CHAPTER 6

USER’S SERVICE THROUGH CONSORTIA
THE IMPORTANCE OF USER SERVICES

Different kinds of users require different types of services. Those who are experienced with traditional print resources and the conventions of library research may be more patient with navigations and searching processes but could run into problems in viewing or printing results. Some of these experienced library users will use help files and read written instructions; and they may not except an instant response to a request for help.

New users of library resources, on the other hand, will generally expects simplicity, will be unwilling to deal with technical obstacles, and will not understand library terminology. They don’t know whether what the library has to offer is worth the effort of finding and retrieving its, and if they request help, they will want it immediately.

Lack of time is a constant and universal complaint of all types of e-journal users, but information overload may be the actual unrecognized problem. Most users do not see the overabundance of available information as a factor in their struggles against deadlines, time constraints, and competing demands. They may not be aware of the extent to which sifting through a large quantity of off-target, sloppy search results eats up valuable time. But they may come to you in desperation if they are having technical difficulties that threaten to consume even more of their time. In addition to making resources as obstacle free and easy to use as possible, you will want to offer assistance that is as efficient, effective, context sensitive, and brief as possible.

CUSTOMIZED, TARGETED, AND REMOTE SERVICES-

Most libraries already have a strong service orientation, but serving users of electronic journals (and other electronic resources) is challenging because you will be creating communication conduits and a support system for users you will never see. Service considerations for remote users could fill a book! (See Curtis, 2002). Your Web design and help screens can adequately serve most users with most types of information needs and problems, but individual users will have individual situations with which they need individual assistance. Just as most users of the physical library can serve themselves, some will require reference or other types of assistance from staff. Individualized services to assist with e-journals and maximize their use can several forms:

- Responsive, human help (by phone, e-mail, or chat).
• Cookies that will remember users’ preferences from one session to the next and use their online choices to make recommendations (the Amazon model).
• Alerting services, automatic or manual.

6.1 ATTRACTING AND INFORMING USERS THROUGH MARKETING-

One of the most basic e-journal services is to provide awareness and promote your collection to prospective users. But that means more than half of the faculty and staff at an average university never use library resources for their teaching, learning, or research.

Just because most libraries are nonprofit organizations that do not charge fees for use of their resources does not mean they don’t have to “compete for customers.” Libraries develop their traditional services when information was scarce and they were the most prominent information providers; but, as we know, that is no longer the situation. Information of all kinds is so abundant today that the library needs to “sell” what it has to offer, to convince prospective users of the users of the value of online resources provided by the library.

6.1.1 The Library Home Page and Internal Pages-

Library’s home page design should be “sticky” enough to capture causal visitors and let them know about your electronic resources, and it should be organized logically enough to ensure their success in getting to these resources. At the same time, the overall purpose of library’s home page is to serve a number of different kinds of users with a range of needs, and challenge is to get each of them to the most appropriate resources and services for their purposes. For example:
Fresh students writing their first college research papers should be guided to a general full-text database rather than to a list of e-journals of the library catalog.

Someone looking for books or videos would not be given the impression that the library has nothing but full-text electronic resources.
The library’s hours of operation and policies should be easy to find. There are many reasons to visit a library Web site other than to use e-journals, but you do want them to be easy to find. Too much explanation on one page will undermine your purpose. Try to provide a sense of the richness of content on your site while directing each type of user to a suitable path without unnecessary words.

Figure: What’s New

That are available elsewhere on the Web is not an intuitive concept. In fact, they may even use resources that are provided by your library without realizing that their status as a member of the community your library serves gives them free access to resources that would otherwise be unavailable to them.

Once users realize that they have come across a quality resource that the library provides, they might be interested in seeing what else you offer. One way to help them make a connection between resources they are already using and the library that makes their access possible is to take advantage of options to “brand” the pages with your library’s logo most vendors offer the opportunity to configure the user interface to include a library logo (or name) that might link to a designated URL.

6.1.2 MARKETING YOUR RESOURCE-
Members of user community will be much more likely to visit library’s Web site if they know in advance what you have to offer, which may require some re-education, through an advertising blitz or targeted marketing. Libraries are not accustomed to advertising, but we have no choice if we want to compete in the information marketplace and satisfy the needs of our constituents.

**Marketing inside the Library—**

Habitual or occasional visitors to library might notice the proliferation of computers and a decrease in the number of current periodicals on the shelves, but how would they know that a large number of electronic journals are now available for use in their homes or offices? Let them know:

- Put signs in your periodicals browsing area.
- Put stickers on individual issues of journals: “also available online at.”
- Hang a banner on the outside or inside of your building with the library’s URL.
- Blanket the library with posters.
- Put a brief message on table tents.
- Hand out bookmarks or other printed materials with brief information. Emphasize new online content and how to get to it rather than details.
- Have date-due slips printed with “Check out the library’s electronic journals at library URL.”
- Host events to demonstrate new resources (see the “Instruction” section, below).
- Mention e-journals to information seekers at service points whenever possible.

**6.1.3 USING PROMOTIONAL MATERIALS FROM PUBLISHERS AND VENDORS—**

Many publishers and other e-journal providers have made promotional materials freely
available to librarians through their Web sites. They will also mail marketing items in
the form of bookmarks, posters, or brochures. The problem with materials such as
these is that they are designed to increase the user of that vendor’s products,
promoting only a segment of e-journals, and their focus is on promoting brand
recognition of their products, which may be counterproductive for the library.
However, some of the online materials can be adapted for more generic use,
allowing you to use professionally developed marketing materials to promote all of
own library’s electronic products.

Figure: E-Journal Newsletter Sign Up Form

6.1.4 E-JOURNAL NEWS-
Some libraries maintain a Web page for news about electronic journals- primarily for
the announcement of new titles or licenses, but also to report any changes in
services in services or new forms of access. You don’t want to irritate constituents by
sending e-mail messages they might not want to receive; however, every few
months a brief announcement inviting them to subscribe, with a simple
announcement chosen carefully for its broad appeal would be an appropriate
reminder that library’s e-journal collection is growing and services are improving.

6.1.5 UNDERGRADUATE LIBRARY ORIENTATIONS-
If your library has an established and successful instruction program in place, you
will want to include information about electronic journals in ways that are appropriate
for each audience. Many libraries these days have fewer opportunities than they
once had to introduce students to e-journals with formal instruction. Library
instruction, like so many other library functions, is being reinvented to serve new
purposes in a transformed educational and information environment.3

Teaching about electronic journals during formal instruction sessions for
undergraduates will be most successful if you can.

• Relate the process of searching for articles to the students’ Web-searching
  experiences,
• Emphasize full-text database for subject searching,
• Keep the instruction short and simple,
• Cover a few main points, and
• Demonstrate the process of connecting from a remote site, including how to
  authenticate.

6.1.6 Workshops for Faculty and Researchers-
Workshops for faculty tend to be more successful if they are held in conjunction with other events; for example:

- A new-faculty orientation.
- An information-technology fair.
- A series of university-wide programs that have developed a following.
- Any technology-oriented event on campus, especially one that is designed to foster the use of technology in the classroom.

If a special event such as a reception to honor award winners is held in the library, you may be able to take advantage of a captive audience and lure some of them into a nearby computer classroom for a demonstration of the library’s newest electronic products. A workshop for faculty and researchers will be more successful if you can:

- Get them excited about the new content that is available to them through library licenses,
- Relate searching for articles in e-journals to traditional forms of searching for library resources,
- Focus on browsing and searching strategies that are thorough and efficient, and
- Provide some (but not too much) contextual information about producers and providers, embargoes, moving walls, and costs to the library.

**Researchers will also want specific information:**

- Technological requirements for access.
- How to get help if they run into problems.
- How to create persistent links to articles for their students.
- How to request electronic reserves.
- How to recommended new e-journals.
- How to subscribe to current awareness services.
- Where to find instructions for authors and other front matter information, such as listings of editorial boards.

**6.1.7 Workshops for Graduate Students**

Graduate students have a higher level of intrinsic interest in library-provided resources than undergraduates and more incentive than faculty to learn how to use
them. Specialized workshops for graduate students tend to be well attended, partly because many faculty advisors are unable to guide their graduate students through a high-tech contemporary literature review. Graduate workshops can be longer in duration and more in depth.4

- Introduce appropriate subject databases.
- Discuss how to get to the full text of articles from bibliographic databases.
- Suggest a personalized consultation with a library subject specialist.
- Present “advanced-searching” functionality for databases.
- Include information on how to cite articles from electronic journals.

### 6.1.8 INSTRUCTIONAL FOR DISTANCE STUDENTS-

For distant students without a library nearby, e-journals are a lifeline to scholarly information resources. Access to e-journals can make a significant difference in the quality of their work, and in the quality of their online education, for that matter. But remote students are less likely than local students to have technical support on hand, and more likely to run into telecommunication and authentication problems.

Electronic journals are well suited for inclusion in a library’s online tutorials or distance-education modules. Developing and maintaining an online tutorial is a lot of work—keeping one up-to-date as interfaces change is quite a challenge, and some libraries have abandoned the attempt, especially since tutorials, have not proved to be popular with on-site students.5 However, if your library supports a large number of distance students, a tutorial could be your best approach for teaching them how to take advantage of your electronic journals and databases. Students in distance programs will be more motivated to use (and more accustomed to using) online support.

### 6.1.9 STAFF READINESS-

“Solving” a problem many ultimately involve referring it, but good users support means that if anyone calls the library with a problem related to e-journals, the person who answers the phone will be able to discuss the problem intelligently, solve it on the spot or take the responsibility for getting it solved, and follow up to as certain users success. That’s a tall order. Front-line user services staff will most likely require specialized training to be able to provide this level of service.

The best methods for training the staff to provide technical support will depend on the size of your staff, the level at which combination of some of these methods:

- Formal workshops.
- A public service e-mail group for sharing experiences.
• Real or simulated hands-on experiences with various browsers, operating systems, and modes of connectivity.
• Competencies checklists.
• Troubleshooting exercises.
• Update sessions in public services meetings.
• Training-related goals in job descriptions, linked to your evaluation process.
• An intranet site for internal-training resources.
• The use of vendors’ trainers.
• A knowledge base that reports and tracks questions and answers.

You may need to extend your training activities beyond the library public services staff. If it is likely questions about e-journal access will go to a university help desk or to distributed system administrators in your parent organizations, you will need to make sure that those computing-support people can recognize and respond to questions about access to library resources.

6.1.9.1 COMMUNICATING WITH USERS-

Some of the advantages of electronic journals are also some of their disadvantages, when it comes to supporting them. They are available to your users 24 hours a day, seven days a week from anywhere in the world, but your staff in probably centrally located and available at limited times of the day and night.

6.1.9.2 SUPPORTING SELF-HELP-

Assuming that many of your users will have problems requiring information rather than intervention, they will appreciate detailed explanations of how to solve the problems on their own, particularly during the hours when no human support is available. Addition to detailed instructions for how to authenticate from offsite (discussed below), it would be appropriate to offer written explanations for optimizing browsers for the best use of e-journals, for downloading and installing plug-ins, and to answer any questions that has come up by phone, chat, e-mail, or at a service desk.6

Troubleshooting guided or flowcharts to help identify problems can be very useful for user self-help as well as for staff use. It is well worth your time to document the route an expert would take to pinpoint a problem and share that process with interested users. A troubleshooting guide can be wide ranging or specific to one type of problem. On a Web guide, you can include links to other guided or sets of instructions for certain types of problems.

• “Troubleshooting Off-Campus Access to Library Subscription Services.”
6.1.9.3 Web-Based Instructions-

Instructions and explanations about your authentication system should be available to your users through prominent links on every page that links to licensed resources. Even them, some users will not notice the link or will not realize that they have to do anything special to use certain resources.

Instructions should be written with as much detail as necessary and as few words as possible. Illustration are much more valuable. Using screen shots or simulations will help users. For example, if your process requires users to use a number on their library card, it is more helpful to show what that number looks like than to describe where it is located.

If there are differences in your authentication process for various browsers or operating systems or databases, even if those differences are minor, it is better to prepare separate instructions sheets for each instance rather than to try to explain the differences in the basic instructions.

6.2 THE INTERMEDIARY ROLE-

Often a user will report a problem that originates with the vendor; for example:

- A server is down,
- Your institution’s IP addresses are no longer recognized, or
- A significant amount of licensed content is missing.

It is good to find out about such things as early as possible, not only for the sake of the individual who reported it, but for your other users as well. Serving as an intermediary with vendors is an important aspect of user support. Many libraries designate one person to contact vendors to report and resolve technical problems with electronic journals and databases. The designated communicator could be from reference, serials, systems, acquisitions, or any of a number of departments in the library. Important qualities for this duty are an interest in doing it, a sense of responsibility, determination, follow-through, willingness to work on problems during off-hours, and an understanding of technology issues. Your library will be more successful in solving vendor-related problems quickly if you take the following steps:

- Make sure your designated intermediary is a member of your “first-alert” communication network.
- Designate a backup contact if the primary person is unavailable.
- Keep a log of reports and problems and how they were resolved.
• Clarify technical-support procedures with vendors during the licensing process; specify an acceptable level of support in your contract, if possible.
• Manage an up-to-date list of contact people for each vendor, with phone numbers and e-mail addresses; include names of responsive support people, even if they are not your designated contact.
• Report unsatisfactory levels of support through your vendor’s chain of command until you are satisfied with the improvements.
• Report recurring or irresolvable problems with vendor support on discussion lists such as Liblicense-1 as a last resort (resolution will almost always follow, at a cost to the vendor’s reputation).

If the problem with a vendor’s site or services cannot be resolved immediately, it is important to communicate the nature of the problem (and the projected duration) to all public services staff and any technical support personnel who might receive calls.

The best way to communicate the problem to users is through alerts on your menu pages for e-journals. Red type is good for catching their attention.

6.2.1 PLUG-INS/VIEWERS/READERS-

As more and more e-journal providers enhance their articles with multimedia and other supplementary content, the library will need to provide support in the form of links to specialized browser plug-ins that users will need in order to view or internet with that content. Some new Web users may also need to install Adobe Acrobat Reader in order to read common PDF articles.

Windows operating systems support some seamless integration of multiple file formats, particularly between the Internet Explorer (IE) browser and files created using Microsoft products. However, some e-journal providers will not have tested the usability of their system with Apple or Linux operating systems. Ands as publishers compete with each other to provide exciting e-journal features, some will require special plug-ins that are uncommon.

On e-journal menu pages, you may want to provide links to the most commonly needed plug-ins, such as Acrobat Reader, and another link to a page with links to more specialized downloads. Check your download links frequently to be sure they are viable. It is better to link to a page that will present the latest version of the download than to link to a page for a specific version that may become outdated.\(^8\)

**Portable Document Format (PDF)-**
The PDF format is so pervasive and popular among e-journal formats that your users will have no choice but to download and install it on their computers. PDF is not an optimal format for electronic journals, but as long as users prefer to print articles for reading, PDF will remain popular. It was designed for standard size paper and not for a computer screen, which has different proportions. Some of your users might report problems reading PDF files:

- If they have a very old version of Acrobat Reader, they may need to upgrade to a newer version to read some electronic journals, but an older computer or an older operating system may not be able to accommodate it. The Adobe site (www.adobe.com) lists the system requirements for each version.
- Files consisting of print facsimiles are large, and these big content chunks can take a long time to load. Users with a low-bandwidth Internet connection might complain about the amount of time it takes for a PDF article to load, and in some cases their system might even time out before they can load an article. In this case, you might want to suggest that they save the files and use Acrobat to open it from their own computers.
- Adobe Acrobat contains its own print, save, and find features. Using the browser print function for a PDF may result in blank pages. This problem is more common for users than you might expect.

6.2.2 Downloading-

The word “download” can cause confusion because sometimes it is used to mean bringing to the screen (downloading it from its server), and other times it means to save it locally, on a hard drive or a portable device, from the screen, as it were. If a user claims to be having trouble downloading an article, you will need to determine whether the article appears on the user’s screen or not. If not, the user could have one of several problems, needing for example.

- A newer version of Acrobat Reader.
- An earlier version of Acrobat Reader (if the system doesn’t meet the requirements for the newer version).
- To refresh the screen.
- To change a setting to accept cookies.
- For the Active X plug-in to be in the correct location.
- To restart the computer.
• A different browser.

For windows users, Acrobat and Adobe Reader are automatically configured to open files within the browser windows, but if there are problems, the user may want to change the settings in the browser to open PDF in a separate window. Macintosh users will have to configure IE or Netscape Navigator to use Reader as a helper application.

6.2.3 E-Mailing-

E-mailing an article from a database or electronic journal package can be quite convenient for someone who wants to print it at another site or save it for later use. However, not every database allows the user to e-mail articles. This is a special feature that is available only with certain databases. And not every computer will allow it, either- a browser needs to be configured with an e-mail address from which the article will be sent. Each type of browser has its own ways of doing this, so check browser help files.

6.2.4 Copy/Paste-

Some instructors would rather not have their students copy and paste anything from the Web into their own papers; nevertheless, there are ethical and legitimate uses for the copy and paste functions, which are exceedingly popular.

Users generally do not have problems copying and pasting text from an HTML article, but frequently run into problems with PDF files. They may not know about the Acrobat-specific text-selection and image-selection tools or how to use the column select tool available in the later versions of Acrobat Reader. However, even when they choose the correct tool, they may be blocked from using it by settings the author has established. When copying is restricted, the tools will not be grayed, even though text cannot be captured because of the settings used during scanning.

6.2.5 MOBILE USERS-

Users of your electronic journals no longer need to be tied to a computer on a wired network. Wireless computing and online handheld devices give you a seemingly infinite number of locations where users could need help. Despite their freedom from wires, mobile users have a few more technical obstacles in connecting to electronic library resources.

6.2.6 PDAs and Pocket PCs

Medical professionals who have become accustomed to having access to a deep store of reference information through their personal digital assistants (PDAs) with wireless capabilities may ask for help reading e-journals on their teeny-tiny screens.
Some publisher is beginning to offer selected full text of their e-journals in PDA-viewable formats, and we can expect this technology to change rapidly. Several Highwire Press journals are compatible with PDAs, for example, with tables of contents, abstracts, and selected full text available, but to use them require free registration and specialized software that can be downloaded at the Highwire site.

Despite their small screens, PDAs are popular for several reasons, including their portability and their immediacy. There is no waiting for them to power up. The need to help users with PDA oriented problems will increase, so public services staff should become familiar with this tool. Adobe has a version of Acrobat Reader for the Palm Operating System, but before users can read that is compatible with a wireless LAN. You may need to work with your computing support colleagues initially to help PDA users with their access problems. Pocket PCs, Tablet PCs, and other variations of very small, lightweight, and versatile handled computing devices will continue to fill in the gaps between laptop computers and PDAs for mobile access to electronic information.

6.2.7 HELPING USERS INSIDE THE LIBRARY-

Electronic journals and other Web-based electronic resources change the landscape of in-house user services considerably, though about by the Web. Some libraries are noticeably less visited, and other are still very busy serving users who are using the library in ways different from the ways they did in the past. Most libraries have experienced a decrease in the number of reference questions, and some libraries are receiving an increased number of reference queries by phone. Libraries with public access computers near the reference desk generally have a demand for assisting users with finding articles in electronic journals.

Some reference librarians have noted that questions coming to the reference desk are more complex than in the past because of the wide availability of information on the Web do not need the library for factual answers to straightforward questions, or even for background information on most subjects. It is when they are unsuccessful in their self service quests that they tend to turn to the information professionals at their library. This gives you a perfect opportunity to introduce the library’s electronic journals as a deep pool of content that is largely unavailable on the open Web With a reduced number of reference transactions; you should have the time to give in-depth assistance to individuals who come to you. \(^{10}\)

6.2.8 OPTIMIZING LIBRARY COMPUTERS FOR E-JOURNALS-

The digital divide studies show that many households do not have computers or access to the Internet and that libraries provide a popular gateway to the Internet. Even those who do have their own connectivity will sometimes use the computers in the library. For example:
The digital divide studies show that many households do not have computers or access to the Internet and that libraries provide a popular gateway to the Internet. Even those who do have their own connectivity will sometimes use the computers in the library. For example:

- Students who stay on campus between classes might work on a research paper.
- Faculty and other researchers may want to use online journals in conjunction with their use of print journals in the library.
- Some academic libraries have a mission to serve their larger unaffiliated community by providing walk-in access to licensed electronic resources that would be unavailable off site.

Make it as easy as possible for all of your on-site users to use your e-journals. If at all possible, consider keeping part of the library open 24 hours.

6.2.9 Configuration of Library Computers-

Setting up an optimal computing environment in the library is beyond the scope of this book, but you should consult one of the several excellent books on the subject. To optimize public access computers for electronic journal users, the following:

- Install the latest versions of the most commonly used browser plug-ins and other client software required for viewing e-journal articles or supplemental material.
- Monitor and respond to the popularity of browsers; the majority of your users will be most comfortable using Internet Explorer on library computers, since it is by far the most popular browser.
- Provide a means for saving large files (3.5 inch floppy disks will not hold some PDF articles); consider CD-writers, DVD-writers, zip drives, or front of computer USB ports for storage devices (or a range of these options), and sell the storage media on-site.
- Save your users’ time by offering one-stop shopping on library computers; include productivity software, such as Microsoft Office applications.
• Foster a hospital environment by minimizing restrictions on Internet use in the library.

• Protect the library from liability for infringement of license terms by requiring a log-in process for library computers.

• Secure your settings, shield your hard drive, and protect users’ privacy by configuring computers to restore default settings (the computer’s image) after each use, deleting modifications to the image and other results of user’s actions.

• Have computers reboot after a designated period of inactivity.

6.2.9.1 Printing-

In addition to the common printing difficulties mentioned above, public services staff have found that electronic journals present new challenges for printing services in the library. Libraries that for years provided free printing from public-access computers find users have access to electronic journals. But to add charging capabilities to library printers requires extra staffing or capital investment for card readers and queuing software. E-journal users will have one more procedure to deal with in retrieving and paying for articles they print in the library, so you will want to make your system as simple and reliable as possible. Don’t let your printers run out of paper!

6.2.9.2 Wireless Laptop Checkout-

If space for more computers is a problem in your library, or even if it isn’t, you might want to purchase a fleet of circulating laptop computers for in-library use. This is an increasingly popular library service that allows users to sit where they are most comfortable, and should increase the use of your electronic journals. There are some challenges in checking out laptops, however:

• Users will be farther from service points; you may want staff to do more roving throughout the library to make themselves available to help.

• If a wireless network is not available throughout the library building, you will need available throughout the library building, you will need to convey that information through signage or other types of communication.

• Users will need to save their work on their own storage devices or transfer it to another computer through e-mail or ftp, and they may need help with that process.
6.3 WEB ACCESSIBILITY-
As a gateway, your library has only partial control over whether electronic journals are accessible to visually impaired users. The library can follow accessible-design guidelines for its own Web site, but if e-journals providers do not be able to use your electronic journals without your intervention. If your users to all of your materials, including materials that are not accessible with adaptive technologies, you will need to develop services that will further process those parts of the electronic collection to make them accessible or provide individualized research assistance with electronic resources.

Measurement of library services has long been considered important both within the profession and within the institutions housing libraries. Established units of measurement that continue to be used by libraries generally show fewer people coming to libraries, fewer books circulated, and fewer reference transactions. Traditional measures would indicate libraries in decline (and less deserving of financial support) unless we can show corresponding increases in other areas of activity, using other measures. Documenting the use of library Web pages, e-mail reference and chat activity, use of databases and use of articles from e-journals can round out the picture of library use, providing a much more accurate assessment of the value of library services.

Despite the shift in library activities in recent years, collecting statistics still focuses on print publications and the physical library (circulation, number of books added, gate count). To demonstrate the changes that have taken place in library operations and expenditures requires initiative on the part of the library staff so that they collect, analyze and present the statistics that actually document the changes.

6.4 Collection Assessment-
Typically, acquisitions staff would be expected to be able to supply data to answer the following questions:\(^\text{12}\)

- How many electronic journals are available to your users?
- How has the number of e-journals increased over a designated period of time?
- How does the growth of your electronic journal collection impact the library's budget?
- How many new journals are available to your users as a result of e-journal packages and full-text databases?
- How much duplication of content is there between your print and electronic journals?
How many print subscriptions have been dropped in favor of electronic access?

However, it is not as easy at it might seem to answer questions about the number of e-journals in your collection and how much you are paying for them.

Having a clear and consistent definition of e-journals is very important for statistical reports. Do you want to count journals in aggregator databases in the same way that you count e-journals that are substituted for expensive print subscriptions? You will not want to count the same journals three times if it is available in three aggregator databases, though it is much easier to add together the total number of journals in each database than it is to de-dupe your list for statistical purposes.\

6.4.1 The Impact of E-Journals-

Usage statistics can provide granular or summary data. Although administrator will usually want general information about the impact of electronic journals, you may need to do some detailed analysis and collect data from other areas in the library in order to compile it. And you may need to work with granular data to obtain summary information. All of the following questions can be answered using usage statistics from your vendors and local data:

- How much use is your e-journals collection getting?
- Is there a significant difference in the amount of use of (1) the e-journals that were previously selected as print subscriptions and (2) e-journals that are newly available as part of online packages and full-text databases?
- How many users are browsing tables of contents and how many are downloading (or viewing) articles?
- How has the use of e-journals affected the use of your print journals?
- How has the expansions of your journal collection through e-journal acquisitions affected borrowing through interlibrary loan or the use of your document delivery service?
- What is the proportion of on-site and remote use of your e-journals?
- How much time can users save by using electronic journals rather than print journals?

6.4.2 COLLECTION MANAGEMENT AND ACCESS-

Those responsible for selecting, renewing, and providing access to electronic journals will want detailed information about how they are being used and about the
information-seeing behaviors of e-journals users. Careful analysis can indicate research trends, reveal subject areas that may need attention, and point out problems users might be having with navigation of electronic journals. Your answers to the following questions can help you provide better services and resources to your users:

- Which e-journals are used most heavily?
- Are some e-journals consistently not being used? Are there any patterns?
- If the library has a link resolver, is it being used?
- Are users being turned away from databases or journals that are licensed for a limited number of simultaneous users?
- Are subject lists of e-journals being used?
- Are alphabetical lists being used?
- Do your users prefer HTML or PDF formats when they have a choice?
- Which member libraries in your consortium are benefiting most from a consortial license for a package of e-journals? Should costs be shared differently?
- What kinds of terms are being entered into the e-journal search form?
- Are there any signs of a breach of a license agreement?

During license renewals, usage statistics are tools to help you negotiate prices and adjust the number of simultaneous users. The only way you will know whether a package deal is cost effective is to determine whether the “bonus” journals are, in fact, being used. Your analysis might prove that the a la carte option is better for your library.15

Data collections and analysis frequently out weight the promise that online resources will automatically generate accurate and usable usage data. However, librarians have found ways to use partial and imperfect data to answer some of the above questions, and the general situation is improving as standards are developed and implemented.

6.4.3 PUBLISHERS AND DATABASE VENDORS-

In the rush to make their content available online, to develop user interfaces, and to solve access problems, many e-journal provider neglected in the beginning to develop functional systems for reporting usage. For the first two or three years, they provided what data they could, and for the most part librarians, in their rush to develop delivery systems for electronic resources and solve local access problems, were not overly concerned with the inconsistency in what types of information
vendors were providing and the confusing formats of the reports the librarians received.

However, once things had settled down somewhat for publishers, vendors, and libraries, attention was turned to the need for usage measurement. E-journal providers developed a variety of systems for logging and reporting usage data, usually sending spreadsheets in electronic format by e-mail or in print format by mail, or posting reports on an administrative Web page made available to designated library staff. The main advantage of vendor based data is that e-journal providers can accurately and thoroughly log the details of your users’ interactions with their content on their servers.

Librarians did their best to collect and compile various forms of data from their many providers. It became immediately clear that the available usage statistics were “inadequate, inconsistent, and difficult to work with, unreliable” and that standards were lacking. Such shortcomings underline the validity of library usage analyses. These are some of the problems librarians have run into in working with data from e-journal providers:

- Some vendors do not supply any usage data.
- There is inconsistency among providers concerning what is counted- a lack of agreement on what constitutes a “session” or a “query.”
- Some vendors retain usage data on their Web sites for only a limited period of time.
- System crashes can result in data loss.
- A vendor’s upgraded system may be incompatible with an older system, resulting in the non-migration of data.
- Server caches designed to avoid repeated downloads (to conserve bandwidth and save time) will intercept and fill requests for pages before they reach the publisher’s site- and those downloads won’t be counted.
- One search in a segmented database can be over counted as a search in each segment.
- A single session will be recorded as multiple sessions if users inadvertently close a session before finishing (a common occurrence, since some databases invoke multiple windows and other do not).
- The format of some vendors’ reports will not allow for data integration.
- Double clicks can be counted twice in some systems.
Variations in user behavior can result in over counting (for example, an article download might be counted multiple times if a multitasking user clicks in and out of it more than once in a session).

Some vendors supply too much unprocessed data, which are then difficult or impossible to analyze.

Reporting periods vary - reports might be issued monthly, quarterly, annually, irregularly, or only on demand.

Usage data that are aggregated on a consortium-wide basis for consortially licensed e-journals may be unavailable for individual participating institutions.

Meta searching can result in inflated results, especially for “search” counts.

Some vendors include “zero-hit” searches and others do not.

A link from a database to an article at another site might be counted at both sites.

Some Web logs will count each page of a PDF download as a separated document.

In a full-text database, the citation page might include the entire articles; the user may not look at the full text, but it will be counted as such.

6.4.4 LOCAL DATA COLLECTION-

To simplify and standardize the collection of usage data, some libraries have devised methods for tracking the use of their e-journals from their own web pages. By so doing, they can monitor the use of all their journals, not just those from vendors that provide adequate statistics. However, they can learn only the most basic facts about usage, which is the number of times a particular journal is visited from the library’s web site of catalog users who access e-journals from outside the library’s web pages or catalog (for example, through a bookmark) will not be counted.

An e-journal provider can tell you how many times tables of contents are browsed or abstracts or articles are viewed, and how many searches are conducted in their database no matter how the users arrived at their site, and the number of runaways if limits are in place. Library-generated statistics can document the increase in usage over time with the understanding that actual use will be even higher. Locally collected web data can also help you enhance the ways that users find your e-journals.

STANDARDS AND GUIDELINES-
Statistics from vendors are potentially the most complete and reliable measure of the use of a library’s e-journal collection, and the library community agrees that standards are necessary to ensure compatibility. Vendors also welcome standards that will curb some of the variation in what are asked to provide to libraries. Organizations and agencies that collect and compare statistics from multiple libraries also seek to standardize the usage data that libraries report. Fortunately, several groups have created standards and guidelines for the collection and reporting of usage statistics for electronic resources, and the standards-producing groups are working together to ensure compatibility of their efforts. Asking vendors whether they comply with existing or emerging standards for usage statistics will encourage them to take these standards seriously.

6.4.5 OVERVIEW OF THE PROCESS-

Basically, you will be collecting manipulating, organizing, and translating raw data into meaningful reports. How you do that will depend on the complexity of the raw data and the purpose of your reports. There are some general steps you will want to follow:

1. Decide on the elements to be analyzed, the audience, and the purpose.
2. Collect the data from local and/or remote sources.
3. Normalize the format of that data that comes from more than one source.
4. Transfer/import data into appropriate fields of your data base or the columns and rows of your spreadsheet.
5. Sort the spreadsheet or design a report structure for optimal output that can be easily understood by interested parties.
6. Provide meaningful interpretations of the important data elements.

DATA COLLECTION, PROCESSING, AND ANALYSIS TOOLS-

The software tools that you use will depend on your systems, local availability and expertise, and the type of data you are processing using existing e-metrics, or clearly defined measures that meet industry standards, will ensure that statistics will be comparable to those from other institutions and that they will be collected consistently in subsequent years.

6.4.6 MAINTENANCE AND PRESERVATION OF DATA-

Often in libraries, a flurry of activity will result in a report that is needed for a specific purpose- a strategic plan, an annual report, or a budget request. This kind of report
is much easier to prepare when statistics are compiled and processed on an ongoing basics, but that is not always possible. Save any processed data and reports that have been compiled for comparison purpose and save your having to go back to that raw data if those same statistics are needed in the future. Once you have set up a process for entering data in a spreadsheet or data base, it is a good practice to input data as you receive it, or on a regular schedule, such as once a month.

**Shared Files and Intranets**

The easiest way to share a living repository of usage data is to make it available to your staff on an intranet or networked server. Questions about e-journals and their use come up in various parts of the library, and one type of report may not answer every question. Be sure to use controls so that data on the intranet can be updated by authorized staff but won’t be destroyed or damaged by unwitting visitors.

**6.4.7 Costs and Benefits**

One common approach to using statistics to support collection decisions is to calculate the cost per some kind of standard activity. The Arizona State University database mentioned above (Shim, Murphy and Brunning, 2004, p. 39) generates preformatted reports that show:

- Cost per search.
- Cost per connect time.
- Cost per turn away.
- Cost per full-text unit viewed or downloaded.
- Searches per session.
- Records viewed per search or session.
- Full content units viewed or downloaded per session or search.

Some caution is in order when using these kinds of ratios. A resource might be expensive and unique and supports a specialized group of researchers, and the cost per use might be high compared to the cost per use of an inexpensive general database. You would not necessarily think of canceling the specialized database. Cost-per-use data are often used in conjunction with other measures.\(^{18}\)
• If you are considering the cancellation of an expensive online journal, you might compare the cost per use to the cost of getting the same number of articles through a document-delivery service, or through subsidizing pay-per-view, if that is an option. You would need estimates of these other costs, and you would need to factor in the intangible tradeoffs such as immediacy and budgetary control.

• Your might want to compare the use of print and electronic versions of a journal, in which case you would need to estimate the cost of processing and binding the print journal and the cost of the space it will occupy.

References:


