○Strategic Library™

Bridging the Gap

» The Bellingham Public Library Reaches Out to Patrons Experiencing Homelessness

BY SUZANNE CARLSON-PRANDINI

"**I** am so ashamed."

Taken aback, I look up from entering a library card number into the computer reservation system for the woman who has just spoken. I try to catch her eye, but she focuses on the ground. She's agitated and I'm not sure where the interaction is going.

"Sorry to hear that," I reply. "Did I do something?"

"No, I'm just so embarrassed," she answers.

She shares that she's ashamed of her past behavior in the library, her mistakes. I assure her that she's welcome and that we're glad to see her. It's only then that her eyes dart to mine for a moment, and then she nods her head. Her body quiets and she moves to her internet station. I breathe out

with relief, grateful as this moment de-escalates. I'm aware that the patrons around us have shifted their attention back to their computer screens.

What mistakes had she made? Multiple incidents over the years had resulted in a number of trespasses from the library. She struggles with chronic homelessness, mental illness and addiction. Her situation exemplifies how unsatisfactory it is to call 911 for a disruptive patron who doesn't need police attention but rather a complement of social and health services.

Staff who regularly work the public service desk understand the struggle to strike the right balance of compassion, fairness, inclusivity, and safety. Libraries should be open for everyone, but libraries also need to feel safe and inviting for a wide range of users. Tensions arise when cultures clash

Effective Approaches to Working with Homeless Patrons

LIVE WEBINAR: JUNE 7, 2018; 2:00 — 3:00 PM EST

The challenges surrounding homelessness can seem overwhelming. The homeless people taking refuge in your library have intractable problems, maybe mental illness, maybe an addiction. Homelessness itself has deep societal causes ranging from affordable housing to income disparity. What can a library possibly do, right?

Actually, a lot.

This live webinar offers two compelling perspectives on this topic.

Jared Oates, Niche Academy COO, shows how the most effective libraries are acting as a powerful catalyst within their own communities to implement practical and locally relevant solutions.

Ryan Dowd has been working with the homeless for decades and is currently the executive director of the second largest homeless shelter in Illinois. Ryan presents actionable advice on dealing with problems that arise every day in the library.

Participants will:
- Learn how to dealing effectively with the difficult situations that arise every day within the library--diffusing conflicts, enforcing rules, and responding with compassion.
- Discover how other libraries are acting as a powerful catalyst within their own communities to implement practical and locally relevant solutions to the challenges of the homeless.
- Discover additional resources and training opportunities.

PRESENTERS:
- Jared Oates is a former engineer and director of product strategy at SirsiDynix. He is currently the chief operating officer at Niche Academy.
- Ryan Dowd is the executive director of Hesed House, the second largest homeless shelter in Illinois and the author of The Librarian's Guide to Homelessness, published by ALA.

Registration fee: $49/person. Ask us about group rates for parties of 4 or more (email jenny@libraryworks.com)

Register at this link: https://attendee.gotowebinar.com/register/2822026722610383619

Libraries offer services to connect patrons with traditional resources that address obvious needs like shelter, meals, and access to medical and social services professionals. These services remain vital, but various discussions with patrons who are homeless reveal an additional need, an experience that's hard to quantify. One patron shared, "every time I got a library card...I felt like a member of society."[6] Belonging matters and libraries, especially libraries that enact inclusive policies and customer service, offer the opportunity to belong. For individuals who are used to "not being seen as people"[7], access to resources is important, but face-to-face contact and being treated with respect is paramount as it is so often denied to individuals living on the street.[8]

LIBRARIES IN COMMUNITY

While homelessness affects libraries, changing the dynamic in the building for both staff and patrons, it's not an issue that libraries can successfully engage in isolation. This larger societal struggle plays out across multiple public venues. Other organizations in our communities are struggling to address the challenges of homelessness. Seeking out and partnering with these other organizations strengthens how a library can serve its community.

As a department of the City of Bellingham, the Bellingham Public Library recently contributed to an inter-departmental presentation on how the city is addressing homelessness. In response to this and other presentations, city council members passed an emergency ordinance that creates a process allowing faith-based organizations to help fill the housing gaps via temporary tent communities. One city council member explains, "I do not think that tent encampments are a good long-term solution, but it may be what we need to do in the short term."[9] He acknowledges that while brick and mortar solutions last into the future, they do nothing to diminish the pressing housing needs that exist now.

Our current mayor actively engages with representatives of the homeless community believing that, "there's not one solution to this problem, there are many solutions. I don't think there's one perfect way to do things."[10] She also struggles to balance long term solutions against immediate need. However, she recognizes that libraries have a role to play stating, "I want [the library] to be the information hub...partnering to bring services...it's an extremely relevant, practical,

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between various user groups. The director of the Bellingham Public Library, Nancy Kerr, acknowledges that tension stating, "there are two very distinct populations that use this library...a highly educated, reading public who really uses this library in a more traditional sense...and then there is the other population... some days it's about half and half and some days...it tips over into social services rather than library services".[1] That other population is severely marginalized and has complex needs compounded by extreme poverty.[2] One approach to reducing tensions in the building is to better understand the causes of the conflicts. This

means developing a better understanding of patrons experiencing homeless and what they need and want.

Patrons who are homeless are not new users in libraries. However, the number of such patrons and the challenges they face have intensified, impacting many aspects of public life, libraries included.[3,4] Ryan Dowd, an experienced shelter manager, trainer, and author of the book *The Librarian's Guide to Homelessness,* recently wrote, "homelessness is not the result of extreme poverty, it is an extreme form of poverty brought about by both financial and relational poverty."[5]

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and appropriate solution…you're doing lots of things that nobody else is doing."[11] For example, the Homeless Outreach Team, or HOT, is a team of professionals that travel to individuals who are homeless. They carry food, water, articles of clothing, and plug people into existing services. Library staff are a natural bridge between people living on the street and the HOT team. In order for this to occur, however, staff need to be aware of the service and empowered to call on behalf of patrons.

TRAINING

What other unique actions are occurring? First, Bellingham Public Library administration supported an all staff training on how to work effectively with the homeless population. Given how short-staffed the library is, this is an impressive commitment. All pages, clerks, security staff, librarians, and managers participated in a single 3-hour training session. Some board members attended. Multiple sessions took place over several months allowing for desk coverage and for small group discussion. The training helped staff unpack and examine cultural assumptions around homelessness. In addition, it covered some theory and background information as well as offered practical engagement and de-escalation techniques for common conflicts that library staff members experience when working with patrons who are homeless.

Future steps involve evaluation of existing library policies. Given a new shared understanding of the barriers that patrons who are homeless face, library staff will assess how library policies help or hinder these patrons. Staff will determine if any policy changes need to be proposed to the library board.

OUTREACH

Following the all staff training on working effectively with the homeless population, librarians initiated outreach at a local low barrier shelter in February 2017. Targeted outreach creates opportunity to gather information as well as share it. The low barrier shelter houses the least stable segment of the homeless population and was chosen because the people who shelter there tend to be the patrons who struggle the most in the library. The hope was that increased staff contact in a non-library setting would improve staff and patron interactions. By building trust through positive engagement, staff hoped to learn more about the unmet needs of these patrons and thus provide a better level of service.

In September of 2017, the pilot project transitioned into an ongoing outreach program. Two librarians take turns visiting the shelter twice a month for an hour at a time. During that hour, the visiting librarian shares donated books, coloring sheets, crayons, pens, scratch pads, takes reading requests, engages in Reader's Advisory, and offers community resource information.

Current library policy prevents people without a permanent address to borrow library materials. Librarians have worked with shelter staff to establish a collection of books and magazines at the shelter, increasing ongoing access to materials. Materials are selected from donations made to the library and are not cataloged. Other than materials, librarians participating in the program have observed that a large part of the experience is listening to what patrons talk about either with the librarian or each other. As a gesture of thanks for letting library staff share what is essentially their living room, librarians always bring a little snack, whether it's donuts, cookies, tangerines, or bagels.

Changes have occurred over time. Patrons now chat with the visiting librarian and make reading requests where initially conversations were limited. They greet library staff they recognize when they enter the library where before there was minimal engagement. Librarians have been able to update patrons on current policy. People who thought they couldn't use library services due to fines are now coming back into the building and accessing services. Through casual conversations librarians have learned that bringing items to the shelter is most helpful as people don't want to carry books with them all over town. Patrons don't have any way to store their possessions when they are not at the shelter. Finally, librarians worked with the local YMCA so that the library now receives YMCA shower passes rather referring patrons to a third location. Mobility and transportation

> **Understanding the challenges that our homeless patrons face increases the likelihood of providing services that support their needs. Investing time in understanding patron needs allows staff to better assess current services and policies.**

can be extremely challenging. If library staff have to exclude a patron due to body odor, a shower pass can be offered in addition to an invitation back to the building after the issue is resolved.

CONCLUSIONS

Understanding the challenges that our homeless patrons face increases the likelihood of providing services that support their needs. Investing time in understanding patron needs allows staff to better assess current services and policies. When needs between user groups come into conflict, staff are then positioned to facilitate proactive engagement, resulting in better outcomes for all parties.

Multiple interviewees expressed the importance of library as a unique and essential public space. In wrestling with the role of library, I return to our library's mission: Connecting people to each other and the world. Our mayor said, "...the library shouldn't take the place of social services"[12]. Agreed, the skills and mission of library staff and those of social workers differ. Libraries can, however, continue to uphold democratic principles through courtesy and access. Libraries are uniquely positioned to provide engagement opportunities across the social spectrum, helping to normalize those interactions. We are most in danger of increasing isolation and anger when we see someone else as being the other; respectful engagement confers dignity on all participants and supports positive outcomes. This is how libraries can impact an existing negative reinforcement loop and transform it into a positive reinforcement loop.

Last week a gentleman attempted to speak with me. His sentences were fragmented and after a few moments of what felt like failed attempts, he abruptly turned and walked away. I watched him as he slowly circled back to the desk. Crystal clear, he carefully said, "This is the most I've talked with another human being for over a week, thank you." And then he left. Humbled, I reflected on how little is required in order to establish a connection of value. ∎

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NOTES

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2 Ryan Dowd, "Practical Tips for Difficult Homeless Patrons," (online lecture, nicheacademy.com, 2017).
3 Scott Greenstone, "Puget Sound's Homeless Crisis Pushes 911 Beyond Its Design," The Seattle Times, January, 29, 2018.
4 Nancy Kerr, in discussion with the author, February, 2018
5 Ryan Dowd, 'Homeless Tip: No, homelessness can't happen to anyone', email, 2018
6 Deborah, in discussion with the author, April 29, 2014
7 Jennifer, "This Homeless Woman Lost Her House and Now Lives in Seattle's Tent City 5", Invisible People (vlog), Mark Horvath, December 27, 2017, **https://www.youtube.com/watch?v=l6bBuLXBUOU&pbjreload=10**.
8 Squeaky Frog, in discussion with the author, January, 2018
9 Michael Lilliquist, City of Bellingham, City Council Regular Meeting, Youtube video, 2:18:26, January 22, 2018, **https://meetings.cob.org/OnBaseAgendaOnline/Meetings/ViewMeeting?id=1394&doctype=3**.
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Movement-Based Programs in U.S. and Canadian Public Libraries

» Evidence of Impacts from an Exploratory Survey

BY NOAH LENSTRA

INTRODUCTION

This article analyzes an emerging type of public library program: movement-based programs. These are programs that encourage, enable, and foster physical activity and physical fitness (Lenstra, 2017). The literature review below shows that although there is both research-based evidence that approximately 20-30% of public libraries in the United States offer movement-based programs and anecdotal evidence that these programs are offered by public libraries elsewhere in the world, the impacts and outcomes of these programs have received little attention. This paper addresses this gap by presenting the results from a survey of North American public libraries that have offered movement-based programs.

Since little was known about the impacts of movement-based programs in public libraries, an exploratory survey design was used to address the following research questions: what impacts do movement-based programs in public libraries have and what variations exist between urban and rural libraries. Results show that these programs tend to bring new users into libraries, contribute to community building as well as to health and wellness. Most respondents (95%) state that they intend to continue offering movement-based programs at their public libraries. The article concludes by discussing how these results can productively inform our understanding of the evolving roles of public libraries in relation to public health and wellness.

LITERATURE REVIEW

The literature on movement-based programs in public libraries consists of three types: 1) the inclusion of questions about movement-based programs in surveys that focus on other facets of public librarianship, 2) case studies in which researchers were participants in the experimental cases analyzed, and 3) short, journalistic program reports shared in channels without peer-review or expectations of adherence to research frameworks. This literature shows that approximately 20-30% of U.S. public libraries have offered some form of movement-based programming. Furthermore, the case studies and journalistic reports suggest that these programs are also offered elsewhere around the globe. Although this literature suggests that movement-based programs tend to resonate with the populations served, no research has yet analyzed in detail what impacts movement-based programs have. As a result, the profession has yet to develop the means to communicate about physical activity in public libraries to policy makers, to broader stakeholders, or even to itself.

Survey-based research

Surveys conducted during the last decade find that movement-based programs have been offered in many public libraries throughout the United States. A randomized survey of gaming programs in public libraries (Nicholson, 2009, p. 206) found that "physical games" that require moving the body were the fourth most common type of gaming program offered in public libraries. A follow-up study using convenience sampling that included school and academic libraries found that "the most popular game activity reported in 2006 gaming programs in libraries was the *Dance Dance Revolution* series, with 44% of library programs [reported] using this game" (Nicholson, 2009, p. 209).

More recently, two surveys conducted in 2014 attest to the presence of yoga and other fitness classes among the regular offerings of U.S. public libraries. Among other questions, the 2014 *Digital Inclusion Survey,* conducted by the Information Policy and Access Center at the University of Maryland, asked a random sample of public libraries a series of questions related to health programs and services they provided. One question asked respondents to state whether or not their libraries had during the past year offered "fitness classes (e.g., Zumba, Yoga, Tai Chi, other)." The survey found that approximately 22.7% of U.S. public libraries had offered some sort of fitness class (Bertot, Real, Lee, McDermott, & Jaeger, 2015, p. 62), with these types of programs most common in suburban libraries (33.9%) and least common in rural libraries (12.6%).

Another survey conducted in 2014 came to similar conclusions. The *Library Journal Programming Survey* asked a convenience sample of Library Journal subscribers working in public libraries to answer questions about yoga programs offered by their libraries. The survey found that 33% of respondents had offered yoga programs during the last twelve months (*Library Journal,* 2014). Of those public libraries that had offered yoga, 77% said they offered it for adults, 27% for teenagers, and 40% for children. Of these three surveys, only *Library Journal's* produced evidence on the impacts of movement-based programs: 23% of libraries with yoga programs said they had been very popular, 43% said popular, 28% said somewhat popular, and only 6% said not at all popular.

Case study research

The earliest research-based case study of movement-based programs in public libraries was conducted by two public librarians in the early 1990s. Public librarians in Connecticut collaborated with a local aerobics instructor to develop a series for

teenaged girls that included fitness classes. Interviews with the teenaged participants revealed that the fitness components of the program led to increased self-esteem and increased interest in regular physical activity (Quatrella & Blosveren, 1994). It is unclear if the program continued after the trial study. In any case, approximately 15 years later a group of librarians from the Louisiana State University Health Sciences Center launched a series of programs for youth in local public libraries that included exercise instruction (Woodson, Timm, & Jones, 2011). By tracking the participants in these programs, the authors determined that the programs were successful in that the children who participated had fun while learning about health and wellness.

More recently, three research-based case studies on movement-based programs in public libraries were published in 2015 and 2016. Health science librarians from Washington University in St. Louis, Missouri partnered with the local public library system to administer a community survey on health information needs. The survey found that "exercise" was the topic the public most wanted to see more of at the library (Engeszer et al., 2016, p. 64). In response, the partners developed a series of programs that included yoga, beginning exercise, and Zumba that was subsequently offered throughout the St. Louis Public Library system.

A similar study took place in the small town of Farmville, North Carolina, where the public library partnered with a nearby library and information science professor to develop programs and services that promote healthy lifestyles (Flaherty & Miller, 2016). The library loaned pedometers to patrons and the researcher interviewed those who participated. Participants reported liking the program and asked for more movement-based programs at the library. In response, the library organized a 5K race and a mile fun walk/run in Spring 2015, which has since become an annual library-sponsored program. Based on the success of these initiatives, the public librarian became the wellness coordinator for the town.

In Lethbridge, Alberta, public librarians collaborated with local and provincial partners to develop a "library of things" initiative that involved checking out supplies that could be used in physical activities (Cofell, Longair, & Weekes, 2015; Weekes & Longair, 2016). The librarians assessed the program by monitoring circulation trends and collect-

ing feedback from participants. They found that the circulating materials contributed to increasing physical literacy and physical activity among participants.

Collectively these studies show that diverse types of movement-based programs tend to be popular with public library patrons. Nonetheless, these case studies are based in particular places. Without analysis of libraries outside of those locations it is difficult to make generalizations about the impacts of these types of programs beyond the particular cases presented.

Short reports of programs authored by public librarians

In addition to the peer-reviewed research literature discussed above, short reports concerning programs in public libraries have been published outside peer-reviewed channels. These reports illustrate other types of movement-based programs offered in libraries. In addition to the types of programs discussed above, this literature reports on movement-based programs for early literacy (e.g. Music and Movement) (Dietzel-Glair, 2013; Kaplan, 2014; Prato, 2014), library-based community gardens (Peterson, 2017), dancing (Green, 2013; St. Louis Public Library, 2014), StoryWalks® (Maddigan & Bloos, 2013), outdoor activities like walking and bicycling (Hill, 2017; Richmond, 2012), and fitness challenges (Hanson, 2012). Furthermore, these reports illustrate that movement-based programs are being offered in public libraries in Canada (Maddigan & Bloos, 2013), the United Kingdom (Vincent, 2014), Romania (EIFL, 2016), Namibia (Hamwaalwa, Teasdale, McGuire, & Shuumbili, 2016), China (Zhu, 2017), and Singapore (National Library Board of Singapore, 2017).

A lack of evidence on the impacts of innovations in public library programs

One would perhaps expect that the growth of movement-based programs in public libraries would naturally lead to a growth of data collection on the spread and impacts of these programs. However, the continued lack of evidence based research on innovations in public library programs and services complicates matters. In a guest editorial to a special issue of *EBLIP* focused on public libraries, Ryan (2012) writes that

Despite this welcome inclusion in *EBLIP*, public librarian participation is notably low. This mirrors the grim reality of low public librarian research and publication rates,

as well as the small overall percentage of LIS research articles about public library practice. (p. 5)

In a recent follow-up to this special issue, Cole and Ryan (2016) note that "the current state of evidence based practice and research on, and to inform, public library practice lags significantly behind that of other library sectors" (p. 120). As a result of this state of affairs, there continues to be a great need for research both on how public libraries are innovating, as well as on the impacts of these innovations.

Within the U.S. public library profession, one means of enabling librarians to integrate evidence into their evolving practices has been the development of the Project Outcome toolkit. The U.S. Public Library Association's Project Outcome seeks to create standardized evaluation tools that public librarians can use to assess the impacts of their services and programs (Anthony, 2016; Oehlke, 2016). Nonetheless, despite this laudable goal there are significant gaps in the coverage of *Project Outcome*. In particular, the toolkit provides no means of assessing how libraries contribute to health and wellness. *Project Outcome* focuses on assessing what it calls "seven essential library service areas," including: "civic/community engagement, early childhood literacy, education/lifelong learning, summer reading, digital learning, economic development, and job skills" (Public Library Association, 2017, n.p.). Despite a plethora of studies showing that public libraries impact population health and wellness (e.g. Gillaspy, 2005; Morgan, Dupuis, Whiteman, D'Alonzo, & Cannuscio, 2017; Rubenstein, 2016), Project Outcome does not include any tools to assess these outcomes. As a result, more work is needed to understand how public libraries impact health as well as to prepare public librarians to incorporate evidence into this service area. According to public health scholars and policy-makers, regular physical activity is one of the best things for good health (Kohl et al., 2012). The researcher aimed to investigate the impacts of movement-based programs in public libraries to better understand the impacts of physical activity in public libraries.

AIMS AND METHODS
Study design
Since little was known about the general impacts of movement-based programs in public libraries an exploratory survey design was used to address the research questions:

Table 1: Example of Data Analysis[a]

Library	Early Literacy	Yoga	Tai Chi	Zumba	Dancing	Outdoor activities	StoryWalks	Gardening	Fitness challenges	Library of Things	Other	Average across all programs
Library 1	Exceeded expectations	Exceeded expectations	Exceeded expectations	Exceeded expectations		Exceeded expectations		Exceeded expectations				N/A
Library 2	Exceeded expectations	Exceeded expectations			Exceeded expectations	Met expectations		Met expectations				N/A
Library 3	Exceeded expectations	Exceeded expectations		Exceeded expectations							Fell below expectations	N/A
L1	3	3	3	3		3		3				3
L2	3	3			3	2		2				2.6
L3	3	3		3							1	2.5

[a]Based on three libraries' responses to the question "How would you characterize participation levels in programs?" (**see Appendix A**)

What impacts do movement-based programs in public libraries have? What variations exist between urban and rural libraries?

The focus on disentangling differences between urban and rural libraries relates to a continued divide between these two types of public libraries in the U.S., with entire professional associations focused around the concerns of these two groups (i.e. T*he Association for Rural& Small Libraries and the Urban Libraries Council).*

In any case, in creating the data collection instrument (Appendix A), the author looked to past surveys of public libraries (e.g. Bertot et al., 2015), as well as to past literature on movement-based programs. In addition, the survey was piloted with three public librarians, one each from Illinois, North Carolina, and New Brunswick. These librarians helped inform the language used in the final survey.

Data Collection
Public libraries throughout North American were invited to self-select for participation in the survey. The researcher hopes that in the future this self-selecting sample can be supplemented by a randomized sample of public libraries. Data collection was carried out via an online questionnaire using Qualtrics. The URL to the questionnaire was sent to public librarians in the U.S. and Canada through state and provincial library electronic mailing lists, as well as through announcements from state and provincial libraries to public libraries in their regions.

In addition, the survey was disseminated through national electronic mailing lists used by public librarians (e.g. PUBLIB) and on the project's website. Between February 14 and March 23, 2017 a self-selecting sample of 1,828 public librarians began the "Let's Move in Libraries Survey".

Data Analysis
Respondents were invited to complete as much or as little of the survey as they wished. After removing partial responses (n=570) and responses from libraries that had never offered any movement-based programs (n=101), a sample of 1,157 libraries remained for analysis.

The data were integrated with data from the Institute of Museum and Library Services FY 2014 Public Libraries Survey (IMLS, 2016) to sort the respondents into "urban," "suburban," "town," and "rural" libraries, as well as to sort the respondents by region. According to IMLS (2016) the major distinction between urban/suburban and town/rural libraries is that the former are libraries located within urban metropolitan areas and the latter are libraries located outside those metro areas. All Canadian respondents (n=62), as well as 49 U.S. respondents could not be integrated with the IMLS dataset. These 101 respondents were sorted by hand, using the methods of the IMLS, into these 4 geospatial divisions.

To transform the data in ways that would allow for quantitative comparisons between urban and rural libraries, the verbal options from which respondents selected

were translated into numbers. See **Table 1** below for an example of how this process was carried out. The number in the "average across all programs" column on the right side of the table illustrates how comparisons were made among libraries. For instance, in the example below Library 1 reported the most satisfaction with program participation. The fact that program participation "fell below expectations" in one of the movement-based programs offered at Library 3 led to its composite measure being lower. Similar techniques enabled comparisons among libraries in terms of the extent to which movement-based programs had brought new users into libraries, and the extent to which the media had reported on movement-based programs in libraries.

FINDINGS
Description of Sample
Figure 1 shows respondents' physical locations. Although respondents are located in many parts of North America, this self-selecting sample does not constitute a statistically representative sampling of all public libraries that offer movement-based programs. Nonetheless, as **Table 2** shows, the respondents do represent many types of communities, with a nearly even split between libraries located within urban metro areas (54%) and libraries located outside metro areas (46%).

Overall, respondents reported that their libraries had offered a wide variety of movement-based programs for a wide array of age groups. Yoga programs were the

Table 2: Survey Respondents by Type, Compared to U.S. Population of Public Libraries

	Location of respondents	U.S. library locations
Urban	18% (n=204)	17% (n=2779)
Suburban	36% (n=419)	26% (n=4369)
Town	28% (n=327)	20% (n=3298)
Rural	18% (n=207)	37% (n=6249)
All	100% (n=1157)	100% (n=16695)

(Bertot et al., 2015).

most commonly reported type of program, offered in 65% of the responding libraries (**Figure 2**), followed by movement-based early literacy programs (55%), gardening (41%), dancing (36%), and StoryWalks® (29%). Most of the more frequently offered types of movement-based programs were reported more frequently in urban and suburban libraries than in town and rural libraries. However, other programs, including StoryWalks®, "Other," Outdoor activities, Fitness challenges, and Library of Things initiatives were slightly more likely to be reported in town and rural than in urban and suburban libraries.

Respondents reported offering movement-based programs for all age groups. Among respondents, 73% had offered programs for Pre-K audiences, 52% for school-aged youth, 39% for tweens and teenagers, 65% for adults, and 42% for senior citizens.

In addition, 38% reported movement-based programs for all ages and 37% reported programs for families (**see Figure 3**). Urban and suburban libraries were more likely to have offered movement-based programs for all of the groups asked about except for "all ages" programs, which were slightly more common in town and rural libraries.

THE IMPACTS OF MOVEMENT-BASED PROGRAMS IN PUBLIC LIBRARIES

To understand the impacts these programs have had, this section first analyzes the different ways libraries have assessed their movement-based programs. It then analyzes the satisfaction of library staff with participation levels, before looking at to what extent programs have brought new users to libraries and to what extent programs have received attention from local media. This section concludes by analyz-

ing the outcomes to which these programs have contributed.

1. Assessment techniques

The principal technique libraries use to assess the impacts of movement-based programs has been to count the number of participants. Approximately 90% of respondents said that they use this method. The remaining 10% reported doing no assessment. Surveys and interviews were supplementary assessment techniques sometimes used by approximately 30% and 20% of respondents, respectively.

2. Participation Levels

Based on these assessment techniques, libraries generally reported satisfaction with how many people had participated in their movement-based programs. Based on the analytical techniques discussed above (see Methods), on average libraries reported participation levels that slightly exceeded their expectations. Respondents were asked for each type of movement-based program they had offered whether participation fell below (coded to "1"), met ("2"), or exceeded ("3") expectations. The average satisfaction level across all respondents was 2.2, with statistically significant differences between urban/suburban (M=2.240, SD=0.474) and town/rural (M=2.145, SD=0.481) libraries, conditions: t(1110)=3.3414 =, p=0.0009. In other words, although on average all libraries reported participation levels that slightly exceeded expectations, urban and suburban libraries were more likely than rural and town libraries to report participation levels meeting and exceeding expectations.

3. Users

The most consistently reported impact of movement-based programs was that these programs brought new users into libraries. For each type of movement-based program offered, respondents were asked whether the program had (coded to "2") or had not ("1") brought new users to their libraries. A significant number of respondents (n=183, or 16% of the sample) did not know the answer to this question. Nonetheless, among those libraries that did know, the vast majority reported new users coming to libraries because of their participation in movement-based programs. The overall average was 1.86. There was a significant difference between urban/suburban (M=1.904, SD=0.228) and town/rural (M=1.817,
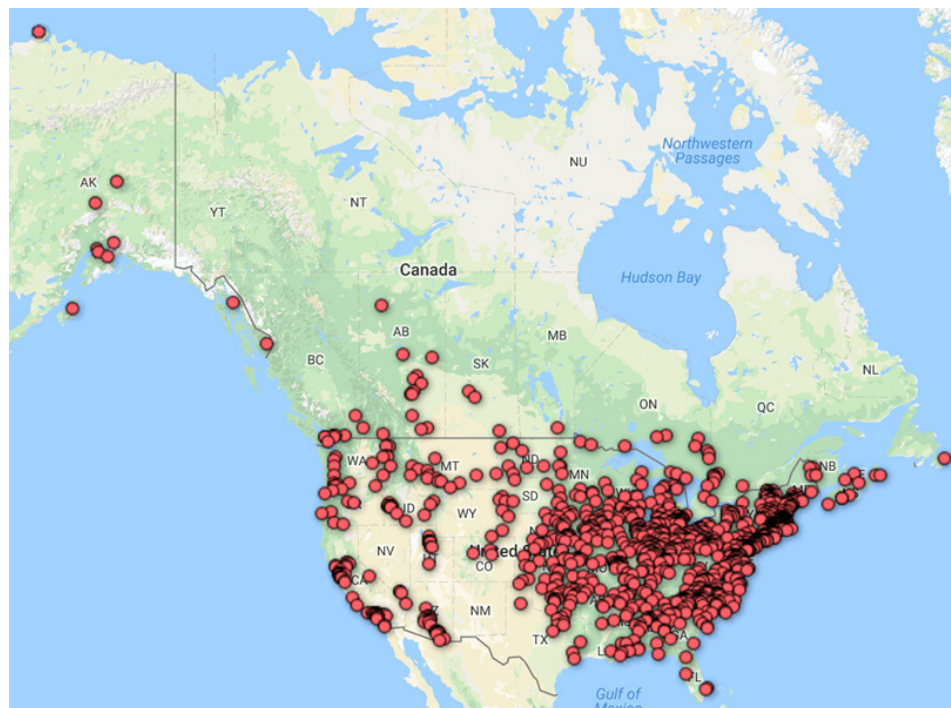

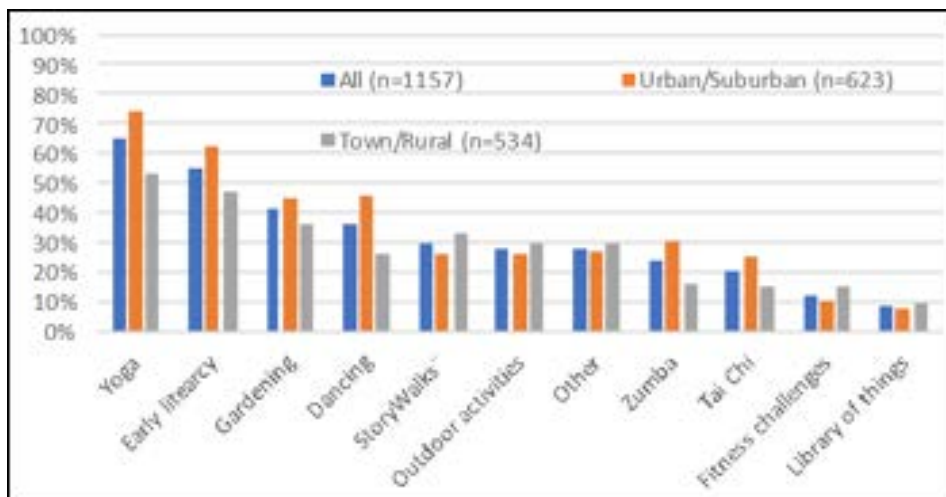*Figure 1: Visualization of where respondents are physically located in North America, n=1157.*

Figure 2: Percentage of respondents that have offered movement-based programs.

SD=0.317) libraries, conditions: t(972)=4.942 p=0.0001. In other words, the tendency for movement-based programs to bring new users to libraries was more accentuated in urban libraries.

4. Media
Even more respondents (n=242, or 21% of the sample) did not know whether or not the media had reported on their libraries' movement-based programs. Nonetheless, among those who did know the answer to this question, the composite average was 1.55 ("2"=Yes, "1"=No). Furthermore, there with a statistically significant difference between urban/suburban (M=1.505, SD=0.442) and town/rural (M=1.591, SD=0.446) libraries, conditions: t(912)=2.958, p=0.0032. In other words, movement-based programs tended to receive slightly more media coverage in more rural libraries.

5. Outcomes
Finally, respondents were asked, based on any feedback and evidence they may have collected, if their movement-based programs had contributed to health or wellness, community building, outreach, literacy, or other outcomes. Overall, only slight variation existed between urban/suburban and town/rural respondents (**see Figure 4**). Interestingly, the most commonly reported outcome was not health or wellness (76%), but rather community building (80%). In addition, over 50% of respondents said that at least one of their movement-based programs had contributed to outreach (52%) or to literacy (58%), suggesting that movement-based programs contribute to multiple outcomes in the public libraries that offer them.

The final measure of the impact of movement-based programs in public libraries comes from the answer to the question: Will libraries continue to provide these types of programs in the future? Nearly 95% of respondents (n=1094) said their libraries plan to continue offering movement-based programs.

DISCUSSION
Similar to the *Library Journal* survey (2014) that asked about yoga programs in U.S., this study found that movement-based programs have been offered for multiple age groups. There does not appear to be any one primary age group for these types of programs. Nevertheless, the high percentage of respondents that reported programs for Pre-K youth suggests that movement may be most integrated into library programs for this age group, an assertion bolstered by the many program development tools that discuss how to incorporate movement into programs for Pre-K audiences in public libraries (e.g. Dietzel-Glair, 2013; Kaplan, 2014; Prato, 2014). The extent to which movement has been integrated into library programs for other age groups is less clear. However, in at least some libraries it does appear that movement-based programs for diverse age groups has become a normal part of library programming.

In any case, the results from this survey also suggest that urban and suburban libraries may be offering slightly different types of programs than their rural and town counterparts. In particular, the survey found that programs that do not require the use of an indoor meeting space, or that take place outside the library (such as StoryWalks®, Outdoor activities, Library of things initiatives, and Fitness challenges) were offered more often in town and rural libraries than in urban and suburban libraries. On the other hand, the differences reported were slight. More research will be needed to determine if the types of movement-based programs offered in public libraries differ by the types of communities served.

The evidence on the impacts of movement-based programs adds to our understanding of how public libraries impact health and wellness. Past research has investigated how public libraries impact health through consumer health information services (e.g. Rubenstein, 2016), but has not focused directly on the question of how public libraries impact health by fostering active lifestyles. Being physically active throughout all stages of life is one of the most important things people can do to be healthy (Kohl et al., 2012). Better understanding the impacts of this emerging programming area could potentially
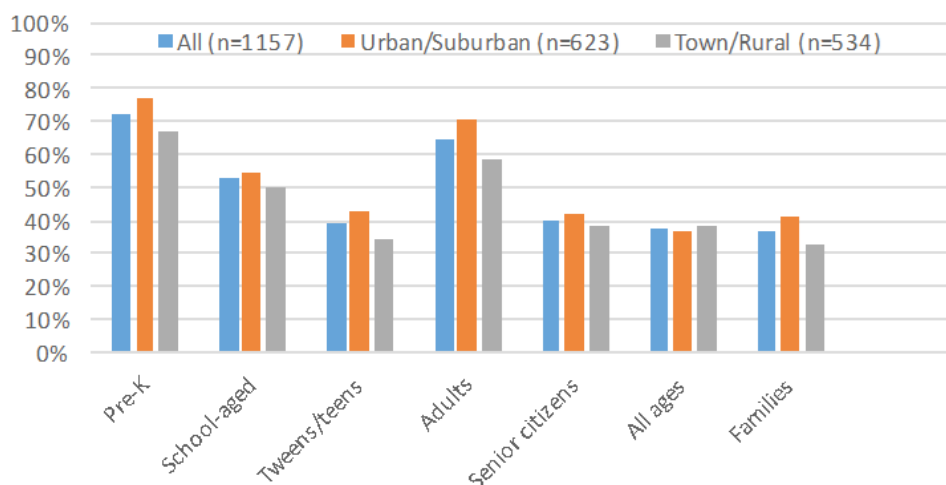

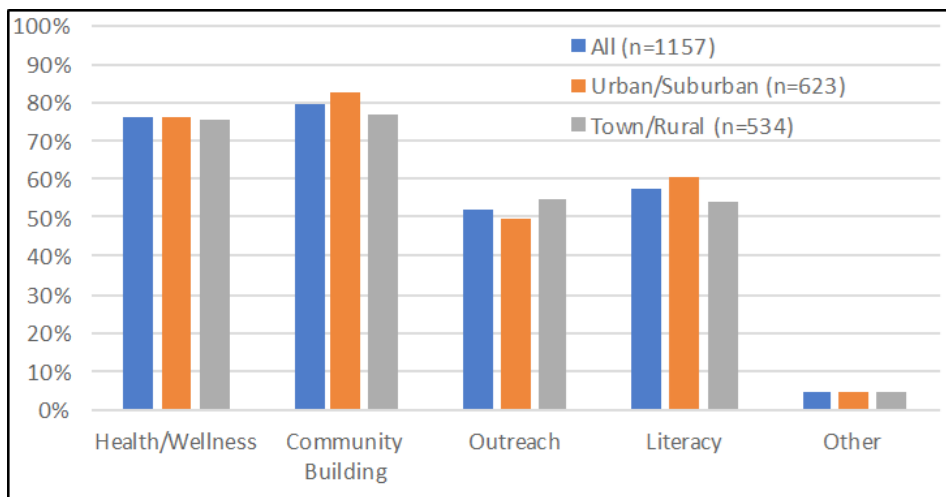*Figure 3: The audiences of movement-based programs in public libraries.*

Figure 4: Outcomes to which movement-based programs in public libraries contributed.

contribute to the development of tools to assess how public libraries impact health and wellness, which could potentially be included in the U.S.-based Project Outcome toolkit (Public Library Association, 2017), as well as in other assessment tools being developed elsewhere (Cole& Ryan, 2016). Although more research is needed, the findings from this exploratory study suggest that movement-based programs contribute both to health and wellness as well as to community building. Furthermore, the fact that so many libraries reported new users being brought to libraries because of these types of programs suggests that these programs also contribute to community engagement in libraries.

Limitations

The principal limitation of this work derives from its exploratory nature. Rather than survey a randomized sample of all public libraries in the U.S. and Canada, the researcher instead recruited a self-selecting sample of public libraries, relying primarily on state and provincial mediators to disseminate this survey to public librarians in their regions. Future work should more rigorously test and refine these exploratory results by using a randomized study design to

enhance our knowledge and understanding of how widespread these types of programs have become and what impacts these types of programs have.

Despite this limitation, this study shows that many public libraries throughout North America do offer a wide variety of movement-based programs and most plan to continue offering these programs. Based on these facts, more research is needed to understand why this programming area has emerged, how it works, and what impacts it is having. In addition to more quantitative data, we also need qualitative studies that look in depth at the evolution and impacts of movement-based programs as they have emerged and evolved in particular public libraries.

CONCLUSION

Past surveys of public libraries show that movement-based programs have been offered in 20-30% of U.S. public libraries (Bertot et al., 2015). Furthermore, case studies and journalistic reports show that movement-based programs also occur elsewhere. Nonetheless, despite this evidence little was known about the impacts these programs have had beyond the particular cases discusses in past case studies and reports. This

study added to this literature by reporting data from a self-selecting sample of 1,157 U.S. and Canadian public libraries that have offered movement-based programs. The most consistently reported impact of movement-based programs in libraries is that they bring new users into public libraries. Complicating assessment of the impacts of these programs is the fact that a majority of respondents did no assessment of their programs beyond counting the numbers of participants. The need for more research on this topic is great; this article has sought to provide needed evidence on this emerging programming area in order to support future conversations and studies. ■

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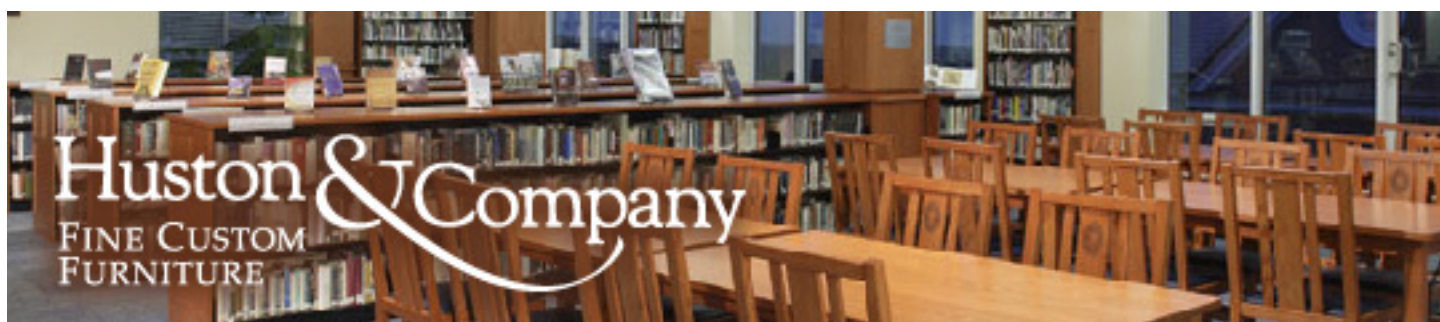
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Reference After 5 PM

» **A Reference Librarian's Experience Working Atypical Hours at a Large Research Library**

BY HAILLEY FARGO

INTRODUCTION

In 1876, Samuel Green cited four services reference provides: teaching patrons how to use the library and the library's resources, answering patron queries, recommending resources and information for the patron to access, and building community within the library (Tyckoson, 2012). While reference services have evolved over the years, Green's four services still ring true today. In an academic library, reference services are evolving and changing to meet the needs of today's students. We are redefining what a reference desk looks like and who staffs this desk. Part of this evolution also includes thinking strategically about when reference services are needed. We know students do not stop researching or using the library after 5:00 p.m. Because undergraduates fill their days with classes, extracurricular obligations, and jobs to support their education, sometimes library research does not begin until after dinner or on a rainy Sunday afternoon.

In my current position as a Reference and Instruction Librarian at the University Park Pattee and Paterno Libraries at the Pennsylvania State University, I see and meet many students who are conducting research in these off times. Because the library assumes students need evening reference support, my position was created to provide those services. My work week is Sunday through Thursday, from 1:00 p.m. to 10:00 p.m. After 5:00 p.m., I am the only librarian in the building. I see these hours as a way to gain a new perspective on the library and spend most of my time working closely with students and staff. During my first semester in this position (fall 2016), I see in-person reference alive and well. Students continue to have reference questions. Therefore, we should pivot our focus from wondering
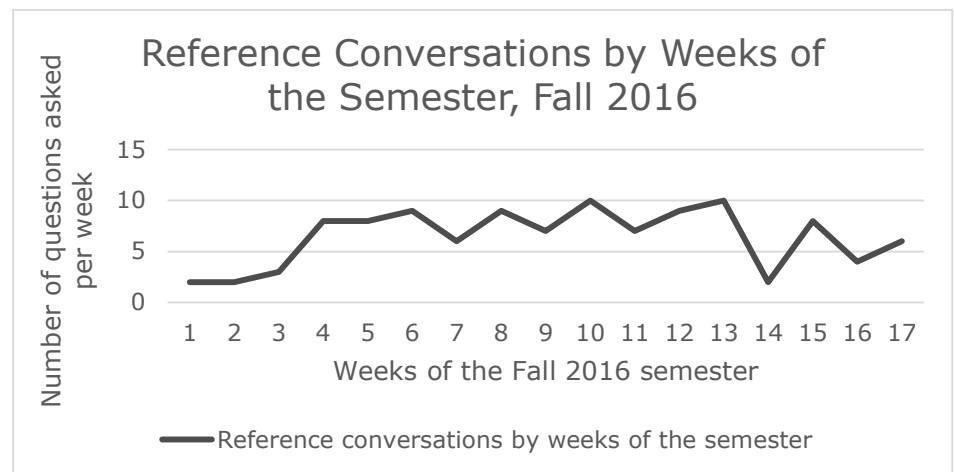

Figure 1: Number of reference conversations per week

if students still have questions to thinking critically about whether students feel comfortable approaching our desks to ask questions. We should also be confident that our employees at public service desks know how to ask a patron questions, find information, and when necessary, make referrals. My strategy during the first semester was to build relationships with library employees and undergraduate students. This successful strategy can be seen through the desk statistics and personal stories gathered along the way.

LITERATURE REVIEW

The status of reference services in academic libraries can be a hotly contested topic. Overall, academic librarians have seen a decrease in reference questions over the past several years. In a 2006 report, the Association of Research Libraries (ARL) reported a 48% decline in reference transactions between 1991 and 2005 (Kyrillidou & Young, 2006). This decline is supported by librarians' personal stories and library-specific statistics. For example, Scott Carlson went as far to predict that by 2012, refer-

ence desks will no longer exist in academic libraries (2007). As the demand for reference desks declined, Christy Stevens (2013) has pointed out that online reference questions, and platforms to answer these reference questions, has been on the rise since 2005.

Due to this decrease in face-to-face reference questions and a rise in more directional questions (e.g., Where is the restroom?), the trend in academic libraries is to move away from staffing these desks with librarians and use full-time staff or student employees instead (Coleman, Mallon, & Lo, 2016). This allows librarians to focus on other job responsibilities and/or perform reference in new ways, such as through a tiered system, roving reference, or online chat services (Dempsey, 2011). With librarians not working regularly at the reference desk, some libraries have transformed their reference desk into an information or service desk staffed by student employees or full-time staff. The employees at the desk provide directions, assist with basic reference questions, and make referrals when necessary. This tiered system can create some tensions, because full-time staff and

Length of Reference Conversation, Fall 2016

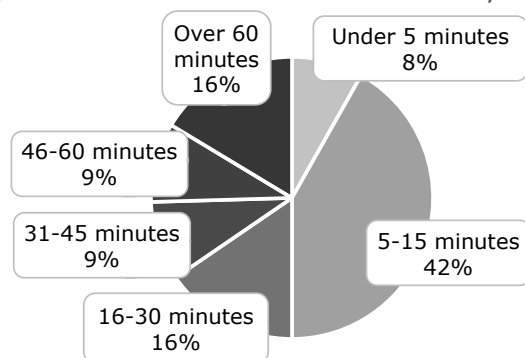| Category	Percent
Over 60 minutes	16%
Under 5 minutes	8%
46-60 minutes	9%
31-45 minutes	9%
16-30 minutes	16%
5-15 minutes	42%

Figure 2: Length of reference conversations

student employees require additional training to provide baseline reference support and must know how to refer questions when necessary. While some librarians fear there will be a decrease in the quality of service (Coleman, Mallon, & Lo, 2016), others feel keeping students at these information desks is a way to strengthen the students' research skills and allow librarians to focus on high-level tasks and reference questions (Brenza, Kowalsky, & Brush, 2015).

There does seem to be a gap in the literature when it comes to evaluating the success of evening or weekend reference. While some academic librarians can be assumed to work an evening or weekend reference shift once a week, there is no data to show how frequently this occurs or how many librarians work a shifted schedule similar to my own. I believe there is a difference between providing evening or weekend reference support once a week versus having a schedule based around the framework of providing that evening and weekend reference support daily. Research on reference during nonbusiness hours are often part of a study or short-term trial, such as Direct-2-U reference in residence halls at the University of Texas at San Antonio (Del Bosque & Chapman, 2007), late night online service from 9:00 p.m. to 1:00 a.m. at Notre Dame University (Kayongo & Jacob, 2011), or the University of Buffalo's providing onsite reference and instruction in department spaces (Wagner & Tysick, 2007). These three studies provide insight to confirm that reference services are needed both in the evening and in other non-library spaces.

Chad J. Pearson (2014) is one of the few who writes on his experiences with evening reference. He argues that the quality of evening reference is dependent on three variables: engaging with patrons in a way

that builds relationships, the ability of the librarian to be interdisciplinary when seeking information, and interpersonal communication. Based on my experience with evening reference, I believe Pearson has correctly identified the three variables to ensure quality reference during nonbusiness hours. However, I would like to expand Pearson's definition of interpersonal communication and building relationships to include not only patrons but other library departments and staff that are active during the evening hours. This collaboration between other library employees has allowed me to be successful in my position during my first semester at Penn State.

BUILDING A ROBUST EVENING REFERENCE SERVICE
Library Context
At the Pattee and Paterno Libraries at University Park, we use a tiered reference system. Patrons approach one of our 11 service desks throughout the building for help. These desks are located at the entrances, in subject libraries throughout the building, and at other high-traffic locations. Our desks are manned by full-time staff, student employees, and part-time staff. For this paper, I will use the term "library employee" or "employee" to represent our student and part-time staff. These employees are trained to answer directional questions, make room reservations for our group study rooms, take hourly count, and conduct baseline reference questions for known items (e.g., an article in a database or a book in our physical collection). Once the question becomes out of range for our student employees or part-time staff to handle, they can contact a librarian or full-time staff member who can assist the patron.

Ordinary patrons are unable to distin-

guish librarians from other library employees and full-time staff; to them, everyone at a desk is a librarian. Therefore, it becomes essential for our staff to know when to call for help and be confident a librarian will be around. With this framework in mind, I set out to build relationships with our library staff at our desks. Especially because my office was not in a visible place in the library, I needed the employees to know I was freely available and ready to help. My goal was to build relationships with our employees that would result in more employees referring students to me for reference help.

Building Relationships
To build relationships, my coworker (who also works a similar schedule) and I would make rounds throughout the evening and on Sundays. We stopped at each desk to check in with our employees, who were often students. Usually after this check-in, conversation moved towards the student employee's academic and personal life. These conversations became a way to get to know the students and gain valuable insight into what it was like to be both a student and a library employee. As I learned about the student, I was also able to tell them about myself and relate to their undergraduate experience. The student employees had questions about my graduate school experience and what it meant for me to be a librarian. As Pearson (2014) states, "any personal anecdote from the librarian or connection with the personal experiences of the customer can serve to enhance the bond between them" (p. 178). Once the student employees opened up, they told me more about the reference questions they had received at the desk. This allowed me to see what the employees knew and did not know about the library databases and resources and how students think about finding information.

Visibility and accessibility were two key factors in building relationships with our student employees. Because my coworker and I made rounds on a daily basis, our employees came to expect us and call on us more quickly when they needed help. I also had a work cell phone, so I could essentially roam the library and upon receiving a call, come directly to the student needing help instead of making them find me. Being so accessible was also helpful in building relationships with patrons in the library. Many were not expecting a librarian to work so late and appreciated my availability and
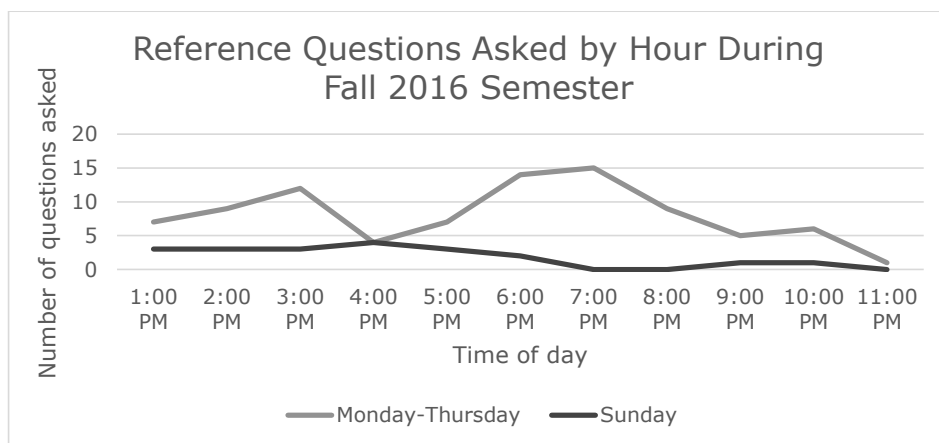
Figure 3: Reference questions asked by hour of the day. Note: one 8 a.m. question was removed

flexibility to help them.

When I did receive a referral from one of our student workers, I made sure to return to the desk to let the employee know they made the right call. This technique strengthened our relationship and also built trust between the employee and me. In the future, the employee knew they could call on me for help. This idea is supported by others, including Carolyn Radcliff (1998) who found at Kent State that "when the librarian responded positively to a referral or consultation, the staff member was more likely to continue making referrals" (p. 63). Additionally, we can view this relationship building as building a brand and cultivating deep customer (student employee) loyalty (Pearson, 2014). The more I developed relationships and communicated the positive results of a referral, the more likely staff were to make another referral or ask for help in the future.

Over time, I expanded my relationships beyond the service desks to library departments and employees who worked a similar afternoon and evening shift. Two of these departments were our Welcome Desks (greeters at every library entrance who received a wide range of questions, some reference) and our Lending Department (where reference questions are sometimes asked). Similar to how I built relationships with our service desks, attending staff meetings, doing regular check-ins, and having a visible presence helped to strengthen these partnerships. Small conversations at the desk eventually turned into big discussions about how to bolster communication and teamwork between the various departments in order to provide the most consistent and cohesive customer service to the library patrons.

Finally, I built relationships with the students who were referred to me. In a successful reference conversation, a librarian should ask questions to assess the information need and work with the students to find that information (even if the students did not know what they needed when they started). I did my best to help the students find the information they were looking for and make referrals to other subject librarians when necessary. Because of my evening hours, I had the time to really dig into the question and spend more than five minutes helping a student locate some resources. Several students emailed me later in the fall semester to ask for more help; they had a positive interaction the first time and now, for a new research project, wanted to start with my help.

Interpersonal Communication

Similar to building relationships, interpersonal communication is about understanding what someone else needs. This understanding applies to both library employees and library patrons. Pearson (2014) discusses "the relaxed atmosphere of the night shift allows the librarian to take things slowly, engaging in a deeper level of the reference interview…" (p. 176). I agree with Pearson; after 5:00 p.m., my meetings with other faculty and staff are over and there is a level of unpredictability to what might happen in the library on a given night. My open schedule affords me the opportunity to devote as much time as needed to help students.

Teamwork is essential when working with library employees and library patrons, and it is necessary to communicate changes and new information while working together to solve problems. Every day that I came into work, I let our desks know I was available to help through the chat service

we use to communicate. If I had to leave early or was about to teach a class, I also let the desks know, so they would know when I would and would not be available. As I learned more about the reference questions our employees were receiving at the desk, I found ways to embed training or widely communicate information either about a database or finding a certain item in our search systems (e.g., a print copy of National Geographic). One of the most effective ways I embedded this training was through a bi-weekly newsletter that included "Hailley's Helpful Hints" with a reference trick or explanation of using a library resource.

I also employed teamwork when working with patrons on a reference question. When a patron and I went to my office to look for information, I made sure my computer monitor was turned towards them so they too could see the search results on their topic. Also, I had a wireless mouse that I would turn over to the patron at the start of every reference conversation. This was my way of saying I trusted the patron to do this search and I wanted them to take control over the results. I was signaling that this is their research and I was there to be a guide and support them in the process.

Interdisciplinary Methods

Pearson (2014) believes that being interdisciplinary is "the key to creative and effective library service" (p. 177). Being interdisciplinary is more than just being able to answer questions in a wide variety of disciplines; it also includes the ability to use different reference strategies that are personalized towards the student. This was definitely a skill I felt I continued to improve upon as the semester progressed and I became more comfortable in my position.

One of the strategies I developed was finding ways to assess the student's research need as quickly as possible. This strategy usually included asking questions about the due date and how soon the student needed resources. Knowing up front which students were doing assignments at the last minute allowed me to spend time effectively and look only for immediately available resources. For students who came to the library early for a project, I could recommend resources beyond those immediately available, such as a book from another Penn State campus or article we would have to loan from another library. Also, for lengthy research questions, I could make a referral to a subject librarian who

could provide even more in-depth support to the student.

As I became more comfortable with Penn State Libraries' resources, I was able to discover more ways to find information when an initial search turned up empty. Over time, I found a rhythm and strategy that worked well for many of the questions students asked. However, I was also able to think of alternate solutions when the student's question did not fit into a thematic area I had answered before. During these conversations, I explored how far a teaching moment could go with more time for the reference interaction. This interaction became really interesting when students were researching topics that had not been widely written about or when an initial search yielded no useful results. These experiences opened up a conversation on information literacy that was easy to understand and relatable. In these moments, I felt I was building meaningful relationships that helped our students find the desired information.

REFERENCE RESULTS

At the Penn State Libraries, we record our various interactions with patrons in Desk Tracker, which is a service provided through Compendium Library Services. It is a web-based platform that is customizable for libraries to track the data they need (Compendium Library Services, n.d.). Every time I completed a reference conversation, I recorded the interaction in Desk Tracker. At the end of the semester, I pulled the data from Desk Tracker and analyzed it to see how the semester had gone. The important pieces of information I hoped to collect were length of conversation, time of day, and a brief summary, which I compiled into a separate document. When analyzing the data, I looked for trends in when questions were asked most frequently during the semester, how long reference conversations lasted, the time of day I was receiving ques-
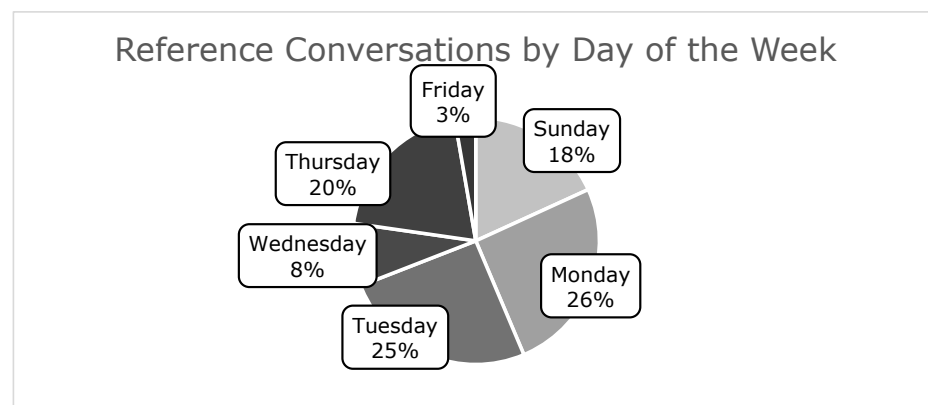

Figure 4: Reference conversations during the fall 2016 semester by day of the week

tions, and which days of the week were the busiest for reference.

During the fall 2016 semester, I had 110 reference conversations. When averaged over the 17-week semester, I fielded about 6.5 reference questions per week. Among those 110 conversations, six students returned to me at least one more time after our initial conversation. Additionally, five of those students worked as student employees in our library. **Figure 1** shows the numbers of questions asked during the 17 weeks of the semester. **Figure 1** shows a slow rise during the first three weeks of the semester. Students are still settling into classes and do not have any research assignments yet. Between weeks 4 and 13, we see a somewhat steady pattern of questions, 6-10 per week. In week 14, Thanksgiving Break, we see a sharp decrease, since the students had left for break and most projects were due before Thanksgiving. Finally, we see a rise for the final weeks of the semester. Even in the final week, I still received six reference questions.

I was also curious not only about the number of reference questions, but how long they lasted (**Figure 2**). From the 110 interactions, 40% of these conversations were 5-15 minutes. The questions lasting this length of time were often about citations, finding books in our catalog, or get-

ting started on some keyword searches. If a conversation lasted longer than 15 minutes, it was likely to fall between 16 and 30 minutes (16%) or over 60 minutes (16%). These questions required some more in-depth searching and often multiple searches in multiple places to find useful information. The high percentage of reference conversations lasting over 60 minutes was likely due to me spending as much time as the patron needed to feel like they were making progress on their research.

Desk Tracker also captures the time the entry was completed. I usually logged my question immediately after the reference conversation. If I was unable to log the question right away, Desk Tracker's custom timestamp feature allowed me to accurately reflect when the interaction occurred. **Figure 3** shows the time of day reference questions were asked. The graph pulls out Sunday questions to show the difference between weekend and weekday reference. Friday and Saturday are not included in this chart, since I do not provide reference services on those days.

On Sundays, **Figure 3** shows that reference questions are more likely to be asked from 1:00 p.m. to 4:00 p.m. During the week, 3:00 p.m. seems busy, but more reference questions are asked between 6:00 p.m. and

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8:00 p.m. Even 9:00 p.m. and 10:00 p.m. are busy, strengthening my claim that reference does happen frequently outside standard business hours. Students use the library on Sunday afternoons and in the evening during the week. Because I am available during those times, I am able to support students at their point of need.

Finally, I examined the data for the day of the week reference questions were asked. **Figure 4** shows which days of the week were the busiest for me.

Mondays and Tuesdays were busiest, accounting for around 50% of the questions I answered during the fall semester. Thursdays and Sundays were also busier times, and Wednesday is the slowest day of my work week. **Figure 4** also shows three reference questions on Fridays. While my normal schedule does not include Fridays, I did work a handful of them throughout the semester.

CONCLUSION & NEXT STEPS

Evening and weekend reference was an excellent way for me to learn more about the institution, the employees of the library, our student population, and the ways our students use the library. By building relationships with our library employees and other library departments, I was able to assess their skill sets, allowing me to plan for future referrals and increased staff training on baseline reference services. These relationships enabled me to push for a required spring training for our employees, which included an information literacy session on our library's major systems for finding library resources, and schedule meetings with other departments to brainstorm ways we could work together and ways I could help them answer students' reference questions. Especially after the spring training, I saw increased confidence among our staff in their ability to use library resources. Our student employees often tell me their success stories and continue to be willing to call me for help when they get stumped with a patron question.

The data collected during the fall 2016 semester was quantitative combined with personal reflections I wrote down after the interaction. While the date, time of day, and length of question were important factors, so too was tracking the types of questions students were asking and other information I learned about the student's information-seeking habits. This mixed method of data allowed me to speak with my colleagues about the work I was doing and inform them of the types of students I interacted with. The types of questions students asked informed potential training questions for our employees, since I felt it was crucial for them to practice reference with actual queries asked at our desks.

As noted in the literature review, there is a gap in the research on evening reference and its impact on student success. The data collected in the fall 2016 semester shows there is something to say on this topic and we should expand the field of knowledge. However, in order to more fully assess the impact of providing evening reference services, I want to collect student responses to their experience of our reference conversation, ask questions about their library use and how they arrived at our desks, and find ways to assess the long-term success of students receiving individual reference support. Another assessment method I am interested in exploring is Wisconsin-Ohio Reference Evaluation project, which has been used by the Penn State University Libraries in the early 2000s in two areas of the library (Novotny & Rimland, 2007; Paster, Fescemyer, Henry, Hughes, & Smith, 2006).

Pearson (2014) says "the image of a librarian as friend, mentor, and information provider creates a powerful positive symbol for customers" (p. 178). Working atypical hours has given me the opportunity to assume those identities in a meaningful way. There are more questions to be answered, and I hope the relationships I built will continue to grow and provide more referrals, training opportunities, and reference success. ∎

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On Your Mark, Get Set, Go!

» Learn More About Using Games in Library Instruction

BY REBECCA ENGSBERG

In October 2016, the Georgia Library Association's (GLA) Reference and Instructional Services Interest Group (RISIG) sponsored a panel presentation at GaCOMO 2016 about using games in library instruction. The conference program description of "Let's Play: Library Instruction" stated that "[b]y tapping into curiosity, creativity, and a sprinkling of competitiveness, instruction through games can be engaging, exciting, and energizing."

As the first presenter (from Mercer University, a mid-sized private school with about 8,600 students), I offered the audience a brief explanation of the potentially confusing buzzwords of 'gamification' and 'game-based instruction' (see my presentation slides at **http://www.slideshare. net/gacomo/lets-playlibrary-instruction**). The next presenter, Jean Cook (from the somewhat larger, public University of West Georgia with about 10,700 students) explained and demonstrated some non-digital games that she had used effectively in a classroom setting. The final presenters, Karen Doster-Greenleaf and Amy Stalker (both from Georgia State University, a much larger public institution with about 32,000 students) discussed their experiences using digital games in library instruction.

Although the panel consisted of four presenters from academic libraries in Georgia, the presentation topic is not limited to just one kind of library. In fact, every kind of library—including public and school libraries—may benefit from librarians using games in library instruction. You don't need to reinvent the wheel, either. You can draw inspiration from what other librarians have done.

Building on the GaCOMO presentation, this brief article offers some additional resources related to using games in library instruction. Whether you're just getting started, or you want to enhance how you already use games to instruct, the selective annotated bibliography of online resources as well as the selective bibliography of additional print resources could be helpful tools for you.

My rationale for the selective annotated bibliography of online resources was to identify a number of online resources that were easy to access from an individual's office computer. I provided annotations of these ten resources so that individuals could more easily choose to explore resources of interest. My rationale for the selective bibliography was to identify additional resources (in this case, fourteen) that were not necessarily online, should individuals choose to further explore the topic.

SELECTIVE ANNOTATED BIBLIOGRAPHY OF ONLINE RESOURCES

Angell, Katelyn, and Eamon Tewell. 2015. "Measuring Our Information Literacy Footprint: Assessing Game-Based Learning in Library Instruction." In *Creating Sustainable Community, ACRL 2015,* March 25–28, 2015, Portland, Oregon, Conference Proceedings, edited by Dawn M. Mueller, 516–521. Chicago: Association of College & Research Libraries—a division of the American Library Association. **http://www.ala.org/acrl/sites/ ala.org.acrl/files/content/conferences/ confsandpreconfs/2015/Angell_Tewell.pdf**.

In this online resource, the authors explore the assessment of games in information literacy library instruction. Following a standard research paper format, they first introduce their topic and offer an overview of the relevant literature. Then they describe their own study, including methods and data collection, followed by a results and discussion section. The authors conclude with their hope that their study will encourage additional research on game-based learning.

Burkhardt, Andy. 2014. "Taking Games in Libraries Seriously." *The Academic Commons.* **http://www.academiccommons. org/2014/07/24/taking-games-in-libraries- seriously/**

Although the author begins by addressing the collecting of games by libraries, a later section titled "Games in Library Instruction" is useful for librarians who instruct. In addition to describing orientation games, the author also discusses games developed by librarians that focus on information literacy competencies as well as more in-depth research skills.

Hofer, Amy. 2013. "Giving Games the Old College Try." *In the Library with the Lead Pipe.* **http://www.inthelibrarywiththeleadpipe. org/2013/giving-games-the-old-college-try/**

In this article from an open access, open peer reviewed journal, the author describes her experience using two different games in a forcredit online information literacy course. She defines games as "activities that

> **The author of this peer-reviewed journal article shares her experiences with developing a brainstorming card game to help librarians create games for information literacy and library instruction, as well as a game about evaluating sources designed to be played in a library instruction session. Smale also expands upon a major benefit of using games in academic libraries—increasing student engagement through active learning.**

are designed as games from the beginning (not retrofitted with "gamification" components), are played online, and create interactive user experiences."

"Incorporating Games in Instruction." 2016. *The Game Making Interest Group of the Library and Information Technology Association (LITA) division of the American Library Association (ALA).* https://gamemakinginterestgroup.wikispaces.com/incorporating+games+in+instruction

This Wikispaces Classroom website offers a useful starting point for librarians who are interested in learning more about (and using) games in library instruction. The website provides links to actual game elements to incorporate, and at different levels—from simple to moderate to advanced difficulty. The website also includes sections titled Best Practices, Library Game Examples, and Suggested Readings (links to these sections are on the right side of the screen).

Isaacs, Steven. 2015. "The Difference between Gamification and Game-Based Learning." *ACSD Inservice* (blog), January 15. http://inservice.ascd.org/the-difference-between-gamification-and-game-based-learning/

This blog post attempts to clear up misconceptions regarding the frequently used buzzwords of 'gamification' and 'game-based learning.' The author's perspective is based on his experience as a middle school teacher, so he understandably often refers to the traditional school classroom. Nevertheless, this site is very helpful—regardless of instruction context—in understanding the differences between the two concepts. Isaacs ends his post with an effective, easy-to-understand infographic that visually portrays the differences between 'gamification' and 'game-based learning.'

McDevitt, Theresa. 2016. "Games and Activities for Energizing Library Instruction." *Indiana University of Pennsylvania Library / LibGuides.* http://libraryguides.lib.iup.edu/c.

php?g=60507

This guide contains links and bibliographic information for resources to help instructors energize library and information literacy instruction with games and activities. All of the guide's content is accessible from the first and only page of the guide, so it is easy to use. That page contains seven boxes, including boxes with links to and descriptions of online games, a selective bibliography of resources, citation Information and activities links, links to blogs and other web resources, and links to online searching instruction activities.

Miller, Willie. 2013. "Gaming the Library: Using Game-Based Learning in Libraries." *Information Today Europe,* November 15. http://www.infotoday.eu/Articles/Editorial/Featured-Articles/Gaming-the-library-using-gamebased-learning-in-libraries-93307.aspx

The author shares his experience with digital game-based learning in this online article. He describes his collaboration with diverse colleagues to develop a new game

directed at informing users about the resources, services, and processes of the library. The resulting game is quite complex and took over a year to plan. In the article's concluding section, entitled "Lessons Learned," Miller addresses what could be improved for future iterations of the game.

Smale, Maura. 2015. "Play a Game, Make a Game: Getting Creative with Professional Development for Library Instruction." *The Journal of Creative Library Practice,* May 18. http://creativelibrarypractice.org/2015/05/18/play-a-game-make-a-game/

The author of this peer-reviewed journal article shares her experiences with developing a brainstorming card game to help librarians create games for information literacy and library instruction, as well as a game about evaluating sources designed to be played in a library instruction session. Smale also expands upon a major benefit of using games in academic libraries—increasing student engagement through active learning. Readers of this article could gain information helpful in creating their own game, or adapting an existing game for their own use, regardless of audience or educational setting.

Smale, Maura. 2011. "Learning Through Quests and Contests: Games in Information Literacy Instruction." *Journal of Library Innovation,* Vol 2 (2): 36–55. https://sites.google.com/site/journaloflibraryinnovation/vol-2-no-2-2011

This earlier article by the same author as the preceding one provides an overview of using games in library instruction. The author first discusses research in game-based learning before addressing information literacy games. After Smale briefly discusses commercially-produced digital games, she writes in greater detail about digital information literacy games used in eight academic libraries. In addition, the author addresses non-digital information literacy games used in seven academic
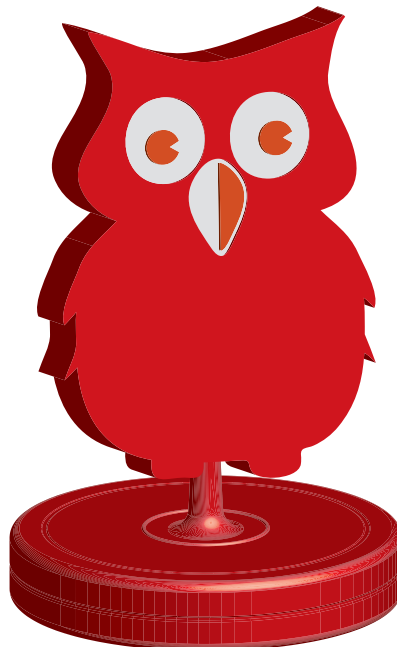
institutions. Then Smale enumerates game principles for information literacy instruction and identifies potential barriers to games-based learning.

Sugarman, Tammy, and Guy Leach. 2005. "Play to Win! Using Games in Library Instruction to Enhance Student Learning" *University Library Faculty Publications.* Paper 38. http://scholarworks.gsu.edu/univ_lib_facpub/38

This article explains the positive impact on students of using games, as well as the benefit to librarians of incorporating games into instruction. The authors identify a gap in the literature (at least in the decade preceding the article) of any articles that describe the use of games in single occasion library instruction sessions. However, the authors offer a thorough review of the studies through 2004 that have been reported. ■

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» **This article explains the positive impact on students of using games, as well as the benefit to librarians of incorporating games into instruction. The authors identify a gap in the literature (at least in the decade preceding the article) of any articles that describe the use of games in single occasion library instruction sessions. However, the authors offer a thorough review of the studies through 2004 that have been reported.**

Getting Real in the Library

» **A Case Study at the University of Florida**

BY SAMUEL R. PUTNAM AND SARA RUSSELL GONZALEZ

INTRODUCTION

In order to be fully prepared to enter the workforce or graduate school, students need the opportunity to explore new technology and develop new proficiencies. Through the development of makerspaces, technology workshops and lending collections, libraries are positioning themselves on academic campuses as collaborative learning environments where students can experience emerging technologies and gain valuable expertise.

MADE@UF (Mobile Application Development Environment) is a digital makerspace for students at the University of Florida to develop and test mobile and virtual reality and augmented reality (VR/AR) applications. With two locations, in Marston Science Library and the Infinity Residence Hall, it was originally designed to solely focus on mobile app development; however, in response to the emergence of VR/AR technology and the demand of our stakeholders, MADE@UF has pivoted to focus primarily on providing a space for VR/AR development.

BACKGROUND

MADE@UF was originally conceived in 2013 as a sandbox for mobile application development by Anne Allen in the University of Florida's (UF) Academic Technology unit. Allen had funding for technology through the UF technology fees, which are assessed to each student, but lacked a space to install MADE@UF. In 2014, Marston Science Library (MSL) completed a full renovation of its ground floor including the repurposing of a large classroom. Originally contemplated as a physical makerspace, plans for the room changed when Allen approached the library with the proposal to use the space for MADE@UF instead. This new lab's emphasis on emerging technology fit with the science

Figure 1: Collaboration pods in Made@UF.

library's objective of encouraging collaboration in its predominantly engineering and science student population.

The original design of the space was a mixture of 3 collaboration pods and 5 individual workstations each with a Mac mini. The collaboration pods accommodate 5-7 users and the large-scale monitor is connected with a Crestron unit that allows users to change inputs between the Mac Mini or mirroring over wifi their own laptop screens.

The Mac Minis were selected because early focus groups of students, faculty and alumni indicated that most students would want to develop iOS applications and an Apple computer is required for iOS development. Software installed included Eclipse ADT, Xcode, Android Studio, Brackets, and SeaMonkey. We made the decision early in MADE@UF's development not to include Microsoft Office or other productivity software in an attempt to preserve the sandbox

nature of the space and discourage general homework activity; this was not viewed as unduly hindering student work as there are another 90 workstations on the same floor outside of MADE@UF with the full range of software available to students.

To support iOS development, we also joined the Apple iOS Developer University program (**https://developer.apple.com/ programs/ios/university/**). This free program, open to degree-granting higher education institutions, permits students to begin developing in iOS without first paying the required $100 developer fee. We felt this was important because one of MADE@UF's major objectives was to encourage students who are new to app development and to eliminate barriers such as the initial developer fee. However, enrolling in this program also required the library to mandate that users would first sign a user agreement stipulating that students would comply with Apple's terms and conditions as well

as general use policies. The logistics of this agreement also meant that only students could use MADE@UF because there was not a way to restrict software usage to different types of patrons, such as faculty, staff, and community patrons.

Along with the software development resources, students could also check out boxes of tablets of varying sizes and manufacturers to test their apps throughout the development process. These boxes could be checked out at the service desk on the main floor for 4 hours and contained an iPad 2, iPad mini, Android Nexus tablet, and an iPod Touch as a proxy for an iPhone. One of the first challenges was how to facilitate students wiping the memory and resetting each of the devices before returning the device box. One of the individual workstations was set aside for this need, unfortunately removing a workstation from general student usage. Detailed instructions for resetting the devices was provided next to the station and it was the responsibility of the student to reset all devices before returning the box to circulation.

After MADE@UF in MSL was opened, the library was approached by Housing IT to query if we would like to partner with them on opening a second MADE@UF in a new residence hall being constructed a few blocks off campus. This new hall targeted students focused on entrepreneurship and included a ground floor with resources that students might need to bring a new invention or company to fruition. These services included a fabrication lab, graphics design studio, and start-up incubator; MADE@UF was seen as an ideal complement to support students developing digital projects.

Using the same UF technology fee support, the new MADE@UF at Infinity was opened in 2015 with similar setup and technology as MSL's location. This was a deliberate attempt to keep the 2 spaces uniform so that students could move between either location easily. Although Infinity is approximately a 10-minute walk off campus, it does have the advantage of being open 24 hours a day, 7 days a week. The hall's lobby staff monitor usage in the space, checkout technology, and disseminate room keys to the students.

EARLY STAGES

Activity early on was aimed at raising awareness of the space and encouraging students to begin app development. UF Information Technology (UFIT) agreed to provide an experienced undergraduate to staff MSL's MADE@UF for 3 hours a day, Monday through Friday. The student was familiar with iOS development and also could triage problems with the workstations. We quickly discovered that students rarely sought assistance; although, it was unclear if it was because they were already comfortable with the software or if they were doing work other than app development. After 2 semesters, UFIT decided to discontinue the daily staffing and provide help as needed.

Marketing of MADE@UF was done mainly through events where we were allowed to set up tables and discuss MADE@UF with participants as well as presentations across campus. These events included new student orientations, the campus-wide IT showcase, and department presentations to faculty. In addition to a handout explaining the basic concept of MADE@UF, students received a Google Cardboard kit, a do-it-yourself cardboard viewer that couple with a smartphone to create a VR headset, along with instructions on how to assemble it and links to available apps to try. Also, MADE@UF obtained an Oculus Rift DK2 that was used for hands-on demonstrations; this invariably led to long lines of students excited to try out the new technology. Even though students were impressed by the Rift, they often seemed reluctant to use MADE@UF due to a lack of programming experience.

Part of the preliminary development of the MADE@UF concept was recognizing the need for basic-level tutorials and instruction to encourage students to explore building apps. Part of the initial funds were earmarked to a computer science professor who agreed to create an online course leading beginners through development using Phonegap, a cross-platform app builder. Unfortunately, the professor did not follow through on finishing the online course so workshop activity changed to locating in-person instructors who would teach hands-on classes. It proved challenging to find speakers and instructors capable of leading workshops without a budget to compensate presenters and we did not have library staff with enough programming expertise to teach. We did invite a local app development company to speak about their work and later held a 3-part series designed to start students developing Android apps. Infinity's MADE@UF had the advantage of an in-house coding school that held classes adjacent to their space. Otherwise, students were encouraged to take advantage of UF's Lynda.com subscription that contains numerous programming tutorials covering both iOS and Android development. All workshops that were held in MADE@UF were heavily attended, highlighting that the demand existed.

TRANSITION

Shortly after MADE@UF opened, we decided to expand app development to include wearable technology. Smartwatches were discussed, such as the Android-based Pebble watch, but staff settled on introducing Google Glass and Epson Moverio, a headset aimed at business. The Glasses were challenging for IT to support because they required network access, necessitating either tethering to a phone or directly connecting to the campus wireless network. Since the Glasses could not connect to the campus network due to its authentication protocols, a separate hidden wireless network was installed in the MSL location exclusively for using the Glasses. These proved to generate the most excitement for MADE@UF at the beginning because most people had never seen or tried on a pair and were highly curious about the interface. However, after examining the circulation statistics for the Glasses and Moverios, we realized that MADE@UF served as a showcase to try out new equipment rather than its original purpose as a development lab.

The Google Glasses led directly to purchasing the Oculus Rift Development Kit 2, a virtual reality headset, as well as the Microsoft Hololens, a mixed reality headset. Issues with the Oculus Rift Development Kit 2 began when Oculus dropped support of the Rifts on Macs. Considering Made@UF was an all-Mac lab at the time, this effectively ended our VR circulation program. However, we utilized another UF technology fee to purchase Windows computers in conjunction with Oculus release of their new VR headset. Oculus was chosen over the HTC Vive partially due to the Rift's minimal space requirements (HTC Vive requires a 6.5 feet by 5 feet of empty space with a minimum 16 feet between base stations). Additionally, these VR-capable Windows computers present a barrier for adoption because several libraries can afford the cost of an Oculus Rift or HTC Vive but not the computer that is required to run VR games and experiences. While most newer machines will meet the minimum requirements for CPU, RAM, and ports, few off-the-shelf builds will contain
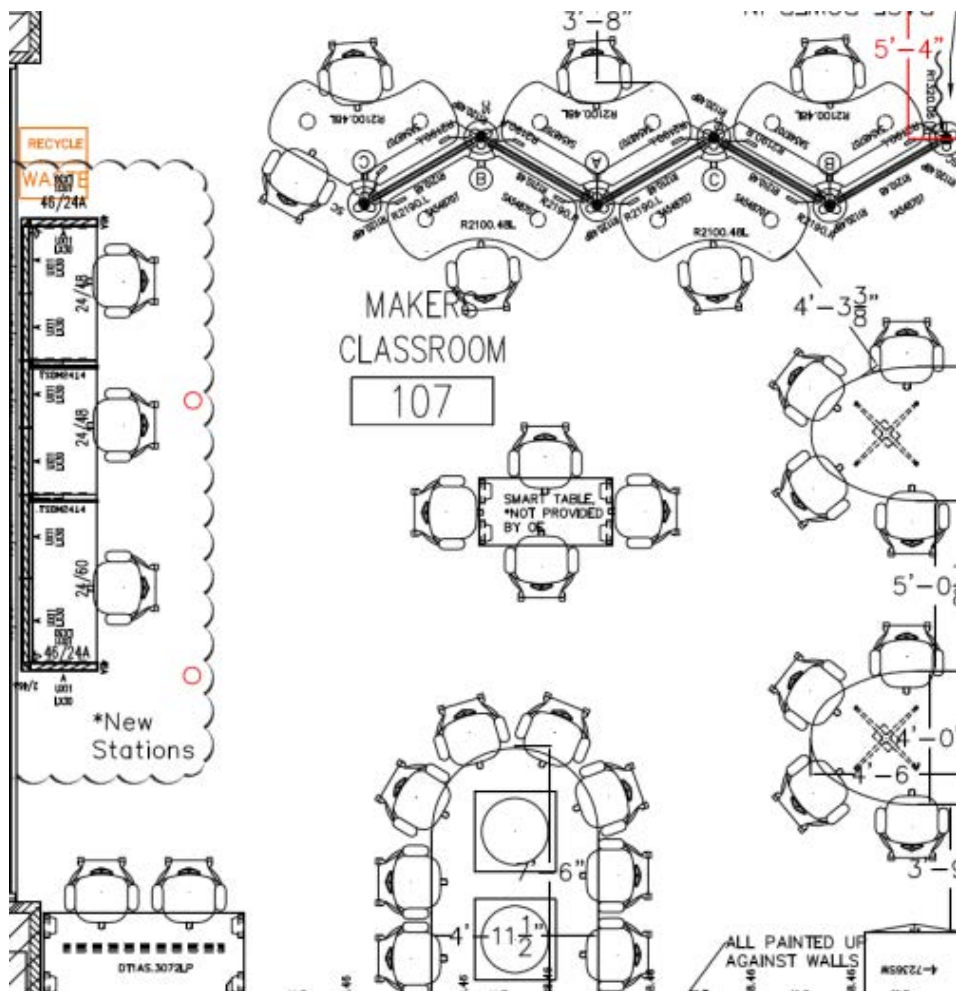
Figure 2: 2014 Made@UF floor plan with potential 2018 changes.

the requisite graphics card to support VR.

Microsoft Hololens provided another list of issues. First, the high cost of the Hololens, starting at $3000, made staff wary of loaning the item and thus limited us to purchasing 1 for circulation. Next, the Development version does not work well with lending due to need for users to link their Microsoft account to use. This requirement leaves circulation staff with the burden of ensuring patrons are logged off of the Hololens, otherwise risking exposure of a patron's Microsoft account to a stranger. As an alternative, Microsoft offers a Hololens with enterprise options geared toward multiple users for $5000.

The transition from mobile app development to VR/AR technology also reflected the increased investment in VR/AR by some of the largest technology companies in the world. In the past four years, Facebook purchased the virtual reality company Oculus, Apple released the ARKit for developing augmented reality applications on iOS devices, Google developed Google Cardboard as an affordable VR option, and Sony released

Playstation VR to accompany their gaming platform, just to name a few notable examples. This increase of VR/AR development was mirrored by a rise in student interest and faculty research in using and creating new VR/AR content at UF.

Around this time, we began conducting informal whiteboard polls at the library entrance. The whiteboard polls would pose one question and invite the responses of library patrons. When the we asked questions related to technology in the libraries on the whiteboard polls, we received robust responses, typically between 75-100 in a 24-hour period. Though informal, these polls helped us receive up-to-date opinions related to technology quickly from our patrons.

RECENT DEVELOPMENTS

The transition from mobile app development to VR/AR was accompanied by new partners in MADE@UF. Gator VR, a student club on campus dedicated to creating VR/AR projects and holding VR/AR events, began conducting their general body meetings,

officer meetings, and special events in the MADE@UF space. MADE@UF's partnership with GatorVR has brought 15 students into the space who are using the VR equipment on a weekly basis. This partnership creates familiarity with a group of students that otherwise may not have been involved.

Beginning in February 2017, the George A. Smathers Libraries was a part of a marketing project funded by our regional library cooperative, the Northeast Florida Library Information Network. For the marketing project, the Libraries agreed to focus on marketing MADE@UF. The project team worked to refresh the MADE@UF website. This included updating information, synthesizing information to eliminate unnecessary pages, adding Google Analytics to the web page, and creating a newsletter sign-up form. Google Analytics allows us to see that our website has had 468 users from September 1, 2017 through November 30, 2017 with 90% of the users being new users. We have also had 39 email subscribers since the beginning of fall 2017. These subscribers receive emails about new technology as well as opportunities to "beta-test" via checkout before it is available to all library patrons. Subscribers also receive information about upcoming events in MADE@UF as well as other VR/AR events on campus and in the community. The project team also crafted press releases accompanying new technology in the space and advertised for the space. The work of the marketing project team laid a foundation for future growth as MADE@UF seeks to increase its impact on campus.

Beginning in fall 2017, Benjamin Lok, a professor in Computer and Information Science and Engineering, created a class named "VR for the Social Good." The class consists of 50 students who will break into groups of five to create a VR/AR project over the course of the semester. The enrollment will grow to 100 in spring 2018 and potentially larger in fall 2018. The course does not require students to be computer science majors. Rather, students from non-computer science disciplines are encouraged to enroll as the first month of the course is dedicated to learning Unity, a game engine used to create VR/AR applications. Lok's course does not have the infrastructure to support VR/AR development on this scale, which is where the partnership with MADE@UF began.

MADE@UF is equipped with collaborative spaces for multiple student groups to work with Oculus Rifts and Unity software

> » **MADE@UF has transitioned from a mobile app development space to a VR/AR focused space over the span of about two years. The transition echoes the emergence of VR/AR into the public consciousness and reflects new partnerships created between librarians at Marston Science Library and VR/AR stakeholders on campus at the University of Florida.**

in order to complete their projects. We have also blocked off time during mornings from 8:00 a.m. to 10:00 a.m. on Monday through Friday for students enrolled in VR for Social Good to receive priority in MADE@UF. The class also is able to reserve stations with VR/AR technology through use of the LibCal room booking system. These accommodations allow for students to complete group work without risking interference from casual computer users. Due in part to these new partnerships, MSL's Oculus Rifts have been circulated 112 times during the fall 2017 semester, a vast improvement over 77 loans in the spring 2017 semester.

In order to provide the most appropriate VR technology for developers on campus, we surveyed the students in the VR for Social Good course (See Appendix 1 for Survey on VR/AR Technology in Made@UF). We will be able to use this survey data to make a more informed decision when we apply for the annual UF Technology Fee. The timing of the yearly application allows librarians to survey students from the fall and spring semesters of the course; in this funding cycle, we will be able to survey approximately 150 student developers for their input. In the future, we will survey the student club GatorVR to gain their input.

In fall 2017, MADE@UF hosted one-hour workshops within the space taught by recently hired librarians and graduate interns. Five workshops were planned during the semester, three focusing on Unity, one focusing on Aurasma, an augmented reality app, and one on Git and Github, which was unfortunately cancelled due to Hurricane Irma. The four workshops brought in 70 participants, a mark representing 50% capacity on average for the events. These hands-on workshops allowed students to use these programs and create a VR/AR project of their own. GatorVR sent a representative to each event to allow participants interested in VR/AR projects the opportunity to connect with other interested students.

MADE@UF also hosted two open hours during the fall 2017 semester. One open house, which was marketed as "Coffee and VR", aimed to bring in faculty and graduate students who identified VR/AR within their research interests. Upon bringing these interested parties into MADE@UF, the goal was to foster discussion amongst researchers from various fields and introduce them to the resources available in MADE@UF and Marston Science Library. We emailed information about the first "Coffee and VR" event to 90 interested parties. We tracked the emails and discovered 49 recipients opened the emails, while 5 clicked on links inside the emails. During the event, 7 participants arrived to enjoy coffee and talk VR/AR; 1 of the participants came as a result of the email. Although this may seem less than ideal, the 1 participant was from the School of Construction Management, a department we did not have a relationship with prior to the email blast. Since the event, we have been in discussions with this researcher about partnership opportunities.

The other open house was designed to reach undergraduate students and excite them about the potential of VR/AR. We included GatorVR in this open house and had them demo the final version of the VR application they created during spring 2017. The two-hour event drew 40 participants including 1 who received the email blast. This graduate student brought his class to the event, a group of about 12 students. Also, we have been in discussions with this graduate student about future partnerships with his college, the College of the Arts, with which we previously did not have a relationship.

CONCLUSION

MADE@UF has transitioned from a mobile app development space to a VR/AR focused space over the span of about two years. The transition echoes the emergence of VR/AR into the public consciousness and reflects

new partnerships created between librarians at Marston Science Library and VR/AR stakeholders on campus at the University of Florida. In the future, MADE@UF hopes to continue to identify potential partners through open houses and workshops on campus as well as supporting faculty interested in utilizing the space for relevant courses. As an area of growth, we are interested in identifying potential opportunities for working with faculty and graduate students conducting research in VR/AR and enhancing assessment to understand our impact on student learning. ■

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Appendix 1: Survey on VR/AR Technology in Made@UF (**http://journal.code4lib.org/media/issue39/putnam/uf_student_survey_2017.pdf**)

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