

THE INTERNATIONAL JOURNAL OF BUSINESS & MANAGEMENT

Pareto Analysis To Identify The Factors For Assessing Of Service Quality – A Case Of Institute Library

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Abstract:

This work aims at presenting the importance of the Library in an educational system and the users of the library are the most important part in defining the services in a library system. In this paper an attempt has been made to identify the factors, that are essential for service quality and those factors were tested through a survey instrument. The factors on the basis of their occurrences and importance has been arranged to present them in a convenient way so that they can be used in setting up a library system in an educational institute.

1.Introduction

Good quality is not only concerned with conformance to specifications, but also drives towards customer satisfaction. Understanding customer requirements becomes the first priority of designing and managing quality (Pun, 1996; Zairi, 1995). In recent times, due to increase in the quality expectation of the customers – students, efforts are being made even in the library system to meet current and expected demands for trained manpower.

The quality of services offered in a library can be classified into two dimensions: technical (outcome) dimension and the functional (process) dimension (Gronroos, 1988). Technical quality or tangible quality can be expressed primarily as the quality and volume of literature available in the library. Functional quality or intangible quality refers to the manner in which library services are delivered.

Calvert(2001) asserted that irrespective of the national culture, academic library service quality depends on staff attitudes, library environment, and services that help users to find information. Staff attitude and behaviour, their knowledge and responsiveness and service reliability is the important dimensions of the quality service of any library. Accordingly, Banwet and Datta (2000) reported the measurement the service outcome in terms of the availability of books, journals and newspapers along with the ease of finding information.

This survey is based on various quality factors such as reliability, responsiveness, assurance, empathy and outcome. Quality of services offered and customer satisfaction in the library of a technical institute was measured on the close ended scale of 1 to 7.

2.Methodology

2.1.Survey

The sample consisted of 217 students of a technical institute. These students belong to various undergraduate and postgraduate courses. These students were given a time period of one week. After one week 149 students returned the questionnaire. Two days later remaining students were persuaded to complete the questionnaire. The impact of this persuasion time 43 students returned the questionnaire. As the target group was controlled group, the response rate was on the higher side. Out of total 192 returns 7 were unusable, and an effective sample of 185 was used.

For better understanding the nature of various factors in the questionnaire, we grouped them in eight different groups. These groups were formed on the basis of commonality of various factors related to the library system of an educational institute. These eight key factors are grouped as under:

- Group I: COURTESY
- Group II: EMPATHY
- Group III: COMPETENCE
- Group IV: EFFICIENCY
- Group V: RESPONSIVENESS
- Group VI: TANGIBLE

- Group VII: TIMELINESS
- Group VIII: COMMUNICATION

Within each group, the factors are listed in hierarchical order as shown in Table 1. This survey considers the study considers the ranking given to each factor on a scale of 1 to 7.

<p>COURTESY Library staff is approachable and welcoming Staff is courteous and polite Availability of staff when needed</p> <p>EMPATHY Available range of material meets the course need Study material at proper place Availability of reference copy when needed</p> <p>COMPETENCE Staff Demonstration of cultural sensitivity Staff understand the customer need Do not refer from one service area to other Provide complete information to access the online catalog Staff providing accurate answers Up to the point information to the customer Staff making the material available to the customer</p> <p>EFFICIENCY Staff offering suggestions on where to look for information inside the library Encouragement by staff for help Staff offering suggestions on where to look for information inside the library Mention Interloan as a means to obtain materials that the Library does not have All public service desks throughout the Library are served by knowledgeable staff (i.e., staff who know what they are doing) Knowledgeable staff Librarians provide teaching programs, tutorials, etc. which enable you to make more effective use of Library materials and services</p> <p>RESPONSIVENESS assistance at a reference inquiry desk Borrow material Use photocopiers Use electronic resources (e.g., CD-ROMs)</p> <p>TANGIBLE Availability of furniture (e.g., you can find a seat or study desk) Comfortable furniture Functional furniture other services or facilities offered by the Library are important to you</p> <p>TIMELINESS Opening hours should match the schedule of the customer</p> <p>COMMUNICATION Staff should be friendly and easy to talk to Ease to make a compliment, complaint, or suggestion about Library services or conditions</p>

Table 1: Hierarchical Structure Factors Within Groups

3. Grouping And Analysis Of Various Factors

3.1. Courtesy

This aspect applies to behavior of the library staff members toward the customer- students. Staff members should always have a positive attitude towards the need of student. Whenever needed, they should always be approachable. A polite and courteous behavior of the staff members make the students free to ask queries.

After survey it was found that on the scale of 1 to 7, 0.541% students has given rank 1 and 9.73% students has given rank 7.

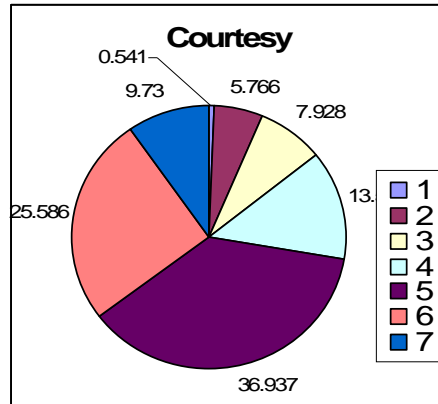


Figure 1: Representation Of Courtesy

3.2. Empathy

Empathy involves the availability of study materials like books, news papers, journals etc. at proper place. These study material should be available in proper quantity. Reference copy of the books should always be available in the library.

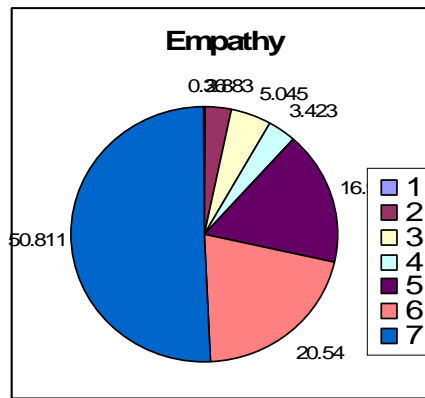


Figure 2: Representation of Empathy

Here, majority of students found this factor as most important. On the rating scale, 0.36% students have rated it as 1 and 50.811% students have rated it as 7.

3.3. Competence

This aspect involves the problem solving nature of the staff members. Staff members should always be helpful to students. They must understand the student need. They need to provide just the accurate information so that the students do not get confused. Use of online catalogue should be taught to students so that they can easily find their required information.

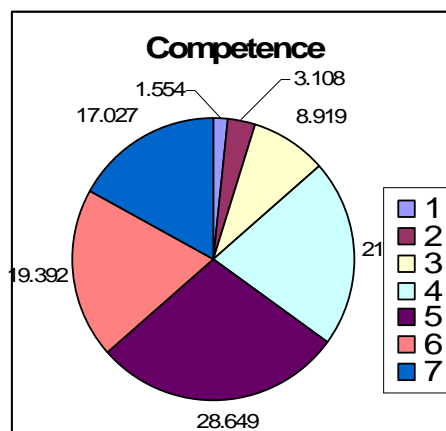


Figure 3: Representation Of Competence

On this factor 1.554% students have found this factor as very less important and 17.027% have found this as most important factor.

3.4.Efficiency

Efficiency involves promptness of services offered in the library. Staff should be well educated and knowledgeable so that they can help the students to fulfill student’s need inside and outside the library.

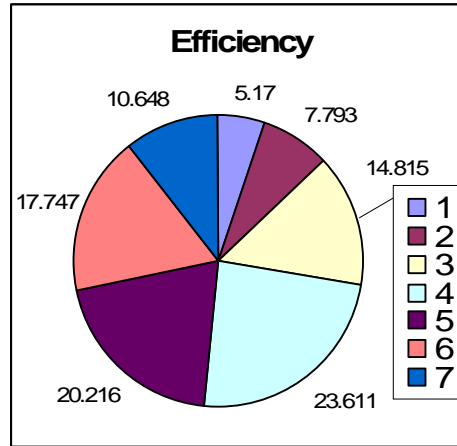


Figure 4: Representation Of Efficiency

For the efficiency aspect 5.7% student have given rating 1 and 10.648 have given the rating 7.

3.5.Responsiveness

Responsiveness aspect involves the time taken in fulfilling the student need in terms of borrowing books, CD ROMs, or accessing printer. This waiting time should minimum. Here, 6.081 % students have marked this factor as least important and 4.189 have marked as most important.

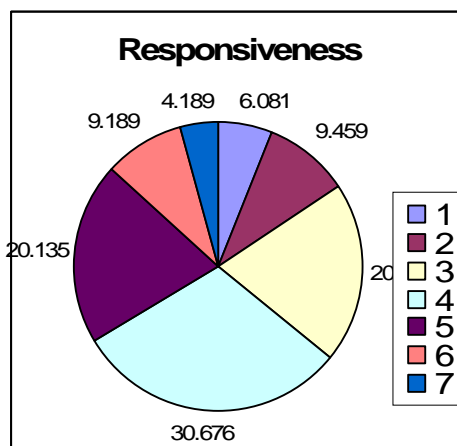


Figure 5: Representation Of Responsiveness

3.6.Tangible

This factor involve the physical attributes of library. Physical appearance, availability of the seat desk, comfort ness of the furniture, silence in the library are the various attribute which should be present in the library.

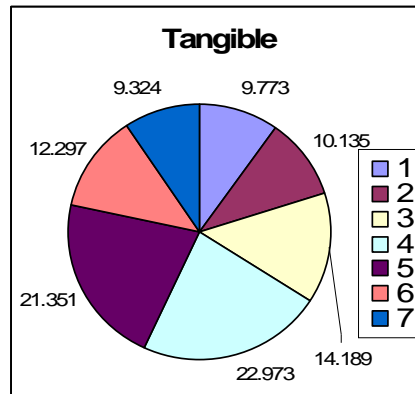


Figure 6: Representation Of Tangible

Physical appearance factor has been rated as least important by 9.773% students and most important by 9.324% students.

3.7. Timeliness

Opening hours of library should match with students schedule so that student can avail maximum benefit of library.

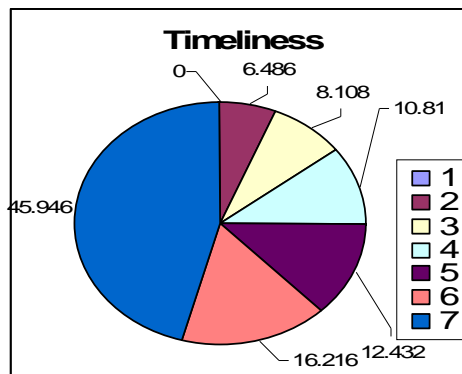


Figure 7: Representation Of Timeliness

Majority of students want to have the operational hours of library according to their work schedule or time table. None of the student has rated this factor as of least importance and 45.946% have found it as most important.

3.8. Communication

Library staff should be friendly to talk with. Any suggestion or complaint regarding service of library or library member can be made easily.

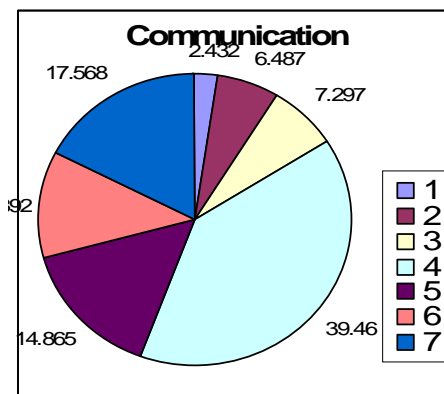


Figure 8: Representation Of Communication

Communication is again on the moderate side of rating. 2.432% students have rated it as 1 and 17.568% have rated it as 7 i.e. most important.

4.Ranking Of Factors

The response rate for survey was high as it was a control survey.86% of the students have answered the questionnaires. To analyze the result and to rank the various groups, we have calculated the relative weight percentage. This Relative Weight Percentage ranges from 0.085 to 0.162. Relative weight percentage of each group is shown in Table 2.

S.No.	Group	Relative Weight %
1	COURTESY	0.134
2	EMPATHY	0.162
3	COMPETENCE	0.135
4	EFFICIENCY	0.119
5	RESPONSIVENESS	0.085
6	TANGIBLE	0.089
7	TIMELINESS	0.152
8	COMMUNICATION	0.125

Table 2: Relative Weight Percentage

Depending upon the relative weight percentage a bar chart has been prepared.

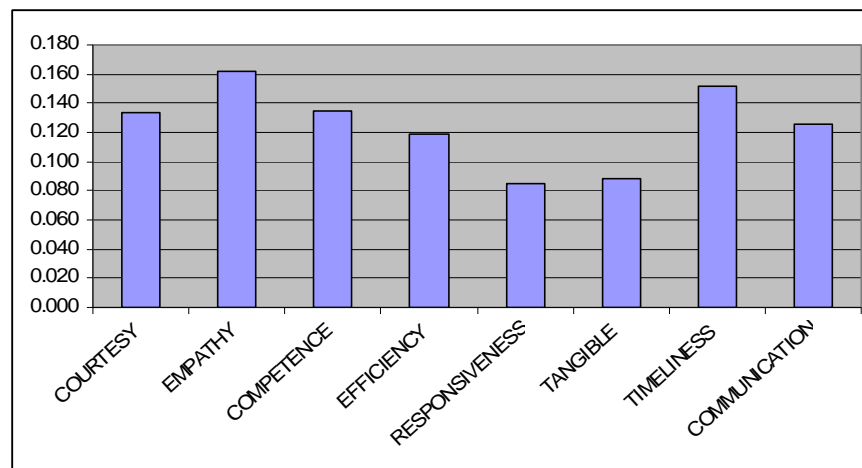


Figure 9: Relative Weights Of Various Groups From Survey Results

The analysis described in this section has been performed in order to determine how the student rates the factors. A factor with lowest relative weight is considered as the least important factor and one with highest relative weight is the most important factor. On analyzing the data, it was found that out of the eight groups Empathy is the most important quality factor for a successful library system. Availability of study material in proper quantity, at proper place and in proper condition is of great important to students. Range of study material available should be according to their need. After Empathy, students have ranked timeliness or the opening hours of library as the second most important quality factor. If timings of library is according to student schedule then they can maximally utilize the various resources available at library.

Majority of the students have rated tangibles as least important group. Physical layout of library, availability of furniture, comfort of furniture is of less importance.

Thus, the factors in the descending order of their importance are:

Empathy, Timeliness, Competence, Courtesy, Communication, Efficiency, Tangible, Responsiveness.

5.Conclusion

Survey has been a valuable management tool on a number of levels. Information gained from this process is unique. Not only can the library identify services which do or do not satisfy students, but it can begin to determine student expectation of library services. Student requirements can be described in qualitative terms of quality dimensions and in quantitative terms of the priority. This survey aimed to find out the quality factors and to identify student's requirement. From detailed study of survey it was concluded that ease of availability of books is of great importance to students.

6. Appendix II

A Survey of Students Enrolled at this Institute

This is a survey of your personal expectations of a Institute Library. We are attempting to find out which Library services and facilities are most important to you, not how well you think we provide them.

Please circle the number which indicates HOW IMPORTANT each of the following points is to you. If you don't use a service, just leave that line unmarked.

- Branch in Enrolled at the Institute:.....
- Year of Enrollment in the Institute.....

	Not Important			Very Important			
	1	2	3	4	5	6	7
1. How important is it to you that Library staff are:							
(a) Approachable and welcoming	1	2	3	4	5	6	7
(b) Courteous and polite	1	2	3	4	5	6	7
(c) Friendly and easy to talk to	1	2	3	4	5	6	7
(d) Available when you need them	1	2	3	4	5	6	7
2. How important is it to you that Library staff:							
(a) Demonstrate cultural sensitivity	1	2	3	4	5	6	7
(b) Understand what information you are looking for	1	2	3	4	5	6	7
(c) Do not refer you unduly from one service area to another for your inquiry to be answered	1	2	3	4	5	6	7
(d) Show you how to use the Library' online catalog (OPAC)	1	2	3	4	5	6	7
(e) Give accurate answers to your questions	1	2	3	4	5	6	7
(f) Direct you to Library brochures and help sheets	1	2	3	4	5	6	7
(g) Do not overwhelm you with too much information and detail	1	2	3	4	5	6	7
(h) Take you to where the material is shelved instead of just pointing or telling you where to go	1	2	3	4	5	6	7
3. How important is it to you that Library staff:							
(a) Offer suggestions on where to look for information in other parts of the Library	1	2	3	4	5	6	7
(b) Encourage you to come back to ask for more assistance if you need it	1	2	3	4	5	6	7
(c) Offer suggestions on where to look for information outside the Library	1	2	3	4	5	6	7
(d) Mention Interloan as a means to obtain materials that the Library does not have	1	2	3	4	5	6	7
4. How important is it to you that all public service desks throughout the Library are served by knowledgeable staff (i.e., staff who know what they are doing)	1	2	3	4	5	6	7
5. How important is it to you that knowledgeable staff are available to assist whenever the Library is open	1	2	3	4	5	6	7
6. How important is it to you that Librarians provide teaching programs, tutorials, etc. which enable you to make more effective use of Library materials and services	1	2	3	4	5	6	7
7. How important is it to you that you do not have to wait more than three minutes when you:							
(a) Ask for assistance at a reference inquiry desk	1	2	3	4	5	6	7
(b) Borrow material	1	2	3	4	5	6	7
(c) Use photocopiers	1	2	3	4	5	6	7
(d) Use electronic resources (e.g., CD-ROMs)	1	2	3	4	5	6	7
8. How important is it to you that the range of materials held by the Library meets your course needs	1	2	3	4	5	6	7
9. How important is it to you that the materials you want are in their proper places on the shelves	1	2	3	4	5	6	7

10. How important is it to you that the material you need from the Reference Copy collections is available to you when you want it	1	2	3	4	5	6	7
11. How important is it to you that study areas in the Library are kept quiet	1	2	3	4	5	6	7
12. How important is it to you that Library furniture is:							
(a) Available (e.g., you can find a seat or study desk)	1	2	3	4	5	6	7
(b) Comfortable	1	2	3	4	5	6	7
(c) Functional	1	2	3	4	5	6	7
13. How important is it to you that the Library opening hours match your schedule and need	1	2	3	4	5	6	7
14. How important is it to you that it is easy to make a compliment, complaint, or suggestion about Library services or conditions	1	2	3	4	5	6	7
15. What other services or facilities offered by the Library are important to you	1	2	3	4	5	6	7

Table 3

7. References

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