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Using Social Software to Enhance IT Operations

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Overview

Higher education information technology (IT) staff members tend to enjoy experimenting with new technologies and imagining how they can be applied in the academy. Indeed, it is precisely these traits, coupled with creative imagination, that have allowed higher education to apply many networked technologies early in their adoption cycle—e-mail, the World Wide Web (and its predecessors), and course management systems, to name just a few. In this context, instant messaging (IM), wikis, blogs, and other social software tools carry numerous implications for higher education, and IT staff members are actively exploring them. As *Digital Rendezvous: Social Software in Higher Education* observes, social software tools “share a common theme: they help people connect with each other over the Web.... [T]he new tools have some distinguishing traits that collectively allow a new level of interactivity. Where previous Web tools allowed individuals to easily publish information online, these new social software tools encourage conversations between individuals about the ideas expressed in Web pages” (Sreebny, 2007, pg. 8).

Surely this interactivity enhances research, teaching, and learning activities. But a closer look reveals, too, that social software has noteworthy benefits for today’s higher education IT organization. IT departments face growing pressure to boost efficiency while maintaining static resource levels; social software can provide a relatively inexpensive and convenient means to tie an IT organization together virtually by interweaving inexpensive, low-overhead communication and collaboration tools. Experimenting with a wiki, a blog, or another social software requires minimal investment compared to many typical IT projects.

Social software tool adoption is frequently informal, allowing for a more laid-back approach than a formal project implementation. Some issues, however, such as solution selection and security implications, may call for closer oversight. But if an IT organization can balance a hands-off approach to social software with hands-on implementation of mission-critical systems, the use of social software tools can add up to enhanced IT staff productivity, greater IT organizational esprit de corps, and even a better understanding of IT activities among the institutional community at large.

This research bulletin offers representative examples of social software in action within IT organizations at three institutions—Duke University; the University of California, San Diego (UCSD); and the University of Washington (UW). The bulletin illustrates ways IT organizations use social software, drawing general implications for other IT organizations to consider when implementing their own social software tools.

Highlights

IM, wikis, and blogs can enhance IT staff members’ information sharing and collaboration in different ways, and institutions are allowing the tools to find their own paths, so to speak, within the IT organization.

Instant Messaging

“Instant messaging is a form of online communication that allows for real-time (or close to real-time) interaction through personal computers or mobile computing devices. Users can exchange messages privately, similar to e-mail, or join group conversations” (EDUCAUSE Learning Initiative [ELI], 2005a, p. 1). When working on a project, staff members often have a quick question or want to share an “ah-ha” moment of discovery. Yet a brief conversation can be problematic simply because of logistics. Rather than interrupt a colleague with a phone call or wait for the next personal meeting, more staff members are relying on IM for a rapid, real-time communication.

IM “offers one level of response beyond e-mail,” states UCSD’s Chief Information Officer Elazar Harel (personal communication, January 16, 2007). “You know when the person is online, and you can send something immediately. It is better than e-mail because it resolves issues back and forth much faster.” Instant messaging increases staff accessibility as well; staff members can answer a quick IM during a meeting without disruption, and they can even handle instant or text messages on their cell phones.

With real-time communication comes the expectation for a real-time response, however, prompting a need for staff members to balance their accessibility and privacy. Christopher De Rosa, enterprise architecture manager at UCSD, notes, “[IM] can also drive you crazy. Before [IM] there were [response] barriers, and now we don’t have them anymore. People have to learn to understand that and deal with it” (personal communication, January 16, 2007). Another consideration is IM’s potentially uneven adoption among IT staff. The University of Washington’s Sreebny observes, “in some ways, [adoption] tends to break down by generation. Long-time staff members tend to use e-mail as if it were IM; younger employees are used to being on IM all the time” (personal communication, January 19, 2007). Thus, IT staff members may be in different communication loops.

Wikis

A wiki is “a Web page that can be viewed and modified by anybody with a Web browser and access to the Internet. This means that any visitor to the wiki can change its content if they desire” (ELI, 2005c, p. 1). Indeed, in its most elementary application, a wiki can provide a means to create, edit, and organize online the voluminous documentation that is inherent to any IT organization. The advantage is that “by putting documentation on the Web, everyone knows where it is,” states Duke’s Senior System Programmer Ben Donnelly (personal communication, January 9, 2007). Just as important is a wiki’s transparent nature, in that anyone with authorized access can view it. “[Using a wiki] gets us out of the platform wars. Even with our small IT staff, we used three or four operating systems between us. No longer do I have to e-mail an attachment in PDF, OpenOffice, and Word formats,” states Duke’s Molly Tamarkin, associate dean, Arts & Sciences Information Science & Technology (personal communication, January 9, 2007). Wikis can facilitate meeting management, too. Rather than e-mailing meeting agendas, preparatory documents, and subsequent meeting notes, staff members access the appropriate wiki to add agenda items, search for meeting notes, and annotate as

necessary. Modifications and last-minute additions no longer have to be forwarded to the meeting organizer and redistributed via e-mail.

Even more powerful is the collaboration potential available through a wiki, since viewers can modify content by clicking the appropriate links or buttons on the wiki site. Indeed, Tamarkin refers to wikis as “parking places for ideas.” One example she cites is the wiki she created for her IT staff to share ideas and solutions for reprogramming time settings on their older IT equipment to comply with the U. S. Congress legislation to advance the commencement of daylight savings time by three weeks, to March 11, 2007.

Wikis, too, can build a collaborative and dynamic reflection of projects and initiatives. UCSD’s Director of Web Application Development Margaret Backer observes how increasingly the UCSD IT staff will “bootstrap a wiki to a new tool, a new technology, or an enhancement to let people read about it, try it, and contribute their experiences to the whole” (personal communication, January 16, 2007). For example, UCSD uses a wiki for new software developers to record their learning experiences while training on a reference system implementation. “By continually sharing, we can grow the program into something useful. Once someone has completed the initialization process, very often they will add entries in the wiki that help us refine how to present the information. It is the social concept of understanding that what is clear to one person may be unclear to another,” observes UCSD’s De Rosa (personal communication, January 16, 2007). This is what he refers to as the “community view” that wikis provide.

Sreebny points out that encouraging people to embrace a wiki’s collaborative aspects may be tricky, however. He notes that people don’t seem as comfortable using a wiki as they are when writing in MS Word or creating spreadsheets in MS Excel, but perhaps that’s simply because the wiki tool is less familiar. The public nature of a wiki might be intimidating, but the collaborative advantages are attractive.

Blogging

“A blog—a shorthand term that means ‘Web log’—is an online, chronological collection of personal commentary and links. Easy to create and use from anywhere with an Internet connection, blogs are a form of Internet publishing that has become an established communications tool” (ELI, 2006, p. 1). Within IT organizations, blogs can be used to create a project record, enabling team members to document their experiences about a project implementation and to provide a reference about best practices and challenges throughout the course of the project. Blogging, too, can foster greater connections between the IT organization and the general institutional community. For example, two engineers who are involved with UW’s Windows networking infrastructure project accomplish both these goals by blogging about their relevant experiences. Interested members of the UW community can follow their progress and “are appreciative of that the fact that the engineers are blogging about the arcane details of their project. It gives them a place to keep up with the project, to ask questions, and to learn what worked really well,” observes Sreebny (personal communication, January 19, 2007). The blog, too, can serve as an accountability tool, enabling people who log on to gain a better appreciation about the project’s achievements, challenges, and progress.

Unlike wikis and IM, blogging requires a certain writing style to make it compelling enough to engage readers over the course of a long-term project. Some staff members are naturally better bloggers than others, and IT organizations should plan accordingly.

Other Tools

IM, wikis, and blogs enable IT staff members to communicate as well as to share content and experiences. Other social software tools enable IT organizations to customize and share online resources and applications. For example, social bookmarking “is the practice of saving bookmarks to a public Web site and ‘tagging’ them with keywords” (ELI, 2005c, p. 1). Sites like del.icio.us and its open source version, de.lirio.us, offer a means for staff members to proactively store and categorize a mixture of online resources that may be useful to the entire IT organization or to a certain department. For example, staff members could tag and share relevant resources related to a specific project or IT system. Other tools are called mashups, “a kind of layering of new content on top of content from another site.” (Molina and the 2006 EDUCAUSE Evolving Technologies Committee, 2007, para. 13). For example, a calendar application mashed up with a campus map can help staff members and visitors navigate where and when a specific meeting will be held. According to Sreebny, UW is exploring the enhancement of its directory to incorporate a social profile. “At the center of MySpace or Facebook is the profile. We are starting to determine whether there is a place at the institution for people to profile themselves in ways that may enhance the life and the work of the institution” (personal communication, January 19, 2007). For example, profiles can highlight staff members’ areas of IT experience, inherently directing people to the appropriate person as a situation requires.

Finally, wikis can offer a first step into further online content management and collaboration. Using a Web-based content management system (CMS) can be a potential next step as staff members gain confidence with wikis. “We are now using Plone because it provides content creation and management beyond a wiki’s capabilities. There is a steeper learning curve for implementation and use, and both issues are more complex than a wiki,” explains Duke’s Donnelly (personal communication, January 9, 2007). For example, with a wiki, the interface may simply instruct users to add a content page with a button labeled “Add a Page.” With a CMS, there may be an “Add” button that displays a list of options to add.

What It Means to Higher Education

The interviews imply a need to balance hands-off and hands-on approaches to social software. For example, a common theme among all the interview participants is the frequently grassroots nature of social software adoption. There was no top-down, formal management mandate that prompted their adoption; staff members frequently adopted various social software tools on their own. “We did not build this project called ‘social networking,’” states Harel (personal communication, January 16, 2007). “It just happened. As different tools become available, we are trying to evaluate them and figure out creative uses.” For example, at UCSD, when student workers suggested implementing a wiki, it became a project for them to work on, and now the use of wikis is

spreading throughout the entire IT organization. UW's networking group implemented an open source Jabber server to provide IM service within the group; eventually growing IT staff demand for accounts spurred its rollout across the entire UW IT organization. The IT environment must be sufficiently "free" to encourage the adoption of such applications.

When selecting social software tools, IT organizations should pick tools that are easy to deploy to promote experimentation. When selecting her department's wiki, Duke's Tamarkin picked DokuWiki because "it was straightforward. We knew could deploy and support it. It would work" (personal communication, January 9, 2007). The rule of thumb is, if you don't like it, try another. "It just has to be a helpful tool," continues Tamarkin. "You don't need to overanalyze the process." UCSD's De Rosa agrees: "It wasn't a process of forming a committee to discuss alternatives and issuing an RFP. We just downloaded a wiki, put it on a developer's machine, and enlisted a few developers to evaluate it. That is why it works. If we had a formal procedure, we might still be discussing its deployment" (personal communication, January 16, 2007). This trial and error provides an added benefit of training for IT staff members, especially if the tool is for internal use only. "If you overanalyze the process early on, you may lose the value of having IT staff work together on it," continues Tamarkin. "By placing it up for the IT staff members to evaluate as you go along, it will help them collaborate as well." But some management oversight of social software tools may be required to address the following:

- **Evaluating open source, vendor, or commercial solutions.** One decision is whether to implement your own open source or vendor-supported tools, or even to outsource them altogether. For example, De Rosa's group downloaded the open source solution, JSPWiki, because it integrates with the UCSD IT environment, enabling the group to integrate a number of networking elements—including single sign-on authentication—into their wiki. Other institutions, however, may feel more comfortable with the support and documentation that a vendor-supported solution offers. For example a Microsoft shop may turn to Microsoft SharePoint. A smaller IT department may not want to invest internal resources in social software and turn to third-party solutions. For example it may select a commercial wiki hosting service like EditMe or an IM service like Yahoo! Messenger, especially if the planned content is not sensitive. According to Sreebny, in many cases you don't have to build it or host it yourself.
- **Balancing openness with security.** In some ways, the open nature of social software tools runs counter to many IT security initiatives under way. "The general issue with social software in our organization is that it is difficult to tell where the boundaries of our organization are," states Sreebny (personal communication, January 19, 2007). This is especially true as more IT projects include members who are not part of the IT organization or even the institution. Just as tricky can be limiting access to a very small group of people. Thus, when selecting a social software tool, the issue of authentication can be a thorny one. Security issues may gain further importance as wikis and other tools proliferate. "At this point we use wikis for public information. But down the road, people

might want to use a wiki for more sensitive information, and then you need to build in more security,” states Backer (personal communication, January 16, 2007).

- **Weaving new tools into customary communication patterns.** Social software is as effective as the sense of community it fosters among the IT organization. One potential barrier that emerged from the conversations is the uneven use of social software tools among IT staff. For example, younger staff members may exhibit a greater propensity to IM. A wiki’s different user interface may discourage some people from participating. Thus, an IT organization might explore ways to ease some staff members’ adoption. IT staff could hold an informal meeting, such as a brown-bag lunch discussion, to exchange experiences. Duke’s Tamarkin adopted a “learn by doing” approach to demonstrate their wiki’s collaborative nature to her staff. “When I noticed someone organizing information on the wiki in a less than optimal fashion, I would change it online and then e-mail the person to ask for his/her feedback. Eventually people feel more comfortable about a wiki’s adaptive nature,” states Tamarkin (personal communication, January 9, 2007).
- **Matching a social software tool’s features with current and future needs.** For example, if an IT organization thinks it may evolve eventually from a wiki to a content management system, it might consider the wiki’s software support of text files to facilitate any future file conversion and posting to the CMS. Duke’s Donnelly notes, “This makes converting to a more ‘heavyweight’ system—such as a content management system—easier because you can pull the text off of one site and place it on the other” (personal communication, January 9, 2007).
- **Integrating social software with established mediums.** In some cases, especially when people external to the IT organization are involved, it may be necessary to offer information in various communications media. “In some projects, we have customers out in the university community who are not necessarily sophisticated in using something like a wiki. In that case, we just build a traditional Web site, too—which in some cases includes a link to the project’s wiki,” states Backer (personal communication, January 16, 2007).

Perhaps the most important implication is the need for flexibility and an open mind. Harel explains, “This is moving and evolving at an extremely rapid rate. It is wise not to try to control social software too heavily at this point. Something new emerges all the time. So let things happen and see what people find really useful. Some things will work, and others will not” (personal communication, January 16, 2007).

Key Questions to Ask

- Which IT staff members or departments are using social software tools currently, and for what purposes?
- Which social software tools are they using?

- How do they deploy these tools in their work?
- How can social software enhance your organization's efficiency or effectiveness in specific IT functions or current projects?
- How do you envision integrating social software into your future IT environment?

Where to Learn More

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