Who Moved My Intranet? The Human Side of Introducing Collaborative Technologies to Library Staff

Keven Jeffery [a] & Ellie Dworak [b]

[a] Library & Information Access, San Diego State University, San Diego, California, USA

[b] Albertsons Library, Boise State University, Boise, Idaho, USA

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KEVEN JEFFERY

Library & Information Access, San Diego State University, San Diego, California, USA

ELLIE DWORAK

Albertsons Library, Boise State University, Boise, Idaho, USA

Intranets can be crucial tools in fostering communication within an academic library. This article describes the successful implementation of an intranet wiki at the San Diego State University Library & Information Access. The steps involved with implementing, marketing, and supporting the MediaWiki software are described, and the results of a user survey are discussed. The survey, which was answered by 50 percent of intranet users, indicated that while the intranet was well used by all respondents, librarians were more active and more comfortable using the editing features of the wiki software. Recommendations for similar projects are offered based on the findings and experiences.

KEYWORDS   intranets, wikis, MediaWiki, staff training, communication, strategic planning, libraries, reference services

INTRODUCTION

In fall 2007, the San Diego State University (SDSU) Library migrated from a static HTML intranet to a wiki intranet using MediaWiki (Wikimedia Foundation) software (http://www.mediawiki.org). The MediaWiki software was chosen because it was open source, used software (PHP and MySQL) supported at the library and had a large user community, including the popular Wikipedia free encyclopedia (http://wikipedia.org). This migration was

completed by two librarians and an IT staff person, who was also the intranet Webmaster. In doing so, the group shifted the responsibility for content development and maintenance from a single Webmaster (with several backups) to all library employees. This change was made in the hopes that this would lead to a more dynamic, relevant, and current intranet. For such a major reallocation of accountability to be successful, library employees had to be persuaded to participate in this process. Without voluntarily participation, the move to this new, more dynamic format would be a wasted effort. This article explores the measures that were taken to garner involvement in this technology change, analyzes the results of these efforts, and offers suggestions and next steps.

LITERATURE REVIEW

According to Hamilton Mphidi and Retha Snyman (2004), intranets can, among other things, be used to share knowledge, create trust, and improve decision making and services (394). They are, therefore, an important addition to the communication tools of any large organization, including libraries. The development of a successful intranet has been compared to an evolutionary process that occurs over time and involves a range of actors within an organization (Martini, Corso, and Pellegrini 2009, 295–296). It is consequently important in the success of an intranet to create value for both the organization and the employees who will rely on it as a communication tool. A key part of this process is to involve everyone in the project (301).

Evaluations of library intranets, however, have found that librarians and professionals can be more invested in online communication than supporting staff members, who can be unaware of the tool or believe it is not targeted to them (Robbins, Engel, and Bierman 2006, 270). While it is no doubt important to have top-level encouragement for Web 2.0 adoption (Köhler-Krüner 2009, 42–43), it is perhaps more important that staff members are completely involved. Staff should be fully invested, not only as an exercise in morale building, but also because many students have been found to not differentiate between the types of academic library employees assisting them. These students expect all library employees to have the tools to answer their questions in a satisfactory manner (Sult and Evangeliste 2009, 249–250). If staff members are left out of the information-sharing process, library patrons are in danger of not receiving a consistently high level of service.

Creating online collaboration and information sharing between organizational actors is a strength of wiki software. Wikis can be used as storehouses of institutional knowledge, aiding reference desk staff (Dworak and Jeffery 2009, 404), and can, perhaps more importantly, become a "collective resource" helping to remind each employee that they are responsible for intranet content (409). Wikis, like any Web 2.0 tool, are also useful, as they

democratize access to the method of creating content, avoiding the danger that information technology staff members are the only drivers of software adoption (Köhler-Krüner 2009, 42).

Intranets can be unsuccessful for a multitude of reasons, including the failure to consider the organizational goals, lack of vision, absence of commitment and responsibility, conflicts, and role misunderstandings (Martini et al. 2009, 296). It seems that the collaborative nature of the wiki can overcome many of these issues, especially in an organization where there is a continuous drive for improvement (Köhler-Krüner 2009, 42).

CULTIVATING INCLUSION

The SDSU Library is a fairly large organization, with 28 librarians, 53 staff members, and four administrators. There are only one or two layers of management between front-line employees and the dean of the library. While technology change always requires a level of staff buy-in, it is crucial in an organization where individuals are given a great deal of responsibility for determining how they do their daily work, as is the case in a flatly structured organization.

The methods this group used to build staff involvement required effort in the areas of communication and training. Anecdotally, the major reasons for technology adoption failures at the SDSU Library were that users did not know who to talk to or that the service was available, users were intimidated by the change, or users felt too busy to dedicate time to learning something new. By offering training and support, the implementation group tried to alleviate the concerns about the wiki being too complicated or otherwise intimidating, offer employees a dedicated time to learn the new tool, and continuously market the new software.

Recognizing the importance of buy-in, the intranet team encouraged involvement by conducting surveys, transferring content, conducting workshops, and recruiting wiki administrators. The team communicated with library staff by conducting pre- and post-surveys, transferring the old intranet content from HTML to wiki markup, conducting several hands-on wiki editing workshops, recruiting several wiki administrators to serve as departmental experts, and updating and questioning staff via e-mail and in-person communications. Each of these is addressed below.

The main purpose of the pre-survey was to gain an understanding of how the current HTML-based intranet was being used and what could be improved. The focus of the post-survey was to determine the success of the wiki transfer and to discover any needs for follow-up. However, both had the hidden benefit of reminding people that an intranet is not a static apparatus imposed upon them by the IT department but a shared tool meant to be used and useful. It also indicated to library employees that the team cared

about their opinions and were considering them while developing a project plan. This is vital because without trust, the chances of gaining acceptance for a major change are slim.

Once the pre-survey was complete and a wiki was chosen as the best solution, the content transfer was done almost exclusively by the project group. While such an action may appear to decrease involvement, presenting a ready-to-use product made the transition easier and encouraged future involvement by removing a large, time-intensive block of work. Library personnel understandably react more positively to being told they are being helped to do creative work than simply being asked to add something new to their workload.

Arguably the most important action in increasing comfort with the new Internet was a series of wiki-editing workshops held by the project group. These workshops were scheduled strategically so the staff had a choice of the most convenient time. During training, attendees were issued logins and passwords, which they could use to edit the wiki. Handouts were given outlining the basics of wiki markup and library Web procedures. After a brief introduction, the majority of the hour-long session was spent adding and editing content in the wiki. This allowed some staff to get comfortable enough to accept the project right away, while others felt the need for more help. Individuals were encouraged to come to multiple workshops, and one-on-one help was offered to those who requested it.

After each workshop, attendees were asked if they would like to be given administrative rights to the wiki. Administrative rights allow users to create and erase pages and assign user names and passwords. Users who do not have administrative privileges can only edit existing pages. The goal here was to have at least one wiki administrator per library department. This goal was easily met; in fact, many departments had more than one administrator. This created a support system for those who forgot information, needed help, or were new to the library. It also initiated a group of advocates who were excited about the project.

Throughout this process, many e-mails were sent to update library staff on the progress of the project, next steps, and workshop opportunities. Through both e-mail and verbal invitations during workshops, questions and comments were encouraged and help was offered for any wiki issues. Quite a few people took advantage of these opportunities and offered their feedback, asked for help, or both. In fact, other wiki administrators were recruited via these communications.

The ability to build involvement was enhanced by several factors. First, one section of the intranet is the heavily used and often updated "Ready Reference File." This knowledge base comprises the shared institutional experience of the reference staff and includes information such as "how to find resources for that difficult English 476 assignment" and "how to locate theses and dissertations in the online catalog." As with the rest of the intranet,

prior to implementation of the wiki, changes to the Ready Reference File had to be made by sending requests to one of the several people with the ability to make changes to the HTML documents. Unlike some other parts of the intranet, the Ready Reference File requires continuous updating, since assignments, item locations, and other information changes frequently. Further, out-of-date content was often noticed immediately because of the public service nature of the subject matter. Employees who worked at the reference desk saw immediate value in being able to update the Ready Reference File on their own, and the project gained traction fairly quickly within this department.

Another advantage was that, at this time, the library was undergoing a round of strategic planning, and several strategic planning groups were distributing frequent status updates and draft reports among the library staff. The wiki was an excellent place to post such documents. Unlike with e-mail, people were not being inundated with draft after draft of planning group reports but instead could find the latest version on the wiki at their convenience. The MediaWiki software used for the project includes automatic version tracking so people could see what had changed or revert to an earlier version in the event of an error.

Finally, several library employees felt the wiki had great potential value and championed the project from the start, both by posting materials and encouraging others to do so. While one of these people was an administrator, it was more a matter of cultural adjustment than a top-down impetus that caused the new model to take hold. Because several people were posting materials to the wiki and directing others to read them there, it became an obvious option for the distribution of materials.

Despite the significant efforts put into training and communication, there was still room for improvement. Rather than giving user-level passwords only to people who attended a workshop, everybody in the library should have been issued a password. This would have allowed people to practice and experiment with the wiki software prior to making a decision about attending a workshop; in fact, it may have encouraged them to come. Still others may not have needed to attend a workshop, given that the software is fairly intuitive. It also would have been a good idea to hold workshops after the project rollout rather than considering them exclusively a pre-launch portion of the project.

SURVEY RESULTS

The project team has conducted three surveys during the course of this project. The first two, mentioned earlier, were carried out directly before and after the implementation. The first, a pre-survey, was used to gauge the need for the change as well as to determine direction, while the second, a

post-survey, was used to assess success. More discussion of these surveys can be found in a 2009 article by Ellie Dworak and Keven Jeffery. Full results data are available from the authors.

A follow-up survey (see Appendix A) was sent about one year after the post-survey and two years after the wiki implementation; the intent of this final survey was to measure the success of integrating the shift from centralized to distributed intranet management and to determine whether there was a need for related efforts. This survey differed considerably from the first two surveys, as it sought information about training needs and integration issues rather than trying to ascertain a need for a new software product or to determine its technical success. As a side note, these surveys were not conducted as statistical studies but as tools to guide and direct the project.

The recent follow-up survey found that of the 40 survey respondents, 98 percent had used the wiki to look up information at least once over the past six months, and 78 percent had reported using it at least once a week. In comparison, 53 percent of survey respondents used the intranet at least once a week prior to the wiki implementation, and 64 percent used it directly post-implementation (Dworak and Jeffery 2009, 407). This upward trend suggests that the wiki has become an increasingly valuable information source for the librarians and staff.

As might be imagined, there were far fewer wiki editors than wiki readers; only half the follow-up survey respondents (48 percent) reported making a change to the wiki themselves. The types of information users reported updating most often were the reference department Ready Reference File (28 percent), committee information (23 percent), department information (23 percent), and information related to a recent library strategic planning initiative (26 percent). This shows a noticeable increase in changes initiated by staff over our previous surveys. Before the wiki project, only 28 percent of survey respondents had made a change to the intranet by any means, including asking the Webmaster to make a change. In the second, post-wiki survey, this number jumped to 40 percent (Dworak and Jeffery 2009, 407).

The 50 percent of respondents who did not report making a change to the wiki themselves also did not contact wiki administrators to make changes for them. These individuals did, however, report using the wiki content, as 95 percent had visited the wiki over the past six months and 65 percent visited it at least once a week. Seventy percent of the individuals who chose not to update content were staff members, not librarians, and only 30 percent of these non-editors had received any training using the wiki software. It was interesting to note, however, that 45 percent of these non-editors were interested in receiving more wiki training, suggesting that there is an opportunity to involve some of them in the content management process.

Acceptance of the wiki as a communication tool seems to be largely spearheaded by librarians. Eighty-three percent of the seventeen librarian

respondents reported using the wiki at least once a week, and 65 percent reported changing wiki content themselves. This can be compared to the 22 library staff respondents, of whom 73 percent reported visiting the wiki at least once a week, with only 32 percent making a change to the wiki themselves. Furthermore, while 50 percent of librarians reported they were more likely to update content because of the wiki, only 27 percent of support staff reported a similar feeling.

At the SDSU Library, the responsibility for updating online content is largely shared by librarians and staff. The different rates of acceptance by librarians and support staff might be explained by the greater success in marketing training sessions to librarians during the launch of the wiki. Sixty percent of librarian respondents reported having received wiki training either in a workshop or individually, while only 41 percent of staff reported the same. There was also a significant difference between librarians and staff members regarding the perception of the wiki being easy to use on their own. Forty-one percent of librarian respondents stated the wiki was easy to use without help, while only 14 percent of staff had a similar feeling. This survey did not investigate why this might be, but librarians do have expertise in navigating interfaces and may not find the wiki software to be any more difficult than using complex research databases.

The difference between librarian and staff adoption might also be explained by librarians having a more immediate need to share information, as with the Ready Reference File. However, the latest survey suggests the library could do a better job of marketing the wiki and providing wiki training to library support staff. Perhaps part of this process could involve encouraging the posting of materials to the wiki that would be of more interest to staff members, such as department manuals and training material.

CONCLUSION

New technology implementations fail for many reasons, the most critical being a situation where there is no significant need for the new technology. When trying to develop projects that benefit from distributed input, it is important that project initiators not get caught up in the trendiness of a technology or that they themselves would like to use it or forget to analyze the real benefits and goals of their mission. This is easy to do, because often the people implementing such a project are engaged with and enjoy using new technologies.

Once a real need has been determined, it is important to time a project so that it is not competing with other big technology projects. However, there are always other things going on in a library, so perfect timing may not be achievable. Instead of looking for the ideal time, determine how the change or new tool can support any ongoing or short-term work. The

strategic planning process described above benefitted from the wiki, which helped facilitate the adoption and acceptance process. If such convergences are identified, forge contacts with the leaders of those efforts and see if they are willing to promote the project.

A perceived need can be just as important as a real need. A new technology may indeed improve processes or outcomes, but if people do not realize this, they will not feel a need to engage. For this purpose, words are not as effective as experience. Thus, providing time for people to try a new product is crucial, as is following up with refreshers and opportunities for those who were not early adopters but have heard how great the new tool is. The hands-on nature of these sessions cannot be stressed enough, since it is by actually using the new technology that users may begin to understand its utility. Ideally, workshops would be followed with real use, such as at SDSU, where employees posted strategic planning documents and made changes to the Ready Reference File. This will reinforce the learning that takes place in a classroom and encourages the new direction.

While technical skills are highly valued in libraries, the person doing the back-end work does not always have time to manage the training and ongoing communication needed for a successful project. It is important to pull together an implementation team that includes somebody who can serve as a main point of contact for questions and concerns, arrange and market training sessions, and identify the need for further training as the project continues. Too many projects become orphaned after an initial push because this final step is ignored.

Finally, throughout a new technology rollout, attention should be given to those who champion the project. These people may work at any level of the library, from management to student employees. They are the ones whose eyes light up when they are offered a workshop, who ask questions, and who seek opportunities to use the tool. Seek opportunities to send these people out as evangelists and assistants; often, they are happy to be asked.

There are many factors in the success of integrating and accepting a new technology in a library. The most important is connecting the technology to real or perceived needs. Also crucial are plentiful training opportunities, favorable circumstances, and the nurturing of early adopters. If attention is given to all of these areas, a technology project is much more likely to succeed.

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APPENDIX A: SDSU LIBRARY AND INFORMATION ACCESS

Wiki Follow-Up Survey

1. What is your role in the library?
   (Answers: Librarian, Staff, Administrator, Student Assistant, not applicable, other (please specify))
2. What department do you work in (check all that apply)?
   (Answers: Acquisitions, Administrative Office, Cataloging (monographs or serials), Circulation, Collection Development, Copy Services, Current Periodicals & Microforms Center, Government Publications, Interlibrary Loan, Information and Digital Technologies, Library Instruction, Media Center, Reference Services, Reserve Book Room, Special Collections & University Archives, Student Computing Center, not applicable, other (please specify))
3. How many times in the past six months have you looked for information on LfolksWiki?
   (Answers: every day, once a week, once a month, once or twice in the last 6 months, not at all)
4. How many times in the past six months have you initiated a change to information contained on the LfolksWiki by contacting the Wiki administrator?
   (Answers: never, 1 time, 2–5 times, 6–10 times, more than 10 times, not applicable)
5. How many times in the past six months have you initiated a change to information contained on the LfolksWiki by posting the information yourself?
   (Answers: never, 1 time, 2–5 times, 6–10 times, more than 10 times, not applicable)
6. What type of information have you updated on the LfolksWiki?
   (Answers: The Ready Reference File; Committee Information; Department Information; Strategic Planning Information; procedures, manuals,

or instructions for library activities; I have not updated any information; other (please specify))

7. If you don't use the Wiki, what's stopping you?
   (Answers: I don't have information to share, I don't have a password, I've forgotten my password, I'm not comfortable with the software, it's easier to get someone to post for me, I do use the wiki, other (please specify))

8. Have you received training on the Wiki software?
   (Answers: yes, I went to a Wiki training session; yes, I received one-on-one instruction from a Wiki administrator; yes, I was shown by a colleague; no, I learned to use the Wiki on my own; no, but I don't use the wiki at all)

9. Would you like to see the library have more training sessions?
   (Answers: yes, more training sessions would be good; no, having the Wiki administrators to ask questions of is enough; no, the Wiki is easy enough to use without training; no, I'm not interested in using the Wiki)

10. Due to the Wiki software you are:
    (Answers: more likely to initiate a change to the Lfolks Web site, just as likely or unlikely to initiate a change to the Lfolks Web site, less likely to initiate a change to the Lfolks Web site)

11. Do you have any comments about this survey or the LfolksWiki Web site that you'd like to share?