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Science boot camp for librarians: CPD on a shoestring

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Abstract:

The University of Massachusetts is a system of five campuses spread across the state. In 2009, science librarians from all five campuses organized the first of an annual series of three low-cost, regional professional development programs. Conceived as part of a response to state-wide life science initiatives, these programs take advantage of each institution's faculty, scholarly connections and facilities, as well as the ingenuity and imagination of its librarians. This presentation focuses on the planning and execution of the largest of these events, Science Boot Camp for Librarians, as an example of a successful, grass-roots professional development program for librarians engaged with the sciences.

Science Boot Camp for Librarians was envisioned as a casual but intensive immersion event into selected scientific subjects that employ networked computing capabilities for research and collaboration. The goal of the event is to provide librarians with networking opportunities, but more importantly, to give them some of the context and vocabulary of a discipline to enable them to better engage faculty and research scientists with regard to e-science. A half-day is devoted to each of three topics chosen for that year's camp. A local faculty member provides an overview of the research area, and a second describes a single project that illustrates how the research is conducted. Speakers are asked to aim their talks to an audience of educated non-specialist

By making use of the resources of all five institutions, we have kept the registration fee for the camp to \$200 per person, which covers a room for two nights, food for two and a half days, and all materials. An important part of the camp is the opportunity to socialize with colleagues from different institutions; consequently, the camp includes at least two social events. The camps have received enthusiastic praise from participants.

Introduction

In March of 2008, an Ad Hoc Committee of Science Librarians from the five campuses of the University of Massachusetts System convened to discuss the challenges of e-science and prepare the Libraries for their role in e-science initiatives. The Ad Hoc Committee identified professional education as a major component necessary for successfully engaging faculty and researchers on e-science. In order to partner with researchers generating data sets—the basic component of e-science, big or small—librarians must be aware of the research trends in their fields. Moreover, librarians must be familiar with the methodologies used in different disciplines in order to effectively collaborate with and earn the trust of researchers.

As discussions on this topic progressed, it became quickly apparent that even on the Ad Hoc Committee only a handful of librarians had formal science education or experience. Further, all members of the Committee struggled to keep current with developments in the traditional disciplines, and, while they were aware of emerging fields of research, they did not know much about new methods or practices in these areas. Consequently, the Ad Hoc Committee initiated a multi-event program between April and June of 2009 designed to inform and prepare science librarians in the New England region to engage research faculty as a first step toward active participation in e-science projects.

The events included a regional e-Science Symposium to discuss e-science resources and future roles that libraries and librarians might take on to support their institutions; a professional development day to explore a particular scientific discipline in depth with talks and lab tours; and the Science Boot Camp for Librarians (Boot Camp), a two-and-a-half day immersion education event. The Ad Hoc Committee has now run this series for three consecutive years, with Boot Camp being a cornerstone of the program.

This paper will focus on the planning and execution of the Boot Camp, particularly with respect to its low-budget and high-impact aspects, as an example of a successful, grass-roots professional development program for librarians.

Planning

The Ad Hoc Committee felt strongly that, beyond understanding the fundamentals of e-Science, there was a need for the group to educate itself with regard to scientific research, and that this was not unique to librarians from the University of Massachusetts. In response, the Committee planned Boot Camp as a casual but intensive immersion event into selected data-intensive, scientific disciplines that employ networked computing capabilities for research and collaboration. With an emphasis on education and on maintaining a “camp”-like atmosphere, Boot Camp became an informal, inclusive, and inexpensive approach to learning in a face-to-face, group environment specifically for librarians.

Logistics

The Ad Hoc Committee was made of up of science librarians from all five UMass campuses (Amherst, Boston, Dartmouth, Lowell, and Worcester). Using in-person meetings, regular teleconferences, and a wiki platform to coordinate members across the state, the Ad Hoc Committee was able to organize and execute Boot Camp within a seven-month period.

The group compared the cost of holding the Boot Camp at two University campuses with regard to overnight lodging, parking, meals, and rental fees for meeting rooms, microphones, and projection equipment. Amenities for participants such as Internet access, suitable space for a banquet, and area attractions were also considered. For its overall cost and centralized facilities, the University of Massachusetts Dartmouth was selected to host the first Science Boot Camp for Librarians.

UMass Dartmouth is located on the south coast of Massachusetts, a one-hour drive from Boston and Worcester, and about two hours from Lowell and Amherst. The Claire T. Carney Library at UMass Dartmouth features a central, open lecture space that can accommodate 100 people and was the primary location for Boot Camp activities. The lecture space is adjacent to the library's Learning Commons, where participants had access to the Internet and e-mail, as well as a group study area with tables that were used as a dining area. Campus food services delivered all meals to the Boot Camp space.

Because Boot Camp was an experimental effort during difficult financial times, value and affordability were of prime importance. The five University of Massachusetts campus library directors uniformly contributed \$1000.00 each to the cost of the Boot Camp. Each contribution covered registration for participants from that campus and gave the planners some seed money to use for deposits and miscellaneous expenses before registrations were received. The Boston Library Consortium also contributed \$800.00 toward the cost of a banquet, and the New England Regional Medical Library added \$1200, which brought the amount of start-up money to \$7200. With this support, the Ad Hoc Committee was able to set reasonable registration fees for attendees, particularly for those who had to pay their own expenses (See Table 1).

Boot Camp Registration Fees

Full registration (2.5 days with meals and overnight accommodation)	\$ 200
Commuter registration (2.5 days with meals but no overnight accommodation)	1 00
One-day registration (with meals)	5 0

Table 1: Tiered registration fees for Boot Camp

The Camp was advertised to the libraries of the Boston Library Consortium as well as libraries in the National Libraries of Medicine—New England Region, and science libraries through listserves. Promotional announcements were made at the e-Science Symposium and the Stem Cell Research Day.

With a shoestring budget and short preparation time, the group set up a site using UMass Amherst's Libguide subscription. Libguides, a commercial web publishing platform developed by Springshare, are easy to set up and change, and, with a basic knowledge of HTML, can easily be made distinctive and attractive. The site (<http://guides.library.umass.edu/bootcamp>) provided information on the topics to

be covered, the instructors, the schedule, some preparatory reading, directions to the UMass Dartmouth campus, and a link to the registration site.

Program

An important consideration of the Ad Hoc Committee was that the Boot Camp would provide librarians an opportunity to learn enough about scientific subjects to use electronic research tools more efficiently and contribute to e-Science projects more effectively. With that in mind, the Ad Hoc committee planned for consecutive, three-hour subject sessions over a two-and-a-half day period.

Sessions were arranged with two instructors, one to provide an introduction and overview of the topic, and another to provide a more detailed example of the research tools used within that discipline. Instructors were identified from the University of Massachusetts System faculty and offered a small honorarium for participating. They were told that their audience would be librarians, described as “educated non-specialists.”

The first Boot Camp was held from Wednesday, June 24, 2009 to Friday, June 26, 2009. There were 60 registered campers. Wednesday morning was kept for registration, moving into the dorms, and guided architectural tours of the campus, which was designed by Paul Rudolph, former dean of Yale’s school of Art and Architecture.

Wednesday afternoon officially opened Boot Camp with remarks from the Library Directors and the first subject session: GIS. Dr. Zong-guo Xia from UMass Dartmouth provided an introduction to GIS and Matthew Arsenault, a consultant from NOAA who was also an instructor at UMass Dartmouth, described field applications of GIS. There was a lively question period at the end of the session and many participants stayed to ask questions.

Wednesday evening featured a “Non-Sensible Shoe” dinner. Campers were invited to wear their least-sensible shoes and were given an opportunity to tell a story behind the shoes that they had chosen. Three winners were selected to receive \$25.00 gift certificates from Barnes and Noble. A very creative Ad Hoc committee member had re-written the words of three songs to fit the theme of science boot camp—“Little Data Sets” (to the tune of “Little Boxes”), was one. She led us in a sing-along to close the banquet. Later that evening, campers gathered in the residential area with musical instruments. Some campers brought wine and beer, and the rest of the evening was spent in song and conversation.

On Thursday morning the group reconvened at the library over breakfast and began the second day of camp. The first subject session was on Bioinformatics, led by Dr. James Griffith, chair of the department of Medical Laboratory Science at UMass Dartmouth. His presentation was followed by Dr. David Osterbur from Harvard University Library who demonstrated the use of BLAST, a program that finds regions of local similarity between nucleotide or protein sequences. The Thursday afternoon session, led by Dr. Sanjeev Manohar from the University of Massachusetts Lowell with the help of a graduate student, provided a thorough introduction to the field of Nanotechnology.

Thursday evening gave participants a chance to leave campus and see more of the region. A dinner banquet was held in a nearby New Bedford restaurant, located on the fish pier among the fishing boats. Participants carpooled and could return to campus after dinner or go for a walk in historic New Bedford or along the pier to see the boats up close.

At the end of each session, each camper was presented with a “merit badge” in exchange for a completed evaluation form. (See Fig. 1) The badges were designed and created by Sally Gore, a very talented planner from the Lamar Soutter Library at the University of Massachusetts Medical School.



Fig. 1 Boot Camp 2009 Merit Badges (Sally Gore, designer)

All three sessions were video-recorded by UMass Dartmouth’s Visual Resource Center (VRC), which copied the videos to 2-DVD sets. The VRC also designed a case to hold them, and each attendee was later sent a set.

Friday morning closed Boot Camp with a short debriefing and a discussion about future Boot Camps.

Outcomes

The success of Boot Camp can be measured not only in the overwhelmingly positive final evaluation survey results that were received, but also in requests for program and planning material at regional and national conferences where the Boot Camp has been referenced.

A total of sixty campers registered for Boot Camp, the majority of whom registered for the entire event with accommodation. All campers received a final evaluation survey electronically; 63% completed the survey. Overall, respondents classified Boot Camp as extremely valuable (70%) and reported that they would attend a future Boot Camp (92%). “I have a stronger sense of what bioinformatics, GIS, and nanotechnology is. Some of the science lingo also forced me to recall some of those concepts I learned in my science classes in college (several years ago). I think it's important to keep current on new and emerging scientific fields, especially when those fields profoundly impact other scientific fields.”

Although some campers expressed an interest in either a one-day or blended multi-media course, the three-day format was valued. “It would not be a “boot camp” without an overnight option”; “I don't think a one-day only format would be appropriate because I think there is too much content to cover. The three day session was perfect.”

Survey respondents learned of the event either through one of the listservs or directly through their institution (31%); in addition word of mouth was an effective mechanism for reaching campers (25%). With regard to the event cost and accommodations, respondents were generally pleased, the majority finding the event inexpensive (47%) and rating it very good on lodging and meals.

This first Boot Camp was an experimental approach to providing professional development for science librarians particularly with regard to e-Science. Perhaps because it was the first attempt to provide this kind of learning experience, the Boot Camp goals were

not explicit or developed enough (58% reporting that the event had clear goals). Also, one component that campers requested most often for future Boot Camps was an opportunity for hands-on learning or lab sessions to experiment with some of the resources described during the subject sessions (83%). In addition, campers requested additional time for networking with other librarians.

Overall, the Ad Hoc Committee was very pleased with the event and with the response that it generated from the campers. “It was great & worthwhile!”; “All fantastic speakers! Learned a lot!”

Currently, the University of Massachusetts System Science Librarians are planning a third Science Boot Camp for Librarians to take place in June 2011. The goal for that event is to maintain the educational focus while including the desired hands-on experience and to expand the focus on impacts for librarianship.

Boot Camp 2010

The second Boot Camp was planned along similar lines as the first, and was held at the University of Massachusetts Lowell. Sixty-three registered campers participated, mostly from the New England and New York regions. The first camp had generated some publicity, and librarians from New Mexico, Utah and even Canada attended. The topics chosen that year were Genetics, Climate Change and Remote Sensing. The instructors represented four of the five University of Massachusetts campuses. We asked the instructors to provide us with any preparative material they thought would be useful to the campers, and posted links to it on the Boot Camp page. At the request of several campers, one instructor provided to the planners links to websites he mentioned in his talk. The camp activities once more were an important part of the event. Another “Non-Sensible Shoe” contest was held, this time accompanied by a New England lobster dinner and a boot piñata, and there was music and conversation in the evenings. Sally Gore designed a new set of merit badges corresponding to the new topics. Returning campers brought the previous year’s badges with them, and proudly displayed them along with the new ones. Again, the evaluations were overwhelming positive, and the comments offered guidance for future camps.

Following the 2010 Boot Camp, the planners received requests from librarians at other colleges and universities to join the planning committee. After some discussion, the planning group agreed that librarians from outside the University of Massachusetts system, but in the New England region, would be permitted to join the planning group if their institutions contributed \$1000 to that year’s camp, just as each of the University of Massachusetts do. For the 2011 boot Camp, three new institutions—Tufts University (Medford, Massachusetts), Worcester Polytechnic Institute (Worcester, Massachusetts) and the University of Connecticut (Storrs, Connecticut) — joined the planning group. Besides more funding, this brings to the group new planners with new ideas, a wider choice of venues, and a larger number of potential instructors.

In 2011, the Science Boot Camp for Librarians will be held at Worcester Polytechnic Institute. The registration costs remain unchanged since the first camp.

Science Librarians Boot Camp as a Model

Since the 2009 Boot Camp, members of the Ad Hoc Committee have been asked half-jokingly when they would bring the Boot Camp to other parts of the country. While the notion of a road-show Boot Camp is intriguing, we feel that the camp can serve as a model for similar low-budget “home-grown” events which can provide learning opportunities in any area, not only science. Here we offer some suggestions for others who would like to stage their own Boot Camp.

- A community of regional institutions is essential. While one institution could produce a boot camp, much of the value comes from working with people from different institutions and institutional “cultures.” In addition, a consortium of some sort creates a larger pool of researchers to draw on for speakers. Planning and execution would be easier with a regional association, which would also provide a natural audience for the camp.
- Institutional support is vital. Each of the five Library Directors contributed funds to the camp, permitted librarians to spend time planning it, and provided administrative support such as signing authorizations for venue reservations and expenditures.
- Use what is at hand. LibGuides, blogs, wikis, dormitories, researchers, local attractions, the talent in the planning group—these all helped to keep the cost low. Each campus contributed some promotional items such as pens or sticky notes for “swag.”
- Integrate fun into the camp. Merit badges and camp songs made the project seem much less like work, both for organizers and attendees. In the same way, it is important to find researchers who are engaging speakers.
- It’s not clear to us yet how scalable Boot Camp is. It seems that camaraderie and community would decrease as the number of participants increase. On the other hand, costs might be even further reduced with a larger group. So far, no camp has attracted more than 63 participants.

Acknowledgments

We would like to thank the members of the Boot Camp Planning Committee for all their hard work on past and future camps. For more information on our e-science activities, see the *eScience Portal for New England Librarians* <http://esciencelibrary.umassmed.edu/>.