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Competencies Required of Public Services Librarians to Use New Technologies

The classic dichotomy within librarianship roughly divides the profession's functions into two—the technical activities of acquiring and organizing recorded information on the one hand and on the other hand the public assistance to interpret and disseminate this stored information. Within this setting, the main function of public services librarians is to help library users to acquire needed information. To do so involves personal interactions, interpretation of needs, retrieval of information, and delivery of documents, facts or directions.

Does the utilization of new technologies which are appearing in libraries demand the development of new competencies among public services librarians to perform their function? Are we in the midst of a revolutionary change whereby “the availability of online bibliographic searching has created demand for librarians with new skills and expertise.”¹

This quote is representative of much of the literature which heralds the arrival of and demand for a new breed of librarian—one equipped with new skills to use the technology. A digestion of some of this literature, however, within the larger framework of what it is that public services librarians do, suggests that most of the identified requirements for successful functioning are identical to earlier expectations. This paper thus proposes that the basic competencies required of public services librarians to perform their primary functions today are the same whether or not automated resources are used. Yet the utilization of such tools has placed a greater focus on the librarian's accountability and perhaps for the near future has increased user dependency. The byproducts may be examined in light of other services provided.

The aim of this paper is to review the competencies required of public services librarians to utilize the new technologies. This review will consist of (1) an identification of basic public services librarians' competencies, (2) a consideration of where the present impact of technologies is most felt within public service activities, and (3) a discussion of how online retrieval technologies have affected the attainment of the basic public services competencies.

Two difficulties with a topic such as this one are that drawn conclusions change dependent on one's time perspective, and that we have various thresholds for mediocrity. My observations are based on my current perceptions of the past and the present. They are also based on a practitioner's experiences and what is undoubtedly not an exhaustive review of the literature. Proposed observations are made based on the present state of technology in libraries. A few speculations concerning future trends and the subsequent effects on public services librarians' competencies will be restricted to the end of this paper.

I had difficulty with the concept of competency itself. My first association with the term *competent* is that it is an evaluative, generally complimentary adjective describing a level of ability engendering trust, confidence and respect of the person demonstrating the competency. And yet the dictionary defines *competence* as adequacy or sufficiency. One who is competent is "adequate but not exceptional." My perspective thus dropped to focus on minimal requirements and not ideals. I agree with Jose-Marie Griffiths that a base level of basics needs to be recognized and in turn used to qualify requirements to accomplish our tasks and to facilitate design of training programs. However, as a manager of a service requiring the personnel resources of professionals, I aim higher and seek qualities that go beyond minimal requirements. My difficulty however is to express that expectation in measurable terms. Qualities such as service attitude, potential for growth, commitment to common goals, creativeness, and intelligence are indicative of the evasive nature of the topic.

Identification of Public Services Competencies

To accomplish their primary function of linking users to needed information, public services librarians must master various skills. These might be categorized into five basic types of competencies, including the abilities (1) to communicate with others, (2) to analyze needs, (3) to retrieve data, (4) to instruct users, and (5) to manage operations and supervise staff who provide services.

This particular categorization is based on impressions from the limited literature on the topic I was able to identify and from considering the public services activities. The indexed literature was searched online

and manually for material on professional competencies and very little was found. In addition, staff of the American Library Association (ALA) Reference and Adult Services Division (RASD) and the Office for Library Personnel Resources were contacted. A search of the ALA Archives was also conducted by staff of the University of Illinois at Urbana-Champaign Library Archives.

An excellent review of the literature prior to 1978 relating to the topic is summarized by Suzanne H. Mahmoodi in her Ph.D. dissertation entitled, "Identification of Competencies for Librarians Performing Public Services Functions in Public Libraries." She describes four approaches taken in the literature: (1) concerns related to library education; (2) design of accreditation, certification or standards to upgrade the profession; (3) differentiation between levels of staffing; and (4) identification of components of a job.² Mahmoodi makes several pertinent observations:

Accrediting library education programs, and establishing qualifications for certification, both of which must reflect the standards specified by professional organizations, for the most part have not focused upon development of statements of competencies expected of individuals, but instead upon the production of generalized statements on the educational background of members of the profession.³

As to accreditation, since 1957 the ALA accredits only the entry level professional programs at the master's level and the process—purely voluntary—has no legal sanction. Certification, the recognition by an agency of an individual who meets predetermined qualifications, typically may include completion of a set amount of work experience. Mahmoodi identifies only two library associations which perform certification in the library field: the American Association of Law Libraries uses academic background and/or work experience, while the Medical Library Association uses academic background and competency based testing of performance. School librarians are certified in all fifty states, usually by State Boards of Education. Public librarians certification is on the state level and is not standardized. Standards tend to be guidance for library service, not of competencies of those offering the service.⁴ Mahmoodi concludes that statements on competencies point to a specialized body of knowledge broadly defined, usually acquired through special training. The few organizational attempts to identify competencies, according to Mahmoodi, tend to be on amounts of training and experience needed for a position.⁵

More recently when consulted, the RASD staff identified one recent organizational attempt to list competencies. The Young Adult Services Division (YASD) of ALA developed "a list of competencies which librarians working with young adults in any type of information agency should be able to demonstrate." The list was developed by a committee in 1981 and

is published in the September 1982 issue of *School Library Journal*.⁶ Seven areas are noted:

1. leadership and professionalism (i.e., attitude and commitment),
2. knowledge of client group,
3. communication,
4. administration—planning and managing,
5. knowledge of materials,
6. access to information, and
7. services.

Six specifics are noted under “services” including such abilities as utilizing techniques, providing information services (including crisis intervention counseling along with online databases), instructing young adults, encouraging use, etc.

Furthermore, most enumerations of qualifications have been based on informed opinion rather than systematic research. Two exceptions to this last summary are Mahmoodi’s study and an earlier one conducted by Anna Hall entitled “Selected Educational Objectives for Public Services Librarians: A Taxonomic Approach.”⁷ Mahmoodi’s study uses a goal-analysis procedure whereby the burden of identifying required competencies for public services jobs rests with incumbents. Hall’s study attempted to identify “abilities” also by surveying public services librarians and then comparing these to five library school curriculums. Based on her 1968 research, Hall concludes that subjects important to public services generally are not taught and those that are taught are presented at an awareness level only. Courses aimed to develop higher skills were usually electives and thus were missed by most students. Finally she notes that instruction stresses factual knowledge, neglecting the complex intellectual skills required.⁸

Mahmoodi’s survey conducted in 1976 among Minnesota public libraries identified fifty-three competencies, grouped in five categories: (1) the ability to identify individual and community information needs; (2) the ability to select, package and provide information; (3) the ability to evaluate services; (4) the ability to manage services; and (5) the ability to have general skills and attitudes conducive to provide public services activities.⁹ Interestingly, Mahmoodi found that:

in responding to the questionnaire individually, they rejected one skill—ability to conduct effective searches of machine-readable data bases—as of no importance (not needed) for current practice. They accepted all competencies as of at least some importance for ideal practice.¹⁰

Hall however, as Mahmoodi notes, identified a related competency, “to know which are the tried and proven applications of machines and equip-

ment to the automation of specific library procedures as well as what new applications are presently being tested."¹¹ Mahmoodi concludes from the results of her research that, "competencies related to selection, organization and dissemination of information, knowledge of the community, interpersonal communication and supervision are perceived as of great importance to current practice." Also attitudes are seen to be equally as important to public services librarianship as knowledge and skills.¹²

A historical review of reference services by Thomas Galvin appearing in the *Encyclopedia of Library and Information Science*¹³ traces a few trends which contribute to today's concept of what reference librarians aim to do. Although reference is only one component of public services, it is perhaps the most representative and traditionally the most identified public services function.

As Galvin points out, historically the function of reference work during the nineteenth century included assisting students, developing the role of the library as an educational institution, helping the reader make the best reading selections, and justifying the library's existence by demonstrating its value to its funders.¹⁴ The twentieth-century development added the growth of separate departments dedicated to reference services coupled with the emergence of subject divisions which decentralized the reference function and developed central "ready reference" service. The growth of the special library movement also greatly improved reference services in subject settings.¹⁵ Galvin characterizes a minimal level of reference services held in common among all types of libraries today to include (1) assistance and instruction in library use, (2) assistance in the identification and selection of materials relevant to information needs, and (3) providing brief factual information (ready reference).¹⁶ His list of activities which are offered in settings of amplified service may extend the traditional "reference services" role to that more all encompassing "public services." These activities include compiling literature searches, preparing user guides and selection aids, constructing special indexes, interlibrary loan, abstracting, translating, selective dissemination of information tailored to personal profiles, and editorial and publishing services.¹⁷

These activities share a few components which essentially characterize public services in libraries. Primarily, they involve personal interaction with the user, initially to gain input on his information need and subsequently, and to varied degrees, to deliver the information, to obtain feedback, and on occasion to promote the library resources through instruction or marketing. Second, the common component involves the intellectual process of translating the user's statement of need to the framework of the resources which may store the desired information. Third, a resource is somehow selected, examined and information sought in it, effectively done only if the resource is well understood. Finally, a tradition of most public

services is to assist the user toward becoming self-sufficient in acquiring information, and thus librarians tend to share their knowledge of how to do it. To accomplish these activities, the abilities required (as noted earlier) are those to communicate, to analyze, to retrieve, and to instruct.

Let us briefly identify specific skills falling into each of the five proposed categories of competencies. First is the ability to communicate. It is most frequently demonstrated in the public services setting by the successful completion of an exchange with the user known as the "reference interview." Here the basic skills to master include the capability to effectively listen, to show empathy, to project verbally and nonverbally an approachability, and the ability to confidently articulate the options available to the user at various stages of his search for information. Reference interviewing is sometimes characterized to be an art, requiring an innate personality more than a learnable set of skills. An open, caring, inquisitive, approachable personality may favorably affect the interaction, but many of the required communication skills can be acquired. Another situation in which the librarian's communication abilities are seen is marketing. To complement the interpersonal communication skills, marketing techniques require abilities from the promoter; the abilities to understand the audience well enough to present the promoted product or service in relevant terms. To "sell" the concept or specific services of a library today is an extension of what Galvin described as a key function of nineteenth-century librarianship—to justify to funders. These skills are not widespread expectations of librarians, but are more frequently emerging as the competition for survival in the information marketplace increases.

The second category of competency suggested includes the ability to analyze information need. This process occurs both on an individual level and on a community level. Analysis of need is a key element necessary to link users with sources of needed information. The process, as any reference librarian knows, entails encoding the user's request to the search parameters of the system organizing the stored information. This encoding is an intellectual process involving an analysis of the request into related conceptual groups which each can be identified by terms comparable with the index vocabulary of the resource. For example, identifying a book on a given subject requires a translation of the subject into headings used in the card catalog searched. Sometimes knowledge of various languages is needed.

On a larger scale, public services librarians' analysis of the community's needs contributes to the design of library services offered and collections developed. Skills needed to effectively perform such analysis include evaluation, survey and statistical techniques. Again communication skills—both interpersonal and mass—become a necessary ability to master.

Such research activities, whether performed intuitively, informally or systematically, must be conducted to maintain an effective means to set service objectives.

The third category proposed to be essential for public services librarians is the ability to retrieve needed data. Skills required to perform this essential service include a contextual knowledge of sources and an awareness of the mechanics of utilizing them. Subject background becomes essential in some specialized situations, especially as user contact is decentralized into settings of subject orientation such as in special or branch libraries. The intellectual organization of the resource's information should be understood. The mechanics of using specific tools must also be mastered to effectively retrieve information. Various citation indexing methods, cataloging rules and filing rules, for example, govern the organization of much bibliographic data and demand a working familiarity to use them.

Instruction, the fourth category, may be an extension of communication skills, but because its objective is different, it has been identified separately here. One traditional role of the library has been to be an educational institution accomplished not only through knowledge gained by reading its stored information, but also by supplying methods of acquiring that information. The recent interest in library instruction, especially in the academic library setting, is an extension of this traditional function. Skills required are those of effective teaching and of developing user aids such as pathfinders and other bibliographic listings.

Finally, though not unique to public services librarians, most professionals need to be able to manage operations and supervise staff. The public services librarians participating in Mahmoodi's study estimated that 25 percent of their time was devoted to supervisory and administrative activities. Effective planning, budgeting, training, and personnel handling require learning managerial skills. Personality characteristics such as leadership, creativity and energetic dynamism contribute to effective administration.

These five categories will be the points of reference in this paper as we consider the impact of technology on public services librarians' competencies. They each may have variations in application to different library settings, to different users' services or community size; however, they are basic to all public services activities.

Impact of Technologies on Public Services

The technologies most prevalent in public services sections of libraries are seen in automated information retrieval systems, including databases of indexes, online card catalogs and machine-readable reference

sources. Microcomputers are quickly adding user-friendly interfaces to larger systems, personalized organization of data, management aids, localized computer-assisted instruction packages, and word processed lists for users. These applications of automation in libraries most directly have affected reference, circulation, interlibrary loan, and collection management. Audiovisual technology has also influenced public services with increased formats of storage such as microforms, cassettes, records, videotapes, and software. Media centers for educational and popular reading have quickly developed to service these new formats and library public relations offices utilize media and production to reach remote users. Advances in telecommunications, including data transmission networks, satellite and microwave communication systems, provide public services librarians and users quicker transfer of information for such activities as interlibrary loan, circulation, information retrieval, and document delivery.

Although the full impact of all these technologies may have varied effects on public services librarians, the emphasis here will focus on automation. Specifically the major changes in public services settings within the past decade have occurred in the growth of availability of online database services and computerized bibliographic utilities.

Online databases of bibliographic citations began to develop in the mid-1960s, many from government contracts to design methods to organize and retrieve scientific and technical literature. Publishers began to utilize machine-readable data storage techniques to create photocompositions for printing abstract and index tools. With developed software, these files could then be used to retrieve citations for tailor-made bibliographies. Online retrieval systems, each providing access to numerous databases through a vendor, became commercially available in the early 1970s. Today hundreds of bibliographic files and millions of records, as well as several numeric databases, are available in the information market. The major vendors, DIALOG, SDC and BRS, as well as numerous smaller vendors and producers, market their systems to all types of libraries. Using them, public services librarians can offer users quick and comprehensive retrieval, providing retrospective searches, ready reference, bibliographic verifications, state-of-the-art bibliographies and selective dissemination of information (SDI) updates to specific profiles.

Effect of Online Technologies on Librarians' Competencies

Several articles in the literature address the issue of skills required of online database searchers. Most of the skills identified fall into one of the categories of competencies described earlier as a requisite of public services librarians.

The first primary competency identified for public services librarians is the ability to communicate. The process of determining the user's need requires effective interview techniques whether the subsequent search for information is computer assisted or not. Somerville, in her 1982 *Database* article on the "Pre-search Reference Interview," identifies "person-to-person communication skills..." to be "among the most critical for conducting the effective interview."¹⁸ The process requires attentive listening, encouraging questioning, empathy, and an established rapport. Mignon presented a paper during the 1978 ASIS Annual Meeting in which he reports the findings of a meeting of library educators who identified a set of key issues related to the training and qualifications of information professionals specializing in online searching. Among the standards for qualifying beginning searchers are "skills associated with user interviewing."¹⁹ Van Camp, in her 1979 *Online* article describing the "Effective Search Analysts," identifies "people oriented" attributes, suggesting that "skills in communication and interpersonal relations are essential for successful question negotiation with the end-users and for enthusiastic promotion and marketing of the search service."²⁰ She further stresses the importance of projected empathy, open-ended questioning, awareness of nonverbal behavior, and establishing rapport with the user. As Somerville points out, these interpersonal communication and negotiation skills "are the same as for all reference interviews. Without effective people skills, it would be highly unlikely that one would identify the needed information."²¹

Similarly, the second category of competencies repeatedly identified as required of online searchers is the ability to analyze the information need. In an excellent 1979 article in *Online*, Dolan and Kremin address the factors to provide "quality control of search analysts." A combination of traits are described and include concept analysis, flexibility of thinking, ability to think in synonyms, anticipation of variant word forms and spellings, and self-confidence.²² All are essential for the search analyst to analyze the user's statement of need and translate it to parameters compatible with the source of information. Van Camp stresses that the "ability to think in a logical and analytical manner is an absolute *must* to be effective in searching," and that the searcher should be skilled at problem solving, decision making, and organizing and accomplishing a number of tasks simultaneously.²³ Somerville also emphasizes conceptual skills, analytical skills, and the ability to think logically among attributes for successful search analysis. Thus, as with traditional information retrieval done by public services librarians, computer-assisted reference services require from the searcher an ability to conceptualize in order to formulate search strategies.

The third category of competencies identified earlier include skills needed to actually retrieve information from sources of recorded data.

Mignon describes this skill among the standards identified to qualify beginning searchers as having "a command of the heuristics of literature searching," and being able to map the information request into the database vocabulary and to modify the strategy online.²⁴ Somerville echoes these traits in her list which includes knowledge of file organization, understanding of indexing policies and vocabulary control, and knowledge of sources and subject.²⁵ Van Camp identifies a few other skills necessary for effective searchers, including "knowledge of the subject areas in which the bulk of searching is to be done..." perseverance, patience, and efficient, organized work habits.²⁶ Again, as with manual searching, online retrieval requires the understanding of the content and organization of the sources of information as well as the access language and mechanics. Hammer suggests that familiarity with printed reference resources and reference experience are key sources for developing these required skills.²⁷

User instruction skills compose the fourth category of competencies identified earlier. Dreifuss investigates "Library Instruction in the Database Searching Context" in his 1982 article in *RQ*. He argues that the five characteristics essential to any successful library instruction program exist in both traditional and online settings and advocates integrating instruction and computer-assisted searching services. These components include student motivation, timeliness of presentation, faculty support, and concept-oriented instruction.²⁸ The public services librarian needs efficient teaching techniques as well as planning and organization of materials. In providing traditional library instruction, librarians aim to facilitate the user's abilities to be self-sufficient in satisfying his/her information needs. At present, most user instruction about online services offered by librarians aims to inform the user about the sources, but not how to use them directly. The user remains dependent on the librarian intermediary. Some investigation is underway to create more "user-friendly" access systems to wean users from this dependency, but prototypes are not yet widely available. Greater progress is being made in the area of user-friendly access systems in the growing development of online catalogs. Various system designs and microcomputer interface programs are appearing in libraries to eliminate the end user's need for an intermediary to provide access to machine-stored information.

Instruction skills for online searching, however, are frequently required for in-house staff training. Vendors, database producers, associations, and consultants offer a wide variety of training sessions but most charge a substantial fee. Typically, many librarians utilize in-house training to expand staff skills and responsibility, for such education frequently rests with an online searcher. Van Camp includes the ability to share

knowledge with others as one essential quality for effective search analysts.²⁹

Several competencies not unique to public services librarians are identified in the literature as qualifications for online searching and should be mentioned to complete the discussion of expected skills. Again, they are equally important for the successful performance of traditional public services. Self-confidence is identified as a necessary characteristic to facilitate decision-making (by Dolan and Kremin), to reflect commitment to the professional activity of information retrieval and to eliminate any potential intimidation by computers (Van Camp). An attitude of commitment and inquiry is also vital to successful searching.

Test on Current Job Descriptions

Most of the views expressed thus far are based on personal observation and the informed opinion of other searchers expressing themselves in the literature. Additional research, similar to Mahmoodi and Hall's earlier studies, is needed to provide more substantial data on what skills public services librarians need to continue to provide user services as technology affects our ability to do so. In particular, I was curious to see how some of these observations about required competencies are reflected in practice. Without any pretense to following scientific methodology, I examined a sample of the fifty job announcements for vacant public services positions listed in the most recent two issues (March and April 1983) of *American Libraries*. ✓

Responsibilities listed to qualify as a public services position included reference services, online searching, bibliographic instruction, circulation, interlibrary loan, and the management or administration of these activities. In addition, some listings for these assignments also included responsibility for collection development or selection of materials, public relations, liaison with user groups, and technical processing tasks. Nearly half (22) of the positions specifically cite responsibilities for performing computer-assisted services, mostly database searching (18), but also managing online circulation systems (4). The thirty-one academic library positions listed were nearly evenly split between those involving responsibilities with automated systems (16) and without (15); the fifteen public library positions, however, involved fewer assignments with automated services (5) than without (10). Special (3) and school (1) library positions listings were too few to analyze this way. ✓ ✓ ✓

Among the twenty-two positions listing responsibilities for automated services, six specified no qualifications involving computer skills, and sixteen listed such competencies for applicants (eight each as require-

ments or as desired or preferred qualifications). Interestingly, of the remaining twenty-eight positions which specifically did not list any automated services responsibilities, nearly one-third (10) cited competencies in automated activities in the expected qualifications, four as requirements and six as desirable of applicants; eighteen noted no expectations of such skills.

Competencies involving automated activities were most frequently listed as "experience with online systems" (12) or "familiarity" or knowledge of online systems (11); occasionally (6) training or acquired skills were expected. Several other qualifications, not related to technology, were more frequently listed in these sampled job vacancies. These include an M.L.S. degree (44), additional subject-related education (30), experience in specific tasks (25), general library experience (20), ability to communicate (17), and managerial experience (15). Other qualifications listed include knowledge of collection development or resources (10); personality factors such as innovativeness, leadership, energy and dynamism (9); knowledge of foreign languages (5); service attitudes (5); and demonstrated research abilities (3). One might speculate from this small sample that libraries tend to primarily value experience, education and the ability to communicate when selecting public services librarians. Experience or familiarity with automated systems qualifies applicants about as frequently as knowledge of other sources and personality traits conducive to public services. The lack of more specific mention of qualities such as analytical methods or retrieval techniques might be a result of our profession not yet having clear measures of such competencies. Library educators and practitioners are both challenged to better understand the role of these traits in designing the training and methods of qualifying attainment of these competencies.

Look at the Future

As stated at the outset, the perspective of this paper has been strictly past and present. Viewed in terms of today's requirements, public services librarians basically must have the same competencies to use automated technology as did the previous generation who did not face computerization. Communication skills remain paramount. Analytical abilities, knowledge of retrieval systems and sources, and instruction techniques are necessary to perform effective public services and perhaps have become more explicitly required with the appearance of automated services. Experience and education continue to be the primary measure of attaining required competencies.

There seems to be an implied higher expectation of librarians to provide precise, accurate information with the use of online systems than was previously experienced. The costs—calculated with each instance of

use of automated resources—and the visibility of errors—such as incorrect logic, improper selection of files or terms, and misspelling—both contribute to a rising sense of accountability among public services librarians using online sources. These same factors, however, hidden in the costs of staff time and users' convenience, existed before in traditional public services. The experiences of providing online services and the resulting sensitivity to efficiency, user satisfaction and cost effectiveness should be actively applied to other public services and should aggressively contribute to development of library service philosophies. Aside from relatively minor adjustments in mastering new techniques and understanding new resources, the impact of technology today on public services librarians falls within this area of perfecting existing competencies.

But the situation may or may not change in the future. To consider future trends, the remainder of this paper can only be based on speculation. Lancaster provides a very plausible forecast of the future of publishing and the corresponding changing role of librarians in an upcoming paperless society. In an article by Lancaster, Drasgow and Marks, current trends are projected to offer a scenario of what the role of libraries may be by the end of the century. The prediction includes "a rapid decline of the artifact—particularly the printed book..." and an "increasing diversification in the profession..." where information specialists will not need to function from a library.³⁰ Publishing will continue to rely more on electronic means, until eventually information will be accessible primarily in machine-readable form. Electrobooks, online journals, electronic mail, and computer conferencing exist today, and, as Lancaster argues, will likely replace present methods of information recording and distribution. In turn, access to sources of information will be made most often from individuals' homes and offices and will not require going to a separate library facility. Most individuals in all fields will conduct their own searches.

"Considerable trauma" is predicted to occur within the profession during the transition to the electronic library. We have already begun to witness anxiety about the future role of librarians, their replacement by machines and the obsolescence of print tools. Lancaster predicts the "dwindling away of technical services in general...a very considerable reduction in interlibrary loan traffic," the reduction of staff, and the remaining library activities to be highly service oriented.³¹ Lancaster suggests a new dichotomy may occur between those librarians handling electronic information sources and those concerned with print and microform tools, as well as one between generalists in libraries and subject specialists not necessarily affiliated with libraries who work more closely with research teams in the capacity of retrieving information. Librarians become information consultants, linking users with data in subject areas

with which they may be less familiar—e.g., in the academic library setting. Public librarians will facilitate terminal access for those who may wish to retrieve information from the library and will assist users with general and difficult question-answering services. School librarians will provide access to computer-assisted instruction facilities and recreational materials. As costs of storage, retrieval and communication continue to diminish, the gap between the information rich and the information poor should be reduced.³²

Lancaster's persuasive predictions about the future role and requirements of librarians in the next twenty years or so extends the need for many of the competencies identified in this paper, but suggests that the setting of their utilization will change. The major change is that although the term *librarian* may remain associated with those professionals performing archival-like work affiliated with libraries, the new public servant is an "information consultant" or "information specialist" not requiring the physical facilities of a library. The needs in the electronic age will be for "a detailed knowledge of electronic information resources together with the terminals and expertise needed to exploit these resources effectively." Similar to their library counterparts, these information consultants help "to put those with information needs in touch with data bases or individuals likely to be able to satisfy these needs." Furthermore, they will provide a more complete range of sources and the delivery of information.³³

Educational objectives of these future professionals suggest the expected competencies to be needed. According to Lancaster, knowledge of the communication process, of publication and dissemination processes, of interpersonal communication, of design and management of information services, of evaluation methods, and of how to retrieve data and exploit resources will need to be part of the curriculum.³⁴ Thorough familiarity with communication activities, such as electronic mail systems, computer conferencing, communication networks and word processing, and text editing systems and equipment are required. Some future librarians will be responsible for the electronic organization of internal company files and sources of information dissemination which places them in a critical position to influence the design and usability of online resources potentially to be used by others.

The seldom stated requirement of anyone in a public access position is that of flexibility and common sense. The implied characteristic of a professional is inquisitiveness and continued self-education. Together these qualities will facilitate today's public services librarians to adjust their existing competencies in the areas of communication, analysis, retrieval, and instruction to meet the challenges offered by new sources of information and the techniques to utilize them in the electronic future.

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