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It's just not the same: Mobile Information Literacy.

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~~ABSTRACT~~Introduction

Libraries are increasingly developing services that take into account the massive effect of mobile devices upon our users. This ~~paper~~ chapter looks at what this might mean for Information Literacy.

Some databases and library catalogues have mobile versions. Growing numbers of our users have the devices to access these. When a library user is as likely to search for information on a mobile phone, tablet or handheld gaming device as on a fixed PC in a physical library, this could change the concept of what it means to be information literate. How will mobile search change the discovery, evaluation and re-use of information? We will consider whether we need to develop a new lens through which to view the literacies required by our clientele.

From these theoretical considerations we proceed to a quick review of experience gained of mobile devices at two UK new Universities: Bedfordshire and Huddersfield.

~~INTRODUCTION~~

Libraries could presently be in their greatest period of change: we have moved on from the hybrid library, are facing a public perception of electronic delivery of all content, and Web 2.0 has given everyone the potential to author and share. Now add to this the phenomenal spread of mobile devices across the world. Information is becoming mobile and social. It also appears that the Great Recession which has hit large parts of the world may not slow these

developments. Librarians must be spending more time over coming months conditioning their services to the mobile environment.

HOW DOES MOBILE AFFECT INFORMATION L ITERACY?

The image of young students who are continually wired into the online environment, texting, and multi-tasking has been overdone. It has been easy to exaggerate the differences of the Web generation. The CIBER reports (CIBER,2008) have done much to debunk the hype that used to surround them. The truth is that we have all become part of the Web generation to a greater or lesser extent. If we consider mobile devices, then their adoption is across the whole of society. But what will it mean when searching and expectation of access to information is immediate and done on the move? It is likely to involve an extension of existing trends whereby search is done at speed with lack of reflection on results and less reading of the actual content. Also there will be the requirement to join up these devices into existing personal learning environments, and into new developing platforms. As we are already seeing a merging of literacies (ITC, information, media, visual etc.) the management, manipulation and reformulation of this stuff is being seen by some as transliteracy. The onset of mobile devices into this equation simply adds a new twist.

But what is the nature of that twist? Do we know how information seeking and use changes when using mobile devices? At the moment there is limited evidence, but the current literature provides evidence for four areas in which 'mobile information literacy' may vary from 'fixed information literacy'.

	"Fixed" IL	"Mobile" IL
Where?	Largely in "set" places. At a desktop computer (with little variation in software); at a fixed workplace; within a library.	Anywhere; any mobile device (phone, games device, eBook reader – massive variation in device).
What?	Anything and everything.	Normally quick information, often context or location specific.
How?	Range of established tools to access and manage wide range of information sources. Standard search engines.	Often narrow Apps and individual specialist sites rather than open web.
Time spent?	Varies. Often slow, long access. People spending long periods searching for, organising and extracting information, especially for academic use.	Quick / Fast only. Shorter searches. Little pondering and extracting information. Favour short chunks of info. "Convenience" of device.

Fig. 1

Where it is manifested

Traditionally searching for information, evaluating it, and using that information may have been expected to happen in a limited range of contexts. Searching for information may happen in a library, from a fixed workspace, possibly at a fixed multi-purpose computer with a large screen. Mobile search can happen anywhere from a range of devices with massive variation in functionality anywhere with a mobile

phone or wireless internet signal. Search no longer happens in fixed, controlled environments, but in random, messy, uncontrolled ones.

Church and Smyth (2008) in a diary study of mobile information needs, found that over 67% of information needs in their participants were generated when the user was mobile. The quantity and penetration of mobile internet capable devices mean that these people can increasingly attempt to meet these needs when they occur. Indeed, Hemoinen (2009) found that amongst already active mobile internet users, virtually all of these "on the move" type of information needs were addressed through mobile devices as they occurred, with the only failure to address a need occurring due to a mobile phone battery running out!

What searches are carried out

Mobile information needs are dominated by the desire for quick, often context specific information particularly regarding local services, travel and trivia (Church & Smyth, 2009 and Heimonen 2009). Whereas with searching and using information in a fixed, traditional location we may search for anything and everything, this isn't the case for mobile use. The searches we carry out on a mobile device are much more likely to be an additional activity rather than the sole focus of our attention, and therefore influenced by the primary activity we are also engaged in, that is the context in which we find ourselves (Hinze et al., 2010).

The information we seek on the move is about facts and small elements of information. There is likely to be limited evaluation of the information we find, and little opportunity to take detailed information away and derive new knowledge from it.

How we search

Searching for information online from a desktop computer allows access to a wide range of established tools and information sources. It is normal to start searching for information with a generic search engine, which may then lead onto more specialist sites or search tools. It could be characterised by the breadth of sources and tools available and used. Mobile search, however, is heavily influenced by the natural constraints of using a device with a small screen, a small or virtual keyboard and may be characterised by narrowness of sources used.

Rather than search the open web, smartphone users are also tending towards the installation and use of specialist apps.

Time spent on searching

In Hemoinen's (2009) study, it was found that 35% of information needs occurred in the home. Even though a fixed computer (or laptop) may have been available, the speed, proximity and convenience of using a mobile device trumped the more powerful device. People turn to their mobile devices for quick and dirty searches for information. They want to know something, and they want to know it now!

A typical quote from some recent interviews one of the authors carried out is '*I just love the thought of not being tethered to go and fire up the old laptop or desktop machine…*', where the interviewee tended towards using a mobile device because of speed and convenience.

UNIVERSITY OF BEDFORDSHIRE

University of Bedfordshire (UoB) is a new University with libraries at two major campuses (Luton and Bedford), and several smaller units serving the 23,000 students. International recruitment is particularly strong and we shall focus on the views of these students later in this paper. A small general survey last summer, together with the obvious prevalence of mobile devices ———everywhere among students, prompted the development of mobile friendly access to our resources. Mobile devices also seemed to provide a way of connecting with our users to aid Information Literacy development.

QR codes offered the most promising way of helping to exploit our stock and also gave the potential of helping to explain procedures or how to use unfathomable equipment onsite. We had already developed a series of short library videos which we called "Just a Minute", covering anything from basic catalogue introduction to print credit machines, self-issue and referencing. These were loaded into YouTube. See http://lrweb.beds.ac.uk/libraryservices/whoweare/videos

The possibility of being able to put links to these at point of use offered by QR codes was novel and exciting. For example a video on how to operate a new movable stack to house our journal collection at the Luton site. We have experimented with the use of QR codes in subject leaflets to encourage connection with our best resources. Certain textbooks have

always been in exceptional demand. Although these could sometimes be available as an electronic book, our users still opted for a print book. We have therefore been using QR codes on the bay ends of book shelves to promote the e versions of our most popular titles. See fig 2.
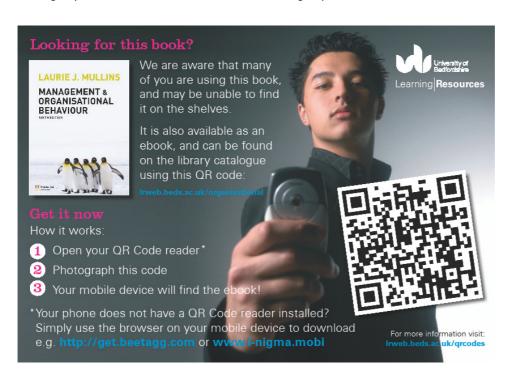
In the last year we have developed in-house a free Learning Resources application for Android phones which links to the Catalogue, our Web site, a list of our "Just a Minute" videos with ability to view, a GPS "Find a Campus" guide to the local campus, and E-mail through the auto-enquiry function or ability to call us directly to renew items. See http://lrweb.beds.ac.uk/libraryservices/whoweare/apps/android

However we still needed a direct Library Catalogue application and for this we chose to employ the commercial LibraryAnywhere software which is compatible with iPhone, Android and Blackberry devices. See http://lrweb.beds.ac.uk/libraryservices/whoweare/apps

Finally we have employed the commercial Z-Bar software for both iPhone and Android devices which allows the scanning of barcodes (importantly of book barcodes in shops) to match against our Library catalogue.

So far I have listed our initiatives without any indication of impact. Download of the applications have been encouraging. Take-up of QR codes was likely to be slow due to students being unaware of them and then the barrier of needing to download a free application like Beetag on their device. The need to log into the wireless network on campus provided another time barrier. Therefore promotion was required and championship by

academic librarians in any encounter with students. I decided to take a snapshot and test the ownership of devices, knowledge and take-up of our mobile services in April 2011 with a major client group : large cohorts of Business Masters students. The vast majority of these students were from the Indian subcontinent. 172 responses were gathered (about 10% of the student cohort)of whom 116 considered they were using a mobile device as a learning tool, but only 25 admitted to having an iPhone, 20 an Android and 3 an iPad, 2 an e-book reader and 24 a Blackberry. Only 27 said they knew of our Android application for library services and 10 had used it. 36 knew of QR codes with 21 using them. Many of these students had seen a demonstration of a QR code at an earlier date. Despite some clear faults in the survey design the message was that these students were not so advanced in mobile use as might have been supposed. Familiarity and employment of these devices will be crucial in a business environment so this encourages me to be much more proactive with future cohorts. This can be done most effectively by following up the survey with some small focus groups and interviews with some of this client group.

Fig.2

UNIVERSITY OF HUDDERSFIELD

The University of Huddersfield has in the region of 24,000 students with representation from over 130 countries. A Post 1992 university, it has a rich history of vocational education that reaches into the present day and is among the UK's top 10 providers of 'sandwich courses' where students undertake a paid work placement in industry or commerce. We've also noticed increasing numbers of mobile devices being used in the library over recent years, with a current trend towards smartphones rather than standard 'feature phones'. Indeed, a university survey in 2010 found that roughly three quarters of our students had a mobile phone contract that allowed access to the internet, the majority of which had effectively unlimited data. We've therefore experimented with several services to take advantage of students' own mobile devices, a few of which are outlined below.

Although text messaging (SMS) has been ~~about~~ in existence for many years, with a high percentage of people in the UK having access to it, until recently we hadn't taken advantage of it. So over the last couple of years we have tried various text messaging services, the first of which was a simple "text a librarian" service, allowing members of the university to text questions through to a librarian alongside the many other ways of contacting us. This simple text service has been taken up by others more recently, with our most popular mobile service currently being the ability to text NOISE to a number, along with a location, to report inappropriate behaviour in the library.

Getting more directly involved with information literacy and text messaging, we produced a set of ten text messages to support our face to face induction process. These were sent out

during the first term of the academic year to remind people of useful information we traditionally cover in the standard induction process.

We've also used students own mobiles in classes, experimenting with different ways to use them for polling, similar to interactive handsets or clickers that many educational institutions use. Currently we tend to use Poll Everywhere (www.polleverywhere.com) that allows similar functionality to clickers, but using students own mobiles. They can vote via text message, Twitter or the web and the basic service is currently free for class sizes up to thirty.

QR codes have been used in many ways, particularly in print handouts to link the plain physical paper to extra videos, quizzes and other online materials to turn them into interactive handouts. These seem a great way of bringing extra information literacy materials to our users, but can only be an "extra" at present as so many people either can't, or are not willing to, access QR codes.

Some of the materials linked to from QR codes are videos that we have tried to make available in mobile friendly format and we have settled primarily on uploading videos to YouTube to facilitate this rather than trying to provide a range of alternative formats.

We suspect that mobile search will be increasingly important, and our resource discovery service (Summon), which includes our library catalogue, works well on mobile devices.

~~Summary~~Conclusion

It is likely that mobile devices will continue to make a difference in the way that people interact with information, a difference that is likely to accelerate. We don't yet know how mobile information literacy may be different from traditional views of information literacy, though there are already clues emerging.

We are providing a range of services to help develop information literacy within our universities, only some of which are outlined above. In the near future we need to be more aware of how information literacy itself is changed so we can continue to provide appropriate and useful services to staff and students within our institutions.

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