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INSTRUCTION 2.0: TEACHING AND/OR INCORPORATING WEB 2.0 TECHNOLOGIES IN YOUR CLASSROOM

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INTRODUCTION

The rise of Web 2.0 has led to in an explosion of new tools and technologies that foster online collaboration and communication. Blogs, wikis, RSS feeds, folksonomies, social networks and other components of the 2.0 environment offer librarians myriad avenues to incorporate new technologies into their instruction sessions, from “one-shots” to quarter or semester-long classes. They also offer rich opportunities for librarians to share their knowledge and expertise through training and educating library and even college or university staff about these emerging and evolving tools.

I. TRAINING AND EDUCATING LIBRARY AND UNIVERSITY COLLEAGUES ABOUT WEB 2.0

For those who use these tools on a regular basis, it is easy to forget there is a larger audience within the library and campus community who is unfamiliar with blogs and wikis, and may not have even heard of Web 2.0, RSS, social networks or tagging. Thus, librarians can position themselves on campus as educators and innovators of technology.

a. University Staff Workshops at UCSD

Every quarter, the chemistry librarian (Vogel) teaches a staff education course, “From Blogs to Wikis” (https://enrollmentcentral.ucsd.edu/sed_course.cfm?&cdcrs=BLGS2WIKIS). The workshop is scheduled through the university’s staff development program, which

handles registrations, confirmations, reminders, evaluations, and some of the publicity. Currently, “From Blogs to Wikis” is a 2-part course that meets for 90-minutes each session. Blogs and RSS are the focus of the first week; wikis and social software are covered in the second week. Firefox and Google tools are included as time permits.

The participants are staff members from across campus, in both academic and administrative departments. Many are actively looking for solutions to meet specific work-related needs or projects, while others have a more general interest and curiosity about the topics being discussed. Attendees leave with:

- a greater familiarity with the concepts and terminology behind Web 2.0;
- a deeper understanding of the various Web 2.0 tools, how they work, and how the technologies can be best utilized to meet specific goals and objectives;
- resources that list and sometimes evaluate the different software options, like a list of RSS readers or a site that offers recommendations on selecting a wiki; and
- the questions and answers they need to consider when discussing these tools with IT colleagues and administration.

b. Library Staff Workshop Series at UCSD

Based on feedback from interested staff, “From Blogs to Wikis” was retooled into a library workshop series that ran from February through March 2007. There were six one-hour sessions: blogs, wikis, RSS, social bookmarking and media sharing, Google tools, and Firefox. The library training officer managed the registrations, and participants could sign up for one, some, or all of the workshops. The goals for this series were

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similar to those for the university-wide workshops, but with a greater emphasis on library-related examples of how these tools are being used. There was also a greater range of knowledge and experience among the attendees. Between 15 and 25 library staff, including librarians, library assistants, department heads and even an associate university librarian, attended each workshop. There is interest in a repeat of this series, which may be scheduled later in 2007.

c. Lessons Learned from University and Library Workshops on Teaching Web 2.0

- As with any library instruction, understanding the tools being taught is essential. The workshops should be as hands-on as possible; teach the tools by using them. This means the instructor must be comfortable with the tools to teach them, to demonstrate them, and to discuss the differences among the major players. In both the university and library staff workshops the following tools are taught or shown: Blogger, PBWiki, Bloglines, del.icio.us, WordPress and WordPress Multi-User (the university's blogging software), Mediawiki, Simpy, LibraryThing, Flickr, Google Docs and Spreadsheets, Google Notebook, Google Reader, and Firefox.
- Set up a workshop blog that attendees can access (<http://scilib3.blogspot.com/>). Send invitations to the workshop participants at least two days in advance, leaving time to troubleshoot if anyone has trouble accepting the invitation or setting up any related accounts (a Google account for posting on Blogger, for example). Use the blog to post training materials, and have attendees post entries and comments to complete in-class exercises.
- Use this same hands-on approach for other tools. Set up a wiki for the workshops (<http://scilib3.pbwiki.com/>), as well as RSS reader and social bookmarking accounts. Make the account passwords available to the attendees so they can try them out. Create another in-class exercise that has the group using the wiki, remembering to create enough working pages within the wiki so attendees are not locking each other out while editing pages.
- If the instructor actively uses something not included as part of the hands-on work but would still feel comfortable showing it to the attendees, then it is certainly an option.
- Expect change. One of the characteristics of Web 2.0 is that the tools are in constant beta, so between workshops the wiki or RSS reader used in the training may change dramatically, disappear, or get absorbed by another company. Keeping up with the changes to the teaching tools and monitoring for new ones to incorporate into the workshops will reduce surprises when it is time to prepare for the next workshop series.
- Be wary of assumptions made about the attendees. The library workshop series was first proposed when discussions with several library staff members (including

one who attended the university staff workshop) revealed that false assumptions were being made about knowledge and understanding of Web 2.0 among library staff. Write clear workshop descriptions to let participants know in advance what will be covered, and what (if any) expectations are made of the attendees. Surveying workshop participants in advance is an option, as a way to get a sense of their previous experience and to prioritize topics. However, a survey can also reveal that everything to be covered is a high priority, and some attendees may ask that additional tools be covered.

- Find partners to provide support for promotion, scheduling and registration, which frees up more time for class preparation.
- Include in the handouts: URLs and account information for all the websites the workshop participants can use or look at; resources where they can go to locate or compare the various software options, like the RSS Compendium (<http://allrss.com/>) and the Wikimatrix wiki selection wizard (<http://www.wikimatrix.org/>); and a glossary of all of the terminology used in the workshops, from 'blog' to 'WYSIWIG.'

II. INTEGRATING WEB 2.0 INTO LIBRARY INSTRUCTION

The chemistry librarian has been exploring ways to integrate Web 2.0 tools into library instruction. Unlike the library and university workshops, the goal here is to use the technologies, but not to make them the focus of the instruction.

a. Wiki Course Guides

Since January 2007, the chemistry librarian has used PBWiki to create course guides to complement one-shot instruction sessions. Inspired by a patents guide her co-author created in 2006, she created wikis for four undergraduate chemistry courses, using three of them in the actual instruction sessions (the fourth was created in lieu of a class). The primary reason for switching from the library's website to a "wikifarm" was the ability to create and edit the guides from any location, instead of being tied to a library computer to check pages in and out from the web server. The librarian could login to PBWiki from home or in the classroom before or after the instruction session, and make immediate changes to that guide. The wiki-based guides are publicly available, but students must set up their proxy access to reach the licensed resources linked on the site.

Each guide has a similar URL that includes "ucsdchem" and the course number (<http://ucsdchem6ch.pbwiki.com/> for Chem 6CH). The students are given a handout with the librarian contact information and URL for their class guide. The wiki's sidebar feature, though not particularly attractive, becomes a table of contents with links to pages on search tips, suggested databases, and instructional modules like "review vs. research articles." Repeated content must be manually copied and pasted into newer wikis since there is no content management system to store and retrieve these learning objects.

While the advantage of collaborative web writing is covered in the Web 2.0 workshops, it is not a factor with these wikis, which are presented to the students and faculty just as web-based course guides. At this time the long-term future of these guides is in question, as the UCSD Libraries are moving to a content management system this summer and the content (if not the guides themselves) should be migrated into the new website.

b. Blog and Wiki for Chemical Information Seminar

A blog and wiki were used in CHEM 192, a one-credit senior seminar on chemical information, co-taught by the chemistry librarian and a faculty member in the Department of Chemistry and Biochemistry. This was the second time the course had been taught, and the instructors were originally seeking ways to get the students to know each other and hopefully become more comfortable participating in the seminar. The original plan was to create a private Facebook group that the students would join, and then the instructors could use the group's wall and message board to post assignments, receive answers and give feedback. Surprisingly, some of the students surveyed at the beginning of the quarter did not have Facebook accounts, or did not want to use their accounts for the course.

Instead, Blogger and PBWiki were the Web 2.0 tools used for the course, and functioned primarily as the CHEM 192 website and courseware. For some assignments, a question was posted to the blog and seven students were asked to comment to the post with their answers. The course wiki was used for more in-depth assignments, such as answering questions about a database search query and the subsequent results. A template of questions and single-cell tables (for answers) was created for a particular assignment. Copies of the template were made for each student and saved in their names (.../week3-john), then linked to a single assignment page.

The students accessed the assignment page, went to their copy of the assignment, and used the wiki's edit function to answer the questions. The students could see each other's work, as well as any posted comments. There were some technical glitches, but overall the students seemed comfortable with the blog/wiki combination. Social software options (including Facebook) will be considered for the next spring's seminar.

c. Lessons Learned from Integrating Web 2.0 Technology into Instruction

- Again, do not assume what students will want to use or even that they know how to use these tools. The instructors here were both surprised at the resistance to using Facebook and that most of the students had never used a blog or a wiki before. Build some time into the first class to make sure students are comfortable using them.
- Consider privacy issues. The wiki was password-protected for viewing as well as editing, and the blog had similar protections which were eased slightly to

accommodate a student who had problems logging in. To protect student privacy after the course is completed, wiki file names will be changed so 'john' becomes 'student1,' and names will be covered if screen captures are used in future presentations or publications.

- Anticipate technology problems, whether a single student has problems using the wiki or the blogging site is temporarily unavailable.

III. LOEX DISCUSSION SESSION

The Discussion Session based on this topic was moderated by the authors at the 2007 LOEX Conference in San Diego. Attended by approximately 80 people, the session provided an opportunity for small group discussions centered around how people are currently incorporating Web 2.0 tools in their instruction, and if they are also teaching workshops to faculty, staff, or students on using these technologies. To facilitate structured discussion, the attendees were supplied with two worksheets: one to collect participants' contact information and any details about the tools they currently use or would like to explore further; and another worksheet for listing their thoughts about the following issues: 1) barriers and challenges to bringing Web 2.0 technologies into the classroom, 2) the overall climate at their institutions regarding these tools, and 3) their opinions on the most promising of the Web 2.0 tools for their potential impact on instruction.

The worksheets were collected at the end of the session and compiled in a wiki (<http://loexsd.pbwiki.com>). Below is a summary of the content collected.

a. What Other Libraries Are Doing

It's important to note that not all people who attended the discussion session reported on their activities using these tools. The high turnout for the session spoke to the level of excitement or curiosity about the topic, and the table discussions were lively and enthusiastic. Those who did record their projects reported using a variety of 2.0 tools in their instruction. Many cited the use of wikis for posting course pages or subject guides. Many also use blogs for communication with students about assignments or resources, and for communication between students. One person mentioned using a blog for students to document their research process. Google Docs was mentioned for student collaboration, and some reported using Facebook and MySpace for instruction, though no details were given. An instructor for a Journalism course promoted 2.0 as "portability tools" for journalists who often need accessible places to create and store information. The use of del.icio.us was reported for research management. Another interesting concept was the use of Library Thing rather than bibliographies. Moodle, a free open source course management system is used by one participant, and another uses Mediasite for finding presentations and lectures. The University of Illinois at Urbana-Champaign Graduate School of Library and Information Science has developed iLabs, a collection of open source 2.0 tools to support inquiry-based learning (<http://ilabs.inquiry.uiuc.edu/>).

Although the focus of the discussion session was on the use of these tools in instruction, many reported using them for other applications, including wikis/blogs for committee work or internal workflow. Several mentioned outreach aspects of podcasts/vodcasts or the use of the library blog for reaching users. Fewer people reported that they teach classes for faculty, staff or students specifically in how to use Web 2.0 technologies, but this seems to be a growing trend.

b. Issues in Teaching/Incorporating Web 2.0 Technologies

- Barriers and challenges to bringing Web 2.0 technologies into the classroom
 - The most frequent barrier mentioned was the library's IT Department, in their reluctance/refusal to support or host a new technology. Consequently, many people indicated they were using free tools hosted on the web.
 - Another barrier cited was the ability of librarians to keep up with new and changing tools and platforms, given instruction and other workloads.
 - Again, as noted above, instructors sometimes face hesitation or lack of experience on the part of students in adopting the tools for class activities.
- Overall climate or attitude at your institution regarding these tools?
 - Again, a general reluctance was noted, although there is plenty of use of these tools taking place.

- One person's comment was, "Adventurous in purchase and promotion, but not good in support and training."

- Most promising of these technologies for their impact on instruction?

- No single tool was highlighted as the most promising, but people noted several advantages:
 - These tools provide a space for people to work collaboratively and are great for classes
 - Quick and easy to set up - essential for adoption
 - Provide resource sharing
 - Allow long term access

IV. CONCLUSION

Librarians can use Web 2.0 tools to make instruction more relevant and interactive for students. More and more librarians are actively integrating them into their workshops, while others are just beginning to explore their potential and possibilities. Academic instruction librarians have a unique opportunity to share their expertise in using these technologies with their campus and library colleagues, and they can lend valuable insight into the appropriate use within classroom and workgroup settings. While keeping up with the ever-changing 2.0 landscape is a challenge for time-strapped librarians, they can position themselves as advocates for these tools within their academic institutions.