

# Use of Libqual+® Technique to Measure the Expectations and Perception Among the Patrons of NKC Library: A Case Study\*

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## ABSTRACT

*The paper discovers and analyses the users' expectations and perception about the library and its services. The case study on the Library of Nagindas Khandwala College, Mumbai and its users has been made. The LibQUAL+® technique has been applied to reach the objectives of the study. The study helps the above said library in understanding the users' expectations and perception about its services, thus giving an opportunity to bring necessary changes. The paper may also help the fellow library professions to undertake similar survey in their libraries to bridge the gap between their users' expectations and perception. The results of the study show that there is a gap in patrons' perception of quality of library services against their expectations.*

**Keywords:** *LibQUAL+®, SERVQUAL, User study, User expectations, User perceptions, Nagindas Khandwala College Library*

## 1. Introduction

The user's approach to libraries is changing. Thanks to the web 2.0 technology and the advanced e-devices that have impacted library and information centres in myriad ways. However, the users' expectations and perception are changing rapidly. To cope up with the same, the library professionals are trying to understand the change factors to deliver the qualitative services according to the users' need. In this view, as a sample for the case study, the paper discovers the user's expectations and perception by selecting the library services being catered by Nagindas Khandwala College's Library (NKCL), Mumbai.

The present study finds out the gaps between the patrons' (in this paper the words viz. patrons, customers, users, readers, students are used as synonyms) perceptions regarding quality of library service with the application of LibQUAL+® technique. A survey research method has been followed by simple random sampling method for collection of user responses. The study was conducted in three different phases. In the first phase, data collection from the users of NKCL was obtained for getting customers' perception. The results of the study show that there is a gap in customers' perception of quality of

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library services against their expectations. The recommendations suggested in the above study needs application for getting the fruitful results.

## **2. Concepts**

**2.1. User/Patron Expectations:** It is about a user's general expectation from the library as how it should be and what way it should serve him/her. Example: A user expects from a library that it should have WebOPAC as the user wishes to access the library catalogue remotely and based on the availability of the book the user wishes to reserve the book online or visit the library to collect the same.

**2.2. User/Patron Perception:** A user having a particular expectation—realizes-- after consulting the library and its services that his/her expected service/material are available or unavailable. Example: In relation to the above example, the user may before or after availing the library membership comes to know that the library does not have WebOPAC.

## **3. About NKCL**

The NKCL is one of the state-of-the-art libraries in the western suburbs of Mumbai. The library is fully automated with the advanced technologies and follows Open Access System. The facilities like spacious reading rooms, stack room, Wi-Fi, free Internet facility, WebOPAC, library's official blog are accessible by readers.

The library caters Consultancy Service, Outsourcing Service, bibliographic service, translation service etc. to its faculty, students, research scholars and also academic and corporate libraries. The library has an Institutional Membership of many institutes and libraries like American Library and British Council Library. The library is also well stocked with around 42,000 books, 4,000 e-books, 140 journals, 60 online journals, 10 databases, 2,650 CD-ROMs, 60 award winning movies, 65 cartographic materials and also foreign language learning kits.

## **4. Objectives**

The present study finds out the gaps between the NKCL patrons' perceptions regarding quality of library service with the application of LibQUAL+®. And also to—

- a) To determine the user expectations regarding the library services and the quality of the NKCL's library service perceived by the users in the current stage.
- b) To propose solutions for improving the NKCL's library services.

## **5. Literature Review**

Many studies have been conducted to investigate library services in India; almost all of them have used quantitative methods. Several studies investigated the quality of library services outside of India. Some of them used the modified SERVQUAL to assess users' expectations and perceptions about the quality of library services. For example, in 1994,

1997 and 1999, Texas A and M University Libraries conducted a study using SERVQUAL. They found a discrepancy between user expectations and perceptions of service quality with respect to the dimension of reliability (Coleman, Xiao, Bair, & Chollett, 1997).

Donnelly, Campbell, and Wisiniewski (1995) studied quality of services in the Stirling Library in Scotland using the SERVQUAL instrument. After analyzing 368 questionnaires, the researchers found that a significant difference existed between expected and perceived quality of services.

Nimsomboon and Nagata (2003) examined the service quality of Thammasat University Library from users' perspectives. They identified the dimensions that affect customers' evaluation of service quality. They also investigated the problems clients encountered when using library services. The modified SERVQUAL questionnaires were distributed for data gathering. The results showed that most users' expected expectations were not met. The greatest deficiency was found to be insufficient and non-current collections.

Landrum and Prybutok (2004) evaluated a modified version of the SERVQUAL questionnaire to determine how effectively it measured service quality within the information service industry. They evaluated instruments designed to measure information center and information system success to determine how effectively they measure success in the library system application and how they relate to SERVQUAL. Responses from 385 end-users at two U.S. Army Corps of Engineers libraries were obtained through a mail survey. Results indicated that service quality is best measured with a performance-based version of SERVQUAL and that measuring importance may be as critical as measuring expectations for management purposes. Results also indicated that service quality is an important factor in the success of programs in the library.

## 6. Hypotheses

- a) **Null hypothesis :( H<sub>0</sub>)** There is no significant difference between expected and actual levels of service at the NKCL.
- b) **Alternative hypothesis: (H<sub>1</sub>)** There is significant difference between expected and actual levels of service at the NKCL.

## 7. Methodology

The present case study method has used an adapted version of SERVQUAL and LibQUAL+® instrument developed by Parasuraman (Zeithamal, Parasuraman, Berry, 2000) and Association of Research Libraries (ARL) (<http://www.arl.org>) for assessing the quality of services offered by IMCC Library in the present state.

This survey was conducted in the NKC Library from 24<sup>th</sup> January 2012 to 2<sup>nd</sup> March, 2012. The service quality was investigated using the SERVQUAL questionnaire. Randomly selected respondents were asked to complete the questionnaires. A pretest was conducted to make the statements understandable in context. The total population of the students in NKCL is around 2000. Therefore, 10% of the total population (students) was selected as the sample size, i.e. 200. The valid sample was 167 which were

used for further analysis. The researchers processed the data, validated them, and transferred them to the SPSS software, version 17. The researchers then statistically analyzed the data.

## 8. Service Quality

**8.1. Research Tool:** Study of the gap between expected and observed quality of services was conducted using SERVQUAL instrument.

SERVQUAL, a widely used questionnaire, was introduced in 1985 by Parasuraman, Zeithaml and Berry (1985) as an instrument for assessing customer perceptions of service quality in service and related organization. The questionnaire contains 2 sets of 22 questions that measure expected (optimal expected) and observed (current) levels of service. The first set of questions measures customers' expected level of service on a seven point scale. The second set of 22 statements is identical to the first set. Here, respondents rate their perceptions of the level of service given by the institution or organization (observed level of service). For each pair of statements, the difference between the ranked perception and the ranked expectation is calculated. The average of the gap in scores is the SERVQUAL overall quality score (Nitecki & Herson, 2000). SERVQUAL consists of the **five** following dimensions:

- a) **Tangibles:** Physical facilities, equipment, and appearance of personnel.
- b) **Reliability:** Ability to perform the promised service dependently and accurately.
- c) **Responsiveness:** Willingness to help customers and provide prompt service.
- d) **Assurance:** Knowledge and courtesy of employees and their ability to inspire trust and confidence.
- e) **Empathy:** Caring, individualized attention the institution provides its customers with.

Several studies supported the SERVQUAL as a reliable and valid instrument to investigate the service quality in information centers (Jiang, Klein, & Carr, 2002; Parasuraman, et al., 1991; Watson, Pitt, & Kavan, 1998).

Based on SERVEQUAL, Association of Research Libraries (ARL) developed LIBQUAL +, a web-based survey tool in 2001 to measure service quality in Libraries. Modified version of SERVEQUAL and LIBQUAL+® developed by ARL. Like SERVQUAL, it measures the difference between customer expectations of service and their perceptions of satisfaction.

**Application of the Technique:** The users are asked to assign a value to the level of service they desire, as well as their perceptions of how well their library meets their needs. In the library context LIBQUAL+® measures three areas (Cook 1999):

- a) "Affect of service" or how users perceive library staff;
- b) "information control" or how users perceive the quantity and accessibility of information sources and
- c) "library as a place" or how users perceive the physical environment of the library.

These dimensions are assessed through the core 22 questions. Each dimension is assessed through asking at least 5 questions for ensuring the validity of the responses.

**8.2. Data Analysis:** The collected data was entered on to a spreadsheet and analyzed with the help of a statistical package using "SYSTAT 12.0" software.

**Statistical Test :** Statistical measures like mean, standard deviation and statistical tests paired't' test, Wilcoxon test were computed for understanding the degree of quality of services expected and perceived by the participants.

**a) User Expectations:**

Table 1: *NKCL user expectations*

Sr. No.	Question Statement	Mean	S.D.
E1	CL should have physical facilities that are visually appealing +	4.14	1.112
E2	CL should have convenient Library Timing for Users. +	4.45	1.017
E3	CL should have a good collection of Books and Journals. +	4.59	.923
E4	CL should have a non printed Collection (CD-ROMs). +	3.68	1.214
E5	CL should have qualitative collection (syllabus related and for extra reading). +	4.42	1.053
E6	CL should have sufficient quantity of collection. +	4.23	.910
E7	CL should provide sufficient online catalogue (OPAC). +	3.93	1.174
E8	CL should provide Internet based information services. +	4.16	1.027
E9	CL should have subscription of statistical/ bibliographic databases. +	3.78	1.171
E10	CL should have proper arrangement of print resources (books and journals) in the library. +	4.17	1.070
E11	CL should have useful Signage's (Shelf guides and location boards etc.). +	3.97	1.115
E12	CL should have Internet facility for users. +	4.39	1.041
E13	CL should have Computerized library operations and maintaining Computer and other equipments in the library. +	4.36	1.047
E14	CL should have Library's networking/collaboration with other libraries. +	4.03	1.159
E15	CL should have Error free records in the library. +	4.08	1.177
E16	CL Staff should have ability to deliver the promised services on time+	4.29	1.108
E17	CL Staff should take sincere interest/willingness to help users. +	4.43	1.025
E18	CL should have Provision of "Right document the very first time +	4.01	1.133
E19	CL should have Staff who instills trust/confidence in users. +	4.16	1.082
E20	CL should have Staff who understands the specific needs of users.	4.35	1.064
E21	CL staff should have Knowledge/Competence to answer user's queries+	4.29	1.044
E22	CL should have Physical facilities that are visually appealing. +	4.08	1.161

From Table 1 it is observed that the overall average expectation Score is "4.18". The score indicates expectations of the customers from the library services and resources are high. The values above 4.18 indicating higher expected library services. The values below 4.18 indicating relatively lesser expected services. Therefore the highly expected library features and relatively lesser expected library features are listed below:

Table 2: *Highly expected library features*

Sr. No.	Question Statement	Mean	S.D.
E4	CL should have a non printed Collection (CD-ROMs). +	3.68	1.214
E9	CL should have subscription of statistical/ bibliographic databases. +	3.78	1.171
E7	CL should provide sufficient online catalogue (OPAC). +	3.93	1.174
E11	CL should have useful Signage's (Shelf guides and location boards etc.). +	3.97	1.115
E18	CL should have Provision of "Right document the very first time" +	4.01	1.133
E14	CL should have Library's networking/collaboration with other libraries. +	4.03	1.159
E15	CL should have Error free records in the library. +	4.08	1.177
E22	CL should have Physical facilities that are visually appealing. +	4.08	1.161
E1	CL should have physical facilities that are visually appealing +	4.14	1.112
E8	CL should provide Internet based information services. +	4.16	1.027
E19	CL should have Staff who instills trust/confidence in users. +	4.16	1.082
E10	CL should have proper arrangement of print resources (books and journals) in the library. +	4.17	1.07

Table 3: *Relatively lesser expected library features*

Sr. No.	Question Statement	Mean	S.D.
E6	CL should have sufficient quantity of collection. +	4.23	0.91
E16	CL Staff should have ability to deliver the promised services on time. +	4.29	1.108
E21	CL staff should have Knowledge/Competence to answer user's queries. +	4.29	1.044
E20	CL should have Staff who understands the specific needs of users.	4.35	1.064
E13	CL should have Computerized library operations and maintaining Computer and other equipments in the library. +	4.36	1.047
E12	CL should have Internet facility for users. +	4.39	1.041
E5	CL should have qualitative collection (syllabus related and for extra reading). +	4.42	1.053
E17	CL Staff should take sincere interest/willingness to help users. +	4.43	1.025
E2	CL should have convenient Library Timing for Users. +	4.45	1.017
E3	CL should have a good collection of Books and Journals. +	4.59	0.923

**Assessment of Dimensions for NKCL User Expectations:** The study involves assessment of 3 core dimensions namely, Library as a place, Information Control and Affect of service.

Affect of service is the human dimension of service quality. The questions of this dimension relate to user interactions with and the general helpfulness and competency of library staff.

Information control dimension relates to whether users are able to find required information in the library in the format of their choosing, in independent and autonomous way. Library as a place dimension deals with the physical environment of the library as a place for individual study, group work and inspiration. For getting the more focused results, each dimension mentioned above is assessed and analyzed as follows.

Table 4: *Dimensions of NKCL user expectations*

<b>Library as a Place</b>		<b>Mean Score</b>
E1	CL has physical facilities that are visually appealing.	4.14
E2	CL has convenient Library Timing for Users.	4.45
E10	CL has proper arrangement of print resources (books and journals) in the library.	4.17
E13	CL has Computerized library operations and maintaining Computer and other equipments in the library.	4.36
E22	CL Remote access to library resources	4.08
	<b>Mean</b>	<b>4.24</b>
<b>Information Control</b>		
E3	CL has a good collection of Books and Journals.	4.59
E4	CL has a non printed Collection (CD-ROMs).	3.68
E5	CL has qualitative collection (syllabus related and for extra reading).	4.42
E6	CL has sufficient quantity of collection.	4.23
E7	CL has provision of sufficient online catalogue (OPAC).	3.93
E8	CL has provision of Internet based information services.	4.16
E9	CL has subscription of statistical/ bibliographic databases.	3.78
E12	CL has Internet facility for users.	4.39
	<b>Mean</b>	<b>4.1475</b>
<b>Affect of Service</b>		
E 11	CL has useful Signage's (Shelf guides and location boards etc.).	3.97
E 14	CL has Library's networking/collaboration with other libraries.	4.03
E 15	CL has Error free records in the library.	4.08
E 16	CL Staff has ability to deliver the promised services on time.	4.29
E 17	CL Staff is taking sincere interest/willingness to help users.	4.43
E 18	CL has Provision of "Right document the very first time"	4.01
E 19	CL has Staff who instills trust/confidence in users.	4.16
E 20	CL has Staff who understands the specific needs of users.	4.35
E 21	CL staff has Knowledge/Competence to answer user's queries.	4.29
	<b>Mean</b>	<b>4.1788</b>

The above assessment shows that the expectation level for "Library a Place" is highest among the three (4.24), "information control" is rated as the lowest expectation.

**b) User Perceptions:** The perceptions of the customers are to be viewed as the feelings of the customers about the services/products provided by the particular organization. The perception score is calculated on the basis of 5-point scale as mentioned earlier.

Table 5: NKCL user perceptions

Sr. No.	Question Statement	Mean	S.D.
P1	NKCL has physical facilities that are visually appealing.	3.87	1.218
P2	NKCL has convenient Library Timing for Users.	3.75	1.234
P3	NKCL has a good collection of Books and Journals.	4.07	1.105
P4	NKCL has a non printed Collection (CD-ROMs).	3.65	1.266
P5	NKCL has qualitative collection (syllabus related and for extra reading).	4.13	1.082
P6	NKCL has sufficient quantity of collection.	3.96	1.075
P7	NKCL has provision of sufficient online catalogue (OPAC).	3.49	1.399
P8	NKCL has provision of Internet based information services.	3.86	1.205
P9	NKCL has subscription of statistical/ bibliographic databases.	3.58	1.133
P10	NKCL has proper arrangement of print resources (books and journals) in the library.	3.94	1.056
P11	NKCL has useful Signage's (Shelf guides and location boards etc.).	3.65	1.186
P12	NKCL has Internet facility for users.	3.83	1.294
P13	NKCL has Computerized library operations and maintaining Computer and other equipments in the library.	3.84	1.349
P14	NKCL has Library's networking/collaboration with other libraries.	3.34	1.404
P15	NKCL has Error free records in the library.	3.42	1.249
P16	NKCL Staff has ability to deliver the promised services on time.	3.82	1.135
P17	NKCL Staff is taking sincere interest/willingness to help users.	3.63	1.350
P18	NKCL has Provision of "Right document the very first time"	3.70	1.211
P19	NKCL has Staff who instills trust/confidence in users.	3.28	1.431
P20	NKCL has Staff who understands the specific needs of users.	3.67	1.208
P21	NKCL staff has Knowledge/Competence to answer user's queries.	3.65	1.250
P22	NKCL has Physical facilities that are visually appealing.	4.17	1.112
	<b>Mean</b>	<b>3.74</b>	

The respondents overall perception score (average perception) is 3.74. The overall expectation score (average expectation) is 4.18. It indicates the user's perception level for the library services is lower than the expectation level. It indicates the users expectations are slightly high by "-0.44". The features which are perceived above the mean (3.74) as well as below the mean mentioned as below:

Table 6: Features showing higher score than mean (3.74)

Sr. No.	Question Statement	Mean	S.D.
P19	NKCL has Staff who instills trust/confidence in users.	3.28	1.431
P14	NKCL has Library's networking/collaboration with other libraries.	3.34	1.404
P15	NKCL has Error free records in the library.	3.42	1.249
P7	NKCL has provision of sufficient online catalogue (OPAC).	3.49	1.399
P9	NKCL has subscription of statistical/ bibliographic databases.	3.58	1.133



P17	NKCL Staff is taking sincere interest/willingness to help users.	3.63	1.35
P4	NKCL has a non-printed Collection (CD-ROMs).	3.65	1.266
P11	NKCL has useful Signage's (Shelf guides and location boards etc.).	3.65	1.186
P21	NKCL staff has Knowledge/Competence to answer user's queries.	3.65	1.25
P20	NKCL has Staff who understands the specific needs of users.	3.67	1.208
P18	NKCL has Provision of "Right document the very first time"	3.7	1.211

Table 7: Features showing lower score than mean (3.74)

Sr. No.	Question Statement	Mean	S.D.
P2	NKCL has convenient library timing for users.	3.75	1.234
P16	NKCL Staff has ability to deliver the promised services on time.	3.82	1.135
P12	NKCL has Internet facility for users.	3.83	1.294
P13	NKCL has Computerized library operations and maintaining Computer and other equipments in the library.	3.84	1.349
P8	NKCL has provision of Internet based information services.	3.86	1.205
P1	NKCL has physical facilities that are visually appealing.	3.87	1.218
P10	NKCL has proper arrangement of print resources (books and journals) in the library.	3.94	1.056
P6	NKCL has sufficient quantity of collection.	3.96	1.075
P3	NKCL has a good collection of books and journals.	4.07	1.105
P5	NKCL has qualitative collection (syllabus related and for extra reading).	4.13	1.082
P22	NKCL has physical facilities that are visually appealing.	4.17	1.112

The above features rated as least perception features. These features mentioning library services required corrective actions to be taken for improving those for meeting the expectation level of the users.

### Assessment of Dimensions for NKCL User Perceptions:

Table 8: Dimensions of NKCL user perceptions

Library as a Place		Mean Score
P1	NKCL has physical facilities that are visually appealing.	3.87
P2	NKCL has convenient library timing for users.	3.75
P10	NKCL has proper arrangement of print resources (books and journals) in the	3.94

	library.	
P13	NKCL has Computerized library operations and maintaining Computer and other equipments in the library.	3.84
P22	NKCL Remote access to library resources	4.17
	<b>Mean</b>	<b>3.91</b>
<b>Information Control</b>		
P3	NKCL has a good collection of books and journals.	4.07
P4	NKCL has a non-printed Collection (CD-ROMs).	3.65
P5	NKCL has qualitative collection (syllabus related and for extra reading).	4.13
P6	NKCL has sufficient quantity of collection.	3.96
P7	NKCL has provision of sufficient online catalogue (OPAC).	3.49
P8	NKCL has provision of Internet based information services.	3.86
P9	NKCL has subscription of statistical/ bibliographic databases.	3.58
P12	NKCL has Internet facility for users.	3.83
	<b>Mean</b>	<b>3.82</b>
<b>Affect of Service</b>		
P11	NKCL has useful Signage's (Shelf guides and location boards etc.).	3.65
P14	NKCL has Library's networking/collaboration with other libraries.	3.34
P15	NKCL has Error free records in the library.	3.42
P16	NKCL Staff has ability to deliver the promised services on time.	3.82
P17	NKCL Staff is taking sincere interest/willingness to help users.	3.63
P18	NKCL has Provision of "Right document the very first time"	3.70
P19	NKCL has Staff who instills trust/confidence in users.	3.28
P20	NKCL has Staff who understands the specific needs of users.	3.67
P21	NKCL staff has Knowledge/Competence to answer user's queries.	3.65
	<b>MEAN</b>	<b>3.57</b>

The overall assessment of perception level NKCL users regarding the core dimensions shows that "Library a Place" is the highly perceived area as mentioned by the users. Information Control is in the second order, whereas "Affect of Service" is the third area in the order.

### Gap between the Customer Perceptions and Expectations:

The LIBQUAL+® approach is used for examining the gaps existing in the expectations and the perceptions of the users. This gap is known as service superiority gap. Service superiority gap is an indicator of the extent to which the library is extending the desired expectations of your users. These gaps are calculated by subtracting the perceived value of service (P)- expected value of service (E). The negative results indicate the room for improvement, whereas positive results indicate the service is good and beyond the expectations of the users. It means the higher the score, the higher is the perception of quality. The comparison of P –E score (Service superiority Score) of NKCL library indicated as follows.

Table 9: The comparison of P–E Score (Service Superiority Score) of NKCL Library

Sr. No.	Features	Mean exp (E)	Mean percep (P)	Gap (P- E)
1	NKCL has physical facilities that are visually appealing.	4.14	3.87	-0.26
2	NKCL has convenient library timing for users.	4.45	3.75	-0.70
3	NKCL has a good collection of Books and Journals.	4.59	4.07	-0.52

4	NKCL has a non printed collection (CD-ROMs).	3.68	3.65	-0.03
5	NKCL has qualitative collection (syllabus related and for extra reading).	4.42	4.13	-0.29
6	NKCL has sufficient quantity of collection.	4.23	3.96	-0.27
7	NKCL has provision of sufficient online catalogue (OPAC).	3.93	3.49	-0.45
8	NKCL has provision of Internet based information services.	4.16	3.86	-0.29
9	NKCL has subscription of statistical/ bibliographic databases.	3.78	3.58	-0.19
10	NKCL has proper arrangement of print resources (books and journals) in the library.	4.17	3.94	-0.23
11	NKCL has useful Signage's (Shelf guides and location boards etc.).	3.97	3.65	-0.32
12	NKCL has Internet facility for users.	4.39	3.83	-0.56
13	NKCL has computerized library operations and maintaining computer and other equipments in the library.	4.36	3.84	-0.51
14	NKCL has library's networking/collaboration with other libraries.	4.03	3.34	-0.69
15	NKCL has error free records in the library.	4.08	3.42	-0.66
16	NKCL staff has ability to deliver the promised services on time.	4.29	3.82	-0.48
17	NKCL staff is taking sincere interest/willingness to help users.	4.43	3.63	-0.80
18	NKCL has provision of "Right document the very first time"	4.01	3.70	-0.31
19	NKCL has staff who instills trust/confidence in users.	4.16	3.28	-0.87
20	NKCL has staff who understands the specific needs of users.	4.35	3.67	-.68
21	NKCL staff has knowledge/competence to answer user's queries.	4.29	3.65	-0.64
22	NKCL has physical facilities that are visually appealing.	4.08	4.17	0.09
	<b>AVERAGE</b>	<b>4.18</b>	<b>3.74</b>	<b>-0.44</b>

As shown in the table 8, the NKCL users have rated 1 service positively namely library has Physical facilities that are visually appealing (22). That means library has exceeded the desired level of expectations on the 1 question as mentioned above. The overall gap score (mean: -0.44) slightly above the median score (-0.46) indicating the gaps in existing NKCL library resources and services against the customer expectations.

## 9. Hypothesis Testing

To study the difference between expected and observed actual levels of services from the viewpoint of users, a paired *t*-test was conducted. Table 1 summarizes the results, which reveal a significant difference between expected and actual services. This indicates that service quality has not met users' expectations.

Table 10: Paired *t*-test: Difference between Expected and Actual (Observed) Service Level

Service quality	N	Mean	S.D.	t	df	p
Expected level	22	4.1804943	0.2492849	8.28	21	0.0000
Actual level	22	3.7405119				

## 10. Findings

- a) **Expectations of the customer/ user (E):** The expectation level of the users in NKCL is high for the library services and resources with the overall expectation score "4.18".
- b) **Perceptions of the customer/ user (P):** It is found that the perceptions of the existing library resources and services in the NKCL is above their expectations regarding only one library services as: Physical facilities that are visually appealing (22). For the remaining services, the customer perceptions are below the expectation level.
- c) **Gap between perceptions and expectations (P-E):** The gaps are found in the customer perceptions and expectations except one service as mentioned above. There is significant difference between expected and actual services. This indicates that service quality has not met users' expectations.

## 11. Conclusion

The results of the study show that there is a gap in customers' perception of quality of library services against their expectations. The recommendations suggested in the above study needs application for getting the fruitful results. Therefore, it has become necessary for the library professionals to consider the changing expectations of the users and continually strive to provide quality service to its users.

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