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SHARE AND SHARE ALIKE

Barriers and solutions to tutorial creation and management

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ABSTRACT

Findings from data gathered in a nationwide survey indicated the most important barriers to tutorial creation for instruction librarians were time and technological expertise. Based on the authors' experience, extending the content management system used to build class pages and subject guides to build tutorials suggests using a content management system, like Library à la Carte or LibGuides, as a path around these common barriers.

INTRODUCTION

Instruction librarians want to make tutorials and learning objects for a variety of reasons: because they feel those are the best ways to teach technology-savvy learners, because stresses on budget or staffing prohibit prevent in-person training, or as ways to meet the needs of distance learners and others working on their own without the help of a librarian (Slebodnik & Riehle, 2009; Su & Kuo, 2010). Lewis (2007) expressed the views of many when he envisioned a future for library instruction programs that mix tutorials, learning objects, and traditional face-to-face classroom teaching.

However, creating tutorials is easier said than done. In 2009, Somoza-Fernandez and Abadal published an evaluative review of academic library tutorials, examining 180 tutorials for content, design, technology, and pedagogy. Their review builds on and updates four previous studies, but despite this history the authors found the state of academic library tutorials in 2008 (when the tutorials were examined) still reflected “an early stage of development” (p. 130).

Teaching librarians at Oregon State University (OSU) have been working to develop and expand an online presence for several years. OSU librarians purchased different kinds of screencasting software, participated in workshops and trainings, and formed work groups to look at the potential of incorporating learning objects, tutorials, and course management systems in information literacy instruction. Despite the high degree of motivation, progress was not made at the expected rate, and barriers still existed to implementing a sustainable online library instruction workflow. Shea (2007) found that while faculty in higher education had concerns about online instruction, none

of these concerns were significant enough to de-motivate them. In other words, they still wanted to teach online, even when they faced barriers to doing so. This matches the authors’ experience.

This paper examines these barriers, both as they pertain to OSU librarians and to the broader community of teaching librarians. The results of a survey of instruction librarians’ experiences with and attitudes toward the tutorial creation process is shared. Finally, the discussion examines OSU librarians’ attempt to address these issues: a new approach to online library instruction using OSU’s homegrown, open source Library à la Carte content management system.

LITERATURE REVIEW

Anyone who has tried to create online learning environments or experiences knows doing so requires a great deal of front-end planning and work. Online learning also requires instructors to spend time developing technology skills. In their summary of the literature, Mandarach, Dailey-Herbert, and Donnelly-Sallee (2007) pointed to these two factors as they concluded that the “research indicates that online teaching requires more time and effort than face-to-face teaching” (p. 1). In this regard, library instruction is no different from any other kind of instruction.

In other ways, library instruction does pose a different set of challenges. At OSU, most library instructors do not teach regular credit classes. OSU librarians teach in several different classes over the course of a term; to deliver instruction relevant to the unique needs of each of these classes means that each one requires its own planning period. That online instruction requires more front-end planning time is very relevant in this

environment.

Technology also becomes a barrier in an online environment. OSU librarians not only needed to create new online instructional materials but also needed to update existing resources previously creating using technology that had become outmoded, as a matter of infrastructure and of pedagogy. Yang (2009) maintained there is a consensus within the library literature that HTML-only tutorials are outdated. In their update to previous analyses of academic library tutorials, Somoza-Fernandez and Abadal decided to exclude any tutorial that did not include interactive features even though, as they acknowledged, most library tutorials are still static. They maintained that non-interactive tutorials are inherently informative, not formative, and were not of interest (2009, p. 127). In practice, all of this means that even if a small group of librarians does become proficient in the technology needed to create tutorials that reflect best practices, the skills they develop may not stay relevant due to ever-changing Web technologies and standards.

The technology barrier extends beyond the question of which screencasting package to buy. At OSU, subject librarians deliver library instruction to their departments in a fairly decentralized environment. The easiest way to deliver tailored online instruction in all classes would be for every instruction librarian to have the same facility with the technology needed to create the instruction. Requiring all librarians who do instruction to develop these skills is not practicable; however, none of OSU's teaching librarians has the time to develop online instruction for the whole department.

Like many others, OSU librarians looked to collaborating and sharing as a way to address some of these barriers.

Collaboration is relevant to this discussion on multiple levels. First, the potential of sharing is one of the benefits of putting library instruction online. A single librarian cannot teach in two places at once, but s/he can create a learning module that can be used in several classes at the same time. Sharing also offers a potential way to overcome technological barriers. If librarians can share their tutorials and learning objects, everyone need not learn how to create them from scratch.

This is by no means a new concept in library instruction. The Library Orientation Exchange (LOEX) Clearinghouse dates back to 1971, and as early as 1993 instruction librarians were talking about the potential of the Internet as a way to share instructional resources (Engle, 1993). In the early 2000s, the Texas Information Literacy Tutorial (TILT) was widely adopted by other libraries (Bradley & Romane, 2008). Sharing within a single department or institution is also a theme in the literature. In their study of reusable learning objects, Mardis and Ury (2008) argued that these single-concept learning modules "appear to be one solution to the labor-intensive task of creating content for common information literacy principles" (p. 394).

While teaching librarians have been motivated to share resources for some time, they have not been wholly successful. Institutional clearinghouses like LOEX are excellent resources, but they can suffer from a "bottleneck" effect, with backlogs keeping new content from appearing on the site. At the same time, dynamic solutions like the Library Instruction Wiki, which removed the bottleneck but relied on community participation, also came up short (Deitering & Bridgewater, 2007).

Even more concrete evidence of the barriers

to sharing emerges when one looks for libraries that specifically license their instructional materials to enable sharing. Somoza-Fernandez and Abadal (2009) found that while half of the tutorials they surveyed included a copyright notice, a full 43% said nothing at all about ownership or sharing. Only 4% used Creative Commons licenses, and an additional 4% used Open Publication Licenses. Teaching librarians at OSU also found it difficult to build a culture of sharing. To understand why, the authors looked to the broader history of learning objects and learning object repositories.

Anoush Margaryan and Allison Littlejohn have repeatedly argued that when analyzing the use of learning object repositories, one cannot limit one's focus to the repository itself, but must also consider the community of people contributing to and using the resources in the repository. In 2006, they suggested that most efforts to increase sharing focus on technological issues, trying to identify standard tools and practices that will make sharing easier. Sociocultural factors, on the other hand, have been largely ignored.

Margaryan and Littlejohn (2008) continued, suggesting a number of cultural factors that can impede sharing. Sometimes, those in charge of creating or maintaining collections of materials focus so much on their goal of promoting sharing that they forget that the teachers themselves just want to find learning objects or resources they can use. Sometimes, teachers are already using and are used to a technology system; asking them to shift to another one just to allow sharing does not work. They also suggested that when teachers have other professional responsibilities that are valued more highly than teaching, they will not take the time to contribute to shared collections.

Margaryan and Littlejohn's work suggested that focusing too much on developing ways to share the products of online information literacy instruction, the tutorials or learning objects, might not address some of the root causes of the tutorial creation problem. Instead they found the more fruitful approach was looking more closely at the final desired outcome: consider existing available systems and develop a way to share within those processes.

LIBRARY À LA CARTE APPROACH

In 2007, librarians at OSU started using Library à la Carte (LALC), a locally-developed, open source, content management system (CMS), to build their course assignment pages and subject guides. LALC pages are similar to those created by LibGuides in that they are organized around reusable, sharable modules. In addition, to create pages, librarians only need knowledge of the content they want to publish; the LALC system takes care of the Web-related, technological requirements. Implementing LALC had an immediate effect at OSU. The number of course-specific Web pages published increased immediately; librarians who had not created pages for years quickly published several. In December 2007, the LALC system was introduced as an open source project, available to any library (Griggs, 2009).

In 2009, a small, two-person project team was formed to study why OSU librarians were not creating the tutorials and other online learning tools they wanted to create. The goal was to build a system that would allow any librarian to offer online instruction as an alternative to, or in combination with, face-to-face instruction. It was important to avoid a bottleneck system in which one or two librarians had to create, or even approve, all forms of online

instruction. In addition, it was important to streamline the process of making instructional materials available online and to take the guesswork out of where tutorials or learning objects would “live” on the library’s Web site.

The team did not want to require all teaching librarians to use the same software to create tutorials. If a librarian were already familiar and comfortable with a particular screencasting package or image editor, it should not be necessary to require them to change. In other words, the team believed OSU librarians needed to create tutorials using a common platform, but did not want the success of the tutorials project to rely on all librarians adopting a common workflow or developing the same skills.

The team decided the content management approach that had worked so well in Library à la Carte for creating course pages and subject guides held promise for the tutorial project as well. Building tutorials with a content management system would allow librarians to focus on content instead of look and feel. Technological expertise would no longer be a barrier to tutorial production. Existing workflows would solve administrative problems such as where the tutorials would be placed on the library’s Web site or where the component materials would be stored. Adopting a system that the librarians were already actively using would address one of the major cultural issues pointed out by Margaryan and Littlejohn: recognizing that librarians had already learned and adopted a particular software platform. Allowing them to stay in that comfort zone removed a potential element of resistance.

While the LALC solution was particularly appropriate in the OSU context, the underlying themes are broadly applicable.

Using a content management system to build tutorials addresses many of the barriers to developing online instructional materials. Because LALC is an open source project, available to any library, the utility of this particular solution could also have broader applicability. To better understand the potential LALC might have for other teaching librarians, the authors decided to investigate the issues and barriers other librarians face in developing online tutorials and learning objects through a survey.

SURVEY METHOD

A 24-question, online survey was developed to determine respondents’ experiences with and perceptions of the tutorial creation process. The survey link was sent out to the Information Literacy Instruction discussion list (ILI-L), an email discussion list sponsored by the Instruction Section of the Association of College and Research Libraries (ACRL). The survey was approved by Oregon State University’s Institutional Review Board and participants were required to consent before taking the survey. The survey was available for 2 weeks during the spring of 2010, and 156 participants completed the survey.

The first part of the survey captured demographic information. This background information included the type of library at which participants worked, whether instruction was part of their job description, how long they had been providing library instruction, and whether the participants had formal training in educational technologies (such as programming skills), e-learning pedagogy, or instructional design.

To learn about participants’ familiarity with the tutorial creation process, the second part of the survey asked participants for information about their level of experience

creating tutorials, including whether they create tutorials, whether their tutorials were primarily demonstrations or included interactive features, how much time they spent working on tutorials, and how many tutorials they had created. Participants were also asked to describe the tools or platforms they used to create tutorials: tools they used to create screencasts, to add or edit images, and to incorporate dynamic content.

To determine how often participants re-used content, the survey asked how often participants either borrowed from other tutorials or shared content with other tutorial creators. The survey included branching, so if participants were open to sharing content, the survey asked whether they had contributed to a tutorial repository such as the Multimedia Educational Resource for Learning and Online Teaching (MERLOT) or the Animated Tutorial Sharing project (ANTS) or if they had licensed their tutorial with a Creative Commons license.

The following section of the survey asked participants to reflect on their reasons for creating tutorials. Participants were also asked to consider their future tutorial creation plans and to identify barriers to tutorial creation in terms of software and support issues. Finally, participants were able to provide open-ended responses for any additional thoughts they had about the tutorial creation process.

The authors analyzed the results to determine if any trends were apparent in participants' experiences with tutorial creation, whether their level of training impacted the types of tutorials they created and the tools they used, and the types of barriers participants perceived in the tutorial creation process.

SURVEY RESULTS

Demographics

Most survey respondents worked in academic libraries. Of the 156 participants who completed the survey, 42% worked at a 4-year college library, 38% worked at a research university library, and 19% worked at a 2-year college library. School library or media centers, public libraries, and special libraries were represented with one respondent each. This sample reflects the membership of the ILI-L listserv, as does the fact that 98% of the respondents had instruction or information literacy as a part of their current job descriptions. While this sample does not reflect the whole population of librarians interested in tutorial creation, it does illustrate this topic's importance to academic librarians. A range of experienced and brand new librarians responded to the survey. Participants were fairly evenly distributed between 0-2 years, 3-5 years, 6-10 years, and 11 or more years of library instruction experience.

Education and Experience

A strong majority of respondents (77%) had created tutorials before. What is perhaps more surprising in a pool of librarians who self-selected to answer a survey about tutorials is the significant percentage of respondents (22%) who reported having never created a tutorial as an instruction librarian. However, almost all of those (84%) who had never created a tutorial reported they would like to do so, supporting Shea's suggestion that while barriers to online instruction exist, they do not de-motivate teachers from wanting to teach online.

Librarians who had never created a tutorial were more likely to report a lack of expertise with relevant software as a barrier to tutorial creation and were more likely to rank "software" highly on a question asking what they would need to create the tutorials

they want to create. However, the total number of respondents in this pool is so small that these results should be taken only as suggestive. Overall, 40% of respondents reported having some kind of formal technology training (such as Flash programming or HTML coding), and a slightly higher number (46%) reported that they had received formal training in e-learning pedagogy or instructional design. It is important to note that in this context, “formal training” could have been a stand-alone workshop. Indeed, this was the most common type of training respondents had in pedagogy or instructional design (67% of responses); respondents were able to choose more than one option. Degree programs or certificate programs represented only 15% and 16% of responses, respectively.

Most respondents created tutorials episodically rather than as part of their everyday or weekly workflow. Fifty-five percent responded they created tutorials “once or twice a year,” 27% responded “monthly,” 6% responded “weekly,” and 3% responded “daily.” Interestingly, those who created tutorials at least monthly were more likely to have had educational technology and/or e-learning pedagogy or instructional design training. In addition, more than half of the respondents had created between 5 and 20 tutorials, and 6% of respondents estimated they had created between 21 and 50 tutorials.

Motivation

Participants were given a list of options as reasons for creating tutorials and were allowed to choose as many responses as they liked. Not surprisingly, respondents chose a wide variety of reasons for creating tutorials, reflecting the wide variety of motivations cited in the literature. The top three responses were to provide help at the point of need, to reach out to distance

students, and to reach students who do not receive library instruction. The primary motivation for creating tutorials, therefore, is to provide users with resources that allow them to work in an unmediated environment without direct assistance from a librarian.

Interestingly, among the small group who had created 21-50 tutorials, help to distance students was the reason selected most often. While survey participants selected many reasons for creating tutorials, one reason was clearly at the bottom of their lists. Only 20% of the responses indicated librarians make tutorials because classroom faculty ask them to. Further research is needed to ascertain if this suggests faculty are not aware of librarians’ ability to “teach” outside the classroom or if it reflects librarians’ difficulties communicating the value of information literacy instruction.

Technology

When asked what platforms or tools they used to build their tutorials, respondents chose screen capture tools such as Camtasia, Captivate, or Articulate twice as often as the next popular option. Respondents also most commonly used Captivate, Camtasia, and Jing to create screencasts for their tutorials. The second most popular platform option was learning management systems (LMS) such as Blackboard or Moodle. Using an LMS platform makes particular sense for those librarians who are embedded in classes. In addition, respondents who used LMS as a platform were more likely to have had some kind of formal e-learning pedagogy or instructional design training.

To explore the level of interactivity and visual interest librarians implemented in their tutorials, the OSU librarians asked participants what tools they used to integrate dynamic content into their tutorials. Almost 70% of respondents did not use any type of

dynamic content in their tutorials. Of those who did use dynamic content, the most common type was a comment box followed by instant messaging or chat widgets. Respondents who did incorporate some type of dynamic content were more likely to report having either educational technology or e-learning pedagogy or instructional design experience.

Sharing and Borrowing

Respondents were asked if they shared components or pieces of the tutorials they created with other librarians or if they used components or pieces of tutorials created by others. They were told that “components or pieces” could mean text, screencasts, or images. Almost two thirds (59%) replied they do so at least “occasionally.” When asked if they borrowed or linked to tutorials (in their entirety) created by others, even more responded affirmatively. Fourteen percent said they do so “all the time,” 34% said they do so “sometimes,” and another 28% said they do so “occasionally.” On the other hand, when it comes to actively or intentionally making tutorials available for sharing, librarians are much less likely to do so. When asked if they licensed their

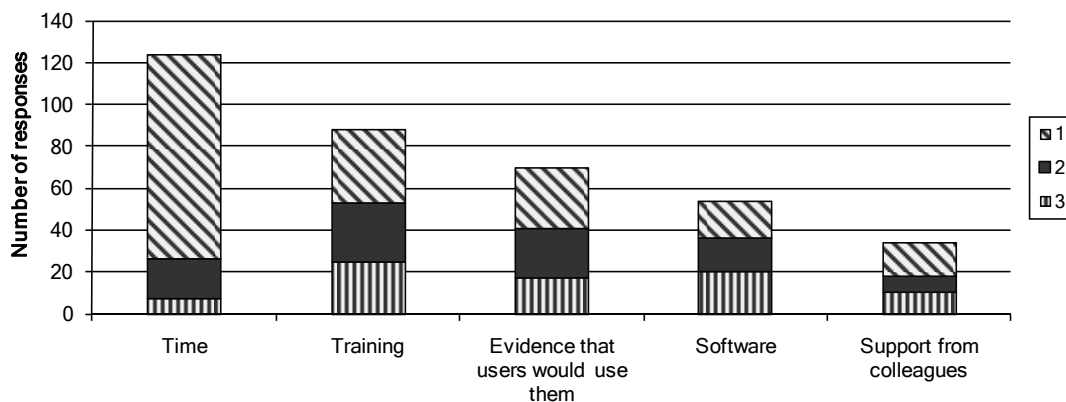
tutorials so as to encourage sharing, 83% of respondents said they did not. Similarly, 91% of respondents said they had never submitted a tutorial to a public repository like ANTS or MERLOT.

Barriers

Overwhelmingly, the survey results suggest the most important barrier to tutorial creation is time, or the lack thereof. Respondents were given a list of potential barriers: factors drawn from the literature and from the librarians’ experience at OSU that might prevent them from creating tutorials. They were asked to rank barriers in order of importance. The barriers were divided into two categories: technology and support. In both categories, time-related barriers were ranked highest. It is not surprising that when asked what they would need to create more tutorials, a majority of librarians in all subgroups selected “Time” (see Figure 1).

When asked to rank software-related barriers, a plurality (40%) ranked “time to learn the software” as most important, and another 29 respondents (21%) ranked it number two. There were no significant

FIGURE 1: WHAT PARTICIPANTS NEED TO DEVELOP MORE TUTORIALS



Ranked from 1 (highest) to 3 (lowest)

differences between those who created tutorials already and those who had not. Time was such an overwhelmingly popular choice that the number of responses indicating other barriers was too small to yield statistically significant results, but some interesting patterns did emerge. Lack of expertise with tutorial creation software was particularly noted as an important barrier among those who do not currently create tutorials. Thirty-nine percent of those who do not create tutorials selected this option as most important, compared to 15% of those who currently create tutorials. This factor was especially important to those who do not currently create screencast tutorials.

When asked what the most important support-related barriers were, respondents again chose time. “Time to develop the content” was selected as the most important barrier by almost three quarters of respondents (72%) (see Figure 2). Again, this pattern held across all subgroups. Respondents did not report feeling a lack of support, either from library administration or from colleagues, for tutorial creation. Financial support, on the other hand, was noted as an issue for those who wished to

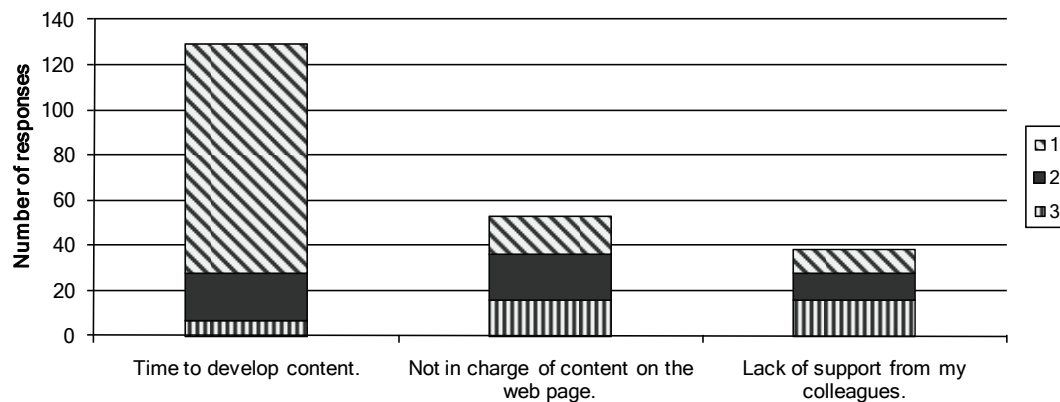
create more tutorials; 20% of those who created tutorials and 35% of those who had not ranked “cost of buying software” as a concern.

DISCUSSION

Content Management Systems as a Socio-culturally Appropriate Solution

At OSU, time and technological expertise were barriers keeping instruction librarians from creating the tutorials and learning objects they wanted to create. The survey results indicate that many instruction librarians share these concerns. The authors suggest that by developing a tutorial creation process that allows librarians to use a familiar content management system, librarians can work around common barriers to tutorial creation while respecting the socio-cultural factors identified by Margaryan and Littlejohn. Just as LibGuides and Library à la Carte have made it possible for most librarians to create Web pages without advanced technological skills, using a content management system for tutorial development similarly lowers the technological bar. At the same time, using a

FIGURE 2: SUPPORT ISSUES KEEPING PARTICIPANTS FROM DEVELOPING MORE TUTORIALS



Ranked from 1 (highest) to 3 (lowest)

familiar content management system allows librarians to use the collaboration and sharing processes they have already internalized as they develop the content for tutorials and learning guides.

Borrowing tutorials or content developed by others is a clear path around some of the barriers keeping librarians from creating tutorials. Reinventing the wheel takes time, and re-using content saves that time. Similarly, expertise issues are also addressed by sharing. Linking to a tutorial created with advanced skills or technologies is a way to take advantage of skills or technologies that are beyond one's own capacity. As one respondent said, "I would love to do more, but just don't have the time or expertise to develop them [tutorials]. I must rely on the ones developed at other institutions."

It is important to realize the barrier that instruction librarians perceive is not just about the time it takes to build a tutorial. Instead, the single most important barrier they report is the time it takes to develop the content. This issue, separate from issues of technology or design, is the reason instruction librarians have continuously tried to find ways for librarians to share the content they develop. A survey comment sums up the views of many:

I believe that it takes time to do them properly. I also believe that there is a need for a lot of content. Consequently, I think that the best answer for all libraries is to share in the development of content that is useful to all.

In light of this shared concern, it is interesting that many more librarians borrow tutorials in their entirety than adapt or tweak tutorials developed by others.

Given how many processes are local, it seems clear that only borrowing those tutorials that are generic enough to work across institutions in their entirety means significant amounts of potentially useful content is not being shared.

The survey results also highlight that while borrowing and linking are important parts of the tutorial creation process for librarians, actively sharing or making one's own content available are not. The librarians surveyed are much more likely to borrow content developed by others than they are to make their own content available for sharing. As one response suggested, a reason for this might be awareness: "I don't want to reinvent the wheel, so I do like using others [tutorials] when possible. I had not considered placing content in Creative Commons or licensing tutorials, though, until this survey."

While awareness and education might be part of the answer, there is probably more to the story. Many instruction librarians know about repositories like ANTS and MERLOT, yet adding content into those repositories has not become part of the wider culture of instruction librarianship. Whether this is because of the time it takes to share content or because other professional responsibilities are perceived as more important (or rewarded more directly), it is clear that barriers remain to inter-institutional sharing.

At OSU, the tutorial creation team noticed even within the institution, a culture of sharing and collaboration had not developed in the area of tutorial creation. This was problematic on two levels. First, it meant time was being spent re-inventing the wheel. Secondly, collaboration and the sharing of ideas could have been making the finished products stronger. As one survey

respondent put it “[Tutorial development] is a good project for library staff to work on collaboratively. That is how we do it here (as we have a very small staff) and it's good for team-building, I think.” Another expressed a similar thought: “[w]e just keep learning new stuff from our colleagues. I find it exciting!”

While building a system that can address the technological and cultural barriers to sharing within the whole community of instruction librarians might be daunting, building a system that will work with the culture of a specific department or institution is achievable. Using a familiar content management system not only allows librarians to stay within their technological comfort zone, but it also allows the instruction program to leverage workflows that have already been adopted by instruction librarians to build course pages and subject guides. If these workflows include sharing, that benefit will extend to tutorial development as well.

With either LALC or LibGuides, librarians do not need to know everything about the technology behind the tutorial creation process, rather they can focus on content creation instead—an area in which most librarians tend to have a high degree of expertise. One of the survey participants noted, “What most concerns me today is that many library tutorials are full of razzle dazzle and use Flash but lack strong content.” Using a content management approach allows librarians who have advanced programming skills to include those elements within their modules; librarians without those skills can either choose to focus on content, include elements of interactivity through the use of quiz modules, or borrow modules with advanced features from the content management pool.

The small subset of respondents who had never created a tutorial was more likely to identify technological expertise as a barrier. Using a familiar tool might help those who fit into this group, like the respondent who said, “As open to learning as I am, being older, I don't pick up the technology as quickly as younger librarians. I WANT to, but it takes me time, so projects get given to the younger people because they are quicker, and time is of the essence. I learn in an old-school way (building from the ground up, not trial and error).” At OSU, even those librarians with limited technological expertise are familiar and comfortable with Library à la Carte. For many other libraries, the similar modular content management system LibGuides is a likely logical solution. Examples of libraries already using LibGuides or Library à la Carte as a tutorial or a tutorial portal can be found at Oregon State University (<http://ica.library.oregonstate.edu/tutorials/lesson/601-ENG-200-Creating-a-bibliography-from-a-Zotero-Library?mid=22231&type=MiscellaneousResource&uid=1171>), the University of Southern California (<http://libguides.usc.edu/scholars>), and the University of Washington (<http://guides.lib.washington.edu/content.php?pid=55083&sid=425314>).

By using a content management system like Library à la Carte or LibGuides, librarians within a department or unit can easily share content at the tutorial, unit, or module level (see Figure 3). And while LALC only allows sharing within a single institution, LibGuides allows for sharing across institutions. In either case a librarian can borrow a page or set of pages from a colleague and make small changes on each page. Using a modularized content management system can help decrease the time required to create tutorials by limiting the temptation to over-customize instruction

for each learning instance.

Maintaining modules within a content management system also addresses concerns raised by two survey participants. One participant expressed a need for “a learning objects repository to deal with the location and updating of these [tutorials].” Another participant noted, “Some of the difficulties we face are figuring out how to design once in a modular fashion and employ everywhere...how to design them so that they are easy to update when things change.” A content management system solution tackles both these issues by providing a repository of modules and enabling easy updating from one location. Improving tutorial creation workflow in this way provides additional time savings. A solution like LALC or LibGuides may not be perfect, but it is extensible—something that is lacking in other online tutorial systems.

For some users, there may be drawbacks to a content management solution. A CMS provides less flexibility for adjusting the look and feel of the tutorial. Also, tutorial designers would need to work within the

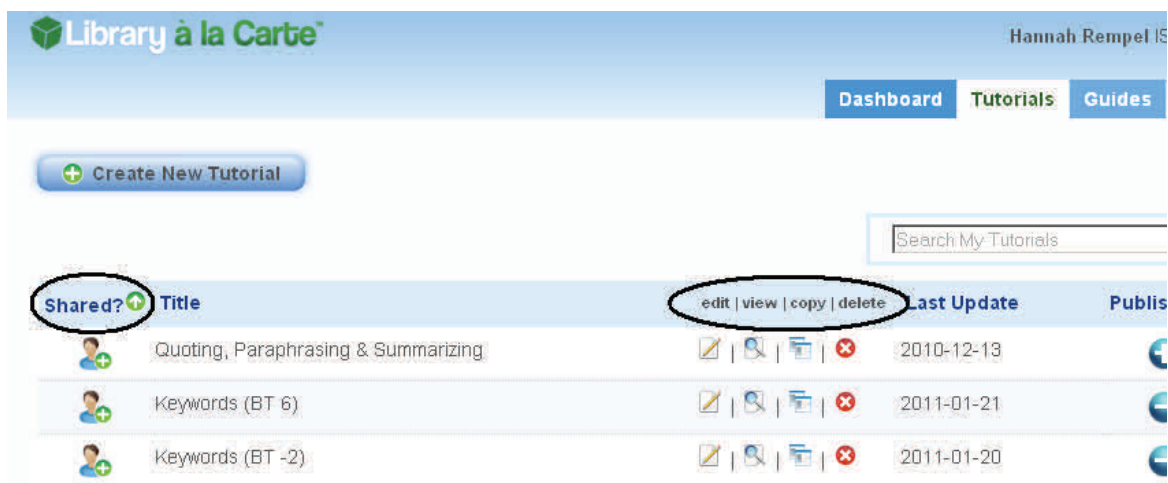
modularized framework of a CMS. Finally, to maximize the strengths of a content management solution, larger buy-in from the user community is required. If only one or two members of a department are using the CMS, the number of modules available for sharing is reduced.

Interactivity and Point of Need Help

The CMS, therefore, allows the librarian to focus on creating and sharing content, content that can then be presented to the user in a variety of ways. With Library à la Carte, OSU librarians had the freedom to brainstorm about needed content; a close examination of what was needed, however, revealed new questions. Most important among these was: Are there situations where our users do not need a “tutorial” at all?

It might seem surprising to learn that many librarians are not sure exactly what is meant by the term “tutorial.” One survey respondent said that he was “not EXACTLY sure what a tutorial is” while another added that she could not “find a clear definition of what a tutorial is. Just know it when you see it, I guess.” This lack of clarity is also present throughout the literature on tutorial

FIGURE 3: THE LIBRARY À LA CARTE INTERFACE



development. As Web technologies have become more dynamic, static tutorials designed to push information in one direction, from library to user, have been increasingly scrutinized.

Online tutorial definitions consistently mention the importance of interactivity (Reitz, 2010). In Dewald's (1999) initial review of library online tutorials, a required element of "good library instruction" was active engagement and learning, or interactivity. Active learning as defined by Dewald (1999) included "exercises conducted by the student online, whether this involves using online forms to review material and receiving instantaneous feedback, or sending online worksheets or quizzes to the librarian for later email feedback."

The assumption underlying these definitions is that interactivity and feedback are essential components for online learning. At OSU, librarians identified two important purposes for online instructional content: as a supplement to or replacement for face-to-face instruction, and to deliver point of need help. Our motivations for creating tutorials, therefore, closely mirrored those reported by the survey respondents.

For the former purpose, replacing or supplementing face-to-face instruction, an interactive presentation of content was important. For point-of-need help, however, the goals are different. A user who wants to be able to troubleshoot a problem or navigate a barrier during his or her own hands-on research process does not want to complete a quiz or submit a response as a part of getting that help. In this context, a static "demonstration" module can be exactly what the user needs. From the librarian's perspective, the ability to quickly and consistently make this help available is

key.

More research is needed to know how well the content management approach can deliver pedagogically robust, interactive tutorials. Content management systems like LibGuides and Library à la Carte not only make it easy for librarians to develop content, but they also make it relatively easy for librarians to use widgets to pull dynamic content into tutorials or Web pages. Whether this type of dynamic content can make tutorials more effective as teaching tools, however, is a question for further study. To develop a quick, efficient online help center, however, the content management system is ideal. Shifting content creation away from complex screencasting systems and into the existing CMS has made it easy to reconceptualize the delivery of point-of-need help.

CONCLUSION

This study's survey showed that instruction librarians see online tutorials as a valuable learning tool and want to make more of them. Time and technological expertise are common barriers to moving forward with creating tutorials. The authors suggest that creating tutorials using the content management systems that many libraries have already adopted can solve these issues and that the ability to easily share content within these systems will suggest improved workflows for instruction librarians. This study raised research questions about the evolving role of tutorials in library instruction. Expanding instruction librarians' understanding in these areas will help meet the challenge of reaching out to students in a pedagogically sound way regardless of the teaching environment.

REFERENCES

- Bradley, C., & Romane, L. (2008). Changing the tire instead of reinventing the wheel: Customizing an existing online information literacy tutorial. *College & Undergraduate Libraries*, 14(4), 73-86. doi:10.1080/10691310802128344
- Deitering, A., & Bridgewater, R. (2007). Stop reinventing the wheel – Using wikis for professional knowledge sharing. *Journal of Web Librarianship*, 1(1), 27-44.
- Dewald, N. H. (1999). Transporting good library instruction practices into the web environment: An analysis of online tutorials. *Journal of Academic Librarianship*, 25(1), 26-31.
- Engle, M. E. (1993). Electronic paths to resource sharing: Widening opportunities through the internet. *Reference Services Review*, 19(4), 7-62.
- Griggs, K. (2009). Library information made to order: An open source project built for and with librarians. *Computers in Libraries*, 29(2), 12-47.
- Lewis, D. W. (2007). A strategy for academic libraries in the first quarter of the 21st century. *College & Research Libraries*, 68(5), 418 -434.
- Littlejohn, A., & Margaryan, A. (2006). Cultural issues in the sharing and reuse of resources for learning. *Research and Practice in Technology Enhanced Learning*, 1(3), 269-284. doi:10.1142/S1793206806000184
- Mandernach, B. J., Dailey-Hebert, A., & Donnelly-Sallee, E. (2007). Frequency and time investment of instructors' participation in threaded discussions in the online classroom. *Journal of Interactive Online Learning*, 6(1), 1-9.
- Mardis, L. A., & Ury, C. J. (2008). Innovation—an LO library: Reuse of learning objects. *Reference Services Review*, 36(4), 389-413.
- Margaryan, A., & Littlejohn, A. (2008). Repositories and communities at cross-purposes: issues in sharing and reuse of digital learning resources. *Journal of Computer Assisted Learning*, 24, 333-347. doi:10.1111/j.1365-2729.2007.00267.x
- Reitz, J. M. (2010). ODLIS: Online dictionary for library and information science. Retrieved November 19, 2010, from http://lu.com/odlis/odlis_O.cfm#onlinetutorial
- Shea, P. (2007). Bridges and barriers to teaching online college courses: A study of experienced online faculty in thirty-six colleges. *Journal of Asynchronous Learning Networks*, 11(2), 73-128.
- Slebodnik, M., & Riehle, C. F. (2009). Creating online tutorials at your libraries: Software choices and practical implications. *RUSQ*, 49(1), 33-51.
- Somoza-Fernández, M., & Abadal, E. (2009). Analysis of web-based tutorials created by academic libraries. *The Journal of Academic Librarianship*, 35(2), 126-131. doi:10.1016/j.acalib.2009.01.010
- Su, S. F., & Kuo, J. (2010). Design and development of web-based information literacy tutorials. *The Journal of Academic Librarianship*, 36(4), 320-328. doi:10.1016/j.acalib.2010.05.006
- Yang, S. (2009). Information literacy online tutorials: An introduction to rationale and

technological tools in tutorial creation. *The Electronic Library*, 27(4), 684-693.
doi:10.1108/02640470910979624