Introduction

Welcome

This work begins, as many begin, with the author wondering aloud (er, in writing) why she took the time to write it, in the hope that sharing this little piece of information will convince you to continue reading. A few years ago, I found myself wanting a work like this to exist. Because it did not, I figured that I might as well consolidate all the information about library technology competencies in one place so that others could benefit from my hunting and gathering. In short, I saw a huge gap, and instead of simply trying to take a running leap over it myself, leaving others to the same chance fate, I'm trying to fill that gap with some nice solidly packed, foot-friendly earth.

In the following pages, I will discuss an exciting technology-training practice: using descriptions of technology competencies as a way to enhance your staff members' technology knowledge, improve their self-confidence and morale, provide better service to the public, and transform your library into an institution that continuously promotes lifetime learning for every staff member. I will cover the entire topic from beginning to end: the purpose and background of describing competencies, the process of creating descriptions, various types and structures of competencies lists, sample competencies to include, and the implementation process, including assessment and best practices for technology training. This work is an attempt to fill the gap in knowledge about documenting technology competencies with overall guiding principles, examples of successful projects, and project-management guidelines for those embarking upon such a project in their libraries.

As you've bothered to begin reading, you're already thinking about competencies, technology, and training in your library. Congratulations! You've taken the most important step already—deciding that you, or your library's staff as a whole, can benefit from some coordinated technology training. Read on!

What Are Competencies?

What are competencies, you may be asking? Let's begin by looking at some general and business literature sources:

- *Merriam-Webster's Collegiate Dictionary* provides several definitions for *competent,* the applicable one of which is this: "having requisite or adequate ability or qualities." Therefore, competencies would be those requisite or adequate abilities or qualities.
- General agreement exists that the idea of an institution's "core competencies" began with a 1990 article in the *Harvard Business Review* by Prahalad and Hamel. In their definition, a core competence is "an area of specialized expertise that is the result of harmonizing complex streams of technology and work activity."[1] Since then, the idea of core competencies has evolved somewhat, with various institutions defining them as the core tasks necessary for a particular job, the unique benefits an institution can offer to its users through its staff's talents, or some blend of the two.
- Campbell and Luchs, in their seminal book *Core Competency-Based Strategy*, write, "Similar terms—strengths, skills, competencies, capabilities, organizational knowledge, intangible assets—are used interchangeably by different authors."[2]

Now let's look at how librarians and libraries have integrated the idea of competencies into our field.

- The executive summary of *Core Competencies: SPEC Kit 270*, a resource overview and survey about competencies from the Association of Research Libraries (ARL), says, "core competencies were defined as the skills, knowledge, abilities, and attributes that employees across an organization are expected to have to contribute successfully within a particular organizational context."[3]
- In "Core Competencies for Technology," Reaume and Bilsland define core competencies as "[s]kills, knowledge and behaviours related to library technology" and "[c]ritical abilities which determine organizational success, personal performance, and career development."[4]
- In "Core Competencies for Libraries and Library Staff," McNeil and Giesecke write, "Core Competencies are the skills, knowledge, and personal attributes that contribute to an individual's success in a particular position."[5]

Assembling the pieces, let me take a stab at a concise definition:

> Competencies are the abilities, qualities, strengths, and skills required for the success of the employee and the organization.

Core Competencies not only define the present, they also ensure a future for the profession.

David Hunter, "Core Competencies and Music Librarians"[6]

Libraries and Competencies: The Story So Far

In a field where technical skills and education are essential, not only to the success of the employee, but also to the success of the organization in its mission to serve its users, the library profession has been rather lax about quantifying and qualifying exactly what our staff members need to know to do their jobs well in the arena of technology.

Libraries have been paying attention to general work-based competencies, however, for some time. As a result of the growing use of competency descriptions as a management and development tool in general industry, institutions of all kinds began to fold competency descriptions into their workplaces. The use of competency descriptions in library science really started to gain momentum in the 1980s. A well-known study from 1996, "Library and Information Science Competencies Revisited," by Lois Buttlar and Rosemary Du Mont, revealed much about library science programs and their views of competencies, including (even then) the emphasis on technological competencies.[7] Focus groups held in the nineties with librarians also found then, as well, that technological competencies were the most crucial.[8]

A 1998 survey conducted by Armstrong and Baron found that about one third of employers used some sort of competency assessment for their employees.[9] I would imagine the number is not very different today. Through the ARL, Beth McNeil created a SPEC kit to help libraries develop descriptions of core competencies for their staff members. In her 2002 survey, half of the libraries that didn't have a list of core competencies reported that they were considering developing one, with heavy emphasis on technological competencies.[10] Her survey also found that among those that had created lists, the process took more than six months for sixty percent of them. (*Author's hint*: This is an early clue for you, reader, that the process of creating competency descriptions is not instantaneous.)

Dozens of lists of professional competencies exist already, having been created largely in the 1980s and 1990s by American Library Association (ALA) divisions and other national groups, independent libraries, and consortia. If a library is looking for a list of competencies to use in developing job descriptions or training and educational models, there are many ready-made lists to tap. For example:

- ALA's "Statement of Core Competencies" (draft)[11]
- Art Libraries Society of North America's "Core Competencies for Art Information Professionals"[12]
- ALSC's (Association for Library Service to Children) "Competencies for Librarians Serving Children in Public Libraries"[13]
- Medical Library Association's "Health Information Science Knowledge and Skills"[14]
- Reference and User Services Association (RUSA) Taskforce on Professional Competencies' "Professional Competencies for Reference and User Services Librarians"[15]
- SLA's (Special Libraries Association) "Competencies for Information Professionals of the 21st Century"[16]
- YALSA's (the Young Adult Library Services Association) "Competencies for Librarians Serving Youth"[17]

I have attempted to provide a comprehensive listing of lists of technology competencies for library staff (see Appendix 1), as well as a list of some of the better general competencies lists (see Appendix 2). The competencies lists cited in both appendices were created by library professional organizations, individual libraries, and consortia that cover many different library types, fields, positions, and classifications. To find additional lists of competencies and information about general competen-

cies in libraries, see the resources listed on the Library Staff Competencies Web page (see screened box below for URL) created by Mary Niederlander. If a library decides to tackle documenting all the competencies simultaneously, these lists will help jump-start the process.

Library Staff Competencies
www.librarysupportstaff.com/4competency.html

I have been very disappointed at how little attention technology competencies have been given in the general lists of competencies that have been written by our professional organizations and workplaces. Some of the lists of general competencies cited in Appendix 2 include brief sections on technology—often vague descriptions of "technology skills." Very little attention is given to the actual hard and fast technology skills that library staff members must have to do their jobs, and even less has been written specifically about technology competencies.

Some lists of competencies, in fact, like YALSA's 2003 "Young Adults Deserve the Best: Competencies for Librarians Serving Youth" (see note 17), have no mention of technology or technology proficiencies in them whatsoever. The RUSA competencies list (see note 15) identifies the need for staff members to know how to evaluate and integrate technology, but makes no mention of actually being able to *use* the technology effectively. If general competencies lists mention technology at all, it is usually in a general statement. For example, the Teacher-Librarians' Association of Nova Scotia (TLANS) "Competencies for Teacher-Librarians" says only, "uses appropriate information technology to acquire, organize and disseminate information."[18] The Association of Southeastern Research Libraries (ASERL) "Competencies for Research Librarians" merely says, "[i]s knowledgeable about technology (theoretical and skills-based) and applies it to improve services."[19] Is that enough? Would you, as an employee, be able to deduce exactly what is required of you based on these statements? Or would you read them and think, "Umm, sure, I can do that," and then move along without a second thought? What about from the employer's perspective? Would you be able to use these statements to justify why you are requiring an employee to go to training to learn how to use a word-processing program effectively?

Even the ALA's list of core competencies includes only four lines in the category of "Technological Knowledge":

1. Demonstrates a comprehension of current information and communication technologies, and other related technologies, as they affect the resources and uses of libraries and other types of information providing entities.
2. Has basic knowledge of the concepts and processes related to the assessment and evaluation of the specifications, economic impact and efficacy of technology-based products and services.
3. Understands and can apply the principles of techniques used to continuously track and analyze emerging technologies to recognize relevant innovations.
4. Demonstrates proficiency in the use of standard information and communication technology and tools consistent with prevailing service norms and professional applications.[20]

In essence, library workers are being told to know what tools are out there, know how to evaluate them, keep up with new tools, and use the tools we have on hand. Although this is a good start, it is nowhere near specific enough for a staff member asking, "What do I really need to know to do my job well?" With technology, more than with any other skill required by our profession, it is absolutely necessary to be accurate, succinct, and prescriptive.

Libraries and Technology: The Story So Far

We have no way of knowing for certain whether the exclusion of technology skills from competencies lists in libraries everywhere was a conscious choice or an oversight. The lack of documentation of these basic needs seems to point to a real gap in the expectations we have for our staff members, or at least in the expectations we're willing to put down on paper.

To me, this gap is also strikingly evident in the observable technological skills of staff members working in our libraries. Library workers need to know more and more things every day. We need to have, and be able to teach, the skills *our users need* to participate effectively in today's information economy and society. As the technologies that affect information seeking and information literacy continue to change, library workers need to stay one step ahead of the users. Unfortunately, few libraries can make that claim today. Most libraries have outdated technologies in their buildings—not due to a lack of wanting the newest and best, but due to a lack of overall funding or of adequate appropriations for technology, to outdated physical buildings, or to a lack of understanding or vision on the part of the governing and fiscal agents responsible for the library's budget process.

Likewise, library staff members often have skills that would fit better into a 1995 library than a library of the new millennium. In the year 2007, we all still have staff members who are not comfortable operating in a Windows environment, who do not know how to change font size in Microsoft Word, or who do not know how to attach a

document to an e-mail message. This is unacceptable, but it points to our own failings—that we have not clearly outlined expectations, and that we have not trained to those expectations in a satisfactory way. . . hoping against hope that our staff would simply magically pick these skills up along the way.

When a staff member is proud of having finally figured out how to put an "out of office" message on an e-mail account, it is heartening on one hand (someone is getting excited about technology), but rather frightening on another. What happens when a user makes contact with that staff member and asks for help downloading an e-book or finding resources on building a personalized Google home page? Is that staff member going to be able to help, or will he or she say, "Let me get Bob for you—he's really better at this stuff," or worse yet, turn the user away? Again, we can blame, among other factors, a lack of funding or a lack of adequate appropriations—this time for staff training.

None of this is new. A decade ago, *Library Journal* columnist Anne Woodsworth wrote: "We've gone beyond the 'knowledge of online searching and automated library systems' level. A scan of recent openings reveals that desirable and even required skills include: familiarity with presentation software and technology relative to web-based instruction, . . . experience with SGML, HTML, and other web standards . . . technical knowledge of DOS, Windows, networked environments, and the Internet."[21]

These job requirements were not for technology services positions, but for catalogers, reference librarians, and instruction librarians. Employers required these skills a decade ago, and many of our professional staff members still do not have them today. I know we're in a profession that is slow moving (why that is, though, is still a puzzle to me), but gosh—do we have to be this slow?

The results we have today are quite different from what we wished for a decade or two ago. We are now left with a bifurcated staff in every library—there are staff members who are technologically competent, the go-to people for patron tech questions or for troubleshooting and training for staff, and there are those library workers who are technologically deficient, whether through a lack of training or through obstinacy and an unwillingness to learn (yes, we'll talk about them later too).

Lack of training is certainly more common than unwillingness to learn, and that is a sad reflection on our profession. We all have technologically deficient colleagues: colleagues who won't change the printer's ink cartridge because they don't know how and instead put an "out of order" sign on it; colleagues who can't use PowerPoint and so don't give public presentations; and colleagues who cannot organize their digital files and so lose essential documents and have to waste time re-creating things they can't find. The work piles onto the few staff members who do have the skills, building resentment and fostering burnout in those very tech-savvy and driven staff members that are most essential the library keep. And let's not forget about the public—library users lose every time the equipment gets in the way of the staff providing services.

As I have worked on technology competency and training projects, it has been argued to me time and time again that technology skills are simply a prerequisite for a job and not something we need to quantify in the form of competency descriptions. "We don't specifically write down anywhere that librarians have to be able to answer the phone, but they do . . . and we don't have competencies for that," said a colleague to me recently. Her implication was that technology skills of all levels are simply a "given" in today's workplace, so why painstakingly list everything?

I counter that phones have been around for quite a while, and most people learn how to use them in the process of growing up in the modern world. Phones exist at home and have for nearly a century now. They are something you are exposed to in regular life in most parts of the world. The specific technology and computer skills required by library workers are not things you learn from your parents or in primary school. How did *you* learn how to troubleshoot a printer jam? How about double-spacing a document? Perhaps someone was nice enough to show you in your first job, library or otherwise. Perhaps you fiddled with it yourself until you figured it out. Nevertheless, a learning process had to take place for these skills to be acquired; therefore, these skills should be clearly spelled out for our staff members.

Management owes it to employees to clearly define what is expected of them in all areas, and this technology bugaboo has become a particularly difficult area to pin down. It is ever changing, and employees need to have specific measurable skills to serve our users equally and competently. By working together to come up with a list of what each person needs to know to do his or her job, library staff members can help meet our ultimate goal: excellent customer service.

Where Are Our Users in This Game?

In looking at what kind of technology-based customer service we will need to be ready for, we need to look at where our users are. Our users are online, eager, and waiting, and—come on, now—they have been for a while. Where have we been? Providing raw access to computers is one step in closing the Internet digital divide, and libraries have done a pretty good job. But the Internet requires more than pure access—it requires skillful and thoughtful use. We, as library staff members, can assist our users in developing those skills, but only if we understand the technologies and communities in which our users wish to participate.

More and more of our users have broadband access at home. In 2005, "Twenty-four percent of rural Americans had high-speed internet connections at home compared with 39% of adult Americans living elsewhere."[22] In 2006, an overall 40 percent jump was quantified—raising the overall number of Americans with home broadband access to 84 million.[23]

But what about those users who do not have home broadband access? Are they able to actively engage in today's information economy? Let's look at some more numbers: 42 percent of home broadband users have posted content to the Internet, compared to only 27 percent of home dial-up users. What about all of the computer users we see in the library? Currently, 11 percent of online Americans have access only at some place other than work or home (likely a library); of those users, only 21 percent have posted content online.[24]

Why is that? This is half the rate of home broadband users. Is it because the people who use the Web in libraries aren't as entrenched in online communities or as creative? I think not. Is it because the limitations on our public computers, including the knowledge limitations of our staff members, prevent users from bringing in their own content, viewing and editing it, and posting it? Perhaps. Is it because these users don't have the knowledge or skills yet to know about posting content? Perhaps.

Furthermore, if we look at another Pew study, "Internet Penetration and Impact" (April 2006), we can see that 73 percent of adult respondents are active Internet users.[25] We also find that online Americans are finding that exposure to the online environment and the resources found there are greatly increasing the quality of their lives: 33 percent say the Internet has greatly improved the way they pursue hobbies and interests; 35 percent say the Internet has greatly improved the ability to do their jobs; and 20 percent say the Internet has greatly improved the way they get information about health care. The same study found the more educated you are, the wealthier you are, and the younger you are, the more likely you are to be online.

Our users are going online, making their lives better, and we need to be there with the knowledge and tools to help those who are there already be there effectively and to help those who are not there yet to arrive.

All of these people are our users—those who are posting multimedia content through their home broadband connections; one who comes in for his or her precious limited time of access per day to struggle to post a résumé to a job site; and those who have never used the Internet. Our goal is as it ever was: to provide access to information regardless of education, income, or age. We need to serve all of these users and to have the skills with which to do so. As information increasingly becomes something accessible through a technology intermediary, those technology skills become ever more important.

Krissoff and Konrad write, "[M]uch of our attention, as professionals, has been given to paring down to the absolute minimum those skills that our users need to know in order to simply survive in the environments we have created for them. It is easy to understand this approach given the complexity of our systems and the time constraints and staff resource limitations we face."[27] But we can think bigger than that—giving our users the skills they need to actively participate and succeed in today's information economy.

> The hit and miss nature of the Internet encourages surfers to keep clicking in hopes of finally hitting a jackpot, just like gamblers in front of a slot machine or lab mice in a deranged experiment.
>
> Andy Barnett, *Libraries, Community, and Technology*[26]

We all know the way reference librarians do their jobs has changed greatly in the last few decades, due to more than just the introduction of computers into the library. Can you remember a time when your job did not include instruction, of one sort or another, for users? According to Lynch and Robles Smith, job ads in the 1970s did not mention instruction at all, while instruction was included in all job ads in the 1990s. Some of this shift had to do with the changing technologies in our workplaces—the tools our users now needed to master in order to access the information at their fingertips.[28]

> Technology has fundamentally changed the ways in which libraries provide access to materials and information for their users.
>
> Anne M. Prestamo, "A Comprehensive Inventory of Technology and Computer Skills for Academic Reference Librarians"[29]

In the 1980s there was profession-wide recognition that knowledge was changing, but we still haven't put the full force of staff training behind our conviction that the way staff interacts with technology is critical to the success of our jobs and institutions. Two quotes from the 1983 work *Professional Competencies—Technology and the Librarian* are as applicable today as they were then:

- "'Considerable trauma' is predicted to occur within the profession during the transition to the electronic library. We have already begun to witness anxiety about the future role of librarians, their replacement by machines and the obsolescence of print tools." [30]
- "The new technologies are changing the inner workings of the library. The automated systems are important in facilitating the workload but our human resources are still our strongest asset and they need

to be thoughtfully and carefully supported through the changes brought about by automated systems. When the systems are fully in place, they will only be as good as the people who interact with them."[31]

Let me sum up:

- The transition from physical to electronic library has been, and continues to be, traumatic.
- The tools are only as good as the people who are using them.

And that's where this report comes in. There is a need for a comprehensive checklist of required technology skills because libraries across the world are creating their own, reinventing the wheel one cog at a time. There is no need to reinvent the wheel. Here's the wheel. Add a few spokes or some sleek tires, perhaps even a neat little bell, and you've even got yourself a full-fledged racing bike. Race on.

Notes

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