

IPads in education: the beginning of a revolution?

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Abstract

April 2010 saw the launch of a computing device which has the potential to change the educational landscape for ever. Apple Computers’ iPad was originally aimed at the consumer market and it has already been phenomenally successful. Apple are reported to have sold 3 million iPads within 80 days of the launch

(<http://www.apple.com/pr/library/2010/06/22ipad.html>) and almost 15 million during 2010.

But what is the place of these innovative devices in education settings? In particular, what new approaches to literacy teaching do they make possible? It is the purpose of this article to begin a discussion of these questions.

How are iPads different?

It is worth outlining some of the key distinctive features of what is not just a new electronic device, but a new type of device entirely. How is the iPad different from previous devices? What can people do with it which is new? When something such as the iPad comes along, which does not fit neatly into existing technology compartments, it can cause confusion and debate and the temptation is to simply compare it to what is already there. Consequently, the iPad has been compared to the Netbook, a highly portable computing device which has risen in popularity over the past few years. It is important to make a clear distinction between Netbooks and the iPad, or there is a danger that the educational potential of the new device could be missed by a misunderstanding of how it differs from what is currently available.

Firstly, Netbooks are smaller, cheaper and less powerful versions of laptops. They have the same ‘clam-shell’ design, usually the same operating system and people use them largely like they did their laptops. They are scaled down versions of what already exists with the added benefit of increased portability and economy. They run mainly the same applications, and can, as their name suggests, access the Internet. In effect, the ways they are used have not changed significantly from what went before and therefore what is produced and created using them is likely to be very similar to before.

The iPad is different from this in a number of important ways. Firstly, it is not built to be a smaller version of an Apple laptop and clearly does not resemble a laptop in its design. This makes a big difference to how people physically use the device, as its design encourages users to hold it close to them, rather than use it just on their laps or desks. In this way it becomes more of an extension of one’s body rather than a separate machine. This is very similar to the way many young people ‘feel’ about their mobile phones. They carry them everywhere they go, usually sleep with them, use them to connect with the outside world and almost incorporate them into their personality. It is unlikely that many people feel the same way about their laptops! Yet the design of the iPad puts it in a place which has more in common with the mobile phone than a laptop or Netbook. It might well become the case that people will feel the same about their iPads as they do their mobile phones. For a school this could well increase the care and attention that learners give to these new devices. Given that an iPad is less inherently likely to get broken anyway (no moving parts), this enhances the changing relationship between learner and device.

A second important difference lies in the operating system of the iPad. Rather than trying to run a desktop Operating System (OS) on a small portable machine, Apple has produced an OS which is designed specifically for mobile devices. The system requirements of a mobile device are different from those of a traditional computer, and battery life is perhaps the key feature here. iPad users do not need to use an electrical power source anywhere near as often as users of a laptop or Netbook. This vastly extends the locus of use of the iPad. Learners can actually take one out of school with them for a whole day, without it running out of power. Our definitions of device portability change significantly.

Thirdly, although Netbooks can usually claim the advantage of running the same applications that desktops and laptops do, and therefore offer continuity and compatibility for users, this actually constrains their functionality. They rely on software developers to write applications for desktop and laptop machines which can then be used on Netbooks, but often with reduced functionality. iPad applications (or apps) are quite different. Generally speaking the apps in the Apple App Store are original and have been written specifically for mobile devices. This is important for at least two reasons: they are written specifically for mobile computing and they are ever-changing and often create user needs as much as meet existing needs. Mobile computing creates new demands for devices and software, the iPad OS is written for that purpose, and with 200,000 + apps the landscape for iPad software is creative, exciting and progressive. Netbooks seem somewhat static and staid in comparison.

A fourth major contrast between the two items is how tactile and engaging the iPad is compared to a Netbook or any laptop. This is due to the use of fingers and gesture touch as the means of input into the device. The fact that there is no trackpad, mouse, stylus or cursor makes such a difference to how the user engages with the device. The tip of a finger may seem somewhat 'blunt' compared to the fine control offered by a mouse cursor or the point of a stylus, yet with well-designed applications this becomes less of an issue. By contrast, controlling the iPad with direct touch from the user makes such use a different, involving and pleasing activity. It is likely that more and more mobile computing devices will adopt this form of input as it also offers greater flexibility than a fixed keyboard. With the iPad and iOS, we now have a tablet style computer on which the physical design, OS and applications work seamlessly and produce a device which works and offers users a new type of mobile computing. The launch of the iPad can be seen as a paradigm shift as significant as the move

to mouse-based computing in the 1990s. Thus it offers the potential of transformation in the uses of technology in teaching and learning - new methods for new learning.

Why use iPads in schools?

There are a number of plausible, if speculative, reasons why the iPad is likely to have a major effect upon learning, and learning in educational settings particularly.

- a) The device occupies a new space in technology, a space which is still undefined to some extent, yet which is likely to become significant over time. This space is between the mobile space occupied by mobile phones, MP3 players such as iPods, and the newer designs of smart phones (which usually means devices which play a variety of media and connect to the Internet, as well as enabling telephone calls), and the portable space occupied by laptops and Netbooks. The new position is in between these established areas and the iPad shares elements in common with both these spaces. It handles text, visual and audio media, doing virtually everything that a laptop can do, and uses a screen size which is readable and 'touchable', but is self sufficient (no mouse, no hard drive) and superbly mobile, like a mobile phone without the telephony (although it can manage video calling through Skype and Facetime).

- b) It will help to personalise learning. The traditional one expert to thirty learners model of education as knowledge-transfer is fast becoming redundant. As models of education and learning swing away from their virtually exclusive reliance on reading and listening as learner language modes and towards much greater salience of speaking and writing in knowledge creation, the iPad might just be the key device in this transformation. Communication (through email, text message, social networking and video conversation) is at the heart of the iPad's design, and the device demands interaction with others, who may not, of course, happen to be in the same classroom (or school, or even country).

- c) It does not depend on networks – other than the biggest of all networks, the Internet itself. In most learning organisations, the network is dominant. This has given rise to a number of features / problems in technology. How much time, for example, is wasted by the network user in 'logging in' (or worse, not being able to log in)? How often is the network 'down', causing frustration for learners and loss of learning time? How much

time and energy is spent on network security? The iPad can handle all of these issues by being permanently 'on', holding all the apps a learner needs for a day/week/month/term's work, and having a simple security system which just involves an individual password.

- d) It could also be the start of a large reduction in the role of the technician in providing the technical support many schools need with their technology. Too often teachers are over reliant on technicians for everyday issues due to the complicated nature of some technology. The iPad needs little if any maintenance and installing its software is simple, quick and easy - there is little need for any technical support. This puts the teacher and the learner in control of their technology.
- e) Educational organisations no longer need ICT suites. In many organisations technology is segregated from everyday teaching and learning by being located in a dark, windowless room and having timetabled access. Learners are then moved in large groups to use this technology, which becomes compartmentalised and discrete rather than ubiquitous and generic. The iPad is at its best when used ubiquitously.
- f) It is open-ended - the scope for apps written specifically for teaching and learning is huge. Educationalists can work with developers to create new and innovative software which reflect the learner's needs and expectations in technology. Essentially the iPad is a tactile and engaging handheld device which could transform the way young people learn.

Uses of the iPad for literacy learning and development

In this section, I will briefly review some of the iPad apps which seem to have the most potential for developing a range of literacy skills and attitudes. Many of these apps are free to download, and even where there is a cost, this is usually quite small.

iBooks: FREE

iBooks offers an amazing way to download and read books. iBooks gives access to the Apple iBookstore, from where books can be downloaded to read on screen. Users simply browse their library on a screen bookshelf, tap a book to open it, flip through pages with a swipe or a tap, and bookmark or add notes to their favourite passages. Many electronic books will need

to be paid for, although there are many sources of free books (e.g. <http://www.epubbooks.com/>)

Dictionary .com: FREE

The free Dictionary.com app delivers content from Dictionary.com and Thesaurus.com, including nearly 2,000,000 words, definitions, synonyms and antonyms. No Internet connection is needed. The app also features audio pronunciations of words, and you can simply shake the iPad to see a randomly selected word.

StoryKit: FREE

This app allows the user to create an electronic storybook. It involves simply writing the text, adding photos or drawings and then sounds (which can be recorded via the in-built microphone) or music. The completed story can then be shared with friends or classmates or uploaded to the StoryKit web server.

Toon Toolkit: £1.79

ToonToolkit lets the user create cartoon strips on an iPad. It provides a set of characters in different poses and a range of objects for them to play with, all drawn by a professional cartoonist. The user can add text, thinks and speaks bubbles, change the layout, and then save the finished strips, or upload these to a web server for sharing.

iPhrase: £0.59

In iPhrase, you start with a selection of words, which might be randomly chosen by the iPad, and the software then creates random, hilarious or emotional phrases or poetry which it then displays as a series of 'fridge magnets'. Screenshots of creations can be sent them to friends or displayed as iPad wallpaper.

Free books - 23,469 classics to go: FREE

This app draws on public domain content, allowing the reading of some of the great books of human history. From the finest Regency and Victorian novels, to the plays of Shakespeare, via just about every book published in English over 75 years ago, and hence out of copyright.

Free Audiobooks – 2,947 classics to go: £1.79

This includes 2,947 of the classic books from the Free books app above, all available to download as audiobooks, ready to listen to anytime, anywhere.

Wordflick: FREE

Wordflick is a fast-paced, arcade-style, word game. The goal is to score points in the allowed time. Points are scored by spelling words from the letters provided. The longer the word, the more points. What sets this game apart is the ability to quickly drag and flick the letters into place.

WritePad: \$1.99

WritePad lets the user take notes in his/her own handwriting using an iPad stylus or just a finger. The software will then recognise the handwriting, adapting to and learning particular styles. Simple gestures can be used to select text, cut, copy, paste, and insert special characters. It is also possible to switch easily between the handwriting recognition and the standard iPad keyboard.

Blanks: FREE

This is a simple application to aid the learning of new words. It gives a word definition and 4 choices of word as an answer. The user just selects one of the choices by dragging it onto the hole in the on-screen paper. If you are correct, a green hock is displayed. If the selected word does not fit to the definition, a red cross appears.

Into the future

It seems likely that the apps currently available for the iPad only scratch the surface of what is possible with this innovative device. And in many ways, it is not its apps which are the most important thing about the iPad. An excellent summing up of the distinctive features of this new device is given by Jesus Diaz in his Gizmodo blog post, *The Next Step* (<http://gizmodo.com/5506692/ipad-is-the-future>).

“That is what is important about the Apple's new mobile computer. It shows that computers have—*must*—be an invisible platform, one that shifts its appearance to give people the tools to complete the tasks they want to accomplish, whatever these are. To enjoy and create content. To play. To communicate. To work. By being invisible and letting the applications

do the work in the most simple way possible, the power of the computer will, at last, be available for *everyone*. No previous knowledge required. From a 3-year-old baby to your 90-year-old grandma, people will be able to just *do things*.”