Mobile website or an app? Looking ahead to strategic mobile library development in Higher Education.

blogs.lse.ac.uk/impactofsocialsciences/2014/10/03/mobile-website-app-strategic-library-development/

With more and more users accessing library websites via smartphones, what is the best mobile platform to facilitate access to the diverse collections? Ros Pan and Josh Clark report back from an extensive study into library website development. They conclude that at present time, the best strategic solution is a hybrid approach where a platform-independent web app is created that can be used on any mobile device.

In 2012 the small and newly established Outreach Unit at University College Dublin Library successfully submitted an application to receive the ANLTC/Swets Award, a modest grant designed to facilitate some practitioner research in an Irish library into a hot topic. We wanted to clarify our understanding of the extent to which app development was being pursued in third level (HE) libraries, with some focus on the Irish context, and the range of content and services being included.

We also aimed at developing a good non-technical overview and understanding of the options available to us for developing library apps, and to further our understanding of alternative approaches to addressing the needs of mobile device users in. As well as time spent on desk research, we undertook a survey of Irish libraries, ran a student feedback exercise at our own institution and made visits to libraries in the UK and Ireland to interview a range of staff for case studies.
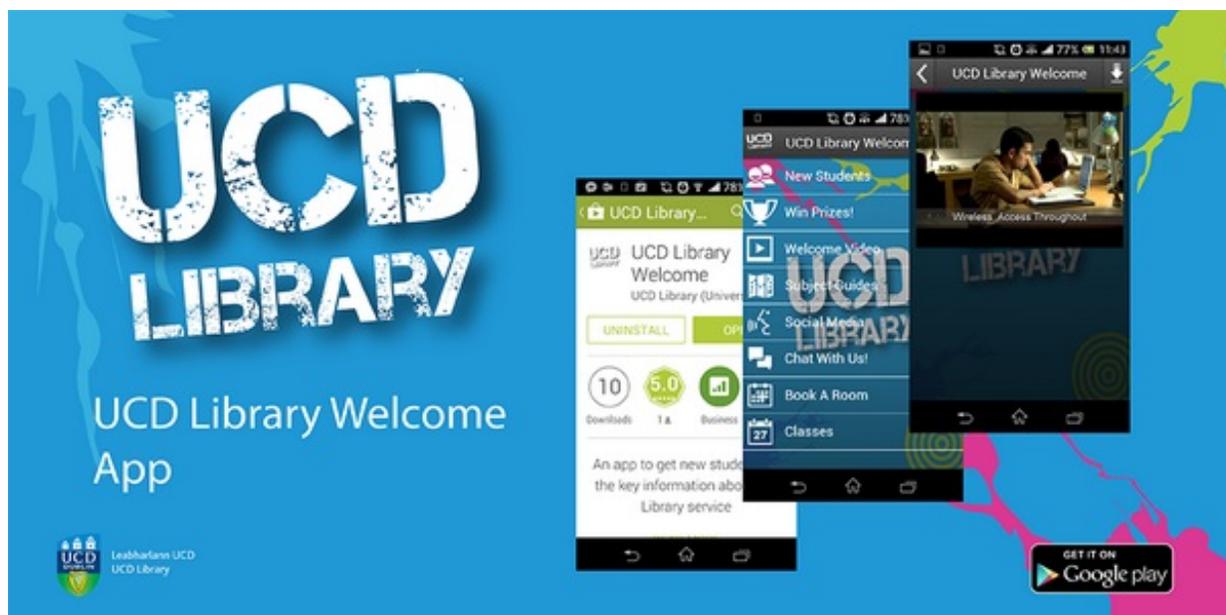
Image: UCD Library Welcome App in Google Play

A number of points of particular interest emerged:

1. The complexity of the options available to libraries to further their mobile environment. We initially contrasted mobile websites with the app approach, but it quickly became apparent to us that the situation is more complex than that, with at least four main options: Responsive Web Design (RWD) which has developed a great deal over the 2 years since we commenced investigations and would be the way we would like to go with our website; dedicated

mobile websites covering some or all of the content of the desktop site, widely agreed to be an outdated approach but the one that we current have at UCD Library; native apps; or in-browser apps (webapps) – another area that has taken centre stage over the period of our investigations.

2. For libraries an additional range of options are presented by library system vendors and third party companies specialising in library apps, who offer a number of ready to go solutions which centre on catalogue or web scale discovery searching but also allow additional content to be presented alongside that in their apps: Library Anywhere, Boopsie and the more recently launched SOLUS are briefly referenced in the report.

3. There is also the related question as to whether libraries should develop their own apps or try to get content into any institution-level app that has been developed, as many universities and other institutions do have. Our report includes a number of examples where libraries have leveraged the content of the institution-wide app very successfully and got a lot of library content included, but this may prove difficult to achieve where collaboration and the central role of libraries in the research and teaching cycles of the institution is not well-established or understood

4. Many apps developed by libraries can be found and our report includes many references and screen shots and summaries of the key functionalities found. Apps range from general content to very specialised apps covering just one function such as exhibitions, tours, or floor plans. But looking at things overall, as also reflected in our survey of Irish libraries, it would is fair to say that app development work in libraries has been limited. Some authors contrast this to the alacrity with which libraries took up the internet and web to present their services and resources to users.

5. The reasons for this seem from desk research and survey to be varied but some key issues are:

- Lack of staff with the technical ability and the time to develop high end apps, combined with lack of financial resources to buy in the technical expertise from outside
- Lack of evidence of a return on investment – our own live app for new students certainly has been downloaded so far by less than 1% of the new students, though usage of our websites from mobile devices is running at around 15-20% of all page views
- Lack of clarity on the best strategic mobile development route to take, together with perhaps a lack of library engagement with the topic and some strong advocacy of alternative approaches, most particularly the responsive web design route
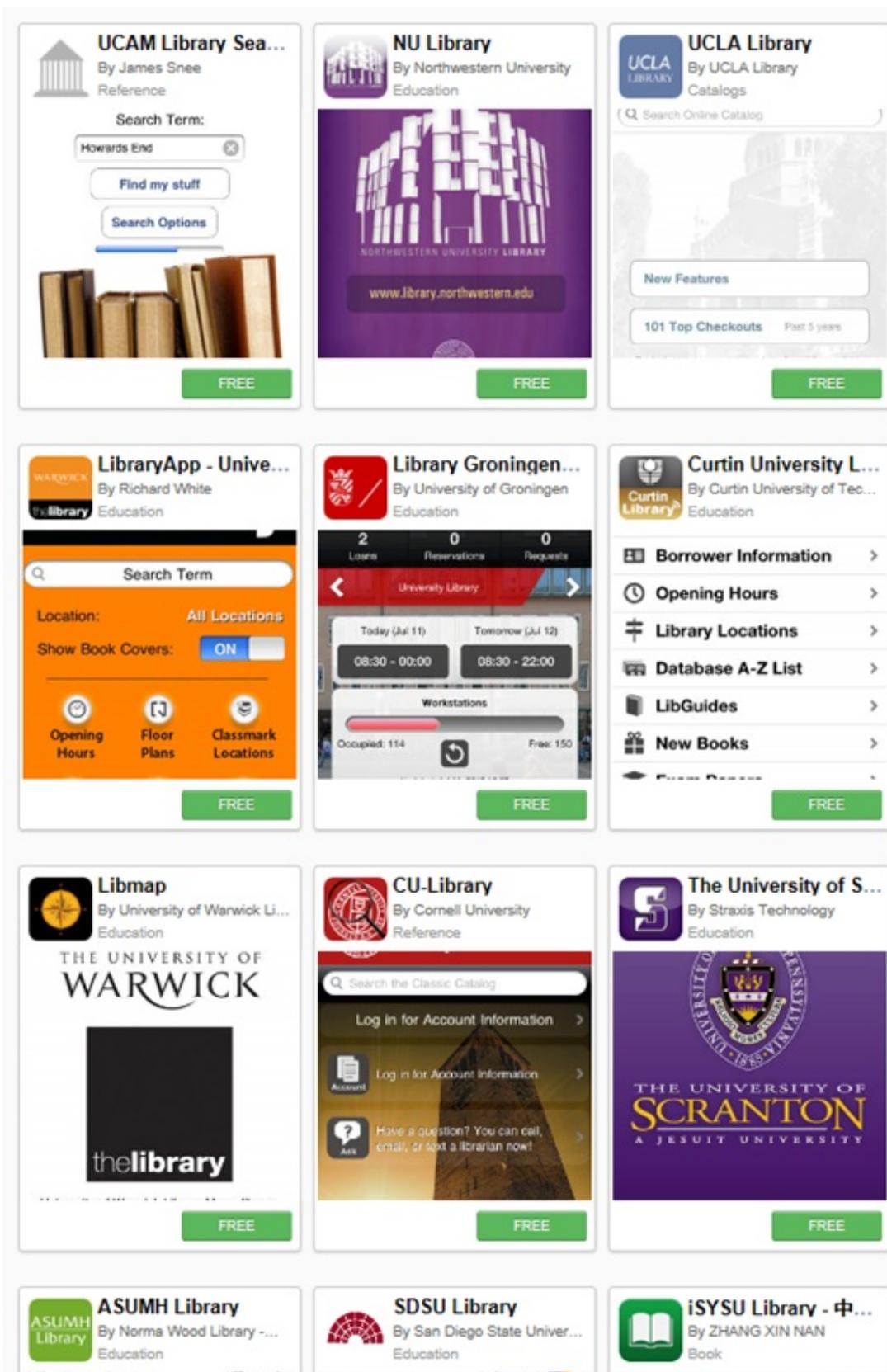
Image: Uquery.com – a good place to browse library apps

So the case for library app development is far from clear, but assuming this is being pursued by an information unit, there is intense argument on the native app versus the web app approach. Web app development – essentially a particular form of touch enabled mobile website but with heavy use of JavaScript to access and make use of local

mobile device features – is seen by some as the only supportable, platform-independent route to take to app development. Others focus on the fact that at present you cannot get quite the same level of access to local device features with a web app, and users like native apps – and don't use their web browser all that much, particularly on smartphones.

The hybrid approach to any app development deemed worthwhile is probably the best strategic solution at the present time: with this solution a platform-independent web app is created that can be used on any mobile device, and this is then enveloped in proprietary iOS and Android code so that it can be lodged in the stores where users expect to find apps and downloaded and used in the normal app manner. A number of high level development languages are available which enable this hybrid approach to be taken.

For libraries without the skill sets to follow these routes there are the "zero-coding required" solutions, from library focused vendors and numerous hosted options on the web. The issue with these is likely to be inflexibility and limited ability to pull in data from other systems.

The case studies and demonstrators we included in the report cover many of the points already mentioned.

- We interviewed Library staff at University of Maynooth who teamed up with their Computer Science staff to develop a specialised book location app, developed using DrupalGap, a Drupal mobile SDK plug-in, and PhoneGap, an open source framework that allows a developer to build cross-platform apps using HTML5, CSS and JavaScript

- In UCD Library technical and coding skills are to hand which have enabled the UCD Digital Library to be redeveloped with a responsive website built using Bootstrap, with no plans to follow the app approach, and having moved on from plans for a separate mobile website built using JQuery mobile

- We interviewed staff at St Angela's College, a small institution with limited technical skills to hand, about how they have proceeding using ready to go app developments tools – dudamobile, Andromo and theappbuilder

- Leeds Metropolitan Library were interviewed about their use of the SIRSI/Dynix native app for catalogue access and a mobile website approach

- The Institute of Technology Tallaght were using the Library Anywhere catalogue native app/mobile website, used by a number of Irish libraries, and were about to move to a responsive website as well

- We ourselves opted to round off the project with development of a hypothetical general web app to replace our mobile website, and with development of a targeted app for new students using a cloud-based solution needing no coding expertise – for which we chose the Appy Pie solution. The latter is presently live for the new student intake

Our own small demonstrator developments drove home a number of lessons:

- Some technical knowledge is desirable on the library team, even if the work is being outsourced, otherwise it is not possible to evaluate the approaches being proposed, and their technical validity

- Get to grips with the Apple rules and regulations concerning apps before submitting. Android apps can be submitted with little difficulty, but we fell foul of their regulations concerning competitions and disclaimers and our app was rejected twice, a delay that we could have avoided if we had done our homework

Overall, though a considerable amount of work, we feel that the grant has been very worthwhile for us and has resulted in a concrete deliverable to test out: the usage of that deliverable however does not encourage further resource investment into app development at this time.

The full report can be read here.

Featured Image credit: iPhone (Pixabay, CC0 – Public Domain)

Note: This article gives the views of the author, and not the position of the Impact of Social Science blog, nor of the London School of Economics. Please review our Comments Policy if you have any concerns on posting a comment below.

About the Authors

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