Assistive Technology Solutions

Premier's READING Challenge

DEPARTMENT FOR EDUCATION AND CHILD DEVELOPMENT
OFFICE FOR CHILDREN AND YOUNG PEOPLE
SPECIAL EDUCATION RESOURCE UNIT
72A Marlborough Street, Henley Beach SA 5022
ph 08 8235 2871   f 08 8235 1907
www.web.seru.sa.edu.au   admin@seru.sa.edu.au

Adjustments and accommodations to support access to text

Many students with reading difficulties experience a number of barriers to reading when participating in the Premier's Reading Challenge. Flexible accommodations include allowing students to read eBooks, audio books, non-fiction texts, books in another language and research for assignments. Assistive Reading Technologies can support students with reading difficulties to be more independent and participate more fully in the Premier's Reading Challenge. This resource document has been compiled to assist teachers in determining technology solutions.

How do Assistive Technologies help?

Assistive technologies are designed to provide additional accessibility to individuals who have physical or cognitive difficulties, impairments, and disabilities. Specialised applications which support students with reading difficulties have text to speech engines that read out the text on the screen to the student. Many of these programs highlight the individual words as they are read. This allows students to visually track the words being read out aloud. By using assistive technologies to support reading, students are able to tackle more varied and challenging texts independently. Research *(NEIRTEC 200; Hecker, L. Urquhart Engstrom, E. 2004)* shows that employing Assistive Reading Technologies supports students to attend better to their reading with reduced distractibility, read with less stress and fatigue, read for longer periods of time, complete reading in less time and better comprehend text.

What is readily available?

Students with a print disability may use texts that have been adapted to meet individual learning and literacy needs, including Braille texts, ebooks, talking books, podcasts and books on DVD or CD. Many published books are available as digital books from a number of sources (free and paid). These are accessed online.

ONLINE LIBRARIES

1) **Libraries of SA** – Public libraries across South Australia offer a large collection of downloadable eBooks and Audiobooks. Borrowing is <u>FREE</u>! Download wirelessly to a compatible eReader, iPad, smart phone, mp3 player, PC or laptop. All that is needed is a valid library card (join at any public library across SA), a device and an internet connection. More details: http://www.libraries.sa.gov.au/page.aspx?u=535

2) **Vision Australia's** Information Library Service (VAILS) provides <u>free</u> information and reading in braille, and audio for people with a **print disability** anywhere in Australia. Accessible via post or online.
   i-access ® Online allows library members to download a variety of audio and text DAISY books, newspapers, magazines and podcasts, as well as braille books and braille music, directly to their desktops via the internet.

   *A **print disability** includes, a person:*
   - without sight, or whose sight is severely impaired;
   - with a perceptual disability e.g. dyslexia, visual processing disorder;
   - unable to hold or manipulate books, or to focus or move eyes e.g. MS, stroke

3) Bookshare.org is a service which can provide a reader with a print disability access to a a library of synthetic voice DAISY and Braille format books. It has over 13,500 titles, and is available through *Vision Australia*. Ideal for students, keen non-fiction interest and recent titles. An <u>annual subscription</u> to Bookshare also offers members access to assistive reading software applications that have high-quality voices.

NB: Bookshare is an additional range of texts to i-access Online   http://www.visionaustralia.org

How can you read Bookshare books?
- Listen to books with high quality text-to-speech voices
- Hear and see highlighted words on screen
- Read with digital braille or enlarged fonts
- Create physical braille or large print
- Read directly from an Internet browser
- Use the app **Read2Go** and read from portable device.

4) **Free e-texts** can be obtained from a number of web sites. This link at http://bit.ly/dY0B4j provides a listing of over 300 web sites which have free eBooks. One of the most comprehensive of these web sites is **Project Gutenberg** (http://www.gutenberg.org/) a site containing over 48,000 titles. The copyright free books are in simple text format. The e-text files can be kept intact or converted to other formats including ePub and Kindle, and offers cloud storage options. This genre of text may appeal to readers who have previously not been able to access original classics (Alice in Wonderland, Huckleberry Finn) because access to these texts was not available.

eBook Readers

The "e" in eBook stands for electronic, meaning the book is in an electronic format, as opposed to a traditional book printed on paper. Being electronic, eBooks can be accessed via computers using special software or portable devices called eBook readers. The pages of an eBook appear in print on a screen with push buttons or touch screen gestures used to turn the pages, place bookmarks, make notes and so on.

While a tablet is not essential in reading an e-book, they do allow for the accessibility features contained in Android and iOS to be used to support the e-reading experience. In addition, the tablet form factor and e-reading apps offer useful features such as a back-lit screen and the ability to bookmark pages, make notes, highlight and save selected text, change font sizes and styles, access an inbuilt dictionary and allow the book to be read out by the screen reader.

The following are well supported e-reading devices that also contain a number of accessibility features:
- Apple iPad and iBooks
- Google Android and Play Books
- Amazon Fire and Kindle app

For more information http://www.mediaaccess.org.au/digital-technology/e-readers.

Two **e-book reader apps** already mentioned in this article are **Read2Go** and **OverDrive**. They are offered on multiple portable device platforms.

The **Read2Go** app is an accessible e-book reader app for readers with print disabilities. Directly from within the Read2Go app, Bookshare members can find, download, and read books all on a single device. It offers high quality text speech with dual highlighting of text (American voice only). This app only works with a Bookshare account (criteria for Bookshare mentioned above).   http://read2go.org/

The e-reader app **OverDrive** is compatible with many online libraries, including Libraries SA. You can borrow eBooks, audiobooks, and stream video.   eBook & Audiobook catalogue at http://sapln.lib.overdrive.com/

Accessibility features supporting reading on iOS devices (iPad, iPod and iPhone)

As mentioned above, **e-Books** offer students an accessible avenue to engage with appropriate books. Apple's iOS mobile platform in particular, provides an extensive array of accessibility settings that can accommodate a diverse range of learner preferences and access requirements for independent interaction with digital books. *(Sprialis, J - 2015, Premiers Reading Challenge – the OCR Option, http://www.sprialisconsulting.com/blog)*

A full description of accessibility features can be located at http://www.apple.com/accessibility. Features specific to supporting access to text include:

Speak Screen

Speak Screen can be activated to read aloud any text displayed on the screen (books, web pages, emails etc). The release of iOS8 Speak Screen option now gives users the ability to have word definitions spoken out aloud! The voice's dialect and speaking rate are adjustable and words are highlighted as they are being read. To turn on Speak Screen swipe down from the top with two fingers, or just tell Siri to Speak Screen and have all the content of the page read back to you. **This option can be used in the e-book reader applications** mentioned in this article (as well as many other third party apps) and has made reading digital books on iOS devices <u>much</u> more accessible.   To enable this feature: *Settings > General > Accessibility > Speak Screen*

VoiceOver is a screen reader that lets user know what is happening on the iOS screen. Voice over is touch activated, giving the user an instant auditory message from the iOS device. Gestures are also used to control the device. VoiceOver works with apps that come with the iOS device and is particularly useful for users with a vision impairment.   *Settings > General > Accessibility > VoiceOver*

Speak helps with reading text as well as speech development by speaking words that are read. This feature works in the ebook application iBooks, when books are in an ePub format, but does not work with other ebook applications. It also supports reading on the web, emails and for any text that can be selected on the iOS devices.   *Settings > General > Accessibility > Speak*

Dictionary definitions are integrated into iOS. The dictionary provides quick access to definitions and commonly used phrases to help with reading, spelling, pronunciation, and grammar. Speak Screen and VoiceOver read aloud the dictionary content.

Zoom

Zoom is a built-in magnifier that works anywhere on the iOS device and with all apps from the App Store. Turn Zoom on for full screen or picture in picture mode, to allow the user to see the zoomed area in a separate window while keeping the rest of the screen at its native size. Magnification is adjustable to access multiple filter options to suit the readers' vision needs. While zoomed in, all the familiar gestures to navigate around the device can still be used.   *Settings > General > Accessibility > Zoom*

Visit http://luisperezonline.com/portfolio/ for more information and tutorials on accessibility using iOS devices. There is a link to his you tube channel as well as many other relevant resources.

Android also offers accessibility features. For information on Android accessibility options, visit http://www.androidaccess.net

More information about e-book readers is also available at http://www.visionaustralia.org/.

Reading support with the physical book – OCR options

The option for a digital version of a book for the PRC may not always be possible. **Mobile devices can be used to instantly provide reading support when interacting with a physical book.** This is achieved by utilizing Optical Character Recognition (OCR) technology. This technology analyzes a photograph of text and converts it into digital text that can then be read out aloud. This means that a student could be holding and reading a book, use a mobile device to take a photo of a block of text, and <u>instantly</u> hear that text being read back to them.   *http://www.sprialisconsulting.com/blog*

There are many OCR apps available but here are three options for you to consider:

Prizmo   *http://www.creaceed.com/iprizmo/about*
One of the more popular OCR apps, Prizmo offers a one button capture and read process. This is particularly useful when a reader would like to read a number of pages from a document without interruption.

ClaroSpeak Plus   *http://www.claro-apps.com/clarospeak/*
This includes access to high quality voices, an extensive range of personalisation settings for reading, and the ability to edit and spell check to increase the level of accuracy of the document. The resulting scan can also be saved as an audio file.

Knfb Reader   *http://www.knfbreader.com*
Knfb Reader is by far the most advanced OCR app available. It has extremely positive reviews from the blind and vision impaired community for its ability to accurately handle a wide variety of document styles and formats. Though highly priced in comparison to other OCR apps, its superior accuracy and functionality are essential reasons why an individual with a print disability would choose to utilise this app.

For more information about OCR applications, visit http://www.sprialisconsulting.com/blog.

Many resources are available to borrow at the **Special Education Resource Unit (SERU)**, including Assitive Technology, for Trial and Evaluation purposes. For more information about SERU and how to register, visit http://web.seru.sa.edu.au, or contact SERU by phone or email (details below).
NB: DECD employees and <u>all</u> families of children / young people (B to 12) with a disability or learning difficulty are eligible borrowers.

This article was compiled by:
Candice Fiegert
Special Education Resource Unit (SERU)
Project Officer – Learning, Communication and Technology.
candice.fiegert324@schools.sa.edu.au

For more information on any of the Assistive Technology options mentioned in this article, please contact

SERU   ph: 08 8235 2871   e: admin@seru.sa.edu   72A Marlborough Street, Henley Beach SA 5022

Websites used in this article have been cited throughout. They are listed below for easy access.

http://luisperezonline.com/portfolio/   http://www.apple.com/accessibility
http://www.visionaustralia.org/   http://www.sprialisconsulting.com/blog
http://web.seru.sa.edu.au   http://www.mediaaccess.org.au/
https://www.bookshare.org/cms   http://www.libraries.sa.gov.au/
http://www.androidaccess.net