

Assistive Technology

Making A Difference to Education, Employment and Social Inclusion Opportunities

ACEA – Reintegration Puzzle Conference

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Incidence data

- “Mapping the Territory” (2000) report states that between 6% and 30% of students will experience difficulties with learning

(Mapping the Territory: Primary Students with Learning Difficulties Literacy and Numeracy, Commonwealth Department of Education, Australia)

- Almost 50% aged 16-65 do not have the necessary literacy and numeracy levels to deal with present-day work requirements

(OECD data reported in the Age Oct, 2001)



Incidence data

- The most common feature shared by young offenders is early school failure.

(Cadigan & Shelton, 2007)

- Studies report an overall disability rate among youth in juvenile justice facilities ranging up to 70%

(Quinn et al. 2000, Burrell and Warboys 2000)

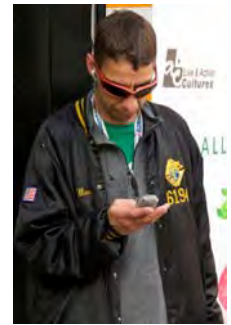


Adult Literacy and Barriers to Learning & Opportunity

“impaired access, participation and progress throughout learning”



Live in a Digital World



Adult Literacy and Barriers to Learning & Opportunity

“impaired access, participation and progress throughout learning”

“an environment where we spend more time reading and using information on the internet than they will reading from a printed book”



What is Assistive Technology?

Assistive technology is defined as “the software and technology which helps people with (literacy difficulties) and special needs to overcome the additional challenges they face in communication and learning” (BECTA, 2003).



Using technology to remediate or compensate for difficulties

1. Reading tools
2. Writing tools
3. Organisational and study tools



Emerging Research

- Improved comprehension
- Improved engagement
- Improved written output
- Access to and maintenance in employment
- Universal Design for Learning

<http://tinyurl.com/AT-Research>



Research

- <http://gregoconnor.wikispaces.com>
- Edyburn, D., Higgins, K., & Boone, R. (Eds.). (2005). *Handbook of Special Education Technology and Research*. Whitefish Bay, WI: Knowledge by Design, Inc.



Barriers to Learning & Opportunity

Assistive technology...can remove barriers and enable to gain more equitable access to successful learning experiences and accomplish things not thought possible before (Sitko, Laine and Sitko, 2005)



Let's take a look



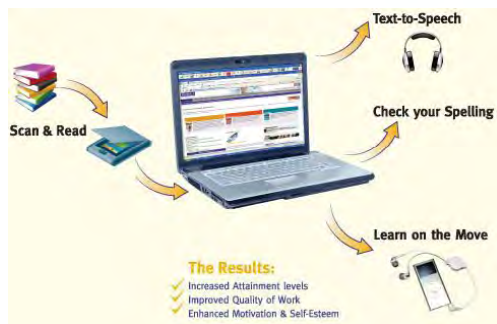
textHELP Read & Write Gold



<http://www.spectronicsinoz.com/product/texthelp-readwrite-9-gold>



Reading Tools



Reading Tool Features

- Read text aloud (text to speech)
- Dictionary & Thesaurus
- Text to audio capabilities
- Scanning to text



Writing Tools



Word Prediction provides:

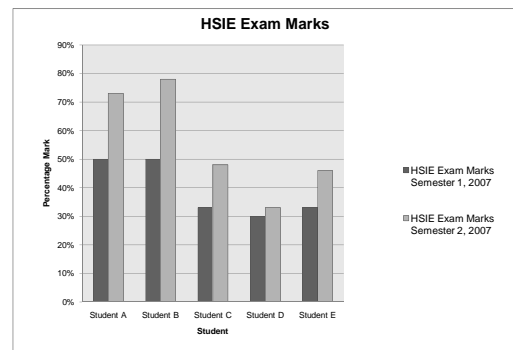
- Supportive writing strategies for **struggling writers** and **English as a Second Language** users
- Support for people with **physical disabilities** – their pen and paper, reducing the number of key strokes required



Let's take a look



Results



Results

1. Positive attitude
2. More independent reading behaviour
3. Self esteem
4. Independent writing - all notes in TextHELP
5. Decreased student stress



Where is it used?



- TAFE Tasmania – state licence
- Great Southern TAFE in WA
- New England TAFE in NSW
- Adelaide TAFE in SA
- 2010 - North Coast TAFE in NSW



Resources

- Abbott, C. (2007). *E-inclusion: Learning Difficulties and Digital Technologies*. Available from www.futurelab.org.uk/download/pdfs/research/lit_reviews/futurelab_review_15.pdf
- LD Online - www.ldonline.org
- Technology for Learning Disabilities Project - http://www.cwu.edu/~setc/tld/eval_outcomes.php
- Dave Edyburn Home Page provides links to research, publications and articles - www.uwm.edu/~edyburn
- Journal of Special Education Technology - www.tamcec.org/jset/index.htm



Resources

- Accessible Book Collection - www.accessiblebookcollection.org
- Bookshare - www.bookshare.org
- Project Gutenberg Online eBook resource with over 20,000 free books - http://www.gutenberg.org/wiki/Main_Page
- Daisy Books - <http://www.daisy.org>
- CITEd's Learn Center showcases select resources and targeted tools to help students meet the everyday educational challenges through technology - http://www.cited.org/index.aspx?page_id=2
- Reading Software: Finding the Right Program - <http://www.readingrockets.org/article/7765>



Resources

- Assistive Technology Writing Tools - <http://www.greatschools.net/cgi-bin/showarticle/3084>
- A blog focusing on making the curriculum accessible to all learners through the provision of assistive technologies and universal design - <http://www.teachingeverystudent.blogspot.com>
- Accessibility features of Microsoft products - <http://www.microsoft.com/enable>
- Broaden Your Horizons: Assistive technology benefits to students, suppliers, freeware and shareware, resource links - http://www.imvc.com.au/broadenhorizons/index_new.asp?NavID=9&a=9&b=0



Resources

- Inclusive Technology Resource Kit (2007) - This resource includes a range of fact sheets on a wide variety of assistive technologies including organizational, research and study tools. Contact RMIT Disability Co-ordination Office <http://www.rmit.edu.au/ssg/dco> for more information.
- Hall, T., & Strangman, N. (2002). *Graphic organizers*. Wakefield, MA: National Center on Accessing the General Curriculum. Available from http://www.cast.org/publications/ncac/ncac_go.html
- CAST works to expand learning opportunities for all individuals through Universal Design for Learning - www.cast.org
- UDL Technology Toolkit - <http://udltoolkit.wikispaces.com>
- Universal Design for Learning Wiki - <http://udl4all.pbwiki.com>



Thanks.

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