Open Source Conversion: Moving from Preaching to Practicing

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Abstract

The Open Source Software movement seems very compatible with the goals of librarianship—to make information free and open to all. However, the Open Source movement has not been quickly embraced by the library world. This paper will examine the role of the American Library Association in the promotion and growth of Open Source as well as how Schools of Library and Information Science have advanced Open Source technologies in the education of future librarians. How have these two groups helped or hindered OSS and what can they do to increase its use and sustainability?

Open Source Conversion: Moving from Preaching to Practicing

In a recent blog post, Matt Asay argues that in the age of open-source proliferation, evangelism will no longer be needed. He concludes that "It's time for the next phase of open source, the practical phase where we focus on how to deploy open source, not why."(Asay, 2009). For those in the library world, a movement whose founders share the belief that information should be free and offers an alternative to proprietary corporations would seem to be a perfect fit. However, despite the fact that the free software movement has been in existence since 1983 (Wikipedia, n.d.), the library world seems slow to embrace open source software.

The answer to the question of how to make open source the foundation for library computer systems stems from Asay's conclusion. While librarians seem very cognizant of *why* open source software would be beneficial, there seems to be a disconnect in *how* to take advantage of its benefits. The lack of knowledge necessary to become proficient consumers of open source software needs to be addressed.

In the library profession, the American Library Association and the universities educating

future librarians should be leading the charge toward open source software usage. This paper will examine what these two groups are doing to prepare librarians to become movers and shakers in the open movement, specifically as it pertains to open source technology.

The ALA's Role

American Libraries serves as the news of record for the American Library Association. In that role, it should be a bellwether to librarians in reporting on open source technology. However, the first coverage found in relation to the library world and open source technologies comes from *Library Software Review*. The article outlines how to "use the Linux operating system, the Apache Web server, and Samba" to build a low cost library web server (Orr, 1998, p. 171). The first mention of open source by *American Libraries* comes from David Dorman in his column "Technically Speaking." He notes that "the open-source software movement seems to be on a roll these days" (Dorman, 1999, p. 102). The column reports on the new listserv oss4lib as well as the Open Source Digital Library System hosted by Jeremy Frumkin of the University of Arizona.

After this initial mention, open source software only has thirteen more acknowledgments by *American Libraries*. Compare this number with its reporting on Microsoft, which retrieves twenty-seven items when a search of *AL*'s archives is done. Nearly half of the references to open source are short notations in the technology column of the magazine. Of those remaining, most articles simply mention new open source alternatives that have become available in the library world. Evangelical content about open source software in the magazine is minimal.

However, in 2002, AL did a cover story entitled "Open Source Software and the Intellectual Commons" (Dorman, 2002, p. 51-54). In it, the technology columnist for the

magazine proselytizes to the non-tech contingent about open source and briefly mentions Koha. He contrasts the restrictions to information that has evolved from stronger copyright law to the freedom of code available through open source software. Another positive open source article in AL details the author's experience with using the new (to him) web browser, Mozilla Firefox (Janes, 2005, p. 80). His explanation of why he used Internet Explorer for so long when he wasn't satisfied with it sums up what seemed to be the default attitude of the library community toward open-source, “it seemed too much trouble to use anything else, so I just didn't.”

One clue that might explain AL's light coverage comes from the introductory column written by Andrew K. Pace, who replaced David Dorman as the magazines tech columnist in April, 2004. He first states “If there's a schtick that I pull on occasion it's endeavoring to improve associations between libraries and their vendors.” (Pace, 2004, April, p.93). Later in the column he shares his position on the OSS community: “They say that nine out of ten restaurants fail—OSS projects should be so lucky. With so many of them out there, separating a clamor for attention from a real chance at success is a tricky business.”(Pace, 2004, April, p. 93). He clearly does not share Dorman's positive feelings toward OSS.

While the coverage of OSS by *American Libraries* would be one indicator of the ALA's inclination away from open source technologies, one should also examine how the association has chosen to represent these technologies to its members. The Library and Technology Association (LITA), a division of ALA, does have an Open Source Systems Interest Group. Unfortunately, its area of ALA Connect and the LITA wiki have almost no content. Additionally, the last posted annual conference report dates from 2006. (LITA, 2009). However, in the LITA Division’s section of the website, LITA Open Source Systems Committee’s charge statement is found:

> To encourage active participation in the Open Source community through developing, adapting, improving and fixing Open Source solutions for use in libraries. To promote the use of Open Source in libraries through education, distribution, and creating support structures to assist with appropriate implementation. To advocate for the development of appropriate standards and policies that are true to the spirit of the Open Source movement. (LITA, 2009).

It is unclear if the lack of content stems from the change from an interest group to a committee, but searches of LITA yield no more information on this shift in title.

Conferences also would be a place that the ALA could show their support of Open Source Technologies. As early as 2000, LITAs Open Source Software Interest Group hosted *Practical Solutions for Libraries: Open Source Software* (Chudnov, 2000). At the ALA Conference in Chicago this past summer, a program titled *The Open Library Environment Project: Building an ILS for Service Oriented Architecture Integration* (2009 ALA Annual, n.d.) was presented. Contrast this single program to 2008, when meetings titled *Drupal4Libraries Birds of Feather, Open Source Open Services, Open Source Legal Issues,* and *Building and Supporting Koha* were all offered at the ALA Annual Conference. Additionally, the Next Generation Catalog Interest Group discussed open source alternatives as did the Top Tech Trends discussion group. Perhaps ALA has taken Asay's stance that librarians no longer need to be sold on OSS. However, it remains to be seen what ALA will do to address the question of how librarians can integrate OSS in a sustainable way.

Much like *American Libraries* isolates it OSS content to the tech column, the ALA website tends to contain its OSS news in that section of the site geared toward more computer-savvy librarians—www.alatechsource.org. One could argue that by doing so they are continuing the tradition of giving each separate division of the Association a separate forum specific to their

interests. However, while the interests of school librarians may vary from public librarians, for too long ALA has pocketed technology into a category for which only a segment of librarians need to have interest. In the digital information age, every librarian needs to become adept in technology. To be able to sustain OSS without reliance on outside sources librarians must be able to integrate its maintenance and development into their workload. Continuing to address Open Source systems information to only a segment of librarians is the logical equivalent of librarians *not* sharing research databases with every patron seeking information based on the patron's level of experience with technology; it makes no sense and sets up severe and arbitrary limitations.

Train Up a Child in the Way He Should Go

The degree to which librarians embrace open source can often be directly correlated to their comfort with technology in general. If schools of library and information science wish to encourage the open source software movement, then the first step would be to ensure all graduates of their programs hold a certain level of technological knowledge.

Currently, the ALA has given accreditation to 48 Masters programs in the United States. (ALA, n.d). In looking over the degree requirements for these schools, a standard technology requirement exists for all of them. The concern seems to be that the computer used by the student meets certain specifications, and while many of the program guidelines specify knowledge of MS Office Suite and comfort with email and the internet, no sites mention open source alternatives that might exist to fulfill these requirements. Offering suggestions and links to Open Source alternatives would save students money and expose them to these sources early in their careers.

Although knowledge beyond word processing may be unnecessary for students entering a Masters program, once completed, one would expect that the curriculum would prepare future librarians to take advantage of the open source alternatives that exist as well as the proprietary software they will be expected to use. However, of the 48 ALA-accredited programs, only one third require any sort of technology course. The following programs require all Masters recipients to have completed a 3-hour Information Technology course: University of Alabama School of Library & Information Studies, University of Albany College of Computing and Information, UCLA Department of Information Studies, Emporia State University School of Library and Information Management, Kent State University School of Library and Information Science, University of Maryland College of Information Studies, University of Missouri-Columbia School of Information and Learning Technologies, University of Pittsburgh School of Information Sciences, Queens College Graduate School of Library and Information Studies, Simmons College Graduate School of Library and Information Science, and Wayne State University School of Library and Information Science. University of Iowa School of Library and Information Science mandates graduate students to take Computing Foundations. University of Michigan's School of Information expects all students to take Networked Computing: Storage, Communication, and Processing. Graduates of University of Kentucky School of Library and Information Science Masters program must complete one of the following: Foundations of Information Technology, Information Technology, Internet Technologies & Information Services, or Information Systems Design. University of South Carolina School of Library and Information Science allows students to take a computer competency exam, but if they do not pass it, they must take Introduction to Information Technologies. Only Louisiana State University School of Library and Information Science requires two courses of its graduates: Information

Some schools offer alternatives to the Master of Library and Information Science which prepare the graduate for careers focusing on the more technological side of information science. Drexel offers as an alternative to the Masters in Library and Information Science, the Master of Science in Information Systems. This degree program emphasizes the computing aspects of librarianship. Indiana University offers the Master of Information Science which, like Drexel's MSIS, prepares those information professionals who wish to focus on the more hi-tech aspects of the profession. The University of Maryland also offers a Masters of Information Management that "meets the growing need organizations have for information professionals who understand the issues of information management; business management; computer science; and information systems" (University of Maryland, n.d). The University of North Carolina offers both a Master of Science in Information Science and a Master of Science in Library Science. The MSIS focuses on the networking and programming end of Information Science, but the MSLS graduate has no required technology courses at all. North Carolina Central University School of Library and Information Sciences also divides the curriculum for Masters in Information Science and Masters of Library Science with the later focusing on traditional librarian skills and not requiring any technology courses.

Additionally, even those schools that offer only an MLIS degree do have specializations addressing the technical knowledge needed by information professionals. Courses of study offered by the various schools include Information Technology, Digital Libraries, Networked Digital Information, Informatics, Information Architecture, Information Systems, Web Design, Technology and Networking, and Library Automation. Of the programs offered, only one consists completely of Open Source Systems. The University of Arizona offers a Graduate

Certificate in Digital Information Management. The goal of this program is to address "a shortage of professionals who combine an understanding of the disciplines of libraries, archives, and data management and who also have the technical knowledge and learning skills needed to create and manage digital collections in a fast-changing environment."(University of Arizona, 2009). It consists of six on-line courses training students on a LAMP (Linux, Apache HTTP Server, MySQL, and PHP) software bundle.(University of Arizona, n.d.)

While having these choices does address the need for these skills in the digital age in which we live, making them electives has the same impact as ALAs segregation of technology issues. Only those students who have an affinity for the topic will select these specializations. Those sixteen schools requiring all students to be exposed to information technology increase the likelihood of them pursuing further coursework in an area which may have initially intimidated them. Open Source Systems need maintained to remain sustainable, and the more schools are able to produce librarians comfortable doing this task, the more libraries will most likely embrace OSS.

For those librarians who entered the profession prior to the advent of the digital age, continuing education must be proved to help them become proficient with technology so that they, too, can assist with improving the independent sustainability of Open Source software. The Association for Library and Information Science Education (ALISE) "promotes excellence in research, teaching, and service in library and information science (LIS) education" (Fitzgibbons, 2003). One function of ALISE is maintenance of the Library and Information Science Statistical Report and Database. While only members of ALISE have access to the database, in 2001, the editors of the database released "Highlights of the 2001 ALISE Statistical Report with Five and Ten Year Comparison of Key Data Elements" (Fitzgibbons, 2003). One finding of this report

was:

> Though 46 schools report some form of nondegree continuing education activity, two schools continue throughout the decade to report very high levels of continuing education activities: South Carolina and Wisconsin-Madison. Only nine schools employ a coordinator for continuing education activities.

Furthermore, an area where schools of library and information science could assist in the OSS movement would be to provide continuing education for librarians who cannot teach themselves the technology skills needed to be competent with cultivating Open Source software within their institutions. Schools of Library and Information Science should make this continuing education more of a priority and ALA should include that criterion in their accreditation requirements. This continuing education should focus on programming and computer knowledge as well as Open Source software alternatives.

While all ALA-accredited graduate programs offer information technology to some degree, less than half specify in their course catalogs that open source technologies will be taught. As mentioned earlier, University of Arizona has designed a graduate certificate based around OSS, but they also address the different OS alternatives available in all the information technology courses. UCLA, University of Illinois, University of Kentucky, Louisiana State University, University of Michigan, Simmons College, University of South Carolina, University of Tennessee, and University of Wisconsin-Madison all use the Open Source Course Management System, Moodle. At Texas Women's University, Dr. Diane Neal used Koha with Class in her library automation course. (Kado, 2006). LibLime hosted the demo systems for the class pro bono, one would assume as a means to market their product to future librarians. A review of oss4lib.org reveals many university open source projects are mentioned, but they either are not at library schools or are being done at schools which have not achieved the ALA

accreditation.

Conclusion

As information sources have moved increasingly away from paper and toward computer-based collections, librarians have needed to adapt to these changes. While some have been quick to adjust, others have failed to diversify their skill set. The information explosion has made information a commodity and its networks, retrieval systems, and disseminators expensive. A failure to broaden horizons may be at the heart of the slow growth of Open Source Software in the library world. Open Source technologies would not only allow libraries to decrease operating costs and become independent of proprietary companies, it would also better adapt to the needs of patrons over time.

The two factions in the best position to communicate the benefits of OSS to the library community would be the American Library Association and the Schools of Library and Information Science which they have accredited. Currently, Open Source alternatives have been presented by these two groups, but only to those librarians and future librarians who express interest in the world of information technology. To truly grow OSS and take advantage of all its benefits, both of these groups need to make digital expertise a core competency and a requirement of all library professionals.

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