

Using Technology in Literacy

Case Study from Denny High School



Introduction

Denny High School has recently started to provide iVona MiniReader¹ and the Scottish Voices² to support pupils in developing their reading and writing skills. This will enable pupils to become more independent and to develop skills that will assist them in Further / Higher education and the workplace. There has been a positive response from both learners and teachers to the use of ICT packages to support the development of literacy skills.

Background

Learners undertaking the new National 3, National 4 and National 5 Literacy Units are not permitted to use a human reader or human scribe where reading and writing skills are being explicitly assessed. However, the use of communication and assistive technologies is allowed. The National Literacy Unit is a mandatory Unit in National 3 and National 4 Courses in English and Gàidhlig.

“The provision of a human reader and/or a human scribe would undermine the fundamental assessment objectives for reading and writing and would not secure that the National Units in Literacy provided a reliable indication of the knowledge and skills of the candidate upon whom they are conferred. It would not be possible to maintain public confidence in the National Units in Literacy if learners are given credit for ‘reading’ and ‘writing’ when that process has been carried out by someone else.”

SQA Policies, Section 96(7) Equality Act 2010, Specification 3 - Literacy Units

In Practice

Denny High School was asked a number of questions about its use of ICT support.

What ICT do you use?

The school has a full estate of Windows 7 PCs, laptops and netbooks. As part of the standard ICT “build” in Falkirk, the school’s computers have been configured to have the “Scottish Voices”, Stuart and Heather, installed. In addition to this, iVona MiniReader has been installed on every machine in the school and pupils know they can access this whenever and wherever required. iVona MiniReader was selected because of its ability to read text from any application (Internet, Word, PDF etc) allowing pupils to select text and have it read back to them by the computer.

All staff in the school have access to the school’s two scanners. These can scan any paper-based document and save it as a PDF on the school network.

¹ iVona MiniReader is a free simple toolbar for reading from Word, PDF, Internet etc

² These are free Scottish computer voices from CALL Scotland’s website at <http://www.the.scottishvoice.org.uk/>. These are high quality male (‘Stuart’) and female (‘Heather’) voices that work with almost all text to speech programmes on Windows and MacOS computers.

The school has also obtained some copies of Adobe Acrobat Pro from Education Scotland. This software allows a scanned document to be converted into text that is “readable” by any computer with Adobe Reader installed, enabling pupils to access these documents using iVona MiniReader and have selected text read out in the Scottish Voices. This means that pupils with Additional Support do not need a member of staff to read and/or scribe for them.

How is ICT promoted within Denny High School?

We initially encouraged the use of iVona MiniReader and the Scottish Voices within the English Department. Staff instantly saw the benefit when we demonstrated the software. All pupils were encouraged to make use of it, to proofread their work and to take responsibility for the quality and accuracy of extended pieces of written work completed using ICT. Staff also recognised the benefits of teaching pupils to use this software, rather than relying on the use of a human reader and/or scribe for class work and assessments, and the benefits it would bring for pupils moving on to further and higher education and to the workplace.

Members of staff undertook the CALL Scotland CPD Course ‘Creating and Implementing Digital Examinations and Assessments’ to ensure that they understand the practices SQA uses when creating digital examinations, and to ensure the same standards are followed when creating digital question papers for pupils within the school.

ICT is actively promoted in the school by all members of staff, as part of the whole school improvement plan following a recent HMiE Inspection. We have invested in a Wi-Fi network that allows the use of netbooks and laptops (both those issued by Falkirk Council and personal devices) within every teaching area in the school. This encourages pupils to build essential ICT skills that they will continue to use throughout their lives.

Were there any barriers to implementation?

No, we did not feel that there were any barriers. The Scottish Voices are free and are available under licence from the Scottish Government in association with CALL Scotland and CereProc.

iVona MiniReader is a free application that can be installed on any computer.

There is no cost for setting this system up, other than technician time to install these applications.

Having a whole school strategy in place for booking computer rooms or mobile ICT is helpful. Staff can book available ICT rooms to encourage the use of technology in their lessons, giving pupils extra opportunities to build their computer skills.

Which groups of pupils use ICT as a way of accessing assessment?

We are now asking any pupil who has difficulty with reading or writing to make use of this software, in order to limit the number of human readers/scribes and invigilators required for assessments and SQA examinations. We currently have no pupils in the school for whom this solution is not appropriate. ICT skills are taught as part of the curriculum during primary school and are extended when they come into S1 and beyond. Pupils have this arrangement as part of everyday teaching and learning and undertake their class assessments using this technology, so they have plenty of time to practise.

Are there any groups of pupils for whom ICT is not suitable?

We have identified that some pupils with a physical difficulty can have issues using ICT. For those candidates, other reasonable adjustments are identified and verified in line with SQA procedures.

Are teaching staff trained in how candidates can use ICT in the classroom and in assessments?

Traditionally in Denny High School, the Support for Learning Department facilitated any assessment that required the use of assessment arrangements. When switching over to Digital Question Papers and using iVona MiniReader, we kept the same processes in place for staff to request the support, but instead of pupils having to work with a member of staff, papers are generated in the appropriate format and made ready for the pupils to use on the computer.

Do candidates participate in the classroom using ICT?

ICT is part of teaching and learning in the school. We have bookable netbooks for classes in Modern Languages, Science, Social Subjects and English. We also allow our ICT suites to be booked when they are not in use, resulting in over 100 periods per week where ICT can be used in teaching and learning outwith the Computing, Business, Engineering, Design and Technology curriculum. For pupils with additional support needs, we also have a set of laptops they can borrow from the Support for Learning Department to allow them to use ICT during lessons that are not normally computer-based. This allows the pupils to become more independent and frees up support staff to work with more pupils within classes.

Are there any obstacles to this?

The only obstacles that we encountered when developing this were:

Under the ICT policy, pupils are not normally allowed access to the volume control on the computer systems in the school. However, after a quick discussion with the DHT in charge of ICT and a phone call to the Local Authority technician, pupils were given access to the controls when required.

Access to headphones was also an issue. We had planned to supply headphones to all pupils who wished to use the software but this was found to be too expensive. Pupils themselves suggested that they could use their own headphones and, as a result, we only needed to provide 20 sets of headphones for pupils to borrow when required. The majority of the time, pupils use their personal headphones.

Are the necessary resources available?

At the same time as introducing iVona MiniReader, we developed an online booking system to allow staff to book the ICT resources required to incorporate this software into lessons. This was a big change to existing practice, as previously staff were unsure as to when and where ICT could be used other than when using the suite of computers in the Library. Now, the Library, Computing, Business, Design Engineering & Technology and Art suites, as well as "Class in a Box" sets, can be booked through the online booking system. This means staff can pre-plan lessons to make use of this technology on a regular basis. Pupils are also encouraged to make use of iVona MiniReader whenever they are using computers.

Is technical support available?

In order to ensure that technical support was available we discussed the requirements with the Falkirk Council ICT team, demonstrating the software so that they knew what we were looking for and how it would benefit the pupils. Once they understood the reason for using the software, they planned how to incorporate it into the standard PC build. This was the extent of the technical support required, as once the software is on the computers it can be used as required.


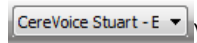
Top tips for using ICT in assessments

- If you do not have a copy of the Scottish Voices in your school, download them from www.thescottishvoice.org.uk/. They will work with Microsoft's Windows built in Text to Speech software but you can also download iVona MiniReader from www.ivona.com/en/mini-reader/
- Show staff the software and the benefits it will bring to the learners and get them on board by discussing the skills you will be developing.
- Ask staff to ensure assessment materials are available well in advance of the assessment date to ensure they can be adapted to meet the needs of the learners.
- Give pupils credit for the skills they already have. Although the thought of new software can be daunting for staff, pupils learn to use the software very quickly and effectively.
- Treat iVona MiniReader like paired reading – ask pupils to follow the text along with the voice – it has helped some of our pupils develop their reading skills too.
- Give it a try! You will be amazed at the confidence your pupils will show. Watch how everyone interacts with the task you set – some will have the whole passage read out, others will have just a sentence at a time read out, others will have it read just one word.
- Persevere with it! You are teaching pupils valuable skills – skills that they also may need to be successful in the National Literacy Units and National Qualification examinations. More importantly, they are more independent and do not need to rely on others to help them succeed.

General advice for a teacher wishing to promote the use of ITC in their school

It is easy to forget that our pupils have grown up in a “digital world”. Very often pupils have ICT skills we don't expect and are extremely resilient to issues with ICT.

The training that we offered for iVona MiniReader was:

1. Where to find the icon for the software - 
2. How to select the appropriate voice (via the dropdown menu- )
3. How to make the voice speak (press “Play” ▶)
4. What to do if there is no sound – set volume – check mute – check headphones
5. How it works with different software on the computer – Internet, Word Processing etc.

Training took 10 minutes at the end of a period. Pupils were encouraged to go off and try the software and come back and speak to us if they had any issues. So far no one has asked for extra training.

Feedback

Pupil feedback

Paul uses iVona MiniReader across the school. He loves it, especially when he is doing research. As well as helping him with his reading, he feels that it makes writing easier for him. He stated that everyone should be shown iVona MiniReader because it is so easy to use. In the time that he has been trialling the software in school and at home, he has shown around twenty people how to use it. They too are making use of it now. He was asked if there were any drawbacks to using iVona MiniReader and the only one he came up with was that it is not very good with French and German as it does not pronounce the words properly. He sees a use for the software in every other subject in the school. The difficulty with French and German (or any other modern language) can be overcome by using other language voices.

Gemma also enjoys using iVona MiniReader, which she also uses at home a lot. She found it simple to install and has had no issues with it. Gemma usually only selects the individual words she does not know, and has them read back to her. She doesn't normally have the entire passage read out to her. When asked how she uses it in school, she said that she uses it when using the computer in order to read things to her and she uses it in class tests. She also stated that she cannot see any drawbacks to using this as opposed to using a human reader.

Teachers' comments

"What struck me about iVona MiniReader is how readily the pupils engaged with the software. I was prepared to offer clear step-by-step instructions, but the vast majority of pupils understood exactly how to use the software without too much input from me."

"Watching the pupils use the software was fascinating. They all used it to read the passage of text and I saw several of them go back and highlight specific words or sentences multiple times. They also used the software to read each question individually and they seemed far more focused than usual when answering these questions. They seemed to be more able to correctly identify what was being asked of them and what section of the text they were being directed towards."

"One of the most interesting things for me involved how the pupils used iVona MiniReader in conjunction with their own answers. Spelling and sentence construction have been significant issues for many pupils in this class, but I watched them use it to read back their own typed answers. On several occasions pupils listened to the software read their own words to them, realised that something sounded wrong, and went back to make changes. The ability to hear their own writing read back to them in real time allowed pupils to actively correct their own work."

"In terms of results, the class as a whole did answer more questions correctly when using iVona MiniReader than when doing the same type of work on paper. What iVona MiniReader offered was confidence for pupils who often lack it, and the ability for pupils to truly think about the structure and presentation of their work."

A Depute Rector with responsibility for Literacy stated:

"I have observed pupils using iVona MiniReader during English lessons and was greatly impressed by the ways in which pupils were engaged. Pupils were more focused on their reading and they were taking control, identifying the most appropriate ways to facilitate their understanding of the text. Some pupils highlighted the whole passage and initially read this before highlighting relevant sections that allowed them to respond to the tasks; others broke down the text into sections that allowed them to pause and reflect. I noticed one pupil reading a

paragraph, then highlighting one sentence in the paragraph before he read the next paragraph. Pupils were able to work at their own pace, required less support from the teacher and were able to take more responsibility for their own learning.”

There has been a very positive response to the use of various ICT support tools at Denny High School from the learners, teachers and senior staff, particularly the use of iVona MiniReader. The pupils have found it easy to use and it has helped them become more independent in their learning. It is also possible to use it at home so their whole learning experience has improved. The teachers have seen an improvement in the learner’s level of ability in literacy, and were also very positive about how easy to use the software was for the learners. Appendix 1 gives further feedback on the use of iVona MiniReader from other schools.

Appendix 1

External feedback

We questioned staff from other schools on the use of iVona MiniReader. Responses are below.

1) Do you see iVona MiniReader and the Scottish Voices being of use to pupils?

Response:



Comments:

"Pupils can hear the text/section of text as many times as they require - they may not request this of a 'human' reader as they can be embarrassed - an independent reader can read as often as they require without anyone else being aware of this"

"Ease of use. Independent learning. Pupils can set their preferred speed of voice and can self-correct written work"

"Useful for pupils checking over their own work. Also useful for pupils' greater independence when reading"

"Useful for assessments where few staff are available or for independent study"

"Invaluable for learners who face barriers to learning due to literacy/communication difficulties"

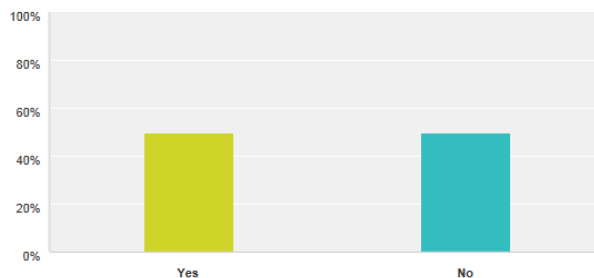
"Makes pupils more confident and independent"

"Gives some pupils more confidence in completing their writing and helps them complete tasks more independently"

"Enables pupils to work independently and to choose how much/how little text they need read to them"

2) Have you had any difficulties using iVona MiniReader?

Response:



Comments:

"Difficulty with the reading of some Science notation, graphs and mathematical terms"

"Technical difficulties with computer, not iVona MiniReader itself"

"Mainly lack of availability of computers"

"Difficulty with the computer volume or headsets not working. Not a fault with iVona MiniReader"

"Speed of reading can be too fast. Sometimes, the diction not clear. Would be better with a classic/classless accent. Lack of intonation sometimes makes comprehension difficult"

"The software doesn't always load first time. It is also quite difficult to slow the speech down a tiny amount using the slide".

"In general, there have been no difficulties and all pupils can be totally engaged on a task in the one room - those using iVona MiniReader and those reading for themselves. It helps the pupils with Additional Support Needs feel they can work on their own as easily as the others in the class"

3) **What advice would you give to teachers / schools thinking of using iVona MiniReader and the Scottish Voices with pupils with Additional Support Needs?**

Response:

"It is a really useful tool".

"Introduce as part of normal classroom practice"

"Demonstrate uses to each faculty using subject specific resources and encourage computer access for pupils who have literacy difficulties"

"You must have a dedicated computer suite with everything working"

"To incorporate it into your lessons from an early stage with pupils to encourage them to use it naturally"

"Experience iVona MiniReader for themselves. Discuss what the common approach to the use of iVona is going to be"

"Definitely go ahead with installation"

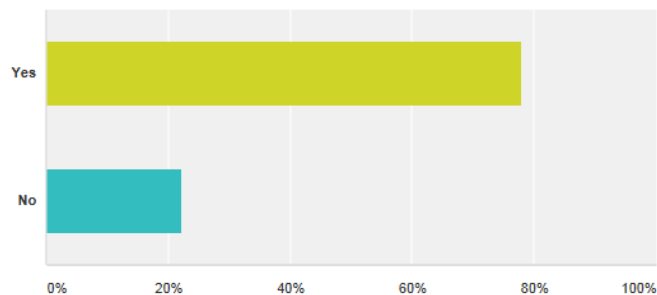
"Staff using it like it- and find it easy to use"

"I would encourage all schools to allow pupils to try iVona MiniReader and they will then be able to judge for themselves. The benefits to pupils in terms of increased independence are enormous"

"Give it a go! Encourage all staff, learners and their parents to familiarise themselves with the software - see how easy it is to use and consider the ways in which it can vastly improve the experience for ASN learners by allowing them to access materials"

4) **Have you witnessed any vast improvements (success stories) for pupils using iVona MiniReader and Scottish Voices?**

Response:



"Improved self-confidence; helped understanding for pupils"

"Pupils feel they have more control and therefore more independence"

"I have been involved in supporting a project involving iVona MiniReader- through the project the positive impact on learners was apparent"

"Several pupils have found close-reading type activities a lot easier to complete and have therefore received stronger grades"

"A girl with severe dyslexia is now writing stories that are many pages long. She understands what she is writing when she is writing it and mostly can read it back with iVona MiniReader later with good comprehension. With this aid you can move on from simply being able to produce a story to teaching punctuation, grammar and vocabulary"

"Made one pupil in particular much more focused and concentrated when using iVona MiniReader through his headphones"

"Pupils in S4 and S5 are more comfortable with iVona MiniReader than using a person to read and scribe. I have seen an increase in what pupils can achieve when using iVona and when they struggle on by themselves".

5) **Any other comments**

“For many pupils iVona is a really useful learning aid”

*“So easy to access. Pupils much more keen to use iVona MiniReader than previous programs
Senior pupils have found the package useful to assist with more complex pieces of work”*

“A superb resource for encouraging independence in learning for ASN learners”

“Addition of Scottish Voices was very helpful!”

“Parents have also commented on iVona MiniReader favourably and are keen for their youngsters to increase their independence in school and be less reliant on someone reading and scribing whenever they have an assessment.