

# **Changing Reference Service Environment: A Review of the Perspectives of Managers, Librarians, and Users**

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## **Abstract:**

This article reviews the literature on academic library reference service, and examines changes in the traditional reference desk model. Based on the review from the perspectives of managers, librarians, and users, new research directions are proposed in which users' information-search processes and librarians' intervention in reference service are integrated.

While all units and functions in libraries are experiencing the consequences of technology in one way or another, reference service is the area where users most directly see the effects of technology. The essence of reference service lies in the interaction process between librarians and users. Library managers support this interaction by creating a climate in which librarians can fulfill reference services. Taking these points into account, it is important to discuss issues and trends related to reference service from the perspectives of all three parties involved - managers, librarians, and users.

Considerable attention has been paid in the literature to the impact of technology on reference service with respect to the kinds of newly-available information resources and the means for accessing information electronically. As Chris D. Ferguson and Charles A. Bunge have noted, academic libraries, to date, have done a remarkable job of incorporating online searching, online catalogs, CD-ROMs, full-text resources, and, recently, the Internet into their service delivery routine.<sup>1</sup> However, relatively little attention has been paid to investigating how technology influences the nature of reference service. Rather, the concern has been primarily with changes in the daily activities of librarians. For instance, it is often pointed out that professional librarians spend much of

their time rebooting the computer or clearing up jammed paper in the printer. It is now time to develop a research project regarding the changing reference service environment in more theoretical and conceptual ways.

Recently, several researchers and practitioners have suggested “new” reference service models, as “alternative” models of the traditional reference desk. Some authors have reported on a particular library in which they worked (e.g., Kerryn A. Brandt, Jayne M. Campbell, and Willard F. Bryant, Jr.; Carol Hammond; and Virginia Massey-Burzio) and others presented a proposal based on personal opinions (e.g., Jerry D. Campbell; Keith Ewing and Robert Hauptman; and William L. Whitson).<sup>2</sup> In general, the approach taken in previous writings is very practice-oriented. On one hand, there has been little effort to evaluate the effectiveness of new reference service models, with a few exceptions (e.g., Beth S. Woodard<sup>3</sup>). On the other hand, no attempt has been made to discuss effects, consequences, and problems at a conceptual level beyond listing advantages and disadvantages of “alternative” models.

The current literature on the subject of academic reference service can be broken down into three categories: (1) that which focuses on concerns related to managers, (2) that which takes stock of professional concerns of librarians themselves, and (3) that which takes an explicitly user-centered focus. This article examines the literature across these three perspectives and addresses the research problem related to the changes in academic reference service. Specifically, the objectives of this article are to:

- Examine the evolution of reference service models with respect to physical service points, comparing the traditional reference model with “alternative” service models;
- Investigate the effects of evolving reference service from the perspectives of

managers, librarians, and users; and

- Identify conflicting approaches to the role of reference librarians, and redefine the role in changing reference interaction environment.

## **EVOLUTION OF REFERENCE SERVICE**

### **Traditional Reference Service Model**

The term "reference service" has a dual meaning. Reference service refers to a variety of activities associated with personal assistance to library users including selection, liaison activities, bibliographic instruction, and the implementation of electronic products. It also indicates direct librarian-user interaction, which takes place in some physical service points, typically the reference desk. Constance Miller and James Rettig noted that the ideas and assumptions underlying reference service had changed very little since the 1876 publication of Samuel Green's article in which reference practice for readers was emphasized, despite the radical changes in reference service in terms of the amount of information available, and of storage and retrieval mechanisms.<sup>4</sup> It seems that the interaction environment anchored around physical service points has changed little as well; that is, there is usually a single reference desk in the library, where library users approach reference librarians any time with any queries ranging from simple directional questions to complex instructional inquiries. Ferguson and Bunge noted that this model "symbolizes values such as ease of access, equity, and high-quality service."<sup>5</sup>

The most obvious, and commonly recognized, weakness of the traditional model is that it works best for directional questions while complex and in-depth questions are handled often briefly and superficially. This is because, as Thelma Freides has pointed

out, discussion aimed at clarifying the user's question is discouraged by other users waiting in line or hovering around the desk.<sup>6</sup> Joan C. Durrance noted another disadvantage: the traditional reference desk model makes it impossible for users to continue the consultation as the search progresses because of the pattern of staff rotation at the desk.<sup>7</sup> William L. Whitson summarized the disadvantages of the traditional model as follows: high cost, lack of control, inflexibility in use of staff, lack of accountability, reinforcement of unrealistic client expectations, duplication of effort, and reinforcement of the image of librarian as clerk.<sup>8</sup>

### **Tiered Service Model**

Recently numerous practitioners and researchers have proposed or reported “alternative” models of reference service. The alternative models, often called *tiered service*, divide the reference desk into two or more service points, differentiating complex or in-depth service from simple questioning-answering. Technology, though not the only reason, is certainly a driving force behind for the emergence of alternative models.

In the most commonly used model, there is an “information desk” which is typically staffed by paraprofessionals or student assistants to filter out “simple directional questions,” and refer “reference questions” to professional librarians. A survey by the Association of Research Libraries (ARL) found that, out of the 87 institutions, 39 (45%) identified themselves as having an information desk and 19 (22%) libraries used a variety of desks or divided the information function between the reference and circulation desks.<sup>9</sup>

Another alternative model, called the “research consultation model,” takes the

information desk model one step further by eliminating the reference desk entirely and establishing an “information desk” and a “research consultation service office.” Brandeis University Libraries implemented this model in 1990. The Information Desk, staffed by Brandeis graduate students, provides “quick information and directions and refers library users to librarians when appropriate,” while the Research Consultation Service Office, staffed by librarians, provides “answers to longer, more complex questions.”<sup>10</sup> The William H. Welch Medical Library in Johns Hopkins University adopted the same model as Brandeis except that it used paraprofessionals instead of graduate students at the Information Desk.<sup>11</sup> The professional librarians’ desks are located in an open area of the library, in a room adjacent to the information desk. Three full-time professionals sit at their desks and wait “just in case” someone has a question.

Carol Hammond reported a similar, but not identical, model carried out at Arizona State University (ASU) West, in which both “paraprofessional information providers” and “research support service librarians” provided reference service.<sup>12</sup> In the ASU West model, “paraprofessionals” work as “information providers” in managing electronic tools to clarify the role of librarians. Hammond claimed that “paraprofessionals serve a role similar to that of the laboratory assistant, with the library as the laboratory,” while the librarians’ expertise is used for “teaching, consultation and referral.”<sup>13</sup>

James Rettig described “floating (or roving) reference librarians” as one of the trends for reference service.<sup>14</sup> The floating reference librarians were assigned to spend their “desk-duty” time circulating among users and workstations, and routinely to inquire if the users would like assistance. According to Rettig, Boston College experimented

with this service, and reported that it was successful. While this mode of service is not exactly a tiered service, it is certainly an effort to get the reference librarian out from behind the desk.

Other alternative models have been suggested, though not implemented. For instance, Whitson proposed a model that divided reference service into the following five categories: directions and general information, technical assistance, information lookup for the clients, research consultation, and library instruction.<sup>15</sup> His idea was to discard the notion of reference service as a single activity, as each of five service categories needs to be structured, staffed, supported, and evaluated on its own terms. The limitation of Whitson's model is that it lacks the mechanism that helps users who might be confused by five different categories.

### **“Revolutionary” Change in Reference Service**

Some researchers believe that there should be a more “revolutionary” change in reference service, beyond the tiered service. For instance, Keith Ewing and Robert Hauptman took the position that the traditional academic reference service “does not need to be rethought and reconfigured, it needs to be eliminated.”<sup>16</sup> They claimed that high school graduates, with a little training, could do anything reference librarians did because “it does not require any special educational preparation to direct a student or faculty member to a particular library department, a photocopier, a lavatory, or a general almanac.”<sup>17</sup> Although some of the issues raised by Ewing and Hauptman are correct, their arguments are very troublesome. The examples that they used to demonstrate the tasks that reference librarians perform are only part of the picture of what reference librarians do. More importantly, they fail to present a proper rationale for eliminating

reference service.

Jerry D. Campbell's idea of "Access Engineers" is another example of self-proclaimed "fundamental change" in reference service.<sup>18</sup> He argues that "reference" is the wrong name because "its meaning is outmoded; its connotations are obsolete."<sup>19</sup> He proposes that reference librarians are "Access Engineers," who have three tasks: knowledge cartography (mapping information resources), consumer analysis, and access engineering (transferring information upon demand from its source directly to the user). However, it seems that the three tasks which he proposed do not provide anything new. Currently "Reference librarians" are doing them.

### **EFFECTS OF NEW REFERENCE SERVICE MODELS**

The issues in the literature tend to focus on whether or not to keep the reference desk, or on how many desks to maintain. It appears that some authors believe that a new reference model or a new name for reference librarians will be a satisfactory solution for the types of changes that the reference service is experiencing. However, the changing reference service environment in the technological era is a complex phenomenon. Taking into account that reference service involves users and managers as well as librarians, changes in the reference service environment, in general, and the evolution of reference models, in particular, should be investigated. Three important questions are:

- What should managers do to support reference service in changing environments?
- How do librarians deal with changes in their professions and working environments?
- Can new reference models improve users' information search process?

### **Perspectives of Managers**

No matter what types of service models libraries adopt, paraprofessionals increasingly

have become involved in direct assistance to library users, often at the information or reference desk. As of 1990, 88% of the sampled ARL libraries and 66% of sampled smaller colleges and universities regularly scheduled paraprofessionals at their reference or information desks.<sup>20</sup> Larry R. Oberg et al., in their national survey, found that 24% of the smaller college and universities and 27% of the ARL libraries reported more paraprofessionals and fewer librarians on their staff today (as of 1990) than in the past.<sup>21</sup>

The primary concern regarding the use of paraprofessionals has been related to their performance effectiveness. For instance, Beth S. Woodard's study in the University of Illinois Library demonstrated that the nonprofessional staff at the information desk answered 62.2% of the questions correctly, and correctly referred another 8.5%, for a total of 70.7%.<sup>22</sup> The study also showed that staff at the information desk were least effective in handling subject-related questions: only 46.4% of subject questions were completely answerable at the information desk using available sources while 88.6% of bibliographic questions, 87.9% of procedural questions, 94.1% of ready reference questions, and 94.1% of directional questions were answerable by them.

The comparative study of nonprofessionals and professionals conducted by Marjorie E. Murfin and Charles A. Bunge showed that, out of 20 libraries, paraprofessional staff achieved a success rating of 60 percent or above in 4 libraries while professional librarians achieved 60 percent or above in 10 libraries.<sup>23</sup> In their study, a larger percentage of users who received assistance from paraprofessionals responded that they did not locate what they asked about at the reference desk (6.9%) than those who were helped by professionals (3.4%). The difference was significant at  $p < .01$  level. Patrons of paraprofessionals reported not being satisfied or being only partly

satisfied with information (29.6%) in significantly more cases ( $p < .01$ ) than did patrons of professionals (22.8%). According to Murfin and Bunge, for all directed transactions (simply directing patrons to potential answering sources rather than assisting them with searches), patrons were less satisfied with the results when helped by paraprofessionals (39.7 % success) than when helped by professionals (54.6% success).

With regard to job satisfaction, Patricia A. Kreitz and Annegret Ogden reported the results of a comparative study among librarians and paraprofessionals in the University of California libraries.<sup>24</sup> Eighty-two percent of the librarians, but only 52% of the library assistants, checked the two highest satisfaction ratings when asked to rate their satisfaction with the nature of the work they performed. Regarding how effectively the library used their expertise and abilities, 73% of the librarians answered in the highest two satisfaction categories compared to 30% of the library assistants.

Duncan Smith and Robert Burgin, collecting data from 731 participants in the North Carolina Library Staff Development Program, investigated the reasons given by professional and paraprofessional librarians for participating in continuing education programs.<sup>25</sup> They found four underlying components of the programs: personal concerns, patron service, collegiality, and professional competence. According to them, paraprofessionals gave significantly higher ratings than did the professional librarians on each of the four components at  $p < .05$  in professional competence and at  $p < .001$  in patron service, collegiality, and professional competence respectively.

These findings lead to some understanding of the working conditions of paraprofessionals at information and reference desks. They might experience lower job satisfaction as a result of having fewer opportunities for training and professional

development. Overall, paraprofessionals have more ambiguous work assignments than do professionals. Anne Goulding's study, based on nine British public libraries and one polytechnic library, showed that support staff often felt confused, anxious, and overburdened by their duties and the rate of change occurring in the services which they provided.<sup>26</sup> Although the study was conducted in public and polytechnic library settings, her arguments about paraprofessionals' feelings that "they are not being rewarded or appreciated for the extra effort they are expending"<sup>27</sup> might apply to academic libraries as well because these issues surrounding the emergence of paraprofessionals in reference services are not necessarily restricted to specific types of library. Goulding also noted that paraprofessionals were generally eager and willing to assume more responsibility and were excited at the prospect of gaining enlarged, more influential positions.

Given these issues, it is important for managers to understand that there are relationships among organizational climate, job motivation, satisfaction, and performance. Reference service requires the full commitment of library staff, because it is an "interaction process" and a "communication act."<sup>28</sup> Therefore, the working conditions as well as the attitudes of paraprofessionals are crucial for the success of reference service. One strategy, as Goulding has suggested, is that library managers should acknowledge and respect this category of staff and credit staff for the more sophisticated level of work which they perform.<sup>29</sup> Another strategy that managers should consider is the development of systematic training, staff development, and continuing education opportunities for paraprofessionals as well as professional librarians.

### **Perspectives of Librarians**

There are two extremely different reactions from reference librarians about the changing

work environment. On one hand, librarians are satisfied with their present work situations, believing that the availability of electronic databases has “enhanced the role of the librarians” and “makes reference work more fun and easier.”<sup>30</sup> On the other hand, librarians experience “burnout, overload, and feeling out of control,” “technostress,” due to “performance anxiety, information overload, and role conflict.”<sup>31</sup> In Mary Lynn Rice-Lively and J. Drew Racine’s study, one librarian said, “I used to have a role; now I have anxieties.”<sup>32</sup> This comment seems to explain the effect of new technologies precisely.

In considering the impact of technology on librarians' work, Carol Tenopir and Ralf Neufang report on ARL librarians' perceptions of how their jobs have changed.<sup>33</sup> Regarding their working environments, these librarians said that: (1) the reference area had become busier because users demanded more assistance with electronic databases than with print products; (2) librarians spent more time learning a variety of software products; and (3) more time was spent on manual tasks such as paper changing and hardware trouble-shooting. The authors concluded that electronic resources revitalized reference work, leading librarians to a renewed enthusiasm for their jobs.

On the other hand, a number of studies have investigated librarian burnout. Janette S. Caputo identified the following factors that contributed to burnout in the working environments: lack of professional autonomy, dealing with the public, role conflicts, role ambiguity, decreased opportunities for personal accomplishment, inadequate positive feedback, lack of control over library operations, no-win situations, continuously heavy workload, and aspects of the physical environment.<sup>34</sup> Bunge noted that the expanded range of resources often “becomes a source of frustration, feelings of inadequacy or lack of competence, and a sense of loss of control over our practice.”<sup>35</sup>

Focusing on burnout of bibliographic instruction librarians, Mary Ann Affleck found that role conflict and ambiguity were significantly related to burnout of bibliographic instruction librarians.<sup>36</sup> Her research, based on the analysis of 142 responses, also revealed that librarians who felt prepared by their M.L.S degree to do bibliographic instruction reported less role conflict and ambiguity. In a review article, David P. Fisher concluded that there was no proof of the widespread existence of stress and burnout among librarians, pointing out that only two of five empirical studies found significant levels of stress and burnout among librarians.<sup>37</sup>

This brief review of the working environment from the perspectives of reference librarians suggests that librarians have expressed mixed reaction toward new technology. This becomes more complex as new reference models become adopted and paraprofessionals play a more important role in the reference service. Larry R. Oberg pointed out that the redistribution of the library workload had resulted in more overlap among the tasks performed by librarians and paraprofessionals.<sup>38</sup> According to him, “role blurring angers paraprofessionals, who see themselves as doing what librarians do, but often for less money and always for less prestige.”<sup>39</sup> He also noted that librarians remained reluctant to surrender many aspects of library work that they no longer need to perform -- “either failing to grasp the potential of paraprofessionals or perceiving them as a threat to their own positions.”<sup>40</sup> If Oberg is correct, the next question is “why do librarians feel that way?” Here, Brian Nielsen’s concept of “core task” for occupation offers a good explanation for the tension which has developed between librarians and paraprofessionals.<sup>41</sup>

Nielsen claimed that “core professional tasks” were those tasks shared by large

numbers of the membership of a particular occupation and that served to make the members distinctive as a group to the public. The core task is the symbolic power which provides “a ready identification for the profession as a whole that conveys status, the performance of special and esoteric skills, and a sense of the critical role that the professional members play.”<sup>42</sup> According to Nielsen, the performance of reference work is a “core professional task” for librarianship as a whole. Reference involves a “professional-client” relationship in which the contact with library users is often direct. Because there is direct user contact, reference is the “public face” of the occupation. Nielsen’s arguments indicate that it might not be easy for many professional librarians to surrender their responsibilities for interaction with users to paraprofessionals, though the benefits of “new models” for librarians are obvious.

However, there is a more fundamental reason for role conflict, ambiguity, and the blurring of the roles of professional librarians with paraprofessionals. It is that reference librarians and paraprofessionals working in the reference area rarely have articulated their goals and the scope of their work beyond a general intention to assist library users with whatever they need.<sup>43</sup>

### **Perspectives of Users**

To understand the new reference service environment from the user’s perspective, it is appropriate to review the major literature on users’ information-seeking behaviors in libraries as the first step. Overall, users play two roles in libraries: one role as a participant in self-service; another role as a participant in the human-human (user-librarian) interactions.<sup>44</sup> When library users are working on their own, it is difficult to know whether users have found what they were looking for. In human-human

interactions, it is also difficult to understand what users actually need because many users can not specify their information problems sufficiently. This is because, as Robert S. Taylor noted, “one person tries to describe for another person not something he [or she] knows, but rather something he [or she] doesn’t know.”<sup>45</sup> He described four stages involved in the development of information need: the actual, but unexpressed for information (the visceral need); the conscious, within-brain description of the need (the conscious need); the formal statement of the need (the formalized need); and the question as presented to the information system (the compromised need). According to him, the job of the reference provider, which requires “skills,” is “to work with the inquirer back to the formalized need, possibly even to the conscious need, and then to translate these needs into a useful search strategy.”<sup>46</sup>

Nicholas J. Belkin and his colleagues suggested a concept similar to the "visceral need:" the ASK (anomalous states of knowledge).<sup>47</sup> It is based on the idea that people engage in information-seeking behavior because their states of knowledge concerning some particular situation or topic are recognized as being insufficient or inadequate. That is, there are anomalies (e.g., gaps, uncertainties, and lack of concepts) in people's state of knowledge. Their work was an attempt to provide a framework in which people's information-seeking behaviors could be represented and used for information systems.

Another well-known theory of users' information-seeking behaviors in problematic situations comes from Brenda Dervin. Dervin's sense-making theory looks at users as sense-makers, acting to resolve situationally bounded information problems. According to this theory, an individual encounters a problematic situation when routine thinking, or problem solving strategies, no longer work effectively and movement is

stopped. The major concept of this theory is labeled "Situation-Gap-Use:" the *situation* refers to the time-space context in which the movement is constrained; the *gap* is operationalized as questions; the *use*, also called *help*, denotes the ways in which people put answers to questions to work. This theory suggests that librarians should consider "how librarians can intervene usefully in individual sense-making process,"<sup>49</sup> rather than how librarians can be ready and waiting for each user.

Carol C. Kuhlthau proposed a process theory for library and information service, which integrated affective (feelings), cognitive (thoughts), and physical (actions) aspects of the information search.<sup>50</sup> Articulating a process theory of information seeking, she developed the "uncertainty principle" in which uncertainty was defined as a cognitive state that caused affective symptoms of anxiety and lack of confidence in the early stages of the Information Search Process (ISP). According to her, "Uncertainty due to a lack of understanding, a gap in meaning, or a limited construct initiates the process of information seeking."<sup>51</sup> In addition, the theoretical framework of the uncertainty principle is involved in the constructivist view of learning in the six stages of the ISP (i.e. initiation, selection, exploration, formulation, collection, and presentation). The underlying key concept of Kuhlthau's ISP theory is that individuals seek "meaning" rather than "answers," therefore a traditional bibliographic paradigm which focuses on locating sources and information is not adequate to address the process of learning from information. Kuhlthau's theory is unique in terms of applying a conceptual understanding of the users' information process to a practical system of library and information service (e.g., levels of mediation, levels of education, and process-oriented service).

In a study of user-centered library service, Ruth C. Morris noted that users often view information as something external and objective.<sup>52</sup> According to her, users feel that "there is a right answer for their information need - it's just a matter of finding it."<sup>53</sup> While users approach information in an ordered manner, they do not know exactly what they want, and users who think they know will often be satisfied with something quite different. The shifting focus indicates that a constructive process is taking place during which the information need is redefined.

Some writers have reported interesting empirical studies of library users' perspectives, based upon their experiences in the reference encounter (e.g., Joan C. Durrance; Patricia Dewdney and Catherine S. Ross; and Patricia Dewdney and Gillian Michell).<sup>54</sup> Durrance noted that her student observers reported that the reference desk was not marked in any way, and there was no identification of the nature of the occupant of the reference desk in some libraries.<sup>55</sup> Furthermore, 68% of the observers said that they thought they had worked with a librarian, but only 35% of them were "quite sure." According to Durrance, a longer period of interaction, and identifying the librarians' name, often led to a successful outcome of reference service. She also found that librarians' interpersonal skills dominated an observer's willingness to return to the librarian at another time.

Using unobtrusive observation, similar to that of Durrance's study, Dewdney and Ross examined the "most helpful" and the "least helpful" features of the service that users received.<sup>56</sup> They found that the features of reference service that matter to users are: using body language to welcome the user (e.g., smiling, nodding, looking up, putting away other work, and moving out from the librarians' desk); including the user in the

process of search; and providing an adequate answer in terms of helpful materials or referral.

The success or failure of reference transactions was also studied by Dewdney and Michell, who describe the "communication accident" as an example of ill-formed queries.<sup>57</sup> The story of "oranges and peaches" - the young undergraduate, who said that he wanted to find a book called "Oranges and Peaches," was actually looking for "On the Origin of Species" - demonstrated the importance of understanding reference questions as they were initially presented. They recommended specific interview techniques: restatement, open or neutral questions, and follow-up questions. In a more recent article, Dewdney and Michell proposed contextualization and the use of neutral questioning as a way to avoid problems with asking the question "why" in reference interviews.<sup>58</sup>

Taken all together, interaction in the reference encounter is not a matter of whether the users' inquiries are "simple directional" or "complex instructional." Rather, it is a matter of how efficiently and how well librarians (or paraprofessionals) can understand the users' needs with respect to their intentions and goals. The alternative reference models, often called tiered service, have disadvantages and advantages from the users' perspective. The disadvantages are associated with the doubts of how paraprofessionals or student assistants at the information desk can recognize the user's unexpressed need, if they try to differentiate complex instructional inquiries from simple directional ones. A more fundamental weakness of the tiered service models is that the distinction between directional and instructional inquiries is too arbitrary, and is highly questionable when taking into account that information need is difficult for users to express.

Yet, alternative models, especially “research consultation models,” certainly have a number of advantages for users. For instance, users may be willing to take the time to explain what they are looking for, in detail, to librarians, and users may return to the same librarian at another time so that users and librarians interact on a continuing basis. In a recent study, Massey-Burzio found that although users found librarians in the Research Consultation Office to be helpful, competent, and knowledgeable, many of the users who participated in this study did not realize that another level of service in Research Consultation Office was available.<sup>59</sup> These results indicate that, in order to implement the tiered service model effectively, it is important to make sure that library users clearly understand that there are two or more layers of service, and that they know who is responsible for providing each layer of service.

### **THE ROLE OF REFERENCE LIBRARIAN IN CHANGING ENVIRONMENTS**

There is no doubt that the reference service environment is experiencing dramatic changes in terms of the increased availability of and the improved access to information technology. The introduction of the online public access catalog (OPAC), CD-ROM databases, and the Internet has allowed end-users to search directly on computer terminals. The changes from mediated searching to end-user searching effect the traditional interactions between librarians and users. For example, Soo Young Rieh found that many users tended to ask more mechanical or technical questions than subject-oriented or reference questions in end-user online searching environments.<sup>60</sup> Given this situation, one might ask: Has the role of the reference librarian really changed, or should the role be changed? The next, probably more important, question would be: How can the role of reference librarians be redefined in changing environments? To explore this

question, this section will start with the classical debate about the role of reference librarians, which is certainly related to issues of redefining the characteristics of reference service in changing environments.

The debate between “information provision versus information instruction” has a long history in reference service literature, since reference service has been characterized as personal service to the users. The central feature of instruction is to “provide guidance and direction in the pursuit of information, rather than providing the information itself,” whereas the feature of information is “to provide an end product in terms of information sought by the library’s patron.”<sup>61</sup> Anita R. Schiller explains the instructional approach as being based on certain educational goals which emphasize the patron’s “self-reliance” and places deliberate limits on the librarian’s assistance while the information approach advocates the belief that reference service best fulfilled the library’s role in the dissemination of knowledge when information was made available without restriction.

The two approaches have coexisted, resulting in two specialized role models for reference librarians: the information intermediary on the information side, and the teacher on the instructional side. In the 1970s and 1980s, the intermediary role was increasingly appealing to many reference librarians as a result of the growth of online searching. The traditional intermediary role of reference librarians was used to establish new relationships with users by performing database searching on behalf of users. At those times, librarians accepted the new technology because the demands for online searching gave them greater control over the user-librarian interaction than might be achieved in a simpler question-answering iteration.<sup>62</sup>

The advent of end-user searching, along with the development of more user-

friendly systems, led to changes in the role of the intermediary. It is not that users do not need the librarians' help in conducting end-user online searching. Rather, it is that users seek assistance from reference librarians on how to find information in online database searching. Given this situation, Richard Biddiscombe argued that librarians were seen as having a vital role to play in providing instruction to users in end-user searching environments.<sup>63</sup>

As libraries look at service from perceptions other than efficiency and effectiveness, they want to gauge user perceptions about service quality and satisfaction. Service quality focuses on the gap between the perceptions that users have about library services and those perceived by a particular library.<sup>64</sup> Danuta A. Nitecki adapted the SERVQUAL instrument to measure the quality of interlibrary loan, reference, and graduate reserves.<sup>65</sup> Nitecki advocated that the SERVQUAL scores measure user expectations and perceptions of service performance by providing indicators of the degree and direction of discrepancy between the two. In the discussion of service quality in reference services, she reminds us about the importance of the user's unique judgment of what transpires during the delivery of library services.

How the library sees and interacts with users clearly affects the quality and nature of the service rendered.<sup>66</sup> Kuhlthau examined learning and the process of seeking meaning in libraries, defining the role of librarians as process intervention of learning. In her process-oriented approach, she argued that "increased access to vast amounts of information requires service that centers on seeking meaning rather than merely on locating sources."<sup>67</sup> With respect to the role of the reference librarian, Kuhlthau identified five levels of interventions for each "mediation" and "education" service.

Within the mediation, the levels are: Level 1, the Organizer; Level 2, the Locator; Level 3, the Identifier; Level 4, the Advisor; and Level 5, the Counselor. For each level, the intervention is differentiated as follows: no intervention (self-service search), ready reference intervention, standard reference intervention, pattern intervention, or process intervention. According to Kuhlthau, while Levels 1-4 fall within the source-oriented and bibliographic paradigm, Level 5 is based on a process-oriented approach. The education service is similarly divided into the five levels: Level 1, the Organizer; Level 2, the Lecturer; Level 3, the Instructor; Level 4, the Tutor; and Level 5, the Counselor. Education is categorized as being planned for no instruction (self-service search), single session, a variety of independent sessions, series of sessions, or holistic interaction over time. What is of interest in the five levels of intervention is that at the Counselor Level, the two forms of intervention (mediation and education) merge into one interactive service of guidance.

Although there are a number of studies which address the changing role of reference librarians, most of them are based either on personal experiences or previous literature, and only a few of them are empirically tested. For example, Robert R. Burkhardt analyzed 212 survey responses from the heads of reference service in academic libraries.<sup>68</sup> He tested nine hypotheses which were concerned with whether librarians were more frequently engaged in certain managerial responsibilities (planning, budgeting, communication activities, and training) and user instruction due to technological capabilities in the reference environment. The results indicated that technological change did not effect the frequency or importance of managerial responsibilities. Instructional responsibilities were performed more frequently in

departments which had electronic access capabilities. However, librarians did not perceive that instructional responsibilities had become more important due to technological capabilities.

Rice-Lively and Racine surveyed front-line academic library professionals, Library and Information Science (LIS) educators, and university students (total 25 participants) using focus groups, individual interviews, and follow-up questions via e-mail.<sup>69</sup> The participants, in general, agreed that information professionals continued to do the same fundamental things: determining information needs of users and linking the user with resources that would meet those needs. One of the interesting findings was that there was an increased need for librarians (information professionals) to be “translators, guides, and teachers for the user.” The participants reported that librarians were spending more time training their users and marketing new services and electronic resources through, for example, the development of special printed or electronic guides.

Benjamin O. Alafiatayo, Yau J. Yip, and John C. P. Blunden-Ellis analyzed survey results from 18 reference librarians, and found that the highest ranked key reference activity was “answering requests to find source materials,” followed by the task of “answering how to use those source materials,” and “answering specific questions.”<sup>70</sup> The task of searching the literature was ranked ninth on the list of key activities. The authors concluded that the most important tasks of reference librarians were the identification and selection of sources that could answer users’ queries and solve their information problems; “the nature of assistance is that of a facilitator between inquirers and information sources.”<sup>71</sup>

The results from these three empirical studies seem to be mixed. On one hand, it

is inferred that the “fundamental” role of reference librarians - intermediaries between the users and information resources - is still important in spite of changing technological environments. On the other hand, the role of reference librarians appears to be changed toward “instructors” (Buckhardt), “translators, guides, and teachers” (Rice-Lively & Racine), and “facilitator” (Alafiatayo et al.).<sup>72</sup> These roles are not totally new. Rather, the focus of the role is moving back to user instruction in an individually-based interaction at the reference service. In this sense, the intermediary role and the instructional role are merging due to the impact of technology.

### **CONCLUSION AND FUTURE RESEARCH**

The literature reported suggests that: from the perspective of managers, it is important to develop motivational strategies, such as staff development programs for paraprofessionals who suffer from identity problems related to uncertain role in reference service; from the perspective of librarians, it is important to articulate goals and identify the scope of reference service to clarify ambiguity and blurring of roles between professional librarians and paraprofessionals; and from the perspective of users, a distinction between “simple directional” and “complex instructional” inquiries in the tiered service models should be reconsidered because users’ inquiries can be understood on a need-basis rather than a question-basis.

There has been little effort in library and information science to make a link between the users’ information search processes and the librarians’ intervention processes, with the exception of Kuhlthau’s work.<sup>73</sup> Although Kuhlthau’s work remains a useful framework for exploring new service models and the librarians’ role, her process

model does not much consider technology as an important factor that influences the interventions of librarians. In the future, research on how technology, particularly end-user searching environments, influences librarians' intervention and users' behaviors in reference interactions will be of great interest. Rieh's work<sup>74</sup> is such an example. Using Kuhlthau's model of mediation (Organizer, Locator, Identifier, Advisor, and Counselor), Rieh argued that the librarian's role at the reference desk had reverted to "Locator," rather than moving on toward "Counselor" due to a changing service environment. Further research is needed to identify appropriate reference service models which can more effectively support users' search behaviors.

For the most part, reference service has been discussed with respect to access of information resources available in libraries and answering reference questions asked by users. There are at least two assumptions underlying this approach. The first assumption is that users visit libraries to access information resources available in the library. The second assumption is that users can specify what they need to know when they ask questions of reference librarians. The limitation of this approach is that it overlooks the importance of the interaction process between librarians and users in reference service.

It appears that most studies which have investigated evolving service models have taken the following sequence: first, to develop and implement new models; second, to listen to what users' reactions are; and third, to report their experiences. However, to advance the understanding reference service models, future studies might take the following approach: first, to understand the conceptual and theoretical issues underlying the nature of reference service; second, to explore the behaviors of users with respect to asking for help during information searching; third, to characterize the interventions of

librarians; fourth, to implement new reference service models, and fifth, to test new models and refine them.

In changing reference service environments, librarians and managers are experiencing much ambiguity and conflict in redesigning the models of reference service and redefining the role of reference librarians. Certainly, the reference service area must continue its efforts to be a bridge point between information resources and users in the information search process. One way to make such efforts can be to ask questions of library users directly about how helpful and useful reference staff and library services are (e.g., Massey-Burzio<sup>75</sup>). However, a more important key to exploring new roles of reference librarians and improved service models is to integrate users' information search processes with librarians' intervention activities in reference service. Considering that the essence of reference service is the interaction process between librarians and users, alternative reference service models can best be redesigned by looking more closely at how users are dealing with their information problems and how they get help from reference librarians in technological environments. This will also help us to redefine the role of reference librarians in changing service environments. The ultimate goal of reference service is to understand users' information seeking behaviors and support those behaviors effectively.

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