Assistive Technology

Making A Difference to Education, Employment and Social Inclusion Opportunities

ACEA – Reintegration Puzzle Conference
Greg O’Connor
Education Services Manager
Spectronics

www.spectronicsinoz.com/blog
http://gregoconnor.wikispaces.com

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”

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).

Live in a Digital World

“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”
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

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)
The DDA and Disability Standards for Education

- The Disability Discrimination Act (DDA) makes discrimination on the grounds of a person’s disability against the law
- The Disability Discrimination Act (DDA) Education Standards became federal law in August 2005

Remediation vs Compensation


Should not be a big stick
Universal Design for Learning

Multiple Means of
Representation
Expression
Engagement

CAST - Center for Applied Special Technology
http://www.cast.org
Let's take a look

textHELP Read & Write Gold

http://www.spectronicsinoz.com/product/texthelp-readwrite-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

HSIE Exam Marks

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Student A</th>
<th>Student B</th>
<th>Student C</th>
<th>Student D</th>
<th>Student E</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>60%</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
<td>50%</td>
</tr>
</tbody>
</table>

Graph showing HSIE Exam Marks for different students.
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

- LD Online - www.ldonline.org
- Dave Edyburn Home Page provides links to research, publications and articles - www.uwm.edu/~edyburn
- Journal of Special Education Technology - www.tamcec.org/iset/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
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
- 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.
- CAST works to expand learning opportunities for all individuals through Universal Design for Learning - www.cast.org
- UDL Technology Toolkit - http://udltechtoolkit.wikispaces.com
- Universal Design for Learning Wiki - http://udl4all.pbwiki.com

Thanks.

grego@spectronicsinoz.com
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