Quality of Services Rendered by University Libraries: An Empirical Investigation

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ABSTRACT

Libraries need to continuously monitor changing aspirations and expectations of users in order to tailor their service offerings. Intense competition offered by the e-resources has made it imperative for the libraries to continuously innovate or perish. In order to identify current status of satisfaction with the library services, a likert scale questionnaire containing 32 items on various aspects of service quality, adapted from SERVQUAL was administered to 100 users and 20 members of library staff of two universities in Punjab. Independent sample t-test, ANOVA, Pearson Correlation, Linear regression analysis were undertaken. Findings reveal no significant difference among library users on the basis of age, educational qualifications and gender. However, a significant difference lies between the users and the providers on various dimensions of service quality. Benchmarking against the best practices worldwide, involving various stakeholders, viz. users, staff, management, publishers and sponsors can help in improving quality of services rendered by libraries.

KEYWORDS

SERVQUAL; User Satisfaction; Empathy; Assurance; Tangibility; Responsiveness

PAPER TYPE   *Survey cum Research*

INTRODUCTION

I n this era of scientific innovation and information explosion, knowledge and technology development hold the key to human growth and prosperity. Libraries play a facilitative role by providing the resources and enabling environment that can foster intellectual, emotional and social development. In order to render effective and efficient services, it is paramount for the libraries to constantly monitor changing customer needs and preferences so as to reorient their services

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accordingly. Library and information services are fundamental to the goals of creating, disseminating, optimally utilizing and preserving knowledge. Libraries are harbingers and custodians of knowledge. Besides, e-resources are making the information more effective **(Lomte, 2007)**. The main function of university libraries has been to support the teaching learning activities and research needs of faculty and students. University libraries are expected to adopt a more strategic approach to promote their services and delivery system as viewed by **Bamigboye (2007)**. Libraries in India have contributed immensely in the promotion of Education, Science and Technology and Research and Development (R&D) activities which in turn provide a pool of talent and skills required for India, gaining competitive advantage in the knowledge economy.

Libraries have diversified themselves with rich source of books and journals, but also with the reservoirs of audio-visual and e-resources. Developments of INFLIBNET and online public access catalogues (OPACs) have brought libraries to the rooms and offices of the researchers. The virtual libraries or cyber-raries render access and retrieval of information across networks anywhere, anytime to facilitate information sharing.

CRITIQUE ON EXISTING LITERATURE

In an era of increased competition, the importance of achieving high levels of customer satisfaction has gained the attention of researchers and practitioners alike. This is especially the case in the service sector, where many organizations are focusing upon service quality improvement issues in order to ensure high levels of customer satisfaction. **Hoffman and Bateson (2006)** have premised that four gaps exist in delivery of a service:

- ➢ **The knowledge gap**: The difference between what consumers expects of a service and what management perceives the consumer to expect.
- ➢ **The standard gap**: The difference between what management perceives consumer to expect of a service and the quality specifications set for service delivery.
- ➢ **The delivery gap**: The difference between the quality specifications set for service delivery and the actual quality of service delivery.
- ➢ **The communication gap**: The difference between the actual quality of service delivered and the quality of service described in the firm's external communications.

A consumer's overall service quality evaluation is the accumulation of multiple experiences. The translation of customer expectations into specific service quality standards depend on the degree to which tasks and behaviours to be performed can be standardized or routinized **(Zeithaml, Gremler, Bitner & Pandit, 2008)**. Management of service organisations have been advised to lay emphasis on offering reliable, responsible, tangible and empathic customer service **(Rod, Ashill, Shao & Carruthers, 2009)**.

According to **Jaiswal (2007)** during face-to-face encounters, tangible factors such as physical appearance and dress of employees and characteristics of place where encounters take place (e.g. air conditioning, ambience etc) affect service quality perceptions of customers. The design of the service concept and delivery involves not only the consideration of tangible issues like physical surroundings, mechanical equipments but also relates to the expression of staff emotions (e.g. sincerity) and behaviours (e.g. formality and personalisation) towards the customer that are also culturally acceptable and appropriate.

Libraries' multifaceted informational, educational, social and cultural roles provide excellent learning opportunities for the diverse user population. An outstanding customer service makes libraries' contribution to lifelong learning more effective **(Miao & Bessham, 2008)**. **Ueno (2008)** opined that rapid technological progress has forced libraries to adapt and adjust their structure and processes to match users' needs and increase their satisfaction. The CRM concept and technology is customer-centric, may help libraries to identify users' preferences, detect their needs, motivate library staff to interact well with users, and tailor the right service outputs and products **(Wang, 2007)**.

Libraries now find themselves at a critical juncture as the challenges encountered are not necessarily related to the introduction of new technologies but also to the creation of an ideology and culture where technological imperatives are increasingly governing and directing management processes **(Sierpe, 2004)**. **Bamigboye (2007)** evaluated the library services and indicated that the user demands of library service represent a wide range of aspects, including the availability of conventional books and periodicals, a good reference function, and access to internet facilities, which are considered an important library function by many of the respondents.

Nejati and Nejati (2008) measured how successful the libraries have been in meeting user needs by providing good and reliable services and reported a poor level of customer satisfaction due to lack of identifying the most important aspects of service quality considered by the customers. **Nagata, Satoh, Gerrard, & Kytomaki (2004)** accomplished that the library service quality consists of four dimensions: *effect of service (personal); collections; access and effect of service (organizational)*. The application of quality management principles in libraries can establish a

culture of continuous improvement. The Present study was therefore undertaken to explore the extent of satisfaction with services rendered.

OBJECTIVES

➤ To identify the extent to which libraries meet the user's expectations on the service quality dimensions.

➤ To spot satisfaction of the customers on individual dimensions of service quality, viz, tangibility, reliability, responsiveness, assurance and empathy.

➤ To highlight relative importance assigned by the users to five dimensions of service quality.

➤ To determine perceptions of the service providers (library staff) against the expectations of the service users.

HYPOTHESIS

In order to achieve the objectives, following hypotheses were formulated

H1: There is no significant mean difference in the service quality among respondent in terms of the demographic variables, viz, age, gender and educational qualification.

H2: There is no significant correlation among the service quality dimensions and overall satisfaction with quality of library services rendered.

H3: The library service quality dimensions are not significant predictors of user's satisfaction.

METHODOLOGY

Service quality index, SERVQUAL, developed by **Zeithaml, Berry & Parasuraman (1996)** was adapted and pretested for its reliability and validity. The SERVQUAL dimensions included:

Tangibility: Physical facilities, equipment and appearance of personnel.

Reliability: Ability to perform the promised service dependably and accurately.

Responsiveness: Willingness to help customers and provide prompt service.

Assurance: Knowledge and courtesy of employees; their ability to inspire trust and confidence.

Empathy: Caring, individualized attention the employees provides to their customers.

SERVQUAL was administered to measure the service quality in two universities of Punjab. SERVQUAL was adapted to solicit responses on a five point Likert scale, ranging from strongly disagree to strongly agree. A total of 120 valid questionnaires were obtained from the students (100) and library staff (Assistant librarian, Deputy Librarian, Librarian) amounting to 20. The questionnaire consisted of 32 close-ended items. Independent sample t-test, ANOVA, Pearson Correlation, Linear regression analysis was undertaken. The hypotheses were tested at 0.05 level of significance. The demographic characteristic of respondents is given in Table **1**.

Table 1 Demographic Characteristic of Respondents

Sample	Respondents	Age				Gender		Education		
		Below 20	20-24	25-29	30 & above	M	F	Grad.	PostGrad	Research Scholar
Service providers	20	0	56.7%	27.5%	15.8%	62.5%	37.5%	26.3%	47.9%	**25.8%**
Service users	**100**	6%	62%	32%	_	62%	38%	31%	**44%**	**25%**

Test of goodness was performed to use the adequacy and reliability of the questionnaire. The KMO test proved that the samples are adequate and useable for inferential statistical analysis as KMO >0.5 is considered to be

an appropriate indicator of adequacy of data. Bartlett's test of Sphericity also confirmed that the data was significant at P<0.05 **(Field, 2005)**. **Table 2**

Table 2   KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.801
Bartlett's Test of Sphericity	Approx. Chi-Square	1331.068
	df	465
	Sig.	.000

Reliability analysis was undertaken to determine internal consistency of data. Cronbach's alpha, greater than 0.7, accepted indicates the internal consistency **(Field, 2005)**. Value of alpha obtained was 0.9087 indicating high degree of internal consistency. Thus, KMO and Bartlett's test, Cronbach's Alpha test shows that the data was valid and reliable for further analysis.

FINDINGS & DISCUSSION

a) Analysis was undertaken to find out if any significant difference exists between library users of different age groups. No significant mean difference among age groups was noticed except on four variables (clean environment, sufficient numbers of computers, library staff tries best to answer the question and library staff answers accurately) at p<0.05.

b) Independent sample t-test was conducted to determine if any significant difference exists in terms of gender on quality of services rendered by libraries. Levene's test for equality of variances was applied by assuming equal variances. Findings reveal that there is no significant mean difference between male and female library users on any of the parameters of service quality.

c) Effort was also made to find out if there is any significant difference in the perceived quality of services rendered among readers with different educational qualifications. Findings reveal that there is no significant mean difference among readers with different educational qualifications except on the dimension of adequate provisions for display of new books.

d) In order to test the second research objective, viz, there is no significant correlation among the library service quality dimensions and overall satisfaction, correlational analysis was undertaken on each of the five dimensions of service quality.(**Table 3**).The findings indicate that there is strong correlation among the five quality dimensions and overall service satisfaction at $p<0.01$ level. Therefore, the hypothesis is rejected. Thus, users of library services give weightage to all five dimensions of service quality.

e) In order to test the hypothesis that library service quality dimensions are not significant predictors of users' satisfaction, effort was made at model building. The model summary (**Table 4**) reflects strength of the relationship between the model and the dependent variable. R, the multiple correlation coefficient (0.68) indicates linear correlation between the observed and model-predicted values of the dependent variable. R square indicates that 46.3% of the variance in overall satisfaction is explained by empathy, assurance and tangible dimensions of service quality.

f) Stepwise linear regression indicates that empathy, assurance and tangible dimensions are the major predictors of the overall library user satisfaction. Thus, the hypothesis that dimensions of service quality are significant predictors of the overall satisfaction of the users with the library is accepted **(Table 5).**

g) In order to test the hypothesis that there is no significant difference in service provider's perception and service user's expectations of service quality among the libraries, independent sample t-test was performed **(Table 6).**

Table 3   Correlation between service quality dimensions and overall satisfaction with the library services

		Overall library services are satisfactory	TANGMEAN	RESPMEAN	RELIMEAN	ASSUMEAN	EMPAMEAN
overall library services are satisfactory	Pearson Correlation	1	.580(**)	.378(**)	.424(**)	.567(**)	.604(**)
	Sig. (2-tailed)	.	.000	.000	.000	.000	.000
	N	100	100	100	100	100	100
TANGMEAN	Pearson Correlation	.580(**)	1	.567(**)	.481(**)	.591(**)	.633(**)
	Sig. (2-tailed)	.000	.	.000	.000	.000	.000
	N	100	100	100	100	100	100
RESPMEAN	Pearson Correlation	.378(**)	.567(**)	1	.461(**)	.569(**)	.516(**)
	Sig. (2-tailed)	.000	.000	.	.000	.000	.000
	N	100	100	100	100	100	100
RELIMEAN	Pearson Correlation	.424(**)	.481(**)	.461(**)	1	.658(**)	.615(**)
	Sig. (2-tailed)	.000	.000	.000	.	.000	.000
	N	100	100	100	100	100	100
ASSUMEAN	Pearson Correlation	.567(**)	.591(**)	.569(**)	.658(**)	1	.596(**)
	Sig. (2-tailed)	.000	.000	.000	.000	.	.000
	N	100	100	100	100	100	100
EMPAMEAN	Pearson Correlation	.604(**)	.633(**)	.516(**)	.615(**)	.596(**)	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.
	N	100	100	100	100	100	100

*** Correlation is significant at the 0.01 level (2-tailed)*

TANGMEAN indicates the mean of tangible variables.
RESPMEAN indicates the mean of responsibility variables.
RELIMEAN indicates the mean of reliability variables.
ASSUMEAN indicates the mean of assurance variables.
EMPAMEAN indicates the mean of empathy variable.

Table 4: Model Summary of predictors of satisfaction with library services

Model		R Square	Adjusted R Square	Std. Error of the Estimate
1	.604(a)	.365	.359	.438
2	.657(b)	.432	.420	.417
3	.680(c)	.463	.446	.407

Note: a) Predictors: (Constant), EMPAMEAN; b) Predictors: (Constant), EMPAMEAN, ASSUMEAN; c) Predictors: (Constant), EMPAMEAN, ASSUMEAN, TANGMEAN

Table 5: Findings of Stepwise Linear Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.056	.255		8.075	.000
	EMPAMEAN	.534	.071	.604	7.511	.000
2	(Constant)	1.711	.263		6.501	.000
	EMPAMEAN	.365	.084	.413	4.333	.000
	ASSUMEAN	.261	.078	.321	3.361	.001
3	(Constant)	1.507	.271		5.557	.000
	EMPAMEAN	.272	.091	.307	2.973	.004
	ASSUMEAN	.195	.081	.240	2.419	.017
	TANGMEAN	.221	.093	.243	2.367	.020

Note   a) Dependent Variable: overall library services are satisfactory

Table 6: Group Statistics of Users Expectation and Providers Perception (Independent sample t-test)

Library Service Quality Attributes	Mean response		Mean difference (E-P)	Sig.(2-tailed)
	Library Users (E)	Library Staff (P)		
Sufficient numbers of periodicals	3.49	4.00	-.51	.011
Sufficient numbers of books	3.38	4.00	-.62	.006
Sufficient numbers of technical reports	3.16	3.35	-.19	.323
Complete volumes	3.02	3.45	-.43	.075
Data base in good condition	3.40	3.90	-.5	.013
Clean environment	4.13	4.10	.03	897

Sufficient study rooms	3.35	3.70	-.35	.175
Sufficient computers	2.76	3.55	-.79	.004
Study rooms are comfortable	3.74	4.05	-.31	.103
Lighting quality Adequate	3.95	4.35	-.4	.110
Conducive Academic Environment	3.94	4.30	-.36	.127
Staff tries best to answer the queries	3.64	4.55	-.91	.000
Staff is willing to render services	3.56	3.35	.21	.535
Collections are timely	3.24	3.60	-.36	.115
Collections are accurately stacked	3.11	4.05	-.94	.00
Loans and records are accurate	3.70	3.95	-.25	.124
Library Website is adequately updated	3.33	3.50	-.17	.254
Staff answers accurately	3.55	4.35	-.8	.00
Classifications fit in subjects	3.33	4.10	-.77	.00
Directional signs are clear	3.86	4.10	-.24	.08
Staff is friendly	3.73	4.50	-.77	.00
Staff is aware of every item	3.52	4.35	-.83	.00
Collection meets the course work needs	3.15	3.95	-.8	.00
Lib. Subscribes adequate newspapers, magazines.	4.29	4.45	-.16	.325
Number of books issued is sufficient	3.60	4.10	-.5	.017
Time period for issued book is satisfactory	3.46	4.30	-.84	.00
Number of times reissuing permitted is satisfactory	3.24	4.20	-.96	.00
Sufficient electronic publications & data bases	3.14	3.45	-.71	.157
Length of opening hours is satisfactory	3.91	4.25	-.74	.115
Adequate provision for exhibition of new books	3.42	4.40	-.98	.00
Library renders services of books search	3.52	4.10	-.58	.002

The independent sample t- test indicates that there is significant mean difference in 17 out of 31 library service quality attributes between the library user's expectation and library staff's perception at p<0.05.

Accordingly, the library staff's perception is higher than the library user's expectations. Therefore, the hypothesis is rejected. Thus, there is a perceptual difference in the perceived quality of services rendered by the library staff and the perceived service quality availed by the users.

Libraries offer a platform to fulfill information needs of the users. Quality of service rendered adds value to library resources by enabling the customers to use them effectively. Libraries need to understand their customers, the learners, and their requirements and expectations. A strategic focus on customer service can act as an effective tool in helping libraries to accomplish their mission of serving customers in an improved way. University libraries and their operations face challenges as the demand for library services seems to be as diverse as human interests.

In present study, one way ANOVA test reflected that the respondents in the age group of 25-29 are not satisfied with the cleanliness of the library. This could be attributed to the fact that the respondents in this age group are mostly research scholars who need to spend considerable time in thesis section which they found to be filthy. The respondents in the age group of below 20 years were not satisfied with numbers of computers in the libraries as well as handling of queries by the staff. Another area which exhibited lower level of satisfaction was the smaller reading area and lesser numbers of newspapers, magazines etc. This could be attributed to the fact that universities are good centers for preparing for competitive exams. One way ANOVA test indicates that the graduate students are not satisfied with the provision for exhibition of new books in the library, especially those of engineering. Findings reveal a strong correlation among the five quality dimensions and overall service satisfaction at $p<0.01$ level. Stepwise linear regression indicates that empathy; assurance and tangibility dimensions are the major predictors of

the overall library users' satisfaction. Study revealed that the service provider's perception regarding the library services are greater than user's expectations. In providing library services and measuring their performance level, the library needs to identify priorities among these demands and measure service performance in areas, which users perceive important.

RECOMMENDATIONS

Rapid technological progress and changing customer preferences have made it imperative for libraries to continuously adapt and adjust their structures and processes to match user's needs in order to enhance satisfaction. Libraries need to upgrade their services to fulfill expectations of library users. Strategies to improve the service quality of library include:

➢ Staff is a key resource and accounts for a significant component of the budgetary allocations of libraries. Performance of both professional and supporting staff determines to a large extent the quality of the customer experience and has a significant impact on the contribution that libraries can make to their communities. Motivation, thus, is the key to quality of services rendered. Possible strategies for motivation include developmental programmes such as imparting personality development, appraisal and development schemes, opportunities for professional growth, managing dissatisfiers and financial and social rewards. Providing training to the employees on rendering customer service and humanizing the library environment can lead to skill formation. Training programmes on interpersonal skills can help focus on better understanding of behavioural aspects of readers. Such programmes could include imparting counseling skills, communication skills and problem-solving skills etc.

➢ It is imperative to continuously undertake thorough analysis of customers' needs and requirements. Information about library's customers' can be collected by reviewing key operational data (such as the library usage statistics, queries etc.), obtaining inputs from the employees, and by reviewing customers' complaints and suggestions. A library should develop a systematic way of gathering information on customer needs. Surveys and focus groups interviews need to be periodically undertaken. Since the most important quality dimension perceived by low-involvement customers is that of "tangibles", the management of the library should lay emphasis on the suitability of library facilities, cleanliness and comfort of the environment and the availability of resources.

➢ In addition, customers regard "access" as the most critical quality criterion when evaluating library services. Hence, library should focus on customer-oriented service encounters, such as information regarding new arrivals as well as bibliographic instruction programmes conducted by the library. These can help the customer understand better the resources and services of the library and reinforce customers' motivation or willingness to use library's resources

➢ As "empathy" is the most significant quality criterion considered by high-involvement customers, library should concentrate on personalized services, such as individualized attention, initiative on the part of the librarians in providing information to customers and the librarian ability to reply to customer inquiries accurately etc.

➢ Every library has a set of policies. Libraries should review their policies and revise those that are not customer-friendly and strengthen those that serve their vision statement.

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