Learning and the iPad @ St. Columba's

A report that aims to address the school's vision for learning in a contemporary context; with specific focus on the school's implementation of the iPad into the educational landscape.

Rationale

At St. Columba's we believe that the iPad allows for a more personalised approach to learning and it is this personalised learning that offers a means of transforming the learning experience of every child. We aim to create a learning environment tailored to the needs, interests and aptitudes of every single student. As such, this program is a real opportunity to make a positive impact on young people's learning and future (National College for School Leadership, 2005).

We also see the iPad as being an integral component in the school's educational goal of fostering an environment where students develop a stronger self-efficacy, as this trait has been shown to bring about the largest learning gain in students (Hattie, 2003).

"In simple terms, personalised learning is the route to raise quality and equity in our education system." (NCSL,2005).

The 2011 New Horizon report, a not-for-profit consortium dedicated to the exploration and use of new media and new technologies in education, also illustrated a need for all education sectors to move toward a more flexible, collaborative approach to education, one where mobile technologies feature heavily as "people expect to be able to work, learn, and study whenever and wherever they want" (Horizon Report, 2011, p.3).

Some key findings of the report included;

- Students' easy and pervasive access to information outside of formal campus resources continues to encourage educators to take a careful look at the ways we can best serve learners.
- Digital media literacy continues its rise in importance as a key skill in **every** discipline and profession.
- **Mobiles devices** enable ubiquitous access to information, social networks, tools for learning and productivity, and much more. Mobile devices continue to evolve, but it is the increased access to affordable and reliable networks that is driving this technology now. Mobiles are capable computing devices in their own right — and

they are increasingly a user's first choice for Internet access.

- Electronic books have the potential to truly transform educational practice. They offer the user self-directed, interactive experiences; easy exploration; collaborative work; multi-modal, immersive activities; and other deeply engaging approaches to learning. Mobile applications add easy social interaction around electronic books that could be marshaled in support of group study and focused teacher-student interaction at any point in the text.

- Mobile devices are recognized as advantageous tools for learning and study

- Mobile devices allow very simple tools to be easily integrated into classroom activities with no need for involvement of IT or support staff. Twitter, a short-message micro blogging service that is very easy to use on phones, is a good example, finding ever more common use as an in-class discussion tool.

Further to the academic grounding of using such a device in the pedagogical practices of staff and learning activities of students, the school has maintained a five-year focus exploring the learning benefits of the Assessment For Learning framework. The focus on Assessment For Learning has involved "new ways to enhance feedback between those taught and the teacher, ways which require new modes of pedagogy—which will require significant changes in classroom practice" (William and Black, 2001, p.3) and the iPad facilitates this flexible delivery of teacher to student and student to student feedback in an engaging, personalised manner.

In a practical sense the students owning these devices offers the school and families several key benefits. These include;

- The iPad costs approximately half as much as schools undertaking a one-to-one laptop program
- A significant weight reduction in backpack weight
- A cheaper option for families when compared with the total textbook costing over the two-year warrantable period
- The relatively small size of device will allow easy storage
- Due to the personalization possibilities the device allows (App arrangement, Home screen display, music and photo content etc.) the students gain a sense of ownership therefore highly value their iPad

- It is estimate that printing costs for the school will be reduced by approximately $3600 per year, per class (Hue, 2011)

After having completed the first phase of the school's iPad program, involving Years 7 and 9 2012, as well as a synthesis of data gathered from student, staff and parent surveys the following observations were made by our students;

- Users to date are finding that through the use of different apps, students are able to choose the type of product they construct to demonstrate their understanding – catering to the different learning needs of the students

- Students were given more flexibility with regard to how they create and present work

- Students were significantly more engaged with course content and their learning as a result of their use of the iPad

- The iPad is a personal device and acted as a 1 to 1, anywhere, anytime learning device.

- The abundance of apps and access to information on a vast range of topics allow students to pursue areas they are interested in learning about.

- Notes can be kept in one spot, commented on and available anywhere through the use of the Evernote, Notes and Dropbox Applications

- The touch screen is familiar to the students as it is similar to the technology students use in their everyday life – therefore minimal technical assistance is needed

- A 10-hour battery life means the iPad can be used throughout the entire school day.

- The instant startup of the iPad means greater use of class time for learning.

- There is anywhere, anytime access to current information that contains text, sound, images and interactivity – therefore increasing the student's perceived engagement with the content (when compared to a textbook or the white-board)

- The iPad is light and portable, easily carried in the school bag and to and from class.

The device

"a powerful and versatile tool with a multitude of applications, including thousands with educational uses". (Hu, p.1, 2011)

Physically and functionally, Apple's iPad tablet falls between the smartphone and the laptop. Applications designed for this type of device typically offer multimedia content that is more interactive than on a cell phone screen, while allowing navigation with taps, finger swipes, and pinch zooms not feasible on a typical laptop or desktop. Many iPad applications focus on presenting content such as music, movies, magazines, newspapers, websites, games, or e-books. Apps allow the device to be used as an e-reader but with more interactive features than other e-texts, redefining what a textbook can be and do. However there are an ever increasing array of 'productivity' applications, allowing students to store, share, sync and send files of many types between their home computer or any computer with internet access and their iPad.

The iPad is well suited for the consumption of information, with a crisp visual display and built-in wireless connectivity that facilitates easy download of the hundreds of thousands of applications available from the iTunes store. But many applications offer more than just consumption, providing interaction, exploration and content creation as they take advantage of the touchscreen interface, web access, and large-tablet display size.

A wide range of applications support teaching and learning, including many apps developed by institutions and third-party developers. For individual study, students might find that flashcard apps like Cram offer a rich, interactive learning opportunity. Alternatively, they might turn the iPad into a graphing calculator by downloading the Pi83 application or challenge themselves with vocabulary word games like Word Warp or Blanks. In a classroom setting, polling applications such as eClicker can collect, collate, and present student responses during lectures or discussions. Or the iPad might function as a backchannel tool using cloud services like Twitter or Google Moderator.

As a single device that is smaller than a laptop, the iPad combines robust computational functionality with a screen large enough to serve as a legitimate replacement for printed textbooks and other course materials, with the added benefits of interactivity. The iPad also provides assistive tools, including an audio reader for those with visual impairments and support for closed-captioned content to accommodate those with hearing difficulties. Some iPad applications suggest a future where we can design our own media. Flipboard, for example, aggregates feeds from websites like Twitter, online newspapers or the student's most visited webpages and displays them in an attractive magazine-style layout complete with virtual page turning.

In recent years, technological innovation has focused on providing mobile technologies with computing ability and the iPad is no exception. With a 1GHz dual-core processor the iPad can access online content wirelessly anywhere, anytime whilst on the school grounds and does so faster then the schools MacBook laptops.

With the release of iBooks 2 and iBooks Author, an e-book creation platform teachers, students and publishers can use to develop their own textbooks, we at St Columba's believe the iPad provides a more direct, technology rich vehicle for students to be the creators and owners of content rather than merely consumers of it. When professional publications are required it is easily accessible with the iPad given that Apple has also recently expanded iTunes U for K-12 educators, teaming up with publishing giants McGraw-Hill, Pearson and Houghton Mifflin Harcourt to offer interactive textbooks.

Implementation

The school's implementation procedure to introduce the iPad into the Years 7 and 9 learning program at St Columba's is as follows;

- The school will offer a number of purchasing options and all information regarding these options will be communicated as they are finalised
- There will be school-based introduction seminars covering basic uses, syncing and school expectations regarding acceptable uses of the device, although it is very likely that the majority of students will be very familiar with the device
- Interested students across all year groups have been given technical training to act as classroom 'experts'. This group of students are then able to assist staff with regard to possible technical issues that may arise, therefore enabling the teacher to continue with their planned lesson with minimal distraction
- Parent training afternoon/evenings will be scheduled as students receive their iPads. These sessions will cover information such as safely managing your child's iPad at home, registering the device to an i-Tunes account and iPad basic functionality. Informative material will also be available on the school's web site and sent home to assist parents with any technical issues, procedural expectations etc.

This continuation of the school's iPad program will see students in Years 7-10 using an iPad in their learning by the mid-way point of term 1 2013.

Staff development

The mobile learning journey at St Columba's has been a three-year focus for all staff. Through the school's highly commended "iPod Touch Trial", and now through a shift in focus to the more powerful, user-friendly iPad.

Here at St. Columba's we have made a concerted effort to focus on familiarizing ourselves with the device in a number of ways.

Firstly a 6 month exploration, through weekly staff development sessions both during school hours and outside of regular school hours, of the iPad's basic functionality and capability. Secondly, a focus on the devices educational applications.

This staff development has taken many forms over the three-year journey.

- Weekly App "Show and Tell" held during staff briefing meetings
- Fortnightly iPad training focusing the use of Applications on the staff and student App list
- Weekly staff meeting time assigned to staff workshops that are focused on pedagogical implementation of the iPad
- Regular showcasing of student work samples created using the iPad
- One-on-one staff development opportunities offered to all staff
- A web-based resource page containing 'how to' documents and videos

Learning at St Columba's with the iPad

When working with any form of technology within the St Columba's community it is the students that guide its use. To ensure that the use of the iPad is directed with educational objectives in mind a Technology Experts group will be formed, consisting of students from each year group. This group will meet each fortnight on a rotating basis to learn specific apps and to provide guidance to teachers and other students in the use of iPads. The Technology Experts group will rotate each term in order to allow for a new set of students to gain these practical and educational experiences.

iPads can also serve as part of a student response system and for numerous other purposes. iPads have longer battery life than most laptops, and educational applications designed for the iPad often incorporate audio, video, animation, and illustrations.

The iPad was not designed to replace a user's primary computer, so the applications that run on it often turn it into an appliance: a net- book, an e-reader, a calculator, or a student response device. Some applications, like History: Maps of the World, exploit the iPad's capabilities to support multiple learning styles, inviting users to match music and artwork on the touchscreen with the appropriate time and geographic location, thus presenting data that is visual, auditory, and kinesthetic. At the same time, the iPad's tactile interface and media-friendly approach introduce an element of fun into the learning experience. The planetarium app Star Walk, for example, allows users to navigate the night skies, tapping for information on stars and their satellites, swiping for images of constellations, and examining changes in the heavenly bodies through time-lapse animation. At their best, these **applications that live in the spaces where education and entertainment overlap can capture the imagination, enticing students to learn on their own.**

The App List

Pages - $10.49

Keynote - $10.49

Numbers - $10.49

iMovie - $5.49

Upad - $5.49

FREE

iBooks

Flipboard

TED

Twitter

Dropbox

Edmodo

Wordpress

Wikipanion

Prezi viewer

Kindle

Google earth

Dictionary

Mindjet

Showme

Where is it going?

E-book applications for the iPad that employ the device's potential for interactivity could substantively change the textbook experience. More applications like The Elements can be expected in the near future, with tap-and-swipe access to dynamic diagrams, animated illustrations, illustrative videos, and updatable content, all available at a touch for interaction, examination, and in-depth investigation. Using an iPad as an e-reader allows searching, bookmarking, tagging, and sharing of content, which could turn a textbook from a static resource into a learning hub. Many existing applications designed for learning will become customizable: for instance, a vocabulary-building game like Word Warp could be made more useful as a learning tool if an instructor could load specific vocabulary assignments. As the iPad itself evolves, applications will emerge to take advantage of likely future hardware updates such as a built- in camera and improved hardware connectivity options. Finally, **where the iPad applications have led, other tablets and their attendant applications can be expected to follow, creating a more competitive and diverse market for tools of this type.**

Research and Further Reading

http://edition.cnn.com/2012/01/23/tech/innovation/ipad-solid-education-tool/index.html

http://www.gamedesk.org/projects/motion-math-in-class/

http://www.pcworld.com/article/245901/goodbye_textbooks_hello_ipad.html

http://www.scholastic.com/browse/article.jsp?id=3755865

http://ipadacademy.com/ - tips on educational iPad use

http://www.kentucky.com/2010/12/13/1564473/math-and-english-apps-help-students.html

http://www.apple.com/education/ipad/

http://www.ipadineducation.co.uk/iPad_in_Education/iPads_in_Schools.html

http://www.21stcenturyfluency.com/blogpost.cfm?blogID=1739

http://ipad366.posterous.com/

http://www.schrockguide.net/ipads-in-the-classroom.html

http://ali.apple.com/acot2/

http://emergingmediainitiative.com/project/mobile-education/