



Using Digital Resources across the Curriculum in Schools

Kinross High School Case Study

**Fran Ranaldi, Education Additional Support Officer,
Perth and Kinross Council**

First edition: September 2010

Publication code: BE5606

Published by the Scottish Qualifications Authority

The Optima Building, 58 Robertson Street, Glasgow, G2 8DQ

Ironmills Road, Dalkeith, Midlothian EH22 1LE

www.sqa.org.uk

The information in this publication may be reproduced in support of SQA qualifications. If it is reproduced, SQA should be clearly acknowledged as the source. If it is to be used for any other purpose, then written permission must be obtained from the Editorial team at SQA. It must not be reproduced for trade or commercial purposes.

© Scottish Qualifications Authority 2010

The views expressed in the report are those of the author(s) and do not necessarily reflect those of SQA or any other organisation(s) by which the author(s) is/are employed. SQA will be making this research available online in order to provide access to its contents for those interested in the subject.

This document can be produced, on request, in alternative formats, including large type, Braille and numerous community languages. For further details telephone SQA's Customer Contact Centre on 0845 279 1000.

SQA is committed to using plain English. We will try to make our publications as easy and straightforward to understand as we can, and will try to avoid all unnecessary jargon. If there's any language in this document that you feel is hard to understand, or could be improved, please write to Editor, Editorial team, at the Glasgow address above or e-mail: **editor@sqa.org.uk**.

Background

Meeting children and young people's needs is a primary focus for all educational establishments. The provision of an accessible curriculum, which is supported by accessible digital course resources, is an important factor for all schools to consider when planning to meet a wide range of learners' needs effectively. Education authorities, schools and educational practitioners have duties and responsibilities to provide an accessible curriculum and to meet the needs of all learners, as set out in the Scottish Education legislation and the Disability Discrimination Act (DDA) 2005. SQA's digital exams and digital course resources together provide a cohesive support model.

The Disability Equality Duty (DED) 2006 is UK-wide legislation which covers all policies and services to the public, including education

Education legislation

All children including those with ASN and disabilities are covered by:

- ◆ Education (Scotland) Act 1980 SEN Framework
- ◆ Children (Scotland) Act 1995
- ◆ Standards in Scotland's Schools, etc Act 2000
- ◆ Education (Additional Support for Learning) (Scotland) Act 2009 as amended



Pupils with disabilities

Disability Discrimination Act 1995 & 2005 *Rights not to be discriminated against*
SENDA 2001

Education (Disability Strategies and Pupils' Educational Records) (Scotland) Act 2002
(DSPERA) – (Accessibility Strategy)

Part IV, DDA 1995 amended Code of Practice (Schools), DRC 2002
DED 2006

Fig. 1

Introduction

What are accessible digital resources?

Accessible digital resources are teaching materials that can be accessed by pupils using a range of ICT formats. They are relevant for all subject areas in coursework, internal assessments and external examinations. Digital resources enable a wide range of needs to be met effectively and appropriately across the curriculum by pupils in all years, and are particularly effective from S1–S6.

When developed appropriately, a digital teaching resource can be adapted (with the minimum of work) from an electronic file, eg a Word document, and used for a wide range of additional support needs (ASN) (see Fig. 2).

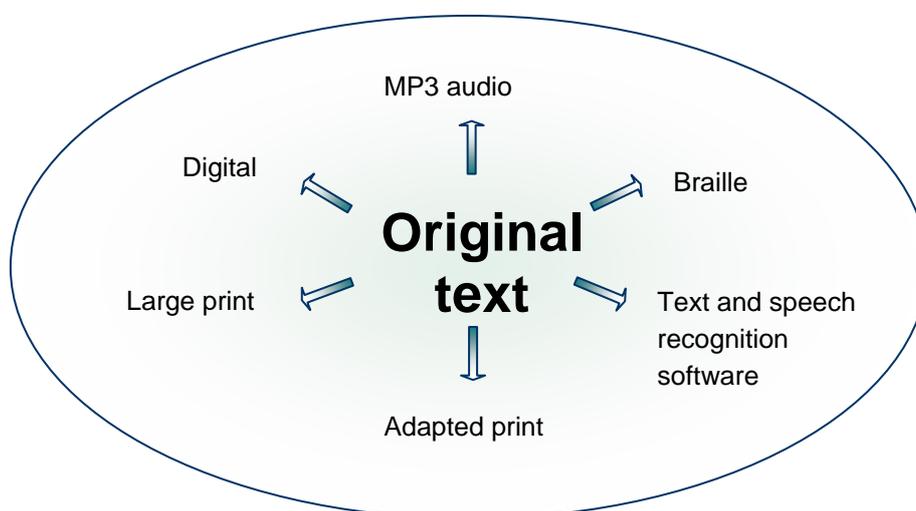


Fig. 2

Accessible digital resources provide important benefits for all involved, some of which are:

- ◆ increased access to all areas of the curriculum for children and young people
- ◆ raised confidence and attainment for learners — through appropriate opportunities for children and young people to demonstrate their understanding from learning, to the best of their abilities
- ◆ reduced preparation time for teaching and support staff when producing support materials

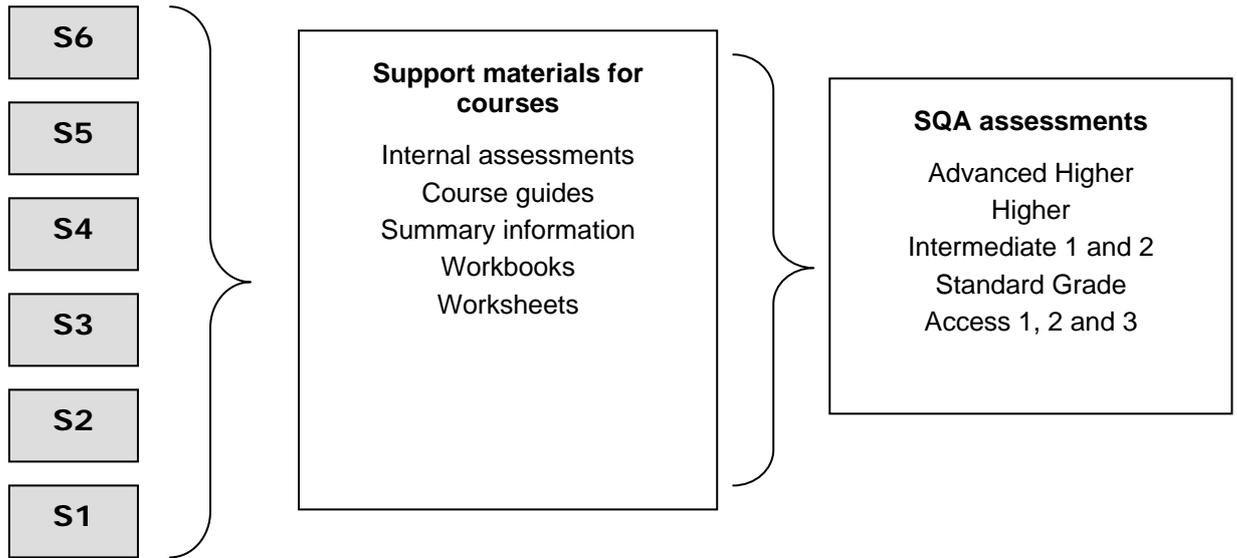


Fig. 3

SQA's assessment arrangements require that the support mechanisms, which are in place for pupils in examination conditions, reflect the support which the pupils use throughout their courses. Using digital resources across the curriculum meets the SQA assessment arrangements criteria and importantly, also enables pupils to become comfortable and familiar with the format.

The benefits which pupils experience when using SQA digital papers were acknowledged and highlighted in the SQA 2006 evaluation (*SQA Adapted Examination Papers in Digital Format — 2007 Pilot Project Report*). The continuing rise in requests for digital exam papers each year indicates that, for many candidates, this is a very positive development. There is a demonstrated, positive link between the digital exam paper and the curriculum materials the candidate accesses.

Benefits for candidates

Learners who use digital resources benefit from raised levels of confidence and increased independence. They also gain from easier access to:

- ◆ SQA digital exams
- ◆ subject resources on a PC/Mac/netbook/laptop which can be used in the classroom along with their peers, elsewhere at school, or at home
- ◆ text-recognition software — to independently read Microsoft Word resources and/or pdf files of published textbooks

Text-recognition software, such as Microsoft Reader's Text-to-Speech package, allows learners to highlight text and have it read out by the computer. They can type answers into the answer boxes on screen and listen to their answers. It will also allow the learner to use the keyboard, mouse or switch to 'turn the pages' of a book if they experience difficulties doing this independently.

Ultimately, the benefits of increased self-confidence and independence impact positively on attainment.

Benefits for teaching and support staff

Teaching and support staff will find that they can meet a range of needs with one resource, for example:

- ◆ dyslexia
- ◆ visual impairment
- ◆ physical health problems
- ◆ illegible handwriting — digital resources are often easier to mark

Once a resource has been produced, font size, illustrations, examples and questions are all easy to alter, thus saving teachers' time.

Overview of some practicalities to consider

If education establishments want to maximise the benefits of digital exams then they will need to focus on the practicalities involved with providing this support. For example:

Q What knowledge and understanding are required to produce the resources?

A Awareness and understanding of the technical aspects and quality assurance involved with the production of accessible resources.

Q Who will produce them?

A Teachers when preparing their course material. Support and administration staff may be involved in the production of resources.

Q When to use the digital resources?

A They can be used for school communication/information; classroom and course resources; and internal assessments — NABs, end-of-Unit tests.

Q What are the implications for education authorities and establishments which are considering using this support strategy?

A It will help with your local authority's interpretation of legislation — especially understanding and prioritising accessibility strategies. You will have to allocate time and support for staff — including staff training.

Case study: Kinross High School and digital resources

Background

Two years prior to the SQA digital exam 'live' pilot in 2006, Kinross High School began to develop accessible digital resources across participating subject departments. During the initial stages of the school development plan in 2004, the decision was taken to focus on this area as a contribution towards supporting the school and subject departments in an effort to meet learners' needs. The aim was to increase pupil accessibility to the curriculum and to promote pupils' independence and confidence in their learning, with the hope of also raising attainment.

Without support, it was recognised that pupils were not able to reflect their knowledge and understanding to the best of their abilities. The difficulties pupils experienced in accessing their subject material and assessments were wide ranging and existed across all years. Some examples are listed below:

- ◆ Difficulties with the acquisition of literacy and numeracy skills
- ◆ Motor impairment
- ◆ Sensory impairment
- ◆ Dyslexia
- ◆ English as an additional language
- ◆ Concentration and focusing issues
- ◆ Illegible handwriting

The development and production of resources using ICT and a standardised format across the participating subject areas provided pupils with a higher level of accessibility and continuity between subjects. The resources were designed from the outset to be:

- ◆ accessible for a wide range of needs
- ◆ easily converted into different print, audio and digital formats (as shown in Fig. 2)

This proved to be a cost-effective strategy.

Subject teachers and digital resources

Meeting the needs of learners is, first and foremost, the responsibility of the classroom teacher. The development of accessible support materials and strategies is not the sole responsibility of Pupil Support departments. Teachers are active participants in the development of support materials which meet the needs of their pupils, and therefore they need to be aware of how to produce the digital resources themselves. It is important for staff

across the school to be comfortable with ICT and to be provided with training opportunities to develop their skills in this area. The necessity for this training becomes apparent during the process of formatting electronic files into accessible resources. If files are not produced in an appropriate way in the first instance (eg simple things like using the wrong software/layout/tables/margins etc), valuable time will be lost editing these faults in the later stages.

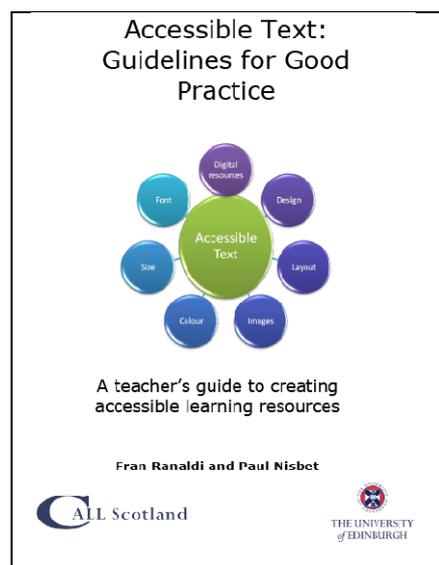
Staff training in the case study

To help support staff, a whole-school presentation was given on an in-service training day and a programme of continuing professional development (CPD) was provided. The aim was to raise awareness of what digital resources were, and how to produce them to an appropriate standard. The project was initiated and managed by the Pupil Support department within the school, and the CPD developed by the project co-ordinator.

In the early stages of the programme, resources were developed by the project co-ordinator with administrative support. However, as participating staff became more confident, they began to produce their own digital resources and internal assessments (prelims).

In May 2010, the project co-ordinator and CALL Scotland produced a practical guide to help teachers develop accessible resources: *Accessible Text: Guidelines for Good Practice* (ISBN 978 1 898042 30 3). It can be downloaded from:

<http://www.callscotland.org.uk/resources/Books/Assets/Downloads/Accessible-Text-Guidelines-for-Good-Practice.pdf>



The chart below provides an overview of the project.

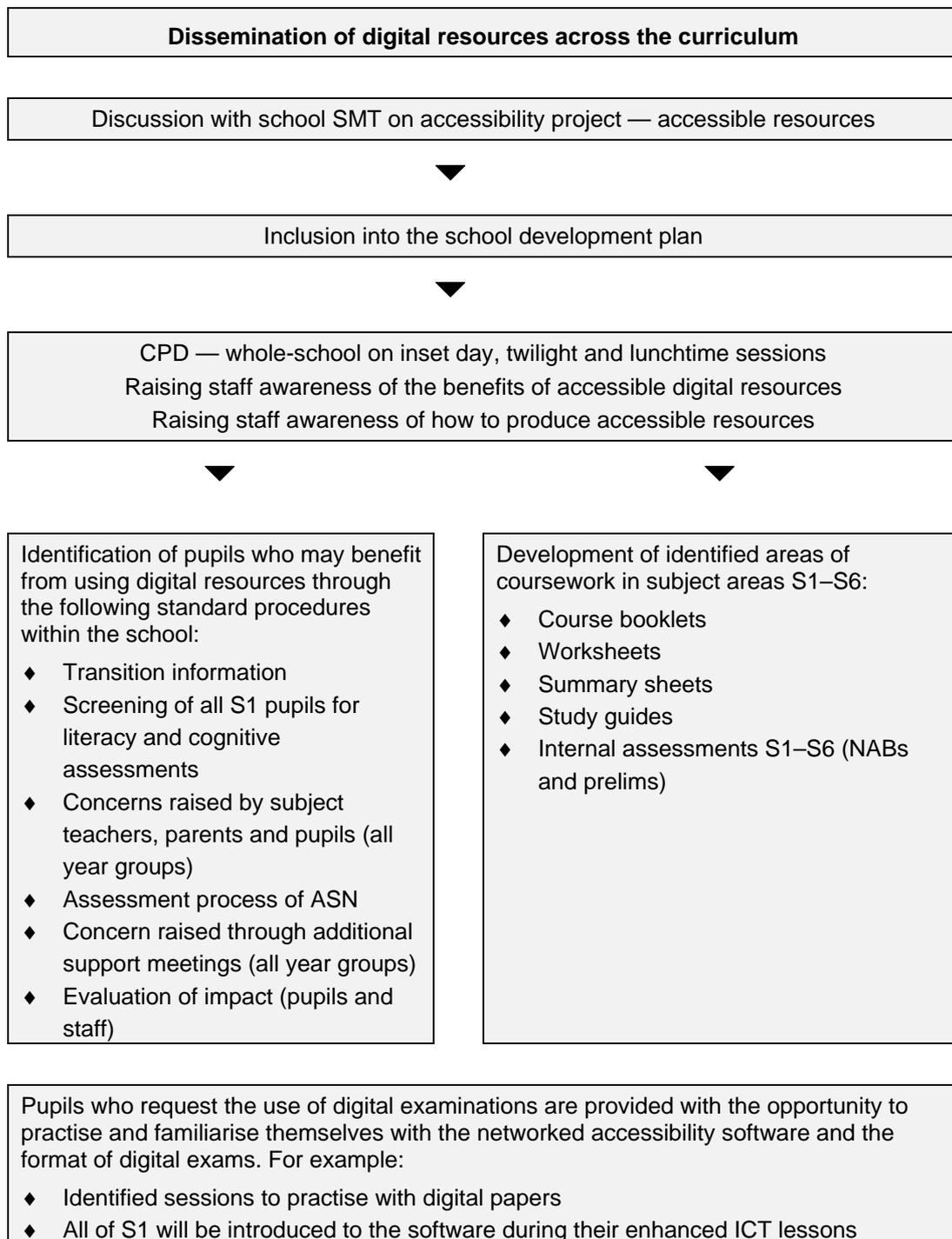


Fig. 4

The introduction of the ‘live’ SQA digital examinations to Kinross High School in 2006 was a welcome and natural progression to the work already being developed on accessible digital resources within the school.

Evaluation of advantages in the use of digital resources for the case study

An evaluation of the project highlighted that a very positive impact was experienced by pupils and staff in the participating departments.

- ◆ Pupils increased their independence.
- ◆ Pupils increased their self-confidence.
- ◆ It quickly became apparent that the pupils with ASN were not the only ones to benefit from the resources. The resources also suited a wider range of pupils.
- ◆ Accessible resources met the needs of learners and practitioners efficiently and effectively.
- ◆ Producing and using accessible resources across the curriculum helped teachers, educational establishments and authorities meet their legal duties and responsibilities on accessibility under the DDA (1995), ASfL (2004) and DSPERA (2002).
- ◆ Participating teachers regularly used the format for the whole class, thus reducing any possible perceived stigma for the identified pupils.
- ◆ Using digital resources within coursework reflects and confirms the support required by those pupils who are eligible for SQA adapted digital question papers.
- ◆ Familiarisation with using the resources across the curriculum, and in all years, ensured that the pupils were comfortable with the support arrangements in their examinations.
- ◆ Pupils were more comfortable with the format than adults (staff and parents/carers).
- ◆ Digital resources can be interactive, so that the pupil can answer questions on the screen and use text- or speech-recognition software if required. This was a very positive feature.
- ◆ Pupils can access the materials on screen and adjust screen magnification, colour, and font sizes. This is very helpful for a reader with a visual or perceptual impairment.
- ◆ A higher standard of presentation is achievable — graphics and text.
- ◆ The presentation of the text produced using ICT is usually more legible, compared to handwriting. Poorly handwritten materials can cause unnecessary stress to poorer readers who may not be able to understand the text and be embarrassed at having to ask for help.
- ◆ Faster production of resources, with less effort due to the use of editing tools such as cut, copy, paste, insert images.
- ◆ Faster production of resources, which have been differentiated from the original, such as scaling up from A4 to A3 when printing.

- ◆ The text can be converted, using text-to-speech software, into audio files for readers to listen to on an MP3 player or iPod.
- ◆ The networked software was available to all departments in the school to enable them to produce their resources on a computer (Microsoft Word).
- ◆ It is easier to produce a copy or a summary of notes in advance if the materials have already been prepared on the computer.
- ◆ Effective and efficient time management — for both classroom teachers and assistants.
- ◆ Effective and efficient use of classrooms and invigilators during examinations — several pupils can sit in one classroom with only one invigilator where previously they may have all required one room and one invigilator each.

Quotes from pupils

'I don't mind using the laptop in class — at least I can read what I am supposed to do by myself.' (S2)

'It helped me decide if I wanted to use this support in my exam next year.' (S3)

'I just use my own earplugs when I use the software to read the writing to me. It's really easy to do.' (S5)

'I am really not very good at spelling and writing, but I do not like asking for help and I hate using the dictionary. These help me work on my own. It is much better.' (S4)

Quotes from teachers

'I had a large number of pupils in my class who have ASN. It would have been very difficult meeting their needs without the use of digital resources, particularly when they were doing their NABs.' (Biology teacher of S3 Intermediate 1 class)

'It is a very effective support strategy.' (Pupil Support teacher)

'It is very useful if we need to support a pupil unexpectedly, if the resource has already been made it is a very quick process to organise.' (Pupil Support teacher)