Walk1916: Exploring how a mobile walking tour app can provide value for LAMs

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ABSTRACT  
In this paper, we describe preliminary findings of semi-structured interviews with eight testers of the Walk1916 mobile walking tour of the Easter Rising in Dublin, Ireland. While some LAMs have begun to integrate mobile technology into their suite of tools to enhance the cultural heritage experience, most studies align the value of these tools with existing institutional measures of impact. Understanding the ways in which users value a mobile app that integrates digital collections with a walking tour allows LAMs to develop best practices for use of such tools associated with the cultural heritage experiences, as well as ways to assess such tools. Preliminary findings suggest that geo-location and the ability to compare between archival image and modern day add significant value to the users’ cultural heritage experiences.

Keywords  
Mobile apps, cultural heritage institutions.

INTRODUCTION  
Utilizing mobile apps in the cultural heritage sector has been explored from several different perspectives: that of LAMs attempting to utilize apps for impact, tourism scholars exploring the heritage experience and app developers attempting to develop the best user experience. However, few such studies explore how digital collections can be utilized in mobile apps separately from a LAM visitor experience. Further, most studies aim to explore impact using pre-established institutional LAM impact factors. While these impacts are a starting point, one cannot assume that they are the best or only method to assess impact of a mobile app for the cultural heritage sector. This study reports preliminary findings from interviews with users who tested Walk1916: a mobile walking tour of the Easter Rising in Dublin, Ireland. Understanding how users assess value in the app can assist LAMs in determining the best ways to utilize mobile apps that integrate their content for users who don’t visit their brick and mortar locations or websites, as well as determine the best methods for relevant assessment of such tools.

LITERATURE REVIEW  
LAMs and Impact  
Scholars in LIS have explored the ways in which mobile apps can assist institutions in their attempts to increase their impact. In order to understand this positioning of mobile apps, one needs to consider how LAMs communicate their impact and attempt to measure it, which provides context for the ways in which mobile apps are utilized. Wavell, Baxter, Johnson and Williams (2002) explain that museums, archives and libraries typically measure impact using four different categories: social impact, evidence of learning impact, economic impact and access. However, it is important to note that these impacts are typically measured at the institutional level only; the institution as a whole, not a specific item, collection or event. The authors reviewed over 600 pieces of literature in order to understand how each institution-museum, archives and libraries, attempted to measure the three impact categories. The researchers define the impact categories as follows:

- Social impact: inclusion and overcoming exclusion of individual and/or groups; healthy, safety, employment, education. This can include personal development;
- Learning impact: formal or informal lifelong progressions toward knowledge; acquisition of new skills;
- Economic impact: economic implications for individual and/or groups;
- Access: “provision of opportunity to accommodate learning, social or economic wellbeing (Wavell et al., 2002).

Examples provided often bridge categories. For example, the authors consider strengthening personal, family and community identity a social impact, but it could also have implications for learning impacts. Impacts were measure quantitatively as well as qualitatively. After surveying available impact studies, the researchers recommended that
future research should assess the impact of core services, not just projects. In addition, research on the social, learning and economic impact of archives should be treated as a top priority, specifically economic impact.

Nearly ten years later, Yakel, Duff, Tibbo, Kriesberg and Cushing (2012) heeded this call by exploring the economic impact of archives. Again, this measure impact at the institutional level only. The researchers surveyed visitors to 43 US government archival repositories (state, county and municipal) and 23 Canadian government archival repositories (provincial/territorial and municipal). According to Yakel et al., data suggested that archival institutions serve as a draw and individual may spend at nearby businesses as part of the draw to the area. However, the research was exploratory and further data is needed to define trends. The researchers espouse the need for future work that explores the social and cultural impact of archival institutions.

Armbrecht (2014) attempted to measure value of a cultural institution using a six factor model including a) perceived contribution of identity, b) perceived contribution to social network, c) perceived contribution to skills d) perceived contribution to mental and physical health, e) perceived contribution to economic development and f) perceived contribution to a positive opinion about the region among non-locals. The six factors that Ambrecht suggests overlaps with the three of the four categories proposed by Wavell et al. (2002); social impact (a, b, and d), learning impact (c), and economic impact (e and f). Confirmatory factor analysis was used to refine the scale. Using R factor analysis, Armbrecht found that the final scale suggests that the perceived value of cultural institutions can be measured by six factors: image, education health economic development, social relationships and identity/cultural capital. When considered with Wavell et al. (2002), it suggests that social, learning and economic factors are the best indicators in which to measure the impact of LAMs.

**Mobile Apps and Cultural Heritage**

The development of mobile apps for cultural heritage institutions often focuses on app development as well as the user experience. Cocciolo and Rabina (2013) explored how place based learning can increase learner engagement and understanding of historical topics using the app they developed, Geostoryteller. Geostoryteller provided stories about historical sites accompanied by historical images, that were viewable at different historically relevant geographical sites in New York City. Users would use the app to take a tour of these historical sites and view content on the app while at the location. The researchers directed 31 participants to engage in the tour and then interviewed them after the experience. Findings suggest that the use of place can increase learner engagement and understanding of historical content. This study represents an example of how a mobile app was used in order to determine learning impact of a cultural institution.

WolfWalk, developed by North Carolina State University, is described as a “photographic guide to the history of the North Carolina State University optimized for mobile devices” (http://www.lib.ncsu.edu/reports/wolfwalk). Developed in 2010, the app integrates historical content from the university’s archival collections with a campus map and other content. The app demonstrates how mobile technologies can be utilized to outreach to archival users (Sierra & Casden, 2011).

Harley, Poitras, Jarrell, Duffy and Lajoie (2016) utilized mobile technology, specifically augmented reality to explore location based learning scenarios that support meaningful experiences. Harley et al. evaluated the effectiveness of two mobile applications used together, designed to foster meaningful experiences. Participants used apps in laboratory (study 1) with an eye tracker as well as in the field (study 2) in order to determine whether or not they could identify historical differences between past and present images of a site. Findings suggest that both in lab and in field app experiences supported history learning as well as positive emotions. As with Cocciolo and Rabina (2013), this study suggests that mobile apps can be utilized in studies associated with learning as an impact in cultural heritage institutions.

Cocciolo (2014) utilized mobile technology to determine if it enhanced memory and remembrance functions of the 9/11 memorial site. Cocciolo used focus groups to gather feedback about how an oral history mobile app could enhance remembrance of a historical site. Participants reported a positive experience with the app, leading the author to report the use of curated oral histories via app effective in enhancing visitor experience to a memorial. Remembrance, or memory is associated with Wavell et al.’s social impact, demonstrating that mobile technology can be used to explore social impact in the LAM sector.

While previous studies have determined that cultural heritage mobile apps can impact learning, other impacts (social, economic) have been given less attention. Further, it is unclear if the traditional institutional impacts of social, learning and economic factors are the best ways in which to assess the value of mobile apps for the cultural heritage sector.

**METHOD**

In order to better understand the value of mobile technology for digital cultural heritage collections, A mobile app, Walk1916, was developed. The mobile app utilized a platform created by Haunted Planet Studios, originally develop for Geo-located games. The app provides users a map of 10 significant sites associated with the 1916 Easter Rising around Dublin’s city centre. The Easter Rising is largely considered to have sparked the Irish Independence movement, which established the Irish Republic separate from the UK and led to the eventual boundary between the Republic and Northern Ireland. The centenary of the Easter Rising was celebrated in 2016, leading to an increase in general interest in the topic.

To use the app, a user would follow the map on the mobile phone to a blue bubble near a significant Easter Rising site (figure 1).
Once in the vicinity of the geo-location marker, the phone uses augmented reality to display a snippet from an archival image, held in a local cultural heritage institution (Figure 2).

The user was then instructed to snap a photo of the modern day image shown through the viewfinder with the archival photo snippet overlay. Once the photo was taken, the app revealed the original archival photo, along with text and narrative about the significance of the location to the Easter Rising.

In order to understand how participants valued such an app in relation to cultural heritage institutions, participants were invited to use the app for 45 minutes and then answer questions about their use and impressions of the app for 45 minutes. A research assistant observed the 45 minutes of use and then delivered the interview protocol in a nearby café. Participants received €20 as an incentive for participation. Interviews were audio recorded.

Interview audio recordings were transcribed. The interview data was analysed using NVivo 10 following the guidelines of Corbin and Strauss (2008) and Miles and Huberman (1994). Categories were developed from the Interview protocol, as well as data that emerged from the interviews. Once codes were developed, all interview transcripts were coded.

FINDINGS

The attempt to explore the value of a mobile walking tour for cultural heritage institutions, yielded several categories of results. This paper will only address findings related to LAM collections as well as recommendations for LAMs. Specifically app elements that enhance the use, experience and appreciation of digital surrogates in LAMs. Additional findings, such as additional ways in which participants valued the app experience, how LAMs can utilize such apps and how they can best be assessed in the current climate of Impact measures, will be addressed in future works. In addition, usability findings will be addressed in separate reports of findings.

Eight participants were provided an Android mobile phone to test the app for 45 minutes. They were instructed to rely on user instructions within the app and to visit whichever app sites they wished, in any order. After using the app, they were interviewed to engage in a 45 minute interview about their use and impressions of the app. Additional participants were using the app and being interviewed, during the development of this paper. As a result, this paper reports preliminary results only.

Geo-location

Many participants reported that the app helped them better understand the Rising, when comparing it with their previous knowledge of the history. The Easter Rising and Irish independence is taught to all Irish school children, at primary and secondary levels. Several participants compared this previous experience learning about the Rising with use of the Walk1916 app. Participants commented that while they had learned about the Rebel leaders and significant locations, using the app allowed them to understand the distance between the significant sites. According to participant 1OD, “[Walk1916] gives you a sense of distance” such as how you’d have to walk to go between the sites and as a result, “helps you form a better picture of what went on.” Participant 2OD reported that visiting the original sites helped him link geography to his previous knowledge of the Rising:

“[Walk1916] gives you a sense of distance” such as how you’d have to walk to go between the sites and as a result, “helps you form a better picture of what went on.” (participant 2OD)

A mobile app allows for this experience, which would be difficult to achieve within the four walls of a traditional cultural heritage institution, or visiting a digital exhibit on the web. One can view a map, but walking between sites enhances the experience. This finding is associated with learning impacts, as participants were able to add to their existing understanding of the event via the use of geo-location.

In addition to being utilized to compare with previous learnings about the Rising, the app allowed some participants to develop a new view of the significant sites. According to participant 4OD, “I don’t know how many
times I walk around Dublin and forget how close you are to the buildings where everything happened.” Participant 8DG appreciated the fact that the Government Post Office (GPO) which the Rebels claimed as their headquarters during the Rising, is still a functioning post office: “It’s still there...it’s a historic monument and it’s still a functioning post office.”

Finally, participants discussed how the app allowed them to personalize their cultural heritage experience:

“You are actually there and hearing the narrative. It is more personal than a touristy experience. A tourist guide we hear as part of a group is one thing. You’re standing there and the app is telling it, so it is more of a personal experience.” (participant 8DG).

The importance of geo-location has been previously addressed in research concerning tourism and historic sites, but less in relation to LAMs. The use of a walking app allows LAMs to add geo-location to a born digital or digital surrogate in their collection, which may enhance the user experience.

Comparison Between Archival Images and Modern Day

The app also allowed participants to compare and contrast the archival images that the app provided with the modern day image they could view through the app viewfinder as well as with the naked eye. While several participants reported liking the fact that the app allowed one to “…see how it was, and how it is now” (participant 1OD), other participants appreciated the ability to notice the differences that occur when one can compare and contrast and helped them develop their understanding of the events: “[the archival images] really show a stark contrast between then and now, and again, the devastation that occurred in that time” (participant 4OD). Further, “the last [site] there, when we went to Liberty Hall. In the image there was something called Brooks in the end, I was trying to find that, but I couldn’t find it...it is not there anymore. That stood out for me” (participant 9DG).

Participant 4OD reported that the ability to determine such a stark contrast between the archival photo and modern day scene was valuable: “I think that really strikes a chord with the users.”

Some participants spoke about how the images added value to the experience. Specifically, the ability to snap a picture that included a snippet of the archival image overlaid on a modern day image. According to participant 2OD, “you take a picture but you see the old image there. That was good.” In addition, the use of the archival photos added value by adding new information “…the contrast between the buildings then and now. The information that’s there that you might not realize how much took place” (participant 4OD).

Finally, one participant appreciated the option of the ability to view the archival image, but chose not to: “I didn’t really look at the images too much. I wouldn’t have focused on them, I was more interested in reading the text and see what they’d say. If it was a museum, or something, it’s valuable going through the images, but I’ve seen it first, like where it is.” (participant 1OD). This comment suggests that while archival images are of use when paired with geo-location in real time for comparison, some users were more likely to appreciate the context that the app provided.

Overall, participants reported geo-location added to archival content and the ability to compare and contrast the archival content with the modern day at the site, as the most significant elements of the app thus far. Mobile technology allows for these elements and has potential to enhance the LAM user experience in the cultural heritage sector. Additional participants are being interviewed in order to reach saturation and report more robust results.

CONCLUSION

We explored the ways in which mobile apps can be of use to LAMs in the cultural heritage sector. This paper reports on preliminary findings from 8 participant interviews. While some previously established institutional impacts under the umbrella of “Learning impacts” were found to exist, the addition of geo-location and the ability to compare past and present in situ, have the potential to further enhance the cultural heritage experience and lead to new ways to assess impact of digital cultural heritage collections.

REFERENCES


