% to 32% (Table 3 and Figure 2) while the proportion of requests that include digital papers in particular have increased. While we know that some candidates are using digital papers with text-to-speech instead of a reader, we cannot quantify the number because we do not have that data. However, candidates who use text-to-speech to read digital papers are likely to have used readers, were the digital option not available, and so it seems probable

that the number of requests for readers would have increased by even more than 11%, if SQA had not introduced digital papers.

Comparing scribes to ICT as methods of support for writing and recording appears slightly more clear-cut. The percentage of requests that included a scribe dropped from 33.4% to 25.4%, while other methods of supporting writers, particularly ICT and digital papers, increased. While this does not prove that ICT is replacing scribes because approximately the same numbers of pupils are still using scribes, given the overall increase in the number of candidates and requests, it is probable that many of these candidates would have used scribes had ICT not been an option.

Table 3: Percentages of requests for most popular methods of support, 2008-2012

|	2008	2009	2010	2011	2012
Total number of requests	44,356	45,612	48,416	53,705	57,821
Reader	38.2%	36.3%	34.8%	33.6%	32.5%
Scribe	33.4%	31.1%	29.6%	27.9%	25.4%
Use of ICT not including digital papers	9.5%	11.2%	11.6%	11.7%	12.0%
Digital Question Papers	1.2%	2.6%	4.1%	5.3%	6.4%
Prompter / Practical Helper	4.2%	4.6%	5.0%	4.9%	4.8%
Coloured Paper	3.4%	4.5%	4.1%	5.1%	3.7%
Transcription with correction	2.7%	2.6%	2.3%	2.3%	2.4%
Enlarged or Adapted Print Question Papers	2.4%	2.9%	2.5%	2.4%	2.2%
Transcription without correction	1.7%	1.4%	1.2%	1.3%	1.3%
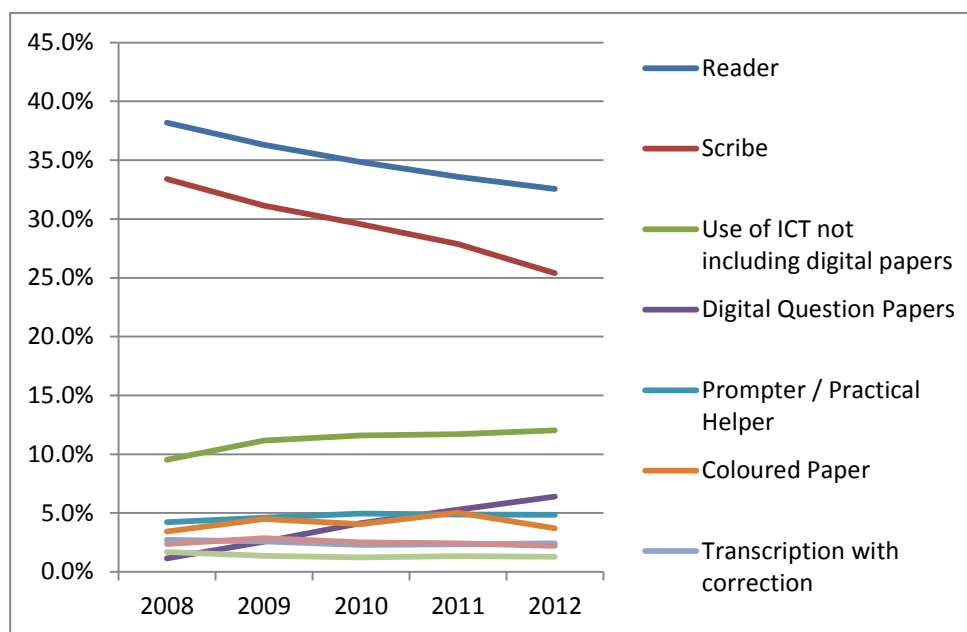
Figure 2; Percentages of requests that include the most popular methods of support, 2008-2012

Recording use of text-to-speech with the AAR system

Given that SQA's policy under the Equality Act[1] from August 2013 is to restrict the use of readers in new National Literacy Units that assess reading, but permit use of text-to-speech, it is important to research the use of text-to-speech in examinations and assessments. However, as discussed earlier, it is not actually possible to determine how many candidates use this technology and therefore we recommend that this should be explicitly recorded by SQA using the AAR system[2]. When making a request for a Digital Question Paper, the user should also have the option of requesting 'with Text-to-Speech').

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[1] SQA Section 96(7) Equality Act 2010 http://www.sqa.org.uk/sqa/64698.html

[2] SQA AAR https://aar.sqainfo.net

Digital Question Papers

Looking in more detail at Digital Question Papers, we see that the number of centres, candidates and requests all increased again in 2012, by 16%, 24% and 30% respectively (Table 4 and Figure 3).

Number of candidates and requests

The mean number of candidates and requests from each centre are also increasing, indicating that centres typically request more digital question papers for more candidates each year.

Table 4: Digital Question Papers 2008 - 2012

	2008	2009	2010	2011	2012
Number of requests	514	1,167	2,000	2,832	3,694
Number of centres making requests	46	73	101	149	173
Number of candidates	204	422	675	1,069	1,327
Mean number of requests per centre	11.17	15.99	19.80	19.01	21.35
Mean number of candidates per centre	4.43	5.78	6.68	7.32	7.67
Mean number of requests per candidate	2.52	2.77	2.96	2.65	2.78
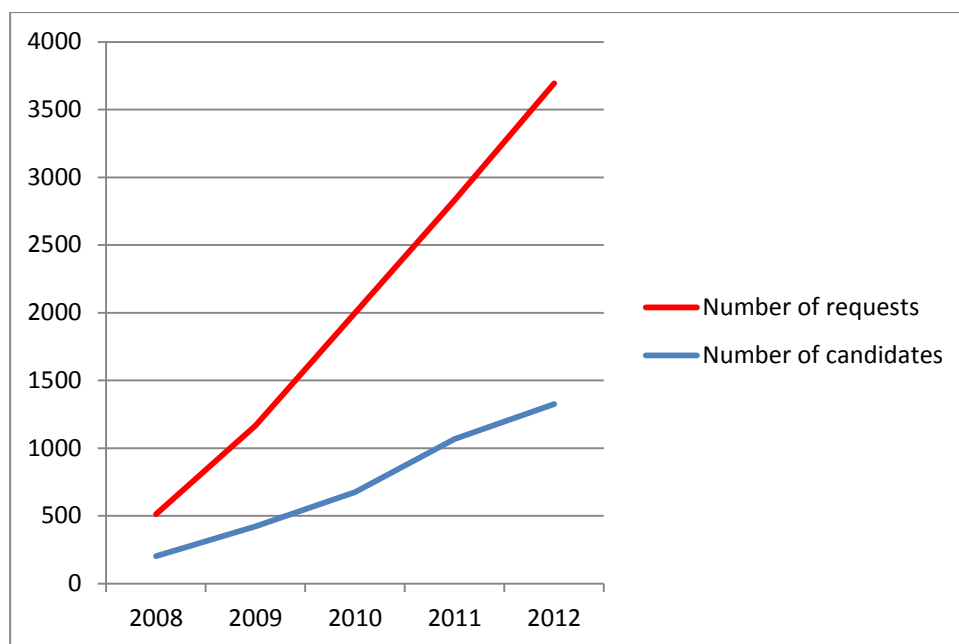
Figure 3: Number of candidates using digital papers, and requests for digital papers 2008 – 2011

The mean number of requests for Digital Question Papers per candidate increased slightly to 2.78 entries (Table 4). The number of requests for digital papers from each of the 146 centres ranged from one request (made by 20 centres) to 161 requests from one school. The mean number of requests from each centre increased slightly to 21.35, from 19.01 in 2011. The mean number of candidates using digital papers in each centre continued to increase to 7.67, from 7.32.

Taken together, these figures show a general trend of more centres requesting more digital question papers for more candidates, each year.

Uptake in centres

Table 5 and Figure 4 show the percentages of centres requesting different numbers of papers from 2008 to 2012. The most notable change here has been the proportion of centres requesting 21 to 50 papers, which rose from 16.8% to 26%.

Table 5: Percentages of centres requesting different numbers of digital papers 2008 - 2012

Number of requests	2008	2009	2010	2011	2012
1 only	10.9%	16.4%	12.9%	13.4%	12.1%
2 to 5	43.5%	28.8%	33.7%	24.2%	24.9%
6 to 10	6.5%	19.2%	13.9%	20.1%	17.3%
11 to 20	23.9%	12.3%	13.9%	14.8%	11.0%
21 to 50	13.0%	15.1%	15.8%	16.8%	26.0%
51 to 100	2.2%	6.8%	5.9%	8.1%	4.6%
more than 100	0.0%	1.4%	4.0%	2.7%	4.0%
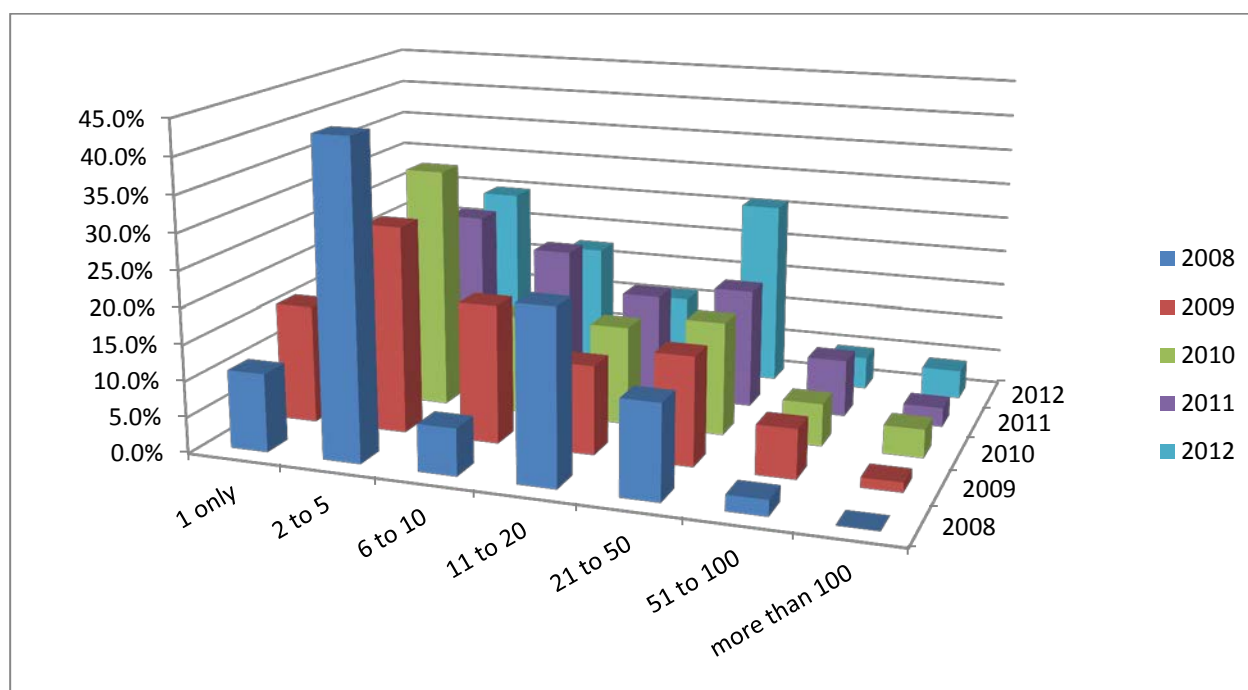
Figure 4: Percentages of centres requesting different numbers of digital papers 2008 - 2011

Table 6 looks at the number and percentage of centres that used digital papers for the first time. The number of 'new user' centres has not varied much over the period, and the percentage of centres that are using digital papers for the first time has fallen as the total number of centres increases.

Most centres that use the papers one year will request them again the next, and in most cases the number of requests and candidates rises, but there are some schools that are not 'repeat users': 13% of user centres in 2011 did not request papers in 2012 (Table 7).

Table 6: Centres using digital papers for the first time, 2008 - 2012

	2008	2009	2010	2011	2012
Number of centres using DPs	46	73	101	149	173
Number of centres using DPs for the first time	34	40	43	65	47
% of centres using DPs for the first time	74%	56%	43%	44%	27%
Number of centres that did not request DPs the following year	0	14	14	17	23
% of centres that did not request DPs the following year	0%	19%	9%	11%	13%

Table 7: Centres that did not repeat use of digital papers, 2008-2012

	2008	2009	2010	2011	2012
Number of centres using DPs	46	73	101	149	173
Number of centres that did not request DPs the following year	0	14	14	17	23
% of centres that did not request DPs the following year	0%	19%	9%	11%	13%

Table 8 gives the number of requests for Digital Question Papers from the 'top 30' centres for 2012, and also for the past five years, to illustrate how uptake has developed for these schools since the papers were first offered in 2008. The 'top 30' accounted for 59% of all requests for digital question papers: this is a smaller percentage than previous years, reflecting the increase in the total number of centres using the papers.

Most centres have made more requests each year, although there are exceptions: usage in Ashcraig, Campbeltown, Kinross and Stranraer peaked in 20010 and has declined since then. This could be coincidence, may reflect fluctuation in usage according to different needs of the candidates for different years, or it could indicate a trend. For example, these schools were all involved in the original pilots in 2006 and 2007 and have been using the papers now for seven years: perhaps they were initially very enthusiastic and keen to use digital question papers and now, having used them and found out which pupils and subjects they suit best, are re-balancing the support provided. Or, it could reflect a change in the needs of the pupils. Alternatively, it is possible that policies regarding methods of support have altered, possibly following staff changes. Further analysis of the types of Assessment Arrangements used in these particular schools is required to investigate changes in usage.

Most schools appear to introduce digital papers gradually, but some such as Blairgowrie or Montrose in 2011 (Table 8), have adopted digital question papers on a fairly large scale from the first or second year. Usage can vary dramatically: for example, in 2008 Queen Anne High School in Dunfermline did not request digital papers at all, but in the following two years the school was the biggest user in Scotland, with 122 and then 233 requests. Yet in 2011, this fell to 31 requests, and in 2012, the school made no requests at all.

Table 8 also gives the mean number of entries for which digital question papers were requested, for the top 30 centres in 2012, and the mean for the top 30 centres in each year. (These are different because the top 30 centres vary from year to year.) It is clear that on average, these centres are making more requests for digital papers each year.

Table 8: 'Top 30' centres requesting digital papers 2008 - 2012

Centre	Number of requests 2008	Number of requests 2009	Number of requests 2010	Number of requests 2011	Number of requests 2012
Harris Academy	0	20	46	125	201
St Paul's RC Academy	0	32	114	161	175
Beath High School	0	5	15	87	151
The Royal High School	52	82	111	60	124
Blairgowrie High School	0	0	0	7	121
Prestwick Academy	31	60	89	84	110
Robert Gordon's College	0	0	0	93	103
Aboyne Academy and Deeside Community Centre	16	34	32	55	96
Montrose Academy	0	0	0	77	77
Campbeltown Grammar School	40	37	122	109	64
Kinross High School	32	59	100	65	62
Stranraer Academy	30	62	89	67	62
Holy Rood High School	15	30	41	53	61
Armadale Academy	0	0	5	50	60
Oldmachar Academy	0	0	0	18	53
Hutchesons' Grammar School	10	18	19	15	50
St Andrew's High School	0	0	0	9	50
Portlethen Academy	0	0	0	32	47
Perth Grammar School	0	0	0	0	45
Albyn School	0	0	30	18	44
Ashcraig School	19	37	69	50	43
Carrick Academy	0	0	19	22	43
Lourdes Secondary School	0	0	25	118	42
Alloa Academy	5	0	0	0	41
Penicuik High School	0	0	0	12	41
Stirling High School	0	0	0	2	41
West Calder High School	0	23	39	28	41
Williamwood High School	0	0	0	0	40
Graeme High School	25	19	5	25	39
Largs Academy	0	2	16	36	38
Total number of requests	**275**	**520**	**986**	**1478**	**2165**
Mean number of requests for all 30 centres for 2008 to 2011	**9.17**	**17.33**	**32.87**	**49.27**	**72.17**
Mean number of requests for the top 15 for that year	**16.10**	**33.63**	**53.37**	**62.90**	**72.17**
% of requests made by the top 30 centres for that year	**94%**	**86%**	**80%**	**67%**	**59%**

The mean number of requests may give an indication of future uptake:

- if every centre in Scotland made 21.35 requests (the mean number across all centres that used digital papers in 2012), SQA would receive 11,678 requests for Digital Question Papers;
- if every centre in Scotland made 86.8 requests (the mean number of requests from the top 30 centres in 2012), SQA would receive 47,480 requests.

Requests from different sectors

Table 9 presents the number of requests from each sector (local authorities, FE Colleges and Independent schools) since the papers were first offered in 2008, rank ordered by the number of requests in 2012.

Table 9: Local authority / sector requests 2008 – 2012

Authority / sector	Number of requests 2008	Number of requests 2009	Number of requests 2010	Number of requests 2011	Number of requests 2012	Change 2011 to 2012	% change 2011 to 2012
Dundee City	8	62	201	322	424	121	60%
Perth and Kinross	32	59	100	111	314	11	11%
Edinburgh City	82	122	175	147	268	-28	-16%
Aberdeenshire	62	65	115	205	251	90	78%
Independent	10	22	55	148	247	93	169%
Fife	12	149	306	190	234	-116	-38%
South Ayrshire	35	60	108	121	177	13	12%
City of Glasgow	19	42	102	206	161	104	102%
Dumfries and Galloway	31	89	102	100	145	-2	-2%
Falkirk	27	97	98	119	130	21	21%
Angus	3	0	23	116	122	93	404%
West Lothian	0	45	59	133	117	74	125%
Aberdeen City	20	52	19	55	99	36	189%
Argyll and Bute	40	38	122	115	98	-7	-6%
North Lanarkshire	2	15	2	26	92	24	1200%
Highland	20	22	65	83	90	18	28%
North Ayrshire	4	16	30	68	88	38	127%
East Ayrshire	0	1	8	96	84	88	1100%
East Renfrewshire	0	4	21	42	75	21	100%
Clackmannanshire	8	0	1	23	68	22	2200%
East Lothian	0	0	13	92	63	79	608%
Stirling	13	36	58	38	62	-20	-34%
Midlothian	0	4	14	24	52	10	71%
South Lanarkshire	18	1	16	26	52	10	63%
Inverclyde	13	33	20	75	38	55	275%
FE College	5	21	28	39	35	11	39%
Moray	18	31	39	54	35	15	38%
Renfrewshire	8	13	12	13	30	1	8%
Scottish Borders	6	41	64	9	16	-55	-86%
Shetland Islands	18	18	16	3	11	-13	-81%
West Dunbartonshire	0	0	0	0	8	0	0
East Dunbartonshire	0	7	4	8	7	4	100%
Eilean Siar (Western Isles)	0	2	4	25	1	21	525%
Orkney	0	0	0	0	0	0	0
Totals	**514**	**1167**	**2000**	**2832**	**3694**	**+ 832**	**+ 42%**

There were increases in the number of requests from most (25 out of 32) sectors between 2011 and 2012; the largest from schools in Dundee City and City of Glasgow. In percentage terms, East Ayrshire, North Lanarkshire and Clackmannanshire showed the largest increase in number of requests. There were lower numbers of requests from 7 local authorities, particularly Fife, Stirling, Scottish Borders and Shetland.

The percentage of schools or centres from each sector that requested digital papers is given in Table 10. The number of centres using digital papers has increased in most local authorities/sectors; in 2012, 38% of SQA centres requested DPs compared to 33% in 2011 and 23% in 2010.

Table 10 provides a good indication of uptake of digital question papers across Scotland, and of the relatively wide variation in usage. Although local authorities and sectors vary greatly across Scotland in terms of size, number of centres, population, socio-economic and geographic factors, it is clear that there is uneven adoption of digital papers, and, given the evident effectiveness and efficacy of the technology and restrictions on use of readers and scribes, action should be taken to bring about a more even uptake. CALL will continue to offer CPD opportunities both centrally and delivered locally, and to create online webinars for staff (see http://www.callscotland.org.uk/Training-and-CPD/CALLlive-Webinars/).

Table 10: Percentage of schools and centres using Digital Papers, 2010 - 2012

Authority / sector	Total number of centres	% using Digital Papers 2010	% using Digital Papers 2011	% using Digital Papers 2012	Authority / sector	Total number of centres	% using Digital Papers 2010	% using Digital Papers 2011	% using Digital Papers 2012
Perth and Kinross	10	10%	60%	80%	Edinburgh City	29	14%	24%	34%
East Lothian	6	33%	67%	67%	Inverclyde	9	11%	22%	33%
Angus	8	50%	63%	63%	Renfrewshire	12	17%	33%	33%
Aberdeenshire	17	41%	47%	59%	Fife	25	24%	28%	32%
Falkirk	9	44%	56%	56%	Aberdeen City	13	15%	38%	31%
Argyll and Bute	10	10%	20%	50%	West Lothian	13	31%	38%	31%
Clackmannanshire	4	25%	25%	50%	Scottish Borders	10	30%	10%	30%
South Ayrshire	8	25%	50%	50%	City of Glasgow	39	13%	26%	28%
Dundee City	11	45%	36%	45%	Eilean Siar (Western Isles)	4	25%	25%	25%
North Ayrshire	11	36%	45%	45%	North Lanarkshire	29	7%	17%	24%
East Ayrshire	9	33%	56%	44%	East Dunbartonshire	9	11%	22%	22%
East Renfrewshire	7	29%	43%	43%	Moray	9	22%	22%	22%
Midlothian	7	14%	43%	43%	Shetland Islands	9	22%	22%	22%
Dumfries and Galloway	17	24%	29%	41%	West Dunbartonshire	5	0%	0%	20%
Highland	31	26%	29%	39%	Independent	77	6%	10%	16%
Stirling	8	25%	38%	38%	FE College	40	13%	20%	15%
South Lanarkshire	22	23%	36%	36%	Orkney Islands	5	0%	0%	0%

2012 Questionnaire: responses from centres

The SQA team created an online survey which was completed by 51 (34%) of the 149 centres that used papers. This is a lower percentage than previous years (45% in 2011; 35% in 2010).

Question	Yes	No	Feedback
1. Was the format and quality of the digital papers acceptable?	49 (96%)	2 (4%)	Most centres were happy with the papers. One respondent noted that the candidate found it difficult to swap between digital question paper and answer book and asked for answer to be inserted into the question paper. The other negative comment was about the PDF answer booklets (Word versions are now available).
2. Were there any errors in the Digital Question Papers used by your centre?	11 (22%)	40 (78%)	22% of respondents reporting errors would seem to be a high figure, although if we consider this in terms of the number of papers produced and used, 11 errors out of 3694 requests could be regarded as a very small error rate (0.3%). 9 of the 11 respondents gave feedback: • 4 were reported text-to-speech issues (mispronunciations in English Close Reading, Biology and Modern Studies; some text not read in Geography Foundation and Business Management); • 3 identified errors with answer boxes; • 2 noted errors with paper copies.
3. Are there any ways in which you think Digital Question Papers could be improved?	17 (34%)	33 (66%)	17 respondents offered suggestions for improving digital papers. The most common suggestions were concerning text-to-speech, but only one concerned the digital papers: the other three were because schools were using the Adobe Read Out Loud tool rather than recommended software (e.g. Ivona MiniReader). 3 respondents asked for answer boxes to be added to question-only papers; 3 made suggestions for features which are actually already available in the digital papers of Adobe Reader software; 2 asked for the answer booklets to be provided on CD (they are provided on the SQA web site).
4. Was the delivery of the CDs at your centre satisfactory?	48 (96%)	2 (4%)	Delivery of the papers on CD was in most cases satisfactory. One respondent received the wrong CD in an envelope.

Area for improvement	Number of suggestions
Text to speech issues	
Request for Answer boxes on Question Only Papers	
Lack of staff knowledge	
Request for Answer Booklets on CD	
Issues with maths or science	
Issues with Answer Booklets	

Question	Yes	No	Feedback
5. We provided one CD-ROM for each subject/level plus one back-up copy. Was this provision acceptable to you?	49 (100%)	0 (0%)	Most centres were happy to receive on CD per subject/level.
6. What were the accommodation arrangements for candidates who used Digital Question Papers in your centre?	Open ended response		Centres used a wide range of accommodation arrangements. There were 48 replies to this question. The most common type of accommodation was an ICT suite. **Accommodation used** ... **Numbe** ICT suite / room ... 2 Classroom Separate accommodation Support for Learning Base Library
7. Did you encounter any problems with the examination arrangements for candidates who used Digital Question Papers in your centre?	3 (6%)	48 (94%)	2 respondents experienced delays because they did not realise that answer booklets had to be downloaded from the SQA web site; 2 respondents had problems printing (insufficient printers or paper); one school had a power cut in the whole town during Higher English.
8. Did you encounter any technical problems with the examinations for candidates who used Digital Question Papers in your centre? Please include details here of any difficulties encountered with PC equipment, etc.	20 (40%)	30 (60%)	Out of the 21 replies: • 6 respondents mentioned computers crashing; • 4 respondents had printer problems (not working, running out of ink); • 2 had network or server problems; • 2 complained about slow computers; • 2 did not have PDFaloud installed; • 2 had problems with the computer reading CDs; • one had issues with login profiles not giving correct access; • one could not get the Scottish voice to work; • one hard disc crashed. The issues described are typical problems experienced when using computers in schools. The number of issues would seem to be relatively small considering there were 2,832 exam entries for which digital papers were requested.
9. Does the SQA Guidance material adequately cover the arrangements that need to be put in place in order to use digital papers?	46 (94%)	3 (6%)	Respondents were generally satisfied with the SQA guidance.
10. Did you use standalone or networked machines (or both)?	Standalone = 11 (22%) Networked = 31 (62%) Both = 8 (16%)		SQA and CALL recommend the use of networked computers because it is more efficient and in most cases reliable. The percentage of standalone computers being used has fallen over the years since 2008.
11. For the 2012 examinations, if candidates required the Question Paper to be read out, SQA	35 (51%)	28 (49%)	The percentage of centres reporting that they used text to speech software fell slightly from the previous year, to just over half.

Table for Question 10:

	2008	2009	2010	2011	2012
Standalone	47%	38%	31%	30%	22%
Networked	32%	48%	60%	43%	62%
Both	21%	14%	9%	27%	16%

Question	Yes	No	Feedback
recommended that centres use either PDFaloud or Texthelp Read and Write Gold. Did any of your candidates use the text-to-speech feature?			**Was text to speech used?** 2008 2009 2010 2011 2012 Yes 45% 40% 49% 56% 51% No 55% 60% 51% 44% 49% Of the centres that used TTS, PDFaloud is still the most commonly used software, although it is likely that it will be less popular in future because the version that is currently used in most schools does not function with current versions of Adobe Reader. **Text to speech tool** 2008 2009 2010 2011 2012 PDFaloud 30% 50% 76% 71% 72% Read and Write Gold 50% 36% 24% 23% 20% Adobe Read Out Loud 10% 9% 0% 0% NA Other TTS 10% 5% 0% 6% 8%
12. Please list the name, subject and level of all candidates at your centre who used text-to-speech.			Of the 22 responses to this question, 19 centres reported 82 candidates who used TTS for 171 entries: an average of 4.3 candidates per centre and 2 entries per candidate. The most common subject where TTS was used was English (62 entries). Followed by PE (14 entries), Biology and History (both 9 entries), Computing, Maths and Drama (8 entries each).
13. Did any of your candidates sitting Digital Question Papers use Comment and Markup tools?	4 (8%)	47 (92%)	The percentage of centres reporting that candidates used the onscreen drawing, comment and markup tools increased from 2011 to 12%, although they are still employed relatively rarely. Centres reported using the tools in Graphic Communication, Physics, Biology, Computing, English, Modern Studies and Geography. **Comment / Markup tools used?** 2011 2012 Yes 4 (8%) 6 (12%) No 47 (92%) 43 (88%)
14. For the 2013 Examinations we are investigating the option of distributing Digital Question Papers via the SQA Secure website rather than issuing them on CD. Would this option be acceptable for your centre?	32 (63%)	19 (37%)	There are still many respondents who feel that online delivery of DQPs would not be reliable enough, either due to concerns over school network or internet connections, or who stated that CDs were more secure. **Provide DQP online?** 2011 2012 Yes 32 (63%) 29 (60%) No 19 (37%) 19 (40%)
15. Please provide any additional comments here. We would be particularly interested to know your future plans for using Digital Question Papers, your thoughts on delivery systems and anything else you have to say.	Open ended response		There were 27 comments from centres which are reproduced below.

Additional comments from staff in 2012

The comments from staff provide some useful insights to benefits and challenges of using digital papers. In general, staff are very positive about the papers.

- *I would like to see the continued development/use of digital papers. Up until now I have not used text to speech software however the school has just purchased ClaroRead and I am going to investigate its use with digital papers. At first glance it may not be as suitable for use with PDF format as some of the other text to speech software. The printing of papers is demanding in terms of paper and toner, especially numbers of pupils using this support continues to increase.*
- *The time involved to set up all machines prior to each examination when you had four or more pupils needs always to be considered by the school*
- *I enthusiastically endorse the use of digital papers for pupils with ASN - Specific learning difficulties with reading, writing, spelling. Also, more able pupils who have poor handwriting and presentation skills can use the papers to type answers straight into paper rather than cope with paper exam and laptop. We have used the C.A.L.L. centre website and materials to train staff via twilight courses. Now virtually every department in the school has one person trained, plus there are 2 classroom assistants and 2 ASN assistants who can now create digital prelims from Word documents using Adobe Professional which has been installed on computers. There were still pupils in school who were more comfortable with Reader and Scribe this year because this is the method they were familiar with. However, I am encouraging most of ASN pupils to consider this method in the future. This is our second year of using digital and I am convinced it is the way ahead. I have encouraged English Department to prepare S2 Close Reading Assessments in digital format so that this becomes the norm for pupils as they move through the school and undertake assessments. Science is also beginning to develop this method for pupils.*
- *I like how the SQA is introducing digital papers into exams but making them more user friendly would make it better.*
- *I like the idea that pupils can type their own work without the aid of a scribe. However, technical hitches with saving work (one pupil had to resit the exam as the work could not be saved and was lost), has made me nervous about using the digital exams again.*
- *Pupils appreciate being able to type answers.*
- *This was our first attempt at using Digital Papers and we felt that it went much better than we had expected! Will be using next year with a larger number of pupils.*
- *This was our first attempt at using the digital format so we only presented a few pupils in 2 subjects. We are happy to expand this next year with the right candidates. The candidates' response to using digital format was very positive.*
- *Candidates who need to type answers will continue to use digital papers if possible. More candidates with reading issues will begin to use digital papers, hopefully, after training in using screen readers.*
- *We have used DQPs for a number of years now and feel we have the systems in place to deliver these appropriately. Receiving CD of the exams on the day is useful, but I'm sure that delivery through the SQA secure website would also work well.*
- *It is the first year that we have used digital papers. They really suited the pupil concerned. We will use them again for the same pupil when he moves to S5. At present we are unsure about any other candidates for next session. However, if there are any other appropriate candidates we won't hesitate to use digital papers in the future.*

- *Training and advice from SQA for support staff who are not from IT departments but may have to supervise pupils doing these digital papers. Instructions on things like switching off and on spell checkers, moving to new page etc.*

- *Pupils are trained in using digital papers from 1st year onwards. Subject workbooks and class tests are in digital format for ASN pupils. This will continue to be updated and developed.*

- *This was our first year of using Digital Question Papers. We were very pleased with how it went. One pupil used them for most of her Standard Grades and it made a huge difference to her and her overall confidence.*

- *I would anticipate increasing the training and presentation of digital papers in the future. Downloading from a secure websight would have to allow time to set up more than PC.*

- *Plan to use Digital Papers for Social Subjects next session in S4 exams.*

- *I fully intend to broaden my use of Dig. Papers in 2013 now that I have tried them. I admit to being extremely nervous of using them for the first time but having bitten the bullet I was extremely impressed. They work for pupils who are not entirely relaxed with a Reader / Scribe and allow greater independence.*

- *We are very keen to continue to use digital exams. There are ongoing related issues though such as staff cutbacks (severe recently) and this means that we have little time to provide practice for candidates in advance of exams. There is also little time to teach youngsters keyboarding skills to speed up their typing. If they are very slow at typing up answers, they are generally not keen to use a digital exam. Cutbacks have also meant that we now have very few printers in school and so if a number of candidates are printing at the same time, there can be quite a backlog. This is a problem if exams are timed to run very close together as it does not allow time for candidates (and staff) to have a proper break and also for staff to reload the next exam.*

- *Hoping to increase the number of pupils using digital media. Would like to employ the method more but realise that pupils require to practice using digital papers often before final examination. Limited resources in some areas eg. on computer in English classrooms makes this very difficult.*

- *Digital papers are a great improvement on using readers and scribes as it promotes independence and puts the candidate in control.*

- *I intend for Digital Question Papers to be extended in school next session - particularly for more able candidates with diagnosis of dyslexia who are intending to stay on until S6 as this provides a sustainable means of candidates showing what they are capable of beyond school in higher / further educational setting while having candidates are left as independent as possible. When JP3 is duly extended and rolled out next session there will be very limited need to use SQA external Exam arrangements for pupils who are able to complete internal assessments only however we do, as a school, intend to try and encourage the use of Digital Paper for internal exams also.*

- *I like the Digital exams - but they are dependent on excellent ICT within the school. I think they make young people more independent.*

- *We only had 1 6th year pupils who used 1 Digital paper this year. No issues reported back. Thanks*

- *I had a young person, who had a problem with writing by hand, which only came up after requesting copies of digital papers, it would have been useful if they could have been transmitted through the secure website or through a late request system as they do not require the specialisation of the adapted papers - either by colour ,size and orientation of paper, or size and type of font.*

- *We are delighted with the advancement of digital presentations. Pupils have a far greater sense of independence and achievement. As far as logistics are concerned, it is an invaluable development in the smooth delivery of additional support.*

- *The stand alone system has worked well but as the numbers are growing for the digital papers it would be hoped that we could progress onto a secure networked system. The school alone do not have the 'power' to make this transition and we therefore are relying on the support from the NLC computer centre to support us on that. Apparently there has been a change in personnel this year and we intend to contact them before the end of term. Digital papers are a great opportunity for our students to maintain independence and confidence. It is our hope to further develop this resource and extend this throughout the school community.*

- *Spellchecker still tends to be set to US English. Digital Answer Books sometimes jump in formatting, resulting in rather awkward page breaks - don't know if this is caused by the candidates at times or not. However, the digital answer books in Word are much more user-friendly than the previous ones in PDF format. Inserting date of birth and candidate number to a digital answer book is frustrating as you can't tab from box to box. It might be better simply as one text box to take the whole number/date. Still one or two confusions for questions on digital papers which ask for lines to be drawn from a word in one column to a word in another column. The candidates cope with this, but if there were a way to solve this glitch, it would be appreciated.*

- *I thought the digital papers were easy to set up and good for the pupils who used them. We would like to use digital papers again- if right for the pupils. Getting the prelims in digital format was not easy and required some time to set up - this is my only negative point - as practice at this point is important.*

- *Felt we wasted paper in printing off complete answer books with blank pages.*

- *This is our second year using digital papers but last year we had just a couple. This year we had most of our AA pupils on digital and the system worked extremely well and the feedback from pupils and staff was very positive. We will definitely be using them in future. We use digital papers all through school so that when the pupils sit SQA exams they are completely used to the system.*

- *I am glad that you are constantly improving your answer booklets available online. I think it would be advisable though that they are also provided on the CD along with question papers / examination tasks. I am looking forward to further developments, definitely introducing speech recognition software which would allow pupils with poor keyboard skills / poor fine motor skills / severe literacy difficulties to take exams in digital format and become more independent in their assessments. Right now digital question papers seem to be appropriate only for children with mild literacy difficulties who have good keyboard skills, which unfortunately excludes a number of pupils with additional needs. Thank you.*

- *We plan to utilise this facility more at Mearns Academy - pupils liked using this format. Where there were large amounts of pupils sitting Digital Question papers it would have been helpful to access papers earlier than 1 hour before to allow for setting up. I will be continuing to develop the use of these exams. Feedback from pupils has been very positive.*

2012 Focus Group meeting

The fifth annual Digital Question Paper Focus Group meeting was held at CALL Scotland, University of Edinburgh, on 31 October. 37 centre staff attended together with 4 from SQA and 3 from CALL.

The Focus Group reviewed the overall requests for and use of digital papers in 2012 and discussed issues raised by the feedback questionnaires, in order to inform possible developments to papers and arrangements.

Answer Booklets in Word DOC format

The 2011 Focus Group members requested answer booklets in Microsoft Word (DOC) format for the 2012 diet, to enable candidates to take advantage of better text formatting tools, insert mathematical and scientific expressions and to use a wider range of text to speech tools. Word format answer booklets were made available on the SQA web site in January 2012 and the 2012 Focus Group felt that these were a helpful alternative to the existing PDF booklets.

The booklets are provided with the required number of pages and staff felt that this led to wasted paper being printed off. Therefore SQA agreed to amend the papers to comprise the front cover, single pages for content (that would automatically expand as text is typed) and a rear cover. These were added to the SQA web site (http://www.sqa.org.uk/sqa/30030.html) in February 2013.

Data Booklets

Similarly, the Group asked for Data Booklets to be provided in PDF, and SQA made these available on their web site in February 2013. Data booklets are provided for Chemistry, Physics and Technological Studies.

Text to speech (TTS)

The Focus Group appreciated the availability of Heather and Stuart, the free high quality Scottish computer voices, but noted that some words and terms are still not pronounced correctly, and that occasionally some text elements cannot be read using TTS.

Pronunciation errors

Following the 2011 diet, CALL staff reviewed the papers, identified 259 mispronounced words and liaised with CereProc to create new versions of the voices with corrected pronunciation. This exercise was repeated for the 2012 papers and the number of mispronunciations was much smaller, showing that the voices have been improved [3].

Text elements that cannot be read

Some text elements cannot be read out by the computer because they are images of text as opposed to readable text. SQA desktop publishers have been careful to avoid use of unreadable text elements and a review of the 2012 papers[3] found that the number of unreadable text objects seems to have been reduced.

Downloadable question papers

The possibility of providing digital question papers for download from the secure SQA web site rather than distributing papers on CD was again discussed and again, feedback from the questionnaires and the focus

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[3] Nisbet, P.D. (2013) Accessing SQA Digital Question Papers with Text to Speech Software. CALL Scotland 2013.

group indicated that this was not regarded as a viable option at this time because of concerns over internet and network reliability and security.

Higher multiple choice papers

At the 2011 meeting staff requested provision of 'clickable' multiple choice Higher answer sheets where the candidate can mark the correct answer by clicking on the appropriate response (Figure 5). This is technically possible but has not been tested and so CALL and SQA should explore options for the 2014 examination diet.
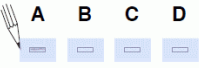

Figure 5: Digital Multiple choice question

Engagement and CPD

Table 11 lists conference and training events between 1 April 2011 to 31 March 2012 where CALL staff delivered CPD or presented on the digital question papers. In-service training is primarily funded by schools and local authorities while presentations and conferences are supported through CALL core funding from the Scottish Government. This direct engagement with staff and parents helps raise awareness and builds capacity in schools and centres, and will have led at least in part to the increase in use of DQP across Scotland.

Table 11: Engagement and CPD events 2011-12

Date	Topic / title	Event & Venue	Number of participants
18/4/11	SQA Digital Question Papers	Edinburgh Telford College	12
29/4/11	Accessible Digital Resources & Digital Question Papers	Greenwood Academy, North Ayrshire	20
3/6/11	Independent with ICT or reliant on readers? Can technology replace readers in exams?	British Dyslexia Association International Conference Harrogate	50
8/6/11	Digital Papers and Books for All	Dyslexia Scotland South East	18
15/6/11	Reliant on Readers or Independent with ICT?	ICT & Inclusion, Edinburgh	30
16/6/11	Reliant on Readers or Independent with ICT?	ICT & Inclusion, Glasgow	30
20/6/11	SQA Digital Question Papers	Oban High School, Argyll & Bute	10
2/9/11	eLearning Alliance FE/HE SIG	Abertay University Dundee	15
6/9/11	SQA Digital Question Papers	Stirling	6
25/9/11	Books for All & SQA Digital Papers	Dyslexia Scotland AGM	100
1/10/11	SQA Digital Question Papers	Dyslexia Scotland Education Conference 2011	55
10/11/11	SQA Digital Question Papers	Garnock Academy, North Ayrshire	14
15/11/11	SQA Digital Question Papers	Mearns Academy Aberdeenshire	18
28/11/11	SQA Digital Question Papers	Banchory Academy, Aberdeenshire	12
29/11/11	SQA Digital Question Papers	Dundee College	12
6/12/11	SQA Digital Question Papers	Hamilton, South Lanarkshire	8
25/1/12	SQA Digital Question Papers	Loudon Academy, East Ayrshire	5
7/2/12	SQA Digital Question Papers	Dundee	12
8/2/12	SQA Digital Question Papers	Dundee	12
10/2/12	SQA Digital Question Papers	Dunoon Grammar School, Argyll & Bute	18
14/2/12	SQA Digital Question Papers	St Andrew's High, North Lanarkshire	25
6/3/12	SQA Digital Question Papers	SQA Equality Day, Dalkeith	30
9/11/11	SQA Digital Question Papers	CALL Scotland, Edinburgh	17
30/9/11	SQA Digital Question Papers	CALL Scotland, Edinburgh	12
3/11/11	SQA Digital Question Papers	CALL Scotland, Edinburgh	10
17/11/11	SQA Digital Question Papers	CALL Scotland, Edinburgh	18
		TOTAL	**569**

Figure 6: SQA Digital Question Papers web pages

Figure 7: CALL Scotland Digital Question Papers web site