

Wiki Pushing for Doubters: A Successful Applied Model [developed by a reluctant late adopter]

Donna Hayward and Lorelei Rutledge

Introduction

In 2008 our large, multi-library University of Michigan system developed a wiki to serve as an online repository for information relevant primarily to reference and other public services staff. What started as a place to store and share passwords, training manuals, and reference sources for repeat assignments, evolved into a robust collaborative space where any library staff member is invited to view, edit and create any material of interest to public services library staff.

This effort succeeded in making information more easily available to staff wherever they work, and allows us to capture some of the unwritten institutional knowledge previously shared only between employees in person or exclusively within decentralized groups. Through this initiative we have made progress toward ensuring a consistent base level of knowledge of all service providers across the library system. All librarians, student reference assistants and newer reference providers have equal access to the information needed to provide excellent service to our patrons, independent of location, time, library, and availability of training and mentoring opportunities.

We chronicle the extensive and unexpected benefits, and frustrating and surprising challenges of adopting such a technology for intra- and inter-library information sharing within our library system. We outline how we conceptualized, planned, and de-

veloped our wiki to improve collaborative communication, offering a set of strategies and tools that might transfer to other initiatives at other institutions. We describe our basic evaluation of the use of, and attitudes toward the tool, and how we used the results to try and address barriers to use and adoption.

Social Networks in the Workplace

Wikis, as Cunningham, the creator of the technology explains, are a simple kind of database designed to enable quick collaboration.¹ In their ideal application, wikis “facilitate collaborative authorship, enabling democracy in the workplace, making the act of cooperation comprehensible, enhancing efficiency, and allowing the interlinking of pages.”² A scan of the literature shows that both the advantages and challenges of adopting wikis and other social networking tools in any work setting are universal. The common need is to gather dispersed expertise, consolidate isolated information portals and disperse the responsibility of maintaining the knowledge-base to all who may benefit.

In his article, “Improving Workplace Performance,” Cross echoes Cunningham, asserting that social networking tools can have a democratizing effect of the recently evolving communication networks in the workplace.³ Addressing their direct and practical use, he singles out evolving training and learning

Donna Hayward is Information Studies Librarian at MLibraries, University of Michigan, e-mail: dlhodge@umich.edu; Lorelei Rutledge is University Library Associate at MLibraries, University of Michigan, e-mail: rutledgl@umich.edu

methods in the workplace.

Knowledge workers are becoming self-service learners, taking on responsibilities that once resided with supervisors and the training department. Knowledge work requires judgment and decision-making, and workers are beginning to use those abilities to manage themselves.⁴

Ras and Rech describe the dominant learning and working styles of the next generation of software engineers in-training:

“because they are digitally literate, always connected to the Internet and their social networks. They react fast and multitask, prefer an experimental working approach, are communicative, and need personalized learning and working environments. Reusing experiences from other students provides a first step towards building up practical knowledge and implementing experiential learning in higher education.”⁵

In examining the efficacy of using social networks for learning, results showed an improved “knowledge acquisition of 204% compared to conventional ...” training methods, making a strong argument for the use of these tools in the workplace.⁶

Since wikis became more widely adopted in the early 2000s, numerous library professionals have documented their experiences using the technology, attesting to their benefits. A 2009 study of academic libraries found that “Among the 48 university libraries responding... 16 (33.3%) were using wikis for work, 4 (8.3%) were experimenting with using wikis, 13 (27.1%) were planning to use wikis, though they are not currently doing so, and 15 (31.3%) did not plan to use wikis at all.”⁷ The most cited reason for using wikis was “enhancing information sharing among librarians.”⁸ In addition to facilitating communication, the ability to allow users with appropriate permissions to update material is also highly valued. Dworak and Jeffery, when describing San Diego State University’s intranet transition to a wiki-based format, note that it allowed more non-technical staff to add information.⁹

Organizations of all kinds have discovered the wiki as a possible solution for internal communication needs. The tool resonates with the ways new pro-

fessionals are accustomed to learning and capitalizes on the desire of established professionals to realize the benefits of distributed knowledge creation.

Challenges in Implementation

It is helpful to acknowledge that adopting these tools successfully requires overcoming common challenges.

“Perhaps the biggest concern corporate managers have about Web 2.0 applications is that they’ll lead to employee rebellion, uncontrollable outbursts, leakage of sensitive information, and other kinds of mayhem. They fear that people will rise up and turn on the organization.”¹⁰

Management may not actually fear *mayhem*, but the openness of wikis are an area of concern within organizations. The evidence of their effectiveness is growing however, and organizations have decided to grapple with the challenges in order to claim the greater productivity and efficiency promised.¹¹

Information Technology (IT) departments, those charged with managing the technological environment in which these tools reside, are put in the position of learning to support the new tools while balancing new security risks and data access and management challenges.¹²

Unsurprisingly the most common problem is users’ low participation rates.¹³ Personnel are reluctant to invest the time to learn how to use a new tool, amid concerns that it will soon be replaced by yet another. Users are also resistant to expend the extra effort editing content, particularly since this may not previously have been part of their work responsibilities.

Project Setting

The University of Michigan’s large research library system is made up of seventeen libraries, housed in twelve buildings widely dispersed over three campuses. Each library offers independent reference or information services, and most participate in a shared email and chat service known as Ask a Librarian. Library staff number five hundred and eight, with two hundred and one public services personnel and a total of one hundred and forty six librarians. With such a large system, operations have tended to be decentralized, with each library managing its collections and services independently.

In this environment then, it is not surprising that different service points maintained separate wikis, separate print reference training manuals, and static procedural and policy guidelines accessible via binders at desks and files stored in shared server spaces. In addition, often individual staff members maintained personal email archives of information useful to them in their public service roles.

Project Plan

The first step of initiating our project was to develop a project plan. Time taken to carefully craft a comprehensive outline at the beginning stages paid off many times over throughout the life of the project, and served many purposes. Most obviously, those implementing the plan used it as an outline of work progress, but at least as important, it was used to gain support of critical stakeholders important to the success of the project. Our carefully thought-out plan was used to address questions and concerns of administration, management, early adopters and trend setters who would lend legitimacy and authority to the project.

Our project plan included the following elements, proposing solutions or strategies for addressing anticipated issues at each stage:

- Description of the collaborative information sharing need;
- Clearly defined and bounded purpose;
- Confirmation of informal commitment by key players, particularly those managing large sets of content;
- Plan for securing active support of a broad and diverse set of stakeholders;
- Outline of content organization, population and management strategies
- Outline of ongoing page and repository maintenance;
- Plan to develop best practices, to be developed and updated on an ongoing basis;
- Training and support program; and
- Commitment to an evaluation of wiki use and effectiveness.

A timeline was agreed upon by all key players, allowing colleagues to organize their resources to meet

Adoption of New Technologies

When exploring the adoption of new technologies, it is helpful to be mindful of the following realms, all of which require close attention:

Administrative

- Organizational support and commitment is critical.
- Library staff must embrace the value of experimentation even if no product is in sight.
- Honest, open, non-controlled, non-mediated communication across and between units and departments.

Technological

- Evaluate technologies using criteria dictated by the need.
- Find the right tool for the task.
- Engage knowledgeable staff outside normal work groups.
- Ask for help and tap other resources.
- Evaluate project needs.

Motivational:

- Be prepared for different levels of intensity and different periods/cycles of participation.
- Don't be discouraged by temporary environmental conditions - view exploratory work like R&D (research and development).
- Have courage to explore and experiment.
- Recruit caretakers of ongoing projects.
- Encourage staff to act as resources for colleagues.

Adapted from Desai, et al., "Planting 2.0 Seeds," LITA Forum 2008 Poster Session

project goals. Deadlines were realistic, had some flexibility built in, but were not so generous that enthusiasm waned due to inactivity.

Administrative Support

The institutional culture of MLibrary is such that innovation and creative problem-solving is encouraged and supported. One illustration of this philosophy is the initiative to challenge and encourage all library staff to learn about, experiment and adopt Web 2.0 technologies in their everyday work. All staff were encouraged to participate in the series of lectures and workshops, branded the MLibrary 2.0 Series, during the summer of 2007. As the reference wiki was borne out of this initiative, gaining administrative support for the project was a something of a formality, but was still necessary and lent the project authority when talking with stakeholders.

There is conflicting evidence about the necessity of upper-level support for the adoption of new technologies in the workplace. White and Lutters found that lack of support from management in organizations often lead to failure. "Every site that was unsuccessful in adoption cited lack of management support as a primary reason."¹⁴ Participants in the study suggested that, "lack of support was often caused by fear of the openness," since many managers feared that allowing open editing would create problems," a common barrier to success.

On the other hand, as one might expect, the success of these social tools is highly dependent on buy-in from individuals. In one setting where wikis were used successfully, "the activity we found was overwhelmingly bottom-up, driven by individual contributors. They saw wikis as a place to post or find useful information or answers to frequently asked questions, a place for knowledge that is usually shared informally, and not necessarily efficiently, because it was previously undocumented or inaccessible."¹⁵ Therefore if staff identify with and understand the need the wiki is meant to address, and feel a sense of personal responsibility for their part in maintaining the tool for themselves and for others, the odds of success are high.

The characteristics inherent in social network technologies bode well for their potential to effect change within an organization. The absence of a culture that embraces innovation and openness need not be an insurmountable barrier. The beginnings of a collaboratively developed resource, widely shared and

used, can be held up to demonstrate its effectiveness to those who fear large negative impacts of such technologies. Administration supportive of transparency might even use the broad application of these tools to try and dismantle dysfunctional structures of control within libraries or departments.

Stakeholders

Key stakeholders were identified as those engaged in managing service points, including the training of new reference staff. Securing a commitment from reference coordinators of the five largest libraries to use the wiki for training, ongoing skill development, and staff communication was, and continues to be, the single most important factor in the wiki's success. Working within a culture of cooperation and collaboration was a distinct advantage. Having informal conversations with key stakeholders to gauge buy-in was an important step in making the decision to move forward with the project before presenting a formal plan to administration. At the point at which potential participants are gathered to discuss the plan, those in attendance were ready to commit their time and resources to the project.

Our plan utilized a tiered roll-out method of involvement. The largest early adopter groups started the project, paving the way for other libraries. After the benefits were clearly demonstrated, others used material already in the wiki as a model for their own presence.

Purpose

- Build a flexible, easy to find, easy to use tool to share materials used to assist patrons.
- The wiki will enhance, but not duplicate, other repositories of information or modes of communication.
- Staff will use the wiki to share information that is not, or should not, be available to patrons.

Developing a clear purpose for the wiki was essential in communicating its utility to all potential users. Time was spent in the workshops offered to all staff discussing the purpose of the wiki; both the needs the tool did and did not intend to address. This helped to clarify, situation by situation, our vision of what one might find and add, providing reluctant adopters with coherent and specific ways they would benefit by using the wiki. For example, we were able to respond to

a pressing need among public services personnel for a place to keep easily updatable solutions for printer and computing troubles commonly and frequently encountered by reference staff.

Content Organization

An anticipated challenge was establishing the degree and method of content control. As librarians we understand and appreciate the advantages of bibliographic control, yet the strength of wikis include the ability to allow for organic and evolutionary growth. In our experience, the anticipated challenge was not actually realized. There was universal agreement among first tier stakeholders that categories should be assigned to each page, creating an organization system as content was added. Best practices would be readily available in the wiki, emphasized in training, and explained in terms of findability. Our evaluation results strongly suggest that this value was accepted by librarians.

In addition to the active use of categories, master pages were created to co-locate similar pages created by each library, making finding local information easier. Master pages include Printers, Computers, Desk Tracker (widely used statistics tracking tool), Phone numbers, Directions, Parking, Fax machines, etc.

Another convention which seemed to work well is the inclusion of an "Edit Needed" category, which is assigned to all pages authors and editors believe are incomplete. This convention makes management of incomplete pages easier for editors, since in theory, all pages that need work can be brought up in a single list.

Content Population & Management

Adding a critical mass of information in the wiki before roll-out to the whole library was an important element of the plan. The usefulness of the tool should be immediately apparent. To meet this goal the first tier partners agreed to add all their training, policy and procedural materials, building information, etc.

Most first tier partners adopted the recommended content population and management model; a dedicated wiki content manager, and two additional dedicated wiki editors per unit. In most cases, wiki content managers were coordinators of reference services and wiki editors were student associates with two year appointments. As reference trainers, content managers had a personal stake in their pages as they

had each made a commitment to make the wiki integral to their training. This model has continued to work well two years later. Challenges with turnover of student associates are mitigated by staggered appointments, ensuring some wiki editor continuity.

Adoption Strategies

As already noted, the most common difficulty with wiki adoption is users' low participation rates.¹⁶ Simple strategies for encouraging adoption of the tool were recommended to all partners.

Integrating the wiki systemically into the everyday workflow of staff, guarantees some degree of basic use. In advising participating libraries in strategies to get staff to use the wiki, making a complete switch to the new online repository was advised. One library stopped issuing printed training manuals to new staff members, building in the need to use the wiki to access training resources and to continue to use the wiki as a reference during their first shifts. Establishing this habit early ensures that when encountering a situation with which they are unfamiliar, their first instinct is to check the wiki.

Other strategies used to encourage adoption were providing quick links on the browsers of reference desk machines, placing a link to the wiki on the front page of the staff website, and inviting individuals to create pages about areas of expertise.

Training

After two waves of content population by two groups of partners, we rolled out the wiki to all staff. The roll out included scheduling multiple wiki workshops, open to all library staff. These were surprisingly well-attended by staff from all over the library system. Additional workshops had to be scheduled to accommodate the demand.

Evaluation

Based on anecdotal evidence, from the perspective of reference coordinators, the adoption of the wiki has been very successful. At the same time we were aware that adoption across populations and libraries was uneven. We were also aware of some frustration experienced by users. In order to better understand how well the tool was meeting the identified need, we developed an evaluation project, which was included in the original project plan. The goal was to gauge the degree of adoption and to identify gaps in coverage

and barriers to use. The assessment informed our work in improving access to content and has helped determine new directions for the wiki. The focus of the evaluation was wiki use by reference staff.

Survey Results.

Unsurprisingly, eighty five percent of survey respondents were staff whose home library participated as a first tier partner in the building the wiki. Those libraries with a larger stake in the project derived the most benefit from the tool.

As expected most of the time staff used the wiki to help patrons, but surprisingly, staff used the wiki to assist in their own work twenty four percent of the time. We would go on to expand use of the wiki as a collaborative work space, but this result told us that librarians were looking to the tool for more than providing information to assist patrons.

Results that were most helpful in making the wiki more user-friendly were related to what information they search for or would like to find. Printing/photocopying instructions and troubleshooting guides, fax machine location and desk procedures were ranked as the most useful pages. Computing, electronic access, sets of library pages and the search function were also ranked as highly useful. Some users found it difficult to find the information they needed and some told us they found conflicting information in different places in the wiki. Others questioned whether or not some of the material was regularly updated which made them wonder if they were finding the most up-to-date information.

Despite the ability to edit and create pages, relatively few people did the bulk of the editing and development. Thirty seven percent of respondents reported that they had never edited a page, while only six percent of respondents reported editing the wiki three or more times a week. Twenty four percent of respondents reported editing the wiki a total of between two and four times over an eight month period. Occasional editors reported forgetting how to format entries between edits since they often forgot how to format entries, and found it frustrating to have to search each time for the proper formatting.

Overall, staff were positive, with many respondents offering encouraging comments to continue with the initiative. Findings indicated that the more staff used the wiki, the more they became familiar with the contents, which resulted in a stronger sense

of responsibility to contribute. Editing a few pages often solidified staff commitment to the tool. Efforts continue to support staff in integrating use of the tool into their everyday workflow.

Measures of Success

The survey was one method used to evaluate the success of our initiative. Another was anecdotal evidence such as the pace of growth of the resource, comments of users, frequency of overheard references to the wiki, all of which contribute to a perception of the degree to which the tool has been integrated into the workflow of staff.

Perhaps the most meaningful measure of the successful adoption of the reference wiki is the interest generated across the library system, both in the platform and in our iteration of the tool. More than half of the attendees at training workshops offered upon rollout were staff in units outside the reference and instruction divisions. The technical services department was the most heavily represented group at our most recent workshop.

The ultimate indication that our project was successful was the decision to expand the wiki to include instruction-related materials. The reference wiki has now grown and evolved into the public services wiki, and all indications are that use of the tool across our library will continue to grow at a healthy pace, well into the foreseeable future.

Notes

1. Leuf and Cunningham, *The Wiki Way*, 14
2. Chu "Using Wikis," 170
3. Cross, "Improving Workplace Performance," 23
4. *Ibid.*, 24
5. Ras and Rech, "Using Wikis to Support," 553
6. *Ibid.*, 553
7. Chu, "Using Wikis," 172
8. *Ibid.*, 172
9. Dworak and Jeffery, "Wiki to the Rescue," 408
10. Jander, "Web 2.0 Balancing Act," 44
11. *Ibid.*, 42
12. *Ibid.*, 44
13. Chu, "Using Wikis," 173
14. White and Lutters, "Collaborative Remembering," 2
15. Gruden and Poole, "Wikis at Work" 4
16. Chu, "Using Wikis," 173

References

- Chu, Samuel Kai-Wah. "Using Wikis in Academic Libraries." *The Journal of Academic Librarianship* 35 (Mar 2009): 170-176.
- Cross, J. "Improving workplace performance." *Human Capital Management* (Sept.-Oct. 2007): 23-4
- Desai, Shevon, Donna Hayward, Susan Wortman, Karen Reiman-Sendi "Planting 2.0 Seeds in the Academic Library Community Garden." (Poster presented at LITA Forum 2008 Poster Session, Cincinnati, OH, 16-19 Oct, 2008).
- Dworak, Ellie, and Keven Jeffery. "Wiki to the Rescue: Creating a More Dynamic Intranet." *Library Hi Tech* 27, no. 3 (2009): 403-10.
- Grudin, Jonathan and Erica Shehan Poole. "Wikis at Work: Success Factors and Challenges for Sustainability of Enterprise Wikis" (Paper presented at WikiSym '10, Gdansk, Poland, 7-9 July 2010)
- Jander, Mary. "The Web 2.0 Balancing Act." *InformationWeek* 1220 (Feb 16, 2009): 42-48
- Leuf, Bo and Ward Cunningham *The Wiki Way*. Boston: Addison-Wesley, 2001)
- Ras, Eric and Jorg Rech "Using Wikis to Support the Net Generation in Improving Knowledge Acquisition in Capstone Projects," *Journal of Systems and Software* 82 (April 2009): 553-62
- White, Kevin F. and Wayne G. Lutters "Midweight Collaborative Remembering: Wikis in the Workplace" (Paper presented at CHIMIT'07, Cambridge, MA. 30-31 March 2007)