

## Adding New Skills to our Skillset

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I recently presented my “Metadata Standards and Applications” for the nth time (fourth? fifth? I can’t remember!) and realized that, although most of the course hasn’t changed much, some of what I bring to it certainly has. This shift is clearly a function of the fact that it’s been nearly two years now since I started developing the course, and just about a year since I presented it in prototype form for the first time. I’m just about to the point of wanting to fuss with it a bit, do some updates to the slides, correct a few things that are difficult for trainers, etc. Nothing really revolutionary, just the usual primping that should happen fairly regularly. I was giving some thought to why I didn’t think it needed more of an overhaul, and concluded that a big part of the reason was that it focused less on “training” in the sense of presenting new material about how to do something, and more on changing the way people looked at what they do. Part of that involves introducing new tools, and talking about the differences in the environment where those tools are used, as well as the skills required to use those tools effectively

My general approach to these new tools and skills is based on the notion of “empowerment”—a very overused term but one I’m reluctant to give up. Most often people come into the workshop with some trepidation. They’ve heard over and over that things are changing around them and that their jobs will change, too. Most of the time they feel very competent in the area where they currently work, and they worry about whether they can attain new competencies.

All of us involved with change and new technologies in libraries talk about how frustrating this generalized resistance to change can be, but I was taken by a recent post to the Web4Lib discussion list on the subject by Andy Havens of OCLC. In his frustration with a previous post asking whether libraries could afford the failure inherent in experimentation and taking risks, he points out that

*“ ... humans are hard-wired to fear change from a biological perspective. The same parts of our brain that go, "Ow! That's hot!" are activated when we try to do things differently. And it's for good reason; evolutionarily speaking, doing something that you've done before will not kill you. If it was gonna, it already did. So doing things the same way is advantageous, in terms of survival.” [1]*

He goes on further to describe what he believes are the precursors to positioning

oneself for success, rather than doing nothing as a knee-jerk survival mechanism:

*“...you need a change-ready and change-friendly focus. Because success, as opposed to survival, is a condition that doesn't just rely on your efforts, but is dependent on your activities in comparison to what's going on elsewhere in your environment. And all environments change.” [1]*

In my workshops, I see primarily people who have overcome that first rush of fear, and have decided to take a chance and figure out what they need to know to move forward. Occasionally I also see one or two people who have been “forced” to come by a boss, and they definitely do not have a “change-friendly focus.” Sometimes they come around during the workshop and see that there is useful information presented, but generally they don't, I must admit. And frankly, I spend more time with the people who are there voluntarily, who want to learn and understand the new material. Their generally positive response to the workshop is what keeps me doing it.

There have been flurries of discussion on the lists and blogs about what are these new competencies exactly, with corollary discussions about how to ensure that librarians have access to opportunities to learn, both as students and practitioners. I find these discussions fascinating, both for what they contain and what they say about the folks who are thinking about these issues. Christine Schwartz, in her *Cataloging Futures* blog, has been discussing this topic extensively recently, and has pulled together both her own thoughts about possible strategies and those from comments to her posts. In her most recent post on the subject (as of this writing), she came up with a list:

1. *Learning systems analysis/theory*
2. *Learn new technologies*
3. *Learning to read code: XML, SQL, and CQL*
4. *Openness to play and experimentation with new technologies*
5. *Learn about what makes the web work*
6. *Talk to people who are making the Semantic Web work*
7. *Find a way to get your data onto the Semantic Web*
8. *Understanding more about how computers work, what they can do, what they can't do*
9. *Develop a fundamental understanding of computer systems and modern technology*
10. *A willingness to learn new technologies/standards and to experiment/play with them [2]*

I think from this list (and others from past discussions everywhere on the library list and blogosphere) there are a couple of basic themes, and I think I'd like to take those themes

and expand on them a bit. I speak below from the somewhat narrower point of view of those transitioning from cataloger to metadata librarian, mostly because it's where I have the most experience.

### **New Technology (in general)**

There are a couple of basic pieces to this: first is knowing enough about the computer on your desk to actually use it effectively, and although I think we would all agree that this is important, it is not really knowing how to use the hardware and software of the modern desktop computer that differentiates those who are ready to be part of the new world of libraries from those who are not. In a sense, one indicator is whether a person uses their computer for more than the tasks that they're assigned. And yes, of course, many workplaces have strict rules about that, thinking that they are ensuring a focus on *the work* of the institution by restricting that kind of exploration and learning.

So, it's first knowing how to use the technology on your desk to learn about the technology and thinking "out there"—on the web but also within institutions using it effectively. It's also about knowing the way data flows in this new world, and how it is used and exchanged (this is particularly true for catalogers, but also for those who use the data in its various permutations). One of the exercises in my workshop "Metadata Standards and Applications" involves looking at various websites and trying to figure out what's going on by what you can see. What is the purpose of the site, and how does it express that purpose? What is the business model behind the site, and how do they make the money that allows them to operate? Where does the data come from, and how is it indexed? Are there obvious (or hidden) uses of vocabularies on the site? That exercise was modeled after one I used in an "Information Architecture" class I taught a few years ago, and it works in a number of ways to get the workshop classes thinking in different ways—beyond the library-centric notions of how data is created, shared and used.

The idea of experimentation, mentioned on the *Cataloging Futures* blog, is an interesting part of this notion of what makes a metadata librarian different. Experimentation in this context is a bit different than it might be for a programmer, but the idea that the expectations for a metadata librarian is not to create data in the same manner as a cataloger, but to think about the problem set from a level or two above one-at-a-time creation and one-at-a-time improvement and maintenance.

Jason Thomale, in a comment to a blog post on this subject, opined

*" ... metadata librarians should be good enough with systems and imaginative enough that they can look at a group of objects, see what data already exists for those objects, and employ the necessary automatic and/or manual processes to derive the appropriate metadata and convert it to the appropriate format. For a given group of objects, generating some key words by performing some natural language processing on the full text and then performing some post facto grouping, categorizing, etc. might be good enough. Another group of objects might require full-fledged manual subject heading assignment. One or both groups of objects*

*might have additional data from which useful metadata can be extracted. Seeing how and where that can be done requires imagination and familiarity with data processing methods and data syntaxes.” [3]*

I would add to Jason’s list of requirements the experience to understand what will work and integrate with other data managed within the same institution or setting.

### **Other Technical Skills**

I find it interesting that there’s sometimes a notion out there that it’s not enough to be a librarian, but you also need to be a programmer and a systems analyst and a bunch of other things. Knowing at some level what programmers do and how they think is absolutely essential (because you’ll probably have to work with them more closely in the future) but that doesn’t mean that knowing how to program is a logical extension. Systems analysis is another matter: it’s far more important for the librarian is to know how to analyze problems, write specifications, use cases and documentation, and leave the programming to someone who really knows what he/she is doing. And don’t forget how to evaluate and test the results of programmer activity—something that the programmers don’t always know how to do well.

More important for a librarian than programming is to understand things like data formats and encodings and how they work in a data processing context. Knowing what XML, XHTML and RDF are and how they relate, where they’re used, and what their limitations are is as critical to a metadata librarian as in-depth knowledge of MARC is to a traditional cataloger. Even better is being able to look at an XML expression of data and know enough about the structure to figure out what might be wrong with it (using tools helps but even the best ones often provide feedback that can be unintelligible at anything but the expert level).

So when people ask me for advice I usually don’t advocate developing extensive expertise in some new technology or technologies. For one thing, if it’s not something you inherently want to learn to do for your own purposes, recognize that the technology will change far too quickly for most mortals to keep up with it. You don’t have to be able to build XML records from scratch to survive in this new metadata world. But you do need to know one when you see it, not faint, be able to “read” it in its native form, and have some notion of what tools will help you manipulate it. A basic knowledge of the broad range of technologies used on the web (and good relationships with talented programmers) go a long way towards assuring success in the new world of metadata librarianship.

I worry that by setting the bar too high in terms of expertise with various technologies we’re both missing the boat and setting ourselves and our colleagues up for a continual feeling of insecurity and inadequacy. Librarianship has always been very attractive to generalists, and I think that’s been one of the strengths of the profession. A generalist with some curiosity and enthusiasm can float nicely above the roiling sea of technological change and provide the organizational skill and broad view of the data and

the library needs that most library programmers don't have—and desperately need—in their librarian partners.

[1] Havens, Andy. “But Can Libraries Afford Failure” Post of June 8, 2007 on Web4Lib. Available at: <http://lists.webjunction.org/wjlists/web4lib/2007-June/044201.html>

[2] Schwartz, Christine. “More Resources on Upgrading Catalogers' Skills,” post on *Cataloging Futures*, June 9, 2007. Available at: [http://www.catalogingfutures.com/catalogingfutures/2007/06/more\\_on\\_upgradi.html](http://www.catalogingfutures.com/catalogingfutures/2007/06/more_on_upgradi.html)

[3] Thomale, Jason. Comment on “My Cataloging/Metadata Credo” (Jonathan Rochkind’s *Bibliographic Wilderness* blog), May 29, 2007. Available at: <http://bibwild.wordpress.com/2007/05/24/my-catalogingmetadata-credo/#comment-270>