



Article

A Mixed Methods Approach to Assessing Roaming Reference Services

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Abstract

Objective – The objectives of this research are threefold: a) to assess the students’ perception of the roaming service at the point of service; b) to assess the librarians’ perception of the service; and, c) to solicit librarian feedback and observations on their roaming experience and perceived user reactions. Ultimately, this data was used to inform and identify best practices for the improvement of the roaming service.

Methods – A combination of quantitative and qualitative survey methodologies were used to collect data regarding patron and librarian service perceptions. Patrons and librarians were asked to complete a survey at the conclusion of each reference transaction. In addition at the end of the first semester of the implementation, librarians were asked to provide feedback on the overall program by responding to five open-ended questions.

Results – The findings indicate that our students typically seek assistance from the librarians once a term (58%), but the majority (71%) indicated that they would seek a librarian’s assistance more frequently, if one were available on the various floors of the library. Overall, our users indicated that they were “Satisfied” (36%) to “Very Satisfied” (43%) with the roaming service. Librarian responses indicate overall enthusiasm and positive feelings about the program, but cautioned that additional enhancements are needed to ensure the continued development and effectiveness of the service.

Conclusion – Overall, patrons were satisfied with the service delivered by the roaming reference librarian. The roaming librarians also provided positive feedback regarding the delivery of service. Data collected from both groups is also in agreement on two major program aspects needing improvement: marketing of the service and a means by which to easily identify the roaming librarian.

Introduction

Reference service delivery has centered on the physical service desk since the late nineteenth century (Miles, 2013, p. 323). However, even pioneering library thinkers such as Samuel S. Green saw the need to decentralize reference service delivery and untether the reference librarian from the desk. In one of his classic publications concerning patron–librarian relations, Green asserts: “One of the best means of making a library popular is to mingle freely with its users, and help them in every way.” (Pena & Green, 2006, p. 164). Over the years, reference service delivery has evolved in tandem with emerging information and communications technology. Reference librarians have expanded their reach beyond the desk by interacting with patrons using multiple modalities such as by phone, fax, email and now via the web, text and SMS. As noted by Askew and Ball (2014): “The use of technology has empowered reference librarians to move away from reference ‘as place’ services and enabled them to provide focused service at point of need” (p. 119). Today, mobile technologies such as iPads, cell phones, smartphones, and laptops are being employed successfully to deploy roaming or roving services in public and academic libraries to provide reference services to the patrons where they are.

Such is the case at Florida International University (FIU) Libraries. To better accommodate the information needs of the students in a library building with severely limited available seating, the Information & Research Services librarians instituted a roaming reference service. In the literature, the terms roaming and roving have been used

interchangeably when referring to reference services physically delivered beyond the desk. As a professional preference, the FIU reference librarians preferred to be referred to as “roamers” rather than “rovers”. Therefore the term “roam” and its variant forms will be used throughout this article when referring to the FIU roaming service.

FIU Libraries Roaming Reference

The FIU Libraries system is comprised of two libraries, the Steven and Dorothea Green Library located on the Modesto A. Maidique Campus and the Glenn Hubert Library situated on the Biscayne Bay Campus – approximately 30 miles apart. Despite the different geographic locations, the libraries share common service challenges that are inherent to primarily commuter-based populations. Reference services provided across both libraries include the traditional desk, in-depth one-on-one research consultations, phone, email, and growing chat and texting services. Despite this array of service options, results from a previous internal library survey attempting to discern users’ preferred mode of interaction revealed users still preferred face-to-face interaction. These types of interactions have become increasingly difficult as seating in the libraries – particularly, in the Green Library – has become even scarcer. Students are reluctant to leave their seats to seek the assistance of a librarian at the reference desk for fear of not being able to reclaim their seat upon their return and have taken to Twitter to express their concerns about the lack of seating in the libraries. The number of in-house initiated chat sessions serves as further evidence of their reluctance to leave their study space. Growing user expectations for ubiquitous service and the

continued evolution of information and communications technologies has dictated the need for increased flexibility and mobility in the delivery of the libraries' reference services. The "Ask-Us-Anywhere" roaming reference pilot iPad program was developed in an attempt to respond to user needs and expectations of the libraries' reference services, with the added benefit of providing at-point-of-need service.

A total of 12 volunteers for the pilot iPad roaming service were recruited from across the libraries: 5 at the Hubert Library and 7 at the Green Library. In order to participate in the program, librarians agreed to roam for two hours each weekday during the peak hours, between 10:00 a.m. to 2:00 p.m. on the day(s) of their choosing. A shared calendar was created to facilitate the scheduling of the service across libraries. Due to limited weekend staffing, roaming was not provided on Saturdays and Sundays. Roamers were encouraged to roam within or outside of the library buildings and were expected to represent the libraries at student and faculty orientations and other events across the university. In order to receive their iPads, participants were required to attend a training session to familiarize themselves with the iPad and recommended software applications prior to their first day of roaming.

The iPad 2 was selected as the device of choice for the roamers primarily because of its easy mobility. The device allowed full access to the web, the online catalogue and other library resources including, research guides, library FAQs, databases, and the libraries website. Funding for the iPads was secured through a Student Technology Fee grant awarded by the university. Given the nature of the iPads as personal devices, as well as the scheduling difficulties that would arise from sharing devices across campuses and busy schedules, the program coordinators decided to assign each librarian their own iPad. Therefore, grant funds were used to purchase 12 iPad 2s, 12 wireless keyboards, and 12 OtterBox protective cases.

To supplement the training sessions, an *Ask Us Anywhere: iPad Roving/Roaming* LibGuide was created. The workshop, as well as the guide, covered the basics of device usage, the setup of their individual accounts, network and wireless access, installation of apps, bookmark suggestions, and how to collect service assessment data. Guidelines for best practices on how to approach patrons and what to do when roaming were also addressed using roaming etiquette and techniques compiled from researching the library literature and business-related literature (Askew & Ball, 2013).

Aim

The objectives of this research were threefold: a) to assess the students' perception of roaming service at the point of service; b) to assess the librarians' perception of the service at point-of-need; and, c) to solicit librarian feedback and observations on their roaming experience and user reactions. Ultimately, the findings were used to inform and identify best practices for the improvement of the roaming service.

Review of the Literature

In its earliest form, as described by Samuel Green, roaming reference consisted of librarians who would walk around the library to identify and assist patrons in need. However, the proliferation of electronic and web-based information impeded the librarian's ability to easily access information while away from the reference desk – and their computer work station. Kramer (1996) notes that this challenge was resolved as libraries increased their numbers of stand-alone OPAC terminals, which were strategically scattered throughout the library buildings. As electronic information became mobile in the first decade of the new millennium, tablet PCs were incorporated into the delivery of roaming reference services with mixed results (Hibner, 2005; Smith & Pietraszewski, 2004). Next came the integration of smartphones, particularly the iPhone, but problems with connectivity, screen size, non-

standardization, formatting, and functionality prevented the early generations of this technology from being adopted on a long term basis (Murray, 2008). However, Apple's introduction of the iPad in 2010 provided a mobile and lightweight technology that librarians were quick to adopt for their roaming services. Given its relatively short lifespan, a review of the literature published during the years 2010-2015, reveals little has been published about utilizing iPads for roaming reference services substantiating the findings of Maloney and Wells (2012) who noted in their literature review, that they found only a "handful of scholarly titles, with most focusing on roving reference" (p. 12).

Perhaps, the most thorough iPad roaming reference study to date was conducted by McCabe and MacDonald (2011) at the University of Northern British Columbia. Using roaming reference as a way to address their declining reference statistics, their librarians staffed the service for six months, during which time they collected transaction data for query type, location and approach. Two iterations of the roaming service were implemented: one integrated with the traditional service desk duties and the other as a standalone service. The latter iteration required librarians to provide roaming service in addition to their reference desk hours. Patrons were asked to complete an optional e-questionnaire at the end of the roaming transaction to collect data related to past use of reference services, provide thoughts on the service and to find out whether or not the service made them more apt to contact a librarian for help.

The library realized an overall increase of 228 reference questions with the roaming service; the majority of which (67%) were research-related. The results indicated that the roving reference service with iPads proved to be very successful when librarians were only assigned to rove, but less successful when they combined desk hours with their roving duties. They found that the integration of roaming and reference

desk services resulted in a 56% decline in the total number of roaming reference questions from the previous iteration where roaming was implemented in addition to desk hours. Although they indicated that they did collect patron data, an analysis of that patron data was not presented.

The Youth Services (YS) division at the Boise Main Public Library received a Library Services and Technology Act (LSTA) Just-in-Time grant that allowed them to acquire four iPad2s for nine staff members to provide a roving reference service (May, 2011). The intended goal was to increase staff interaction with patrons, by giving them tools that allowed them to move away from the reference desk. Although they kept their traditional reference desk, the use of the desk was minimized as they added more roving personnel.

As a result of the service, they were able to have multiple librarians assisting multiple patrons at the same time using the staff features of the catalogue. They also learned that their web-based public access catalogue was not optimized to work with mobile technologies. Other complaints such as ergonomic issues with long-term use of the device, the lack of ease when switching back and forth between applications and cutting and pasting were also common. Based on their experience, it was recommended that each librarian should have her or his own device to allow for the personalization of the applications and other customization (May, 2011, p. 14). Unfortunately, May did not provide any assessment data regarding this program.

At the University of Warwick Library, Widdows (2011) recounts their roving reference experiences using the mobile phone and their trial of the iPad as a potential roving tool. The Warwick library does not have a traditional reference service desk, but utilizes HelpDesks, which deal primarily with circulation and account questions as a means of providing query "triage". The HelpDesks refer patrons to "specialists staff", or rovers, as needed. The

rovers also provide backup support to the HelpDesks during peak times.

Their iPad trial lasted one week (35 service hours). Fifty-six of the total 230 HelpDesks queries were handled by the rovers and 26 of these required the use of the iPad. Widdows noted the major challenge with using the iPad was the lack of a phone feature which prohibited the rovers from contacting a specialist for more complex queries. As with the Boise library, the Warwick librarians also ran into problems accessing the full features of their web-based catalogue on the iPad. Although Widdows states that they collected data on their roaming program, other than the few transaction statistics shared above, there was no other data presented to illustrate an assessment of the users' or the rovers' perspectives about the program.

At Southern Illinois University-Carbondale, Morris Library, three iPads were integrated into an existing roaming program (Lotts & Graves, 2011). Nine reference librarians shared usage of the iPads, which were checked out in shifts. The benefits of using the iPads included the Virtual Librarian being mobile while staffing the virtual reference service and the multi-functionality of the iPad which was ideal for reference, enabling access to the online catalogue, reference tools, and serving as an eBook reader. The drawbacks noted by the authors presented some surprises. The literature typically reflects that roaming librarians tend to prefer the lighter, more mobile iPad, to the laptop. However, at this library, the librarians reported feeling "uncomfortable" with the iPad as a replacement for the laptop. In agreement with May's recommendation, the authors thought that each roamer should have his or her own iPad to minimize the need for continual account management and allowing individual to customization for their specific needs. Lotts and Graves did not present any transactional or assessment data of any kind, they explained the omission in their "Next steps and the future" section of the article, by saying that assessment and usage data will be compiled

and analyzed as part of their next steps in determining how the library moves forward with their roaming service (p. 220).

Librarians at the Albin O. Kuhn Library & Gallery collected two semesters of data about their iPad roaming service, which operated for four hours per week in predefined campus locations (Gadsby & Qian, 2012). The roaming locations were identified through observing traffic patterns in their 24-hour library study space, the commuter lounge, the University Center and academic department offices.

Using transaction data for 60 queries, they determined that more than 75% of the service users were students, the busy times of the week were Tuesday through Thursday from 2:00 p.m. – 4:00 p.m., and more than half of the questions they received were library-related. Although they mention anecdotal feedback they received from their campus community, there was no attempt to formalize a data collection effort to capture and analyze this qualitative data. Furthermore, there was no mention of future assessment efforts.

The roaming programs identified in the literature shared a number of commonalities across library types such as: reference librarians being able to provide services beyond the reference desk; the provision of just-in-time service; the ability to access web-based library resources away from the desk; and, library staff being able to access multiple instances of their online catalogue in order to assist large crowds of users (May, 2011; McCabe & McDonald, 2011; Widdows, 2011). The statistics collection and tracking for these iPad roaming programs vary widely by method and scope. The noted challenges of these programs included using mobile devices to access full functionality of the online catalogue, unstable wifi connectivity, and statistics recording (May, 2011; McCabe & McDonald, 2011; Widdows, 2011).

The literature indicates that the experimenting libraries – academic and public – have had

overall positive experiences with integrating the iPad into their roaming services. However, it also reveals that very little assessment data has been collected on iPad roaming programs. While three of the five articles discussed above present mostly transactional or usage data, none provided any type of assessment data – empirical or otherwise – to represent program effectiveness, user satisfaction or feedback. This study attempts to fill this existing gap in the literature and create a foundation upon which to build assessment techniques for roaming services using mobile devices.

Methodology

Surveys were used to collect data from the user and the librarian immediately after the roaming transaction was completed. The survey instruments were created using Qualtrics, a web-based survey tool licensed by the university and were bookmarked on the roamers' iPads for easy access. In order to encourage participation, the instruments were designed to be very brief; the user survey consisted of four items and the librarian survey had two items. The survey items were piloted by a small group of faculty and students before they were put to use. To allay any concerns about privacy, users were advised that their responses were confidential and that once they clicked on the survey submit button, all responses would be recorded and disappear before the iPad was handed back to the librarian. After the user completed the survey, the librarian would then complete the corresponding librarian survey for that transaction. The data collected from both surveys reside behind a firewall on a secure university server.

The roaming service coordinators collected feedback about the program from the librarians via email asking them to respond to five questions concerning the service implementation, user reception, suggestions for improvement and an open-ended question for any additional comments they may have had about the program.

Results

The survey data collection period lasted 52 days (approximately 10 weeks) for a total of 208 service hours during the beginning of fall 2011. The roaming service and data collection efforts were conducted during the libraries' peak hours between 10:00 a.m. - 2:00 p.m., Monday through Friday. During that time the reference librarians responded to a total of 2,850 (N) queries via our virtual/mobile services that include chat/IM, SMS/Text, telephone, email, and phone. Reported roaming reference transactions totalled 168 queries ($n=168$), which represents 5.9% of the total number of these virtual/mobile transactions.

Quantitative Results

A deeper analysis of transaction data recorded in our LibAnswers system provided us with useful information not only about the program, but also about our library users. The data show that our roamers were most often inside the library (89%), when a transaction occurred. The majority (79%) of the service users were undergraduates. The nature of the roaming queries were most likely to be directional/informational (73%), followed by research-related (20%) and least likely to be technology-related (7%). The overwhelming majority (88%) of the transactions took between one to ten minutes to complete.

The student surveys ($n=15$) completed upon the conclusion of a transaction, provided insight to user behaviour and their satisfaction levels with the service. When asked why they were in the library on that day, the largest percentage (33%) of users responded that they were there to check out a book or reserve an item. The second most frequent response was that they were in the library to "study by themselves" (27%) or to "research an assignment for a class or class project" (27%). The third highest response showed that the reason users were in the library that day was to check out an electronic device

(21%) such as a laptop, iPad, Kindle etc. (See Figure 1)

Figure 2 shows the majority of the respondents indicated that they asked a librarian for assistance about once a month.

The third survey item collected data regarding user satisfaction with elements of the roaming program using a Likert type satisfaction scale (See Table 1) with 5=Very Satisfied and 1=Very

Dissatisfied. In particular, we wanted to know if the roaming librarians were friendly and approachable, if they were easily identifiable and, of course, if the user received the help they needed. Since there were no negative responses, only the positive responses are represented in the table. Forty-seven percent of the respondents indicated that they were “Very Satisfied” and the librarian who assisted them was approachable and friendly; however, 20% of the respondents indicated they were “Neutral”. Over half of the respondents (60%) indicated

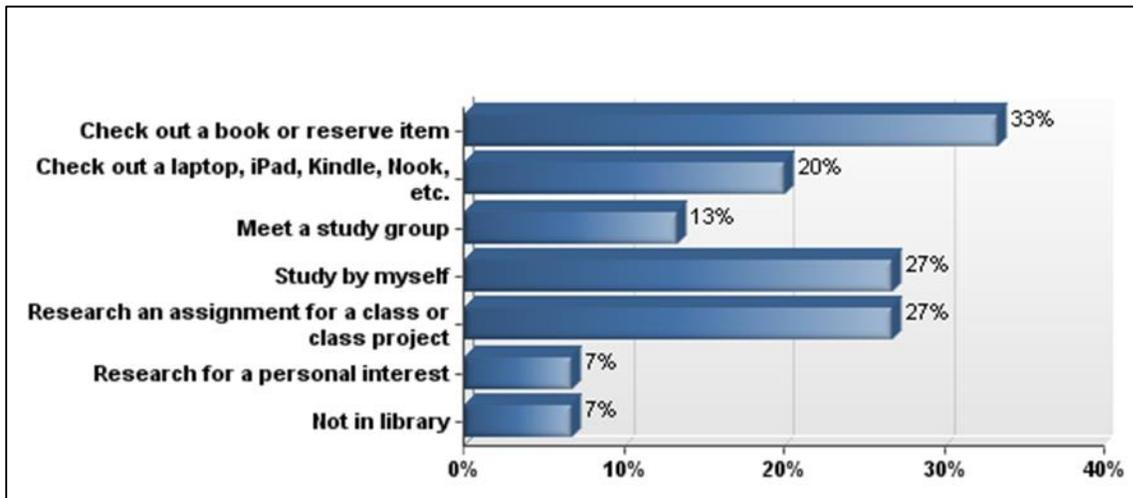


Figure 1 Purpose of library visit. Percentages do not equal 100%, since users were asked to check all responses that applied to them.

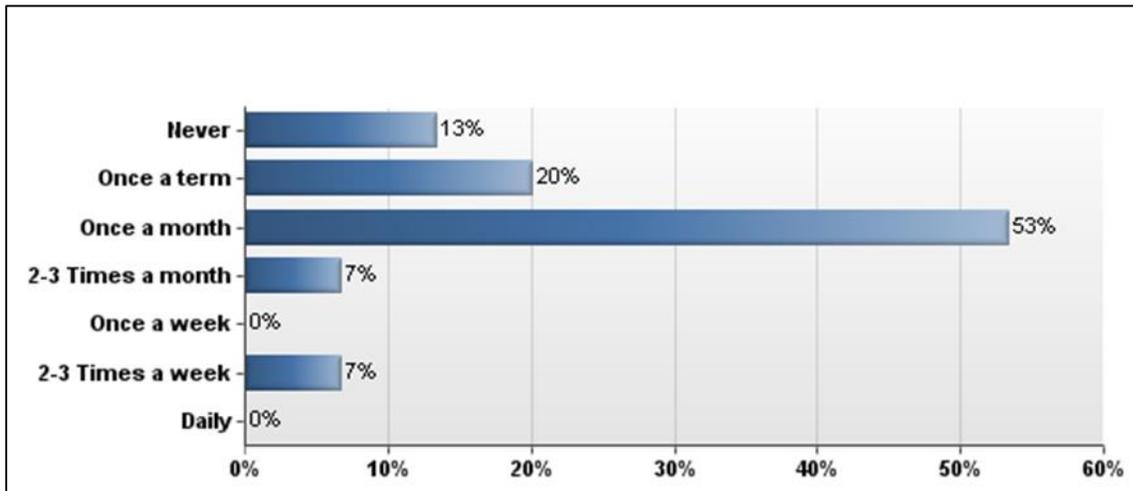


Figure 2 How often user asks for librarian assistance

satisfaction with the ease by which they could recognize the librarian as a library employee and with the help that they received. However, only a third (33%) of the respondents indicated being “Very Satisfied” with the ease by which they could recognize the librarian as a library employee and 7% gave “Neutral” rating to this same item indicating a program need.

The last survey item asked if the respondent would be more willing to ask for assistance if a librarian were available on the various floors of the library, to which 73% responded “Yes”. The low number of user responses prevents us from gathering any meaningful information from a cross tabulation of the responses to this item

with survey item #2 regarding their frequency of asking assistance, to find out if there is a relationship between the respondents who tended to ask a librarian for help more often and those who would be more likely to seek assistance from a librarian posted on the various floors of the library throughout the day.

The responses to the Librarian surveys (*n*=23) provided insight into their behaviour while roaming. The librarians indicated that they typically approached the student (74%). There seemed to be two most common roaming locations between both campuses: the second floor of Green Library (35%) and the third floor of Hubert Library (30%). (See Figure 3)

Table 1
User Level of Service Satisfaction

Question	Very Satisfied	Satisfied	Neutral
Librarian was approachable and friendly	47%	33%	20%
Librarian was easily recognized as a library employee	33%	60%	7%
I got the help I needed	40%	60%	0%

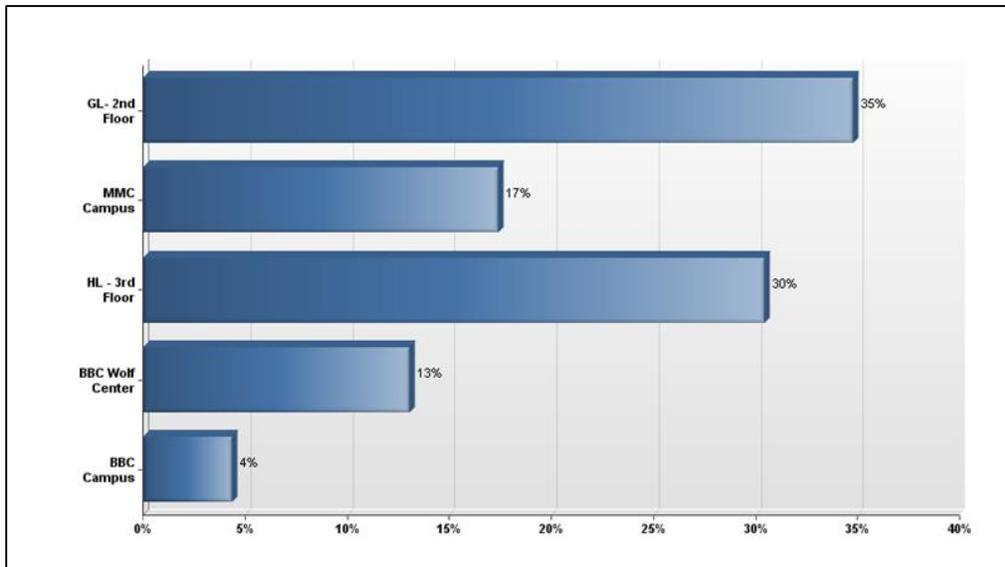


Figure 3
Roamer frequented locations

The Librarians' response to the survey item asking them to rank how they felt the user's level of satisfaction was with their assistance indicated that a little over half (52%) felt their user was "Satisfied" with the services received, a few indicated their users were "Very Satisfied" (22%) with their assistance.

Qualitative Results

While the quantitative data primarily focused on the users' behaviours, the qualitative data does the same for the librarians who roamed. The qualitative data collected from all 12 librarians provided useful suggestions for changes to the services from the people on the front line interacting with the patrons. As the quantitative data showed, roamers indicated a preference for roaming in one of two places in and around the Green and Hubert Libraries. Surprisingly the comments for the favourite spot in the Green Library, the third floor, differed from the recorded transaction locations, which mostly took place on the second floor of the library where the reference desk was located. The Green Library librarians indicated that they liked to

roam on the third and seventh floors, as these floors have no service desk. Since the Hubert Library has fewer floors than the Green Library, the librarians roamed in the library, as well as in the nearby academic buildings and the student center where the students tend to congregate. One of Hubert Library librarians shared that they roamed

...through the library and around the WUC [Wolf University Center]. Sometimes through AC1 [Academic Center 1]...Because the library is too small and I often find I get more questions outside of [sic] library.

The challenges identified from the FIU experiences were unique compared to those found in the literature and included excessive noise levels, extreme temperatures in certain locations and poor recognition or visibility of the service. One librarian commented on feeling a "little intrusive" when roaming a floor where the students are quietly studying saying:

I must admit that sometimes, when it is very quiet and students are busily engaged, I feel a little intrusive and somewhat like a floor walker.

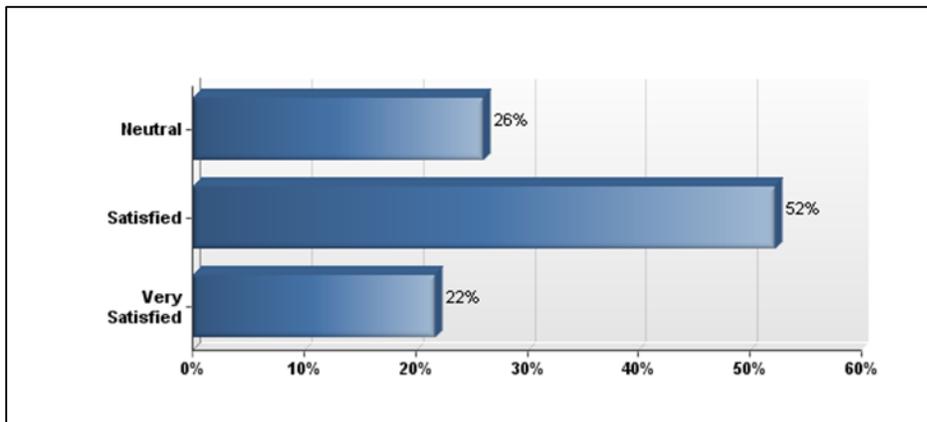


Figure 4
Roamers' rating of user's service satisfaction level. Using the same Likert type satisfaction scale as with the previous items, there were no negative responses recorded and these are therefore not represented in this figure.

Although at the end of the comment, the concluding sentiment was that perhaps it was “Just my hang up, of course.” Another librarian expressed the difficulty of having students feel comfortable with approaching them for help stating:

The most challenging aspect so far has been having the students approach us for help. You can usually find students who need help if you ask them, but they will not approach us themselves.

A number of free applications were suggested and recommended for use by the roamers during the roaming service training session and the roamers were taught how to install and use these apps on their iPad. Most of the roamers report that rather than using the apps, they used bookmarks more frequently instead. One of the more ambitious and tech savvy roamers indicated using applications such as “prezi viewer, dropbox (most often), and adobe reader” as well.

The majority of the roaming librarians agreed that the service needed better publicity and marketing to raise the students’ awareness of the service and help them easily identify roamers when they needed one. As one librarian commented, the service needed to be more “high profile”. However it became clear through other comments that along with the high profile there was a need to implement a “consistent schedule”.

When asked to look into the future and share their vision of our roaming service one to two years from now, all but one roamer indicated that they saw this service existing alongside the traditional reference desk as opposed to a standalone service. In comment after comment, it was clearly and strongly expressed that the traditional reference desk should continue to be a point of service for reference. Such assertions included the following:

I believe the desk will always be needed

As a traditionalist, I like the idea of having a reference desk. I think people need to identify a specific place where they can go for help.

Roaming should not replace the reference desk: it's an extra way to help people.

However, one librarian saw things a bit differently:

I see reference increasingly decentralized, online, ubiquitous, and continuous....

When asked to provide any additional comments they had about the service, they unanimously presented overall positive and enthusiastic feelings about their service experience:

I've enjoyed it quite a bit, and believe this and online help are closer to the future of reference services than sitting at a desk.

There is great potential with this service. We just have to keep tweaking.

The students are always very happy when they receive help right where they are.

Discussion

The reference transaction data recorded in LibAnswers showed that the respondents who received assistance from a roamer were more likely to be an undergraduate student and were in the library to check out a book or reserve material. This indicates that they were more likely to interact with library staff at the access services desk(s) than with those stationed at the reference desk. This also means they were less likely to need to seek out a reference librarian for research assistance. When users were provided assistance by a roamer, it was the roaming librarian who approached the student to initiate the reference transaction more often

than not. Student responses concerning their recognition of the roamers as a library employee validated the librarians' suggestions regarding the need to improve the identification of librarians while away from the reference desk and to improve the service publicity and marketing strategies.

Although library personnel have nametags they are not required to wear them. The "Ask me" tag attached to the lanyards worn by the roamers tended to hang lower than the line of sight and was therefore easily overlooked by potential users. Alternatives discussed included creating a button, wearing hats, or wearing other outerwear that would clearly show the "Ask Me" logo to encourage users to approach the roamers for assistance. The program publicity consisted of an announcement on the libraries' website, social network venues and advertising the service on the libraries' internal digital signage displays. The roamers agreed that more should be done to raise the visibility of the program. In addition to the above, ideas included creating a more attractive and engaging sign for the libraries' digital display, highlighting this service more prominently on the libraries' homepage as well as promoting the service in the student newspaper.

Given the students' reluctance to ask a librarian for help, it was encouraging to see users respond that they were most often satisfied with the help they received from the roamers and with their overall experience. While most (80%) of the respondents indicated that they were "Very Satisfied" and "Satisfied" with the librarian being approachable and friendly, 20% responded "Neutral" to this item. These responses may suggest that roamers be more aware of their body language and facial expressions when approached by a student, or when approaching them. What was most encouraging was that the respondents indicated they would be more likely to seek assistance from a librarian if one were available on the various floors of the library. This indicates that the roaming service has high impact potential

and signifies a need to redefine the program service strategy. As several roamers noted, the service needs to be provided on a more consistent schedule and perhaps in conjunction with the reference service desk schedule.

All of the above factors, along with the abbreviated service hours, most likely contributed to the low response rate to the quantitative surveys. While the data presented in this article may not be generalizable to other libraries, it does serve as an indicator for students' receptiveness and potential use of a fully implemented roaming service by the FIU Libraries. Overall, the data indicates that the FIU Libraries' roaming service fulfilled a need and that students would use the service if were offered as part of a suite of reference services.

Based on the librarians' survey responses it is noteworthy that the GL librarians, unlike the HL librarians, preferred to roam on the floor where the reference desk is located. Especially so, since the Green Library has eight floors - six of them providing open study spaces - whereas, the Hubert Library only has three floors. A comparison of the service data between the roamers and the users presented an interesting revelation. The users reported being much more satisfied with the service they received than the librarians perceived them to be. This suggests that as service professionals, librarians set a higher bar for service delivery for themselves, than is actually expected by the patrons.

Although there were a number of common challenges cited in the literature about providing an iPad roaming service, very few of these challenges were mirrored by the data collected from the FIU roamers. The challenges experienced by the librarians were unique to the FIU Libraries and included excessive noise levels, extreme temperatures in certain locations, and poor recognition or visibility of the service. The latter challenge was further exemplified by the statistics indicating that the librarian most often initiated the roaming transactions.

There was quite a bit of time spent on identifying appropriate and relevant iPad applications for the service along with the appropriate training for their use. However, the majority of the librarians' responses revealed that they preferred to use bookmarks instead of the apps. This preference bears further investigation to determine why that was the case.

A subsequent iteration of the roaming service model implemented in the following academic year which integrated the service with the reference desk as was suggested after the pilot was considered unsuccessful. Of particular concern with the new model was determining an easy and reliable method of communication (i.e., realtime chat, SMS/Text, Facetime, etc.) between the user and the librarian at the reference desk so that a roamer can be efficiently dispatched. In the spring of 2014, the roaming service was placed on hiatus until the Information & Research Services departments can identify and come to a mutually agreed-upon solution.

Conclusion

Roaming reference is not new in academic libraries and the integration of mobile technologies has provided even more opportunity for academic librarians to become "unchained" from the traditional desk to meet their users at the point-of-need. As reference services become more decentralized and personalized, researching the effect of roaming services may be valuable to inform the overall quality of service as perceived by the user. Askew and Ball (2013) identify a need for further research to determine to what extent does culture, language or gender impact a library user's willingness and comfort level to approach a librarian for help. They also state more research is needed to determine how these same factors affect librarians' comfort level when approaching users. When focusing on the technologies employed in roaming reference services such as iPads, there is need to

determine what functionalities, features and apps are most necessary or useful when responding to queries at the point-of-need. There are always two sides to every story. In addition to gathering data from our patrons, there is also a need to gather data from roaming librarians (staff) in a more formal way. Askew and Ball (2013) note: "...academic libraries should consider not so much the 'what' we do, as illustrated by the traditional reference transactional data collected, but should also incorporate data collection to describe who we serve, how we serve them, and where we serve them" (p. 98). Conversely, we should also take into account what services our users tell us they want, along with how and where they want to receive them. The two may not always be in agreement. In order to accomplish this in a comprehensive fashion necessitates using assessment methods and measures looking from the outside in, by obtaining data not only about the patron, but also about the librarian to capture and reveal the complete story.

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