Sustaining Public Access Computing Programs: Technology and Management Competencies

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May 2007

Editor
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Acknowledgments

In compiling the competencies for public access computing, WebJunction collected input from a spectrum of library practitioners, consultants and leaders, and from competency standards defined by other library organizations.

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Standards Created for the Library Field by Other Organizations

California Library Association's Technology Core Competencies
http://www.cla-net.org/included/docs/tech_core_competencies.pdf

Kansas State Library Technology Core Competencies
http://kansaslibtech.blogspot.com/2005_07_01_kansaslibtech_archive.html

Ohio Public Library Core Competencies
http://www.olc.org/pdf/core.pdf

Public Library Director/Staff Competencies. State Library of Iowa/Iowa Library Service Areas, 2003.

Public Library of Charlotte & Mecklenburg Counties (PLCMC) Core Competencies
http://www.plcmc.org/public/learning/plcmccorecomp.pdf

SLA Competencies for Information Professionals, 2003.
http://www.sla.org/content/learn/comp2003/index.cfm

State Library of North Carolina Competencies in Technology
http://statelibrary.dcr.state.nc.us/ce/competencies.pdf

Western Council Library Practitioner Core Competencies
http://www.westernco.org/continuum/final.html

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Introduction

Technology has permeated 21st century libraries, impacting the environment for both patrons and staff. At all levels of library service, a host of new skills and knowledge are now required as an integral part of working in a library. This is particularly true of public access computing, a service that is now in high demand by patrons and replete with expectations for keeping current with emerging trends and technologies.

Defining competencies for sustaining public access computing programs is the first step toward providing a roadmap for library staff to identify skills gaps through assessments and to connect to learning opportunities to achieve each competency. The general orientation is toward all public libraries across the spectrum with an emphasis on smaller and more rural libraries. Given the variety of organizational structures, it is beyond the scope of this project to delineate roles and classifications that apply within every system. Instead, we offer a menu of categories and competencies from which to pick and remix those that make sense to any individual library or library system.

WebJunction's competencies are divided into three sections—two of which address technical skills and knowledge and a third that addresses the management of public access computing programs. Technology Competencies for Patron Assistance defines skills that frontline library staff need in order to provide direct assistance to patrons on the public computers. The System Administration section defines skills necessary to set up, configure and maintain the public computers and networks. The Management Competencies are the umbrella over all, covering the master-planning, coordination and integration aspects of running a public access computing program.

The competencies are displayed in two levels of granularity. For each higher-level, more comprehensive competency in the left column, there is a list in the right column of associated skills, knowledge and/or attitudes by which a staff person might demonstrate that competency. It is hoped that the greater specificity will help an individual library worker's self-discovery of skill levels. We aim to provide a system whereby it will be easier and less intimidating to focus on concrete steps and actions, to identify weak and strong points, and to actualize the overall intention of filling knowledge and skill gaps.

Technology Competencies for Patron Assistance on Public Access Computers

Assisting patrons on the public access computer stations requires that library staff be competent and confident in their own use and understanding of the technologies involved. The focus here is on the skills necessary for patron assistance by frontline staff: there may be overlap with and/or omission from a more general list of technology competencies for all library staff positions.

Competencies for configuring, administering and maintaining the computers and networks are listed under Technology Competencies for System Administration of Public Access Computers.

Hardware

Understand the functions of the hardware components of the public access computers

Why? It is important to understand the set-up and basic functioning of the computers and their associated parts in order to provide timely assistance to patrons. Many elementary tasks and troubleshooting can be done before it's necessary to call in more robust technical support.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the basic hardware and common peripheral components of a computer ▪ Understand the connections for all components	▪ Identify and use the monitor, mouse and keyboard or trackball. ▪ Identify and use the floppy drive, CD and/or DVD drive, Zip drive and USB or Firewire ports. ▪ Use the speakers, headphones and microphone. ▪ Identify a printer and a scanner. ▪ Know which port or socket to use for each component and how to verify that cables are properly connected. ▪ Identify an uninterruptible power supply (UPS) and understand its use. ▪ Identify the network connection (wired or wireless) and determine if it is properly connected. ▪ Provide basic assistance to patrons attempting to use the wireless network (if applicable).

▪ Understand the start-up and power-down procedures for the public computers ▪ Understand how to reboot	▪ Properly start up and log in to a computer that is currently powered down. ▪ Know how to determine if a computer and associated peripherals are plugged in and powered on. ▪ Follow the standard procedure for powering down a computer. ▪ Know the difference between a hard (cold) reboot versus a soft (warm) reboot. Know when it is appropriate and how to perform each.
▪ Understand the options for removable storage devices available to patrons	▪ Recognize different types of removable storage devices (USB flash drive, CD-R or CD-RW disk, DVD-R or DVD-RW disk, floppy diskette, Zip disk, USB external disk drive). ▪ Know the storage capacity and the limitations of each. ▪ Know which devices are supported by the public access computers. ▪ Identify which drives are mapped to external storage devices and be able to assist a patron in making use of each device.
▪ Know how to obtain further technical support	▪ Know whom to contact to further troubleshoot problems with library computers (i.e., city, county or parish IT department or hardware vendor's customer support help desk). ▪ Know where to find contact information. ▪ Be able to describe the problem and report steps already taken to address it.

Operating System & File Management

Understand how the operating system manages the software applications and files

Why? Understanding the basic functions of the operating system and knowing how the set-up determines the allowances and limitations of actions performed by patrons are crucial to providing a positive experience for public computer users. Not only will these skills help with patron orientation to the public computers, but they also comprise a basic knowledge set for all computer use.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the desktop and its icons ▪ Understand the Windows Start menu	▪ Launch a program from the Start menu or the desktop. ▪ Create shortcuts for a file, folder or program on the desktop. ▪ Organize the files saved to the desktop. ▪ Empty the Recycle Bin and understand the reason for doing this. Be able to recover files and folders from the Recycle Bin. ▪ Use operating system functions to adjust speaker volume or mute speaker sound. ▪ Know the patron log-on procedure and time limits for public use.

▪ Understand how to manage files and folders ▪ Understand the use of common file management tools in Microsoft Windows	▪ Know the difference between programs, files and folders. ▪ Perform basic file and folder functions, including how to open, close, delete and rename, as well as copy, cut and paste (or drag and drop) files and folders. ▪ Find folders and files in My Computer or Windows Explorer. ▪ Be aware of the different views of files and folders in My Computer or Windows Explorer. ▪ Recognize common file name extensions and their associated applications or application types. ▪ Know the patron's options for saving files both temporarily and permanently. ▪ Be familiar with the restrictions of the public access computing security and know which files get deleted at the end of a patron session.
▪ Understand profiles (if applicable) and user management	▪ Be knowledgeable about profiles set up on the public computers for access by different patron groups. ▪ Be able to switch between profiles. ▪ Know how to use the public access computing station time and reservation management programs.

Security

Understand basic security practices for public access computing

Why? Using basic security procedures and instructing patrons in best security practices are important in order to help protect public computers from viruses and to protect patrons from scams.

Competencies	Demonstrable Skills/Knowledge
▪ Demonstrate an understanding of security-conscious computer use	▪ Be able to explain the difference between a user name and a password. ▪ Know how to create a secure password. ▪ Recognize suspicious e-mail attachments and instant messages, and advise a patron on how to handle them. ▪ Recognize "phishing" scams that request personal information and advise a patron on how to handle them. ▪ Explain why use of an e-mail client (Outlook, Outlook Express, etc.) is a security risk on public computers and why Web-based e-mail is recommended in the public access computing environment.

▪ Understand the effects of public access computing security on user privacy	▪ Know how the public access security set-up retains records in the form of cookies, Internet history or saved files between user sessions. ▪ Know how to remove saved records upon patron request and if it's even possible. ▪ Inform patrons of their options for saving files created in a user session.

Software Applications

Understand common software programs

Why? Being able to assist patrons with a variety of popular software applications broadens the patron experience and often meets the needs of most public computer users. These skills also translate to personal computer use.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the difference between operating system software and application software ▪ Understand functions common to most applications	▪ Identify some broad categories of different types of software applications (word processors, Web browsers, spreadsheets, databases, e-mail programs, etc.) and determine which are best suited to the patron's needs. ▪ Be familiar with the various software applications that are available for patron use on the library's public computers and know the common uses of each. ▪ Maximize, minimize, reposition and close program windows. ▪ Use horizontal and vertical scrollbars. ▪ Identify and use the menu bar and menus to access commonly used application functions. ▪ Be aware of the ability to have multiple applications open at one time. Be able to toggle between open applications (Windows Task Bar or alt+tab for PCs). ▪ Identify a toolbar within an application and understand the function of common icons on the toolbar. ▪ Cut, copy and paste information within or between open programs. Know how to use the Windows clipboard in association with these operations. ▪ Know the difference between the "save" and "save as" functions within Windows programs. ▪ List some of the most common keyboard shortcuts used with Windows programs that would be most useful for accessibility (cut, copy, paste, find, print, etc.).
▪ Understand basic procedures to address application software problems	▪ Be able to force the shutdown of applications. ▪ Use the Windows Task Manager to end processes. ▪ Use the Help menu within an open application.

▪ Assist patrons in the use of software applications	▪ Know what applications tutorials are available for patrons' self-paced learning. ▪ Assist patrons with Microsoft Word or other word-processing applications, including how to compose a letter or a résumé and how to insert images. ▪ Assist patrons with Microsoft Excel. ▪ Assist patrons with Microsoft PowerPoint. ▪ Assist patrons in using the Help menu in an application. ▪ Know how to copy files to a removable storage device (USB flash drive, CD-R or CD-RW disk, DVD-R or DVD-RW disk, floppy diskette, Zip disk). ▪ Know how to burn a music CD. ▪ Provide on-the-spot coaching to patrons on basic software applications skills (see Patron Training section).
▪ Identify resources available to patrons for instruction and training on software applications ▪ Refresh little-used applications skills	▪ Know what books or other application-training materials are in the library's collection. ▪ Know where to find quick guides or tutorials, either online or print. ▪ Be familiar with the library's computer class offerings and schedule. ▪ Know where to find resources for learning new applications skills. ▪ Establish a technique for brushing up on a skill that has not been used for a period of time.

Internet

Understand Internet and e-mail applications

Why? Internet and e-mail are very popular uses of public access computers, so it is a high priority for library staff to have a solid set of skills in working with these technologies.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the Internet and the World Wide Web ▪ Understand how to work with uniform resource locators (URLs)	▪ Be familiar with the history and development of the Internet and the World Wide Web. ▪ Explain the basic structure of Web sites and Web pages. ▪ Know what browsers are available on the public computers and how to use them to access the Internet. ▪ Identify the different parts of a URL. ▪ Input a URL into a Web browser to visit a site for which you have the address. ▪ Know how to copy and paste a URL from an electronic document into a Web browser's address bar, or vice versa. ▪ Be able to print only the desired information from a Web site. ▪ Identify a hypertext link (URL) embedded within a Web page and, where possible, be able to identify the home Web site within the hyperlink text before clicking and following the link.

	▪ Open a hypertext link in a new window or a new tab (Firefox/Mozilla/Internet Explorer 7).
▪ Understand common security protocols related to Internet use	▪ Know the purpose of antivirus and antispam software programs. ▪ Know what pop-up and pop-under windows are. ▪ Use pop-up blockers on the public access computers and know how they prevent both harmful and desirable pop-ups and downloads from happening. ▪ Be able to bypass pop-up blockers when necessary. ▪ Know what cookies are within the context of the Web and how cookies can get onto a computer via the use of a Web browser. ▪ List some types of activities that are best performed only on secure sites. ▪ Determine whether a particular Web page or site is secure.
▪ Understand basic navigation functions of a Web browser ▪ Understand browser plug-ins and downloadable files	▪ Use Back, Forward, Stop, Refresh and Home, as well as History (if available). Be able to scroll through a page. ▪ Change the text size on a Web page. ▪ Download and save files from the Internet, including image, audio and video. ▪ Assist a patron in saving "bookmarks" or "favorites." ▪ Download e-books and audiobooks. ▪ Know how to use online forms. ▪ Identify some plug-in applications that are commonly used with Web browsers. ▪ Update the most common browser plug-ins, such as Flash.
▪ Understand Web-based e-mail programs	▪ Identify some of the most popular Web-based e-mail programs that might be used by library patrons (MSN Hotmail, Yahoo! Mail, Google Gmail, America Online/AOL, MyWay and others). ▪ Help a patron sign up for and start using a Web-based e-mail account with one of the programs available. ▪ Help patrons attach, send and save file attachments in Web-based e-mail. ▪ Help patrons manage contacts and the address book in an e-mail program. ▪ Help patrons identify spam and phishing e-mail messages and how to deal with them.
▪ Assist library patrons in locating Internet resources ▪ Understand Web search engines and how to conduct a basic search	▪ Explain the differences between Web search engines, Web subject directories and library subscription databases. ▪ Be aware of the difference between the World Wide Web (WWW) and the Internet itself. Be aware of the concept of the "deep Web" or "invisible Web" and what information will not be retrieved through

for information	popular search engines. ▪ Navigate to popular Web directories. ▪ List and use some popular search engines. ▪ Conduct an image search on the Internet. ▪ Be familiar with online photo editing tools. ▪ Use a Web browser's find function to search for text strings within a Web page. ▪ Be familiar with a variety of strategies for searching the Internet, including keyword or phrase searching, the use of Boolean operators and advanced search functionality.

Patron Training

Teach basic computer literacy skills

Why? Helping patrons to become "information-smart" is a key role for the modern library. Whether this involves teaching basic technical skills on the computer or more broadly applicable information problem-solving skills, most libraries expect frontline staff and even IT personnel to teach and guide the public. In addition to formal classes, teachable moments occur spontaneously when working with patrons. Developing solid teaching and coaching skills will provide a positive experience for patrons.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the trainer role ▪ Understand training techniques	▪ Be familiar with the library's objectives for training patrons. ▪ Seek out train-the-trainer opportunities. ▪ Be broadly familiar with adult learning theory and learning styles. ▪ Recognize the different audiences for training. ▪ Acquire strategies for engaging learners. ▪ Learn by observing or assisting peer trainers.
▪ Understand the coaching role	▪ Know the difference between formal and informal learning. ▪ Recognize opportunities to share knowledge and provide "just in time" learning to patrons at the point of need. ▪ Know the library's class schedule and know when to refer a patron to formal learning. ▪ Direct a patron to further resources for learning.
▪ Develop information problem-solving skills in patrons	▪ Assist library patrons with searching the library's catalog. ▪ Help patrons to develop the ability to recognize an information need, meet it and evaluate the results. ▪ Teach critical thinking skills for the evaluation of information. ▪ Be familiar with strategies to evaluate the accuracy, authority, currency and credibility of Internet resources.

Printing

Print from applications and troubleshoot basic printing problems

Why? The ability to print all kinds of documents is a frequent expectation of patrons on the public access computers. Frontline staff need to be able to assist the process and do some simple troubleshooting before calling for technical support.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the basic functions of the printer ▪ Perform basic maintenance tasks	▪ Determine if the printer is powered on. ▪ Know where to find printer paper and how to load paper into the printer. ▪ Clear paper jams. ▪ Identify and select (change) the active printer. ▪ Change printing preferences such as color, b&w or two-sided printing if available. ▪ Know how to add a printer. ▪ Access the printer queue for a specific printer, and know how to manipulate print jobs in that queue: pause, resume and cancel print jobs. ▪ Know the difference between a laserjet and an inkjet printer.
▪ Understand how to print from common applications and devices	▪ Use Page Set-up and Print Preview. ▪ Print and save Web pages and/or portions of the content on a Web page, including images. ▪ Help a patron to print digital images from a camera, CD/DVD or USB flash drive.

Policy

Understand the library's policy for patron use of public computers

Why? A clearly defined policy for patron use protects both users and the security of the computers themselves. It helps frontline staff by allowing for greater consistency in enforcement of rules and regulations.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the library's policies for patron use of public computers ▪ Understand logging of user data and how that data is used	▪ Know what data is logged by the library, including patron usage sessions, library Web site visits and other sources (such as the integrated library system). ▪ Be broadly familiar with the basics of copyright restrictions and violations and know how to determine whether or not a given Web page/site is copyrighted, as well as the specific copyright terms. Be able to apply this knowledge to patron printing of Web pages and documents found on the Web. ▪ Identify any written library policies dealing with computer and network security, including a computer security policy, an Internet usage policy,

	a public access computer usage policy, and a CIPA and filtering policy. ▪ Be aware of the relevance to libraries of the Children's Internet Protection Act (CIPA). Know whether or not filtering software is used on public access machines in the library and how/when it may be turned off.

Staying on Top

Keep ahead of changes in technology and embrace the learning curve

Why? Everyone knows that the only constant is change! It's a career-long challenge to stay one or two steps ahead of patrons in order to meet their ever-evolving needs.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the resources and strategies for keeping up with new technologies	▪ Be aware of the importance of lifelong learning for all levels of library work and advocate for management support of a personal learning plan. ▪ Locate information sources to stay informed of new technologies and programs becoming available or being used by patrons, including e-mail lists, journals and blogs. ▪ Know what is meant by "Web 2.0" and "Library 2.0." ▪ Learn about IM (instant messaging tools: Meebo, Trilliam, GAIM), social networking sites (MySpace, Facebook, SecondLife), social bookmarking (del.icio.us, furl), photo-sharing (Flickr, ShutterFly), music-sharing (Last.fm, Pandora, iTunes) and video-sharing (YouTube). ▪ Locate and read blogs and podcasts. Know what is meant by an RSS feed and how to subscribe. ▪ Be familiar with online collaboration tools, like GoogleDocs, wikis or LibraryThing. ▪ Know how to locate and use tutorials, webcasts and other online opportunities for learning. ▪ Develop communication channels with system administrators to learn about changes and upgrades to the public access computers. ▪ Develop a plan to allow for testing and experimenting with new technologies becoming available or being used by patrons.

Technology Competencies for System Administration of Public Access Computers

The system administrator (whether formally trained or "accidental") is responsible for configuring, administering and maintaining the public access computers for reliable and secure use by patrons. The public use of the systems introduces special requirements for networking, security and time management. These competencies assume and build upon knowledge of the Patron Assistance skills for hardware, operating systems and security.

Hardware

Set up and maintain the hardware components of the public access computers

Why? Setting up the physical parts of the computers is the foundation of presenting a working system for patrons.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the basic set-up of computer hardware ▪ Understand how to identify and connect peripheral devices	▪ Identify the basic computer hardware (server and desktop or workstation). ▪ Identify internal hardware components (central processing unit [CPU], motherboard, network interface card [NIC], video [graphics] card, audio [sound] card). ▪ Identify common peripheral components (mouse, keyboard, monitor, speakers, headphones, microphone, printer, scanner) and external storage drives (hard disk drives, floppy drive, CD and/or DVD drive, USB flash drives). ▪ Be familiar with the basic set-up of a computer and the purpose of each cable connected to a computer, and know how to verify that cables are properly seated in the right ports on the computer. ▪ Identify and connect key PC hardware drives and ports (floppy drive, CD and/or DVD drive, USB ports, Firewire ports, parallel ports, serial ports, video port, mouse port, keyboard port, speaker [sound] port, microphone port). ▪ Properly install and use a surge protector, UPS or other intermediary electrical device.
▪ Understand hardware performance	▪ Know the differences between computer memory (RAM) and disk drive (disk storage). ▪ Explain the impact of individual components on performance (speed of the CPU), amount of memory, amount of disk space, capacity of the computer bus, performance of the graphics card and the capacity of other individual hardware components.

	▪ Monitor component performance to troubleshoot issues with a computer. ▪ Troubleshoot problems with components and narrow the source of a problem to a peripheral device or to the computer itself.
▪ Understand the hardware upgrade process	▪ Be knowledgeable about the relationship between hardware components and the capacity for operating system and software upgrades. ▪ Research new computer equipment and systems and make recommendations for purchase. ▪ Be familiar with the various internal and external options for upgrading hardware (a wireless NIC could be PCI versus USB). ▪ Install new hardware including the proper/current drivers.

Operating System & User Management

Maintain the operating systems for maximum performance and manage user access

Why? It is crucial to understand the functions, features and limitations of the operating system(s) on the public access computers as this knowledge determines many of the other processes and activities performed. This is also the level at which user access permissions are granted or constrained and thus integrates with security practices.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the core functions performed by operating system software ▪ Understand how to power up, control processes and shut down the computers	▪ Locate hardcopy or electronic user manuals and other documentation related to the computer itself and the operating system used on that computer. Know how to locate and use online help. ▪ Identify some widely used operating systems (Microsoft Windows [versions: 95, 98, ME, 2000, XP, Vista], Unix, Linux, Apple Mac OS, Palm OS, Microsoft DOS). ▪ Identify the version of the operating system running on each computer. Be aware of the features and limitations of the current version(s). ▪ Determine the processing speed, the amount of RAM, and both free and total hard drive space on a Windows computer. ▪ Be able to end processes. ▪ Know the correct sequence of events to properly shut down the public access computers. Know how to force a shutdown of a "frozen" computer. ▪ Add/remove operating system components. ▪ Uninstall/update hardware drivers.
▪ Understand the regular maintenance tasks necessary for the library's public computers ▪ Understand the reasons for performing these tasks and the relationship to good	▪ Create a plan that specifies the frequency and sequence of the maintenance tasks and identifies which tasks are automated. ▪ Perform basic Windows computer maintenance tasks (defragment a drive, clean up a drive, run CHKDSK on a drive). Know the differences between each task and how frequently to perform them. ▪ Verify that automatic settings for antivirus, operating system and other application software updates are correctly configured and functioning.

security practices	▪ Back up files and recover backed-up files. ▪ Change the screen resolution in Windows. ▪ Access operating system logs and notifications ("Event Viewer" in Windows).
▪ Understand user management ▪ Understand access and time management options for public computers	▪ Know the options for granting and limiting patron access to the public computers. ▪ Create/modify/delete users and groups. ▪ Change passwords for all accounts. ▪ Configure user environments and security for different user groups. ▪ Know the options for reservation and time management systems for the public computers.

Networking

Set up and maintain the public access computing network

Why? Setting up the network, both physically and electronically, is the backbone of public access computer systems, allowing patron access to the Internet. It overlaps with security issues.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the key components and set-up of a local area network (LAN) ▪ Understand the relationship between a LAN and a WAN (wide area network) ▪ Understand strategies for troubleshooting network problems	▪ Know what is meant by a LAN and how it can be connected to the Internet. ▪ Know what is meant by a network server, file server, application server and print server. ▪ Produce or find a network diagram of the LAN and demonstrate a full understanding of how network devices connect together. ▪ Visually identify a network hub or switch, wireless access point, router and modem (dial-up, DSL or cable). ▪ Visually identify a network cable (Cat 5, Ethernet, 10BASE-T, unshielded twisted pair, etc). ▪ Set up a switch (or hub) and use it to connect several network devices (computers, printers, etc.) together, and use it to connect those computers to a larger network. ▪ Determine the connection status of a computer and test connections on the LAN or WAN. ▪ Use basic network troubleshooting tools such as ipconfig, ping, tracert and nslookup. ▪ Know the purpose of an NIC (network interface card) on a computer, identify it by looking at the back of a computer, and know what type of cable is required to connect it to a network wall jack, hub or switch. ▪ Test connections to remote computers on the Internet. ▪ Recognize the difference between a local hard disk drive and a network drive. ▪ Isolate and identify problems with the network. ▪ Use Remote Access to troubleshoot network problems.

	▪ Know whom to contact to further troubleshoot network connectivity issues (i.e., city, county or parish IT department, or the library's Internet service provider [ISP]).
▪ Understand network protocols and addresses	▪ Know what is meant by TCP/IP (Transmission Control Protocol/Internet Protocol). ▪ Know what is meant by IP addresses, Default Gateway and DNS Server addresses. ▪ Know how a static IP address differs from an address assigned via DHCP (dynamic host configuration protocol). ▪ Know the difference between public (routable) and private (non-routable) IP addresses and the use of NAT (Network Address Translation). ▪ Identify the network address that has been assigned to a particular computer. ▪ Explain the different types of Internet connections (DSL, T-1, etc.) and speeds typically available to a public library.
▪ Understand the operations of a client/server network (if applicable) ▪ Understand the operations of a peer-to-peer network	▪ Identify the differences and the pros/cons of both a client/server network and a peer-to-peer network. Know which your library uses. ▪ Know the difference between a network client and a network server. ▪ Know the role of a Domain Controller in a Windows Active Directory network—a client/server network. ▪ Know the difference between logging on to the computer itself and logging on to a network domain, and know how to select between these choices. ▪ Know what a network user account is and how to connect to a network with such an account. ▪ Know how to change the password for your network user account. ▪ Know how a thin client computer differs from a PC.
▪ Understand wireless networks	▪ Know the key differences between wired and wireless networks. ▪ Identify the essential pieces of equipment needed to establish a wireless hotspot in the library. ▪ Identify special equipment that an individual computer needs to have in order to connect to a wireless network. ▪ Identify both physical and radio frequency factors in a library building that can interfere with the radio signals used with wireless networking. ▪ Mitigate the risks in configuring a "staff-only" wireless network. ▪ Mitigate the risks in offering wireless Internet access to the public. ▪ Identify the best security protocols and schemes that are used with wireless networks.

Security

Establish basic security set-up and maintenance for public access computing

Why? Threats to security of the network and to the physical equipment are ever-present, so knowledge and vigilance are important characteristics of the successful administrator.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the nature of security threats to a public access system ▪ Understand hardware- and software-based security solutions	▪ Know what is meant by various malware, such as viruses, spyware, adware, trojans, worms and keyloggers. Know the threats each poses. ▪ Recognize the symptoms and warning signs of several common types of computer security threats: banner ads, pop-ups, spyware, e-mail solicitations of personal information ("phishing"), significant slowdown in overall computer performance, files or folders that are deleted without user intervention, new installed programs that were not installed by a legitimate user, etc. ▪ Know what a firewall is and why it is important to secure computer networks with firewalls. ▪ Be able to suggest other hardware-based security solutions: proxy servers, routers, workstation "lockdown" mechanisms (Centurion Guard). ▪ Be familiar with password security and password record-keeping. ▪ Be able to suggest some software-based security solutions: virus and spyware protection software, software firewalls, workstation lockdown programs (Fortres Grand, DeepFreeze, etc.). ▪ Know what virus definition files are.
▪ Understand the security set-up on the library's public access computers	▪ Determine what protective software is installed on the public computers and whether the patches and updates are current. ▪ Know what to do when installed antivirus software indicates a virus has been found on a public computer, whether in a file, an e-mail attachment or an executable program. ▪ Be aware of the impact of the public access computing security on various malware, such as viruses, spyware, adware, trojans, worms, etc. ▪ Know how the public access computing security impacts the ability to install or upgrade operating system or other software. ▪ Determine how the public access computing security system restricts patrons' actions. Know what actions are allowed but deleted later. ▪ Identify some software-based security solutions: virus and spyware protection software, software firewalls, workstation lockdown programs (Fortres Grand, etc). ▪ Know how to set up filters and Child Internet Protection settings.
▪ Understand regular and automated security maintenance tasks	▪ Schedule a regular, automatic virus scan and know how to determine whether or not the public access system allows this or makes it unnecessary. ▪ Configure a public access computer to automatically check for and

	download operating system patches and updates over the Internet. ▪ Configure a computer to automatically check for and download software application patches and updates over the Internet (if applicable). ▪ Inspect the public computers for rogue hardware, such as keyloggers.

Software Applications

Install and upgrade common software programs

Why? Proper set-up, licensing and upgrading of common software applications will make life easier for the frontline staff assisting patrons in the use of programs popular with the public.

Competencies	Demonstrable Skills/Knowledge
▪ Understand how to set up and manage software applications for public access computing ▪ Understand software licensing	▪ Determine what version of a software application is running on a public computer and whether it is the latest version. ▪ Identify common types of software licenses and verify whether a specific installed application on a public computer is properly licensed. ▪ Know what an end-user license agreement (EULA) is. ▪ Maintain and/or upgrade software. (Relates to security set-up). ▪ Isolate and identify problems with the software applications. ▪ Install or uninstall (remove) a software application. ▪ Select, unselect and reset default toolbars and icons within a specific program.

Printers

Set up and maintain public access computing printers

Why? Patrons want to be able to print from a variety of applications. Proper initial set-up and regular maintenance will help the frontline staff deal with patron requests.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the set-up of printers for the public computers	▪ Properly attach power, networking, USB, parallel and/or serial cables to a printer. ▪ Use Microsoft Windows printer configuration tools to add a printer, print a test page, perform “Printer Queue Management,” pause or delete print jobs and troubleshoot printing problems. ▪ Identify whether a printer is locally attached or networked. Identify the differences and the advantages of each. ▪ Share a printer on the network, either directly if “network-ready” or shared from a specific computer on the network. ▪ Use basic printer controls: turn power on and off, switch status from offline to online, cancel current print job, etc. ▪ Be knowledgeable about the options for print management software and be able to implement such a system.

▪ Understand basic troubleshooting and maintenance of printers	▪ Know where to find toner and/or ink cartridges and how to load them into a printer. ▪ Know where to order or request printer supplies (paper, toner cartridges). ▪ Distinguish whether a printing problem is a result of issues with the printer itself, with specific computers, or with software applications that are trying to print to it. ▪ Know how to properly clear a paper jam.

Staying on Top

Keep ahead of changes in technology and embrace the learning curve

Why? The constant pace of change impacts system administrators in a big way. Not only is it desirable to keep up with staff and patron demands for new technologies, it's a necessary and never-ending challenge to keep up with threats to security.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the resources and strategies for keeping up with technology	▪ Devise a strategy for staying informed about advances in technology and tools that are likely to impact libraries. ▪ Be aware of the importance of lifelong learning for all levels of library work and advocate for management support of a personal learning plan. ▪ Locate tutorials, webcasts and other online opportunities for learning. ▪ Locate and subscribe to e-mail lists, journals and blogs relevant to library technology. ▪ Experiment with and test new technologies. ▪ Determine the implication of new technologies on public access hardware, software and security.

Management Competencies for Public Access Computing Programs

A successful program involves leadership and careful management. The management perspective starts at the big picture level, establishing goals and objectives, planning for implementation, determining value and promoting community and stakeholder relationships. Even in a one-person library, where the director may also be the frontline staff and the system administrator, the management "hat" is of a different texture than the technology hat; the focus is wider and the integration with other programs more intricate. The skills and knowledge necessary for managing the library's public access computing program have broad application to implementing and sustaining any library program.

There is so much overlap among the tasks related to managing a public access computing program that it is difficult to separate them into mutually exclusive buckets. If something seems to be missing in one of these competency sections, it's likely that it is covered in another section.

Organizational Leadership

While library technology operations may involve many roles and staff members, the guidance and driving force originate with the director. Examination of any dynamic and successful library will usually reveal an effective and energetic leader at the top. The director's role is structural—defining the mission and vision of the organization, setting objectives for services offered and governing by well-conceived policies. The role may also be visionary—anticipating emerging demands and being the person the community expects to lead a viable and evolving public access computing program.

Tap into the needs of the library community

Why? The needs of the community are at the core of library service, especially for public access computing. To assure that the library's mission and vision are connecting with community needs, it is important to find ways to reach out and stay relevant to community members. This is related to "Demonstrating Impact and Advocacy."

Competencies	Demonstrable Skills/Knowledge
▪ Assess the community's need for the public access computing service ▪ Sustain the process for staying relevant in the community	▪ Identify community needs relevant to public access computing and connect them with library service priorities. ▪ Gather relevant input from staff and stakeholders. ▪ Tap into the activities of other community organizations and translate the implications for library service. ▪ Believe in the value of public access computing in order to demonstrate its value to the community. ▪ Engage staff to identify emerging needs of patrons and recommend service innovations. ▪ Develop a system for research and development—for piloting/testing programs and checking against goals/visions. ▪ Be ready to shift directions when the need for change is indicated.

Establish the mission, vision, goals and objectives

Why? Defining in clear terms the library's mission and vision for providing public access computing is a fundamental step in managing the program. Building all other tasks and efforts on these foundational statements will help to ensure that the program advances the library's overall mission and vision and will energize people in the community to help work toward the vision. The goals and objectives should also align with the library's mission and vision.

Competencies	Demonstrable Skills/Knowledge
▪ Create a mission statement ▪ Create a vision statement	▪ Articulate the values of the library organization. ▪ Write a mission statement for the public access computing service—a concise description of the library's service and its value to the community. ▪ Envision the future of the public access computing program in "x" number of years. ▪ Write a vision statement for the public access computing service envisioning the strategies for accomplishing the mission. ▪ Be clear and succinct in writing statements.
▪ Define goals and objectives	▪ Establish clear goals and objectives, and align them with the mission and vision statements. ▪ Set realistic goals and select goal measures that will help track progress. ▪ Write measurable objectives and relate them to goals. ▪ Include staff in the vision, goals and objectives; clarify the roles and expectations for staff. ▪ Align project-specific objectives with the high-level goals and objectives. ▪ Revisit goals and objectives on a regular basis to see that they are being met.

Work with the Board of Directors

Why? The library director is the liaison between the Board, the library staff and the general stakeholders. Assuming a leadership role and managing communication and expectations will help the Board provide oversight and determine the direction of the organization.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the role of the Board of Directors	▪ Be informed about the structure of the library's Board and its position within the political structure of the community. (Who appoints board members? What is the oversight role? What other organizations engage them?) ▪ Determine if Board members are volunteers and be sensitive to their commitments of time and energy. ▪ Learn about Board members' areas of expertise and opportunities they bring to the operation of the library and the public access computing program. ▪ Advocate for new appointees to fill gaps in needed areas of expertise, e.g., someone who is knowledgeable about technology. ▪ Provide channels for communication between staff and the Board. ▪ Provide timely and pertinent information to Board members to support their decision-making.

Create library policies

Why? Having well-written policies and guidelines helps all levels of staff to be consistent in their relationships with patrons. As new technologies are adopted in the library setting, policies have to be adjusted or created anew.

Competencies	Demonstrable Skills/Knowledge
▪ Assess existing policies ▪ Identify library services in need of policies	▪ Locate and review all existing library policies. ▪ Determine if the policies support the goals and objectives of the public access computing program. ▪ Determine which policies need to be updated and which new policies need to be created.
▪ Revise or write new policies	▪ Research policies for services at similar libraries. ▪ Align policy statements with the library mission and determine the impact on patrons and the community. ▪ Align new or updated policies with all of the library's other policies to be sure they are consistent. ▪ Know whom to consult for legal counsel and final approval.

▪ Put policies into effect	▪ Integrate the public access computing policies into the library services. ▪ Train staff, volunteers and Board members on how to follow and enforce the policies. ▪ Create a manual or a centrally accessible location to collect all policies.

Focus on customer service

Why? Call it "patron service" if you prefer, but don't underestimate the value of providing environments and programs that satisfy the community of library users and attract new patrons to the services offered.

Competencies	Demonstrable Skills/Knowledge
▪ Assess the current customer service ▪ Assess the physical space	▪ Conduct a customer service survey and analyze results to learn how patrons rate the current service. ▪ Acquire a thorough knowledge of the public access computing program and resources available to patrons. ▪ Identify a list of barriers that would prevent patrons from using the public computers. ▪ Be aware of the significance of "atmospherics"—the physical elements in the library that appeal to patrons' emotions. ▪ Understand the importance of the library as "place." ▪ Determine what effect the library's design has on patron satisfaction.
▪ Create a customer service plan	▪ Address barriers to good customer service. ▪ Write a customer service mission statement and create consistent customer service goals. ▪ Create clear definitions of good customer service techniques.
▪ Cultivate customer relations	▪ Train staff effectively and repeatedly on good customer service techniques. ▪ Help staff to develop interpersonal skills and techniques for making each patron feel valued. ▪ Reward excellence.

Look to the future

Why? Tempting as it may be to leave the "techie stuff" to other staff members, the vision for the evolution of the library and its services comes from the top. It's difficult to develop a clear vision without some knowledge of emerging technologies and the new tools and services made possible by them. It is possible to acquire a high-level comprehension of technology without having to learn the nuts-and-bolts specifics.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the importance of keeping up with emerging technologies ▪ Utilize multiple avenues for learning	▪ Maintain an attitude that embraces change and looks for opportunities to initiate change in the library. ▪ Devise a strategy for staying informed about advances in technology and tools that are likely to impact libraries. ▪ Ensure that staff have the technology skills to deliver on the vision; create training and support systems to explore and learn about new technologies. (See "Staff and Patron Training.") ▪ Attend conferences and maintain a professional network with colleagues. ▪ Locate and use tutorials, webcasts and other online opportunities for learning. ▪ Locate and read technology-focused professional literature and library blogs. ▪ Set up an RSS feed reader account and subscribe to RSS feeds. ▪ Locate and subscribe to e-mail lists or message boards to stay informed about library technology issues. ▪ Learn from mistakes and/or misjudgments.

Technology Planning

Now that public access computing is a key service to library patrons, it is necessary to plan strategically for the implementation, maintenance, replacement and improvement of the service. A coherent overall plan that aligns with the library's budget and community needs will help key staffers provide a productive program that keeps up with patron expectations.

Technology Planning competencies are closely related to "Budget and Funding" and "Demonstrating Impact and Advocacy."

Employ project management

Why? The multiplicity of factors involved with managing the library's technology demand an organized approach. Basic project management skills enable the process for coordinating people, time, money, deliverables and other aspects of sustaining the technology.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the importance of project management ▪ Apply project management to the public access computing program	▪ Know the basic steps in the project management life cycle (project definition, planning strategy, implementation planning, execution and control, closeout). ▪ Establish clear goals and requirements. Get buy-in from all staff involved. ▪ Be aware that managing the people involved in a project is the key to success or failure. ▪ Be informed about the library's budget, budget restrictions and procurement processes. (See "Budget and Funding.") ▪ Develop an implementation plan that assigns roles, tasks, timelines and cost factors.

	▪ Identify key project steps and milestones. Establish controls for measuring and tracking progress. ▪ Make adjustments to the plan as necessary as it proceeds. ▪ Establish a mode of evaluation of the project and the plan.

Assemble a technology team

Why? Technology planning should not be a solo affair. A good team will distribute the tasks and collaborate on decision-making in addition to bringing a variety of strengths and expertise to the table.

Competencies	Demonstrable Skills/Knowledge
▪ Identify team members	▪ Identify key people from the library's staff (public services, support, technical services and administrative staff) and from the community (city, county or public school IT departments). ▪ Utilize outside consultants (state library, system-wide, or regional library consultants; resource-sharing consortium staff members; directors of libraries of comparable size; tech support staff in larger libraries or regional systems; community college or university librarians; support personnel from software vendors). ▪ Identify a team lead (a person with good people skills and a track record of successfully managing projects).
▪ Orient the team ▪ Deliver pertinent information and training	▪ Explain the planning process and the general roles and responsibilities of the team. ▪ Provide relevant library data to team members (current services, governance, the number of branches, roles of staff members, patron expectations, benchmarks with other libraries). (See "Demonstrating Impact and Advocacy.") ▪ Incorporate relevant IT plans from other agencies that might affect the library's technology plan (city/county's IT plans for technology upgrades, citywide wireless net, etc.). ▪ Explain the role of the public access computing service in supporting the library's long-range service priorities. ▪ Review current and emerging computing trends, including Web 2.0 and social networking tools. ▪ Provide training on all software used during the planning process.

▪ Establish avenues for team communication	▪ Create a venue for collaboration (e-mail list, wiki, message board, Web-based collaboration tools). ▪ Establish guidelines for communication: which venue to use and when. ▪ Encourage networking among team members. ▪ Manage the process for making decisions.

Create a technology plan

Why? Successful technology management begins and ends with a solid plan, which assesses the current situation and builds a clear roadmap to achieve the goals and objectives for public access computing. (See "Organizational Leadership" for establishing the library's goals and objectives.)

Competencies	Demonstrable Skills/Knowledge
▪ Assess the current public access computing program and services ▪ Collect data and stakeholder input	▪ Utilize a technology planning tool, like TechAtlas. ▪ Conduct an inventory of the current public access computing service. Understand how this service integrates with other library services (reference, Reader's Advisory, children's programming, etc.). ▪ Conduct an inventory of hardware and software used for public access computing services. Evaluate subscription fees, software, hardware, bandwidth, extended warranty, staff time, etc. ▪ Identify the licensing requirements for the current system software. ▪ Incorporate the demonstrating impact data for community needs analysis. (See "Demonstrating Impact and Advocacy.") ▪ Assess future upgrades or replacement requirements for existing infrastructure to sustain services. ▪ Assess the technical skill level of current staff. (See "Technology Competencies for Patron Assistance and System Administration.") ▪ Collect input from staff and all stakeholders affected by the service.
▪ Establish service goals and priorities ▪ Evaluate opportunities for expanded or new services	▪ Establish service goals for the public access computing service that align with the library's mission and vision. Incorporate emerging computing trends, such as Web 2.0 and social networking technologies. ▪ Assign a priority order to the service goals. ▪ Match existing technologies and services to the service priorities. ▪ Identify the current public access computing services to be sustained, expanded or phased out. ▪ Develop cost estimates for upgrades or replacements needed to sustain current services. (See "Budget and Funding.") ▪ Create a list of potential new projects. Identify the service goal(s) to be met by each new service. ▪ Determine the technical infrastructure (hardware, software, network configuration, bandwidth requirements), staff skills requirements and

	costs for expanded or new services. ▪ Determine the requirements for physical space and wiring/cabling; allow for future expansion, if possible. ▪ Determine the level of operational support provided by outside vendors (if applicable).
▪ Conduct a gap analysis	▪ Identify and document gaps or discrepancies between the service priorities and available technology infrastructure. ▪ Identify and document gaps in the staff and skills needed to support current or proposed new services/programs. (See "Technology competencies for Patron Assistance and System Administration.") ▪ Connect staff with appropriate training opportunities. (See "Staff and Patron Training.") ▪ Explain the gap analysis process to the board, staff and technology team members.
▪ Formulate and prioritize recommendations ▪ Write the technology plan	▪ Recommend projects to be phased out; provide explanations. ▪ Recommend projects to be sustained; list benefits, cost, ROI and staff time. ▪ Recommend expanded and new projects: list benefits, cost, ROI, staff time and year of plan in which project will be implemented. ▪ Prioritize recommendations for the current year, weighing the variables for feasibility (benefits, cost, ROI, staff time, relation to service goals). ▪ Prepare a budget and time estimate for each proposed new activity. (See "Budget and Funding.") ▪ Build flexibility into the plan for changing circumstances. ▪ Write the technology plan, summarizing the findings and including rationale, anticipated outcomes, estimated budgets and timelines. ▪ Write an introduction describing the planning process and current state of services.
▪ Review the plan with all stakeholders ▪ Obtain approval from the necessary authorities	▪ Choose the method of communication that is most appropriate for each audience. ▪ Present the draft of the basic plan for review and comment to staff, the technology team and other stakeholders. ▪ Present the draft of the basic plan to library administrators and funding agencies. ▪ Anticipate questions or concerns each audience might have and include the answers to those questions in the presentation. ▪ Make changes based on feedback as necessary. ▪ Submit the final draft of the basic plan to the library Board or local government for review and approval.

Implement the technology plan

Why? Having laid a firm foundation, it's time to get the plan rolling. This is where the knowledge of project management comes to the fore. Keeping all the factors coordinated may feel like herding cats, but a good plan will provide the direction to get everyone through the process.

Competencies	Demonstrable Skills/Knowledge
▪ Announce the final plan ▪ Plan the details of implementation ▪ Delegate tasks and responsibilities	▪ Inform all stakeholders of the final, approved plan. ▪ Be prepared to discuss the process, the criteria for project selection, the timelines and any information pertinent to the implementation of the plan. ▪ Identify a project manager, if applicable. ▪ Work with the project manager to develop projected timelines, define the scope and identify the steps toward completion. ▪ Determine the action steps of the plan. ▪ Allocate or reallocate the resources required to implement the activities in the plan. ▪ Assign tasks and responsibilities to each team member and determine to whom each will be accountable. ▪ Integrate the activities in the plan into the ongoing and long-range operations of the library.
▪ Monitor the progress ▪ Provide follow-up and accountability measures	▪ Plan a data-capture strategy. ▪ Select quantifiable measures capable of being captured in a cost-effective way and related to the service goals. ▪ Get consensus about how the progress and success of the plan will be measured. ▪ Prepare a periodic status report on the progress and distribute the report to groups as needed. ▪ Provide multiple opportunities for all invested groups to give feedback and make adjustments accordingly throughout the process. ▪ Review the action steps and hold people accountable for completing assignments. ▪ Utilize good communication skills to notify senior management of any schedule slippages.
▪ Document the process	▪ Establish a consistent method for keeping records of the progress of the plan. ▪ Track the changes in licensing requirements associated with the plan. ▪ Update the hardware and software inventories as changes are implemented. ▪ Update the staff skills inventory and track staff training efforts.

▪ Roll out the new or expanded service	▪ Coordinate with marketing efforts to announce the new or expanded service. (See "Marketing and Partnerships.") ▪ Broadcast the positive results to the library community. ▪ Provide a venue for collecting input from patrons and staff about the new service.

Evaluate the technology plan

Why? Planning and evaluation form a continuous loop, with the evaluation phase connecting back to the beginning of the process to check that the goals and objectives are being met and the desired results have been achieved. Technology planning is an ongoing process, and it is effective evaluation that keeps it moving in a productive direction.

Competencies	Demonstrable Skills/Knowledge
▪ Understand the impact of evaluation on future planning ▪ Analyze relevant data ▪ Adjust to changing situations and opportunities	▪ Determine the performance of the hardware or software involved in the plan. ▪ Determine the impact the program has had on the community and whether or not it met the intended need. ▪ Utilize data gathering and quantifying skills to determine impact. (See "Demonstrating Impact and Advocacy.") ▪ Develop methods for staff input to recommend further enhancements. ▪ Incorporate what was learned in this planning cycle into the next planning process. ▪ Schedule regular meetings (quarterly, semiannually) with the Technology Team to review results, priorities, recommendations, opportunities; adjust plan as appropriate. ▪ Report the results to interested stakeholders.

Budget and Funding

The popular demand for public access computing puts new strains on the library budget. While libraries face stagnant or reduced budgets, technologies add costs in R&D, equipment purchase, maintenance, staff time and training. Often, resources must either be reallocated or new funding sources identified. The ability to prioritize assumes high importance and must be based on solid numbers and cost estimates. Due to the wide variety of funding structures for libraries, these competencies are more general than specific.

The budget competencies are closely linked to "Technology Planning"; "Demonstrating Impact and Advocacy" and "Marketing and Partnerships" are also interrelated.

Create the budget plan to finance public access computing operations

Why? The ability to develop, justify, administer and evaluate a budget based on long- and short-range goals is key to sustaining public access computing in the library.

Competencies	Demonstrable Skills/Knowledge
▪ Understand budget and funding concepts	▪ Know the concepts and terminology related to the budget (total cost of ownership, return on investment [ROI] and depreciation). ▪ Explain the library's principal means of funding and usages for funding. ▪ Know what is meant by recurring and nonrecurring funds.
▪ Establish budget objectives ▪ Establish a budget framework and timeline	▪ Relate budget objectives to the goals for public access computing; break down high-level goals into specific steps. ▪ Determine the difference between budgeting for activity level or objective level. ▪ Identify the budget categories. ▪ Utilize an inventory of public access computing technology assets. (See "Technology Planning.") ▪ Identify all resources used by library workers to provide the public access computing service. ▪ Incorporate past budget plans and current funding sources. ▪ Identify the budget timeline or plan year.
▪ Establish budget for activities associated with objectives ▪ Prepare a budget summary	▪ Define activities for each objective. ▪ Prepare a budget and develop time estimates for each proposed activity. ▪ Summarize costs associated with objectives and activities. ▪ Assign priorities and levels of difficulty to proposed activities. ▪ Develop the plan and long-range budget for equipment upgrades/refreshes. (See "Technology Planning.") ▪ Relate the public access computing project budget to the overall library budget. ▪ Balance budget goals with estimates of potential income. ▪ Create a value check to justify services and funding.
▪ Use tools for budget planning	▪ Use Microsoft Excel or other accounting spreadsheet software. ▪ Understand worksheets, balance sheets, general ledgers.

Conduct a cost-benefit analysis

Why? To fully assess whether a service should continue or be developed, the cost to produce that service (or program) must be known; once the cost factors are identified, the service can be evaluated in that light.

Competencies	Demonstrable Skills/Knowledge
▪ Assess cost factors ▪ Evaluate the benefits relative to costs	▪ Evaluate present and potential products for public access computing by comparing costs. ▪ Describe in detail how funds will be spent. ▪ Document which activities might be curtailed or eliminated if funding were reduced. ▪ Identify both direct and indirect costs associated with public access computing and whether they are fixed or flexible. ▪ Analyze for total cost of ownership, ROI and/or depreciation. ▪ Assess the value of sustaining or expanding existing programs versus developing new programs. (See "Technology Planning.") ▪ Estimate the projected demand for the program; understand the benefits to the patron. ▪ Compare the level of demand by patrons with the height of cost of the program.

Fund the plan

Why? Now that the budget has been created, the big question is where the funding will come from. Libraries have a variety of funding models and sources. It's important to understand the relationship with each funding source, to know how to leverage the source, and to identify potential new sources for sustainability.

Competencies	Demonstrable Skills/Knowledge
▪ Identify funding sources	▪ Get familiar with current funding sources. ▪ Analyze what other municipal departments the library is competing with if its budget is a line item in the larger municipal budget. ▪ Link resources to activities identified. ▪ Identify ways to reallocate resources to meet budget objectives. ▪ Utilize a funding calculator. ▪ Identify new and creative sources of income. Consider and research multiple alternative funding resources. ▪ Create an annual fund-raising action plan. ▪ Know the federal government funding programs (E-rate or Universal Service discounts, LSTA). ▪ Get familiar with other programs and resources (TechSoup, state and municipal equipment contracts, and other equipment and software vendors that provide library and educational discounts).

▪ Understand E-rate Funding	▪ Know where to find information on obtaining E-rate funding from the federal government. ▪ Be prepared to handle E-rate overhead (qualification determination, applications, compliance and reporting paperwork). ▪ Be aware of the limitations imposed by obtaining E-rate funds (CIPA filtering requirements). ▪ Make an informed decision about whether or not E-rate funding is appropriate for the library. ▪ Utilize tools like TechAtlas to work through the application process.
▪ Forge relationships and make requests	▪ Identify and pursue potential partnerships. Work with charitable organizations for mutual benefit. (See "Marketing and Partnerships.") ▪ Identify key players in local funding sources. ▪ Familiarize funding sources with the library and the services it provides. ▪ Be proactive about attending budget meetings. ▪ Prepare and be prepared to justify budget requests. ▪ Request resources other than money (donations of time and materials). ▪ Develop correspondence for soliciting/thanking for donations.
▪ Conduct fund-raising efforts	▪ Incorporate public access computing fund-raising into overall fund-raising campaigns. ▪ Organize an annual fund-raising campaign. Brainstorm creative ideas for theme and activities. ▪ Organize staff and volunteers for fund-raising events and solicit donations from the community. ▪ Target invitations to key stakeholders, such as political and business leaders or previous contributors. ▪ Conduct a capital campaign.
▪ Understand grantsmanship and the grant process	▪ Research sources of grants for libraries. ▪ Learn the grant-writing process. Know how to comply with grant deliverables and expectations. ▪ Write effective grant applications. ▪ Utilize demonstrating impact analyses to support applications. (See "Demonstrating Impact and Advocacy.")

▪ Utilize a Friends of the Library group	▪ Create and work with a Friends of the Library (FOL) group. Learn about the FOLUSA (Friends of the Library USA) organization. ▪ Learn about existing or past FOL groups affiliated with the library or library system. ▪ Understand the advantages of 501(c)(3) nonprofit status. ▪ Learn what a FOL group can and cannot do to support the library. ▪ Develop a working relationship with the FOL group.

Purchase public access computing equipment

Why? Keeping the hardware and software updated is a vital aspect of providing public access computing. Making purchasing decisions is closely related to "Technology Planning."

Competencies	Demonstrable Skills/Knowledge
▪ Demonstrate an overall understanding of current technology	▪ Apply knowledge of current technology to make educated purchase decisions. (See "Organizational Leadership.") ▪ Evaluate products or delegate to a staff member with the necessary expertise. Identify external resources for evaluating products. ▪ Identify the needs over the wants. Understand what is meant by the term "technolust" and know how to avoid it. ▪ Determine when to make do with current technology until the bugs have been worked out and/or prices drop. ▪ Investigate lease plans that would ensure regular upgrades.
▪ Oversee the purchasing process ▪ Understand purchasing and procurement rules and procedures	▪ Utilize the technology plan as a basis for purchase recommendations. (See "Technology Planning.") ▪ Know the "total cost of ownership" for the purchase. Identify secondary costs for a potential purchase. ▪ Know the established rules and procedures for library purchases. Know the state procurement rules. ▪ Issue a Request for Proposal (RFP) for technology products (if applicable). ▪ Manage multiple bids on multiple items.
▪ Maximize expenditures	▪ Utilize purchasing assistance programs online or in the community. ▪ Identify buying resources or partnerships to combine purchase power. ▪ Identify opportunities to share resources with partner organizations. (See "Marketing and Partnerships.")

Demonstrating Impact and Advocacy

Fundamentally, the library director has to believe in the value of the library and the public access computing service in order to demonstrate its value to the community. The focus is primarily local. The strategy for demonstrating the impact of library services depends on how the library mission is defined, how the program is funded and the nature of the community. It also depends greatly on the director's personal relationships with community members.

These competencies are closely related to "Marketing and Partnerships."

Determine the value to the community

Why? The library community is made up of multiple stakeholders—individuals and groups who have an interest in the success of the library or are impacted by its programs and services. "Stakeholder" is not a monolithic entity; there is a spectrum of needs and interests to be considered. A demonstration of value must be tailored to each group if it is to be energized to help the library achieve its mission and vision.

Competencies	Demonstrable Skills/Knowledge
▪ Determine community needs and desires ▪ Determine the goal of demonstrating impact	▪ Assess the needs of the community through surveys, interviews and other methods. (See "Gather and analyze library data" below.) ▪ Identify current conditions in the community and compare them with the vision for the public access computing program. ▪ Define the outcome that is expected to result from articulating the library's value to the community. ▪ Align the goals for demonstrating impact with the library's overall mission and vision.
▪ Identify the stakeholders	▪ Identify the community of stakeholders (business, cultural, educational, governing and political leaders). ▪ Distinguish the different needs and interests of each group. ▪ Construct a strategy for convincing each of the stakeholder groups.
▪ Assess the library resources	▪ Be familiar with all aspects of the public access computing program. ▪ Identify what the public access computing program does best in the context of each stakeholder group's interests and needs. ▪ Know the priorities for public service of the library's funding agencies and relate them to the value of the public access computing service. ▪ Document the resources of the public access computing program.

Gather and analyze library data

Why? In order to convince the stakeholders and funding agencies of the value of the library, it is important to deliver clear evidence in terms of quantitative and qualitative measures.

Competencies	Demonstrable Skills/Knowledge
▪ Understand data collection methods ▪ Identify data sources	▪ Know the difference between quantitative and qualitative data. ▪ Know the difference between an outcome and an output. ▪ Locate and use online "toolkits" for data collection. ▪ Locate and utilize existing library research and publicly available institutional studies. ▪ Utilize public records and collect community demographics. ▪ Know what daily usage data is collected by the library's automation system. ▪ Design and use surveys, either hard copy or online. Be familiar with a Web-based survey tool. ▪ Look for residual effects from public access computing (increased circulation, students reading while waiting for computers, etc.). ▪ Complete a SWOT (strengths, weaknesses, opportunities and threats) analysis. ▪ Consult with other libraries to see how they demonstrate impact. ▪ Identify what data is important for demonstrating impact, determine the level of factual detail needed, and streamline data collection processes accordingly.
▪ Gather quantitative data ▪ Utilize tools for analyzing data	▪ Be familiar with quantitative data collection methods. ▪ Determine the metrics for measuring the value of the public access computing service (number of public computers, number of hours of patron use, attendance at patron classes, benefit in dollars of social service, etc.). ▪ Design surveys to gather quantitative data and draw conclusions from the results. ▪ Incorporate data from the public access computing budget. Recognize the impacts of library budget, staffing and hours. (See "Budget and Funding.") ▪ Conduct a cost-benefit analysis, weighing the total expected costs against the total expected economic benefits of the service. ▪ Perform an outcome-based evaluation, which measures the effect of the public access computing service on various groups (unemployed, low income, senior citizen, children, teens, etc.). ▪ Use spreadsheet and/or database programs effectively.

▪ Gather and interpret qualitative data ▪ Organize venues for stakeholder input	▪ Collect and review case studies. ▪ Collect and interpret behavioral data (attitudes, beliefs and practices of patrons). ▪ Research trends and trend extrapolation (financial, technology, information, management, consumer trends). ▪ Conduct site visits to other libraries in the community. ▪ Lead a community forum or focus group. ▪ Identify and interview key informants. ▪ Design surveys to gather qualitative data and draw conclusions from the results. Include nonusers of the library as survey targets in order to identify new opportunities. ▪ Survey the library staff on how the public access computing service has impacted their work. ▪ Collect patron stories, opinions, views and perceptions. Create a place on the library's Web site to capture this patron input.

Prepare an advocacy message

Why? Now that the evidence is collected, determine the best way to articulate the advocacy message and become a "library lobbyist." Remember to enlist the help of key players in the community—advocacy does not have to be a solo performance.

Competencies	Demonstrable Skills/Knowledge
▪ Utilize collected data for advocacy ▪ Articulate the value of the public access computing program	▪ Use both quantitative and qualitative data to show impact. Utilize information from surveys, focus groups and interviews. ▪ Organize the collected data to target different audiences. ▪ Research how other organizations advocate for their services. ▪ Conduct brainstorming sessions with colleagues and community members on how to demonstrate the value of public access computing in the community. ▪ Create brief summaries from the documented evidence. ▪ Frame a value proposition—a statement of the unique added value the library's public access computing service offers to the community.
▪ Build an advocacy team ▪ Network inside and outside of the community	▪ Utilize effective relationship-building techniques. ▪ Utilize existing and long-term partnerships. Include any identifiable group that relies on the public computers as at least a tacit partner. ▪ Enlist volunteers, patrons and any community members who might be effective advocates. ▪ Recruit board members to become voices for the library. ▪ Develop personal relationships with stakeholders. Network among groups of all types. ▪ Utilize available technologies to network in greater communities. ▪ Coordinate the activities of the advocacy team.

Broadcast the message

Why? With a strategy in place and evidence to substantiate it, the next all-important step is to communicate the impact message to the city council, county commission, library district board and all relevant stakeholders.

Competencies	Demonstrable Skills/Knowledge
▪ Identify media and community outlets ▪ Identify appropriate markets	▪ Identify broadcast media for sharing the advocacy message, such as public service announcements. ▪ Identify print media outlets, including opinion and editorial pages. ▪ Identify community outlets/events for sharing the message. ▪ Be an active participant in community groups. ▪ Coordinate with marketing efforts to broadcast the message. (See "Marketing and Partnerships.")
▪ Deliver a clear and coherent message ▪ Utilize good writing skills	▪ Create a fact sheet with clear, precise talking points for staff and volunteers. ▪ Write an impact letter and create a variation for each target audience. ▪ Write informative pieces for publication. ▪ Develop and write a periodical or newsletter. ▪ Utilize storytelling: incorporate stories and anecdotes into the message.
▪ Provide effective in-person presentations ▪ Demonstrate public-speaking skills	▪ Speak as a "voice" for the library to tell the library story effectively. ▪ Utilize graphics and word-processing programs to create a presentation of the story. ▪ Use PowerPoint effectively without over-relying on it. ▪ Create an "elevator speech" with variations appropriate for the director, staff and volunteers. ▪ Keep apprised of local politics and attend community and political events. ▪ Attend monthly city council meetings and tell them the library story. ▪ Organize and host public meetings or open houses to be held at the library. ▪ Schedule monthly presentations to the library Board.

Sustain the effort

Why? Demonstrating impact is not a one-time activity; it's an ongoing effort with the aim of keeping the library visible in the community so that its role and significance are not questioned. Documenting the results of the advocacy campaign can help with framing future advocacy efforts.

Competencies	Demonstrable Skills/Knowledge
▪ Keep the process going ▪ Capture results of the demonstrating impact efforts	▪ Stay involved in community groups and nonlibrary events. ▪ Continue to monitor usage trends and library statistics to incorporate into the advocacy message. ▪ Conduct ongoing factual research. ▪ Keep a written record of oral anecdotes. ▪ Keep a pictorial record. ▪ Demonstrate the benefits of advocacy. ▪ Maintain updated contact lists of key stakeholders.

Marketing and Partnerships

Although it may seem unnecessary to market an institution that is so familiar to everyone, recent studies have shown widespread misconceptions about the programs and services offered by libraries. Relying on past reputation and word-of-mouth appreciation from patrons may not be enough to ensure survival in the face of dwindling tax or government support. Be proactive—determine that the library's services meet community needs, get the community involved and then get the word out.

Marketing competencies are closely associated with "Demonstrating Impact and Advocacy."

Assess the library market

Why? To get started, take a good look at the current situation, both inside the library and out in the community. Knowing how the public access computing service stacks up in the "marketplace" will help with setting achievable objectives. Benchmarking against other libraries and external competitors also helps to focus the marketing efforts.

Competencies	Demonstrable Skills/Knowledge
▪ Identify the attributes of the public access computing program ▪ Understand program life cycles	▪ Utilize library statistics and data to determine the characteristics, resources and usage of the program. (See "Demonstrating Impact and Advocacy.") ▪ Know the life cycle of the program (introduction, growth, maturity, decline) and identify which stage of the life cycle the public access computing program is currently in. ▪ Identify the core benefits (positive consequences to patrons) of the public access computing program. ▪ Relate the public access computing program to the rest of the library's offerings.

▪ Assess the current marketing landscape ▪ Assess the program's competition	▪ Determine the current position among other libraries offering public access computing programs. ▪ Answer the question of "How does our service stack up in the marketplace?" ▪ Conduct a competitive market audit. ▪ Identify "desire" competitors: what other organizations offer what customers desire (Internet café, for example)?

Develop the marketing strategy

Why? Having a well-defined marketing strategy will help keep the efforts focused and will promote consistency for all staff members' interactions with patrons. In order to maximize marketing resources, it's important to identify and understand the target audience and how they may benefit from the public access computing program.

Competencies	Demonstrable Skills/Knowledge
▪ Set marketing goals and objectives	▪ Define the expected outcome of the marketing efforts. ▪ Align goals with the library's overall mission and vision. ▪ Make adjustments to bring vision in line with what customers want. ▪ Create milestones and timelines. ▪ Create obtainable and measurable objectives in alignment with the budget and resources. ▪ Get buy-in from all stakeholders at all stages of the marketing campaign.
▪ Identify and understand the target markets or audiences	▪ Know the limitations of a large target market (mass marketing). ▪ Use demographic and user survey data to segment the library community into groups based on common profiles and common wants and needs (market segmentation). (See "Demonstrating Impact and Advocacy.") ▪ Analyze market segments and include the preconditions (assumptions) for delivering the service to these segments. ▪ Select appropriate segments for marketing the library. ▪ Become an expert in the needs, communication preferences and competitive alternatives for selected market groups. ▪ Assess how well the program fulfills identified market segment needs.

▪ Define the strategy for marketing the library's services	▪ Brainstorm how the program falls into the 5 Ps of marketing: Product, Place, Price, Promotion and Partnerships. ▪ Learn about the new 6th P: Participation (social networking). ▪ Understand the relationship between marketing, public relations and social networking. Use all these tools to generate positive user engagement, both online and offline. ▪ Compare program (product) benefits with the needs and wants of the target market(s). Explain how the program fits into the market(s). ▪ Write a "service description" that briefly summarizes each of the library's offerings to users and staff. Include talking points for staff and library advocates. (See "Demonstrating Impact and Advocacy.") ▪ Develop a set of relevant attributes to be associated with the brand. ▪ Utilize the advocacy messages targeted to different audiences. (See "Demonstrating Impact and Advocacy.") ▪ Set realistic timelines and deliverables. Include media deadlines for press releases and public service announcements. ▪ Establish a marketing budget. Integrate the plan into operational and capital budgets. ▪ Determine quantifiable measures of success (number of log-ins, number of class registrations, etc.). ▪ Assign roles and responsibilities to staff and volunteers.
▪ Establish promotion strategies	▪ Identify opportunities to promote the library. ▪ Incorporate traditional marketing tactics, such as direct mail, flyers, summer reading programs, etc. ▪ Investigate online tactics, such as blogs, wikis, podcasts or videos. ▪ Determine which promotional techniques will allow the library to achieve its promotion and marketing goals. ▪ Assess previous promotional techniques and evaluate their effectiveness. ▪ Lead development of an effective library Web site. ▪ Establish specific goals for promotional efforts, such as "increase awareness by x% in y amount of time."
▪ Determine distribution strategies	▪ Identify multiple channels for distribution of marketing materials (on-site, direct mail, Internet, agents/partners, etc.). ▪ Identify the appropriate channel(s) for each market segment. ▪ Determine what local Web sites/places people use and partner appropriately with those sites (local news/school/government/ chamber of commerce/media sites). ▪ Utilize the library Web site as a venue for marketing. ▪ Create a timeline for distribution and identify logistical issues.

Create the marketing brand and materials

Why? Brand identity helps to make the library's programs known in the community by establishing name and image recognition. It unifies the marketing materials, building on the framework of the marketing strategy. It doesn't have to be elaborate in order to lend consistency to the creation of appropriate promotional materials.

Competencies	Demonstrable Skills/Knowledge
▪ Establish brand identity for the public access computing program	▪ Research what makes an effective brand. ▪ Know the difference between descriptive and evocative names. ▪ Know if the library organization requires any naming conventions. ▪ Know what a "tagline" is and how it can strengthen the marketing message. ▪ Develop a logo or icon, if applicable. Coordinate with the overall brand of the organization. ▪ Define brand color palette for print and Web, establish typeface conventions, imagery guidelines and editorial tone of voice (if applicable).
▪ Develop brand marketing materials	▪ Know the difference between short-term promotions (flyers, posters, mugs, etc.) and long-term marketing. ▪ Design print materials, utilizing clear writing and appropriate images. ▪ Design materials for online distribution through the library Web site or through social networks. ▪ Retire materials that are no longer effective at reaching their target audiences or evoking desired behavior.

Implement and evaluate the campaign

Why? Maintaining control on timelines, budgets, resources and controllable variables will result in a smooth implementation of the marketing plan. It is important to be able to provide tangible results.

Competencies	Demonstrable Skills/Knowledge
▪ Launch the marketing campaign	▪ Get buy-in from all stakeholders working to implement the marketing strategy. ▪ Determine good timing for marketing the program. ▪ Establish team milestones to stay on schedule. ▪ Distribute materials through multiple channels in relation to specific submarkets (senior citizen, teen, ESL patrons, etc.). ▪ Maintain a record of information about all contacts with patrons (customers). ▪ Maintain clear communication with staff and stakeholders, and make periodic updates as needed. ▪ Deliver the vision consistently and train staff to do so.

▪ Evaluate the effectiveness of the campaign	▪ Correlate levels of achievement with marketing goals and objectives. ▪ Measure success in fighting cuts in standards and budgets. ▪ Measure improvements in resource allocation (staffing, dollars, space, etc.). ▪ Recommend adjustments in the strategy based on evaluation of results. ▪ Leverage the positive results of the marketing campaign to generate new resources and partnerships for the library.

Form partnerships with community organizations

Why? Collaboration is essential in today's economic climate of decreased funding and increased expectations of getting the most benefit from the least amount of money. The energy and ideas generated through collaboration can be well worth the effort and can bring forth creative solutions to problems.

Competencies	Demonstrable Skills/Knowledge
▪ Identify potential partners in the community ▪ Be visible in the community	▪ Create lists of potential partners for the public access computing program; organize and prioritize the information in order to target the best opportunities. ▪ Articulate the benefits the library can offer partners. Determine specific projects and activities that could involve partners, such as computer classes for seniors organizations. ▪ Find a "match"—organizations that are compatible in mission and intent to accomplish a partnership. ▪ Research and document the background of potential partners thoroughly. ▪ Make the library more visible to others in the community by joining community organizations. Attend community meetings with the knowledge base of the group and its goals. ▪ Brainstorm "outside-the-box" connections with unconventional partners.
▪ Make connections with multiple potential partners ▪ Articulate the benefits to both sides of the partnership	▪ Define the mission, vision, goals and objectives of each collaborative effort. Link service goals to the community's players. ▪ Prepare an information sheet on the library and the ways in which partners can be involved. ▪ Start the partnership relationship with "How can the library help other people in the community do better?" ▪ Assess what the business/organization can offer the library. ▪ Create an appeal letter for special projects and match the message to the target partner. ▪ Find good contact person(s) at each organization and meet in person. ▪ Be passionate about what the library is "selling" to its partners.

	▪ Follow up often and in a variety of methods.
▪ Build effective partnerships ▪ Assume a leadership role ▪ Coordinate team efforts between organizations	▪ Anticipate the amount of time it will take for a business/organization to decide to commit to a partnership. ▪ Create a letter of agreement to summarize the responsibilities of the library and the partner. ▪ Organize and prioritize the library's needs in relation to the partner organization. ▪ Be able and willing to give service in order to gain back service. ▪ Be able to either "close the deal" or accept rejection graciously. ▪ Establish ground rules at the outset and keep them visible. Create an agreeable method of conflict resolution at the outset. ▪ Organize and run meetings with partners. Provide an agenda of accomplishments, issues and actions. ▪ Be willing to commit and manage staff time toward the effort of working with partners.
▪ Sustain partner relationships for future opportunities	▪ Demonstrate appreciation of partners' efforts; for example, send thank-you notes and recruit participating patrons to send notes as well. ▪ Recognize the efforts of partners publicly. ▪ Maintain contact with partners after completion of the specific collaborative project. Consider other ways the partner can be involved with the library.

Staff and Patron Training

As the pace of technological change picks up, staff development continues to be one of the most important needs in libraries. From the smallest library to the largest, training staff has become critical to meeting the library's mission within the changing landscape.

Staff training is the precedent to patron training—a well-trained staff will be able to apply their knowledge to train patrons, either formally in structured classes or informally when interfacing with patrons. Although there is overlap in training programs for staff and patrons, the intent, evaluation and accountability are necessarily more rigorous for staff, whose skill levels are tied to job performance. Some libraries combine staff and patron classes wherever it makes sense.

Establish training goals

Why? Focused and effective training begins with the clear definition of goals and objectives. It's essential to know the desired learning outcome in order to design a training program to accomplish that outcome and avoid wasting limited training dollars.

Competencies	Demonstrable Skills/Knowledge
▪ Set clear goals for staff training ▪ Understand outcomes-focused planning	▪ Relate training goals to the library mission and to job profiles. ▪ Establish institutional definitions that differentiate among training, orientation, continuing education and staff professional development. ▪ Integrate staff development into institutional documents, such as the library's mission statement and budget process. ▪ Garner strong oral and written commitment to training and development from both administration and staff. ▪ Communicate desired outcomes for training. ▪ Devise a plan to revisit training goals annually. ▪ Plan, prioritize and focus on what is critical to learn.
▪ Set clear goals for patron training	▪ Be aware of how the objectives for patron training may differ from those for staff training. ▪ Define the desired outcomes for training patrons. ▪ Identify opportunities for combining training for staff and patrons. Be aware of the advantages and disadvantages of doing so.

Assess needs and skills

Why? Before spending time and money on developing or purchasing training, be clear about where the skills gaps are for staff and patrons and what each target group is interested in learning. (See "Technology Competencies for Patron Assistance and System Administration.")

Competencies	Demonstrable Skills/Knowledge
▪ Identify the training needs of library staff	▪ Devise methods for assessing current staff skills in support of the public access computing program. ▪ Conduct a needs assessment among staff members. ▪ Research and/or create competency lists. (See "Technology Competencies for Patron Assistance and System Administration.") ▪ Identify skills tied to job performance; incorporate core technical competencies into each job description. ▪ Identify opportunities for professional development for staff. ▪ Utilize online survey tools.

▪ Identify the training needs of patrons	▪ Devise methods for assessing patron skills and the demands they put on frontline librarians. ▪ Gather data about patron use of public access computers. (See "Demonstrating Impact and Advocacy.") ▪ Conduct a needs assessment for patrons. ▪ Utilize survey tools to determine patron skill needs.

Identify the resources for training

Why? Every library has to work within some limitations of budget, time and personnel. Making use of resources already available to the library will extend the training possibilities and help to avoid redundancy and waste.

Competencies	Demonstrable Skills/Knowledge
▪ Establish a training budget	▪ Incorporate training into the overall library technology budget. (See "Budget and Funding.") ▪ Research and apply for training grants. ▪ Think creatively about forming partnerships to share training costs. (See "Marketing and Partnerships.") ▪ Keep the board and administrators in the loop about the value of training for the organization. ▪ Brainstorm alternative funding sources for training.
▪ Identify the technology resources available for training	▪ Inventory the physical computing resources available for training programs. Identify the opportunities allowed or limits imposed by the physical resources. (See "Technology Planning.") ▪ Think creatively about repurposing existing resources. ▪ Explore the feasibility of developing portable "laptop labs."
▪ Identify trainers and training programs internally and externally ▪ Utilize volunteers	▪ Evaluate staff for training leadership skills and set training expectations. ▪ Identify motivated staff members who can transfer skills to other staff. ▪ Develop and maintain a list of resources for common training topics. ▪ Identify partner organizations that can deliver training. (See "Marketing and Partnerships.") ▪ Develop a program for recruiting volunteers as trainers. ▪ Know how to work with volunteers in the library.

Design the training

Why? Whether training materials are developed in-house or outsourced, keep the focus on the learning outcomes.

Competencies	Demonstrable Skills/Knowledge
▪ Oversee curriculum development ▪ Understand instructional design	▪ Identify subject topics. Determine which topics can apply to both staff and patron training. ▪ Identify the options for delivering training: live classroom instruction, online classes, Web-based tutorials, facilitated vs. self-paced, or other delivery methods. ▪ Create a step-by-step development plan for each lesson plan (writers to editors to publishers to director). ▪ Recruit and coordinate with subject matter experts to write or fine-tune lesson plans. ▪ Assemble a team of writers, editors and publishers, if applicable. Involve staff and volunteers in lesson plan development. ▪ Organize the lesson plan development among group contributors. ▪ Learn about effective instructional design, including how to break down complex skills into component parts. ▪ Create lesson plan templates for consistency of format and process. ▪ Manage hard copies and electronic files of lesson plans. ▪ Utilize or delegate proofreading and technical editing skills. ▪ Use PowerPoint effectively. ▪ Create useful handouts and quick guides. ▪ Be informed about copyright restrictions related to curriculum design.
▪ Utilize existing training materials and resources	▪ Research existing training programs/courses and determine if they meet the library's learning objectives or can be customized to do so. ▪ Determine whether or not classes outside the library are preferred by staff for their training. ▪ Explore the use of the library Web site for "just-in-time" learning opportunities, such as a built-in tutorial for use of the online catalog.

Deliver the training

Why? The rubber meets the road in the delivery of training. Juggling schedules, preparing trainers and providing a positive learning environment are all part of a successful program.

Competencies	Demonstrable Skills/Knowledge
▪ Create schedules for training ▪ Publicize the classes	▪ Integrate staff development and time for learning into job responsibilities and workday schedules. ▪ Create a timeline and maintain an internal calendar of staff training events. ▪ Train staff and patrons together in the same class where possible. ▪ Analyze patron usage data to identify the best times for target audiences. ▪ Coordinate with marketing efforts to publicize the classes. (See "Marketing and Partnerships.") ▪ Post current classes on the library Web site and keep the schedule updated. ▪ Manage registrations and attendance.
▪ Define expectations for trainers ▪ Develop a train-the-trainer program	▪ Know the basics of adult learning theory and learning styles. ▪ Define the qualities of an effective trainer (presents ideas clearly, employs interactivity, uses a variety of approaches to accommodate learning styles, actively listens to student input, etc.). ▪ Develop curriculum for training the trainers, with the understanding that teaching is a skill apart from subject matter expertise. ▪ Determine when and how to train the trainers who will be delivering classes. ▪ Encourage self-appraising and observation of other trainers. ▪ Facilitate a positive environment of mutual respect and trust, one that respects and values diversity.
▪ Manage the learning environment	▪ Determine that the library technology meets the needs of the classes offered. ▪ Utilize classroom control software, if applicable. ▪ Establish a consistent classroom protocol. ▪ Understand the impact that classroom set-up and atmosphere have on the learner experience.
▪ Support and motivate staff	▪ Create an organizational climate conducive to applying new skills. ▪ Be ready to demonstrate the relevance of proposed staff training whenever the opportunity presents itself. Win "buy-in" from staff. ▪ Maintain management support and interest in the training program throughout the process. ▪ Support staff in managing time for learning and practice of new skills. ▪ Commit to a variety of approaches to teaching and learning for staff

	development activities. ▪ Match staff needs and interests with timely training to maximize motivation. ▪ Recognize the value of personal career planning. ▪ Brainstorm ways to make training playful and fun. ▪ Encourage staff to think innovatively about seeking learning opportunities.
▪ Develop informal learning strategies	▪ Develop mentoring relationships among staff, including the potential for "reverse mentoring." ▪ Provide opportunities for peer-to-peer sharing and self discovery. ▪ Encourage the use of social networking tools to promote peer exchanges (blogs, wikis, social networks). ▪ Support "just-in-time" learning opportunities and encourage staff to take an active role in their own learning (short online tutorials, cheat sheets, FAQs, forums).

Evaluate and follow up

Why? Designing and delivering training is an iterative process when there's no guaranteed formula for getting it right the first time. Use the evaluation phase to collect input on how to improve the next round of classes. Also, in order to maximize the investment in staff training, remember to incorporate mechanisms for continuing and applying their learning.

Competencies	Demonstrable Skills/Knowledge
▪ Evaluate staff training ▪ Collect and utilize input from all involved	▪ Know the levels of evaluation (reaction, learning, behavior, results). ▪ Create a pre- and post-assessment for each lesson plan. ▪ Utilize individual coaches to attend classes and debrief with trainees. ▪ Collect feedback from trainers, coaches and supervisors, and apply this feedback to assessment of staff performance. ▪ Determine accountability measures; establish venues for working with staff who are not successful at mastering required skills. ▪ Create and maintain a log of training events.
▪ Provide venues for staff to extend and apply learning	▪ Structure time for staff to meet in order to pool ideas and share experiences. ▪ Maximize cross-peer training; encourage trainees to teach others in turn. ▪ Determine ways to address outcomes that are not met successfully. ▪ Provide relapse-prevention training that focuses on high-risk situations trainees encounter when practicing new skills. ▪ Build in opportunities for refreshers in a staff person's regular day. ▪ Communicate to staff that retention is a self-managed effort.

▪ Collect and utilize input from patron trainees ▪ Collect and utilize input from trainers for patron classes	▪ Create an evaluation form or other feedback mechanism for each lesson plan. Realize the limitations of this kind of reaction (or "smile sheet") evaluation. ▪ Analyze patron feedback to capture trends in training needs. ▪ Debrief with trainers of patron classes to identify problems and collect suggestions for improvement.
▪ Evaluate curriculum design and delivery	▪ Analyze collected feedback to identify areas for improvement. ▪ Differentiate between feedback on the curriculum, the class environment and the trainers' delivery. ▪ Communicate areas for improvement to trainers and/or curriculum designers. ▪ Plan for periodic review and updating of lesson plans, handouts and online resources. ▪ Devise a plan to keep up with technology and Internet changes. (See "Organizational Leadership: Look to the Future" and the "Staying on Top" sections of "Technology Competencies for Patron Assistance and System Administration.")

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Support for this publication was provided by the
Bill & Melinda Gates Foundation

6565 Kilgour Place

Dublin, OH 43017-3395

www.oclc.org

ISO 9001 Certified

ISBN: 1-55653-369-1

PRM12493 0705—1.5M, PW