

Recommended Core Technology Competencies for Health Sciences Librarians

As part of the RML's working plan the Technology Committee was charged with compiling core technology competencies for health sciences librarians. The list was developed with the knowledge that each library has its own needs and with the expectation that individual libraries would adapt the list to meet their own situation. These skills are important for public and technical services librarians working in academic, hospital, public, and special libraries. Competencies are divided into nine categories: terminology, hardware, software, security and privacy, e-resources, library applications, web and social media, and troubleshooting. These skills can be acquired through on-the-job training, reading, and attending professional meetings and CE courses (in person or online). Technology evolves at an increasingly fast pace. Librarians' skills and the competencies outlined on this list must keep pace.

Terminology:

- Understand the terminology for the basic, major parts of a computer – inside and outside (e.g. keyboard, mouse, hard drive) as well as their functions.
- Use the proper terminology to describe actions on the Desktop (e.g. dialog box, website home screen, site navigation, login page).
- Know commonly used abbreviations and acronyms for computing and networking (e.g. IP address, LAN, RAM, WIFI).
- Know terms related to browsing and searching the Internet and electronic resources (e.g. browser names, tabbed browsing, search box, URL, links).
- Use proper technical terminology when discussing problems with IT and use non-technical speech when communicating with library users.
- Understand difference in nomenclature among the various operating systems (PC, Mac, LINUX, UNIX, etc.)
- Understand terms and concepts related to emerging trends and technology.
- Be conversant with local institutional policies and procedures regarding IT support.

Hardware:

- Desktop computers
 - Turn a computer on and off properly.
 - Reboot a computer.
 - Know the difference between a hard and soft boot and when to use each.
 - Replace a mouse and keyboard.
 - Clean external computer surfaces including: CPU case, monitor, keyboard, and mouse.
 - Attach speakers and headphones.
- Laptops, netbooks, tablets and other portable devices
 - Turn a device on and off properly.
 - Identify parts of portable devices a laptop computer.
 - Connect portable devices to a projector and speakers.
 - Use either mouse or touch pad.
 - Use with battery or charger.

- Flash Drives
 - Save to flash drive.
 - Locate files on flash drive.

- Printers
 - Identify local versus networked printers.
 - Identify the locations of printers for a given computer.
 - Print a test page from the operating system to identify the printer's name, model, and IP address.
 - Replace toner or ink cartridges for printers.
 - Load paper trays.
 - Clear a paper jam.
 - Cancel a print job.
 - Change a default printer.

- Photocopiers and multifunction devices
 - Use all functions of copier.
 - Replace toner and paper.
 - Clear a paper jam.

- Fax machines
 - Send a document.
 - Determine if a document has been sent.
 - Clear a paper jam.
 - Resend or print a document from memory.
 - Replace paper and toner.

- Projectors
 - Connect to desktop, video/DVD player and other portable devices.
 - Be able to set to standby-mode.
 - Change a lamp/bulb.

- Scanners
 - Set scanning resolution (DPI).
 - Set scanning format.
 - Select area to be scanned.
 - Retrieve scanned files.

- Mobile devices
 - Know institutional policy regarding technical support and know supported devices.
 - Be able to use any mobile device issued to them as part of their job responsibilities.
 - Be able to advise students as to which subscription resources have apps or formats for mobile devices.

- Digital cameras (still and video)
 - Use all functions.
 - Capture images for website, library promotional/instructional materials.
 - Upload photographs or videos to a computer.

Software:

- Operating system
 - Access basic system information.
 - Install new applications.
 - Uninstall applications.
 - Add printers and set properties.
 - Understands systems file nomenclature and use or lack of extensions.
 - Locate saved files on hard drive.
 - Use system to organize files.
 - Control appearance of desktop and opened programs.
 - Set screensaver/privacy settings.
 - Use system accessories for media, etc.
 - Access system/diagnostic tools.
 - Defragment hard drive.

- Competencies that apply to all programs
 - Insert, copy, paste, delete, print.
 - Use help function.
 - Use save and save as options.
 - Save files in different formats, including PDF.
 - Designate location and format for file to be saved.
 - Save files to external drives including CD and flash drive.
 - Utilize drives, folders and/or sub-folders structure to organize files.
 - Update applications and add plug-ins where applicable.

- Word processing
 - Create a new document.
 - Create a new document based on a template.
 - Change the line spacing, fonts, margins and indenting of document text.
 - Change the orientation (portrait/landscape) of a document.
 - Set tabs (right, center, left, decimal).
 - Insert bullets and numbers.
 - Insert, move and resize pictures/clipart.
 - Create, insert and edit tables.
 - Insert page numbers into a document.
 - Copy formatting from one piece of text/object to another.
 - Add a background color to a document.
 - Use the Thesaurus functions.
 - Customize the application (toolbar, document defaults, number of files displayed, etc.)
 - Create and format multiple sections in a document.

- Sort paragraphs and tables.
- Convert text to tables and vice versa.
- Create and edit document templates.
- Create documents with multiple page numbering schemes, multiple page orientations, with a table of contents and an index.
- Apply styles to selected text or object.
- Know the keyboard shortcuts for most commonly used functions.
- Utilize data created in word processor and spreadsheets to create merge documents (letters/directories).

- Spreadsheet
 - Create and edit simple tables.
 - Insert and delete rows and columns.
 - Insert additional worksheets.
 - Add borders, shading and color to tables.
 - Use autosum to total columns.
 - Create simple formulas.
 - Set print area.
 - Set worksheet headers and footers.
 - Insert automatic page number options.
 - Set page size and orientation.
 - Custom sort table at multiple levels.
 - Auto size columns.
 - Wrap columns.
 - Search for data across entire workbook.
 - Create advanced formulas.
 - Apply data styles to columns (currency, percent, etc.).
 - Convert data to and from comma and tab delimited formats.
 - Embed spreadsheet into word processing and presentation files.
 - Create graphs and charts based on spreadsheet data.

- Presentation Packages
 - Create simple presentations based on template.
 - Select template and slide layout.
 - Insert photos and clipart.
 - Link to websites from presentation.
 - Embed tables, charts and graphs in presentation.
 - Create presentations without template.
 - Set transition effects between slides.

- Database
 - Create simple flat file or import from spreadsheet.
 - Create simple queries.
 - Create simple reports.
 - Use global replace options.
 - Understand concept of relational database.

- Create and link tables to create a relational database for use in such activities as collection development or assets management.
- Create queries using related tables.
- Create well formatted reports.
- Create databases as needed for such functions as subscription tracking, assets management or others.

- Email
 - Send and receive messages.
 - Delete messages.
 - View sent and stored messages.
 - Create e-mail signature line using institutional guidelines.
 - Utilize institutional address book.
 - Maintain own address book/contact list.
 - Create mailing lists.
 - Understand privacy concerns and use blind copy (BCC) options when available and applicable.
 - Attach files to e-mail messages.
 - Open and/or save files received/attached to incoming messages.
 - Forward messages where appropriate.
 - Recognize spam and phishing; know the potential risks of opening.
 - Know what to do with spam messages.

- Calendars
 - Enter appointments into shared calendars.
 - Locate appointments by person or day/time.
 - Print calendar.
 - Email calendar invitation.

- Internet browsers
 - Navigate web page using scroll bars and buttons.
 - Search for text on page.
 - Enter URL to go to specific website.
 - Block or allow pop-ups.
 - Print all or part of web page.
 - Change screen display.
 - Easily link to library sites/resources.
 - Set default search engine and home page.
 - Set privacy protection options.
 - Customize toolbar for easy access to frequently used sites.

- Photo/Graphic Editing
 - Perform simple edits: adjust contrast, color balance.
 - Resize photo.
 - Rotate image.
 - Flip horizontal and vertical.

- Web Design Packages
 - Create a simple web page from a template – set styles, insert links, insert graphics.
- Distance-learning software/applications
 - Understand how to access E-conferencing software.
 - Use Courseware for educational goals.
 - Use Screen capture (still and video) to fulfill educational goals.

Security and Privacy:

- Create secure passwords.
- Be familiar with anti-virus/privacy/data protection software programs.
 - Run anti-virus programs.
 - Regularly update anti-virus definitions.
 - Pay attention to anti-virus/privacy alerts.
 - Configure anti-virus/privacy level to match level of need.
 - Regularly back-up programs and files.
 - Understand alerts and respond as necessary.
- Practice “safe email.”
 - Understand the risks of opening email attachments.
- Public computers
 - Understand library/institution’s public privacy policy.
 - Familiarity with web browser settings to protect patron privacy (autofill, cookies, history).
 - Familiarity with OS settings to protect patron privacy.
- Staff computers
 - Understand library/institution’s computer/network use policies.
- Be familiar with institutional and personal computer firewalls.
- Understand HIPAA and FERPA regulations and how they apply to library resources and records.
- Maintain the confidentiality of patron records.
- Understand secure storage and disposal of logs, backup media, hard drives.
- Be conversant with institutional policy regarding computer and technology usage and e-teaching –platforms – courseware.

E-resources:

- Know the licensing terms that control the use of each resource.
- Adhere to intellectual property law in providing access to resources.
- Know best practices for searching catalog and website.

- Understand authentication methods for e-resources (IP vs. username/password).
- Be familiar with the different types of e-resources, including:
 - Relevant online databases.
 - Open URL linking.
 - eBooks.
 - Mobile apps or websites.
 - Multi-media sites and applications and resources, including video and podcasts.

Special Library Applications

- ILS - recommend each library create own list which could include:
 - Use web-based OPAC.
 - Check materials in and out.
 - Create patron record.
 - Recall materials.
 - Place materials on hold.
 - Remove materials from hold.
 - Create and run reports for inventory, acquisitions, weeding, collection evaluation, etc.
 - Access acquisitions module in appropriate area.
 - Run reports and access statistics.
 - Original cataloging.
 - Copy cataloging.
 - Import and edit records from vendors.
 - Manage online catalog.
 - Manage reserve module.
 - Set System parameters.
- Interlibrary Loan (Docline, ILLiad, OCLC FirstSearch) - as responsibilities require:
 - Request materials via interlibrary loan using Docline or other services.
 - Set up holding records and routing tables in Docline.

Internet, Web 2.0 and Social Networking

- Know URLs for library website and catalog.
- Know and can link to URLs for subscription and free resources.
- Create favorites/bookmarks.
- Write for the web.
- Post content on website or Intranet.
- Demonstrate familiarity with: blogs, wikis, RSS feeds, RSS readers, microblogging, social bookmarking, social networks, online file-sharing, instant messaging, and photo, music, and video sharing.
- Utilize appropriate Web 2.0 technologies to support library services and relationships.
- Describe popular programs for social networking such as Facebook, Twitter, YouTube and others.
- Recommend social networking resources appropriate or useful to area of subject expertise.

- Explain privacy features and security issues.
- Interpret terminologies and cultural conventions unique to various social networking tools. i.e. “retweeting”, “liking”, “friending.”
- Create, manage or participate in library’s presence on social networking sites.
- Assess information produced for accuracy and reliability.
- Use social networking aspects of OPAC (if exist).

Troubleshooting:

- In-house equipment, including equipment used by library staff:
 - Be able to diagnose a computer that is infected with a virus.
 - Identify corrupt files.
 - Ensure programs are running properly.
 - Set or remove silence due to muted setting.
 - Diagnose common problems.
 - Perform triage as to which problems can be handled by library personnel and which need to be referred to outside support.
 - Call the repair service quickly.
- Assist users in accessing library resources on personal computers with common problems, such as:
 - Difficulty accessing the Internet due to outdated or incompatible connectivity software.
 - “Blue screen of death.”
 - Frozen programs.
 - Infected computers.
 - Lack of proper drivers.
- Assist Remote users’ with common problems, such as:
 - Programs that were improperly installed.
 - Corrupt files.
 - Faulty or outdated video drivers.
 - Corruption or problem with Windows.
 - No power.
 - No display.

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