
iPads in Education

DSAQ will be undertaking an iPad research trial in early 2011 with previously chosen schools. Below is an article introducing the benefits of the iPad. These benefits are proving useful for students with Down syndrome in classrooms. There are some ideas for teachers below. Gerry Kennedy is an independent IT Consultant who has experience in inclusive technologies and education. DSAQ encourages individuals to research their own circumstances before purchasing an iPad.

The iPad as an Inclusive Device in Education

Author: Gerry Kennedy © October 2010

The emerging touch tablet technologies provide a number of opportunities for students in accessing information as well as in communicating with the world. The iPad from Apple is a 9.7" (24.6 CM) high-resolution LED-backlit display. It is a responsive multi-touch screen, accessed by hand and movement. The updated iPhone technology has been completely reengineered for the larger iPad surface, making it precise and responsive.

Downloading Apps

Users need to set up an account on the online iTunes Store in order to, purchase, download, coordinate and organise Apps.

Mind Mapping

This is an area where many educators are still unaware of the power and flexibility of mind mapping or webbing software programs. They cater to students who benefit from pictorial or diagrammatic representation of data. iThoughtsHD is a mind mapping tool for the iPad. It is based on and compatible with iThoughts for the iPhone. Mindmapping enables you to visually organise your thoughts, ideas and information. It offers features such as:

External Monitor Support

Imports and Exports other mind mapping software apps including Freemind, Novamind, Mindmanager, XMind, iMindmap and Mindview
Export the file as a PDF or PNG image
Wirelessly upload/download mind maps using a web browser.

Email maps as attachments (in all supported formats)

Open email attachments in iThoughtsHD

Topic attributes (colour, icon, shape)

Topic notes (with hyperlinks)

Task Management (due date, percent complete)

Relationships (links between topics)

Collapsible branches

Cut, copy, paste, move and merge topics and branches

Auto align and arrange topics relative to each other

Work in landscape and/or portrait mode

Support for very large maps (with a canvas that is 600x the standard screen size)

- Keyboard shortcuts

Another handy App to help students organise their notes, thoughts, clippings and ideas is CarbonFin Outliner. It allows students to organize their thoughts, tasks, and projects. They can easily create a to-do list for today, or track an entire project anywhere they are working or studying. Users of all abilities can share their outlines, edit them online, and collaborate with other Outliner users. Similar Apps in this genre include Taska for iPad and Sorted although these are not necessarily mind mapping or webbing tools but more organization and planning Apps.

Leisure and Games

There are literally thousands of games and activities for leisure as well as for fun, game playing and education. The curriculum is well covered with Apps for reading, spelling, word-definitions, note taking, organisation and planning, personal information systems (PIM), literacy, audio books, eBooks, eReaders, maths, graphing, calculation, estimation, conversion, history, mapping, art and design, music composition, playback and editing, photo manipulation, painting, drawing and science.

A vast range of Apps for cooking, recipes, locating restaurants and eateries, banks, shops, service stations, take away outlets, public services and other community assets are all usually available at little or no cost.

eBooks

Dedicated eBook reading devices such as offerings from Kindle 3, Sony Reader Touch Edition™, Endless Ideas BeBook Neo and Kobo eReader and many others, all offer features and attributes that cater to different needs.

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The capacity now to not only access eBooks but to make your own and edit content is a very important aspect of tablet devices. Software such as Stanza provides great flexibility in storing, retrieving and accessing content.

Stanza is a free application for an iPhone, iPad, and/or iPod Touch. Students and educators can use it to download from a vast selection of books and periodicals and read them immediately on the iPad. It's a wireless electronic library that stays open all day every day. The built-in Lexcycle Online Catalog contains links to over 100,000 books, from classics to contemporary works. If users have an existing collection of electronic books they can then view on the iPad by moving them into the Stanza iPad App simply by dragging them into iTunes on a Mac or PC.

A recent story book genre has appeared. The first title in the PopOut!™ series of interactive children's books brings the Beatrix Potter classic to life with signature PopOut!™ spin-wheels, pull-tabs, spring-mounted elements and objects that literally pop out of the page. Complete with a classical piano soundtrack, fun and immersive sound effects and a clear vocal performance employing a female actor's voice, this is an adventure that fully utilises and expands upon the capabilities of the iPad technology.

This is where many educators will see definite advantages of an iPad for writing, editing, creating and publishing content with text or full multi-media functions. Students will embrace this technology as it encapsulates and promotes multiple methodologies and ways of presenting ideas, story content and media.

In addition, accessing and reading books and material in other contexts is available with lecture notes, study materials, exam notes and class or course content streamed by the school or institution will make traditional texts obsolete in time.

iTunes U

iTunes U features enhanced accessibility for those using screen readers. As a result, everyone with access to the Internet, can enjoy great educational content. iTunes hosts content provided by participating universities, Kindergarten to year 12 schools, museums, and other educational organisations. Students and educators as well as parents can choose from more than 350,000 free course lectures, videos, readings, and podcasts from these institutions worldwide.

Communication Apps

Proloquo2Go is available also on iPad. It has quickly become the predominant and ubiquitous App for communication for people with Alternative Augmentative Communication (AAC) needs.

It has definitely captured the attention of schools and speech pathologists as it provides a lower entry cost point to an AAC device. It does not necessarily cater to every user, though.

Users can communicate using text and symbols, with voice, on the iPad at home, at work or at school or use it on an iPod Touch or iPhone when going on a trip, to a restaurant or when out in the community. Proloquo2Go is an AAC system that has been successful for a wide variety of users' needs for communication. Proloquo2Go is Latin for 'speak out loud'.

A very comprehensive list of other AAC Apps is available from the Spectronics website: <http://www.spectronicsinoz.com/blog/new-technologies/2010/07/iphoneipad-apps-for-aac/>.

There are numerous other apps for communication and each has its own particular set of features, symbols, access input methodologies and functions. The aspect of funding and how the App is purchased as well as the iPad must be considered, as well as setting up the App to meet a user's individual communication needs. Storage, mounting, maintenance and repairs also have to be carefully considered and compared to other existing dynamic display devices, of which there are many in this market.

The capacity to also use the iPad in every other respect is a major consideration for teenagers and adult users as they can access other Apps to accomplish a wide range of options, apart from just communication. It is socially acceptable and will be accepted with peers and siblings and in the community in general as it is a 'mainstream' device and becoming the norm. As with all technologies, considered research and due diligence is required.

Customising and Accommodating Individual Needs

A definite downside is that each iPad requires an account with Apps purchased or acquired for a user for specific needs (e.g. a dedicated communication App). For example, the communication needs of a user would need to be determined and the App configured to meet those needs and settings altered, customized recorded and stored.

If the school wishes to provide an iPad to an individual student with customised settings and Apps, then it would need to be set up specifically for that student and not shared as a school or classroom resource.

Generic solutions are possible with all devices set up with the same Apps.

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The features and functions would then be changed by each new user as he or she deemed fit in a session, app or for access throughout the day (e.g. screen display settings, brightness). There are no passwords, personal preferences settings and all documents and files are all stored for a presumed single iPad user.

Controlling settings and maintaining the integrity of a standard look and feel is difficult as the capacity to 'lock' or protect the device functions is dissimilar to notebook computers that are designed to be protected. This aspect must be considered as students will quickly alter and change settings as they explore and experiment.



Future Options

As with all technologies there is inbuilt obsolescence. There are several competitors' devices that have entered or will soon enter the market from Samsung, Dell and HP. Undoubtedly they will have identified areas that can be exploited in design and functionality and provide alternatives that will take advantage of existing weaknesses in prevailing iPad technology. This will only offer greater choice in product offerings in the marketplace. The ever expanding tablet market will only prove to promote them as viable educational and business computing solutions, though.

Access must be considered for all of our students. It is in choosing the device that more closely and accurately accommodates the learning, research, communication and or leisure needs of our students that will ensure equity and opportunity for all to enjoy the privileges these devices offer.

So far, Apple has carefully considered individual needs and has engineered the iPad to be a universal solution for the majority of users who wish to partake in this next-generation computing device. The future will be interesting to see how integrated the iPad will become in our schools, Universities, TAFE and training colleges – as well as kindergartens.

References and Articles

Links for PD or Research - Education Apps Review

<http://educationappsreview.ning.com>

ATMAC – a local resource site with everything to do with Apple products and disability

<http://atmac.org/round-up-ipad-user-stories>

School Technology Solutions

<http://www.schooltechnology.org/?s=ipad>

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<http://ipadeducators.ning.com/opensocial/ningapps/show?appUrl=http%3A%2F%2Fslinkning.com%2Fspec.xml%3Fning-app-status%3Dnetwork&owner=371wq83chgfc5>

Free iPad Children's eBooks:

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

Hyper Home School

<http://www.hyperhomeschool.com/hyperhomeschoolblog/tag/iphone-apps>

The iPod Touch Classroom

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

Pros and Cons of the iPad in Education

<http://gigaom.com/apple/pros-cons-ipad-education/>

iPads4Education

<http://ipads4education.ning.com/>

How schools are putting the iPad to work - MacWorld article

<http://www.macworld.com/article/153672/2010/08/ipaded.html>

75 really useful iPad tips and tricks

<http://www.techradar.com/news/computing/apple/75-really-useful-ipad-tips-and-tricks-688556>

If you are already using an iPad please get in touch to share your experiences. Education Consultant Amanda McFadden is available to answer questions and discuss the iPad:
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