

## Learning Futures Case Study

### The tools and resources we used

# The innovative use of assistive technologies to engage and support learners by improving curriculum accessibility

## Runshaw College

### Summary

Technology is an essential element of our lives. It is an important tool we can use to promote the independence and confidence of students who have literacy barriers to learning.

As part of our Learning Futures project, we have been working to promote the use of assistive technology in lessons and exams to help to address some of these barriers.

This case study provides detailed information on the equipment and resources we have used as part of our project. All of the tools and resources presented are widely available. In addition, where possible, we have used resources that are inexpensive or free.

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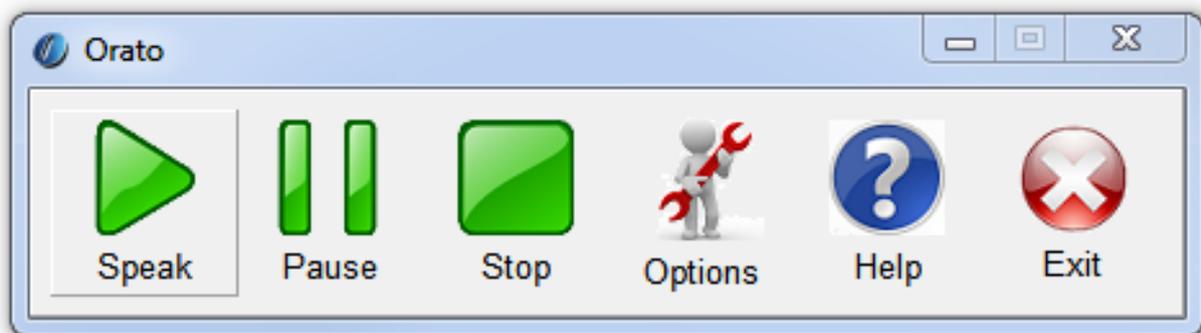
## List of equipment and resources

- Orato Software
- JISC TechDis voices
- Dolphin Easy Converter
- Microsoft Word
  - Word documents
- Adobe Reader
  - PDF Textbooks (Load2Learn)
  - Past papers
  - Exam papers
- Microsoft Windows 7
- Headphones

## Orato software

### Overview

Figure 1. Orato software



Orato is a simple to use, free, open source text-to-speech tool that runs on Windows computers. More information about Orato including a video guide and download link can be found in [this Learning Futures blog post](#).

The software was created by an assistive technology consultant called Chris Stringfellow.

We have used it successfully with students for several years. We used it in our college as part of the [My Study Bar suite of apps](#). We began using it separately from My Study Bar in 2012, when students started to request Orato as a stand-alone tool, for ease of use.

Almost all of the students participating in the project reported that they found Orato easy to use and a helpful aid to support their reading. (More detailed information on student feedback can be found in our detailed project report and in our other case studies). We believe the ease with which a student can use Orato – even those with a self-reported low level of IT user ability - is its greatest asset.

Students at our college can download a portable version of Orato from our Study Support Moodle area, and save it on to a pen-drive for use at college or at home. Each student is offered a short introductory session on using Orato along with other suitable tools in Study Support. We also give them access to supporting resources like video guides, so that they can self-support their use of Orato without having to request help.

Orato is available on the exams logins that are used by students who are entitled to a computer reader as part of their exam access arrangements. Each exams login has a secure shared area where a student will find a copy of Orato that can be used during their exam. Electronic copies of their exam papers are made available by our exams team in this same shared area, on the day of an exam.

### Settings and options

Orato is a clipboard reader. This means that any text the student wishes to have read needs to be highlighted, copied to the clipboard using Ctrl+C or a right click followed by selecting “copy” from the menu. It’s a really flexible tool that will allow a student to access text easily with minimal training.

We recommend to our students that they use the software with the “*Automatically start reading clipboard*” option turned off, as this gives them more control over what they want read. If you are copying and pasting a piece of text, it can be very distracting to have it read immediately. In addition, we have found that having this setting turned off prevents some issues with multiple words being read at the end of a piece of text when using the software in a PDF.

The software can use voices available on your device. Most PCs will have at least one Speech Application Programming Interface (SAPI) voice available

## How do I check what voices I have on my PC?

Open your PC Control Panel and search for “Text-to-Speech”.  
Alternatively, go to the [Microsoft support website](#) for windows and search for “Text-to-Speech”, to find a guide that will walk you through it. If in doubt, speak to someone in your IT department.

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Note: Orato is only one of dozens of text to speech tools that are available. If you want to replicate our project you do not need to use Orato. Other software is available that may be more suitable for your students - don't be afraid to try the techniques and ideas in this project with different software.

## JISC TechDis Voices

### Overview

The JISC TechDis voices were free resources produced with funding from the Department for Business, Innovation and Skills (BIS). TechDis commissioned CereProc to create two text to speech voices for use in further, higher, and continuing education across England.

Once installed, the voices can be used with most text-to-speech programs. For example, the voices can read e-books, PDF files, worksheets and other documents in Microsoft Word. They can also be used create audio files (using a program such as Balabolka), and can be used with screen readers, such as NVDA and Jaws. ( CereProc, 2012)

We found that students responded very well to the JISC Tech Dis voices, and preferred them to the built in “Microsoft Anna” voice that was available on the college computers through Windows 7.

### Availability

At the time of publication, the long term availability of these free, high quality resources is unclear. However, CereProc has voices available for purchase on [their website](#).

You can contact JISC directly via [their website](#) to check on the current availability of the JISC TechDis Voices.

### Distribution of the voices across our network

The JISC voices are downloaded and installed onto our Symantec ghost images. These images are then deployed college-wide, usually over Easter or

summer, in line with our PC refreshment schedule. We have two images upon which the JISC voices are installed:

1). **Support image** - for all support functions within college. (We then install any additional software required).

2). **Teacher\student** - for use in all classrooms/staffrooms. (Again, we install any additional software required, or use application Jukebox to virtualize the application, if possible).

Once a PC has been imaged, we give it a specific name (usually RoomNo-PCUse-Number), then add it to the Runshaw.net domain.

## Dolphin Easy Converter

Dolphin Easy Converter is a piece of software you can use to quickly and easily create accessible Word docs, large print, MP3 audio, DAISY talking books and Braille. We used it during this project to adapt resources for use in lessons by teaching staff, and to convert hard copy exam papers provided by the exam boards, into electronic documents that could be used in exams with Orato.

The process for adapting a hard copy of a resource into an accessible electronic document is complex. It involves a process called Optical Character Recognition. This is a process whereby the software and user convert scanned images of typewritten or printed text into machine-encoded text that can be read by a computer.

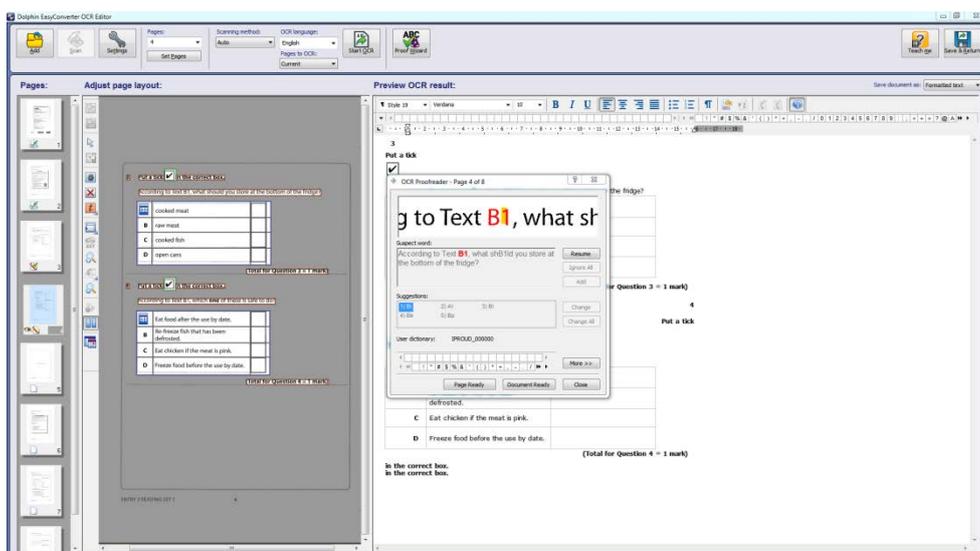
### In simple terms -

A paper document can be scanned, processed with Dolphin Easy Converter and then saved in electronic document format – e.g. a word document that can be read back by Orato.

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For more information about Dolphin Easy Converter, as well as video guides on how to use the software, you can visit the [Dolphin Software website](#)

Figure 2. Dolphin Easy Converter being used to adapt an exam paper. Note the scanned image on the right hand side of the page



## Microsoft Word 2010

Microsoft Office is a typical word processor and Orato can be used easily in conjunction with this software. However other word processors like Apache Open Office, or even the Google Docs web app, would also work well with Orato. We used Microsoft Word to create some resources for lesson use. But any word processor on a Windows computer should work well in conjunction with Orato.

We asked staff to use [the “Heading Styles” options](#) in Word, to add navigation into the documents they produced, to make it easier for the students to navigate round the documents with ease. We have found that prompting students to use the Ctrl + F function, and [Navigation pane](#) in Word, is a good strategy to improve the ease of navigation within a Word document.

### Text-to-Speech in Word

If you are interested in giving a very basic text-to-speech tool a try, you can easily alter the commands available on the [Word Quick Access Toolbar in the Word options](#).

Instructions on how to enable the “Speak” command within word can be found on the [Microsoft Office support website](#) by searching for “Speak Command”. Alternately while using Word, press F1 on your keyboard and search for “Speak Command”.

## Word Document (.docx)

A .docx has been the default format for saving Word documents since Word 2007. Since we use Microsoft Office at our college, some of the resources students used in lessons were produced in this format. Hard copies of resources could be printed and given to students working on paper. Electronic copies of the same document were provided on PCs, to students using a computer reader in lessons. A clipboard reader like Orato can easily access these resources.

## Adobe Acrobat Reader

Adobe Acrobat Reader is a piece of software you will need in order to open PDF documents. This software is available on all of the laptops we used in lessons, and the PCs we use for exams. It is a free piece of software and can be downloaded from the [Adobe website](#). You will need acrobat reader to use PDFs (digital text books, etc).

## Textbooks (PDF)

During English GCSE lessons, some staff used copies of the WJEC English GCSE textbooks. We were able to get electronic copies of these textbooks using a service called [Load2Learn](#). Students were also provided with copies of electronic textbooks in learning support sessions, to support their reading and learning.

### What is Load2Learn?

Load2Learn is a free service that provides accessible curriculum resources to support learners who cannot use standard print materials, particularly those with dyslexia or those who have a visual impairment.

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## Past papers (PDF)

During GCSE English lessons, Entry Level 3 IT and English lessons, mock exams for AS/A2 and mock exams for GCSE and Entry Level 3, students used copies of electronic past papers we sourced from various exam board websites.

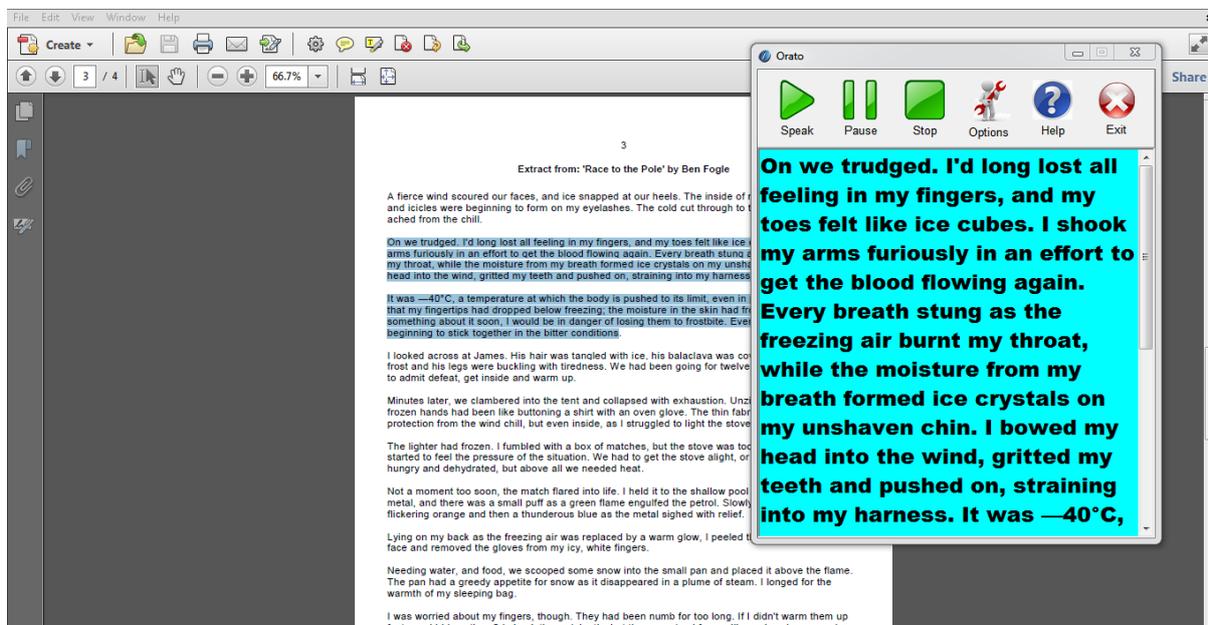
When we did run in to problems with the accessibility of some of the older exam papers, we found them easy to adapt. We made changes to the orientation of some pages, to make them easier to use with the reading software. This was not an issue with the past papers from more recent exams.

When we ran in to significant issues with a mock paper from AQA, we found that the exam board was very responsive and very quickly provided us with an accessible version of the paper we required. You can read more about this in [this Learning Futures blog post](#).

## Bespoke Papers

In addition to using past papers, we produced our own mock exam papers from resources that tutors provided. If you want to produce your own bespoke mock exam papers (to prevent students from checking on the past papers publicly available from exam boards prior to a mock exam), we would recommend that you produce these as PDF documents, to better replicate the experience a student would have in exams.

**Figure 3. Image of Orato being used on a bespoke paper that was created by Study Support Staff for use in English GCSE lessons.**



## Exam Papers (PDF)

All of the exam papers that students used in exams were requested as a part of the exam access arrangements process. The papers our students used were “**non-interactive electronic question papers**”. These papers must be requested in advance, like any modified paper.

## Timescale for requests

At the time of writing, the [JCQ](#) deadline for requesting **non- interactive electronic question papers** is 31<sup>st</sup> January, as they are classed as a modified paper. It is possible that this may be extended to the 31<sup>st</sup> February, for the 2015-2016 academic year. It is important to check the current Joint

Council for Qualifications (JCQ) submission deadlines, as late applications may be refused.

## Microsoft Windows

All of the computers used in lessons and exams ran Microsoft Windows 7. However, versions of the software we used would also work with a Windows XP or Windows 8 computer.

## Headphones

Students will need a pair of headphones in lessons and exams, so that they don't distract other students with their computer reader. It sounds like a simple thing, but we found students were quite sensitive about the headphones they were prepared to use, particularly in lessons. As a result, we had no issue with allowing them to use their own headphones

## Would you like to know more?

### Contact the project team

Contact the project team on Twitter

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## Find us online

Runshaw College Talking [Technology Twitter @TTRunshaw](#)

Runshaw College [Talking Technology YouTube](#)

## Links to useful resources

Adobe Acrobat Reader Download: <https://get.adobe.com/uk/reader/>

CereProc Website: <https://www.cereproc.com/>

Dolphin Software Website: <http://www.yourdolphin.com/>

JCQ Website: <http://www.jcq.org.uk/>

Learning Futures Website: <http://lfutures.co.uk/>

Load2Learn: <https://load2learn.org.uk/>

Microsoft Office Support Website: <https://support.office.com/>

Microsoft Windows Support Website: <http://windows.microsoft.com/>

My Study Bar Download; EDU Apps: [http://eduapps.org/?page\\_id=7](http://eduapps.org/?page_id=7)

Orato Download; FX software: <http://www.fx-software.co.uk/>

Orato Download; Software Informer: <http://orato.software.informer.com/>



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