

**Bruce Washburn**  
OCLC Research

## **Library Mobile Applications: What Counts as Success?**

**Note:** This is a pre-print version of a paper published in *Information Outlook*. Please cite the published version; a suggested citation appears below. Correspondence about the article may be sent to the author at [bruce\\_washburn@oclc.org](mailto:bruce_washburn@oclc.org).

### **Abstract**

We have been hearing and reading about the approaching dominance of mobile for a while now, but there is little evidence yet from library mobile applications of a dramatic sea change in how our users are finding us and using our services. Why is that? If your library does not have a mobile presence yet, there is already sufficient reason to consider one, and there are many viable and affordable options to choose from. But as expectations and capabilities evolve, it will be important to take a careful and objective look at how your selected approach is doing, and to reconsider and try other approaches if necessary.

© 2011 OCLC Online Computer Library, Inc.  
6565 Kilgour Place, Dublin, Ohio 43017-3395 USA  
<http://www.oclc.org/>

Reproduction of substantial portions of this publication must contain the OCLC copyright notice.

### **Suggested citation:**

Washburn, Bruce. 2011. "Library Mobile Applications: What Counts as Success?" *Information Outlook* 15,1 (January/February). Pre-print available online at: <http://www.oclc.org/research/publications/library/2011/washburn-io.pdf>.

*What's really important right now is to get the mobile architecture right. Mobile will ultimately be the way you provision most of your services. The way I like to put it is, the answer should always be mobile first.<sup>1</sup>*

We've been hearing and reading similar statements about the approaching dominance of mobile for a while now. But there's little evidence yet from library mobile applications of a dramatic sea change in how our users are finding us and using our services. Is that due to over-hyped expectations about this transition, or does it have something more to do with the mobile library applications we're building, or the metrics we apply to counting how they are used? Or is it a wave that continues to build but isn't quite here yet?

## **First, what do we mean by Library?**

When we talk about library mobile apps, the word "library" could mean several different things.

- It could mean just the library catalog,
- or that plus other services provided by the library,
- or those plus other services available from the institution of which the library is one part.
- Or it could mean ways in which library resources are made visible in applications constructed by those outside the library world.

Some library mobile apps concentrate on the library catalog. Search and discovery of the catalog can sometimes be implemented relatively quickly, in particular if the system that supports the website for the catalog offers an out-of-the-box mobile solution.

In some recent surveys of mobile users of library services<sup>2</sup>, the library catalog was not the most used or desired service. Other services such as looking up library hours, reserving a study room or computer, checking out materials, paying fines, and reading electronic resources were of as much interest as searching the library catalog; in most

---

<sup>1</sup> "Eric Schmidt on Google's 'mobile first' attitude, weaknesses", Anthony Ha, Mobile Beat, April 12, 2010. <http://venturebeat.com/2010/04/12/eric-schmidt-mobile-first/>

<sup>2</sup> "Mobile Technologies in ARL Libraries: Status and Prospects", Bob Gerrity and Diane Bruxvoort, Presentation at the 157<sup>th</sup> ARL Membership Meeting, October 13-14, 2010. <http://www.arl.org/resources/pubs/mmproceedings/157mm-proceedings.shtml>

cases much more important. It may be especially important for special libraries to provide mobile access to user accounts, in order to view the status of checked out materials, check current awareness lists, and to obtain direct access to online resources from a mobile device.

Some library apps are doing a particularly good job of delivering those commonly-used, often-requested features in the mobile context. While access to the catalog is still present, quick status checks, information lookups, and mobile contacts are also highly visible.

## **The Mobile Context, in Context**

As devices and networks evolve, the distinctions between a computing experience that one would consider “mobile” and one that isn’t are sometimes blurring. The phrase “mobile context” has been a way to characterize the intersection of a person’s location, social network connections, mobile device attributes, time, and preferences. While it may be true that “mobile will be the way you provision most of your services”, it probably is not true that users of your services will always be on the move, away from their home or work environment, and relying exclusively on mobile devices such as iPhones, iPads, Android phones, Blackberrys, etc. However, many people are working in that context now, and it’s for that community and context that many mobile applications have been geared.

You can see some of this at play in the use cases that are so well supported by mobile applications that are now becoming widely used for academic class registration. If you can quickly check to see what classes are still available and who among your friends might be enrolled or may have advice to offer, and can register no matter where you are as long as you have a mobile device and a network, you’ve experienced something that is ideally suited to that mobile context. In fact, it might not be as effective using a more fully-featured application: in this case less is more.

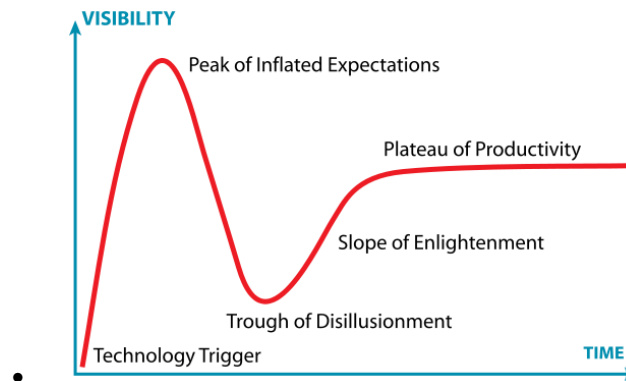
So, before considering how to evaluate and measure the use of our mobile applications, we should be asking hard questions about whether the applications we’re developing make sense in that mobile context. Considering the mobile context early in an application’s development can help clarify its most important features.

## **In the Trough of Disillusionment**

While considering the mobile context in which your users may connect is an important part of the planning behind a mobile offering, it is also important to have tempered expectations. In particular for newer technologies for which the world has very high hopes, it can be easy to get swept up in the excitement, and to deliver almost any nominal solution in order not to be seen as falling behind.

The Hype Cycle<sup>3</sup> is a way to evaluate the maturity and adoption of various technologies. It was developed by Gartner, Inc., and includes these stages:

- Technology Trigger — an event that generates significant interest: breakthrough, product launch.
- Peak of Inflated Expectations — publicity generates over-enthusiasm and unrealistic expectations. Some successful applications, more failures.
- Trough of Disillusionment — Failure to meet raised expectations leads to dismay.
- Slope of Enlightenment — Though no longer the subject of frenzied attention, some businesses continue to work with, and learn the benefits and practical applications of, the technology.
- Plateau of Productivity — Technology benefits can be shown and are accepted. Later generations of the technology are more stable. Productivity and expectations at this stage vary, depending on how widely applicable the technology becomes.



Where would library mobile apps fall on this curve?

In my view, they are somewhere on the downward slope of the Trough of Disillusionment. That's a period in the cycle when consolidation is occurring, and we're seeing some of that with the advent of commercial and open source solutions for providing native and mobile web apps, from library system vendors, MIT Mobile<sup>4</sup>, Terribly Clever Design, Boopsie<sup>5</sup>, and others. It's also a time marked by some successes but more failures. Though success metrics for library mobile apps aren't universally understood and agreed upon, obvious success stories aren't yet numerous.

It also follows a period when expectations for adoption and success may have been raised unrealistically high. There is certainly much enthusiasm and interest in the library community about mobilizing library resources. It's been there, frankly, for years. From

---

<sup>3</sup> Gartner Hype Cycle, <http://www.gartner.com/technology/research/methodologies/hype-cycle.jsp>. Image from Wikipedia Commons, [http://en.wikipedia.org/wiki/File:Gartner\\_Hype\\_Cycle.svg](http://en.wikipedia.org/wiki/File:Gartner_Hype_Cycle.svg)

<sup>4</sup> Mobile site: MIT Libraries, <http://libraries.mit.edu/mobile-site/>

<sup>5</sup> Boopsie, <http://boopsie.com>

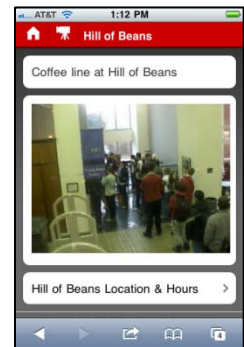
what we can see so far, there isn't corresponding evidence of widespread adoption and use of the results of those development efforts. At best, these applications may be partially displacing use that would have otherwise occurred in a desktop application. At worst, they may be either frustrating users by not delivering fully on the expected promise, or being otherwise missed or ignored.

The notion that the path from innovation to adoption of a technology isn't linear, but instead looks more like an S-curve, isn't original to Gartner. Here's Paul Saffo discussing the concept:

*... it is tempting to wish that this cycle of expectation and disappointment could be avoided. In fact, the cycle is an essential part of the innovation process. It is a collective measure of our goals, and the distance that must be traversed in order to realize them.*<sup>6</sup>

## What does Success look like?

I think the coffee bar webcam available through the North Carolina State University Libraries mobile interface<sup>7</sup> is a near-perfect mobile application. It takes the mobile context into account and delivers a reliable and easy to access utility that provides real value. If you're a student working inside D. H. Hill Library and need another cup of coffee, but are pressed for time, you'd very much like to know if there's a line at the coffee bar. You don't want to get there and find a line wrapped around the corner. This app understands that need and that context, and delivers a simple solution, taking advantage of some straightforward infrastructure: a webcam shows the line and produces a feed that can be embedded on a web page, and a mobile version of the web page is a click away from the home page of the library's mobile web app.



Does it help you find something on the shelf, check out a book, or read an electronic resource? No, but it makes for a better stay in the library. And, in early statistics presented by the app developers not long after the library's mobile site was launched, connections to this page accounted for about 40% of all mobile page views<sup>8</sup>.

Though this application comes from an academic library environment, the pattern it represents is common. All types of libraries maintain physical, real-world resources that

---

<sup>6</sup> "‘Revolution’, the Hype Word of Computer Industry Advances", Infoworld, February 4 1991, p. 60

<sup>7</sup> North Carolina State University Libraries mobile site: <http://www.lib.ncsu.edu/m/about.html>

<sup>8</sup> "Library in Your Pocket – Strategies and Techniques for Developing Successful Mobile Services", David Woodbury and Jason Casden. North Carolina State University, January 20, 2010, <http://www.educause.edu/Resources/LibraryinYourPocketStrategiesa/195003>

experience fluctuating demand, where a quick mobile view of that demand can add quite a bit of operational efficiency.

## Mobile Success Metrics

Mobile metrics are challenging. As applications and mobile technologies are evolving in tandem, it can be difficult to determine how best to measure what's working and what isn't<sup>9</sup>.

I worry that the enthusiasm surrounding mobile has led to the implementation of some solutions that are a problematic fit for their context, and that have not had their use examined, let alone evaluated. This situation is not unique to the library world: a 2010 Omniture Online Analytics survey indicated that less than 75% of marketers that use mobile actually measure visitors coming to their site via mobile devices, and less than 25% are satisfied with their mobile metrics<sup>10</sup>.

Though I won't address specific applications and practices for measuring and evaluating use of library mobile applications, the following strategies have been useful for us and others:

**Set your expectations, and measure whether they are being met.** You can best determine the levels of use that would be, in your view, justification for having delivered the mobile application. Find ways to measure those use levels to see where you fit. We've seen mobile applications that get only 1% of the use of their "desktop" application counterparts, but in certain contexts that may be expected, and sufficient to justify the mobile effort.

**Don't rely on non-mobile metrics for mobile apps.** It's common to count page views when evaluating the use of a conventional web application, but that can be problematic for mobile web apps. Effective mobile applications often try to greatly reduce the number of pages that need to be loaded and viewed, to speed up response time and reduce their user's data costs. User studies can help us determine whether users are getting to needed information more quickly and effectively; lower numbers of clicks and page loads is an indicator of success in this instance.

**Be smart about what you count.** Looking at the information architecture of the mobile app, and the key deliverables it intends to provide, can help determine what sorts of transactions should be counted. For example, if the application intends to make it easy for people to reserve a computer in the library, then count those transactions and the

---

<sup>9</sup> "Measure Your Mobile Initiatives", Ed Hewett, Aug. 11 2009, Omniture Industry Insights, <http://blogs.omniture.com/2009/08/11/measure-your-mobile-initiatives/>

<sup>10</sup> "Study Confirms Measure Mobile, Social, and Video Media ROI is Tough", June 15, 2010, BGAMedia, <http://bgamedia.com/?p=1047>

range of users that take advantage of that feature via your mobile app. And, if the mobile application offers a new kind of library service, or one that had not yet been offered on the desktop application, ensure that your analytics have a way of counting those interactions.

## **When the Wave Arrives**

While waiting for a flight to depart, you want to see what new journal articles in your area of interest are available from your corporate library, and then download some to your iPad for in-flight reading. Or, on the way home from work, you want check whether you have any materials that are due to be returned to the library, so that you can remember to bring them in the next day. These are everyday use case scenarios that could be handled now by a mobile application. So, if your library doesn't have a mobile presence yet, there is already sufficient reason to consider one, and there are many viable and affordable options to choose from. But as expectations and capabilities evolve, it will be important to take a careful and objective look at how your selected approach is doing, and to reconsider and try other approaches if necessary.