Measuring and Improving the Quality of Public Services: A Hybrid Approach

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ABSTRACT

IMPROVING THE QUALITY OF PUBLIC SERVICES involves quantifying patron perceptions. Using a questionnaire devised by Van House, Weil, and McClure (1990); combining it with the concept of service dimensions and service imperatives based on the work done by Berry, Zeithaml, and Parasuraman (1990); and coding patron comments from the questionnaire as either positive or negative; this project analyzes patron perceptions about library services. This model presents a method for quantifying and categorizing patrons' comments from a standard questionnaire in such a way that the results are organized into seven principal service determinants. The results demonstrate that tangibles and reliability are the key concerns of library patrons. A short discussion of prescriptive measures for improving services follows the analysis.

INTRODUCTION

If the language of the literature of librarianship is telling, librarians have adopted the strategies and techniques of the business world. Taking their lead from business, librarians talk and write about intellectual *property*, *accountability*, information *resources*, library *managers*, and *marketing* reference services. In the area of public services, the appropriation of this language of commerce is readily apparent where library patrons, those relics of a more genteel, even aristocratic, age, have become *customers*. This shift in the tone of discourse has been gradual. Still, in approximately the last ten years, responding inevitably to national, even global,

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discussions, librarians writing about public services have adopted the discourse of commerce wholesale. No one should be surprised that the quality improvement movement, which gained currency as the economic competition between the United States and Japan heated up in the 1970s, has engendered adherents in libraries. Articles about quality, what it is (measurement and assessment) and how to introduce it (a process TQM) abound—e.g., Berry, Zeithaml, and Parasuraman (1985); Shaughnessy (1987); Zeithaml, Parasuraman, and Berry (1990); Dobyns and Crawford-Mason (1991); Scholtes (1992); Ross (1993); Zemke (1993); Brown and Swartz (1994); Brown, Churchill, and Peter (1993); O'Neil (1994); and Rust and Oliver (1994). The O'Neil source provides a recent critical survey bibliography of this literature.

Those who write the literature about public services in libraries reflect these two directions. The first direction, performance measurement, identifies quality with successful attainment of quantifiable goals—e.g., Beeler, Grim, Herling, James, Martin, and Naylor (1974); Baker and Lancaster (1977); Library Administration & Management Association, Library Research Round Table, Reference & Adult Service Division of the American Library Association (1980); Buckland (1983); Kantor (1984); Cronin (1985); McClure (1986); French (1987); Van House (1986, 1987); Lancaster (1977, 1993); and Walker (1992). Typically, articles and monographs emphasize the methodology of enumeration and analysis and carefully consider what outputs or outcomes should be counted. Various techniques to evaluate activities such as in-house use, materials availability, catalog use, and reference service become the way to identify deficiencies and, implicitly, the source of improvement. Though it has a shorter history, the second direction, namely the application of the Total Quality Management Process and other quality intiatives to library public services, focuses on the improvement process explicitly. To convince library managers to try the TQM approach, library pundits translate the concepts of W. Edwards Deming, the "father of the quality revolution" and his many followers into the library vernacular (O'Neil, 1994). Interestingly, reports in the library literature contrast with reports from the world of business. The introduction of quality initiatives in business is widespread, and there is an extended discussion in the literature about various experiences with the process.   There is less evidence of actual application of TQM or other quality improvement strategies in libraries to adopt the process, but a recent ARL report notes that "only a small segment of [the] membership is actively involved in formal quality improvement programs" (Siggins & Sullivan, 1993, p. 196).

QUALITY MOVEMENT IN THE SERVICE SECTOR

One reason why there has been talk about quality, and TQM specifically, in public services may be the reluctance of librarians to accept a

basic tenet—i.e., that the recipient of the service determines the efficacy of the service which is often less well understood in the library world than it should be. Do library managers believe a library can only achieve a strong reputation for quality service when it regularly attains, and perhaps exceeds, the expectations of library patrons? Librarians in colleges and universities have traditionally employed a didactic model for service, particularly reference service. Because these libraries are part of learning environments, the people working in them tend to accept the idea that the role of the staff member is to convey some special procedure to the student. More than that, it becomes the responsibility of the teacher/librarian to ensure that the student develops a range of skills necessary for success in library research. For years, reference librarians in academic libraries have made the distinction between giving the student the "answer" and teaching the procedures for finding what the student needs. The public library movement has been caught up in this debate as well. Some public librarians, through their book selection policies, reject paperback romances, gothics, or westerns for more serious books. In effect, they make choices for patrons that the patrons themselves would not make. In both cases, the library staff may operate contrary to the expectations of the library patron. The idea that "the customer is always right" may not be as pervasive in libraries as it is in the business world.

And the wider business community, especially the service sector, is well aware of the importance of success and failure as determined by those who buy the service. Albrecht (1990), whose first book, *Service America!: Doing Business in the New Economy*, established the groundwork for customer-focused management, uses the following definition: "Service management is a total organizational approach that makes quality of service, *as perceived by the customer*, the number one driving force of the operation of the business" (Albrecht, 1990, p. 10, our italics). Albrecht (1988) notes that the president of Scandinavian Airlines, Jan Carlzon, has observed that "the only thing that counts is a satisfied customer" (p. 20). No one has put this view any more directly than Berry, Zeithaml, and Parasuraman (1990) who claim that "customers are the sole judge of service quality" (p. 29).

Knowing very much about the quality of public services remains problematic for various reasons. Many marketing theoreticians have observed that services generally are intangible (Zeithaml et al., 1985, p. 42). Can a library manager—a head of reference, for example—really personally respond to reference questions and shape them, refine them, and remake them until the answers are perfect? And once she has her reference answers ready, can she bring the reference staff together and distribute the correct answers so that reference staff can give them out to the patrons? Of course not. Consider the advantages of a plant manager in the automobile industry who can, in contrast, select a part from the

assembly line and measure it against a set of predetermined specifications. That same part can be tested prior to installation. In fact, the entire automobile can be tested prior to delivery to the showroom for sale.

In the automobile example, production and consumption are two distinct aspects, both of which generate discrete data about quality. Production lends itself to measurement against a series of exact standards. As a result, there is a body of objective data about quality which comes from testing and verification. Reviewing that information allows the automobile manager the opportunity to make improvements in his product prior to selling it. The library public services manager has no such advantage. She is deprived of the means to obtain information for the improvement of library public services *prior* to delivering those services.

In service industries as well as in libraries, timing and the blurring of the distinctions between production and consumption limit the kind of information available about what constitutes good quality. Much of the knowledge about quality comes *after* the "sale," that is, after service has been given. It cannot be otherwise because the production (locating the information), and consumption (using the information) of most library services are inseparable (Shaughnessy, 1987). The quality of library public services is determined at the time the services are rendered. It comes from the people who have used the service and not the service provider, hence the subjective nature of the information about quality of services in libraries. Much of what librarians know about quality comes, categorically, from the people who use libraries.

MEASURES FOR CUSTOMER PERCEPTIONS OF SERVICE

A number of methods may be employed to discover how patrons perceive the quality of library services. Four widely used methods are:

- in-depth interviews with individual patrons;
- focus groups;
- unobtrusive observation; and
- user surveys.

Each has advantages. All provide subjective rather than objective information as they portray the quality of service from the customers' point of view.

Interviews with Individual Patrons

The in-depth interview technique involves spending a large amount of time in a one-on-one encounter. Although it is often done by telephone, it is most effective in person. "In the in depth interview, the interviewer usually listens for aspects of the experience that people seem to feel strongly about and tries to find out more about the nature of their

feelings" (Albrecht, 1988, p. 163). Using in-depth interviews usually involves the use of predetermined questions that are open ended. However, it is not a haphazard approach. "If listening to customers is to be a useful effort and not simply an activity trap, you have to decide to whom you're going to listen, what it is you should be listening for, and when, where, and how you can best acquire the information" (Zemke & Schaaf, 1989, p. 30). The advantages of interviews are:

1. the presence of the interviewer tends to ensure that all questions are correctly interpreted by the respondent;
2. it may be possible, by means of "probing" questions, for the interviewer to check on the accuracy of the responses;
3. the interviewer may be able to collect unsolicited observations from the person interviewed; data unanticipated in the interview schedule may thus be collected. (Lancaster, 1993, p. 228)

The technique also allows individuals to respond in their own words (Stewart & Shamdasani, 1990, p. 13). People are often more amenable to answering questions in person than on paper; there is greater spontaneity in the responses; and answers are more complete and revealing than questionnaire answers. Much of the success of this method depends upon the interviewer. A neutral interviewer is essential, and it is important that interviewer bias or misconceptions do not enter in the recording of the responses. An interviewer should be perceived as knowledgeable in the field. "Moreover, the professional who understands the area of inquiry is more likely to ask better follow-up questions and, thus, to obtain more insight into the problem at hand (Baker & Lancaster, 1991, p. 379). A tape recorder is useful if it is acceptable to the person being interviewed (Baker & Lancaster, 1991, p. 380). After a number of interviews, a pattern usually emerges, and the same answers will reoccur. At the point that nothing new seems to be discovered, the researcher starts compiling the results. "The preferred end result is an *attribute list* that defines the total service experience as the customer perceives it" (Albrecht, 1988, p. 163).

The down side of in-depth interviews is that they require a great deal of intellectual and emotional energy on the part of the interviewer; focus groups are more efficient (Valentine, 1993, p. 301). In-depth interviews are also relatively time consuming. One good in-depth interview may take up to several hours (Albrecht, 1988, p. 163). Interviews are expensive as well and cannot be conducted anonymously. They may even require an independent interviewer (Lancaster, 1993, p. 229).

Focus Groups

A focus group "generally involves 8 to 12 individuals who discuss a particular topic under the direction of a moderator who promotes interaction and assures that the discussion remains on the topic of interest"

(Stewart & Shamdasani, 1990, p. 10). "They are called focus groups be-
cause the discussions start out broadly and gradually narrow down to the
focus of the research. They are not a rigidly constructed question-and-
answer session" (Young, 1993, p. 39). The researcher selects participants
in the group because they have certain characteristics in common which
relate to the topic of the focus group (Krueger, 1994, p. 6). Historically,
marketing researchers have employed focus groups in library settings to
discover why people do not use library services (Baker, 1991, p. 377).
The focus groups provide a fresh objective picture from the customer's
point of view:

> The focus group interview provides a way for the substantive expert/
> theorist to be exposed to a fairly intensive stream of human reac-
> tions and responses. Sometimes one isolated comment is enough
> to change the theorist's focus, to see the problem from a new per-
> spective, and to shape a better mental model of the causal mecha-
> nism. (Moran, 1986, p. RC-17-RC-18)

Themes emerge naturally from the spontaneous response of participants.
"The groups essentially ran themselves while the individual interviews
required more finesse on the part of the interviewer" (Valentine, 1993,
p. 301). In a group setting, it is often possible to elicit data and insights
that would be less likely to occur without the group interaction process.
Moreover, direct involvement in the research process feels empowering
since customers often believe that they drive service modifications (Packer
et al., 1994, p. 30). In fact, "the American Management Association has
found that, except for the use of toll-free telephone numbers for cus-
tomer responses, the focus group approach is 'the highest rated method
of staying close to the customer'" (Bohl, 1987, p. 21. Quoted in St. Clair,
1993, p. 78).
    Despite these advantages, there are some drawbacks. Young (1993)
cautions:

> Remember: the information from a focus group may not accurately
> reflect the attitudes of an entire population; participants in focus
> groups are not necessarily a representative sample; focus groups
> should only be part of the research process;....Focus groups can be
> misleading for several reasons. The most common reason are the
> moderator's lack of questioning skills expertise, a bad discussion
> guide, and focus group participants who don't resemble the target
> market....On the negative side, sheduling groups was a nightmare.
> Between room availability, moderator availability, and guessing what
> would be good times for students and faculty, it was difficult to sched-
> ule groups. (p. 393)

Focus groups may also be expensive since moderators are often paid ex-
perts, and participants are often paid as well (Valentine, 1993, p. 300).
The consensus of most of the literature is that focus groups are a valuable

tool to supplement the research process. For extensive reviews of this method, the reader may want to refer to Krueger's (1994) *Focus Groups,* Morgan's (1988) *Focus Groups as Qualitative Research,* or Stewart and Shamdasani's (1990) *Focus Groups: Theory and Practice.*

Unobtrusive Observation

The library literature began to report the use of unobtrusive observation in the early 1970s (Crowley & Childers, 1971). Typically, this technique involves a surrogate patron or proxy asking factual questions followed by librarians reviewing the answers for accuracy. The retail community practices a similar process called "the mystery shopper" (Brokaw, 1991). Theoretically, this method evaluates service as it is most likely to be delivered, and it compensates for the tendency of staff to do better because they know they are being evaluated. Most of the studies that used unobtrusive observation involved the measurement of reference service, and all have yielded disappointing results. The average percentage of correct reference answers is 50 to 60 percent (Lancaster, 1993, p. 159).

While unobtrusive observation presents a realistic snapshot of service, and the resulting information may be used to improve service, its drawbacks may outweigh the benefits. Childers (1987) points out that this technique tends to measure only one facet of service (factual reference questions, for instance) and then use the results to judge the entire operation (p. 73). Moreover, most studies do not have direct patron perspective. Instead, libraries evaluate the results. Ironically, there may be occasions when patrons seem satisfied, although they actually receive inaccurate or incomplete answers (Baker & Lancaster, 1991, p. 245). People impressed or pleased by one quality in a person or service (i.e., friendliness) tend to overestimate other qualities such as accuracy. This phenomenon, the "halo effect," works in reverse when a patron dislikes something about a staff member and therefore rejects as unacceptable any information that is accurate or helpful ("devil effect" or the "reverse halo effect") (Sutherland, 1989).

Schrader traced citations in the library literature to the work of Crowley and Childers (1971) to evaluate the impact of unobtrusive procedures in the profession. He concluded that unobtrusive observation had not yet become a standard method for evaluating reference and library services (Schrader, 1984, p. 208). Nevertheless, both Lancaster (1993) and Baker and Lancaster (1991) present unobtrusive observation as one of the key methods of evaluating service. However well this method presents a way to acknowledge the existence of service problems, Schrader (1984) surmises that there is a lack of professional commitment to reference service excellence (p. 210). Another possible reason why unobtrusive observation has not been embraced may involve the ethics and fairness

of measuring staff performance at random and without the knowledge of
the staff. Few colleagues or managers willingly will choose single events
to judge the totality of a department's performance. This "keyhole" or
"snapshot" approach may provide false perceptions especially when judged
by outsiders rather than by patrons. It also adds needless pressure to a
service situation which depends upon ease, rapport, trust, and empathy.
This stress may actually undermine the staff/client relationship.

Unobtrusive observation works best when combined with incentives
such as bonuses for employees and free services or products for surro-
gates (Brokaw, 1991, p. 94). Timing should be considered to measure
moments of weak and strong staffing (Childers, 1980). Safeguards may
be implemented to protect privacy, to ensure the use of summary data
only, and to have as the primary reason for such evaluation to be improv-
ing the quality of service through training and self improvement (Katz &
Fraley, 1984).

User Surveys

"A user survey is just what the name implies, a survey of users, and its
purpose is to enable those responsible for the planning and delivery of
information services and products to have quantifiable data about the
services" (St. Clair, 1993, p. 80). Surveys can easily be distributed to a
large number of people and thus enable the researcher to make valid
judgments about a large customer base (Albrecht, 1988, p. 164). As Sum-
mers (1985) points out in his review article, surveys are easy to do, rela-
tively easy to understand, relatively inexpensive, and assistance from con-
sultants is readily accessible and, despite trends, continue to be embraced
by the field of librarianship. He concludes that surveys are "the oldest
and most enduring method of research on libraries" (p. 41).

There are negative aspects as with any approach. Patrons may misin-
terpret questions. Sometimes researchers doubt whether respondents
have answered truthfully or accurately, and there is no practical way to
check (Lancaster, 1993, p. 227). Moreover, problems with low user ex-
pectations and failure to reach nonusers may also present obstacles
(Schlichter & Pemberton, 1992, p. 259). Another problem is that "many
people dislike questionnaires and either fail to complete them or do so
in such a hurried and careless way that the results are of little value" (Baker
& Lancaster, 1991, p. 187).

Pitfalls in the administration of the survey include inadequate sam-
pling methods, problems involving timing, and little effort to evaluate
the effectiveness of completed surveys (Summers, 1985, pp. 41-43). Other
problems reported by various authors include vague or varying methods
of measurement, lack of valid ways to compare data from different sur-
veys, lack of a scientific approach to design, and lack of detail in informa-
tion reported (Lancaster, 1977, p. 308).

Of course, there has been much discussion about the proper design
of surveys. Both close-ended and open-ended questions should be asked,

but open-ended questions can yield information especially useful in determining what new services should be offered (St. Clair, 1993, p. 81). Much of the literature about surveys describes the design of the questionnaire instrument. It may be difficult to design questionnaires that are both user-friendly and yet detailed enough to provide needed information to analyze failures (Baker & Lancaster, 1991, p. 194). The entire questionnaire design issue is best summed up by Van House et al. (1990), "[u]sers are very resistant to lengthy questionnaires" (p. 26). Adapting a standard instrument which has been rigorously tested, such as the one by Van House, Weil, and McClure, obviates many issues and saves valuable time and resources. Despite its drawbacks, the user survey is a time-honored method to reach library users:

> A well-conducted library survey can produce a considerable number of data that are of potential value in the evaluation of library services. This is especially true if the survey goes beyond purely quantitative data on volumes and types of use, and general characteristics of the users, and attempts to assess the degree to which the library services meet the needs of the community served....At the very minimum, however, a well-conducted survey can provide a useful indication of how satisfied the users are with the services provided, and can identify areas of dissatisfaction which may require closer examination through more sophisticated microevaluative techniques. (Lancaster, 1977, p. 309)

METHODOLOGY

For many years, the Public Services Division at the College of Charleston Library has been collecting information from people who use the library about their overall satisfaction with services, facilities, and collections. One day each fall and spring semester, the library staff distribute a questionnaire (the General User Satisfaction Survey) developed by Van House, Weil, and McClure (1990) and published in *Measuring Academic Library Performance: A Practical Approach.* This survey is part of a manual which grew out of a recognition that there was already a sizable literature on performance measures. The Association of College and Research Libraries Board of Directors, through its Ad Hoc Committee on Performance Measures, concluded that the academic library community needed a practical manual of measures specific to academic libraries (similarly, the Special Libraries Association is also developing an instrument for assessing service quality in special libraries) (White & Abels, 1995, p. 37). The goals of the committee were:

(1) To measure the impact, efficiency, and effectiveness of library activities
(2) To quantify or explain library output in meaningful ways to university administrators
(3) To be used by heads of units to demonstrate performance levels and research needs to library administrators
(4) To provide useful data for library planning (Van House, et al., p. vii.)

In the manual, the authors actually present fifteen specific measures that evaluate the effectiveness of library activities, including general user satisfaction, materials availability and use, facilities and library use, and information services. The manual provides specific step-by-step directions for data collection and analysis. Because the forms for the questionnaires, collection and tabulation forms, work sheets, and summary are included in the manual, and because the method requires only a basic knowledge of mathematics, it is ideal for use by librarians who want to concentrate their efforts on surveying and analyzing data rather than developing new untried methods and measurement instruments. The authors believe that their measures fit all types and sizes of academic libraries and can be replicated in various library settings in an easy and inexpensive manner.

The experience at the College of Charleston with the use of the first of these measures, the General Satisfaction Survey, has thoroughly confirmed the authors' claims about the ease with which the survey can be administered and the data collected and analyzed. Library staff, usually student workers, distribute the questionnaire (see Appendix A) at the library entrance. Not everyone entering the library accepts a questionnaire. Those respondents who complete the form deposit it in one of several boxes placed throughout the library. Typically, the student workers give out over 500 questionnaires during each survey period. During the two most recent semesters that the survey has been distributed (Fall 1994 and Spring 1995), the student workers distributed 1,464 forms of which 805 (55 percent) were completed. Data collection and analysis, following the procedures outlined in Van House et al., took several weeks and was largely completed by student workers.

The profile of the survey respondents demonstrates a high degree of congruence between the mission of the College of Charleston (undergraduate education in the liberal arts and sciences), and those using library services and collections. Undergraduates comprised approximately 88 percent of the respondents while graduate students (4 percent) and faculty (4 percent) made up the next largest group of people served. The respondents self-identified with the general disciplines:

Fields of study:	% of Respondents
Humanities	24%
Sciences	26%
Social Sciences	26%
Other	24%
Total	100%

The College of Charleston staff found the high number of people identifying sciences as their field of study surprising, since only 15 percent of the degrees granted each year are in science and mathematics. The profile of the survey respondent is an undergraduate student working primarily in the sciences, social sciences, or humanities.

The first question on the survey asks students and faculty to indicate what they did in the library and how successful they were with seven particular activities.

Activities	% Who Performed Activity	Average Rating of Success (5-point scale)
Looked for Books	42%	3.8
Studied	66%	4.1
Reviewed Current Literature	20%	3.5
Did a Literature Search	35%	3.9
Asked a Reference Question	24%	3.9
Browsed	26%	3.4
Returned Books	16%	NA
Other	44%	4.6

Students and faculty may identify more than one activity with each library visit. They can study and return books in the same visit. Clearly, a majority of the people responding to the survey, more than two-thirds, went to the library simply to study while 42 percent, the next highest activity reported (exclusive of "other"), went to look for books. The high number of those responding to "other" is probably indicative of the large number of people who use a microcomputing laboratory located in the library building. The information about success is extraordinarily constant. Asked on a scale of 0 to 5 to indicate how successful they were from "Did Not Do" (0) and "Not at All" (1) to "Completely" (5), students and faculty success levels fell between 3.4 and 4.1 (again exclusive of "other") for the various library activities. For example, students and faculty report a high degree of success whether they looked for books (3.8) or studied (4.1). While some distinctions are discernible, the consistency of the data seems to conceal more than it reveals. Overall, the people who use the library state that they enjoy much success whatever they are doing.

Subsequent questions on the survey query respondents about ease of use and satisfaction. To the question, "How *easy* was the library to use *today?*" 85 percent indicated that the library was either "mostly easy" or "very easy" while only 3 percent found it "not at all easy" or "not easy." Similarly, 77 percent of the respondents answered that they were "mostly satisfied" or "very satisfied" with their visit to the library. The overall impression that the quantifiable data reveal about library ease of use, satisfaction, and success, seems quite positive. Furthermore, the data have remained constant over a long period. The data reported in this article come largely from the 1994-1995 academic year, but the library staff have administered this survey eight times over four academic years. In Fall

1991, the first semester the survey was used, 82 percent of the respondents found the library "mostly" or "very" easy to use and 77 percent were "very" or "mostly" satisfied. However satisfied the library clientele might be, the library staff were not. Those reviewing the results from the library survey felt that there could be some discontinuity between these data and other evidence on the survey about the expectations, successes, and failures of library patrons.

A final statement on the questionnaire encourages students and faculty to make open-ended comments. The phrase "OTHER COMMENTS? Please use back of form" typically provokes responses from approximately half the people completing the questionnaire. When library staff members began distributing the questionnaire, they were surprised by the willingness of respondents to provide narrative, open-ended statements and for some time were not quite sure how to use this information. Each semester, the Assistant Dean for Public Service collects the information into a document and reviews it with the public services staff. The quality literature has always recognized the value of this type of customer feedback. Zemke and Schaaf (1989) state: "[c]omplaints are analyzed as bellwethers on developing problems that can be nipped in the bud—and as opportunities to get back in the disgruntled customer's good graces by showing concern and responsiveness" (p. 33).

Recently, the library's administrative staff decided to carry out a more formal analysis of this information because the quantifiable information about satisfaction, ease of use, and success was not helping to determine where service improvements could be made. In order to improve library services, the library staff needed to know more about what students and faculty expected from their library. The open-ended comments have become the basis for further research on what library users want. In an effort to classify these comments, the administration turned to the work of three experts in the field of service quality. Berry and his associates (1985) have been studying the determinants of quality service for the last decade. Writing in the *Journal of Marketing*, Zeithaml et al. (1985) suggested that, regardless of the type of service, customers used basically similar criteria in evaluating service quality (p. 46). In their early work, they identified ten overlapping determinants of service quality which categorize and define quality of service as perceived by customers. Subsequently, they refined their analysis, combining these variables into five "principle dimensions customers use to judge a company's service" (Berry et al., 1990, p. 29). Analysis at the College of Charleston, which is grounded in the work of these researchers, found that seven categories most accurately reflect the range of service expectations that library users have. Table 1 that follows is taken from the work of Parasuraman, Zeithaml, and Berry (1980) but adapted with changes to illustrate the dimensions or aspects of quality within library public services.

TABLE 1

LIBRARY SERVICE DETERMINANTS DEFINITIONS

RELIABILITY involves delivery of the promised library service dependably and accurately. It means that the public services staff member performs the service right the first time. It also means that the library collections contain information appropriate to the needs of patrons. Specifically it involves:
- —giving correct answers to reference questions
- —making relevant information available
- —keeping records consistent with actual holdings/status
- —keeping computer databases up and running
- —making sure that overdue notices and fine notices are accurate.

RESPONSIVENESS concerns the readiness of library staff to provide service. It also involves timeliness of information:
- —making new information available
- —checking in new journals and newspapers promptly
- —calling back a patron who has telephoned with a reference question immediately
- —minimizing computer response time
- —reshelving books quickly
- —minimizing turnaround time for interlibrary loans.

ASSURANCE refers to the knowledge and courtesy of the library staff and their ability to convey confidence. It involves politeness, friendliness as well as possession of the skills to provide information about collections and services.
- —valuing all requests for information equally and conveying that sense of the worthiness of the inquiry to the patron
- —clean and neat appearance of staff
- —thorough understanding of the collection
- —familiarity with the workings of equipment and technology
- —learning the patron's specific requirements
- —providing individual attention (Will a staff member go with a patron to the bookstacks when the patron indicates that she is having trouble locating a book?)
- —recognizing the regular patron.

ACCESS means that there are sufficient numbers of staff and equipment as well as hours of operation:
- —waiting time in circulation check out lines is minimal
- —computer terminals, OPACs, etc. are available without waiting
- —library hours meet expectations
- —location of the library is central and convenient.

COMMUNICATIONS means keeping the customers informed in language they can understand and listening to them. It may mean that the library has to adjust its language for different consumers—increasing the level of sophistication with a well educated one and speaking simply and plainly with a new library patron. It involves:
- —avoiding library jargon
- —discerning what information a patron wants through "question negotiation"
- —developing precise, clear instructions at the point of use (next to indexes and abstracts or within computer databases and catalogs)
- —teaching the patron library skills
- —assuring the patron that her problem will be handled.

SECURITY is the freedom from danger, risk or doubt. It involves:
- —physical safety within the library and surrounding area (Will I get mugged on my way back to the parking lot?)
- —confidentiality (Are my dealings with the library private?).

TANGIBLES include the maintenance of the physical facilities and serviceability of the equipment. They encompass various environmental elements surrounding the services and the collections:
- —condition of the building (heat, light, etc.)
- —condition of equipment such as microfilm readers, copiers, computers used to provide library public services
- —impact of other patrons in the library.

The process for organizing the comments from students and faculty began with coding. Working in group sessions, the authors of this article classified and categorized each comment. The process had two aspects. First, the authors placed the comment into one of the seven service quality categories or determinants. At times they found some of the comment classification decisions difficult because of the lack of clarity and information about intention. Nevertheless, the authors did classify most of the comments. Second, the authors assessed each comment for its positive or negative attribute. They found this categorization to be direct and without the ambiguity inherent in classification into service determinants. Some examples illustrate how the process worked as well as what its limitations were. The response, "People here are helpful" received the coding, "assurance/positive." The comment reflects the expectation that the staff possess the skills to provide information and therefore is "assurance." Moreover, it reflects satisfaction since the expectation has been met and can be categorized as "positive." Sometimes the coding decisions were not so straightforward and provoked some lengthy discussions about intentions among the authors. The comment, "I wish there was more instructional material," seemed at first to the researchers to be a "communications" service determinant but, after some reflection, was finally coded "reliability." The sense of the researchers was that the service failure was not so much confusing instructions (communication) as the lack of instructions or an access failure. Sometimes the authors could not classify the comments. The authors did not include comments like "it is a beautiful day" in the analysis because these referred to nonlibrary matters. But many comments which clearly referred to the library like "all I had to do was study" still could not be classified because of a lack of information about the service expectation.

Even these responses, though the authors characterize them as uncodable, confirm some of the conclusions about the data developed from the specific quantifiable questions in the survey. Many responses simply stated that the person came to the library to study. The authors were tempted to code these statements as "reliability/positive" since the perception of the library service as a "study hall" seems to have been met, but they did not, although they do indicate that many students expect the library to serve as a study center. The comments simply did not contain enough information for accurate coding. But these comments do reinforce conclusions drawn from other parts of the survey. The data from the part of the survey that queries patrons about their specific purpose for coming to the library revealed that 66 percent of the people use the library just to study.

Some responses described services outside the library sphere. Although the survey clearly states that it is a library survey, there are many

comments about a microcomputing laboratory that the library houses. These responses have been separated out from the uncodable responses having to do with library services so they can be distinguished as appropriate in the analysis of responses and results. When a student noted "Knew what I was doing" or "Didn't have enough time," a variety of service successes or failures can be read into the response. Did the student know what he was doing because of clear precise instructions from a reference librarian? Did the student not have enough time because she had been searching without success for a misshelved book? Or was the lack of time a question of an obligation outside the library? Because of the lack of adequate information, the responses were unencodable. Such comments indicate the limitations of survey analysis and the importance of other types of analysis such as focus groups, which allow more opportunity to discern exactly what the library patrons believe to be the determinants of service success or failure.

FINDINGS

The library staff collected 805 completed questionnaires over two semesters. Surprisingly, 529 of the respondents wrote comments at the bottom of the questionnaire. Of these, 429 commented on some aspect of library activity, and 404 could be classified into one of the seven service determinants. The questions were categorized into two groups: those that were essentially positive statements about library services and those that were negative. In contrast to the findings from the quantifiable scaled questions about success, "Ease of use" and "Satisfaction" seemed to indicate evidence of positive experiences; most of the unstructured comments were negative. Approximately 55 percent of the responses were negative and the remaining 45 percent were positive. The unstructured responses generate a very different picture of the library. These responses generally fell into one of the seven broad categories (see Table 2).

Many comments (32 percent) fell into the tangibility determinant category (see Table 1 for a description of this category). The responses often had to do with quiet or the lack of it in the building. One respondent noted, "it could always be quieter" while another said, "quiet and comfortable." Several others mentioned the temperature in the building. Sometimes the comments indicated that machines like photocopiers or microfilm readers did not work. Some were quite specific such as the student who found that the study room needed a chalkboard. Tangibility responses roughly divided equally into positive and negative (14 percent positive and 18 percent negative). The relative evenness of the positive and negative responses surprised the library staff, which had become fairly inured to complaints about temperature and noise. The fact that there were almost as many positive comments about tangibility as negative, and that tangibility totaled 32 percent of the classifiable

TABLE 2.
LIBRARY SERVICE DIMENSIONS

Determinant	Responses	% of Total Responses	% of Total (total = 404) Minus Uncodable
Assurance			
+	64	12%	16%
-	7	1%	2%
Total	71	13%	18%
Tangibility			
+	58	11%	14%
-	72	14%	18%
Total	130	25%	32%
Access			
+	8	2%	2%
-	29	5%	7%
Total	37	7%	9%
Reliability			
+	49	9%	12%
-	77	15%	19%
Total	126	24%	31%
Security			
+	0	<1%	<1%
-	2	<1%	<1%
Total	2	<1%	<1%
Communications			
+	6	1%	1%
-	19	4%	5%
Total	25	5%	6%
Responsiveness			
+	2	<1%	<1%
-	11	2%	3%
Total	13	2%	3%
Uncodable			
Library	65	12%	
Non Library	60	12%	
Total	125	24%	
TOTAL	529		
+			
-			
TOTAL (Minus uncodable)	404		
TOTAL (Minus non-library)	469		

responses, indicates the environment in which people work and study, even when the environment is a good one, remains a paramount patron concern. Effective library service as perceived by the clientele at the College of Charleston depends on maintaining a comfortable quiet facility with ancillary equipment in working order.

The survey respondents were almost as likely to make comments about the library's reliability (31 percent). Statements like "journal selection is poor" or "didn't have what I needed" tended to be quite common. The people who use the library frequently indicated that they expected to find information, a book or journal article, but were disappointed. Less often they were pleased: "I knew what I was looking for and where it was." These responses seem largely to be questions about information expectations, namely, that the collection should have certain books or journals and in fact did or did not have these items. Reliability, as the students and faculty understand it, is a question of having appropriate information. The relationship between favorable responses about reliability and less favorable responses was not as evident as with tangibility. Only 37 percent of the reliability comments were positive. These negative reliability responses, particularly those of faculty and students who characterize their difficulties as caused by inadequate library holdings, contrasted with the data from the earlier part of the study. If 85 percent of the students and faculty find the library easy to use and 77 percent consider their visit very satisfactory, why did so many people have negative service perceptions about reliability, especially expectations about collections that remain unfulfilled?

Characteristics related to the courtesy and knowledge of library staff did not have quite the same salience to survey respondents. About 18 percent of the respondents wrote comments that could be classified as "assurance." These comments overwhelmingly tended to be complimentary like one student who wrote "all these happy, smiling people; I am biased in favor of the library," or as another stated, "people are helpful here." Positive comments outnumbered negative comments eight to one and, overall, where 18 percent of the comments were classified as "assurance," only 2 percent of these comments were negative. The contrast between the positive/negative ratios for assurance and all other service dimensions is startling. In every other case, negatives outnumber positives, but the people who use the College of Charleston Library do not perceive either the knowledge or courtesy of the library employees to be at the root of their service failures.

Only 9 percent of the survey respondents cited the next principle service dimension, "access," in their comments, and negative comments outnumbered positive ones by approximately three to one. Patrons recognize when there are (in)sufficient numbers of staff at staffing points or hours of operation. One complained, "the library needs to stay open

until at least 2 A.M.!" while another urged, "more people needed at info desk." Overall, access issues, like hours of service, were less important than the library staff expected. The analysis of the survey comments placed the issue of the overall significance of extended library hours of opera- tion in context. While library hours may become issues with politicized constituencies, like the faculty library committee or student government, there was little evidence that the survey respondents perceived hours as a problem.

The remaining service dimensions, communications (6 percent), re- sponsiveness (3 percent), and security (<1 percent) had relatively less impact on the perceptions of survey respondents. Some people felt the need for additional directional information such as the students who wrote, "provide a map of the library to help search; please include call num- bers" or "is there a sheet of instructions available to find an index of past journals that are on microfilm?" The relative lack of comments about communications left library staff wondering whether the extensive com- mitment to effective communications--in person, through many library handouts, and especially through well-tested online instructions for cata- log and database use--was working or whether it was simply not perceived as an important service dimension. The perceptions about responsive- ness tended to fall into two categories. Some responses noted the lack of current information on a subject, and others found waiting for a given service, such as circulation check-out, a problem. While there were only two responses about security, both were disconcerting ("A strange bald headed man kept following me" and "it's scary") though perhaps the sin- cerity of the responses is questionable.

For the first time, the library staff has been able to organize expecta- tions from people who use library services and collections into seven prin- cipal service dimensions. If the literature is correct, the judgments that students and faculty make should become the sole basis for evaluating service quality. The library staff know what students and faculty expect in the way of library services. Customers assess quality by comparing service outcomes with their personal expectations of what they think library ser- vice should be (see Parasuraman et al., 1985, 1988, 1994; Brown & Swartz, 1989; Carman, 1990; Brown et al., 1993; Teas, 1993, 1994). Others sug- gest that quality should be measured in terms of customer satisfaction or attitude (see Bitner, 1990; Bolton & Drew, 1991; Cronin, 1992, 1994; Cronin & Taylor, 1992; Taylor & Baker, 1994).[1]

The results of the effort to classify the comments stand in contrast with the quantitative data about satisfaction and ease of use. What was consoling, namely that overall satisfaction or ease of use ranged consis- tently between four and five on a scale, now must be qualified. More likely than not, this discontinuity stems from the halo effect. Thus the survey comments become the better basis for defining quality library

services. When library patrons express their expectations about public services, and library managers make a commitment to fulfilling those expectations, the key question becomes how to meet those expectations.

ACTION

Gathering information about what people expect is, however, only the beginning. Patron expectations about services have been classified not simply for library managers to consider but for action. A library develops a positive image of service quality when librarians implement a system for meeting these externally defined expectations. Writing in the *Sloan Management Review*, Berry et al. (1990) suggest various service imperatives for every company in the service sector interested in quality improvement. What follows—some programmatic directives for libraries–is based largely on this work. Five imperatives, defining the service role, hiring and retaining service-oriented employees, providing an accommodating environment, reliability, and "doing it right the first time" have widespread applicability in libraries.

DEFINING THE SERVICE ROLE

Understanding the expectations of library patrons begins with the classification of service expectations into the seven service determinants, but additional research into patron expectations is critical. Moving beyond the framework of customer expectations and continuing the research process, the library staff can obtain a better understanding of the relative importance of the service determinants. For example, the survey indicated that less than 1 percent of the responses commented about security, but the survey excluded students and faculty who do not use the library. A new survey mailed to a sample of all students might provide different information about security if those most concerned never enter the building. Research about the service expectations of these potential patrons may be crucial to the growth of public services and improved service quality.

Research also clarifies and reinforces the service role for employees when that role has been poorly articulated. Libraries, like many non-profit organizations, have ambiguous service missions because library managers have accepted a multiplicity of service obligations. Surely the volume of activity in many reference, interlibrary loan, and circulation departments overwhelms the staff, but the failure to identity service priorities also contributes to problems with work load. Research about patron expectations can help by identifying which service priorities are most important to library users. Positive comments from surveys reinforce positive service behavior. Research can help library staff develop service standards, the basis for measuring staff performance. Whatever service standards emerge from the research effort, library managers need to

communicate the results of the research about patron expectations at every opportunity through internal publications, meetings and workshops, performance appraisal, and hiring decisions.

HIRING SERVICE-ORIENTED EMPLOYEES

Clarifying the service expectations of library patrons for library employees through research works best when the library administration has hired and retained employees who have the desire and ability to provide excellent service. Libraries have been slow to recognize that a reputation for quality is built on the perception that library patrons have about library staff as well as the service itself. There can be a mismatch between the type of people hired and the type needed. Once the service role is defined, it should be used when hiring new employees. "This requires having written service standards for the various positions, written 'ideal candidate' profiles that reflect the service standards, and extensive line involvement in actual hiring decisions" (Berry et al., 1990, p. 32). Once library managers understand the service standards for a position, they would do well to examine some of the essential qualities these standards represent. For instance, for the following positions:

- Reference   friendliness/approachability/curiosity/ perseverance
- Circulation   friendliness/accuracy/dependability/focus /self-confidence/attention to detail/tact
- Interlibrary loan   Efficiency/organization/perseverance/research orientation/focus
- Special Collections Carefulness/neatness/security orientation/ attention to detail
- Shelving   Accuracy/focus/physical fitness/ability to work without supervision

Sometimes the question of whom to hire becomes intertwined with the tendency of libraries to delineate role responsibilities into professional and paraprofessional. Nowhere is this phenomenon more apparent than in the circulation function where the vast majority of patron/ staff exchanges takes place. Judging from the results of the research presented here, it is the circulation desk that is the most visited service point. Only 24 percent of the respondents asked reference questions, whereas 42 percent looked for books and 16 percent returned books (there may be some overlap in these activities). Circulation is the area where library patrons form many of their perceptions about the library. Some library patrons even (mis)take the students working in circulation for librarians. There is often an expectation of in-depth professional assistance available at the circulation desk. The response most public service managers have developed is some effort to teach circulation staff and student workers

to refer questions to the reference desk, but some consideration to hiring service-minded paraprofessional or professional staff may be more appropriate. Imagine, for example, a librarian positioned at the circulation check out position asking library patrons whether they found what they needed as they leave the library.

Larger questions about faculty status and professional versus paraprofessional work lie outside the scope of this article. Nevertheless, many library administrators remain "conflicted" when making hiring and retention decisions because they must bring many variables besides commitment to quality service to bear on these decisions. Public service units may want to minimize the impact of variables such as publication record or fixed distinctions between paraprofessional and professional work. They should recognize variables such as valuing all requests for information equally or familiarity with the equipment and technology when they make new appointments. Hiring and retention decisions become opportunities to find and keep the service-oriented people. Managers in public services who fail to find these opportunities cannot sustain service quality for long.

TANGIBLES

The majority of comments from the survey concerned tangibles. Attention to the details of maintaining a library's physical facilities and equipment, more than any other variable, determines what library patrons think about service. Bitner (1990) shows "that physical surroundings and employee responses can significantly influence important consumer responses" (p. 79). In the questionnaire comments, students often noted the need for more machines, more pleasant heating and air conditioning, and a desire for a quiet atmosphere. As Bitner points out, these elements are controllable, and they "may influence customer evaluations, and ultimately affect perceptions of service quality. . ." (p. 69). Measures such as hiring student monitors for quiet areas, regular communication with the maintenance department, and budgeting for equipment and furnishings, are relatively easy to implement. The building and its contents are not a static entity but a key variable in quality service.

RELIABILITY

While comments about tangibles made up the largest single category of comments from the survey (32 percent), comments about reliability followed closely behind (31 percent). More importantly, negative comments about reliability (15 percent of the total) exceeded negatives about tangibles or any other service determinant. More than any other variable, the failure to meet the expectations about the reliability of library services prevents a library from sustaining a reputation for quality. This analysis confirms the work of Berry et al. (1990) who, when they sampled

nine service industries, found reliability "the single most important fea-
ture in judging service quality" (p. 34). When a library breaks a service
promise, students and faculty lose confidence in the library's ability to
deliver services accurately and dependably. In the world of factory pro-
duction, the reliability issue, which has plagued U.S. industry, has been
attacked through initiatives designed to produce "zero defects" (Crosby,
1979, pp. 170, 233). The equivalent attitude for service industries gener-
ally, and libraries in particular, should be a "do it right the first time"
attitude. Not just a homily that library managers preach to staff, this
attitude should become part of the hiring, training, research, communi-
cations, and rewards functions within the library.

Public services managers recognize certain types of service problems
stemming from lack of dependable information but may do little about
them because they just do not seem "important." Computer generated
circulation notices can overwhelm or inure library patrons when they
contain inaccurate information. Sending a patron an overdue notice for
a book that has been returned undermines the credibility of the entire
library operation. Tolerating these defects also confuses and frustrates
library staff who must spend valuable time with patrons sorting out the
problems and who come to believe inaccurate holdings records are al-
lowable. Doing it right the first time means sending fewer notices. Send-
ing notices after the shelves have been checked results in sending fewer
notices and receiving more book returns.

Other reliability issues may be far more difficult to remedy. Many of
the negative comments about reliability from the survey referred to inad-
equacies in the collections. In some cases, the library staff did not pur-
chase what students or faculty members wanted. In many other cases,
these comments surely come from students or faculty who went to the
online catalog and/or the bookstacks and simply failed to locate infor-
mation that was available in the collection. To some library managers,
these situations do not present any opportunity to "do it right the first
time." However, the possibility that students can come into the library,
look for information, not find what they want, and leave should not be
acceptable to service-oriented managers. Library managers should find
ways to encourage staff to ask patrons if they found what they needed.
Reference librarians who look for opportunities to accompany patrons
to the bookstacks will in effect be doing it right the first time.

CONCLUSION: THE QUEST FOR QUALITY

The quest for quality in public services begins with a focus on pa-
trons or customers. Librarians have measured service in terms of quan-
tities of services performed, turnaround time, or services per patron. Now
they may choose another direction. Librarians committed to quality im-
provement allow patrons to judge service quality and take steps to meet

patron expectations. This approach involves research. One research method presented here is the distribution of questionnaires, such as the one designed by Van House et al. (1990), collecting comments, and placing these elements in a conceptual model that classifies service perceptions into seven service determinants. Armed with some appreciation of service quality as perceived by patrons, managers in public services can take four steps to establish a reputation for service quality. First, they should develop an in-depth research program which allows them to set up service standards and to make choices about the services. Data produced through research then become the basis for improving and refining specific library services and defining a service standard. Second, the library administration needs to hire staff who meet the stated service standards. An effective quality improvement program depends on having service-oriented people in place as service providers. Third, library managers must take steps to provide a conducive environment for study by providing enough copiers, computer equipment, printers, comfortable seating, and clean surroundings. Finally, the staff in public services should adopt the "do it right the first time" attitude. Dependability and accuracy, more than any other characteristics, influence patron thinking about the quality of library services. "Quality should be the central goal and of highest concern—'acceptable' quality levels, errors, and poor materials must be completely eschewed throughout the production system or service delivery process" (Akande, 1992, p. 4).

Public service librarians who want to improve the quality of services should accept patrons' judgments. Pleasing patrons means asking for their perceptions of service in a programmatic way, correcting problems, and emphasizing a "do it right the first time" attitude. The necessity for implementing quality improvement strategies cannot be overstated. "Not only are libraries competing for customers within this changing information delivery marketplace, they are reexamining their budget and their very existence" (White & Abels, 1995, p. 36). By responding to the real needs of patrons, librarians can earn a reputation for quality and thrive in the highly competitive information age.

APPENDIX A

FORM 1-1
GENERAL SATISFACTION SURVEY

PLEASE HELP US IMPROVE LIBRARY SERVICE BY ANSWERING A FEW QUESTIONS.

1. What did you do in the library today? For each, circle the number that best reflects how successful you were.

		Successful?				
	Did not do today	Not at all				Completely
Looked for						
books or periodicals	0	1	2	3	4	5
Studied	0	1	2	3	4	5
Reviewed current literature	0	1	2	3	4	5
Did a literature search						
(manual or computer)	0	1	2	3	4	5
Asked a reference question	0	1	2	3	4	5
Browsed	0	1	2	3	4	5
Returned books	0	1	2	3	4	5
Other (what?) _____	0	1	2	3	4	5

2. How easy was the library to use today? *(Circle one)*:

<p style="text-align:center">1   2   3   4 5
Not at all easy   Very easy</p>

Why? _____

3. Overall, how satisfied are you with today's library visit? *(Circle one)*:

<p style="text-align:center">1   2   3   4 5
Not at all satisfied   Very satisfied</p>

Why? _____

4. Today's visit was primarily in support of *(Check one)*:
   ___ 1. Course work   ___ 3. Teaching   ___ 5. A mix of several
                                                           purposes
   ___ 2. Research   ___ 4. Current awareness ___ 6. Other: _____

5. You are *(Check one)*:
   ___ 1. Undergraduate   ___ 3. Faculty   ___ 5. Other staff
   ___ 2. Graduate student ___ 4. Research staff   ___ 6. Other (what?) ___

6. Your field *(Check one)*:
   ___ 1. Humanities   ___ 3. Social Sciences
   ___ 2. Sciences   ___ 4. Other (what?) _____

OTHER COMMENTS? Please use back of form.

Source: Van House, et al. 1990. Reprinted with permission of the American Library Association, from the *Measuring Academic Library Performance*, ISBN 0-8388-0529-3, copyright © 1990.

NOTES

[1]   Using a two part questionnaire consisting of 97 statements addressing expectations about service that should be offered, followed by 97 statements addressing perceptions about actual service received, Parasuraman, Zeithaml, and Berry (1988) developed an instrument called SERVQUAL. The formula is Q (representing perceived quality along that item) $= P - E$, where P and E are the ratings on corresponding perception and evaluation statements. SERVPERF is another model developed by Cronin and Taylor (1992) and Cronin (1994). Cronin seems to think that performance-based measures are more useful than the gap measure between perceptions and expectations. Teas presents a more complex NQ model. Carman (1990) makes the point that the work by Parasuraman, Zeithaml, and Berry is not completely generic. At any rate there is active debate about the SERVQUAL model, but most seem to agree that the pioneers are Parasuraman, Zeithaml, and Berry, and it is their model which is the most often used for discussion and comparison. The SERVQUAL model was not adaptable for the study investigated in this article because the Van House questionnaire was selected from the outset.

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