

**Keeping up to date:  
What I need to know  
about assistive  
technology research**





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# Presentation Outline

- Provide a brief introductory overview of the assistive technology research literature.
- Provide tools for locating, sharing and documenting research and good practice in assistive technology.
- Discuss Action research as a research tool



# Presentation Information

Information and documents relating to this presentation can be found @

<http://gregoconnor.wikispaces.com/>



# Why Research?

“...delicate balance between no-holds-barred openness to new ideas...and the most rigorous sceptical scrutiny of everything – new ideas and established wisdom.”

Carl Sagan

<http://www.carlsagan.com/>

Sagan 1997 *The demon-haunted world: science as a candle in the dark*



## Definition

**Assistive technology** “is a combination of the processes and tools involved in addressing educational needs and problems of students with disabilities with an emphasis on applying the most current tools: computers and their related technologies”



# Definitions

Assistive Technology

Digital Technologies

E-inclusion



# e-inclusion

- Emphasises interaction between digital tools, contexts and people
- Focuses on the activity of the use of the technology by or with people

Abbott, C. (2007). *E-inclusion: Learning Difficulties and Digital Technologies*

<http://tinyurl.com/digital-inclusion>

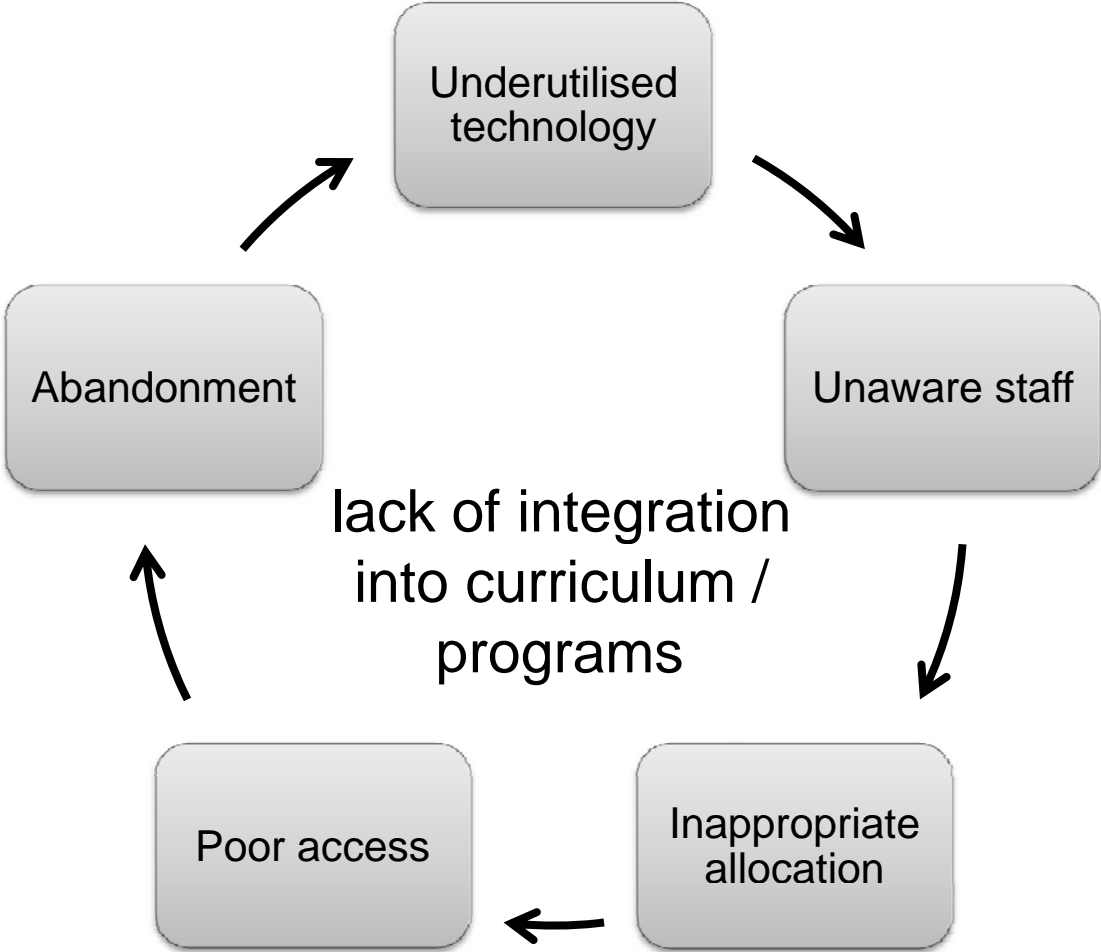


# Dynamic

- In 2003 there were 25,000 products available.



# Making Informed decisions: Baseline



# Assistive Technology Research

- The research base is emerging
- Little published peer-reviewed research concerning the impact of assistive technology on learning
- Limited in scope and rigor
- Technologically determinist perspective



# Barriers to Use

Lack of:

- Knowledge
- Training
- Funding
- System support
- Leadership
- Research
- Data driven decisions



# Barriers to Use

“ special education teachers are using technology to accommodate and adapt curriculum without the use of research or data-driven decision-making processes to guide practice”

Castellani & Castelleni (2005)





**BUT.....**

there is documented research and good practice available. BUT where?



# What does the research say?

Dave Edyburn - What have we learnt lately?

[www.uwm.edu/~edyburn](http://www.uwm.edu/~edyburn)



# Journals

Closing The Gap

<http://www.closingthegap.com>

Journal of Special Education Technology

[jset.unlev.edu](http://jset.unlev.edu)



# Journals

- Special Education Technology Practice

[www.setp.net](http://www.setp.net)

- Assistive Technology Outcomes and Benefits

[www.atia.org/atob/ATOBWeb](http://www.atia.org/atob/ATOBWeb)

- Learning and Leading with Technology

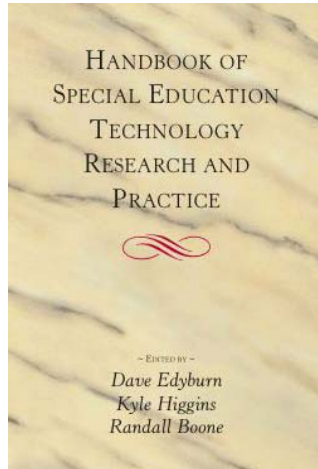
[www.iste.org](http://www.iste.org)

- Assistive technology Journal

<http://www.resna.org/ProfResources/Publications/ATJournal.php>



# Books and Publications



Handbook of Special Education  
Technology Research and Practice

[www.spectronicsinoz.com](http://www.spectronicsinoz.com)

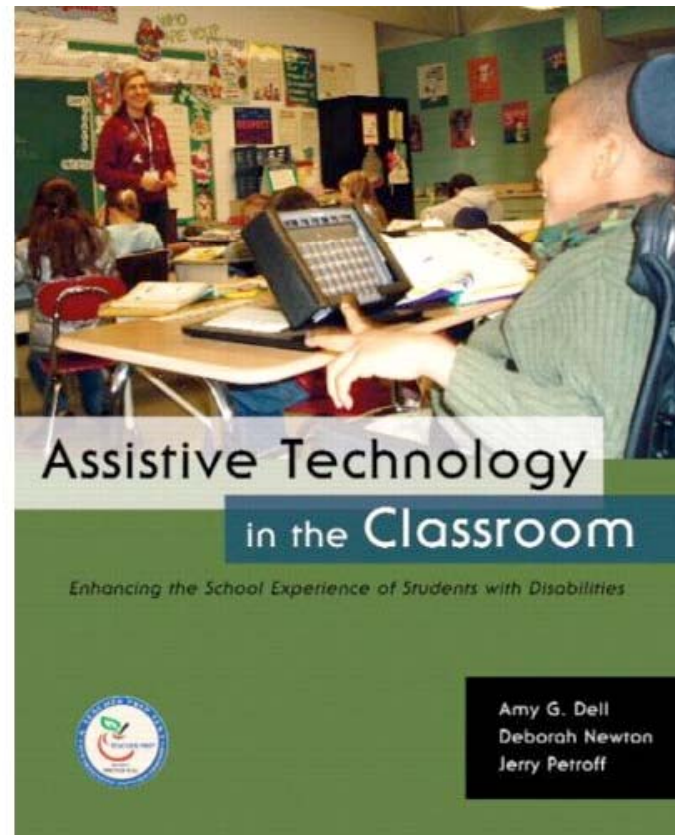


Abbott (2007) E-Inclusion: Learning  
Difficulties and Digital Technologies

[www.futurelab.org.uk](http://www.futurelab.org.uk)



# Books and Publications



Dell, Newton & Petroff (2007) Assistive Technology in the Classroom: Enhancing the School Experiences of Students with Disabilities



# Research Web Links

CITEd's Research Center

[www.cited.org](http://www.cited.org)

TechMatrix

[www.techmatrix.org](http://www.techmatrix.org)



# Listservs / E-Newsletter

SENIT

[lists.becta.org.uk/mailman/listinfo/senit](https://lists.becta.org.uk/mailman/listinfo/senit)

QIAT

[natri.uky.edu/assoc\\_projects/qiat/signup.html](https://natri.uky.edu/assoc_projects/qiat/signup.html)



# Blogs

<http://teachinglearnerswithmultipleneeds.blogspot.com>

Resources and ideas for teachers of learners with severe, profound, intensive, significant, complex or multiple special needs.

<http://www.alltogetherwecan.com/>

Sam Sennott Blog.

<http://teachingeverystudent.blogspot.com>

Karen Janowski's Teaching Every Student Blog.



# Sharing / Networking

Del.icio.us

<http://del.icio.us/ocgreg>

AssitiveTech

<http://assistivetech.ning.com/>



# Search

Google Scholar

<http://scholar.google.com.au/>

Directory of (Re)search Tools

[www.c4lpt.co.uk/Directory/Tools/research.html](http://www.c4lpt.co.uk/Directory/Tools/research.html)



# Storing / Documenting

- Endnote



<http://www.endnote.com>



# Data driven decision making

- Can we wait for the research community to catch up?
- Australian context
- Action Research

*“Investigations conducted by and for the people taking the action, on their own action to inform their future actions”*

Richard Sagor (2005)



# Data driven decision making

## What does success look like?

SETT Framework

[http://www2.edc.org/NCIP/Workshops/sett/SETT\\_home.html](http://www2.edc.org/NCIP/Workshops/sett/SETT_home.html)



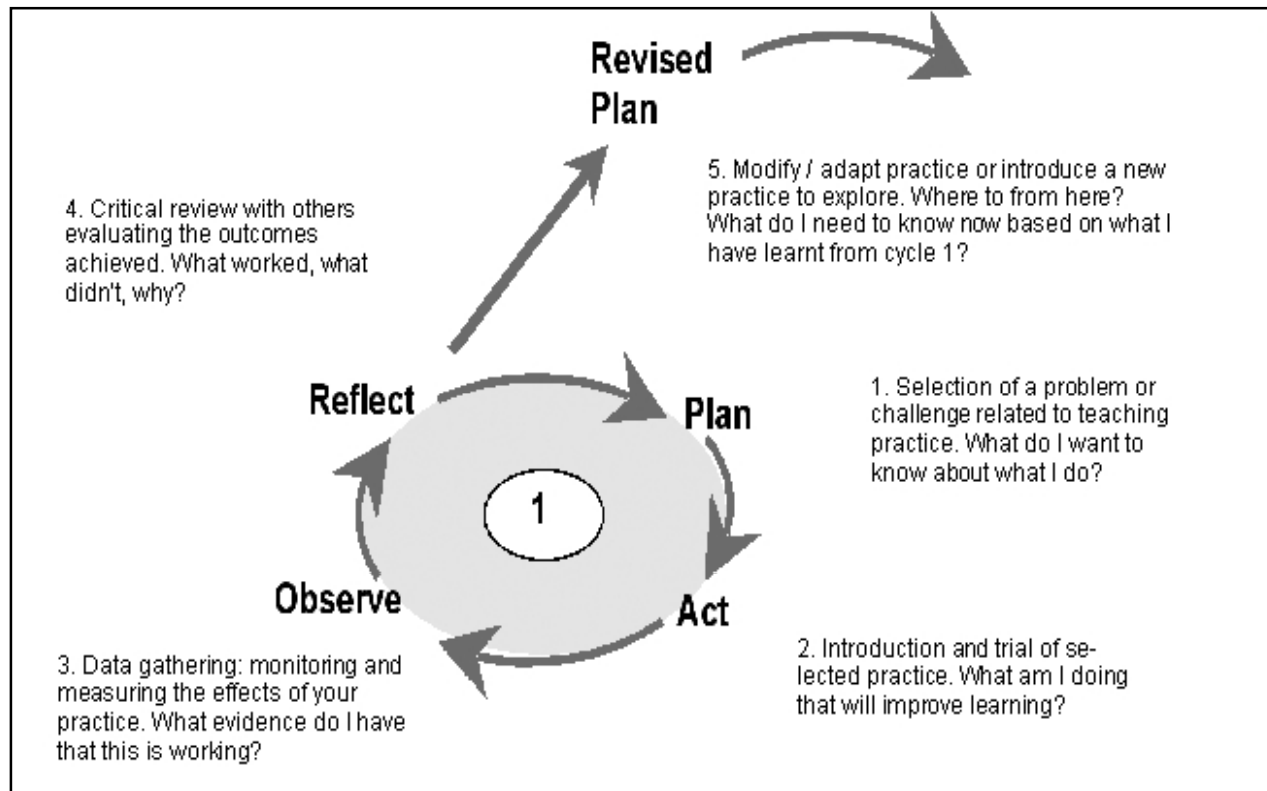
## Action Research Model

*“Investigations conducted by and for the people taking the action, on their own action to inform their future actions”*

Richard Sagor (2005)



# Action research: A teacher-centred approach for self-improving schools



<http://gregoconnor.wikispaces.com/Action+Research+and+Action+Learning>



## Action Research Model

Sagor, R. (2005). *The Action Research Guidebook: A Four Step Process for Educators and School Teams*. Thousand Oaks, CA: Corwin Press.



# Implementing Action Research

Q1. Will a site licence for TextHELP Read & Write increase student access?

Q2. Does increase access have an impact on student learning outcomes?

Five targeted students in Year 9,

(and one student in Year 9 undertaking Life Skills)



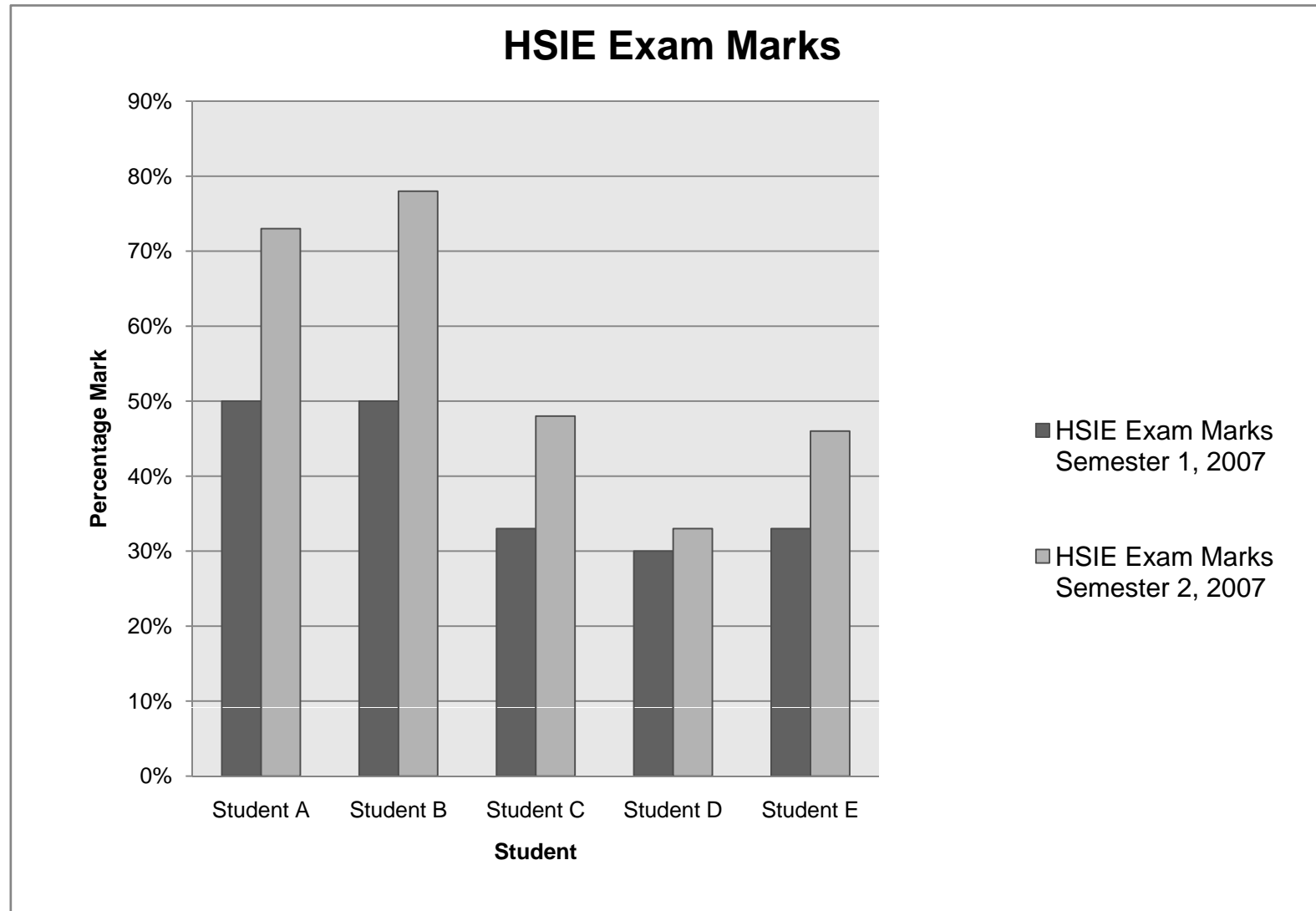
# Implementing Action Research

## Triangulated Data

1. Research journal and observations
2. Assessment results and work samples
3. Feedback from students and staff



# Results



# Results

## Q2. Improved Outcomes

1. Positive attitude of students
2. More on task and independent behaviour
3. Student B handed in all in-class assessments
4. Students A, B & C take all notes in TextHELP
5. Improved internet use
6. Increased quality of assignments
7. Decreased student stress



# What does this all mean?

- 1. Continue action research cycle**
- 2. Don't expect results overnight**
- 3. Other factors impact on results**



# Future Research?

- Response to Intervention
- Differentiating Instruction
- Universal Design for Learning
- Social Inclusion / Social Justice
- Web 2.0

