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Online Ready Reference in Academic Libraries: Current Practices and a Review of Planning Issues

How does the staff of an academic library plan the introduction of online searching for ready reference services? A purpose of this article is to answer that question by describing the planning issues that appear in the literature of online ready reference. The article also reports on a survey that indicates online ready reference service has become common to many academic libraries.

Definitions

Online ready reference is the use of online searching services to answer ready reference questions. An example would be the use of a microcomputer at the reference desk for contacting DIALOG or OCLC for quick verification of an article title or the name of an author. It is possible to refine this definition so that it fits local interpretations of online searching and of ready reference. Thus, online searching in some libraries might mean only the searching of computerized indexing/abstracting services like those available on the DIALOG and WILSONLINE systems. In some libraries, online searching also might include the searching of what are called bibliographic utilities such as OCLC and RLIN. Searching for information in a computerized circulation system or even on a compact disc could be, for other libraries, an activity very much like online searching. The important point is that online searching involves looking for information in a computerized database. "Online" also usually implies that the database is in a computer that the user has access to only by using

telephone lines to connect his/her own computer or terminal to the database. However, this author is willing to accept definitions of online ready reference that involve databases housed right in the library such as in some circulation and compact disc systems. If the definition becomes broader, it might be useful in the future to consider a term like *automated ready reference* as a substitute for *online ready reference*.

Ready reference, whether or not it is online, is the supplying of brief factual information to a patron. As Katz (1974) has said about the service: "Average time to answer: one to five minutes. Average difficulty: nil ..." (p. 9). Online ready reference is the answering of brief information needs through the computerized systems mentioned earlier. Automating ready reference seems to add a facet to the definition of ready reference. Whereas a definition like the one by Katz has relied on time as a characterization of ready reference, a definition of online ready reference could mention location. The literature says that online ready reference takes place at or very close to the reference desk because that is where the computer or terminal is. For example, Brownmiller et al. (1985, p. 321) report some of their online ready reference terminals to be in offices adjacent to or in library reference areas. Root and Glogowski's (1983) definition places online ready reference "at the reference desk while the patron waits" (p. 5), and Hitchingham et al. (1984) say the questions are "presented at a reference or information desk" (p. 45). Note that the latter two definitions leave open how far away from the desk the terminal or computer is. This author feels that characterizing online ready reference by the briefness of the service is much more important than where the searching equipment is. In a given library, a service deserves to be called online or automated ready reference if it is indeed online or automated, as discussed earlier, and if it handles questions of the type traditionally felt to be ready reference questions. One can accept the service as being online ready reference even if the searching terminal or computer is not right at the reference desk.

Later in this article it will be necessary to compare online ready reference with other online searching. The term *formalized online searching* suggested by Hitchingham et al. (1984) is used for online searching that is not done for ready reference. The word *terminal* is used to refer to the searching equipment that might be either a terminal or a computer with communications software.

Surveying Online Ready Reference Practices

When planning for a library service, librarians sometimes investigate whether the service is offered at other libraries. The literature reports very few surveys of online ready reference in academic libraries. Yet one can read that "it was likely that a number of libraries were involved" in online ready

reference (Hitchingham et al., 1984, p. 44); "many libraries are now attempting to integrate at least brief and specific online searches with traditional reference desk service" (Miller, 1982, p. 270); "databases are extensively used in ready reference" (Rice, 1985, p. 301); "many academic... libraries now have terminals or microcomputers at the reference desk for online ready reference services" ("Lapsize Microcomputers," 1984, p. 2). The lack of surveys and the claims of use led this author to create a survey to test those claims.

Previous Survey Results

The one previous major survey of online ready reference came about because "there have been relatively few reported uses" of online ready reference (Hitchingham et al., 1984, p. 44). In 1981, Hitchingham et al. (1984) found that 219 (44 percent) of 495 respondents "had used online databases for reference activities 20 or more times in a six month period..." (p. 45). In 1982 the same authors received 180 responses from these users who told about the nature of questions handled, the length of searches, the success of answering questions, and other matters. About half of the libraries surveyed by Hitchingham et al. were academic libraries.

Other surveys have been quite limited. Mosby and McKinney (1983) found that twenty-five of fifty-nine academic libraries in Georgia offered online services, and sixteen (27 percent of the fifty-nine libraries) had online ready reference (pp. 4-6). Root and Glogowski (1983) found that of fifty-two academic libraries in New York state, nineteen (37 percent) offered online ready reference (pp. 6, 14).

The Present Survey

Academic reference librarians were asked if they performed online ready reference searches. In particular, the survey investigated whether the percentage of use was at least equal to the 44 percent obtained in 1982 by Hitchingham et al. Such a result would seem to support a claim that online ready reference is a rather common activity especially since Hitchingham et al. surveyed all library types and the present survey included only academic libraries.

A postcard survey was sent to 554 libraries. Selection of the libraries was according to a stratified random sample based on the number of academic libraries in each of fifty-four areas of the United States: the fifty states, District of Columbia, Pacific Islands, Puerto Rico, and Virgin Islands. The 554 libraries represented about a 10 percent sample of the 5,592 academic libraries listed in the thirty-ninth edition of the *American Library Directory* (1986). Data for the area by area stratification came from the thirty-first edition of *The Bowker Annual of Library & Book Trade Information* (1986, pp. 396-97). For example, the 1986 annual reported that

academic libraries in Alabama comprise 1.9 percent of all those in the United States. Multiplying 1.9 percent by a planned sample size of 559 determined that eleven Alabama libraries received surveys. (The planned sample size was 559; applying the stratification method and rounding off multiplication products resulted in a total of 554 libraries being sent the survey card.) A random number table helped determine which eleven records in the Alabama section of the *American Library Directory* were to be the recipients. A failing of the method is that the annual and directory count libraries differently, probably at least because of the manner in which they total departmental libraries. Thus, the directory listed 5,592 academic libraries in the United States (pp. x-xi); while the annual reported that there were 3,249 academic libraries (p. 396).

Survey Questions

In January 1987 each library in the sample received a three-question postcard survey and a cover letter. The postcard asked: (1) if the library had performed online ready reference in the past six months; (2) if so, which vendors or systems were used; (3) if not, whether the library, in the past six months, had performed any online searches. The cover letter consisted mostly of a definition of online ready reference. The definition drew from definitions by Hitchingham et al. (1984) and Root and Glogowski (1983). Borrowing parts of previous researchers' definitions enabled some of the results of this survey to be compared with those of Hitchingham et al. Thus, although this author felt that using compact disc services for ready reference could be included in a library's online or automated ready reference work, he followed the intent of Hitchingham et al.'s definition and required the survey respondents not to consider compact disc systems. However, Hitchingham et al.'s definition was extended by including bibliographic utilities like OCLC and RLIN as well as online catalog and circulation systems as sources for respondents' ready reference service. Access to such systems is indeed online.

According to the formal definition for the survey cover letter, online ready reference is the use of online search services to answer questions at a reference or information desk while the patron waits. The search often takes only a few minutes. The service usually, but not always, is used to retrieve or to verify a specific item of information related to the patron's question. Typical online ready reference vendors are DIALOG, BRS, OCLC, RLIN, WILSONLINE, and others. Another online ready reference source can be a library or library system online catalog/circulation system.

The Respondents

Of the 554 libraries in the sample, 440 (79 percent) responded by March 15, 1987. The responding libraries, arranged according to the *American*

Library Directory (1986, p. x) categories, were: 123 junior college nondepartmental, nonspecialized libraries; 234 university and college nondepartmental, nonspecialized libraries; and 83 departmental or specialized academic libraries. (For the remainder of this discussion, "junior college" libraries and "university and college" libraries will mean nondepartmental, nonspecialized libraries. The article will refer to departmental and specialized libraries simply as departmental libraries.) Among the eighty-three departmental libraries were twenty religious, thirteen medical, three law, and forty-seven other libraries.

Results and Discussion

Of the respondents in the sample, 213 of 440 (48 percent) reported that they had performed online ready reference between July and December 1986. This finding was similar to the 44 percent of the 495 respondents that Hitchingham et al. found to be using online ready reference. Online ready reference was most common in university and college and in departmental libraries, with more than half of the respondents in each of those two groups providing online ready reference services. Only about one-quarter of the junior college respondents used the service, however (see Table 1).

Does having had formalized online searching service commonly lead to a library providing online ready reference? This seems to be the case if one assumes that a library with both services introduced the formalized service before the ready reference service. All categories of libraries in this survey reported that 70 to 80 percent of those offering any kind of online searching also offered online ready reference.

Why do some libraries not offer online ready reference? The only possible answer the present survey could test was that such libraries simply did not offer any form of online searching services. That indeed seemed to be true for about two-thirds of the respondents not offering online ready reference. The author had no indication from his results as to why of 282 respondents offering any online searching that there were sixty-nine libraries also not offering ready reference searching.

What are the most commonly used online sources? With one exception, all library categories using online ready reference relied far more heavily on DIALOG and OCLC than on any other system. Of 213 libraries providing online ready reference, 155 searched DIALOG and 147 searched OCLC at least once for ready reference during the six months covered by the survey. The exceptions to this trend were the eight medical online ready reference users for which the most commonly used vendors were DIALOG and the National Library of Medicine which were used by five libraries each.

So those planning for online ready reference service should know that the service is one common to many academic libraries, and apparently the

Table 1
Academic Libraries Offering Online Ready Reference Services
July-December 1986

<i>Service Offered</i>	<i>123 Junior College Libraries</i>	<i>234 College & University Libraries</i>	<i>83 Depart- mental Libraries</i>	<i>440 Total Libraries</i>
Any online searching	45	179	58	282
Online ready reference searching	31	136	46	213
Online ready reference via the following vendors or systems:				
DIALOG	18	110	27	155
OCLC	16	100	31	147
BRS	8	52	15	75
WILSONLINE	8	25	6	39
Online catalog and circulation systems	2	19	8	29
Research Libraries Information Network	0	14	10	24
National Library of Medicine	1	6	6	13

Other vendors or systems and the total number of libraries (in parentheses) using them for online ready reference: VU/TEXT (9), Mead Data Central (7), SEARCH HELPER (7), Western Library Network (7), Dow Jones News/Retrieval (6), DataTimes (4), System Development Corporation (4), WESTLAW (4), STN International (3), Classification and Search Support Information System (2), Agricultural Computer Network (1), Chemical Abstracts Service (1), CompuServe (1), EasyNet (1), Electronic Legislative Search System (1), NASA/RECON (1), Pergamon InfoLine (1), and Questel (1).

Also, 6 libraries reported using online ready reference systems that might not satisfy the definition of online ready reference given in the cover letter: ERIC on compact disc (1 library) and miscellaneous local systems (5 libraries). The author has included these 6 libraries in the "Any online searching" and "Online ready reference searching" lines of this table.

number of libraries offering it is growing. Hitchingham et al. found that 44 percent of libraries receiving the *BRS Bulletin* offered online ready reference, for that publication was their means of reaching potential online ready reference users (Hitchingham et al., 1984, p. 45). And the present survey found that 48 percent of respondents used online ready reference. This is an important increase at least because the population surveyed extended beyond those known to be users of online searching services, and still the percent of libraries using online ready reference increased.

Planning for Online Ready Reference: A Literature Review

Reading the literature of online ready reference is a way for reference

staff to plan for it. Learning how others have planned and implemented the service can help in decisions about the service including whether or not even to offer it.

The very size of a body of literature can give readers a feeling for how popular, commonplace, or untried a service might be. Rice (1985, p. 301) reports that in the early 1980s a "rash" of articles discussed online searching as an aid to reference work. However, as the reference list at the end of this article indicates, since that time the literature has grown slowly. This is so even though a comparison between surveys done by Hitchingham et al. (1984) and by this author indicates a growth in the service itself.

The small size of the recent literature could imply that formal planning for online ready reference (and hence article writing by those who do such planning) has not been widespread in academic libraries. Hitchingham et al. (1984, p. 47) reported that about half of the 177 respondents let online ready reference services evolve out of formalized online searching. Evolution of a service implies little formal planning. It suggests that the service comes into existence very naturally because it is so much like what a library already had done before the new service existed. Perhaps online ready reference evolves out of formalized online searching as the time between some formalized requests and the actual searches gets shorter and shorter; perhaps a terminal used for searching gets closer and closer to the reference desk; perhaps some of the questions answered online require briefer and briefer pieces of information to be retrieved; perhaps there are more and more occasions of a reference desk staff member hurrying to the formalized search service terminal to do a quick search for a waiting patron. At some point, formalized online searching has evolved into a service that permits some searching to be done at or near the reference desk while the patron waits for brief, factual information. The evolution can happen without planning. It does seem to require, however, a library environment that permits staff members to try new things, even if what is new is only somewhat different from what has taken place previously.

If online ready reference evolves as a service, then it is not surprising that an increase in use of the service has not been accompanied by an increase in related article production nor by an increase in formal planning. Evolution rather than formal planning for the service might be especially common in libraries that had done detailed planning a decade or so ago while preparing for formalized online services. Why plan today for a service that, in part, was planned for a decade ago? Awareness of online services today could be so common even for libraries still without their own online services that planning, in general, is rarely as intense as it had been for those libraries that introduced online services when the technology and the service were new.

Guidelines for an Online Ready Reference Service

Almost any article on online ready reference discusses guidelines because even those who do not formally plan for online ready reference

searching can develop guidelines for its use, whether the guidelines be written or implied, whether or not the guidelines evolve as informally as the introduction of the service. Guidelines cover such issues as: deciding whether to use online ready reference to answer a reference question, cost of the search, which patrons are eligible for the service, length of the search, the amount of information retrieved online, how soon to do the search, and which vendors and databases to use.

Deciding to Do the Search

Online ready reference is appropriate if doing the search satisfies all or many of the guidelines discussed in this section. But a first consideration, according to some authors, is deciding that online ready reference is to be preferred to a manual search. Online ready reference is appropriate if the library has inadequate or no appropriate paper resources to answer a question (Brownmiller et al., 1985, p. 321). For small libraries, online ready reference simply might be a method to increase the level of reference services (Rice, 1985, p. 301). Or the service can be appropriate if it is the most efficient way to use the reference staff's time (Chenoweth, 1982, p. 123).

Expectations can affect the decision on whether to do an online ready reference search. Whether such reasoning is logical or proper, expecting to do much online ready reference could lead the reference desk staff to such searches even when only a few of the guidelines are met. Lower expectations perhaps force the staff to be demanding about guidelines being met. But it is not clear what the expectations of search frequency should be. Hitchingham et al. apparently have been unique in providing data on how frequently to expect online ready reference searches. They found that online ready reference questions in academic libraries amounted to only 1.31 percent of the general reference questions handled in those libraries (Hitchingham et al., 1984, p. 49). If these findings are typical of academic services today, reference staff expectations should be that, although online ready reference is a service common to many libraries, it is a relatively infrequent activity. That information ought to help the staff plan for the service or even decide that not much effort need be expended in planning.

Cost

Some authors consider the estimated cost of a search to be a guideline. If the topic of a request makes it a candidate for an online search, then the reference desk staff member who handles the question can attempt to predict how much the online cost will be for the search. If this predicted cost is above some limit, the search is referred to the formalized online search service. Assistance for making this decision and even the basis for establishing a specific guideline comes from the few reports of actual

online ready reference costs. Such average costs for an online ready reference search have ranged from \$3 (Chenoweth, 1982, p. 122) to \$4.51 (Brownmiller et al., 1985, p. 322).

Eligibility

The literature says little about which patrons are eligible for online ready reference service. This implies that the service is so clearly one provided at the discretion of a librarian that deciding to do the search because it saves the library time and money or simply replaces inadequate print sources outweighs any consideration of the status of the patron. Chenoweth (1982) is probably typical of those who think about eligibility guidelines saying that the service is available to students, faculty, and staff of the college or university served by the library (p. 123). For libraries that perform online ready reference only for patrons who meet an eligibility test, it is not clear what happens when a patron is ineligible but online ready reference is otherwise appropriate. Perhaps the search is not done at all. Alternatives to omitting the search would be to refer the patron to the formalized search service (if eligibility requirements are less stringent for that service) or to do the online ready reference search and charge the patron for the service. However, none of the literature read by this author suggested that there ever was a charge for online ready reference.

Search Length

An estimate of the online time it would take to answer a user's question helps the searcher decide whether or not online ready reference truly is to be preferred to a manual search or to a formalized online search. If the estimate for a potential search is more than, say, five minutes online, then the reference desk staff could decide to handle the search manually or refer the patron to the formalized search service. Search length is a guideline even when it already has been decided to do the online ready reference search for this provides an estimate of when to stop if the required information is not being retrieved online. Such a time limit affects other characteristics of the service such as limiting the number of databases there is time to search and the number of references or amount of information there is time to retrieve. If the search ends without retrieving any or all of the needed information, a formalized online search and/or a manual search still are options.

Search length, either as recommended by guidelines or as determined by timing individual searches, has been reported by Brownmiller et al. (1985) to range between one and five minutes (p. 321), by Chenoweth (1982) to be four minutes (p. 122), and by Hitchingham et al. (1984) to average 6.6 minutes in their survey of various library types (p. 49).

Amount of Information

As implied earlier in this discussion, an online ready reference search often retrieves a small amount of information. The literature expresses this by counting citations retrieved during a search thereby reminding one of the dominance in online searching of bibliographic databases—i.e., databases that correspond to printed indexing and abstracting tools. Suggestions and actual counts of search results report that patrons often receive no more than ten citations per search (Chenoweth, 1982, p. 123; Brownmiller et al., 1985, p. 321), with the limit sometimes being only one or two citations or a few good references (Friend, 1985, p. 25).

However, counting citations is not the only way to measure the amount of information retrieved. Because online ready reference sometimes requires retrieving a specific piece of information, like a date or a definition (Chenoweth, 1982, p. 123), the guidelines can state that obtaining that piece of information signals the end of the online search. Certainly finding one piece of information can extend rather than end a person's information needs. But online ready reference probably is not meant to be the means to such extended searching of topics related to the original information need. So, if information found via online ready reference sparks an interest in the patron for further searching, that patron might be able to pursue the research manually or through a formalized online search.

How Soon to Do the Search?

It seems that an online ready reference search occurs almost immediately after the reference desk staff decide a search is appropriate, for rarely does the literature say otherwise. However, Chenoweth has suggested that when the reference staff is very busy, immediate service might only be possible if one reference staff member can deal with other patrons while another does the online search. Delaying the search, say for an hour or more, and then leaving the results at the desk is also a possibility for the busy reference staff member who has no colleague to handle other patrons (Chenoweth, 1982, p. 123).

Thus, how soon to do a search often depends on how the staff decide to share services between types of patrons. This contention for service between the ready reference patron and other patrons sometimes is actually a contention for equipment. As will be discussed later, one terminal might be available both for online ready reference and for searching of the library online catalog or circulation system. If so, the staff might postpone an online ready reference search because the search would tie up reference desk access to the online catalog during a busy time of day (Chenoweth, 1982, p. 123).

Which Vendors and Databases to Use

As Hitchingham et al. (1984) found out, reference staff place "rela-

tively few restrictions" on which vendors and databases to use for online ready reference (p. 47). Friend (1985) did suggest that experienced searchers have ready reference access to BRS, DIALOG, OCLC, and WILSONLINE (p. 25), and Brownmiller et al. (1985) reported their most frequently used databases to be ERIC, NTIS, DUN'S MARKET IDENTIFIERS, GPO MONTHLY CATALOG, and AGRICOLA (p. 323), but deciding which vendors or databases not to use for ready reference probably is simply a matter of avoiding online sources that violate the guidelines listed earlier. For example, searches in expensive databases, like some of those that provide business and financial information on companies, would be more appropriate for the formalized searching service than for ready reference despite the need for specific information about a single company. The staff might decide that potentially expensive searches, even if they are brief, deserve a less hectic atmosphere for preparation and patron negotiation than the reference desk. Searches in a large database during the vendor's busy time of day might also be avoided at the reference desk. For example, looking for a single citation via title words that occur frequently through all of an online version of *Chemical Abstracts* during a busy period might take so much processing time by the vendor's computer that the search surely would violate the guidelines for length of search. In this case, it might be wise to postpone the ready reference search for a less busy time or refer the patron to the formalized search service.

Question Types

Planning for online ready reference can go beyond setting up guidelines. Being aware of the nature of the service and of the support it requires helps a staff to decide if and when to introduce the service.

One of the most straightforward ways to characterize online ready reference is to describe the kinds of information needs or questions it responds to. Reports on the types of questions answered by this service also provide a means to decide whether or not online ready reference is appropriate for a given patron's information need, for question types often handled by the service probably are the questions that tend to fit the guidelines listed earlier. These commonly occurring question types tend to require short periods of online time, small amounts of online costs, and brief retrieval of information.

The online ready reference literature most often mentions the following question types or information needs: bibliographic verification (Brownmiller et al., 1985, p. 325; Friend, 1985, p. 25; Hitchingham et al., 1984, p. 48), current information, obscure information, complex information, information that requires coordinating several search concepts or terms, information for which no printed sources exist in the library (Brownmiller et al., 1985, p. 325), definitions, directory information

(Friend, 1985, p. 25), and material written by given authors (Hitchingham et al., 1984, p. 48). Hitchingham et al. (1984) grouped many of these question types and reported that the "fact/subject" search was most common with bibliographic verification the next most common (p. 48).

Bibliographic verification refers to, for example, retrieving the complete citation to an article for which the patron only remembers a small part of the citation like a few words from the title. Searches for current information can satisfy needs for references to articles published too recently to have been indexed by any of the printed sources on the library shelves. Obscure topics, such as those on which very little has been written, might require online ready reference to retrieve quickly the one or two references that do exist. It is possible in this case that the online search would find quickly that nothing relevant seems to be available on an obscure topic; that information is useful to the patron, too. Complex topics that require coordinating several concepts—such as finding information on the tendency of hyperactive children to become substance abusers as adults—might be much more feasible online than in a manual search. However, there remains the question of whether a complex topic would result in a search that is brief enough for ready reference status.

Record Keeping

If online ready reference is a brief activity, it makes sense that logging the activity should be brief too. Complex logging would offset some of the time savings attained by doing the search online. In any case, there might not be time to keep detailed records at the busy reference desk. Record keeping for online ready reference might need to provide only enough data to enable the staff to reconcile vendor invoices and to evaluate the service. The logs reported in the literature might well be more extensive than those at libraries not described in the literature since preparation for writing the article about the service might have required data not needed for day-to-day operation of the service. Brownmiller et al. (1985) included the following in their logs: search number, date, searcher initials, vendor, file(s), total costs, and question type (p. 326). However, at the author's library, only the date and searcher's name are required with costs and file name(s) recorded only if there is time to do so.

If record keeping is needed solely for verification of vendor invoices, vendors' interfaces or in-house software added to the communication software at the reference desk might be sufficient for collecting log data (Friend, 1985, p. 26). This author suggests that libraries having multiple passwords consider devoting one password to the ready reference area so that when invoices arrive, all online ready reference searches might be listed together on the invoice thus easing verification of the bills.

Rice (1985, p. 302) has asked if tallies of reference desk interactions

ought to include online ready reference searches. One could also ask if these searches should be included with formalized online search statistics. The basic question seems to be: is ongoing data collection needed to evaluate online ready reference services? If so, then online ready reference interactions should be tallied separately from other reference desk statistics. The staff still could add the online ready reference data to tallies of interactions at the desk and/or to the number of formalized searches performed.

Search Aids

Surely many libraries that have separate areas for online searching have one or more shelves loaded with vendor manuals, thesauri, and other searching aids. Some of these items would be helpful at the reference desk for online ready reference (Friend, 1985, p. 25). Room for and maintenance of these materials could be a chore for some, and so reference staff might feel comfortable with no more than vendor catalogs to help decide which databases to use. Manuals and thesauri might not be necessary if searches are very simple and if only a small collection of databases is being used at the desk.

Reference Staff and Change

Brownmiller et al. reported the fears of a reference staff that is about to change from manual ready reference to manual and online ready reference. There is the fear of being inundated with inappropriate requests. For Brownmiller et al. (1985), the staff was not inundated at all (p. 325). For Friend (1985) the "very visibility" of this service could result in some "inappropriate demands from patrons" (p. 25). There is the fear by reference desk staff who have not been formalized search service searchers of how well they will recognize a given patron's need for an online ready reference search (Brownmiller et al., 1985, p. 325). There is even the fear of the very process of doing the search. This last fear could exist when the online ready reference searcher is a novice and infrequent searcher—i.e., being one who does not do formalized online searching. Fear of the search process itself could exist also for experienced searchers because of the thought of doing a search at the busy reference desk.

Some fears might be groundless, especially if reference staff are quite able to distinguish among reference questions that do not need online searches, those that do need formalized online searches, and those that require online ready reference. Some fears can be allayed, perhaps by regular update training sessions for the desk staff. Hitchingham et al. (1984) suggested that such sessions could engender a "feeling 'at ease' with online ready reference" (p. 46). However, it is not clear if ready reference searchers' training needs differ from those of formalized online searchers.

Online ready reference and other automated services not only have the potential of eliciting fear in some, but they can also do just the opposite and increase reference staff pride and confidence. As Miller (1982) has suggested, online ready reference "enhances the image of the librarian," who can now quickly answer some questions that might have been impossible to respond to before introduction of this service (p. 277).

Equipment

Online ready reference can occur at a reference desk terminal, or near the desk, or even remote from the desk. At the desk the ready reference service might share a terminal with some other piece of library automation such as an online catalog or circulation system. Indeed, at the desk the reference staff certainly can satisfy some ready reference needs, like bibliographic verification for books, by using online catalogs and circulation systems. When the library adds to automated catalog or circulation services the ability to do ready reference via online vendors like DIALOG and OCLC, it might be necessary to add a separate terminal to handle communications to these vendors. An alternative to separate terminals for the catalog or circulation system and for communicating with off-site databases is to have a physical or software switch that permits the reference staff to use one terminal for other tasks (Friend, 1985, p. 24).

Online ready reference done at a terminal that is not at the reference desk was typical at least at the time of the survey by Hitchingham et al. (1984) who found that this searching seldom occurred at the desk and at best occurred at a place "easily accessible to" the reference desk. According to that survey it was likely that this remote terminal had a primary function other than online ready reference (p. 47). Root and Glogowski (1983) confirmed this, for their survey of New York academic libraries did not even ask if the ready reference terminal was at the reference desk; instead it asked if the terminal was "near" the desk. Most libraries doing online ready reference answered "yes" to that question (p. 14).

Security

The reference desk is a public place. Passwords that appear on the terminal screen or that are observed as a patron types might compromise the security of vital information (Friend, 1985, p. 25). Some automated logon procedures prevent seeing password information at the desk.

Effects of Online Ready Reference

Miller (1982) wondered how online services "at the reference desk affect public services staff, patrons and the overall reference operation" (p. 273). This is an important planning issue because examining the probable

effects of introducing a service is one means of deciding whether to offer the service or deciding in what form to offer the service. This is an important planning issue even if there is no doubt that the service will soon be introduced because it enables the staff to prepare not only for the service itself but also for its effects. One such effect could be a change in the physical patterns of searches done by the reference desk staff. For example, there might be less walking between the reference desk and paper resources. Verification of subject headings, authors, and titles could occur first at the desk terminal before sending or going with the patron to the card catalog, shelf, or other paper resource (Chenoweth, 1982, p. 122). A conceptual rather than physical effect on searching patterns could be a change in the point at which one stops helping a patron. Perhaps the availability of online ready reference will lead the reference staff to not give up as soon as before online ready reference when faced with needs for brief but obscure or difficult to identify information. The effect here is a raising of expectations, and it could affect both patrons and reference desk staff. Patrons served by online ready reference once could be more likely than ever before to put reluctance aside and take even the most obscure needs to the reference desk. Raised expectations might create frustrations that would not have existed before online ready reference. Patrons and some reference desk staff might perceive the service as a panacea and be disappointed when it does not satisfy an information need.

Of academic libraries in Hitchingham et al.'s (1984) survey, 30 percent claimed that "availability of online databases had been a direct factor...in the cancellation of subscriptions" (p. 48), but it is not clear if availability, especially via online ready reference, was an important factor. Because this service apparently accounts for such a small portion of reference transactions, it probably is unlikely that online ready reference by itself causes many journal or index/abstract cancellations. Yet online ready reference might be an important factor in deciding against beginning a subscription to a printed source. If the advantages and disadvantages of paper versus online formats are otherwise balanced, online ready reference availability could lead to a decision not to subscribe if one of the disadvantages is low potential use of the printed tool.

Finally, as implied by Brownmiller et al., introduction of an online ready reference service can affect the entire online searching service. It can lead to the entire reference desk staff becoming able to do at least some online searching (Brownmiller et al., 1985, p. 325).

Evaluation

Rice's (1985) review found that "no reports of evaluations of ready-reference searching have appeared as part of collection of services evaluations" (p. 302). So, the study by Hitchingham et al. was unusual in that it

asked for ratings of how well questions were answered by online ready reference services. Apparently some responding libraries performed these evaluations only because the survey requested it. Two-thirds of the 413 online ready reference questions evaluated by all library types were reported as successfully answered. The other one-third of the questions were almost equally divided among questions answered somewhat successfully and those answered unsuccessfully (Hitchingham et al., 1984, p. 49).

Evaluating the service is like record keeping for the service because time and effort spent on either process could overshadow the savings obtained by using the service. Evaluating especially a new service is important, but reasonable methods are needed like doing the evaluations during sampled time periods rather than all the time, and using the staff's opinions and reactions to the service in addition to collecting statistics.

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