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Engaging students with new technology: Using a QR code scavenger hunt for library orientation

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Robin Parker, Melissa Helwig, and Jackie Phinney

Introduction

For many students, library orientation events can be repetitive and boring. The Dalhousie Medicine class of 2016 (Halifax and Saint John) experienced a different orientation model, which proved to be an engaging way to familiarize them with their library and its resources. Building on the successful orientation of the class of 2015 conducted by our predecessors, we used QR codes and smartphones to send the students on a scavenger hunt of their respective libraries, W.K. Kellogg Health Sciences Library in Halifax, and Hans W. Klohn Commons in Saint John. The result was a great experience for us as new Dalhousie Medicine librarians, and for the libraries' staff and the students themselves. The following is a description of the activity, as well as ideas for future implementation.

Background

QR code technology was developed for Japanese business and production purposes in the 1990s but has only had wide scale adoption in North America and Europe over the last decade. Reviews of the use of QR codes in academic libraries in the United States and Europe have been conducted by Ashford (2010) and Elmore and Stephens (2012), respectively, and include discussion of the history of QR codes more generally. QR (Quick Reference) codes are 2-dimensional barcodes that can be scanned by software installed on smartphones or other mobile devices and that redirect the viewer to electronic content, such as a web page, video, phone number, or text. In both the North American and European contexts, QR codes are being used in academic libraries in a variety of ways for the purposes of promotion, linking users to more information, self-paced tours, and facilitating access to catalogue information, as some examples (Ashford, 2010; Elmore & Stephens, 2012).

Likewise, scavenger hunts as a form of library orientation have been used in academic libraries for many years. Cheryl McCain's 2007 review examines scavenger hunts' use and success, or lack thereof, in the context of academic library orientations and concludes that there was limited evaluation of their effectiveness as a learning tool. However, she also points out that the evidence does not support some negative claims that scavenger hunts do not work or are overly disruptive.

The use of QR codes in scavenger hunts has been successful in a number of settings, including library orientations. Veronica Wells (2012) reviews the relevant literature and presents a case study describing the implementation of a QR code scavenger hunt library introduction. Wells also refers to a similar case study reported by Erin Burns at Pennsylvania State University in 2011. From this literature, it is clear that other libraries are successfully experimenting with revamping their library orientations through interactive sessions that incorporate mobile technology. This approach echoes the theory behind using video games for educational purposes: "Gaming can provide avenues for exploration and experimentation through which players pursue goals and take risks without the fear of permanent failure" (Beck, 2008).

Design & Tools

Session details

We had 75 minutes for orientation of which the first 15 minutes was spent with a brief overview of online access to library resources. Then the two campuses, which were connected via video conference for the initial part of the session, disconnected and each site spent a few minutes getting some specific instructions regarding the physical layout and services of the respective libraries and organizing into teams. Each team received a set of instructions and a QR code leading to their first clue. To help with crowd control, each group started at a different point in the hunt and progressed through the series of questions. Because each clue led to the next in a loop, the entire hunt was completed when each group returned to its first clue. They then emailed their answers to the librarian, who checked their responses for accuracy and speed in order to award prizes.

Preparation

Meetings with the entire planning group helped us focus on what we were going to do and divide up the work. Tasks to complete included refreshing outdated questions, getting clue web pages posted, checking that the individual QR codes to those pages worked, and collecting prizes. The QR codes for the physical location questions were then printed and placed in the correct locations. Once everything was in place, QR codes for every clue were produced on handouts to initiate the hunt for each team. Then we tested and retested to make sure the scavenger hunt could be completed without errors or problems. About an hour before the orientation session, we did one final sweep around the library to make sure that the QR codes had not been moved.

Other than the physical and electronic preparation for the hunt, the planning team also alerted front-line library staff about the upcoming event. The support of library personnel was crucial to the success of the orientation when students came asking about the clues, so we distributed the questions and an answer key. Also, given the potentially disruptive nature of the scavenger hunt, staff buy-in was particularly necessary.

Things you need:

- Web space to host questions
- QR codes (can be created using freely available software such as Kaywa, QRStuff or Bit.ly - we used the latter due to its capacity to track usage)
- Students with smartphones that have QR readers installed in advance of session. Make sure students identify team leads or organize into groups
- Wireless connections (tricky with new students whose credentials might not yet work) or access to mobile networks
- Buy-in from administration and staff (especially for large class sizes - Halifax campus had over 80 students loose in the library)

Appropriate content - Question creation

The questions were originally created by last year's organizers. As this was our first year working with the Faculty of Medicine orientation, we decided to use the setup and questions from the previous year, with slight modifications. The new librarians met with the remaining organizers from the previous year and incorporated their feedback and experience from the inaugural year. For example, we changed the question regarding finding a specific reference book to finding the "WH 100" section because the reference section had been redistributed, yet we wanted to retain the learning objective of locating books by call number. The questions and answers introduced the first year medical students to a mix of library electronic and physical resources and services that will be useful throughout their studies and beyond. Our scavenger hunt had twelve questions in total and took between 25 and 40 minutes to complete. We alternated the topics between those that required exploration of online resources and those that had the students locating items around the physical library space. Based on feedback from the previous year that there was not time to have a formal wrap up after the hunt, we created an answer key, which was posted to the Blackboard course space after the exercise was completed. This document served dual purposes of providing the correct answers to the clues and acting as a quick library resource for later reference.

Example of an online resource question:

Find a database Using only the library website, find the database DynaMed. Use DynaMed to tell us the correct adult daily dose foresomeprazole (Nexium), used in the treatment of acid reflux. Begin searching here: http://libraries.dal.ca/research/health_sciences_research.html

Example of an in-person service question:

Find the printers Please locate the printers in the Kellogg Library Learning Commons. How many printers are there? What is the default print setting? You may ask library staff for assistance, if needed.

Scan the QR code on the side of the printer for your next clue when you have completed this task

Student & Staff Experiences

Despite efforts to explain the process of the scavenger hunt, students in Saint John were initially confused about how they were supposed to get the next QR code. However, once they caught on that finding the codes was the game, they became excited and groups were seen running between stations. From our perspective as librarians, it was fun to see the students moving through the clues and teaching themselves about the library's resources, instead of being taught in traditional lecture style.

During planning, we were concerned that the clues might get moved during the hunt, leading to a disadvantage for subsequent teams. Fortunately, in only one instance was a QR code shifted slightly from its described location in Melissa's office. Although the teams were competitive, for the most part they aided each other's progress through the hunt. This fact reflects that, in addition to the library learning objectives, the team-based approach to the exercise also facilitated interactions between the new classmates, both intra- and inter- group. We enjoyed seeing the students getting to know the library and each other. The students seemed to appreciate the activity as well; at the end of the session in Halifax, one of the students approached Robin and Melissa to announce it was the best library orientation he had experienced.

Future Directions

The most obvious future directions include evaluation of the session. Based on observation, informal feedback, and the correct answers submitted by the students, we consider this year's session a success. However, an evaluation survey following the session would provide additional insight into what works and doesn't from the students' perspectives. Staff could also be surveyed to assess impact on workload and to further increase engagement. We would like to conduct longer term follow-up with the students to examine whether the scavenger hunt provides an effective introduction to the library that translates to improved student outcomes and increased library usage.

In addition to evaluation, we are considering future steps of incorporating other social media options - such as Twitter or Instagram - into the hunt in order to track student answers and allow them to generate an answer key for themselves. Students could take a picture and tag it, thereby eliminating the need to email answers to the librarian at the end. Integrating more social media interaction between the library and its users at the point of orientation could also serve as a basis for future outreach and promotion.

Logistically, other small adjustments may be necessary. In our experience, slightly smaller groups with five or six members had higher levels of teamwork than those with eight or nine. In future sessions, we will encourage the smaller team size, particularly in the larger, Halifax cohort, in order to foster participation. Another lesson learned from this year is that non-front line staff should be kept informed about the activity as well if the students need to venture into staff areas to locate their librarian's desk, as was the case in Halifax.

Conclusion

The QR code scavenger hunt used in the Dalhousie Medicine class of 2016 orientation was a prime example of how libraries can be forward thinking when trying to engage their audience. While most of the students were aware of QR codes, some had never used them previously. By completing the scavenger hunt they not only learned about library services, but also how to access information in different ways with mobile devices they use regularly. Libraries, including the Kellogg, are increasingly using QR codes as directional and informational tools, so increasing comfort with this technology through the hunt should also improve its uptake in other library contexts. The students' enthusiasm for technology, coupled with the staff's willingness to help, led to a successful orientation event. We hope that the success of our QR code scavenger hunt will serve as a model for using new technologies to facilitate library instruction and outreach and we look forward to next year's orientation with the class of 2017.

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