THE IMPACT OF iPhone IN EDUCATION

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Abstract

Into the Cyber-market a new gadget has arrived – the iPhone; it is a typical smart phone with e-mail, calendar, SMS, photo, music, and Internet support. That in itself isn't so extraordinary because most smart phones come with that nowadays, but what people are really raging about is the interface, it combines three products in one – a revolutionary phone, a widescreen iPod, and a breakthrough Internet device with rich HTML email and a desktop-class web browser. How will this new device impact education? This article is trying to notice what new features does it introduce and how will those be important to students and teachers.

Keywords

iPhone, education, smart phones, web applications

1. Introduction

Clearly the immediate impact of iPhone is small. After all, it’s hard to imagine a significant portion of students or faculty will have an iPhone in the next year.

However, iPhone does give us a glimpse into a new era of networked media. iPhone does give us a sense of how it might be possible to have a workable desktop on a phone. If it is possible to have fully functional web access, then it is not hard to imagine fully-functional web-based applications. Looking back 6-7 years to 2001, we see iPod’s didn’t exist, blogging was around but few people did it, Wikipedia had just begun.

What if we imagine that the kind of technology we’re talking about takes six years to become as widely adopted as iPods, blogs, and wikipedia? That would seem to suggest that over the next six years successful colleges will be ones that have moved to a fully mobile, networked curriculum and pedagogy.

2. Impact features

Here are three features that I believe will impact education.

a. Multi-Touch Display

The most promising technology is the multi-touch display. In this case, it is the technology that will make the difference, especially in the long run. Multi-touch displays are not a new technology, people have been working on this since the 80’s and recently Microsoft announced their similar “Surface”\(^1\) computer. What is unique here is the mass production of a multi-touch device. The iPhone will be the first multi-touch device in the hands of millions of people.

\(^1\) http://www.microsoft.com/surface/index.html
A very interesting presentation of this technology was made by Jeff Han\(^2\) some years ago. He said that he thinks this is going to change the way we interact with machines from now on, and he was right.

Interaction with the computer in a much easier and more human-like manner through this new interface is going to be the jumping off point for a whole new generation of computing. As more and more data becomes available on computers this will be the first technology that will help us to better manage that information.

From a mobile perspective, it has always been a hassle to use a mobile device. Perhaps the multi-touch display will be the missing link for actually using a mobile device in the classroom. The iPhone interface is very good explained in Apple iPhone Ad: This is How\(^3\).

**b. Widgets**

Computer users are already familiar with the wonderful world of widgets. Widgets are most easily categorized as mini-applications: they can be anything and everything from simply displaying the weather and RSS feeds, to fully functional translation devices. There are thousands, tens of thousands of widgets out there: in the Information\(^4\) and Reference\(^5\) categories for Macs alone there are over 300 widgets.

Educators and students can use the widgets and build others that can easily be added to the iPhone thus capitalizing on the mobility factor.

**c. iPhone Applications and a Fully Functional/Easily Browsable Internet**

One of the iPhone’s drawing points is that it runs a full browser.

This is going to be important and this is going to open the flood gates of creativity: the power of a multi-touch display could be used in a test by allowing students to more naturally interact and manipulate the test and then send it back to professor over the air, anywhere.

A fully-functional browser, and most importantly, easily-browsable internet will finally allow rich multimedia, and navigation that has been impossible before. Browsing the internet on a mobile device, up till now, was terrible. If the page wasn’t formatted in mobile format, forget it. Now students and teachers can really interact with the internet, and best of all manipulate it.

As it stands right now, there is no high speed internet over the cell signal (G3), but there is built in WiFi and things are going to be added on and prices are going to drop.

Most relevant to education is the price. Right now it costs approximate $450 for a 8GB model and $590 for an 16GB model. That is awfully pricey for an educational tool, and it certainly going to be a long time before most of us educators gets our hands on one, let alone enough students to design lesson plans around having one. But what to say about the new Microsoft “Surface” devices that are going to cost around $10,000? If it would be possible to afford one per school or organization, a multi-touch display could be shared among a lot of people…

**d.** On the other hand, Apple is presenting new flash cards with teaching, learning and selling purposes, tridimensional images of atoms, stars, constellations, together with reading books, are available on a range that goes from 40 dollars to no cost (totally free) through the App Store. Most of these are flash-card programs that iPhone users can download by accessing the App Store through Apple’s iTunes software and clicking on the “education” category.

Other companies as Modality Inc. and Accela Study are also making there own programs for the iPhone in their respective field of knowledge.

So, it seems that flash cards in iPhones are the future of education.

\(^2\) http://www.edutechie.com/2006/12/computer-interaction-of-the-future/

\(^3\) http://www.youtube.com/watch?v=tH0-GKBmOE8

\(^4\) http://www.apple.com/downloads/dashboard/information/

3. Other’s experience

Kevin Roberts is chief information officer and director of re-engineering at Abilene Christian University, in Texas. He has worked on the university's complete transition to Google Apps for Education and overseen experiments in group learning using various Google applications. He also has pushed for mobile computing, providing free iPhones to faculty members and students to create and complete course work from anywhere on the campus.

A very interesting discussion about his experiences that could serve as models for other institutions can be found in the Chronicle of Higher Education. The reaction to those changes on his campus and how students and faculty members have different views are topics to think about.

Even if they have been looking at the idea of mobile learning for many years, it was certainly not anything new to their campus, figure no. 1.

![Fig. no. 1 iPhone in education](image)

The combination of a mobile device and a fully functioning web browser made them feel like that combination is powerful and compelling as long as these are used as educational tools.

The Google Apps students have found to be most useful were the email app (the most widely used), the chat feature and calendar, and faculty members have commented on the value in the collaborative features built into docs and spreadsheets.

Kevin Roberts do not envision students doing all their coursework on their iphone. However, it can be used as a handy field research device. It can be used to make notes, take photos, record podcasts, etc.

It is often easy to assume that these devices will replace a computer, but isn’t the case at all. Considering them as augmenting the existing technology landscape, the next step is trying to demonstrate best practice uses.

4. Summary

The iPhone can be an incredible tool to support learning. The tablet PC in the palm of our hand, complete with OS X and wifi access, it has all of the features wanted in a cell phone, iPod and handheld Internet device. This device could be put into the service of learning: online simulations, games, learning objects, widgets, blogs, a built-in digital camera to collect images, his capabilities could far exceed the way Palms are currently being used in education today.

The mayor advantage of the I-Phone is its portability, we can take it anywhere at anytime, and do the learning experience whenever we want and wherever we need it, and this is freedom.

Bibliography