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Mobile Blogging: A Guide for Educators

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ABSTRACT
This paper provides a short overview of the nature and educational usefulness of blogging, followed by an overview of the various mobile blogging and RSS reading options available today. The paper serves as a practical introductory guide for educators interested in implementing mobile blogging. The emphasis is on keeping it simple, so that the technology does not get in the way of the pedagogy.

Author Keywords
Mobile, Blogging, Web2, education.

INTRODUCTION

> A junior at the university, Eric wakes up and peers at his PC to see how many instant messages (IMs) arrived while he slept. Several attempts to reach him are visible on the screen, along with various postings to the blog he's been following. After a quick trip to the shower, he pulls up an eclectic mix of news, weather, and sports on the home page he customized using Yahoo. He then logs on to his campus account. A reminder pops up indicating that there will be a sociology quiz today; another reminder lets him know that a lab report needs to be emailed to his chemistry professor by midnight. After a few quick IMs with friends he pulls up a wiki to review progress a teammate has made on a project they're doing for their computer science class. He downloads yesterday's chemistry lecture to his laptop; he'll review it while he sits with a group of students in the student union working on other projects. After classes are over he has to go to the library because he can't find an online resource he needs for a project. He rarely goes to the library to check out books; usually he uses Google or Wikipedia. Late that night as he's working on his term paper, he switches back and forth between the paper and the Internet-based multiplayer game he's trying to win (Oblinger & Oblinger, 2005).

The above snapshot of today's learners gives us an idea of some of their characteristics:

- Technically literate
- Multitasking
- Collaborative
- Connected

To engage these learners a lot of thought must be given as to how their preferred means of communicating can be integrated into the teaching and learning environment. Mobile devices are inherently social, enabling rich social interaction, and the potential for enhancing group work and communication within educational settings. Today's learners are constantly connected to their social networks via their wireless mobile devices. Their preferred method of communication is text messaging (65% (Cameron, 2006)), followed by instant messaging (New Zealand Herald, 2006).

Pedagogy and today's learners

Mobile devices coupled with wireless networks have been described as 'disruptive technologies', and so have the Web2 social software tools that have developed (Blogs, Wikis, podcasting, vodcasting, online photo blogging etc…)

(Alexander, 2004; Fielder, 2004; Lamb, 2004). Their disruptive nature forces a rethink of pedagogical strategies and relationships in education.

A pedagogical framework for implementing social software tools via wireless mobile devices can be developed by drawing on concepts from: constructivism (Bruner, 1966; Piaget, 1973), social constructivism (Vygotsky, 1978), communities of practice (Wenger, 2005), a conversational model of learning (Laurillard, 2001), and the social construction of technology (Bijker, 1995).

Thus a mobile (m-learning) pedagogical model will focus upon enhancing communication, collaboration, and will be student-centred.

Web2

'Social Software' (interactive collaborative software) is one of the key features of what has been termed 'Web2' (O'Reilly, 2005). Examples of current and emerging social software tools include Blogs, Wikis, RSS, instant messaging, podcasting, social book marking, etc… (Farmer, 2004; Glogoff, 2005; Kaplan-Leiserson, 2004). The key characteristics of social software fit well with the pedagogies described above, enabling a natural and relatively simple approach to creating collaborative learning communities.

Web2 is about:

- Moving beyond CONTENT
- Ease of use
- Interactivity
- Collaboration & sharing
- Customisation
- Personal Publishing

To illustrate the end-user emphasis of Web2, Time magazine named 'You' as person of the year for 2006 (Grossman, 2006). The educational implications of Web2 social software is the source of recent interest (Alexander, 2006; Alexander *et al.*, 2006; Anderson, 2007; Becta, 2006, 2007; Bryant, 2006; New Media Consortium, 2007).

Wireless Mobile Devices coupled with open-source Social Software tools potentially provide the basis for enhancing teaching and learning in virtually any discipline, providing an environment that stimulates reflection, critique, collaboration, and user generated content – i.e. a social constructivist environment.

Blogs

A Blog is a reverse chronological online journal, the newest postings appear at the top of the Blog while older postings are archived. Only the owner of the blog, and those given group membership by the owner can make Blog postings. However, visitors can add comments to Blog postings, and automatically check for new postings via an RSS/Atom newsreader. A Blog is a much more personal space than a typical LMS asynchronous discussion forum. Blog hosting software usually provides customisable templates, and add-on widgets for embedding multimedia files. Additionally a Blog is usually accessible via the Internet without requiring institutional passwords, and remains the property of the student/owner after the completion of their course. Bloggers therefore have a potential worldwide audience and can form international networks with like-minded people. Some employers are Googling potential employees to check their suitability. These aspects add incentive to students to develop and maintain a quality Blog.

There are a variety of free online Blog hosts, the most popular being http://www.blogger.com. Other examples include:

- http://edublogs.org
- http://wordpress.com
- http://my.opera.com/community/
- http://www.vox.com

Blog posts can be made via a web browser, a dedicated blogging application, via email, SMS, or via plug in extensions to web browsers like Firefox or Flock, or even MS Word. Readers interested in regularly following a Blog can subscribe to it via its RSS feed.

There has been a lot of interest in the educational applications of Blogs (Educause, 2005; Educause Learning Initiative, 2005; Farmer & Bartlett-Bragg, 2005; Luca & McLoughlin, 2005; Trafford, 2005). In an educational context, blogging can be utilised as an online reflective journal. The use of reflective journals in education is well established (Bain *et al.*, 1999). Similar strategies for assessing and moderating the familiar online discussion forums utilised in most Learning Management Systems (LMS's) can be used for Blogs.

An assessment rubric may cover: the expected number and regularity of Blog posts, quality of reflections, references to external sources, the number of comments, use of multimedia, alignment with the course or project content/context etc… Student Blogs linked via RSS feeds and using a Tutor Blog to notify students of important details using RSS can form the basis for a rich online collaborative community (Farmer, 2004). Blogging enhances the following skills (Panday, 2007):

- Sharing — thoughts, concepts, experiences, knowledge
- Analyzing
- Reflecting — Critiquing, Writing, Questioning, Reacting
- Reading
- Communication
- Record keeping — thoughts, concepts, and experiences
- Collaboration — with peers, people (experts, students) around the world

Variations on blogging include image and video blogging. Currently two of the most popular examples are http://www.flickr.com (Image blogging) and http://www.youtube.com (Video blogging). Emerging Mobile multimedia blogging sites include: http://www.splashblog.com and http://www.mojungle.com. By embedding or linking to a variety of online media formats (e.g. YouTube videos, Flickr images, interactive slideshows, Word and PDF documents via Google Docs or Zoho etc…) students can effectively create customized eportfolios (electronic online portfolios). These blogs/eportfolios can be an important aspect of students developing critical and reflective life-long learning skills. The ability to include visual and audio material into the blogs adds a whole new creative dimension for students. The possibilities in the educational use of blogs are limited only by the Tutor's imagination. Language students can use Blogs as a means to practice reading and writing skills. Design students can use blogs to record their design process and steps, while generating feedback from other students world-wide. Blogs can be used as an interface between student projects and industry, with industry representatives able to read and comment on the progress of student projects. Tutors can provide more timely feedback to students on their progress, unlike traditional paper-based reflective journals that are only marked at the end of the process.

RSS

Rich Site Summary, or Real Simple Syndication, RSS provides a way of subscribing to content via news reading software (e.g. http://www.newsgator.com/). RSS can be used as an enabling/delivery mechanism common to most social software tools (Kaplan-Leiserson, 2004; Wenger *et al.*, 2005). RSS is a real time saver. Instead of logging onto favourite Websites one at a time, a newsreader application can be used to automatically download the headings of new posts, and then a decision made to visit the site for more information or not.

RSS is a great companion to Blogs - you can subscribe to all the Blogs in your classes in one simple window and keep track of your students' progress.

Most news type websites now have RSS feeds. There will be an orange 'XML' or 'RSS' or 'FEED' symbol on the site, clicking on the symbol will reveal the RSS feed address and insert it into your preferred RSS news reading software.

Online News Aggregators

Subscribing to and reading RSS feeds online can be accomplished using several free online news aggregator systems:

Newsgator (http://www.newsgator.com) allows you to subscribe to your favourite RSS feeds and read them on any Internet connected computer with a web browser. It also supports synchronization with dedicated RSS news reading software on Mac (NetNewsWire) and PC (FeedDemon), and the ability to synchronize subscriptions between multiple registered computers with one Newsgator account.

Bloglines (http://www.bloglines.com) is very similar to Newsgator, but also has free support for mobile devices. This is a pay - 'premium' option with Newsgator.

Google Reader (http://www.google.com/reader) is the challenger to the online RSS reading throne. Google Reader is part of a suite of free online Google tools that provide simple mobile interfaces, making it a good option. These include: GMail, Google Calendars, Search, Maps, Picasaweb etc…

MOBILE BLOGGING

Why Mobile?

> The convergence of ubiquitous broadband, portable devices, and tiny computers has changed our concept of what a phone is meant to be. A pocket-sized connection to the digital world, the mobile phone keeps us in touch with our families, friends, and colleagues by more than just voice. Our phones are address books, file storage devices, cameras, video recorders, wayfinders, and hand-held portals to the Internet—and they don't stop there. The ubiquity of mobile phones, combined with their many capabilities, makes them an ideal platform for educational content and

> activities. We are only just beginning to take advantage of the possibilities they will offer. (New Media Consortium, 2007)

Today's mobile phones are powerful computers. The catch phrase of Nokia's current add campaign for its N-Series smart-phones is: "It's what computers have become" (Nokia, 2007a). Mobile phone ownership in New Zealand has almost reached 100 per cent (81.1% 2004 (Cameron, 2006)). Its rise to ubiquity is described as a

> …stealthy but rapid shift from a telephony device towards a portable, personal media hub that enables an increasing range of personalised and customised communication, entertainment, relationship management and service functions. Its reach is pervasively global and trans-cultural, possibly more so than any other media form including the internet and world wide web (Cameron, 2006).

The largest growth area regarding Internet usage is mobile access. "'Mobile, mobile, mobile,' were the words of Google chief executive Eric Schmidt recently when asked what technologies are most intriguing to the computer web search leader" (Wakabayashi & Auchard, 2007). Marc Prensky remarks: "What can you learn from a cell phone? Almost anything!" (Prensky, 2005).

Key Issues

Here we discuss some of the practical issues that need to be considered when designing or implementing mobile blogging trials in an educational setting. These have been identified from the several mobile trials that the author has instigated. Considering the impact of these issues will save time and stress later.

Technical support and mobile configuration

Mobile carriers are attempting to make Internet configuration of mobiles relatively simple. In New Zealand, all Telecom mobiles come pre-configured for the internet, while Vodafone provide an SMS auto configuration service (Vodafone NZ, 2007c). Parallel imported phones can usually be set-up from SMS auto configuration forms found on the manufacturers local website (Motorola, 2007; Nokia, 2007b; Sony Ericsson, 2007).

As every different mobile manufacturers web browser is different, to keep the user experience as similar as possible, use the Opera Mini web browser, which can be downloaded to almost any internet and Java capable mobile phone by typing the URL http://operamini.com into the phones built-in WAP or web browser.

Fast mobile data access is not required for blog posting and RSS reading, as these are basically text based. However, 3G data access is required for multimedia blogging (picture, audio or video uploading). 3G coverage maps are usually available from the local telecommunication carriers, e.g. Telecom (Telecom New Zealand, 2007c) and Vodafone (Vodafone NZ, 2005).

Data costs

For mobile email and Internet access a data account is required. For basic mobile blogging and RSS reading a low data plan (10-20MB/month) will probably suffice. For multimedia blogging a 'broadband' mobile data plan will be required (Telecom New Zealand, 2007a; Vodafone NZ, 2007a). If you do not have a data plan, you will be charged at the 'casual data' rate:

- Vodafone NZ (Vodafone NZ, 2007b) = 1c per Kb = $10000/GB
- Telecom NZ (Telecom New Zealand, 2007b) = 5c per Kb = $50000/GB

Variety of handsets

Providing support for the wide variety of available mobile phones can be daunting. For example there are at least nineteen mobile manufacturers supplying cell phones to the New Zealand market. However, as there are only two mobile carriers who promote a small set of handsets during various specials, the actual variety is relatively small compared to the worldwide market. Thirteen handsets, from five manufacturers currently hold seventy one percent of the New Zealand market. Mobile users update their mobile phone on average every eighteen months. However, teenagers tend to update much more often, and generally have two mobiles to catch both of the Telecom and Vodafone specials.

Manufacturer	**Market Share**
Motorola	33.97%
Nokia	23.6%
Sharp	21.69%
Sony-Ericsson	9.31%
Samsung	2.2%

Table 1. Manufacturer market share in Oceania – New Zealand, March 2007 (Mobref, 2007).

Manufacturer	Market Share
Nokia	42.79%
Sony-Ericsson	16.72%
Motorola	12.48%
Samsung	8.78%
LG	1.53%

Table 2. Manufacturer market share worldwide, March 2007 (Mobref, 2007).

Integration into teaching and learning

One of the biggest challenges is the changing role of the teacher. This includes the need to become techno-savvy in order to model the educational use of the technology, particularly if the teacher is also the technology steward (Wenger et al., 2005) for the class/community. Support structures can be developed utilizing the concept of communities of practice. A community of practice can be based around the course/class – incorporating the teacher, technical support (if outside), and students. A community of practice that provides teacher support can also be created from like-minded teachers. The members need not be limited to your local institution – use the tools: create a support blog, subscribe to relevant blogs, use instant messaging to communicate with peers worldwide etc…

Small screen size

The small screen size of mobiles makes them an inherently personal device. In a classroom setting, demonstrating the set-up and use of mobile blogging requires some creative pre-planning. This may mean either using remote screen controlling software on a PC connected to a video projector, or creating slides/movies using screen-grabbing software on the mobile and transferring the screenshots to a PC via USB, or Bluetooth. Another alternative is to use the SDK java application development kits that most manufacturers provide for free, but then you are limited to demoing Java applications only. Videos taken directly of mobile use tend to be of poor quality for viewing detail, but give an idea of their usage. Bluetooth mobiles can stream pictures and audio via Bluetooth multimedia converters, but do not mirror the mobiles on screen displays. Finally, the latest Nokia handsets (N95 and N93) supply direct video out ports for large screen viewing – at the expense of battery usage.

Overview

Blog options for mobile include: SMS (Short Message Service, i.e. text messaging), MMS (Multimedia Messaging Service), email, mobile formatted Web interfaces, Java clients, and specific mobile OS application clients for smart-phones (Windows Mobile, Palm OS, Symbian, Linux). Most mobile blogging options initially require the Blog host to be set-up using a PC before being accessed via the mobile, although there are some exceptions.

SMS Blogging

The simplest mobile blogging solution is to use text messaging to post to a Blog. The main limitation is the 160-character limit of text messages, so SMS Blog posts will always be short. Most mobile carriers provide an SMS Blog service for their customers, however their blog software is usually not as configurable as the more popular mainstream Blog hosts. To SMS post to these 'mainstream' blog hosts requires an intermediary service. One such free service is http://letmeparty.com. This is simple to set-up, and works with the most popular Blog hosts.

A PC with Firefox (letmeparty.com does not support Internet Explorer Jscript) can be used to create a free registration at letmeparty.com. At the site a mobile phone number can be registered (in international format: i.e. +6421xxxxxx for Vodafone NZ), the Blog host type, address, username and password entered, and finally an SMS sent to +13128047068. Letmeparty.com forwards the SMS to your Blog as a post.

Email and MMS Blogging

Older Blog hosts supported mobile blogging via email and MMS, although almost all Blog hosts offer this as a mobile blogging option. This requires the set-up of the Blog host on a PC, followed by obtaining the 'secret' email address to access your Blog (found in your Blog settings). Your mobile must be configured for sending email via your mobile carrier. Then you can put your Blog email address into your mobile address book, and simply send an email to this address to Blog. The email subject becomes the post title, while the main text of the email becomes the text of your Blog post. Attaching pictures, audio, or video to your Blog email address will usually allow uploading of this content to your Blog host. The advantages of email blogging on mobile phones include: being able to compose a blog message of any length 'off-line', utilizing the built-in text tools of the mobile email client (html text formatting and spell-checking – if

supported), and being able to save copies of blog posts on your mobile phone (although most phones do not have large memories). The main disadvantage is the email configuration required.

MMS messages are simpler to compose than email and most phones come with MMS pre-configured. Also MMS does not require a data account (Mobile providers usually charge a set amount per MMS, similar to TXT messages). An MMS can contain text (greater than 160 characters), images, video, and audio files. Sending a picture via MMS to a blog host's email upload address will achieve similar results to an email with an attached picture. However, depending on how the mobile service provider interprets MMS to email messages, additional text included in the MMS message may not end up as the main blog post.

Of the currently popular free blog hosts, Wordpress is the odd one out, not supporting email uploads as blog posts. However, Flickr.com includes an email to blog forwarding feature that allows an email or MMS message to be forwarded to Wordpress, or virtually any other blog host.

Web2 Mobile Blogging

A revolution has been underway with the convergence between Web2 social software and mobile devices. These mobile Web2 services enable constructivist collaborative environments with very little technical overhead required by the lecturer or students.

The recent release of the Opera mobile and mini web browser (Opera Software, 2006) for almost every mobile phone and PDA has opened the door for viewing many standard Web sites and Web2 services on mobile devices without any translation. However, the best mobile experience comes from Blog hosts that have dedicated mobile friendly versions for viewing and posting, e.g.

- Wordpress http://m.wordpress.com
- Flickr http://m.flickr.com
- MyOpera http://my.opera.com
- SplashBlog http://www.splashblog.com
- MoBlogUK http://moblog.co.uk

The Opera mini web browser also supports most camera phones for picture blogging directly to http://my.opera.com, and includes a built-in RSS reader for a limited number of on device subscriptions. There is an online demo of the Opera mini web browser at http://www.operamini.com/demo.

Web2 Mobile RSS

Most online news reading sites now have mobile access, though not all provide this facility for free. Good examples are:

- Google Reader http://www.google.com/reader/m/view/
- Bloglines http://www.bloglines.com/mobile/
- LiteFeeds http://litefeeds.com/w

Java Clients

Java clients are small applications that can be downloaded via a PC and installed onto your mobile (via USB or Bluetooth), or installed directly onto your mobile 'over the air' (OTA) by putting a download URL into your mobile's built-in web or WAP browser. The Java application lives on your mobile, and requires configuring with the address, username and password for your blog and RSS host. The mobile device must be configured with appropriate Internet access settings for your mobile carrier, and a data account is recommended. These Java clients do not require specific mobile versions of blog hosts, but provide a simple mobile interface to most standard blog hosts. While most modern mobiles support Java applications, there are differences between manufacturers and even models that make wide compatibility difficult. The following Java client examples have wide compatibility:

Example Java Blogging Clients

- Kablog http://www.kablog.org
- Blogplanet http://www.blogplanet.net
- Opera mini http://www.operamini.com
- Shozu http://www.shozu.com
- BluePulse http://www.bluepulse.com

Example Java RSS Clients

- LiteFeeds http://litefeeds.com/m
- Opera mini http://www.operamini.com
- NewsgatorGo http://www.newsgator.com
- Nokia Widsets http://www.widsets.com
- Bluepulse http://www.bluepulse.com

For more information visit the author's Wiki page on mobile learning (Cochrane, 2006).

CONCLUSIONS

The educational benefits of social software, in particular blogging, have been discussed. The alignment with social constructivist pedagogy and new learner preferences provides the potential for the development of collaborative learning communities, enhancing student-student and student-tutor communication and interaction. Mobile blogging coupled with social software tools potentially provide the basis for enhancing teaching and learning in virtually any discipline, providing an environment that stimulates reflection, critique, collaboration, and user generated content (i.e. a social constructivist environment). Issues and options around mobile blogging have been discussed, providing a starting guide for educators who want to engage with mobile blogging.

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