

A COURSE IN ACCIDENTAL SYSTEMS LIBRARIANSHIP

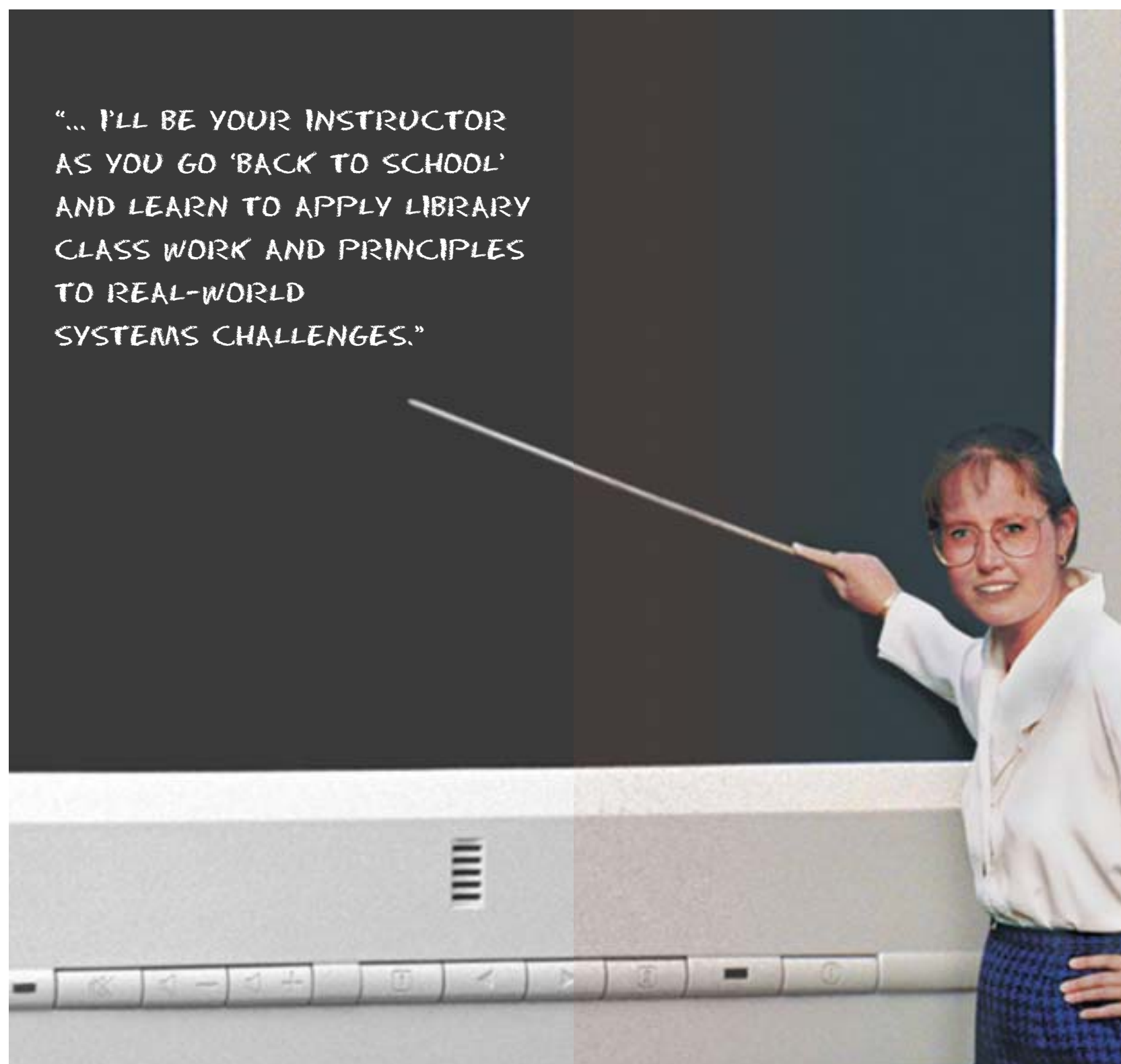
by Rachel Singer Gordon

I never wanted to be a computer geek; in fact, I've been resisting the idea for years! In high school, I was the kid with the Atari—and while my fellow computer owners were cutting their teeth on BASIC programming, I was more interested in playing games and dialing up local bulletin board systems. In college, I graduated to using a monster of an IBM XT—on which I learned Word-Perfect function keys inside and out, but neither wrote one line of code nor hacked into a single government agency. In the mid-1990s, when it became apparent that I would have to go back to school to earn a marketable degree, friends urged me to consider computer certification. Reluctant to lock myself into a future of dealing primarily with machines, I chose instead to attend library school with my trusty 486 by my side—and was introduced to the Internet for the first time. The rest, as they say, is history.

After graduating in 1996, I accepted an entry-level reference position at the Franklin Park Public Library District (FPPLD), which serves a population of 19,500 in Chicago's near-west suburbs. Like most smaller suburban libraries at the time, FPPLD was going through a period of technological transition. Internet access for staff had been enabled just months before my arrival. Although the card catalog had been closed in 1993, it was still available to and widely used by patrons. Our text-based online catalog was accessed through dumb terminals, some of which were hooked to noisy dot-matrix printers. The library possessed several stand-alone PCs for staff and public use, but maintained neither a Web site nor an internal network. Out-of-order signs abounded, purchased software stacked up for lack of someone to install it, and an environment without antivirus software or effective security made the use of public PCs treacherous at best.

Something needed to be done. Because I liked computers and was comfortable with some of the basics, I began to unofficially take care of some of the problems that were stacking up. Because I was willing to tackle some needed projects, such as hardware installation and setting up new PCs, I moved into the new role of reference/

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computer services librarian in 1998. As we acquired more machines, more software, and more demand for technology of all types, my systems responsibilities grew ever-greater.

We implemented Internet access for patrons in 1998, and since then have offered public Internet training sessions several times a month. Our Web-based OPAC went online in late 1999, at which time we sold off the card catalog drawers and gained ourselves a lifetime supply of scratch cards. Since then, our internal Windows NT network has allowed the introduction of basic but useful functions, including laser network printing, file sharing, and intranet Web pages. Our Web site (<http://www.franklinparklibrary.org>) launched in the spring of 2000, and has developed to offer such popular features as an extensive local history section and home access to our OPAC and electronic databases. Our PC population has exploded to 36 (small by some standards, but sufficient for a library our size), and we recently said a less-than-tearful farewell to our last dumb terminal. Our security and antivirus software have been beefed up, and our planned migration to an all-Windows-2000 environment in early 2002 should further simplify security and workstation management.

All of these changes were necessary for a library that wished to remain technologically relevant for its community, but each required that someone take responsibility for project management, technical support, and the countless smaller steps that have enabled us to reach this point. I am now the head of the computer services department at FPPLD—a one-person department that was created in 1999. I still don't want to be a computer geek ... but I have come to accept that technology and librarianship are now intertwined to the point where many of us need to step into the more palatable role of systems librarian. Although I, along with many information professionals in similar positions, graduated from library programs that (at the time) lacked an emphasis on current technology, we are by personality and by training uniquely suited to adapt traditional library skills to the challenges of integrating and supporting computer technology in our libraries.

In this article, I'll be your instructor as you go "back to school" and learn to apply library class work and principles to real-world systems challenges. Each listing in the course catalog that follows is a required element for aspiring graduates of the School of Accidental Systems Librarianship. None requires previous experience or programming expertise; the

"SYSTEMS LIBRARIANS APPRECIATE THE VALUE OF NETWORKING—IN ALL OF ITS SENSES."

only prerequisites are a background in librarianship, a willingness to learn, and an interest in technology. In the description of each area of study, I'll tell you how my experiences at FPPLD have inspired the necessity for that part of the curriculum—and hopefully impart advice that will allow you to learn from my mistakes. Although some course work may seem basic, remember the 80/20 rule: Those who absorb the lessons below (some 20 percent of what an IT person in a large institution may be expected to know) will be prepared to deal with 80 percent of the situations that normally occur in a smaller computer-dependent library organization. Those of us in smaller libraries without an IT department to call on can still keep those all-important systems up and running—most of the time!

**Course Description #1:
Organization of Knowledge**

The organization of human knowledge is one of the basic tasks of librarianship, and learning effective organization is also a basic necessity for any successful library systems administrator. Computer services librarians are required to keep track of systems information, software licenses, vendor contacts, passwords, and each system's (and user's) individual quirks. Extra credit for those who collocate information on an institutional Web site!

Lessons in this course stem from personal experience. When I assumed responsibility for the computer systems at FPPLD, I inherited a jumble of manuals, disks, random computer parts, and software. The need for organization was soon made clear when one of our malfunctioning PCs took a trip to the computer store and came back with a new motherboard, having had the contents of its hard drive and all its settings wiped completely clean.

Problem one arose when Windows 95 declined to plug-and-play nicely with the existing graphics card. Windows decided that 16 colors was enough for any application, but several of our CD-ROMs had a differing opinion. Having no record of the brand and model of the video card, I had to take a screwdriver to the case, open the machine, and look at the card itself to see its type so that I could download driver software from the manufacturer's Web site. Lesson one, therefore, focuses on the importance of accurate record keeping of systems information. Students will learn to do a basic inventory of computer systems, assign each PC an identification number (or letter—Dewey is less than relevant here!), and print and keep systems information for each piece of library equipment.

Problem two followed soon after, when, video drivers safely in place, I began installing our CD-ROM programs back onto the hard drive. A number of products required a customer or serial number in order to function, but I had no record of such numbers. Resolving this issue required a call to technical support, a willingness to sit through a good 10 minutes of Muzak, and a chance to incur the scorn of the product representative who had to look up our records. Lesson two in this course, then, emphasizes the necessity of good record keeping of vendor and software information. Related topics include the necessity of maintaining good relationships with vendors and using your records to identify hardware and software in need of upgrading.

Whether you choose to keep your records in a database, in a 3-ring binder, or on little scraps of paper all over your desk, the need for effective organization and record keeping remains constant. Non-catalogers may take heart; this course differs from basic cataloging in that you need to be able to retrieve the information, and only you decide how much information is necessary and in what format you'd like to keep it.

**Course Description #2:
Basic Research Techniques**

Successful reference librarians know that they don't have to "know" everything—they just need to know how to look it up. As computer systems and software grow in complexity, few of us non-computer-geeks carry in our heads solutions to every situation or question. Previous experience, however, gives us a starting point, and information-seeking skills allow us to navigate the complexities of such misnamed resources as the Microsoft Knowledge Base.

In this course, aspiring systems librarians will learn strategies and starting points for finding solutions to the seemingly random glitches that plague any computer system.

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Class exercises include the following:

- Searching the Microsoft Knowledge Base for an actual error and applying the solutions you find.
- Tracking down technical support phone numbers and e-mail addresses on the Web site of one of your major vendors.
- Locating alternate sources of tech support when a vendor's site lacks the answer and pay-for-support wants to put you on hold for 45 minutes.

The emphasis in this course will be on learning when and where to "look it up" when the answer to a computer-related dilemma is not readily apparent. A willingness to take the time to search for information before starting a repair can save hours of frustration. It took a number of times to beat this lesson into my head, but here is just one example: We'd purchased a new computer for our children's department, and after I had spent some time loading software, removing extraneous icons, and doing other basic setup, I went to install their UMAX scanner. This was an older scanner, so installation involved removing a SCSI card from their old PC, installing it in the new machine, and loading scanner drivers. The card installation went smoothly, the computer recognized the scanner, I installed the drivers from CD, and went to reboot. Big mistake. The system halted on boot up with a threatening "VMM32 .vxd missing or corrupted, unable to load Windows" error.

I'll spare you the long version of this sad tale, but suffice it to say that quite a bit of time and energy could have been saved with a simple visit to the UMAX Web site. Their KnowledgeBase lists this as a known error and provides simple step-by-step instructions for its resolution. The lesson here? When in doubt, try looking it up.

**Course Description #3:
Learning How to Network**

Even with the plethora of research resources available, you'll sometimes have to rely on others' expertise to help solve your technical dilemmas. Systems librarians appreciate the value of networking—in all of its senses. So in this lesson you'll learn how to interact with your online peers, whom to turn to when you need answers to your questions, and how to effectively manage your online networking to gain the most value from these connections. Participants in this course will be required to join at least one e-mail discussion list for systems librarians and to contribute at least one relevant post to the discussion. Topics include: locating and searching list archives to determine whether your question has been asked (and answered) in the past before posting, creating a professional e-mail signature file, and composing an effective question that includes enough information for readers to answer.

Over the past few years, numerous librarians have taken the time to help me resolve issues that they'd previously faced in their own institutions. One happy byproduct of joining pertinent e-mail discussion lists is that, just by reading, you'll find answers to questions you didn't even know to ask, or ideas to try in your own library. Examples of useful items I've seen just in the past few months include free JavaScripts for library Web pages, virus warnings (arriving in time to download new virus definitions), suggestions on HTML editors and graphics software, discussions of Internet policies, and lists of current awareness sites for systems librarians. Participants on discussion lists also often post job ads, calls for papers, or conference information—all of which help you to keep track of what else is out there for systems librarians.

**Course Description #4:
Instruction Techniques**

Librarians have always assumed a large number of roles, among them, that of teacher. Traditional bibliographic instruction focuses on giving library users the skills they need to locate and use library resources. In this Instruction Techniques course, you'll move beyond the bibliographic and learn to use those teaching abilities to deal with computer

and electronic resources more effectively. We will cover a range of topics:

- The qualities of a successful technology trainer—These include patience, the ability to break complex lessons down into small steps, and a willingness to eschew jargon.
- The characteristics of an adult learner—We'll discuss how people learn, what motivates them to do so, and the need to make any computer instruction relevant to your learners by teaching them what they want to know.
- The responsibilities of a wired institution—If you provide public Internet access, are you obligated to provide training sessions? If you provide staff with updated office or automation software, how do you teach them to use these new resources effectively?

At FPPLD, I've been teaching public Internet and OPAC classes for several years, and I provide ad hoc training for staff whenever we complete a software upgrade (transferring our e-mail software from VMS mail to Eudora, for example). Although change can be disconcerting, having someone willing and able to provide training goes a long way toward keeping a library relevant in the Internet age. Participants in public Internet classes range from elderly who want to learn to find travel information or e-mail distant grandchildren, to younger trainees who want to use online resources to find a job

USEFUL E-MAIL LISTS FOR SYSTEMS LIBRARIANS

Electronic Resources in Libraries
<http://www.topica.com/lists/eril>

LIBNT-L
<http://listserv.utk.edu/archives/libnt-l.html>

NETTRAIN
<http://listserv.acsu.buffalo.edu/archives/nettrain.html>

oss4lib-discuss
<http://lists.sourceforge.net/lists/listinfo/oss4lib-discuss>

PACS-L
<http://info.lib.uh.edu/pacsl.html>

SYSLIB-L
<http://listserv.acsu.buffalo.edu/archives/syplib-l.html>

Web4Lib
<http://sunsite.berkeley.edu/Web4Lib>

or fill out a financial aid application. Some may have just purchased computers for their homes, while some may come back to log on at the library. Regardless of participants' reasons for attending, providing such classes allows us to expand the library's traditional interest in advancing literacy to promoting electronic literacy.

Phil Agre's "How To Help Someone Use a Computer" (<http://dliis.gseis.ucla.edu/people/pagre/how-to-help.html>) is required reading for this course.

Postgraduate Studies

Lifelong learning is a necessity for any effective information professional, but is an especially important concept for systems librarians whose responsibilities include keeping up with constant advances in technology. Unfortunately, many smaller libraries lack the funding to send staff to often-expensive computer classes and workshops. This makes it necessary for systems librarians to be proactive about educating themselves on the systems and software that are most commonly used in their environment.

"SIGN UP FOR FREE E-MAIL NEWSLETTERS ON A NUMBER OF TECHNOLOGY TOPICS. BE LIBERAL WITH THE DELETE BUTTON, BUT MAKE NOTE OF PERTINENT NEWS AND TIPS—THIS WILL OFTEN BE YOUR BEST WAY OF KEEPING INFORMED...."

Luckily, computer training is in such demand that a plethora of low-priced online classes and self-paced Web-based tutorials is available. For example, when

FREE AND LOW-PRICED ONLINE COMPUTER CLASSES/TUTORIALS

Barnes and Noble University
<http://www.barnesandnobleuniversity.com>

FindTutorials.com
<http://www.findtutorials.com>

Learn2
<http://www.tutorials.com>

Trainingtools.com
<http://trainingtools.com>

I was preparing to install our Windows NT network, I enrolled in a \$59 NT server administration class from Ziff-Davis University (it's now SmartPlanet, and it no longer offers that class). You do get what you pay for, and the course was basically glorified self-study, although an instructor was available to answer questions via online forums. The structure of being in a "class" and having to complete workbook exercises, however, forced me to spend some time learning basic server operation, which otherwise would have taken a back seat to my day-to-day responsibilities. I'm in no way prepared to take the Microsoft Certified Systems Engineer (MCSE) exams, but am able to move around the operating system, add users, assign permissions, share folders as drives, and carry out the other basic operations that comprise 80 percent of what needs doing to keep the network chugging along.

To earn extra credit in your independent study, take advantage of working in a library. Each month, scan one or two of the computer magazines your library subscribes to for new tips and tricks. If you receive solicitations for free computer weeklies such as *Network World* or *Information Week*, sign up. You won't have time to read all the articles, and some will be too technical or just irrelevant—but set aside an hour or so each week to skim through the articles that look pertinent. Sign up for free e-mail newsletters such as Information Today, Inc.'s NewsBreaks (<http://www.infotoday.com/newsbreaks/breaks.htm>) and InfoWorld's newsletters (<http://www.iwsubscribe.com/newsletters>) on a number of technology topics. Be liberal with the delete button, but make note

of pertinent news and tips—this will often be your best way of keeping informed of virus alerts, software patches, and other timely technical topics.

Graduation and Beyond

Although the above lessons have been described as separate classes, the successful systems librarian will use these skills in combination. Mastering the organization of knowledge, for example, will help you learn where to research problems, while your independent study will give you the background to know when you need to do so. The patience and persistence you cultivate during your training sessions will be assets when the first five solutions you try for a computer glitch fail to solve the problem. Once you've completed the curriculum you won't be a full-fledged computer geek, but you will be better prepared to help your library cope with technological change. You'll be worthy of the title: systems librarian!

Rachel Singer Gordon is head, Computer Services, at the Franklin Park Public Library in Franklin Park, Illinois. She holds an M.L.I.S. from Dominican University in River Forest, Illinois. She is the co-author of The Information Professional's Guide to Career Development Online (Information Today, Inc. 2001) and the Webmaster of the library careers site Lisjobs.com (<http://www.lisjobs.com>). Her e-mail address is rachel@lisjobs.com.

Further Reading

Wilson, Thomas. *The Systems Librarian: Designing Roles, Defining Skills*. Chicago: ALA Editions, 1998.