» "Whatever the cost of our libraries, the price is cheap compared to that of an ignorant nation."
– WALTER CRONKITE

Strategic Library™

Issue 47 // February 15, 2018

Breaking Down Silo Walls

» Successful Across Library Departments

BY MEGHAN KOWALSKI

INTRODUCTION

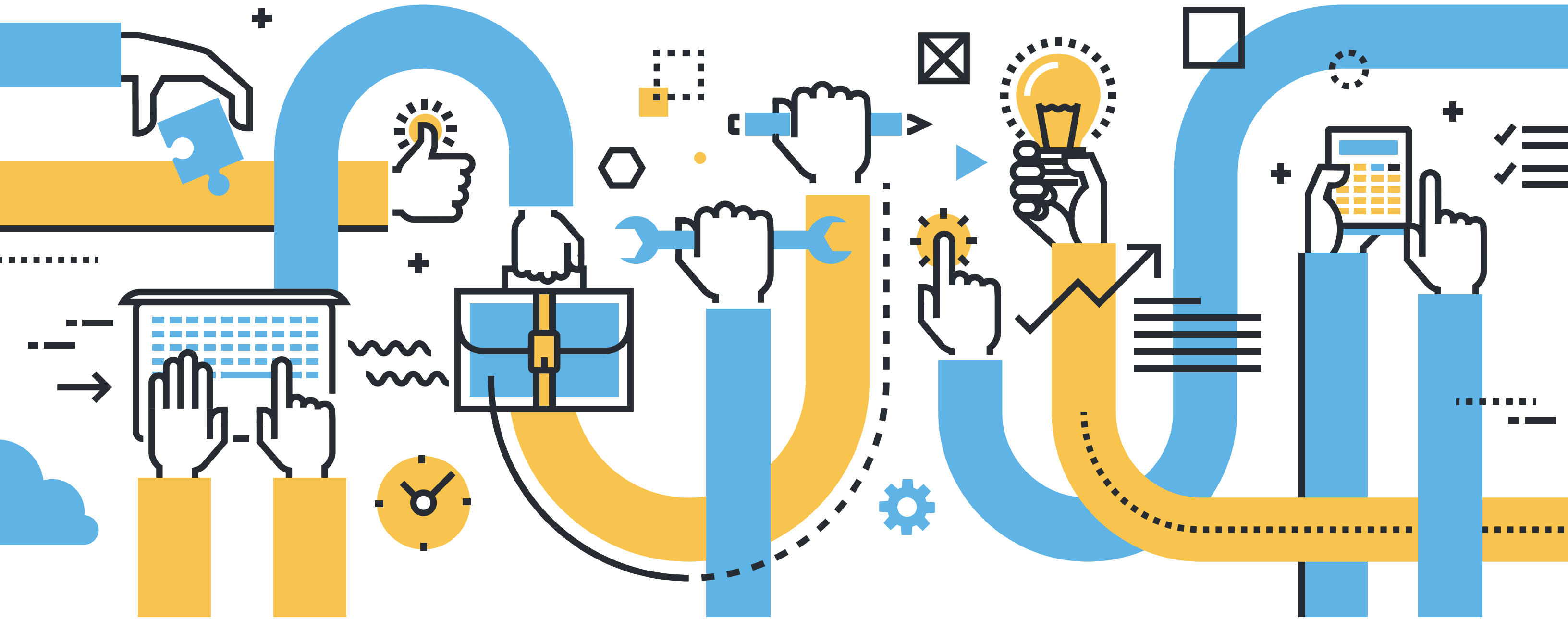
Library work has historically been organized into different silos: public services, technical services, and administration. These functional areas have long served to fulfill the basic needs of a library's mission and work. In many cases, however, this isolation between departments causes rigid and defensive silo walls to develop. Silos are workplace constructs and mindsets that isolate departments from one another through bureaucracy or rigid hierarchies. They are characterized by a lack of communication, information sharing, and collaboration that inhibit efficiency and productivity, reduce morale, and constrict positive workplace culture. The silo mentality splits the library into distinct groups that compete against one another instead of working towards common goals as an holistic organization.

Current trends in technology, budgets, and staffing have drastically altered the library ecosystem. In our current landscape of smaller budgets and fewer staff, the existence of rigid silos harms the library as a whole. In order to be successful, we must evolve into transparent, flexible, and cooperative organizations. Silos act as barriers to progress. Only in breaking down these walls can we best fulfill our purpose for our users. Intentionally integrated organiza-

HARVESTING THE ACADEMIC LANDSCAPE
Streamlining the Ingestion of Professional Scholarship Metadata into the Institutional Repository

CREATING CONNECTIONS
How Libraries Can Use Exhibits to Welcome New Students

READING GHOSTS
Monitoring In-Library Usage of 'Unpopular' Resources



tions are more favorable to their employees and are more successful in meeting their users' needs. This piece will discuss why libraries should break down silos in their organizations, the kinds of resistance and problems that arise, and will showcase methods for collaboration across departments. This article will also help leaders find ways to remove the silo mindset and create a "whole library" mindset in their organization.

PROBLEMS AND RESISTANCE

Change is not always easy nor welcomed by staff. Managers and administrators are often met with resistance when instituting new workflows and attitudes. Further, changes targeted to breaking down silos represents a transformation in the traditional roles held by many library departments and staff. There is a legacy of demarcation between librarians and support staff, technical services and public services, and within library units themselves. Instituting new methods represents a complete adjustment to how staff understand and complete their work. The library world is rapidly changing, and some organizations may be so mired in traditional roles that breaking down silos, a necessary challenge, can seem like an impossible proposition.

Silos often arise because an employee or department considers a task "not my job." In her article, "This Changes Everything: Transforming the Academic Library," Sarah C. Michalak states, "In a library characterized by rigid organizational structures, each staff member in a unit learns only one job, works mostly with other unit employees and reports to one supervisor who is charged with keeping everyone fulfilling their assigned duties."[1] Silos are reinforced by hierarchies that are extremely rigid and internal looking. Managers are evaluated by their department's work within their individual silo. Those in the department only focus on the skills they need to complete their assigned work. Everyone keeps their eyes on their own efforts and do not look out at the broader library environment. These attitudes close off avenues for collaboration and communication between staff and departments.

Silos are further reinforced by the perception of status. Roles within libraries have traditionally fallen along degreed and non-degreed lines.[2] Degreed librarians may work the reference desk and in collection development whereas non-degreed staff are relegated to circulation or shelving even if they have the same skills and experiences as their degreed colleagues. Many staff have worked within this tiered system for a majority of their careers. They are accustomed to focusing on their traditional role within the library while not being empowered to consider the broader context and goals of the organization. Non-degreed support staff are often left out of meetings and conversations with professional librarians. Their opinions are not solicited nor, in some organizations, welcomed. In these organizations, professional librarians may hold biases about traditional library roles and not see support staff as a valuable resource. This divisive structure keeps degreed and non-degreed staff from sharing information and ideas. The challenges faced by the modern library necessitates a less rigid demarcation to ensure the best solutions are encouraged.

Structural obstacles can be compounded by obstacles presented by the staff themselves. Leaders and entrenched employees can be become defensive of their silo and its role within the organization. These are skilled team members who thoroughly know their jobs and may not see a reason to change. This can lead to stonewalling or refusing to cooperate when change occurs. This level of defensiveness often arises from the fear of change. Usual processes are being disturbed, and this can induce stress in employees who have long-standing routines. In defensive situations, sometimes employees will hold firm and refuse to hear any new ideas. They may hope that the "loudest voice" in the room wins. By loudly staking out their territory and making their case, they hope to keep change at bay. Common arguments can be that the alterations are unnecessary, too much/too fast, or damaging to their work. Leaders should be aware of these defensive employees so they can ensure that their opinions are not seen as more valuable than others and do not overwhelm other voices.

Not all staff will oppose change, but most will greet it with some level of fear, confusion, or trepidation. These staff members are not against change per se, but are wary of how much it will impact their roles. Change can be stress inducing, but the initial knowledge that "change is coming" is usually the hardest hurdle to overcome. After the initial acclimation to new processes and mindsets, most will be excited by how they can take advantage of the new opportunities removing silos affords. Their excitement and openness can be encouraged to help bring others on board and to create moments of collaboration.

One of the biggest roadblocks to breaking down silos is not staff resistance but a lack of information sharing. It is difficult to work across departments if you do not know who your colleagues are, what they do, or where their interests lie. While this barrier can exist because some do not like or wish to share information, it more likely results from a lack of communication infrastructure. If communications have been sparse, this lack of knowledge can leave staff wondering who is responsible for what, who approves projects, and who they should turn to with their ideas and questions. Information should always flow freely, but in many organizations people can be omitted from the lines of communication. Along these same lines, roadblocks to breaking down silos can come from logistics. Staff members have different working styles, cultural mindsets, schedules, and attitudes. In multifaceted workplaces, all the "moving parts" can slow down change because the pieces have not worked together previously. It is likely that procedures and policies will need to be adapted to help fit the needs of the new attitudes you are trying to create.

These roadblocks are not impossible to overcome. The first step to breaking down silo walls is to make a list of what roadblocks you may experience. Frontline staff have the best idea of what problems they encounter in their work. Administrators and managers should meet with staff and departments to ask what challenges they see and what changes are on their wish list. These meetings will also give those in leadership a chance to see how their staff react to the idea of change and what ideas they have about how to institute new procedures and mindsets.

WHY BREAK DOWN SILOS

When library users encounter a barrier in their work, they become frustrated and either quit or turn to a perceived easier method (e.g., Google). This kind of frustration also develops when library staff encounter or are forced into silos. When the walls are hard to break through, staff are forced to develop unnecessary workarounds to solve problems. They may also undertake inefficient methods that slow down projects, undermines other units, or duplicates existing workflows. Silos generate internal-looking mindsets and can lead to feelings of isolation within an organization. This mindset individualizes library departments instead of bringing them together to work as one team.

Silos inhibit a library from achieving its core goals. In the book *Building Bridges: Collaboration Within and Beyond the Academic Library,* the authors share a story about the outcome of a library's strategic planning committee meeting. They found that "in this increasingly complex environment, actions, work, and decisions that were being made in one department had a major impact on other departments, in ways they never had before. More people needed to be consulted before policy decisions were made; workflow decisions had to involve all departments and staff who did the work needed to be included in the discussion."[3] For example, how a book is cataloged can have an impact on how it appears in the OPAC. That, in turn, can affect how reference staff and users search the library's system. A decision or change in one area of the library necessarily cascades to others. No single department works in a vacuum. Silos create artificial barriers that inhibit the flow of information and ideas between the team members working to achieve these goals. When communication between departments is lacking or meets resistance, workflows and project plans are complicated and interrupted. Context is important. How is one department to know how they should complete a task if another department changes the result? Library departments have shared goals, but they can be difficult to accomplish if the bigger picture is not kept in mind.

Silos also should be opened up to allow for more efficiency and creativity. Silos are isolating because they create territories and lead to an "us vs. them" work environment versus making employees feel like a part of the whole library team. When resources are limited, as is becoming the norm in most organizations, silos lead to employees becoming defensive about their work and needs. Silos create a feeling that the library is a zero-sum game and, when one department receives funding and attention, another loses. Most libraries need to do more with less these days, and employees need to be working together instead of trying to protect their department's niche at all costs.

Rigid library structures can also be incredibly limiting to an employee's personal and professional skill development. When workers are forced into strict roles, they are not given room to expand their skill set or develop ingenuitive processes that might benefit the library. Additionally, the skills and passions your library needs may not be found in traditional roles. Michael Perini discusses how rigid staff silos can be detrimental to library success by overlooking the talents and input of support staff. He says, "When non-librarian staff are not considered for partnerships on projects with librarians, they unfortunately remain an untapped resource."[4] Perini also argues that the lines between professional librarians and support staff are blurring in the current information ecosystem.[5] Libraries should be using every skill at their disposal, whether or not that skill comes from a degreed librarian. There may be a support staff member on your team with coding skills the library needs, but silos and biases toward degreed

librarians may cause them to be overlooked. Libraries will suffer when they let talent wither simply because it was sitting in the wrong silo or traditional library position. Our information world is changing and libraries will benefit by taking ideas from different staff backgrounds and experiences.

Additionally, in the era of smaller budgets and fewer staff, breaking down silos can free up resources to be shared across silo lines. In their brief, "21st-Century Collections: Calibration of Investment and Collaborative Action," the Association of Research Libraries nicely sums up that "collective problems require collective action, which requires a shared vision."[6] Staff skills can be used wherever they are needed. Departments will feel less of a need to compete for funds or staff when they know their colleagues will help when necessary.[7] Trust and morale will grow because staff know they can rely on one another when there are large projects or challenges to be handled. Streamlined workflows increase efficiency allowing departments to branch out into new areas and institute innovative ideas and programs. It is impossible to grow as an organization when you are forced to focus on simply keeping the lights on. Silos keep staff looking inward, and breaking them down allows departments to look outward toward providing successful user services.

It is necessary to breakdown the silos that exist in your organization. Employees and projects will function better when there are smoother, more efficient workflows and open lines of communications. Staff will begin to work as an holistic-looking team when barriers to their collaboration are removed. Staff will also grow a sense of ownership and pride in their tasks when they see the end result of all their hard work. Work can still be handed-off between departments, but removing silos will help keep the whole, broader image of the library, its mission, and its users in mind.

METHODS AND RECOMMENDATIONS

Once the decision to break down silo walls has been made, there are many ways to start collaborating. This article suggests three methods which can help reduce and remove silos in your organization. These methods are incorporating systems thinking, creating communities of practice, and mentorships and cross-training. Whether used on their own or, hopefully, in conjunction one another, instituting these changes will reduce silos and the siloed mentality in your organization.

Systems Thinking

Systems thinking involves seeing your organization as an holistic organization where departments support and collaborate with one another effectively and efficiently. The simplest approach to developing systems thinking in your library is to first ask questions and then listen. Ask your staff who they want to work with on projects, where they see the need to collaborate, and what workflows and communications patterns they wish to change, adopt, or remove. Open the lines of communication to and between your staff. Let them have conversations between each other and with the administration. Staff who are "in the weeds" are likely to have many ideas about changes that could and should be made. For example, you can have your staff walk you through their daily activities or explain a step-by-step process such as the workflow for how returned books are reshelved. Ask what they want and need. Then listen. There is no point in fostering communication and encouraging people to talk if you are not going to actively listen to and engage with what they have to say.

After you begin asking questions and listening to your staff, it is important to open communication and sharing between departments with the goal of increasing productivity while removing duplicated procedures and tasks. The first step in this process is to review existing policies, procedures, workflows, and projects. Everyone who works in the areas under discussion, no matter how tangentially, should have a seat at the table. Each staff member should explain their role, methods, and contributions. After this review, staff can eliminate redundancies, solve problems, and streamline workflows through open and continual discussion. Each department is a part of the larger organization. To operate successfully, units and staff need to see how their role fits into the broader library system.

Creating shared procedures is the first step to creating a smoothly operating library system. In her book, *Working Together: Collaborative Information Practices for Organizational Learning*, Mary M. Somerville discusses the need for implementing systems thinking. Somerville summarizes, "Systems thinking encourages viewing the organization as an enterprise level organism… It recognizes that holistic systems thinking must be ongoing in organizations if participants are to function, aligned, as effect parts of the whole."[8] The power of this system is that it encourages collaboration and a unified group dynamic. Somerville states, "Furthering organizational learning and advancing stakeholder relationships holds promise for avoiding an 'inward looking' library centric orientation while encouraging sustained 'outward looking' and outcomes oriented learning and improved anticipation of users' changing needs."[9] Every part of the library system should be working toward the same goal and successful outcome. For example, there is no sense in a preservation department removing damaged items from the shelves for repair if the library is about to undertake a large-scale weeding project. Every staff member needs to be informed of projects and changes. This avoids creating unnecessary work and keeps an organization operating as one, whole system. Organizations can only fulfill their mission if their parts are functioning smoothly with clear, open communication and a shared vision for success. Developing projects and workflows that function efficiently from inception to delivery will benefit both staff and users.

In addition to creating shared procedures and workflows, organizations should hold regular all-staff meetings to make sure every department is working together as a team and sharing information clearly. These meetings should be brief, but long enough to discuss library's projects, goals, and success stories. When leaders share information with all staff, it increases awareness of projects and department roles and has the added benefit of encouraging transparency. These meetings also give staff a chance to express their opinions or voice ideas on matters that might be outside of their everyday work. All-staff meetings create a feeling of ownership and teamwork because everyone is being brought together to be made aware of the library's actions. Depending on your organization, meetings can have a bad reputation or may not be feasible, so this information can be shared via all-staff email, newsletter, or conference call. Feedback should be solicited and encouraged. The point is to show transparency and openness to input and suggestions. It is important to remember that great ideas can come from anywhere.

In some instances, all-staff meetings are not required. When a new project begins, just the staff who will be working on the assignment, end-to-end, should be involved. A project is more likely to succeed when those involved have a chance to see each step in the process. Say a library is relocating a collection. Every person from the head of collections, to shelvers, to technical staff who update records should be involved in the decision making and project planning. Problems and hidden efficiencies are easier to handle when those who know the work are at the same table to discuss how they envision their role in the project. Group meetings of this sort can also allow staff to readily adapt to changes that impact their work. The members of these groups are also more likely to communicate outside of meetings when the need arises. Creating a strong team through clear communication helps morale and fosters a sense of unity. These team meetings keep everyone on the same page and working toward their ultimate goal.

Libraries work best when every department collaborates through clear, open communication with efficient workflows and shared goals. Each department and project team is an important cog your organization's system. By instituting systems thinking, you will ensure smoother projects and everyday tasks. Everyone on your staff will benefit from increased efficiency, productivity, and knowing how their role impacts the organization as a whole.

Communities of Practice

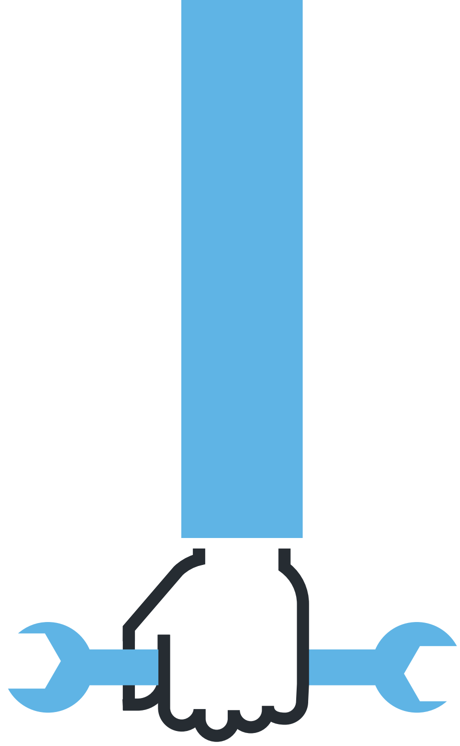
In addition to creating a smoothly operating library system, organizations should open communication and sharing beyond work-specific tasks. Libraries should foster communities of practice that expand its staff's general skill sets, ideas, and passions. Communities of practice are formed when groups of individuals within your organization engage in activities that lead to shared learning. Your organization can offer sharing sessions where staff discuss topics related to their work and libraries as a whole. One example of this is libraries that hold "Article Club" meetings. In these organizations, staff from all parts of the library come together to discuss the same article from a library journal or trade publication. Clubs like this can also discuss local news that impacts the library, a video or webinar, or project they are working on outside of the library, such as a volunteer experience. These sharing sessions also give staff time to boast about themselves. What projects are they working on for a professional library association or working group? Are they writing an article for a journal? Or, are they simply working on something outside of the office that they enjoy? Meetings like this can create greater feelings of collegiality between staff members from different departments who might not otherwise meet. In her book, Somerville argues for the creation of these communities of practice.[10] Silos keep people filtered by traditional departmental segments; communities of practice group people by shared interests. Further, these "communities of practice provide individuals with an identity within the workplace, which ensures a professional and/or disciplinary lens through which to perceive and inquire. This offers a vantage point from which to develop trans-disciplinary and cross functional workplace understanding."[11] Crossing silos builds the bond between staff members and leads to stronger, more holistic teams. When staff start to enjoy one another and discuss shared interests, they are more likely to work well together and share ideas that benefit their work in the library.

Your library can further increase cooperation by creating moments for collaboration for these communities. In the "Google at Work" episode of NPR's *Hidden Brain* podcast, host Shankar Vedantam interviews Laszlo Bock, head of Google's People Operations, about how Google instituted the Bell Lab "bumping into" model. Bock shares that when people "stumble out of their offices and bump into each other [they] have interesting conversations."[12] Bock says that Google tries to "manufacture these moments of serendipity" to get people from different departments having conversations.[13] By encouraging staff to meet and share ideas as they happen, sharing and collaboration become a normal activity and mindset. Collaboration cannot be forced, but it can be encouraged and grown by fostering environments where conversations and ideas can occur organically. Staff should be encouraged to chat during coffee breaks and meet for lunch. (It's even better if you can provide the coffee or lunch!) Their conversations may not always be directly about work, but when employees from different parts of the same organization come together, even informally, ideas are shared and explored.

A library should further encourage the

holistic growth of its staff and communities of practice through professional development. Staff should be allowed to attend conferences, webinars, meetings, and to join professional associations even if the subject area is not directly applicable to their everyday work. Staff who attend these events should then be given a forum to share what they have learned. This could be as simple as giving a presentation to their interested colleagues or making their notes and materials available online. Interested parties should be encouraged to meet one-on-one to share and expand upon what they have learned. When staff attend conferences, they often come back brimming with ideas and the energy to implement new methods and programs. Leaders should encourage this eagerness and passion instead of asking staff to wait or file away what they have learned for another day. The high energy and drive of new knowledge only lasts for a short time. Staff should be encouraged to act or else their passion may dim and their time at these conferences not fully utilized. Staff who are constantly told no or to delay their ideas risk becoming cynical and defensive.[14] They may wonder what the point of attendance at these events is if they never get to experiment with or implement what they have learned. For example, if a staff member returns from a conference excited to try a new social media marketing technique, have them work with the librarian who runs the Twitter, Instagram, or Snapchat accounts. These staff members can discuss the new ideas and how they can be implemented at your institution. A library should never allow their staff's skills or ideas to grow stagnant. The library world is constantly evolving and staff need the time and experience to evolve along with those changes.

Friendly, open offices encourage collegiality and teamwork. This positivity increases library morale and staff begin to work as one team because they find shared passions and are excited about working on ideas together. By allowing the communities of practices to develop, your staff will gain valuable knowledge and skills as well as strengthen relationships with their colleagues.



Mentorships and Cross-Training

People are the key to breaking down silos. They must be able to see how their individual contributions help their colleagues and the organization as a whole. One way libraries can encourage their staff to develop a holistic library mindset is by offering mentorships across departments or traditional silos. Mentorships occur when experienced and knowledgeable staff are paired with newer, less-experienced staff members to provide guidance and and expertise. It is common for mentorships to develop within departments, but cross-departmental mentorships have the additional benefit of reminding staff about the work of the colleagues. Pairing a cataloger with a circulation librarian may seem odd, but these staff will learn how their duties impact one another and they will develop techniques and troubleshoot problems together. Staff in cross-silo mentorships can discover how their daily workflows interact, how they can merge tasks and find efficiencies in their work, and can remind everyone that they are on the same team with the shared goal of fulfilling user needs. These mentorships also allow staff to grow their skill sets and knowledge about other fields in their chosen career.

Libraries should also encourage cross-training. In her article for *College and Research Libraries News,* Cori Wilhelm states, "Cross-training encourages communication between departments, and training colleagues about one's particular speciality creates a sense of ownership and leadership among peers... Furthermore, when employees understand the duties and processes of another department more thoroughly, they can work together more cohesively toward the library's overall goals and mission."[15] Cross-training is when an organization has its employees learn the skills and responsibilities of another department or unit. It can involve shadowing or staff members, hands-on training, or the sharing of documentation. One example of cross-training includes when technical services staff are given training on the reference desk or circulation staff learn how to copy catalog records.

Cross-training not only increases awareness, but means that the library can maintain continuity of mission critical tasks during times of disruption.[16] Cross-training means a staff member can help another department is someone is on medical leave or away on vacation. Additionally, cross-trained staff may develop innovate solutions to problems and find ways to streamline work since they bring a new perspective to the table. Our users want seamless service, and breaking down silos and encouraging teamwork can help fulfill that need. Cross-training and cross-silo mentorships can also be extremely beneficial to the new staff on-boarding process. New hires will more easily discover how your organization works as a whole and how the library fosters and grows its staff if they are given a holistic library experience from the start. In these kinds of workplace partnerships, staff are introduced to and reminded of how their work impacts other areas of the library and the end user. New staff should be given not only training on their new position, but also a wide-ranging orientation to all departments in the library. New staff should meet with or shadow someone in every library department during their first months on the job. This time will allow them to see the library's operations and to develop relationships and contacts that will be beneficial to future assignments and projects. By creating good habits from the start, it is less likely that new staff will fall into silos. Additionally, longer serving library staff will be able to hear fresh perspectives and insights from the new additions to the team.

Mentorships and cross-training are becoming vital parts of a thriving organization. As libraries need to do more with less and provide, in many instances, even greater levels and kinds of service, having a knowledgeable, strong staff with diverse skills across many areas will be invaluable. Staff will be able to help one another when departments or projects have a greater need for skills and support. Additionally, mentorships and cross-training ensure consistent levels of service to your patrons while allowing staff to develop professionally.

SHARING SUCCESS

Finally, a library needs to encourage its staff by sharing successes. Oftentimes silo walls are reinforced because departments rarely see the successful outcome of their work. Technical services staff have limited interaction with users so they do not see how their work helps to fulfill the library's main goal of serving users. Public Services staff interact with users, but they rarely see all the hard-work that puts books on the shelf, provides database access, and keeps a website running. Leaders should be sure to thank every staff member and department involved in major projects. The library is one organization with many moving parts. When one area grinds to a halt the others are impacted. Administrators and managers should always keep work and praise flowing through the whole library ecosystem. Milestones and accomplishments should be celebrated library-wide. The best way to do this is to share success stories at meetings, through emails, or on staff bulletin boards. Sharing accomplishments proves that the library functions better and is more successful when it operates as one unified organization.

CONCLUSION

To successfully break down and keep silos from returning, leaders must be persistent and patient. Silos come from long-entrenched fears, attitudes, and work environments. It takes time to implement change and keep progress moving forward. Leaders should take small steps where they can and empower the staff who want to make changes in the right direction.

The little victories will lead to larger wins. Trending successes will also start to bring on board those staff who were opposed to change in the first place. Breaking down silos is about bringing people together as one team with shared goals.

Breaking down silos hinges on one goal: keeping the big picture in mind. A library is an holistic organization composed of independent departments and individual staff members. Successful collaboration across departments comes from integrated library workflows, open lines of communication, and an holistic mindset. Breaking down silo walls does not have to be complicated nor imposed as a mandate. Library managers, administrators, and leaders should review their employee's activities to see what areas for collaboration and cooperation already exist and are working well. Such activities should be encouraged and expanded wherever possible. Then, it is a matter of introducing new techniques and moments of collaboration into existing workflows to see which methods work best for your organization. Once staff are aware that they are able to communicate better and work together on projects, most are likely to run with the idea.

Silo walls are unnecessary and harmful roadblocks. They are flawed constructs mired in outdated traditional library conventions which impede the overall success of a library and its mission. Silos split an organization into unconnected parts. This rigid mentality creates turf wars and inefficient workflows while also breeding difficult work environments through mistrust and doubt. Breaking down silo walls leads to more flexible workflows, fosters creativity and collaboration, and can lead to more productive staff relationships. This is not an easy task. It is crucial, however, that libraries integrate and collaborate if they are to operate in the current information ecosystem. The separate units of an organization should remember that they share one, ultimate goal: meeting user needs. The more roadblocks we place on ourselves, the more difficult it will be to fulfill this purpose. ■

ABOUT THE AUTHOR: Meghan Kowalski (**gates@cua.edu**) is head of preservation at the John K. Mullen of Denver Memorial Library, The Catholic University of America.

REFERENCES:

Association of Research Libraries. "Issue Brief: 21st--Century Collections: Calibration of Investment and Collaborative Action." Accessed June 15, 2016: **http://www.arl.org/storage/documents/publications/issue-brief-21st-century-collections-2012.pdf**

Farkas, Meredith. "From Both Sides Now: Mentoring the Next Generation of Librarians." American Libraries Magazine 47:6 (June 2016): 76.

"How Google's Laszlo Bock is Making Work Better." Narrated by Shankar Vedantam. Hidden Brain. NPR, June 7, 2016. **http://www.npr.org/templates/transcript/transcript.php?storyId=480976042**.

Langley, Anne, Edward G. Gray, and K.T.L. Vaughan, *Building Bridges: Collaboration Within and Beyond the Academic Library.* Oxford, England: Chandos Publishing, 2006.

Leong, Julia and Craig Anderson. "Fostering Innovation Through Cultural Change." Library Management 33:8/9 (2012): 490---497.

Michalak, Sarah C., "This Changes Everything: Transforming the Academic Library." Journal of Library Administration 52:5 (2012): 411--Ð423.

Perini, Michael. "Conceptualizing Classified Staff as Collaborative Partners." Collaborative Librarianship 7:4 (2015): 150--Ð159.

Somerville, Mary M., Working Together: Collaborative Information Practices for Organizational Learning. Chicago, IL: Association of College and Research, Libraries, 2009.

Somerville, Mary M., Ivan Gaetz, and Janet Lee. "Rethinking Libraries in Terms of Learning and Working Collaboratively: An Interview with Mary Somerville." Collaborative Librarianship 2:1 (2010): 38--Ð43.

Somerville, Mary M., Barbara Schader, and Malia E. Huston. "Rethinking What We Do and How We Do It: Systems Thinking Strategies for Library Leadership." Australian Academic & Research Libraries 36:4 (2005): 214--Ð227

Wilhelm, Cori. "'That's Not My Job:' Developing a Cross--ÐTraining Process in an Academic Library." College and Research Libraries News 77:7 (July/August 2016): 342--Ð346.

FOOTNOTES:

1 Michalak, Sarah C., "This Changes Everything: Transforming the Academic Library." *Journal of Library Administration* 52:5 (2012): 415.

2 Langley, Anne, Edward G. Gray, and K.T.L. Vaughan, *Building Bridges: Collaboration Within and Beyond the Academic Library.* (Oxford, England: Chandos Publishing, 2006), 111-112.

3 Ibid., 4.

4 Perini, Michael. "Conceptualizing Classified Staff as Collaborative Partners." *Collaborative Librarianship* 7:4 (2015): 153.

5 Ibid., 150.

6 Association of Research Libraries. "Issue Brief: 21st-Century Collections: Calibration of Investment and Collaborative Action." Accessed June 15, 2016: **http://www.arl.org/storage/documents/publications/issue-brief-21st-century-collections-2012.pdf**

7 Ibid., 418.

8 Somerville, Mary M., *Working Together: Collaborative Information Practices for Organizational Learning.* (Chicago, IL: Association of College and Research Libraries, 2009): 70-71.

9 Ibid., 71.

10 Ibid., 72.

11 Ibid., 72.

12 "How Google's Laszlo Bock is Making Work Better." Narrated by Shankar Vedantam. Hidden Brain. *NPR*, June 7, 2016. **http://www.npr.org/templates/transcript/transcript.php?storyId=480976042**.

13 Ibid.

14 Farkas, Meredith. "From Both Sides Now: Mentoring the Next Generation of Librarians." *American Libraries Magazine* 47:6 (June 2016): 76.

15 Wilhelm, Cori. "'That's Not My Job:' Developing a Cross-Training Process in an Academic Library." *College and Research Libraries News* 77:7 (July/August 2016): 345.

16 Ibid., 344.

Harvesting the Academic Landscape

» Streamlining the Ingestion of Professional Scholarship Metadata into the Institutional Repository

BY JONATHAN BULL AND TERESA SCHULTZ

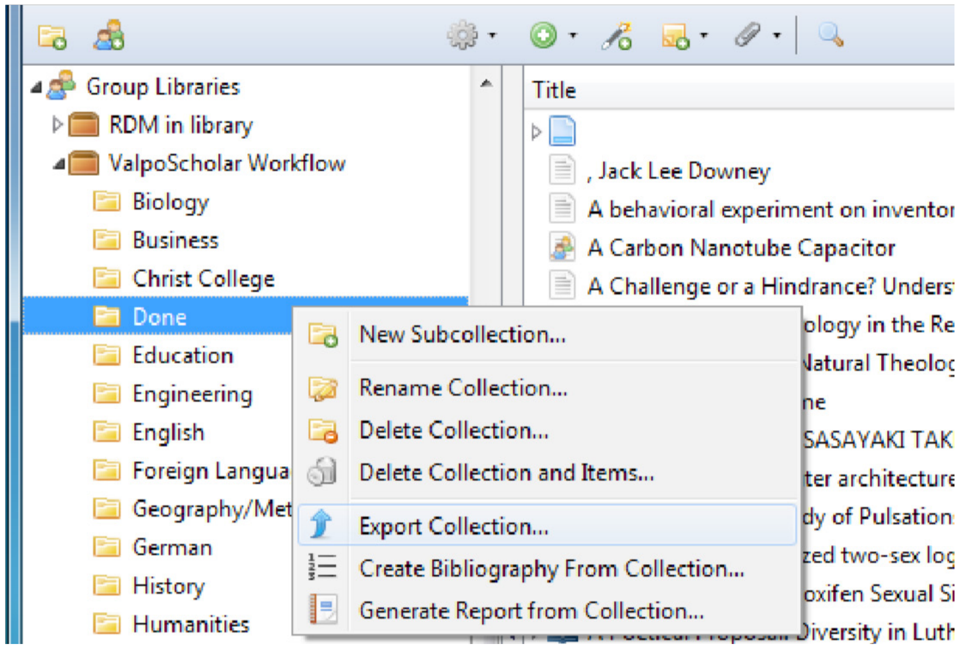


Figure 1. Using Zotero to change the title of an article to title case

INTRODUCTION

In the past two decades, institutional repositories (IRs) have become a common part of the scholarly communication ecosystem, with 2,823 existing across the world (OpenDOAR, 2017). For IR administrators, though, the challenge of sustainability beyond the initial project launch is paramount. This can be an even greater challenge for smaller institutions with fewer resources to support an IR.

While many institutions have shown the impact of growing IR content, many IRs continue to struggle to show sustained growth (Cullen and Chawner, 2011; Kim, 2010; Marsh, 2015). Clifford Lynch recently addressed this stagnant growth by asking, "Is it important for institutions to maintain a local comprehensive record of their scholarly output through their IR?" (Lynch, 2017, p. 127). Because most institutions routinely create intellectual content for a world of information-seeking audiences, these questions of stagnating IRs and whether or not the institution needs a local collection of its scholarly record are interesting and complex, to say the least.

One possible reason for this stagnation and inability to capture the institution's scholarly record could be an institutional inability to move from the initial content of the pilot project phase to a sustained workflow for content recruitment. This paper presents an example of a workflow designed for library-supported IRs that seek to move from a pilot phase or a post-pilot stagnation phase to the use of a fully operational metadata archiving service. This service would be similar to Current Research Information Systems (CRIS), while still allowing for full-text availability when possible. The workflow was designed at Valparaiso University's Christopher Center Library Services (CCLS) to perform all tasks required to populate the IR, ValpoScholar, with limited staff involvement. Factors that contributed to the desire for a new workflow at CCLS included ineffective indexing, poor metadata, and lack of institutional buy-in as well as a lack of a CRIS. Although many kinds of works may be included in an IR, this workflow focuses specifically on scholarship metadata produced by faculty and professional staff—typically, these are journal articles, book chapters, and conference proceedings.

LITERATURE REVIEW

Several approaches to populating IRs with faculty scholarship may be found in scholarly literature on the topic. These include focusing on the implementation or pilot stage, selfarchiving or direct deposit, retraining library staff/faculty to recruit and add content, and streamlining or automating workflows. In addition, several institutions have also experimented with interoperability and even merging the IR with CRIS.

Content Population via Initial Pilot Project Phase

For those who saw the need for and potential benefits of IRs, many struggled with how best to launch, integrate, and populate their institution's repository. Palmer, Teffeau, and Newton (2008) point out three different but common approaches to IR implementation, including a different content focus for each model (p. 149). In regard to IR content recruitment, many institutions created collection development policies as one of the first steps in adding content to the IR; these were similar to policies developed for traditional subjectspecific library collections. These policies often determine the "purpose of the repository, scope of the collections, selection criteria and responsibilities, editorial rights, and how to handle challenges and withdrawals" (Wang, 2011, p. 83). The details of collection development policies vary from institution to institution. For example, some institutions' policies focused on which campus unit might be responsible for the IR or subsections of the IR (Baudoin

& Branschofsky, 2003, pp. 36–37), what priority criteria of material should be added (Cohen & Schmidle, 2007, p. 289), or how to identify the faculty needs regarding and interest in repositories before recruiting content from the faculty itself (Makori, Njiraine, & Talam, 2015, p. 618).

Some institutions focused on electronic thesis and dissertation content first before moving to faculty and staff content (Wrenn, Mueller, & Shellhase, 2009), while others have identified initial content partners as well as a "collaborative IR model" across multiple institutions for content recruitment (Oguz & Davis, 2011, p. 14). These and other approaches have all shown varying levels of success at or near the implementation stage at a variety of institutions (Nykanen, 2011, pp. 17–18).

Content Population via Self-Archiving

Initially, many IR administrators approached faculty members to deposit their own work, or "self-archive," believing that faculty would want to make their work more visible. While the idea of the IR is usually well received, asking faculty to self-archive "did not translate into real content being deposited," resulting in stagnating growth (Mackie, 2004, n.p.). Several other studies found self-archiving rates to be low, with the majority of scholarship made accessible by someone other than the researchers themselves (Foster & Gibbons, 2005; Xia & Sun, 2007; Covey, 2009; Covey, 2011).

Further studies found similar inaction at other institutions. Davis and Connolly (2007) interviewed eleven faculty members in the sciences, social sciences, and humanities about their opinions on depositing their work in an IR. Some reasons for not using a IR include: learning curve, copyright concerns, publishing concerns ("Is a preprint in an IR considered publishing?"), quality association, fear of plagiarism and being scooped, reputation and the importance of accuracy, and use of subject repositories ("Publishing Original Work"). If faculty members did deposit, they did so not "without a lot of coaxing." (Koopman & Kipnis, 2009, p. 115).

Another study examined if researchers in a discipline (physics) with a "familiarity with selfarchiving" via a subject repository (Arxiv.org) would deposit into their respective institutional repositories at a higher

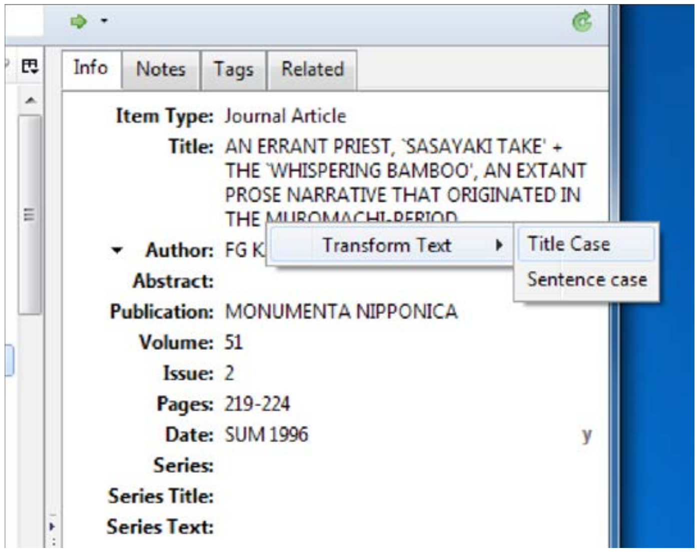


Figure 2. Step one of exporting a Zotero collection

rate than researchers without such familiarity and vice versa (Xia, 2008). The study suggested that "when an article has been presented in one repository, the author(s) will be hesitant to make it repeatedly available in a second repository" (p. 494).

Many institutions have addressed self-archiving through open access policies (or mandates) via associations such as the Coalition of Open Access Policy Institutions (COAPI, n.d.). However, initial buy-in for self-archiving practices resulting from an open access policy was limited, as many faculty members still lacked the technical skill or time to deposit, or were still concerned about copyright infringement (Xia et al., 2012), while others were worried about plagiarism or concerned about the newness or small scale of the repository (Singeh, Abrizah, and Karim, 2013). In addition to those concerns, faculty members also "do not see the benefit of open access reflected in the tenure process, so they fail to deposit items into the repository" (Xia et al., 2012, p. 98).

Content Population via Library Staff/Faculty Retraining and Outreach

While convincing faculty to self-archive has proven difficult, many proponents have advocated for library personnel to be retrained and handle marketing and outreach for faculty scholarship themselves. Bailey (2005) proposed reference librarians—considered by libraries to be the eyes and ears of their institutions—as possible servicers of content population (p. 266). Jenkins, Breakstone, and Hixson (2005) elaborate on the importance of librarians in getting the word out by "conveying [IR value] effectively to authors," which is only possible if those librarians "understand the culture of scholarly communication locally and beyond" (p. 315). Yet, few studies address the varying roles that reference librarians play from institution to institution, specifically small vs. larger institutions, and how those librarians would be able to take on these extra duties.

Reference is not the only branch of academic librarianship viewed as having an important part to play in IR content population. Depending on the repository platform, technical services personnel can play a direct role in content population, specifically collection development, cataloging/metadata, and preservation (Connell and Cetwinski, 2010; Aucock, 2012). In addition, the retraining of the library paraprofessional staff on repository-related tasks can also have a positive impact on populating the repository, while giving these personnel additional professional development (Bull & Eden, 2014). Duranceau and Kriegsman (2013) reviewed a variety of ways libraries are responding to open access mandates and their effect on IRs. Overall, an OA mandate can help in a variety of ways, including motivating staff retraining and outreach, refueling faculty interest, and creating new partnerships with campus research offices and publishers. However, estimating and planning a workload for IR-related duties can still be difficult, due to the year-round, uneven publication cycle of academia.

Content Population via Workflows, Batches, and Automation

For achieving sustainable, systematic growth, adding batches of content through specified workflows shows strong potential. Mackie (2004) outlined different approaches for content recruitment in the short, intermediate, and long-term periods. For short and intermediate periods, the University of Glasgow (UG) identified prospective adopters via staff/faculty websites and previous publications and determined which journals might approve population and those materials already available via open access online. After finding that these "relatively small-scale approaches" for the short and intermediate term that were "not sustainable," UG investigated more "systematic" approaches to IR population, such as adding bibliographic records through their Reference Manager with the assistance of a PERL script or through "departmental/faculty publication databases" (Mackie 2004, "Long-Term Strategies"). These longer-term approaches to IR population workflow allow for a "significant percentage of the process to be automated," but with complete automation still out of reach ("Long-Term Strategies").

Madsen and Oleen (2013) outlined the importance of moving beyond a single-person-managed IR to a locally developed Workflow Management System (WMS). This system assigns the content population responsibilities to a variety of personnel, an approach that is similar to that of other institutions but also utilizes RefWorks and Local-Area Network (LAN) for greater IT-related efficiency. While this workflow is much more efficient and has added a great deal of value, it still is not automated or balanced.

Flynn, Oyler, and Miles (2013) added to this push to automate IR workflow by creating a Google Script that could check a publisher's copyright policy in SHERPA/RoMEO within a spreadsheet. Strauss and Miles (2014) built on this further by creating a full semiautomated workflow using Excel, scripts, faculty CVs, and Google Drive. Utah State University attempted a similar form of automation, trying to import publication documentation, including the scholarship itself, from Digital Measures into the IR (Wesolek, 2014). This batch import proved to be successful, but it still required some human interaction, despite limited staffing. However, using Digital Measures relies on faculty to input their works correctly.

Any mistakes they make would then be carried over into the IR, which might require additional human interaction. Kipphut-Smith (2014) also discussed Rice University's attempt to streamline repository population due to an open access policy, though much of the workflow is specific to the requirements of the repository platform (DSpace) and did not address other platform challenges.

Zhang, Boock, and Wirth (2015) also advocated for using existing citation data available in various databases, specifically Web of Science, to help populate an IR, as

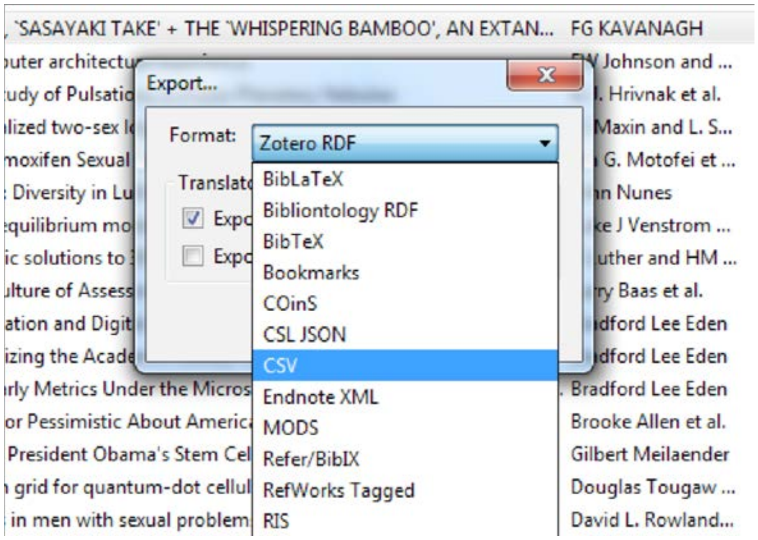


Figure 3. Step two of exporting a Zotero collection

well as for using existing IR citation data to check how much of it is indexed in Web of Science. While this approach is useful, it relates only to DSpace repositories and is not without problematic citation data (pp. 5–7). Using XML and an XSL stylesheet, Li (2016) designed a process for ingesting citations from Web of Science into Digital Commons, increasing input from 50 to 1,000 records into the IR over the same period of time. However, this process did not check copyright or full-text acquisition.

Current Research Information Systems and Institutional Repositories

Parallel to the development of the IR, Current Research Information Systems (CRIS) were created to track faculty output and research documentation. After summarizing the historic need for CRIS, Joint (2008) first suggested that repository librarians "shadow these larger patterns of integration by examining the place of their own repositories within the local 'campus research information system,'" yet left the question of what the relationship of the IR and CRIS might look like unanswered, acknowledging some, but not complete, overlap (p. 571).

A few additional studies did consider this IR-CRIS question more fully. For example, Viner (2010) and Tate (2012) did develop respective possible workflows for migrating CRIS fulltext submissions, mainly for dissertations/theses, into an institution's repository. However, both of these studies only discussed situations where an institution has both a CRIS and an IR. Most recently, Rybinski et al. (2017) suggested combining the functionality of a CRIS and an IR with a focus on the users' behavior and needs throughout the entire research cycle into a single platform. This idea is interesting but might be difficult to implement with limited staffing.

CASE STUDY: A NEW WORKFLOW FOR HARVESTING CITATION DATA INTO THE REPOSITORY

Background

Prior to the creation of the IR, Valparaiso University did attempt to implement a CRIS in order to track faculty research, but that attempt failed to gain faculty buy-in and was phased out within a semester. When launching ValpoScholar, the institution's IR, this failed attempt to track faculty scholarship was cited as a possible obstacle to IR success. As a result, ValpoScholar was marketed as an IR, despite much of its initial workflow mimicking the function of CRIS. Since its creation in 2011, ValpoScholar's workflow has focused on creating metadata records prior to depositing articles. Records are created without concern for whether the accompanying item can be deposited. Instead of depositing the actual artifact, staff instead initially link to the article's web page with its journal or publisher. Only after a record for an item has been created in ValpoScholar do staff research the item's copyright and whether it is allowed to be deposited. If the item may be deposited, staff do so. However, if an item is under embargo, staff make note of when the embargo lifts. The process has been time-consuming, as standard procedure called for creating records on an individual basis, instead of in a batch. For the first four years, CCLS faculty and staff kept track of this entire process, including records created and copyright and deposit status for items, through a series of Excel worksheets.

As the repository grew, the worksheets became clunky, and in the fall of 2014, CCLS decided to investigate a new way to handle the workflow in the hopes of streamlining it. The project quickly grew, however, into a search for ways to help automate at least part of the process, especially as CCLS has few resources dedicated to the IR. Library staff perform the actual work of creating records and depositing items into the repository. No one person was dedicated to this task, however, and it was often up to staff to assist during their downtime. A new process that could make quicker work of record creation and depositing would mean that CCLS could increase deposit rates without requiring significantly more personnel hours.

Initially, staff hoped to base their workflow on Flynn et al.'s (2013) system, which helped automate part of the process at the College of Wooster. However, Wooster's repository is based on DSpace software, and Valparaiso decided that CCLS staff, who did not have any significant IT support for ValpoScholar other than through their vendor, bepress, did not have the ability to adapt the full process for their needs. The library did take advantage of one aspect of Wooster's workflow: the code that allows a user to search Google Sheets containing embargo policies from SHERPA/RoMEO.

A scholarly communication listserv also provided CCLS staff with other workflow ideas when a librarian for the Smithsonian noted that they had set up alerts for articles and then collected the metadata from these alerts into a citation manager. These alerts allowed the Smithsonian Libraries to passively collect articles by setting up email alerts with major journal publishers and databases (A. Hutchinson, personal communication, 2015). This passive collection is well suited to a small library such as CCLS and can be easily set up. The library began collecting items from its email account and saving the citations to be pulled into the citation manager Zotero. Unfortunately, Smithsonian Libraries also use DSpace software for their repository, so CCLS determined that the rest of their workflow could not be directly adapted.

Both Wooster and the Smithsonian did provide ideas about how the process could be partially automated, however, including editing metadata for multiple records at once. Up until this point, CCLS staff created records individually for ValpoScholar, an easy but timeconsuming task. They had not utilized Digital Commons' batch upload feature and thought that adapting the DSpace-specific process for editing metadata used by both Wooster and the Smithsonian Libraries could fit the batch upload process.

Creating the Process

Adapting the process was not easy, though, and CCLS staff ran into several starts and stops. For instance, an intern discovered that collecting citations for items through the reference manager EndNote allowed for easy editing of certain parts of the metadata. An initial workflow was then created that used a mix of EndNote and Excel to easily edit metadata in bulk. However, Valparaiso does not have full access to EndNote, and a concern was raised about the fact that EndNote is the product of a for-profit company; thus, using it goes against the open access ethos. CCLS then decided that it would be better to rely on open source programs and to try Zotero instead.

Zotero has both the benefits and drawbacks of an open-source program, however, including offering fewer options than its for-profit rivals. Some of the options available to help edit metadata in EndNote do not exist in Zotero (or did not at the time of the project). This rendered the initial workflow useless, and CCLS had to study other options to replace some of the functionality that EndNote provided. CCLS had to rely on other, existing programs for all editing functions, as no staff had the coding knowledge needed to create their own functions and the library did not have the needed support from IT.

The workflow was slowly cobbled together over about a year, undergoing several overhauls as CCLS discovered better, more efficient ways to perform certain functions. It finally established a process that could be successfully replicated using a mix of editing functions in Zotero and Google Sheets. The overall process begins with the passive collection of items through email alerts for "Valparaiso University" that were set up with most of the major journal publishers, Web of Science, and Google Scholar. This process brings in about five to 10 citations a week. Care needs to be taken when gathering these items, however, as the items are not always recent research publications by VU faculty. Google Scholar, in particular, has shown to be hit-or-miss, as it often finds mentions of "Valparaiso University" in acknowledgments, captions, and other mentions within an item that do not refer to an author's institution.

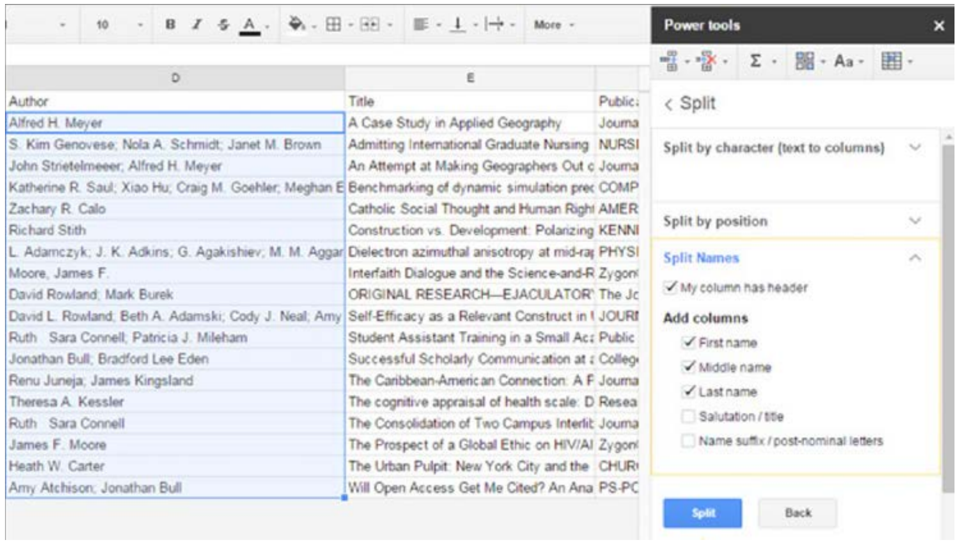


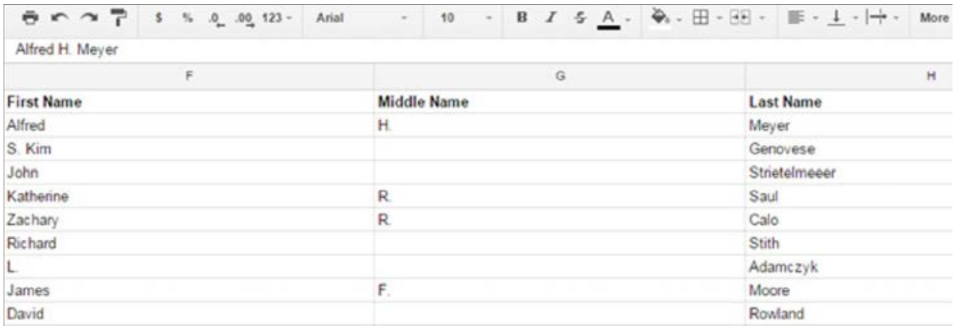
Figure 4. Using the Power Tool split function to separate names into separate cells

Citations for these items are then collected once a week in Zotero and organized by department. This step continues until a decent number of articles—about 50 to 75—have been collected, and then the process proceeds. After formatting author names, journal titles, and article titles within Zotero to fit the repository's style **(Fig. 1)**, the citations are exported as a CSV file and imported into Google Sheets **(Figs. 2–3)**.

These files come with a number of unnecessary columns, which are deleted, and more metadata editing is done in bulk using both the simple "find and replace all" function and the free add-on tool Power Tools **(Figs. 4–5)**. Unfortunately, not all of the editing can be done in bulk; some items must be typed in manually. However, the process allows for much of the data to be added or edited at once instead of going by individual article.

The metadata is then copied and pasted into the appropriate columns in bepress's Excel batch upload spreadsheet for uploading into ValpoScholar. From Google Sheets, Valparaiso runs Wooster's automated search of SHERPA/RoMEO for publishers' embargo policies. Staff then deposit articles where journal policies allow.

This process was created to collect new works of research produced by Valparaiso faculty, but it can also be used for older



Alfred H. Meyer

First Name	Middle Name	Last Name
Alfred	H.	Meyer
S. Kim		Genovese
John		Strietelmeeer
Katherine	R.	Saul
Zachary	R.	Calo
Richard		Stith
L.		Adamczyk
James	F.	Moore
David		Rowland

Figure 5. Resulting columns after using the Power Tool split function

works. CCLS staff have performed historical searches of Web of Science and other large databases for older works by VU faculty and collect those articles into Zotero. The process follows the same path from there.

A training document was created to help teach new staff how to use this process. Initial testing on the process took place in summer and fall 2016.

Lessons Learned

Prior to the implementation of this workflow, ValpoScholar saw a decline in overall record creation after an initial period of significant growth **(see Fig. 6)**. Since fully implementing this process in summer 2016, two batches (109 and 102, respectively) have been completed, contributing to an increase in the number of records created in 2016 compared to the two prior years. The workflow also helped maintain an increase in the number of records of faculty-related scholarship **(see Fig. 7)**. Records created in SelectedWorks, our research profile service, were not included in the figures for this study, as many of those records were created outside of the traditional workflow and by the authors themselves.

Although the new workflow did help increase the number of faculty records created compared to prior years, the process is by no means perfect. Adding 211 scholarship-related records as a result of the new workflow may be positive for a smaller institution, especially if it can be done in select batches. However, despite these numbers, the process proved to be more time-consuming and problem-laden than previously envisioned.

Bulk/Batch Editing vs. Individual Record Creation

Several obvious shortcomings still exist. While bulk/batch editing can be more efficient in many ways, it still takes several hours to go through the whole process. Because records must be uploaded one department at a time, the process is no more efficient than individual record creation for a department that has just one or two new items. However, for those departments that do see more activity, bulk editing of metadata reduces the time spent formatting records. Because the process also relies on programs created by third parties, especially for-profit Google, it is also at the mercy of any changes made to these programs. Google Sheets and Zotero handle most of the needed editing functions now, but that could change in the future. One add-on tool for Google Sheets that this process makes use of, Power Tools, was available entirely for free when this process started but has since begun to make some of its features available only under a paid version. Lack of coding knowledge also prevented CCLS staff from taking further advantage of Google's add-on programs. The company allows users to create their own codes to perform new functions and add them into Google Sheets, the same process used at College of Wooster. Coding knowledge would help buffer CCLS in the future should Google Sheets take away certain functionalities, and could help them create new functionalities not currently offered by Google Sheets.

CCLS also had to overcome certain issues because of the way the Digital Commons platform handles bulk uploads. As stated earlier, CCLS first creates a record for an item and links out to that item's webpage. This has not been a problem with individual uploads. However, the bulk upload Excel sheet does not allow URLs unless they link out to the full-text item on a publicly available server. When a link is included to an article's webpage where it lives behind a paywall, the upload is rejected. CCLS has thus had to eliminate including the URL when batch uploading records. The batch upload spreadsheet for Digital Commons also requires that each part of an author's name lives in its own cell. When Zotero exports metadata into a CSV file, it groups all authors' names into one cell, so a cumbersome step had to be added here to split these names up.

This new workflow process is also slowed down if there is any inconsistent or nondedicated staffing. While undergraduate or graduate student staffing can work, it can also become problematic. Student workers will likely need to be retrained each time a new batch is prepared, unless they can make a multisemester commitment to the project and the position. The best solution for managing a semiregular project like this may be to dedicate a professional staff member who would have a long-term

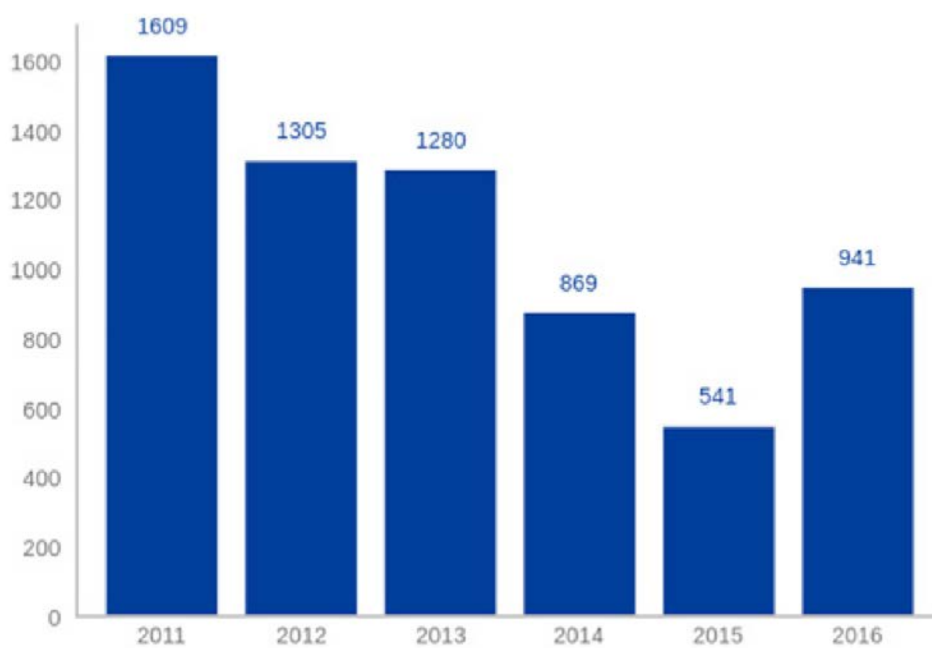


Figure 6. The number of all records created each year in Digital Commons, 2011–2016

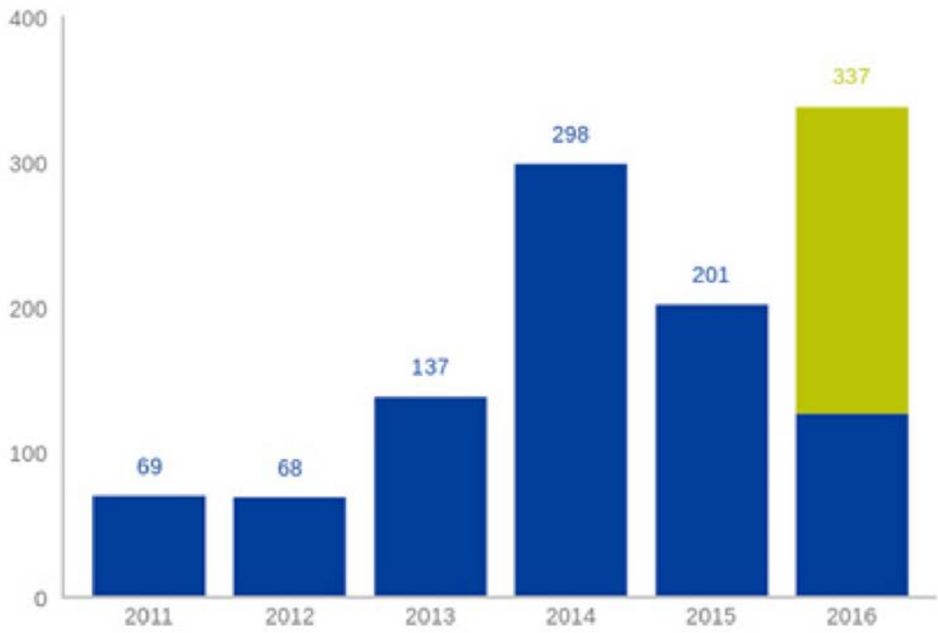


Figure 7. All records created by year for faculty works. The new workflow started in 2016 after 126 works (bottom of the bar) had already been uploaded. Works added using the new workflow are represented by the upper portion of the bar.

commitment to the project and be more comfortable with this project's level of human interaction. "Batch time" could be scheduled on the worker's yearly calendar. Depending on the size of the institution, determining a batch upload schedule could be tricky, but it is essential if the dedicated staff is to remain up-to-date on the batch upload procedure.

Unsolicited Submissions, Too Many Saved Searches, and De-Duplication

Another unresolved issue in this process is how to account for the independent submission of scholarship from faculty and staff members. These unsolicited submissions, while previously very welcomed, complicate this new workflow, as they can sometimes have been added in a previous batch, include erroneous or incomplete (author-supplied) information, or be delayed for inclusion in a future batch. For the workflow to succeed, the unsolicited submissions need to be added to the current batch-in-progress. In addition to the unsolicited submission possibly creating duplication, having too many saved searches could result in many duplicated notifications. For a small institution with limited experience in collecting faculty citation information or for the larger institution with tremendous scholarly output, trying to capture all of these notifications might be the only way to discover the institutional scholarship. However, it also creates a great deal of duplication, as many publishers list their publications in several aggregators.

Incomplete Metadata

Another problem that arises from semiautomated data collection is that the ISSN is not a standard piece of metadata included in citation information. This portion of metadata is essential to determining the embargo status of scholarship, yet it is rarely included in unsolicited submissions or in collected aggregator/publisher notifications. Even if the ISSN is easily discoverable or included, it does not mean that the journal's information will be in Sherpa/RoMEO or, if it is, that it will be accurate.

NEXT STEPS

Several challenges remain in order to make this process more efficient. These include, in particular, ensuring full-text availability, streamlining notifications, and providing more dedicated staffing.

Full-Text Availability Remains a Challenge

Even though adding full-text availability was outside the scope of this case study, it still needs to be addressed in the future. While much of this scholarship is available in full text through a library database, downloading these versions from a database might violate institutional licensing agreements with that vendor. When considering this, directly requesting full-text files from the authors themselves may be best, but even if they comply, many faculty members will still likely only send the publisher's final version, which may be most restricted in relation to IR use. A greater effort will need to be made to educate faculty members on why a preprint (manuscript) or postprint (post-refereeing) version of their work could be more easily added to the repository.

More Efficient Saved Searches and Notifications

Considering the amount of duplicated notifications CCLS received from multiple saved searches, the search and notification processes will need to change. In particular, an overlap analysis will need to be conducted for these saved searches and the duplicated notifications will need to be deactivated, which will result in a more efficient stream of publication and indexing notifications.

» **Another unresolved issue in this process is how to account for the independent submission of scholarship from faculty and staff members. These unsolicited submissions, while previously very welcomed, complicate this new workflow, as they can sometimes have been added in a previous batch, include erroneous or incomplete (author-supplied) information, or be delayed for inclusion in a future batch.**

» **Moving the IR from the pilot phase to a sustained library practice can be problematic, but it can also help the library meet the institutional need of capturing the scholarly record. Many institutions are currently not capable of or choose not to do this, especially if they do not have a CRIS.**

More Dedicated Staffing

While this workflow could work with student worker support, future student staffing will need to be more sustainable, in order to save staff the time of repeated student training. This may preference the hiring of early-career students (i.e. freshmen or sophomores) or a full-time staff member to administer the workflow. Either way, more long-term staffing will likely be needed, albeit very limited increased staffing.

CONCLUSION

Moving the IR from the pilot phase to a sustained library practice can be problematic, but it can also help the library meet the institutional need of capturing the scholarly record. Many institutions are currently not capable of or choose not to do this, especially if they do not have a CRIS. Many IRs start their collections with a pilot project model, randomly creating records and adding materials from whatever can be found and is free to post. However, this model of random addition may not collect much of the institution's scholarly output and may paint an incomplete picture of the institution's professional scholarship. This fractured collection development might stem from a lack of awareness or access or an institutional culture of not reporting one's scholarship. However, often this may be due to a lack of staffing and/or a consistent, defined workflow.

As presented in this case study, one possible solution to capturing more of the institution's scholarship is to implement a workflow that would allow for more scholarly records to be created over time with less staffing. By using automated notifications, freely available tools such as Google Sheets, Power Tools, and Zotero, and an IR software batch upload option, more of an institution's academic landscape can be harvested without much additional staffing as compared to the pilot project phase or the cost of implementing a CRIS. While there is overlap with this new workflow between an IR and a CRIS, it is important to stress that they do not share all of the same functionality, including providing open access to scholarly research by including the full text with the metadata record when possible.

As also evidenced in this case study, the flow of IR submissions is likely to become more problematic than initially anticipated, due to staffing inconsistencies, unsolicited submissions, and duplicated uploads—to name just a few complications. As presented, this workflow will need to be amended in the future—despite an initial increase in metadata capture and record creation—to include more involvement from professional and graduate student staffing (and perhaps less undergraduate staffing), fewer saved searches, and a new procedure for accepting unsolicited items that will need to be implemented. If others wish to pursue a semiautomated method to populating one's IR, as presented in this case study, several factors need to be considered at length:

1. Technical Requirements of the IR: Do you have a vendor or locally hosted IR? What are the requirements for a batch upload? Does the vendor allow for changes to the batch upload requirements?
2. Addressing Quality Control for Record Creation: How does the IR handle large numbers of duplicate submissions and/or unsolicited submissions? Would a semiautomated method of submission complicate or improve this?
3. Staffing Concerns: Who works on the IR? Do you have dedicated professional staff or only student staff? Is there potential for high turnover (i.e. student workers)?
4. Stage of IR development: How old is your IR? How much financial, policy, and/or administrative buy-in does it have?

While more of the scholarly record is captured with this new workflow, problems remain, including a lack of full-text addition and copyright clearance, nondedicated or short-term staffing, incomplete metadata, and duplicated notifications and submissions. Limitations imposed by the Digital Commons batch-upload Excel file have also created difficulties, both in adding steps to the metadata editing process and in the inability to include certain metadata.

However, even with these challenges, this workflow begins to address Clifford Lynch's recent challenge to "re-think about the real prospects and best approaches and roles for IRs" (Poynder, 2016, p. 13). It moves the IR from the pilot phase into a more standardized method of growth, further capturing the institution's scholarly record, while limiting reliance on the institutional patron (i.e. the faculty member) for s

ABOUT THE AUTHORS: Jonathan Bull (Jon.Bull@valpo.edu) is the scholarly communication services librarian at Valparaiso University. Teresa Schultz (teresas@unr.edu) is the scholarly communications and copyright librarian, University of Nevada, Reno

REFERENCES

Aucock, J. (2012). Why not send a cataloguer? *Catalogue and Index,* 167, 28–32.

Bailey, C. W. (2005). The role of reference librarians in institutional repositories. *Reference Services Review,* 33(3), 259–267. https://doi.org/10.1108/00907320510611294

Baudoin, P., & Branschofsky, M. (2003). Implementing an institutional repository: The DSpace Experience at MIT. *Science & Technology Libraries,* 24(1–2), 31–45. https://doi.org/10.1300/J122v24n01_04

Bull, J., & Eden, B. L. (2014). Successful scholarly communication at a small university: Integration of education, services, and an institutional repository at Valparaiso University. *College & Undergraduate Libraries,* 21(3–4), 263–278. https://doi.org/10.1080/10691316.2014.932264

Coalition of Open Access Policy Institutions (COAPI). (n.d.). Retrieved November 8, 2016, from http:// sparcopen.org/coapi/

Cohen, S., & Schmidle, D. (2007). Creating a multipurpose digital institutional repository. *OCLC Systems & Services: International Digital Library Perspectives,* 23(3), 287–296. https://doi.org/10.1108 /10650750710776422

Connell, T. H., & Cetwinski, T. (2010). The impact of institutional repositories on technical services. *Technical Services Quarterly,* 27(4), 331–346. https://doi.org/10.1080/07317131003765993

Covey, D. T. (2009). Self-archiving journal articles: A case study of faculty practice and missed opportunity. *Portal: Libraries and the Academy,* 9(2), 223–251.

Covey, D. T. (2011). Recruiting content for the institutional repository: The barriers exceed the benefits. *Journal of Digital Information,* 12(3). Retrieved from https://journals.tdl.org/jodi/index.php/jodi/article/view/2068

Crow, R. (2002). The case for institutional repositories: A SPARC position paper. Research on Institutional Repositories: *Articles and Presentations.* Retrieved from http://digitalcommons.bepress.com/repositoryresearch/27

Cullen, R., & Chawner, B. (2011). Institutional repositories, open access, and scholarly communication: A study of conflicting paradigms. *Journal of Academic Librarianship,* 37(6), 460–470. https://doi.org/10.1016 /j.acalib.2011.07.002

Davis, P., & Connolly, M. (2007). Institutional repositories: Evaluating the reasons for non-use of Cornell University's installation of DSpace. *D-Lib Magazine,* 13(3/4). https://doi.org/10.1045/march2007-davis

Duranceau, E. F., & Kriegsman, S. A. (2013). Implementing open access policies using institutional repositories. In P. Bluh and C. Hepfer (Eds.), *The institutional repository: Benefits and challenges* (pp. 75–97). Chicago: American Library Association. Retrieved from https://dash.harvard.edu/handle/1/10202474

Flynn, S. X., Oyler, C., & Miles, M. (2013). Using XSLT and Google Scripts to streamline populating an institutional repository. *Code4Lib Journal,* 19. Retrieved from http://journal.code4lib.org/articles/7825?utm_source=tuicool

Foster, N. F., & Gibbons, S. (2005). Understanding faculty to improve content recruitment for institutional repositories. *D-Lib Magazine,* 11(1). https://doi.org/10.1045/january2005-foster

Jenkins, B., Breakstone, E., & Hixson, C. (2005). Content in, content out: The dual roles of the reference librarian in institutional repositories. *Reference Services Review,* 33(3), 312–324. https://doi.org/10.1108 /00907320510611348

Joint, N. (2008). Current research information systems, open access repositories and libraries: ANTAEUS. *Library Review,* 57(8), 570–575. https://doi.org/10.1108/00242530810899559

Kim, J. (2010). Faculty self-archiving: Motivations and barriers. *Journal of the American Society for Information Science and Technology,* 61(9), 1909–1922. https://doi.org/10.1002/asi.21336

Kipphut-Smith, S. (2014). "Good Enough": Developing a simple workflow for open access policy implementation. *College & Undergraduate Libraries,* 21(3–4), 279–294. https://doi.org/10.1080/10691316.2014.932263

Koopman, A., & Kipnis, D. (2009). Feeding the fledgling repository: Starting an institutional repository at an academic health sciences library. *Medical Reference Services Quarterly,* 28(2), 111–122. https://doi.org /10.1080/02763860902816628

Li, Y. (2016). Harvesting and repurposing metadata from Web of Science to an institutional repository using web services. *D-Lib Magazine,* 22(3/4). https://doi.org/10.1045/march2016-li

Lynch, C. (2017). Updating the agenda for academic libraries and scholarly communications. *College & Research Libraries,* 78(2), 126–130.

Mackie, M. (2004, April 30). Filling institutional repositories: Practical strategies from the DAEDALUS Project. *Ariadne, 39.* Retrieved from http://www.ariadne.ac.uk/issue39/mackie/

Madsen, D. L., & Oleen, J. K. (2013). Staffing and workflow of a maturing institutional repository. *Journal of Librarianship and Scholarly Communication,* 1(3). https://doi.org/10.7710/2162-3309.1063

Makori, E. O., Njiraine, D., & Talam, P. (2015). Practical aspects of implementation of institutional repositories in Africa with reference to the University of Nairobi. *New Library World,* 116(9/10), 610–640. https://doi.org/10.1108/NLW-10-2014-0125

Marsh, R. M. (2015). The role of institutional repositories in developing the communication of scholarly research. *OCLC Systems & Services: International digital library perspectives,* 31(4), 163–195. https://doi.org /10.1108/OCLC-04-2014-0022

Nykanen, M. (2011). Institutional repositories at small institutions in America: Some current trends. *Journal of Electronic Resources Librarianship,* 23(1), 1–19. https://doi.org/10.1080/1941126X.2011.551089

Oguz, F., & Davis, D. (2011). Developing an institutional repository at a medium-sized university: Getting started and going forward. *Georgia Library Quarterly,* 48(4). Retrieved from https://digitalcommons.kennesaw.edu/glq/vol48/iss4/5/

OpenDOAR. (2017). Growth of the OpenDOAR database – worldwide, institutional repositories. Retrieved from http://opendoar.org/onechart.php?cID=&ctID=&rtID=2&clID=&lID=&potID=&rSoftW areName=&search=&groupby=r.rDateAdded&orderby=&charttype=growth&width=600&height=350&c aption=Growth%20of%20the%20OpenDOAR%20Database%20-%20Worldwide,%20Institutional%20Repositories

Palmer, C. L., Teffeau, L. C., & Newton, M. P. (2008). Strategies for institutional repository development: A case study of three evolving initiatives. *Library Trends,* 57(2), 142–167. https://doi.org/10.1353/lib.0.0033

Poynder, R. (2016, September 22). Q&A with CNI's Clifford Lynch: Time to rethink the institutional repository? [Blog post.] Retrieved from https://www.richardpoynder.co.uk/Clifford_Lynch.pdf

Rybinski, H., Skonieczny, L., Koperwas, J., Struk, W., Stepniak, J., & Kubrak, W. (2017). Integrating IR with CRIS - A novel researcher-centric approach. *Program,* 51(3), 298–321. https://doi.org/10.1108 /PROG-04-2017-0026

Singeh, F. W., Abrizah, A., & Karim, N. H. A. (2013). What inhibits authors to self-archive in open access repositories? A Malaysian case. *Information Development,* 29(1), 24–35. https://doi.org/10.1177/0266666912450450

Strauss, B., & Miles, M. (2014, July). *Automating workflow: From a trickle to a stream.* Paper presented at the Digital Commons Great Lakes User Group Meeting, Valparaiso University, Valparaiso, IN. Retrieved from http://engagedscholarship.csuohio.edu/msl_facpub/105

Tate, D. (2012). Implementing a Current Research Information System (CRIS) with an existing institutional repository (IR): A brief overview. *Catalogue & Index,* 167, 24–27.

Viner, R. A. (2010). Pure silver: Reusing and repurposing bibliographic data in a current research information system and institutional repository. *Catalogue & Index,* 161, 34–40.

Wang, F. (2011). Building an open source institutional repository at a small law school library: Is it realistic or unattainable? *Information Technology and Libraries,* 30(2), 81–84. https://doi.org/10.6017/ital.v30i2.3008

Wesolek, A. (2014). Bridging the gap between Digital Measures and Digital Commons in support of open access: Or, how I learned to stop worrying and love human mediation. Retrieved from http://tigerprints.clemson.edu/cheer/scholcomm/all_scholcomm/4

Wrenn, G., Mueller, C. J., & Shellhase, J. (2009). Institutional repository on a shoestring. *D-Lib Magazine,* 15(12). https://doi.org/10.1045/january2009-wrenn

Xia, J. (2008). A comparison of subject and institutional repositories in self-archiving practices. *Journal of Academic Librarianship,* 34(6), 489–495. https://doi.org/10.1016/j.acalib.2008.09.016

Xia, J., Gilchrist, S. B., Smith, N. X., Kingery, J. A., Radecki, J. R., Wilhelm, M. L., ... Mahn, A. J. (2012). A review of open access self-archiving mandate policies. *Portal: Libraries and the Academy,* 12(1), 85–102. https://doi.org/10.1353/pla.2012.0000

Xia, J., & Sun, L. (2007). Assessment of self-archiving in institutional repositories: Depositorship and fulltext availability. *Serials Review,* 33(1), 14–21. https://doi.org/10.1016/j.serrev.2006.12.003

Zhang, H., Boock, M., & Wirth, A. A. (2015). It takes more than a mandate: Factors that contribute to increased rates of article deposit to an institutional repository. *Journal of Librarianship and Scholarly Communication,* 3(1), eP1208. https://doi.org/10.7710/2162-3309.1208

Creating Connections

» How Libraries Can Use Exhibits to Welcome New Students

Copyright Grand Valley State University, 2016

BY EMILY FRIGO, EMILY FISHER, GAYLE SCHAUB, AND CARA CADENA

THE EXPERIENCE

You're a college freshman living away from home for the first time. You don't know many people. It's the week before school, and you've been through several campus orientations. You decide to go to the library with your laptop, get a cup of coffee, and plan your first week. On the way in, you pass a glass-enclosed gallery and see a large mural of colored dots. Text on the door reads, "Connected: An Exhibit of Shared Laker Experiences." Curious, you decide to check it out.

Upon entering you see a poster which reads, "We're all human. We all have stories. In an increasingly noisy world, we may not always truly hear each other. Through shared stories, we can find connections, find community, and find ourselves." Watercolor portraits of eight current students hang on the walls. You read quotes from these students and learn something personal about each one. Matthew, an international student, shares that it's been difficult learning to cook for himself. "I usually just eat cereal," his story explains. Another student mentions how her relationship with her mother has improved since she moved away from home. Each anecdote is vastly different from the next, but they all read as authentic. The emotive power of watercolor brings each person to life in a unique way.

Then you see two iPads mounted on the wall, each with a set of headphones asking if you'd like to hear stories from more Grand Valley State University students. You put on the headphones and meet Elyse, 28, who just finished her first year at GVSU. After dropping out of high school and taking classes at a local community college in her early twenties, Elyse looks at education differently than she once did. She is a highly motivated, successful student who, after graduating, plans to pursue a master's degree in journalism and someday ride a motorbike through Vietnam.

Next you listen to Vanessa's story. She graduated in 2017 with a degree in allied health sciences and a minor in criminal justice. She plans to pursue a master's degree in public health. Growing up bilingual in a small town made Vanessa's transition to GVSU a bit of a challenge at first. Seeking out (and receiving) grants, getting involved with student support services, and being her own strongest advocate, Vanessa has become an amazing example for others on how to succeed at college, no matter what your background.

Through each of these stories, you start to realize that GVSU is more than just 25,000 students; it's 25,000 individuals who also didn't know what they were doing when they were freshmen, but who persisted, asked questions, and eventually met goals they didn't realize they had.

You hang up the headphones and find a large table inviting you to express how you're feeling about the new school year by painting a white paper dot in watercolor. Tips for painting in watercolor and a color wheel of emotions sit upright on the table—nervous is orange, hopeful is light green. Ten other emotions span the wheel. You tape your dot to the collective mural. You notice that many others have filled their dots with similar colors, and you begin to feel less alone. You've made your mark on campus, one of many you will make, signaling the beginning of your college experience.

INTRODUCTION

"Connected: An Exhibit of Shared Laker Experiences" was deliberately designed to support students at a key transition point—the start of the school year—by fostering social engagement and cultivat-

Copyright Grand Valley State University, 2016

Copyright Grand Valley State University, 2016

ing a sense of belonging, both of which can ease their acclimatization to college.[1] The exhibit, designed and curated by Erin Fisher, Gayle Schaub, Cara Cadena, and Emily Frigo, signaled to students that the Mary Idema Pew Library Learning and Information Commons is full of dynamic and accessible spaces, all intended to help them thrive. It proved to be a novel and meaningful way to reinforce the University's mission of supporting students. This article describes the exhibit itself and details the collaborative and participatory strategies used to engage visitors and build community through creative expression. While the exhibit has a student-centric focus, the design strategies and overarching philosophy can be adapted in all types of libraries.

BACKGROUND & RATIONALE

Grand Valley State University (GVSU) is a comprehensive university committed to providing students with a broad-based liberal education. The University Libraries demonstrates its student-centered focus with continual study of space usage in its buildings, robust patron-driven acquisitions, a peer research consultant program, responsive web design, and a curricular-based library instruction program. Faculty and staff strive to identify and provide support for students at their points of need.

The Mary Idema Pew Library, which opened in 2013, exemplifies a student-centered focus through both form and function. It was designed based on research of student study habits, preferences, and needs. The physical spaces accommodate students' desire for flexibility and comfort; the furniture is moveable, outlets are never more than a few feet away, ample natural light fills the space, and there is a wide range of seating options.

The building also includes dedicated spaces for events and exhibits in the hopes that students from all disciplines engage in moments of learning outside of the classroom. Library programming is also intended to enliven the atmosphere and signal that the library is a vibrant community gathering space. This includes the Gary and Joyce DeWitt Exhibition Space, the installation space for the Connected exhibit; it is centrally located and glass enclosed to encourage drop-in viewing. However, observations showed that few students visited the gallery outside of formally scheduled programming. Anecdotally, students have said they are unsure whether they are allowed in.

More broadly, some students and faculty report that the Mary Idema Pew Library can be an intimidating place. We wondered if library anxiety related to the building may be a factor inhibiting students from fully engaging with our spaces and thus our services. Libraries have long participated in orientation programs, summer bridge programs, and more, to raise awareness of the library and help students transition to college. Common across all these programs is the goal to create a positive experience with the library and thus help alleviate library anxiety.[2]

Erin, Library Program Manager, was searching for a creative and compelling way to show students that the gallery, like all other spaces in the library, belongs to them. Emily, First Year Initiatives Coordinator, wanted a unique way to welcome first-year students to campus and to the library.

STUDENT FOCUS

The starting point of a student's college journey is a crucial transition point for freshmen. Fisher and Hood's assertion, the most frequently cited to date in the literature, is that homesickness sets in after the first couple of weeks of the term.[3] Feelings of ineptitude and isolation can negatively impact a student's ability to succeed in college.[4] According to the GVSU MapWorks[5] 2013 and 2014 survey results,[6] Grand Valley students tend to score lower than students from peer institutions in the areas of academic and social integration, both factors that can impact student retention.[7] Engaging with peers is integral to a student's successful transition.[8] A participatory exhibit was an innovative way for students to connect with their peers and help normalize the emotions that accompany the start of the school year.

While GVSU has a robust library instruction program and information literacy is integrated into the General Education curriculum, it does not have a First Year Experience (FYE) program. Without a FYE program, support services are distributed across the Division of Student and Academic Affairs,

Copyright Grand Valley State University, 2016

making it challenging for GVSU Libraries to collaborate and integrate on campus. One of the goals of the exhibit was to raise awareness of the library's support services among other campus units. To see the true value of the library, the campus community needed to see beyond the beautiful, light-filled building to appreciate the staff and services that undergird it.

EXHIBIT EXECUTION

In August 2015, Erin and Emily's outreach efforts manifested in an exhibit titled "Letters for Lakers." The exhibit encouraged visitors to take a letter, leave a letter, send a letter. Approximately 50 unique letters containing encouraging messages, reflections, and memories related to the college experience were written by GVSU faculty, students, and staff. These letters were reproduced to fill 300 or so envelopes that hung on the gallery walls. In total, 220 letters were taken. Mailboxes were set up and blank letterhead sat on a table for students to write letters to their future selves. 165 students participated in this activity. All 1,000 postcards printed were taken. Student visitors were also encouraged to use sticky notes to leave encouraging messages for one another. 183 sticky notes were contributed. Student participation with the exhibit exceeded expectations, so plans were made to create a subsequent exhibit in 2016.

Colleagues Cara Cadena and Gayle Schaub, Liaison Librarians, joined Erin and Emily to form a working group in January 2016. Cara brought a needed and different perspective working with professional programs on our downtown campus; Gayle was invited because of her outreach efforts and her passion for supporting students. The group met several times to brainstorm ideas. We considered the space constraints, costs, technical expertise, and other elements while keeping in mind the stated goals:

- Entice students to enter and explore the exhibition space to signal to them that they can take ownership of the space.
- Invite students to join each other in collective expression through a participatory element.
- Generate a sense of welcoming to assuage feelings of homesickness.
- Signal to students that the library is a safe and welcoming space where students' voices are heard and valued.

Together, we decided that the 2016 exhibit would include student stories paired with watercolor portraits and audio stories. Through stories, we hoped to illustrate that no one is alone in their trepidation, happiness, and exasperation, and that the campus community works collaboratively to welcome and support them. A participatory component where visitors could directly contribute would also be included. The exhibit was inspired by many different creative influences, most notably the Oak Park Public Library's Idea Box, Humans of New York, Wendy MacNaughton, Damien Hirst, and StoryCorps.

WATERCOLOR PORTRAITS

In 2014, a dedicated group of GVSU students began taking photographs and gathering stories from fellow students in the style of the widely popular project Humans of New York, which pairs photographs of everyday people with person-on-the-street interviews. We approached Humans of Grand Valley (HoGV) as collaborators on this project because this style is one imbued with an overwhelming sense of authenticity. The student group gathered a special collection of stories specifically for the exhibit. Of the twenty stories they collected, eight were selected for display, chosen to represent a range of experiences and connect with our diverse student body.

We approached art and design students to find an artist to create the watercolor portraits. Alumna Ellie Lubbers was hired to create original illustrations of students based on photographs taken by HoGV. This resulted in eight stunning watercolor illustrations. Below each portrait was an excerpt from the full-length interview conducted by HoGV.

Ellie had been a resident assistant in the campus dorms. Her skills were paramount in making our vision truly come to life. She assisted with the overall exhibit design and installation, was instrumental in shaping the participatory component, and created promotional materials. Ellie also provided other critical feedback on how we could best reach students to accomplish the stated goals.

AUDIO STORIES

The impetus behind the collection of audio stories was the desire to make the exhibit as inclusive as possible, not just its content but also the modes of interaction with the content. The inclusion of recorded stories, separate from any visual representation, added another dimension to the peer-to-peer interactive nature of the exhibit. Audio stories were longer, more in-depth than the stories that accompanied the watercolors. The stories are digitally archived, with transcripts, keeping them accessible long after the exhibit's run.

As avid listeners of the weekly broadcasts of StoryCorps, heard on National Public Radio's Morning Edition, we understood the power of stories to inspire, unite, and comfort. In fact, StoryCorps's mission expressed perfectly one of our primary goals: "...to remind one another of our shared humanity, to strengthen and build the connections between people, to teach the value of listening, and to weave into the fabric of our culture the understanding that everyone's story matters."[9] Students narrating their stories for others to hear was an intriguing addition to the primarily visual exhibits visitors had experienced thus far in the library.

To solicit a wide variety of stories, we reached out to the directors, organizers, and faculty advisors of groups at GVSU that offer support, resources, and guidance to students of various backgrounds with differing needs. The invitation to participate didn't make any specific demands; students were simply asked if they'd be willing to tell a story or two about their experiences at GVSU.

We received responses from a number of student organizations representing students of varying ages and from a spectrum of gender, social, economic, and cultural backgrounds. Ten students shared their stories. The original, full-length recordings were transcribed and then edited into shorter sound bites for the online collection used in the exhibit. For most of the students, it was the only time they had been offered the chance to talk at length about themselves, to articulate their unique educational challenges and successes, and to be truly heard. For those who participated, the process of storytelling was as important as the stories themselves.[10]

One student's recording session included a highly emotional recounting of a racially charged conversation with a professor. Afterward, she recognized aloud that not only had she not intended to tell that particular story, she felt an extraordinary sense of relief and empowerment at having done so. In telling her story, she realized her experiences shaped who she was, helped her find strength, affected her career choices, and defined her self-worth. Another participant, a returning veteran student, military wife, and pregnant mother of a toddler, found the storytelling process unexpectedly cathartic. As she spoke, she came to terms with the incredible amount of work and stress she faced, breaking down more than once. For all ten participants, the exhibit creation process gave as much or more to them as it did to the visitors.

PARTICIPATORY MURAL

Approximately 900 cut circles of white vinyl stickers were affixed to a wall of the gallery to create the canvas for the temporary,

Copyright Grand Valley State University, 2016

participatory mural. Corresponding three-inch circles cut from watercolor paper sat on a nearby table along with paint, brushes, water, and instructions for the activity. A color wheel detailing a range of emotions was prominently displayed to guide visitors in creating a watercolor dot that was unique to their experience. Watercolor was an ideal medium for representing emotions and it provided a low-threshold way for anyone, no matter their artistic ability, to participate.

THE VALUE OF ARTS PROGRAMMING

The exhibit provided visitors with a visual, auditory, and tactile experience that was multivocal and interactive. No other means would have provided such capabilities; art historian Mark Getlein explains that art-making has the power to "Create places for some human purpose; create extraordinary versions of ordinary objects; give tangible form to the unknown; give tangible form to feelings and ideas; and refresh our vision to help us see the world in new ways."[11] The non-prescriptive nature of art also means that individuals can interpret work based on their own unique experiences. Through art, we created an accessible space where students could connect with their peers, the library, and the University at large in a novel way.

PARTICIPATORY TECHNIQUES

The exhibit's participatory artmaking element deepened students' experience by allowing them to not only consume its content but contribute to it as well. We were first introduced to the concept of participatory exhibits through the work of Nina Simon, author of The Participatory Museum. In the book, Simon explains that participation enables visitors to "create, share and connect with each other around content."[12] The techniques popularized by Simon have been widely adopted by museums, libraries, and other cultural institutions as a way to more actively engage visitors while still honoring the mission, vision, and values of an institution. Claire Bishop writes about participation in the realm of contemporary art in the book Participation. In the introduction, she lists three reasons why artists typically employ participatory techniques: they give the audience agency; they are less hierarchical than other modes of artistic production; and they create social bonds through collective expression.[13]

The Mary Idema Pew Library strives to create a learning environment that "supports the whole student through the academic journey."[14] Participatory exhibits are an exemplary way to build students' affinity for the library. We believe they lead to deeper engagement with our spaces and services, while also allowing students to make connections with their peers. Social connections are critical to students' overall success. Alexander Astin states that "peers are the single most potent source of influence," affecting virtually every aspect of their development.[15] Our exhibit goes far beyond traditional library orientations by acknowledging that social needs are equally as important as academic, and does so at a crucial time in their college journey. Even more, exhibits like "Connected" give students the opportunity to actively engage in creative expression, a key tenet of a liberal arts education.

EXHIBIT EVALUATION

Libraries of all types still struggle to find the appropriate means to evaluate cultural programming.[16] With each new exhibit, we consider new or revised ways to measure reach and impact more concretely. Our quantitative evidence is sparse but the qualitative evidence gathered suggests that the exhibit accomplished its intended goals.

We do not know how many people in total attended the exhibit because the space does not include sensors to count visitors. Our target audience comprised 4,380 first-time students. Almost 300 dots were painted as part of the participatory mural. Although attendance numbers do not directly correlate with value, the metric would be helpful to evaluate reach.

A small table near the mural wall included a comment box and slips of paper with a prompt asking students to "Tell us what element(s) of the exhibit you connected with most." Feedback was uniformly positive. We received 60 responses, including the following statements:

- "I loved that we can connect with the community with art, colors, and how we feel."
- "I connected with a few of the stories. I love how there is always someone out there feeling the same emotions."
- "So good! I never thought so many other students were as nervous all the time as I was."
- "Awesome! I enjoyed listening & reading others' stories. I can relate."
- "This was a beautiful opportunity! I loved being able to be creative which is something I don't get to do often!"
- "Thank you so much for bringing this here. It was a great outlet to silently release my emotions creatively."

CONCLUSION

Our organization supports a culture of innovation and informed risk-taking, which allows us to try new methods of engaging and supporting our students. The exhibit is a good example of that culture in action. Conceptualizing and designing a project of this scope and magnitude was not easy, yet creating spaces for discovery is worth doing. Like many art exhibits, ours was designed to elicit contemplation and creativity; we wanted visitors to listen and learn. Student stories were honest and insightful. The stories, the portraits, and the wall of emotions were intended to make visitors feel more connected to a place (Grand Valley) they would call home for the next several years, and a space (the library) where they would spend a lot of their time. They also reminded us, the exhibit organizers, that everyone has their own set of difficulties and triumphs.

The components of the exhibit were unique to GVSU. Your participatory exhibit will be unique to your library community, but the message will be the same: the library is a place where stories matter and individual voices are heard. ■

REFERENCES

Astin, A. W. (1993). *What matters in college?: Four critical years revisited.* San Francisco: Jossey-Bass.

Batty, P. (2014). MAP-Works executive summary. Retrieved from **http://www.gvsu.edu/cms4/asset/DD2DE79E-BC8A-0755-18696BC35286807F/map-works_exec_summary_2014.pdf**

Bishop, C. (2010). *Participation.* London: Whitechapel.

Fisher, S., & Hood, B. (1987). The stress of the transition to university: A longitudinal study of psychological disturbance, absent-mindedness and vulnerability to homesickness. *British Journal Of Psychology,* 78(4), 425.

Fraser, J., Sheppard, B., & Norlander, R. J. (2014). *National Impact of the Library Public Programs Assessment (NILPPA): Meta-Analysis of the American Library Association Public Programs Office Archives.* (NewKnowledge Publication #IMLS.74.83.02). New York: New Knowledge Organization Ltd.

Getlein, M. (2008). Living with art. New York: McGraw-Hill Higher Education.

GVSU Office of Institutional Analysis. (2013). Results from the MAP-Works survey of first-year undergraduates. Retrieved from **http://reports.ia.gvsu.edu/mw2013/MAP-Works_first-year_2013_report_031114b.pdf**

Jiao, Q., & Onwuegbuzie, A. (1997). Antecedents of library anxiety. *The Library Quarterly: Information, Community, Policy,* 67(4), 372-389. Retrieved from **http://www.jstor.org/stable/40039590**

Kuh, G., Kinzie, J., Buckley, J., Bridges, B., & Hayek, J. (2006). What Matters to Students Success: A Review of the Literature. Commissioned Report for the National Symposium on Post-Secondary Student Success: Spearheading a Dialog on Student Success. *National Postsecondary Education Cooperative* (NPEC).

Makowski, M. (2016). Mary Idema Pew Library named landmark library. GV Now. Retrieved from **https://www.gvsu.edu/gvnow/2016/mary-idema-pew-library-named-landmark-library-9603.htm**

Simon, N. (2010). *The Participatory Museum.* Santa Cruz, Calif: Museum 2.0.

Stanton, B. (2017). Humans of New York. Retrieved from **http://www.humansofnewyork.com/**

StoryCorps. (2017). Mission statement. Retrieved from **https://storycorps.org/**

Thompson, N. (2015). *Seeing Power: Art and Activism in the 21st Century.* Brooklyn, N.Y: Melville House.

Thurber, C. A., & Walton, E. A. (2012). Homesickness and adjustment in university students. *Journal of American College Health,* 60(5), 415-419.

Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research* 45(1) 89–125. Retrieved from **www.jstor.org/stable/1170024**

Tinto, V. (2010). From theory to action: Exploring the institutional conditions for student retention. In J.C. Smart (Ed.), *Higher Education: Handbook of Theory and Research,* Vol. 25 (pp. 51-90). DOI:10.1007/978-90-481-8598-6_2

Pass it on.

FOOTNOTES

1. Tinto, 1975; 2010 []
2. Jiao, 1997 []
3. 1987; Thurber & Walton, 2012 []
4. Tinto, 1975; 2010 []
5. MAP-Works is an online student retention tool administered by Skyfactor. []
6. Batty, 2014; GVSU Office of Institutional Analysis, 2013 []
7. Tinto, 1975; 2010 []
8. Kuh et al., 2006 []
9. StoryCorps, 2017 []
10. Audio stories featured students from: WISE (Women in Science and Engineering); TRIO Student Support Services, a federally-funded support program for first-generation and limited-income students; GVSU Crew (club sport); GVSU Veterans Network; Milton E. Ford Lesbian, Gay, Bisexual & Transgender (LGBT) Resource Center; Padnos International Center; DeVos Center for Entrepreneurship and Innovation. []
11. 2008, pp. 7-10 []
12. Simon, 2010, p. ii []
13. Bishop, 2010 []
14. Makowski, 2016, in an interview with retired Dean of University Libraries Lee Van Orsdel []
15. 1993, p. 398; Kuh et al, 2006 []
16. Fraser, et al., 2014 []

Reading Ghosts

» Monitoring In-Library Usage of 'Unpopular' Resources

BY STACEY ASTILL AND JESSICA WEBB

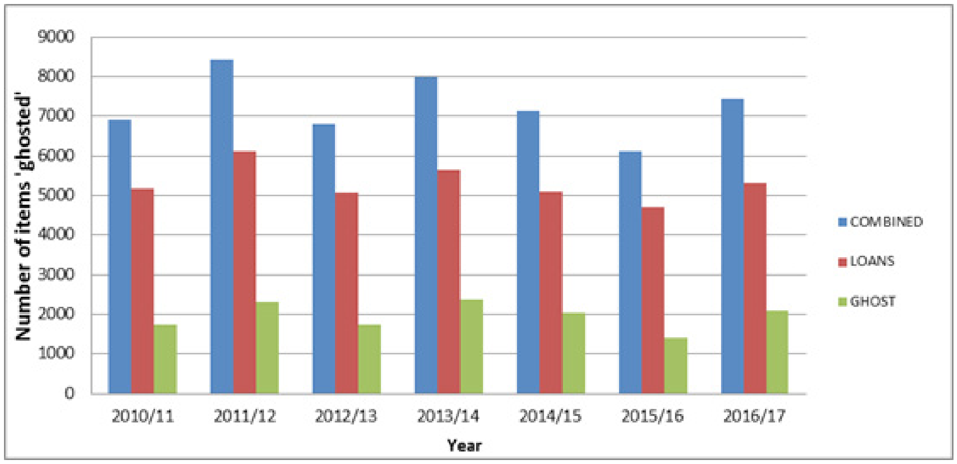


Figure 1: A breakdown of resource use at Keyll Darree Library 2010 – 2017.

SETTING

Keyll Darree Library is situated opposite Noble's Hospital in Braddan, on the Isle of Man. It is the only health and social care library on the island. Keyll Darree Library is responsible for supporting the entire Department of Health and Social Care, nursing and medical education departments, health and social care related charities, private care facilities, and any other groups with a need for these services.

Not all library users are library members (with some using the facilities for reference purposes only, or mainly accessing the computers), and they vary widely in age and discipline. Many of the most regular users are students actively engaged in a degree or other qualification, although this is often seasonal with peak usage around January, April, and November – tying in with exams, and essay deadlines.

PROBLEM

In 2010 library staff started to realise that they were removing items from the collection which library users would then claim they had regularly engaged with. This made no sense, as the record in Heritage (our library management software) was always checked for loan statistics prior to the removal of any resources. It then came to light that some library members, especially students, had been using the books in the library to allow them to share more effectively, and thus there were no loan statistics.

When this was combined with the fact that not all library users were actually members, so were unable to physically borrow books (even if they were reading them in the library), and the issue of swiftly reducing budgets it was decided that we needed to capture these statistics. At this time, our Heritage library management software did not include a function for recording this data, thus, the team devised a method of creating a 'dummy account' for our ghosting procedure in order to work around this system limitation. This has now been rectified in the latest software update and the system now has a specific function for recording in-library usage. Once we knew what was being used, we would be able to make more effective choices, and not have to replace books we had removed from the collection. These objectives have been met over the six years since implementation.

EVIDENCE

Effectively, the aim of our procedure was to keep track of all resources being used, not just those on loan. This would mean that all relevant well used resources would be kept, ultimately ensuring our user needs were engaged, and our collection was relevant for them. We have termed this procedure 'ghosting'. All library users (members and non-members) are asked to leave items they have used but are not borrowing on the tables. A member of staff collects these items twice daily and issues them to our dummy "Writer Ghost" account in Heritage and returns them to the library. This ensures that we gather statistics for items used within the library as well as those borrowed by users.

The statistic gathering ghosting process was implemented in a variety of ways, as this was a big change for a lot of people. Initially, staff put out signs asking library users to leave their books on the tables once they had finished using them, and highlighted the new policy during orientations. Luckily natural instinct also played to our favour as many of our users were pleased at not having to tidy up.

Staff also had to consider stealth ghosting. Some users who felt untidy leaving books out (but weren't dedicated enough to re-shelve) would leave piles of books on trolleys, shelves, and under cubbies in an effort to be tidier. We still find piles like this to this day, and now ghost these too.

Initially we compiled the data collected from our ghosting procedure into yearly amounts; we then compared this to loan values for the comparative years. This general overview of total resource (from both print and audio visual collections) usage and the breakdown can be seen in **Figure 1**. The general trend across total usage is quite interesting in itself, with the average usage remaining relatively constant between current values and those from the start of the statistical recording in 2010. Similarly, **Figure 1** also demonstrates how significant the ghosted resources are in the total library resource usage, making up 28% of the total resources used in the most current years data, 2016/2017, a significant amount of our yearly loans, a similar trend to a study by Rose-Wiles & Irwin (2016) which also found that nearly 30% of their circulation transactions were used 'in house', a significant amount of usage which potentially might have been overlooked if not, for the implementation of 'ghosting'.

Another trend we have been able to use ghosting to identify is the shift away from the traditional build up to April. Historically, there has been a dip in usage from the middle to the end of the year, as shown in **Figure 2** with January to March showing a marked increase in usage before a high peak in April.

Staff have traditionally assumed that as April is a dissertation deadline it will be the busiest for ghosting, and the early figures seemed to fit with this. However, by consid-

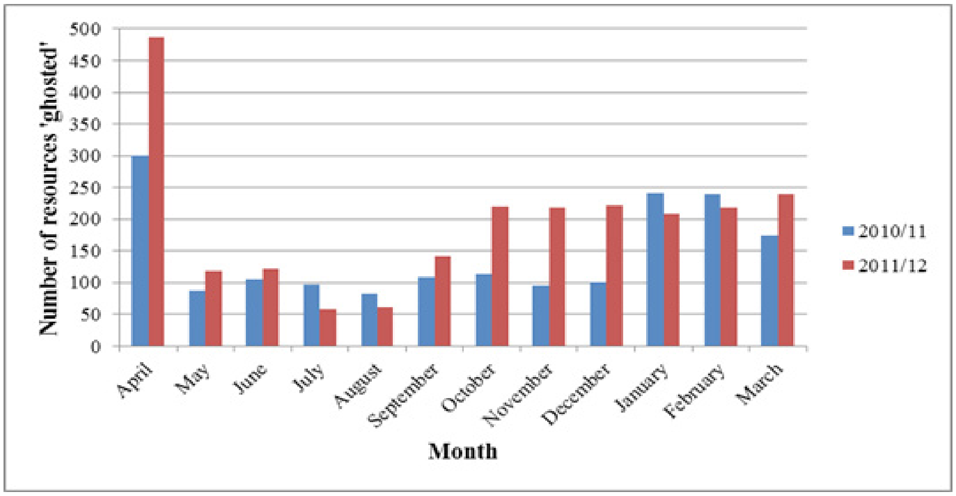


Figure 2: 2010/11 and 2011/12 monthly ghosting data.

ering the ghosting statistics in **Figure 3** we have been able to see that this trend actually changed in 2013 – yet this has still not filtered into staff consciousness. By reviewing the statistics from **Figure 3** we observe that from 2012 until 2016 this altering trend which has seen a second peak in October continues through the later years (which has sometimes become the heaviest period of usage).

IMPLEMENTATION

Due to these observed trends, we are able to plan the library's summer tasks more effectively. In previous years, we had budgeted time from May to November for large scale projects such as stock taking, and collection weeding - these are obviously processes which benefit from having a quiet library as they are disruptive to users. Since 2013/14 we have seen a second yearly peak taking place in October, and therefore we were able to schedule our project between the end of May and mid-September. This transpired to be a beneficial course of action as the October ghosting for 2016/17 transpired to be significantly higher than the peak in "dissertation season" (February to April).

OUTCOME

Overall, the process of ghosting is suited well to our service. This process was introduced to allow monitoring of in-library resource usage, and does so.

Alongside the variety supportive measures used to ensure that we are tracking resource usage within the library, the library has a final fall back for the library users in the form of a withdrawn book for sale shelf – if a book is somehow withdrawn despite regular usage then it is possible for a library user to purchase it.

As a small library with a strong core of regular users we are highly able to engage with them regarding their reading habits, ask questions about the resources, and understand what they want from our service. Because of the benefits we have seen, such as a reduction in the removal of well used items; better tracking of busy periods for study desk use (allowing us to plan staff projects); and a fuller picture of resources usage as a whole, ghosting is a process which we will continue.

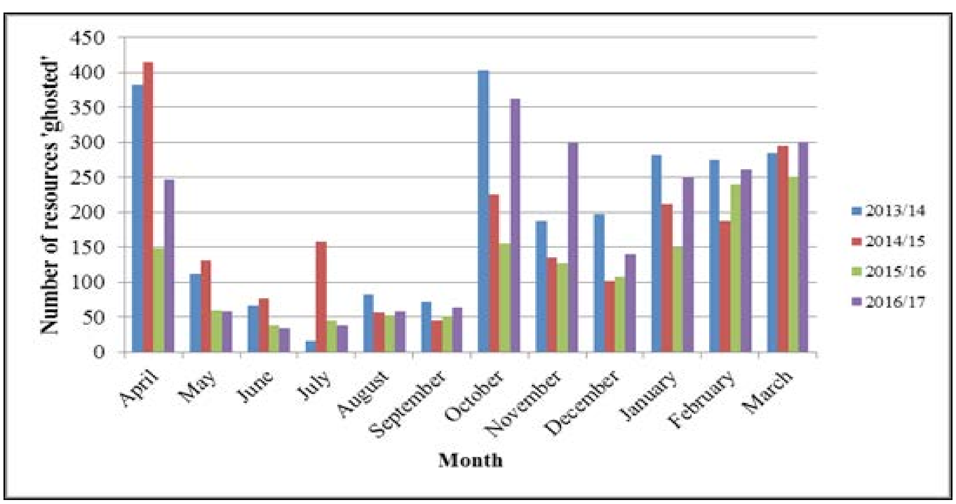


Figure 3: 2013/14 onwards monthly ghosting data

REFLECTION

It is important to note that ghosting is most effective because it is used in tandem with other methods. The process itself is not without limitations and therefore other safeguards must be in place. It is possible that users are leaving them because the items are not useful and there are more relevant resources which they then borrow from the library. Purely because an item has been taken off the shelf, we cannot actually guarantee that it is being used on every occasion. However, to combat this issue there is a suggestions box in the library where users can mention limitations or benefits of certain resources. Staff are often approached by users who want to provide feedback about the resources they have been using. We also have a system of online reviews to support user feedback, although this is underused at present. Staff are working to continually promote it, and encourage users to provide feedback via a text review, or a star rating system (1-5). When verbal reviews are given, staff (after gaining permission) will write these up and add them to the catalogue. ■

 Article first appeared in Evidence Based Library and Information Practice, Vol. 12, No. 4. https://journals.library.ualberta.ca/eblip/index.php/EBLIP/article/view/29318/21452

ABOUT THE AUTHORS: Stacey Astill (Stacey.Astill@gov.im) is a senior library assistant at Keyll Darree Library, Learning Education and Development (LEaD) Cabinet Office, Isle of Man Government, Braddan, Isle of Man. Jessica Webb (Jessica.Webb@gov.im) is a library assistant at

Keyll Darree Library, Learning Education and Development (LEaD) Cabinet Office, Isle of Man Government, Braddan, Isle of Man.

REFERENCES:

Rose-Wiles, L. M., & Irwin, J. P. (2016). An Old Horse Revived?: In-house Use of Print Books at Seton Hall University. *Journal of Academic Librarianship*, 42(3), 207-214. http://doi.org/10.1016/j.acalib.2016.02.012

Strategic Library™

Strategic Library focuses on innovation, best practices, and emerging trends in the complex and rapidly evolving library landscape.

Published monthly, Strategic Library assists administrators and managers in all types of libraries as they deal with day-to-day and strategic challenges. In-depth articles, written by highly regarded professionals in the field, focus on leadership, management, evaluation, assessment, marketing, funding, and more to promote organizational success.

Strategic Library is delivered direct to your desktop, as adigital download.

Special Charter Subscriber Offer!

Yes! Please enter my subscription to Strategic Library at the special charter subscriber rate of $99 for one year (12 issues), a $60 savings, or $299 for a site license (save $200).

Pay Online
Subscription Options
Single Subscriber $99.00 USD

Pay by Mail
Please complete and mail this form to:
LibraryWorks, Inc.
7823 Stratford Rd, Bethesda, MD 20814

(Make check payable to LibraryWorks, Inc.)

FIRST NAME:______________________ LAST NAME: ______________________
TITLE: ______________________ ORGANIZATION: ______________________
CITY: ______________________ STATE: ______________________ ZIP/POSTAL CODE: __________
PHONE: ______________________ E-MAIL ADDRESS: ______________________

Bill Me

FIRST NAME: ______________________ LAST NAME: ______________________
TITLE: ______________________ ORGANIZATION: ______________________
CITY: ______________________ STATE: ______________________ ZIP/POSTAL CODE: __________
PHONE: ______________________ E-MAIL ADDRESS: ______________________
PO # (IF APPLICABLE): ______________________

Thank you! Your subscription will begin upon receipt of your payment.

Strategic Library™

LibraryWorks®

Jennifer Newman
PUBLISHER
jenny@libraryworks.com
240.354.1281