

Evaluation of library services: a literature review

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Abstract:

This paper reviews the literature related to evaluation of Information services. The purpose of this study is to identify the evaluation criteria, evaluation perspectives and instruments of evaluation researches in order to apply to the local context to assure the service quality of libraries. Under this library evaluation points and evaluation perspectives were reviewed. Further to these evaluation criteria, methodology and research instrument used in evaluation research were studied. Several related research carried out by using different evaluation criteria have been reviewed.

Key words: Evaluation Criteria, Service quality, Research instruments for evaluation research.

Introduction:

Measure and evaluation are often combined. But these two terms are distinct and have been well defined. Measurement is “the determination of the magnitude of a quantity” while evaluation is “the process of determining the merit, worth or value of something or the product of that process” (Scriven,1991). A simple definition, but no easier to accomplish is that evaluation consists of comparing ‘what is’ to ‘what ought to be’ (Van House et al,1990).

A historical background

The primary goal of any library is to maximize user satisfaction and to potentially exceed the expectations of their users. Therefore, in the library quality may be recognized by the customers in terms of prompt delivery or error free services. Quality is relating to how good a service is, and not necessarily how large or extensive. Therefore the recipients of the service must experience quality which may also be a property of the service itself. A quality service is one that fully meets the expectations and requirements of the users.

Crowford J.(2000) has listed out the reasons for undertaking evaluation. Those are;

1. To collect information to facilitate decision making and justify increasing expenditure or defending existing expenditure
2. To evaluate the quality of service provided: both overall and specifically to plan for future improvements.
3. To identify the extent to which problems can be solved. It may or may not be possible to solve a problem identified by evaluation. Sometimes, it cannot be solved due to resource constraints (human and finance) or involvement of parties outside the library, for example administration. In this case, at least evaluation can contribute to the planning process.
4. To identify differing and contradictory needs of different user categories
5. To plan public relations work and information dissemination.
Eg. User education on the use of electronic information
6. To provide feed back to, and to evaluate contractors
Eg. Time taken by suppliers to supply items.
7. To involve users in management
8. To provide the basis of further improvement and direction
9. Closing the feedback loop.
Considering .

Library evaluation frame works and evaluation perspectives

A few scholars have presented library evaluation frame works. Herson and McClure (1990) presented four different levels of analysis for evaluation. Those are

- individual
- programmatic level
- organizational and
- societal.

Although all four perspectives are important to consider, they argue that it is important for a library to evaluate its performance of the organizational and programmatic level.

Griffiths and King (1993) also use a two dimensional framework, this one targeted toward special libraries. Their dimensions are the object of measurement;

- entire library
- functions preformed
- services and products
- resources

And the evaluation perspectives are

- library
- user
- organization
- industry
- sector or society

This two dimensional frame work for holistic evaluation is expanded and modified in order to evaluate information services in some other libraries.

Saracevic(2000) discussed the evaluation of digital libraries and presented a set of elements for evaluation. This list consist of the different aspects of digital library, including traditional library elements such as

- collections
- access
- preservation
- use

and elements from computer systems such as

- networks
- security

and elements from management of services such as

- integration - cooperation
- staffing and - costs

He presents the context of evaluation as user centered or system centered.

Turk (2007) has carried out a research titled “building a culture of quality assurance in the libraries of the university of Ljubjana”, which focus on multiple perspectives; service effectiveness, service efficiency and service quality together with combination of these usability aspects of performance measurement. In that study, the author has reviewed performance indicators under five groups such as

1. library staff
2. library documents
3. library services
4. library expenditure and

5. Library space.

According to Turk (2007), Slovenian academic libraries such as the library of University of Ljubjana, have no significance and systematic approach to the measurement of library service quality. Some libraries of University of Ljubjana have already considered measuring library's service quality from the users' point of view. This author has evaluated the library service quality by using a survey instrument containing 23 questions grouped into five dimensions. Those are as follows.

1. Space
2. personnel
3. collection
4. searching information sources
5. service in general

User Perception in Library Evaluation

Dervin, Nilan, (1986) presented a summary of research about the importance of including the perspectives of users in library evaluation. They presented two paradigms; the first is the traditional paradigm where "information is seen as objectives and users are seen as input-output processors of information", and that evaluation from this perspectives focuses only on the 'externally observable dimensions of behaviour and events'. The alternative paradigm is to bring the user into the evaluation and involve their viewpoint based upon the concept that different users will make sense of an information situation in different ways. This paradigm focuses on "what leads up to and what follows intersections with systems".

Orr (1973) presented two basic questions to understand the traditional methods of evaluating library services by examining the concepts of quality and value: 'how good is the service?' and 'how much good does it do'? In order to perform this type of evaluation library must take a different type of measurement from users. Instead of focusing only on the performance of the system librarians must also consider the users' view point of their use experience.

To measure the users' view of their use several scholars have looked at many ways. Those are users' information needs, gaps in knowledge, information encountering behaviour of users, information retrieval from digital system, getting relevant and useful information, and how the library aided in resolving knowledge gap and information needs.

All of those theories need to split the external measurement into two categories: measurement based on the user's view of the system and measurement based on the user's view of the use experience. Accordingly, they have identified criteria for evaluation purposes.

Evaluation criteria

Selection of multiple evaluation criteria and the view points is critical in gaining a more thorough understanding of service quality of library.

Lancaster (1978) presented one of the most commonly accepted frameworks for evaluation consisting three tiers;

- effectiveness
- cost-effectiveness and
- cost-benefit

Effectiveness is "how well the system is satisfying its objectives". Once effectiveness is measured the cost of service can be introduced to examine the cost-effectiveness of the service. Finally, this framework recognizes that effectiveness and benefits are not the same; therefore, cost-benefit is evaluating a service based upon the cost compared to the benefits provided by that service.

Armstrong (1991) has identified some criteria which customers ascribe to service include;

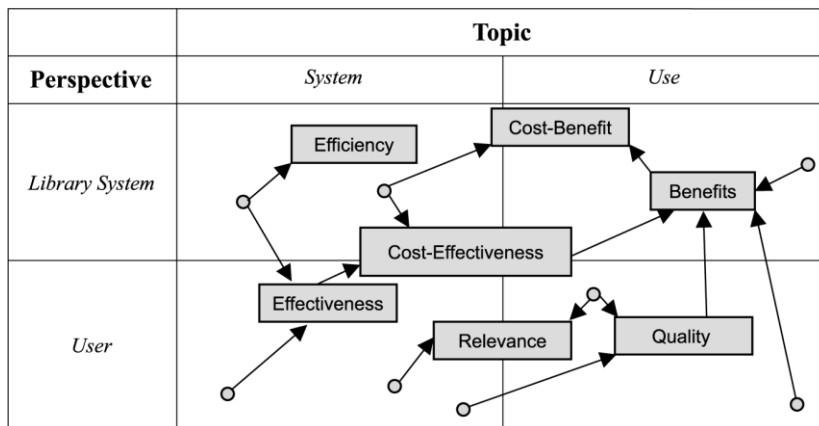
- accessibility

- responsiveness or timeliness
- reliability or accuracy, up-to-dateness and relevance
- accuracy or non threatening behaviour / friendliness and helpfulness
- communications or easy to use
- assurance or reliability and consistence
- affordability, tangibility or within price range

Different evaluation criteria can get from different quadrants of measurement of Nicholson (2004), making the holistic understanding of the library easier to accomplish. Those are

- Effectiveness
- Efficiency
- Cost-effectiveness
- Cost-benefit
- Benefits
- Relevance and Quality

Figure 1: Mapping example evaluation criteria to the measurement matrix (Nicholson, 2004:176)



A user survey at Waterford Institute of Technology libraries (2005) has included the following issues in order to identify the library’s service delivery.

- Library usage and collections
- Library access
- Working environment
- Information technology and computers
- Services and customer satisfaction
- Overall satisfaction and priorities

Some related research by using different evaluation criteria.

Seay et al. (1996) has used five criteria to evaluate quality services. Under these criteria Thapsia (1999) has developed some determinants to measure the service quality at university of Botswana library. The same criteria were used by Sahu, A.K. (2006) to measure the service quality in Jawaharlal Nehru University (JNU) library. The criteria and the determinants are given below.

1. Reliability: this refers to delivery of service as it relates to dependability and accuracy. This includes
 - giving correct answers to reference questions

- making relevant information available
 - keeping records consistent with actual holdings
 - keeping computer databases up and running
 - making sure that overdue notices and fine notices are accurate
2. Responsiveness: it measures the readiness of library staff in providing services. This includes
 - timeliness in delivering needed information
 - making new information available
 - checking in new journals and newspapers promptly
 - calling back the patrons who has telephoned with a reference question immediately
 - minimizing computer response time
 - re-shelving books quickly
 - minimizing turn around time for inter library loans (ILL)
 3. Assurance: it measures the knowledge and courtesy of the library staff and their ability to convey confidence. This includes
 - valuing all requests for information equally and conveying the importance of an inquiry to the client
 - Clean and neat appearance of staff
 - Thorough understanding of the collection
 - Familiarity with the workings of equipments and technology.
 - Learning the customer's specific requirements
 - Providing individual attention and
 - Recognizing the regular customers
 4. Access: It measures the ability to reach out for something and finding or getting it as and when it is needed. This includes
 - waiting time at circulation desk
 - availability of computer terminals, online public access catalogue (OPAC) etc. without waiting too long.
 - Library hours meeting expectations
 - Location and centrality of the library and convenience
 5. Communications: It measures the ability to keep clients informed in a language they understand and the ability to listen to them. This includes
 - avoiding library jargon
 - determining the needs of the client through gentle follow up questions
 - developing precise clear instructions at the point of use
 - teaching the customers the library skills
 - assuring the customer that her/his problem will be handled

In addition Sahu, (1996) has used other criteria called Empathy. Empathy measures the behaviour, attitude and approach of the library staff towards users. It includes

- determine the attitude of staff
- giving equal importance to all users' requests . Thopsia and Gamini (1999)

A research study was carried out by Ghosh, (2003) titled as service evaluation in a special library; supporting developmental research at the Institute of Social Sciences library, New Delhi. In this study the researcher has identified the following services in relation to the functional needs of the users. They

include familiar 'core' library functions such as an electronic catalogue of the library resources on OPAC terminals, a computerized circulation and loan system, reference and information services, access to internet and CD-ROM databases and audio-visual resources.

Together with the above, there is a range of more special services extended reference and information services; information retrieval and dissemination, data packaging and compilation of document lists, periodical indexing service with an annual article index, documentation services- current awareness and SDI services, inter library borrowing and information interchange, On-demand selective acquisition of new resources, News paper clipping services and Photocopying and document delivery services.

This case study has provided other special library practitioners with clear models which they can emulate and apply in their practice.

Though it is carried out in special library, it is suitable to adapt to university libraries too.

Bowden, D.(2006) has reviewed most of the literature in the concept of 'evaluation of library services' and written an article titled "Are we effective? How would we know?" approaches to the evaluation of library services in Lithuania, Slovenia, and the UK". He has insisted that statistical data should be maintained by library and that is very essential to evaluate services. According to Ambrozic (2000) statistical data can be used to measure library activities, the workload (processing of materials, information requests etc.), library collection (size, structure etc.), library users (demographic structure, quantification, their satisfaction etc.), income and outcome. However she argues that by using the statistical methods she describes the input and partially also the outcomes, but this approach does not provide information on the achievement of goals or the impact of library services on the environment. Therefore, library statistics cannot be the only measure of the library's performance.

Bowden (2006) concluded that there is still no "right way" to evaluate the quality and effectiveness of library services. Rather librarians and information specialists must seek the best combination of old and new methods to provide the most useful assessment of their services.

Methodology adopted in evaluation researches

Evaluation has been done in libraries from 1970s. At the beginning library evaluators have used the internal data available in the system. As Lancaster (1978) described usually evaluation is done to assess the effectiveness, cost-effectiveness and cost-benefit analysis. This type of evaluation was done by using the perspectives of librarians and the library staff members. Then focus group interviews also widely used to evaluate the library services. After all it is widely accepted in the evaluation of any services or organizations, customers' view points are very important as they are the end users. To assess the quality of any services questionnaires are administered to the target users (customers/clients) and the data collected from them was analyzed as such method is widely used in evaluation of library services too.

SERVQUAL method (service quality survey method)

Parasuraman, Zeithaml and Berry have created an instrument called SERVQUAL in order to evaluate the service quality of marketing research and practice. SERVQUAL is a diagnostic tool to measure service quality, defined as the difference between customer perceptions and expectations of service. Their criteria correspond to ten overlapping dimensions. Those are;

- tangibles
- reliability
- responsiveness
- competence

- courtesy
- credibility
- security
- communication
- access and
- understanding the customer

To measure these ten dimensions they prepared a 97 questionnaire item. Then they condensed the dimensions into seven and the questionnaire included 34 items. Then drew five dimensions and 26 items and finally settled on five dimensions which contain 22 items.

Parasuraman et al's (1998) identified the important five dimensions with which consumers judge services.

1. Reliability: the ability to perform the promised service both dependably and accurately
2. Responsiveness: the willingness to help customers and to provide prompt service.
3. Assurance: the knowledge and courtesy of employees as well as their ability to convey trust and confidence.
4. Empathy: the provision of caring, individualized attention to customers.
5. Tangibles: the appearance of physical facilities, equipment, personnel and communication materials.

SERVQUAL is a potentially useful approach to consider as a complement to current approaches for assessing quality of library services. SERVQUAL protocol has been accepted as a standard of service quality assessment in the business world since the mid 1980s.

Zeithaml et al. (1990) assured that this instrument SERVQUAL could be widely utilized in any industry with only minor modifications.

LIBQUAL + Instrument

LIBQUAL + was designed by the Association of Research Libraries (ARL) in order to evaluate the library services. This was adapted from SERVQUAL. It is a derivative of SERVQUAL protocol rigorously re-grounded through both qualitative and quantitative means for the research library sector in North America. It is based on the theory that there is a gap between perceived and desired expectations of service quality, and it is designed to measure these gaps. This contains 22 questions grouped into four dimensions Cook et al (2001).

1. Affect of Service (Service affect)
2. Reliability
3. Library as a place and
4. Access to information.

Affect of Service: It collapses, three of the service dimensions identified by SERVQUAL. Those are assurance, empathy and responsiveness. The human dimensions of library services

Reliability: Reliability or the ability to perform promised or expected services dependably and accurately, was found through qualitative assessment to be as important in the library environment.

Library as a place: It is reflective of a concept transcending the SERVQUAL's 'tangibles' dimension. (Tangibles defined the appearance of physical facilities, equipment, personal and communication materials). It also assesses the ability to meet users' requirements for space, for study, collaboration and oftentimes and aesthetically pleasing environment.

Access to Information: Access was ensured through the provision of comprehensive collection, collection sufficient to attract users and barrier-free access (ubiquity). In this context information format also important to consider that is a rich array of full text deliverable to the desktop, strong local collections available in easy-to-reach physical locations and timely access to distant resources through effective document delivery are all components to the 'access to information' dimension.

LibQUAL + was piloted in research libraries and then extended to other educational institutions and university libraries.

LibQUAL +TM

LibQUAL+TM, a partnership between ARL and Texas A& M University as one of the new measures to assess service quality. US Department of Education Fund for the Improvement of Post-Secondary Education (FIPSE) granted and fueled the development of LibQUAL +TM assessment protocol. This questionnaire was accessible as a web based tool. 3200 colleges and universities were involved in the survey and the data was collected by e-mail. Respondents were asked to establish their judgments across three scales for each question.

It consists of 25 questions emerged to define the construction of service quality in a library environment. Those questions measure customer perceptions of library service across four dimensions. Those are listed below.

1. Affect of Service: The human side of the enterprise, encompassing traits of empathy, accessibility and personal competence. This criteria involves 9 items in the questionnaire.
2. Personal Control: The extent to which users are able to navigate and control the information universe that is provided. This includes 6 items of the questionnaire.
3. Access to information: An assessment of the adequacy of the collections themselves and the ability to access needed information on a timely basis regardless of the location of the user or the medium of the resource in question. This includes five items of the questionnaire.
4. Library as a place – comprising variously according the perspective of the user, utilitarian space for study and collaboration, a sanctuary for contemplation and reflection or more grandly an affirmation of the primary of the life of the mind in university priorities. This also includes 5 items.

Applicability of SERVQUAL to library service

Nitecki (1996) conducted a survey to examine the applicability of SERVQUAL to a university library service and put the data through an exploratory factor analysis, reported only three dimensions. She concluded that among the survey results of ILL, reference and reserve services, the only dimension where the factors corresponded to the SERVQUAL dimensionality was tangibles and that the items of reliability and responsiveness were found intermingled and there of assurance and empathy indistinguishable. She thus questioned the validity of establishing dimensions in the assessment of university library service quality. Therefore she contended that the dimensionality of service quality may depend on the type of services under study. The possibility that the customer values in evaluating service quality differs depending on the service type.

Satoh and Nagata (2003) extracted the following five factors which are suitable to apply for a library. Those factors are;

- | | |
|---------------------------------|---------------------------------------|
| 1. Effect of service (personal) | 4. Collection and Access |
| 2. Library as ba (place) | 5. Effect of service (organizational) |
| 3. Reliability | |

To evaluate the university library's service quality two universities in Japan, one university each in England and Finland were chosen as the survey sites. The number of questionnaire items was narrowed down and LIBQUAL + promoted by the Association of Research Libraries (ARL) was also referred to, with the result that nine items were added. Those are

- | | |
|-----------------------------|------------------------------------|
| 1. gaining materials needed | 6. serendipity |
| 2. answering requests | 7. place for thinking and planning |
| 3. search in collections | 8. comfortable place and |

- | | |
|--------------------------|----------------|
| 4. network services | 9. quite place |
| 5. workshops and courses | |

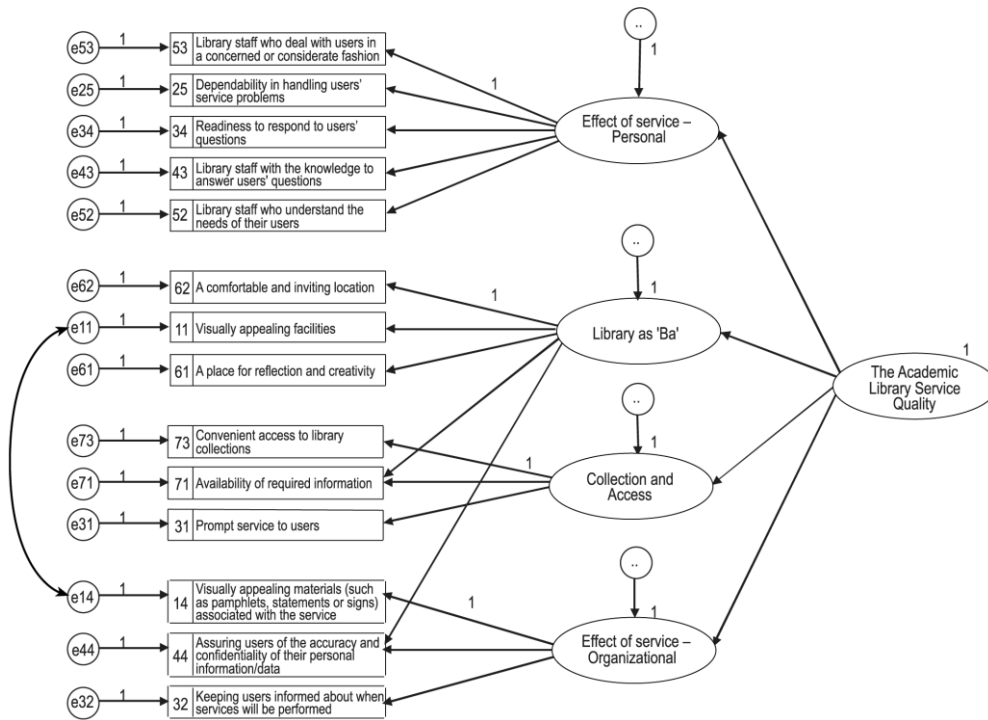
Another survey was conducted at four university libraries in Europe and Japan in order to extract the dimensions that determine the evaluation of university library service. Questionnaire items related to the technical quality (the quality of what the customer receives from the service organization) were added to the SERVQUAL instrument. The data acquired were put through the exploratory factor analysis and four dimensions were confirmed. They dropped the 'reliability' from the above five dimensions. 29 questionnaire items used in the survey that are as follows.

1. Visually appealing facilities
2. Modern equipment
3. Visually appealing materials(such as pamphlets, statements or signs) associated with the service.
4. Performing services right the first time
5. Providing services as promised
6. Providing services at the promised time;
7. Dependability in handling users' service problem
8. Prompt service to users
9. Keeping users informed about when services will be performed
10. Willingness to help users.
11. Readiness to respond to users' question
12. Library staff that instill confidence in users;
13. Library staff that are always courteous
14. Library staff with the knowledge to answer users' questions
15. Assuring users of the accuracy and confidentiality of their personal information
16. Convenient opening hours
17. Library staff that understand the needs of their users
18. Library staff that deals with their in a concerned or considerate fashion
19. Giving users individual attention
20. Having the users' best interests at heart
21. A place for reflection and creativity
22. A comfortable and living location
23. Space that enables quiet study
24. Availability of required information
25. Timely document delivery
26. Convenient access to library collections
27. Access to digital collections from PC
28. Instruction in use and/ or training sessions, when needed
29. Expect to find information and new ideas

Satoh and Nagata (2003)

Through the confirmatory factor analysis, it was confirmed that these four dimensions have strong mutual relations and that it was appropriate to presume the quality of university library service behind these four dimensions. They drew a model with an academic library service quality.

Figure 2: The model of confirmatory factor analysis on service quality in academic libraries
Satoh, et al. (2005)



Satoh, et al. (2005) have carried out a research by using the same four dimensions. In this study with an aim to deepen the understanding of the dimensions of users' evaluation of university library services, focus group interviews were carried out by following a common framework at four universities in Japan, England and Finland and the results were analyzed. Usage scenarios were clarified for each user group – undergraduates, graduate students and faculty members and the contents of interview statements were mapped to the tree based on the four dimensions that had been revealed through factor analysis of the results from the prior survey.

As a result of mapping, the necessity for the additional questionnaire items were implied for the usability of computer systems such as OPAC, outside databases, e-journals, for the appropriateness of opening time for services and for the provision of proper electronic access environment for students. On the other hand, corresponding with the mapping result of 'communication', 'service readiness', 'service response', 'service administration' and 'customer- first –assistance' tuning up items for the dimensions of 'effect of service-personal' should be considered.