Management of service quality in agricultural university libraries

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Abstract

The librarians in the present age find themselves in a position where they may not be satisfied with the traditional orientation of offering books and periodicals but where they also have to consider their target users. With the advent of new communication technologies, shrinking budget, increasing cost of reading materials, globalization of supply, competitive and professional environment, unending and unlimited informational expectations of the users from the library have forced the libraries, including the agricultural university libraries to manage the library operations in order to provide quality library services. Discuss the concept of quality and its application in the library. The present study involves the concept of measuring service quality and how the SERVQUAL model can be helpful in measuring the service quality of library. Discusses the views of agricultural university librarians in managing the library service quality

Introduction

The university library is to support teaching, learning and research by providing adequate current resources, quality service and user education to its clientele, consisting of students, faculty and the university community. The expanding student intake, rising cost of print materials and the proliferation of electronic resources has increased the pressure of demand on the library to provide high quality resources and services (Kaur, Mohamad and George 2006). Historically, library quality has been regarded as "synonymous with collection size--an assessment of what the library has--rather than with what the library does" (Hernon & Ellen Altman, 1998).

Quality

Quality has become the buzzword and symbol of survival and growth in manufacturing and commercial sector and has raised its wings in information sector. Escalating costs of information products, shrinking budget and increasing fees have enhanced the accountability of university libraries. Application of IT in libraries has extended the scope of library

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services and accordingly enhanced the expectations of users for high quality information services. All these problems posed serious challenges for efficient information management, which calls for immediate concern of university libraries to have a careful investigation of skills, management philosophy, expectations and perceptions of customers. Quality, therefore, is no more an option but an urgent need for survival and growth in the prevailing competitive environment. It is the need of the hour that Library should increase the quality of Library services as per the expectations of its users.

Actually, it is the customer, who decides whether a particular service is a quality service or not. If customers say it is quality service, then it is. If they do not, then it is not. If a firm is claiming that, it is providing a quality service and its customers are not satisfied with that service, then it has no meaning at all of firm's claim. It does not matter what an organization believes about its level of service. According to Sarkar (1995) "quality of a product or service is the ability of the product or service to meet customers' requirements". Brophy and Counlling (1997) defined quality as the value of goods and services that meets customer needs and expectations at a cost that represents value. According to American National Standards Institute (ANSI) and American Society for Quality Control (ASQC), "Quality is the totality

of features and characteristics of a product or service that bears on its ability to satisfy stated or implied needs." This widely adopted definition of quality instead of being operations focused is customer focused. At the centre of this definition is satisfaction of customer's needs. When a firm's offer is able to meet or exceed customer expectation, the firm has delivered quality. There has to be a marked shift from a technical to a customer orientation in the delivery of service. All libraries may provide the same type of service but the delivery of that service will differ from place to place depending on its uniqueness (Thapisa and Gamini 1999)

Quality Concept in Library

By the 2nd half of 1980s libraries were considered good or bad by its holdings of books and journals, number of professional and nonprofessional staff, annual budget, etc. These measures were adequate when the primary function of libraries was to acquire books and journals. Pritchard concluded, "the future vitality of libraries in academia will be dependent on whether they can dynamically and continually prove their value to the overall educational endeavor.

The primary focus of a library is service, and service quality is the most studied topic in marketing research during the past decade. The world 'quality' emerges from the latest trend in business and industry but it is closely linked with existing research and practice in the libraries. Library effectiveness - an earlier term for quality has provided an important building block on which advancement in library quality management can be based.

The Element of quality service in libraries is implicit in the 'Five Laws of Library Science' as stated in 1931by Dr. S.R. Ranganathan, who is regarded as the father of Library Science in India. The Fourth Law of Library Science 'Save the time of the Readers' reflects that library users are the axiom of the library service system.

Orr' (1973) in his classic study introduced the concept of 'library goodness' and suggested 'quality' of library service and 'value' of library service as the determinants of library goodness. He further clarified that quality may be understood in the terms of "how good is the library" and value in terms of "what good does it do". Orr presented that 'resources' of a library determine its 'capability'; the 'capability' determines its 'utilization', and the 'utilization' determines its 'beneficial effects', and the 'beneficial effects' in turn determine the 'resources'. The quality of a library may be determined on the basis of resources, capability, and utilization, whereas value is determined on the basis of utilization and beneficial effects. In his opinion 'effectiveness' and 'benefits' were closer in meaning to the term 'quality' and 'value' respectively but in literature effectiveness and benefits were having wider connotations. De Prospo (1973) described library effectiveness as a measure of library collections, facilities and staff. Du Mont pointed out that the service which satisfies to a high degree information and research needs of faculty, students and other users and contributes to the success of educational and development goals of the institutes in an effective manner is known as quality of service. Line doubted the quality/ value distinction made by Orr in 1973. He pointed out the involvement of subjectivity element in judging quality and value. He defined four measures: benefits (long-term), effectiveness (short term), cost effectiveness (value for money), cost benefit (long term benefits for money).

Brophy and Coulling pointed out that from effectiveness point of view quality and value are separate but from quality management point of view both the questions of library goodness are not separable because customer can judge both quality and value. Quality and effectiveness are doing right things only, whereas Girja Kumar considered quality as doing things right and total quality as doing right things only. Accordingly, quality or effectiveness is one of the measures of studying library performance. Other measures of total performance or total quality of library are efficiency, cost effectiveness, economy, market penetration, impact, costs, productivity, appraisal, etc. Efficiency means doing thing rightly. It also means getting something done quickly, and at minimum cost.

The system components provide the framework for formulating the definition of quality and quality management. In other words, quality is the ability or capability of

library services, products and consultation to meet the requirements of users. Quality management is defining the library user (customer), understanding his requirements, finding out library's capability, and in case of mismatch changing either the customer definition or capability of library and specifying library's requirements to university authorities, external venders and suppliers and internal staff.

SERVQUAL- A Measuring Rod of Service Quality

In the early 1980s, the impetus to measure and evaluate service quality arose from the marketing discipline. A repeated theme in the marketing literature is that service quality, as perceived by consumers, is a function of what customers expect and how well the firm performs in providing the service. Recognizing the centrality of customer perceptions of service quality, academicians sought to devise methods to assess customer views of quality service empirically (Cook and Thompson). Among the most popular assessments tools of service quality is SERVQUAL, an instrument designed by the marketing research team of Parasuraman, Berry and Zeithaml (PB&Z). Through numerous qualitative studies, they evolved a set of five dimensions which have been consistently ranked by customers to be most important for service quality, regardless of service industry. These dimensions are defined as follows:

Tangibles: appearance of physical facilities, equipment, personnel, and communication materials;

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 and their ability to convey trust and confidence; and

Empathy: the caring, individualized attention the firm provides to its customers.

The three collaborators concluded that quality could be viewed as the gap between perceived service and expected service, and their work eventually resulted in the Gap Theory of Service Quality, that is,

Q = P - E

(Where Q = Quality, P and E are Customers' Perceptions and Expectations of particular product/service)

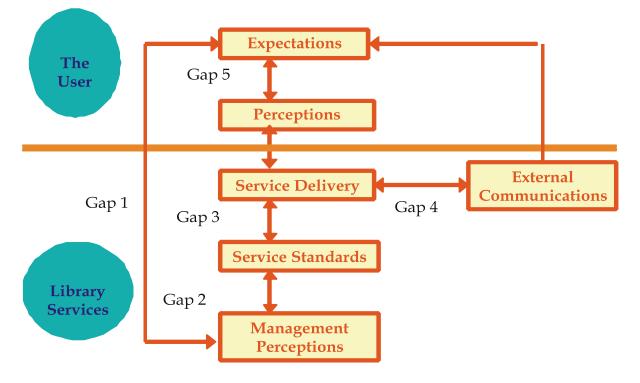


Fig. 1. The Gaps Model of Service Quality

PB & Z identified following five quality gaps:-

Gap 1: Difference between actual user expectations and management's idea or perception of user expectations;

Gap 2: Mismatch between manager's expectations of service quality and service quality specifications;

Gap 3: Gap between the service quality specifications and the delivery of service;

Gap 4: Differences between service delivery and external communication with the users;

Gap 5: Difference between Expected and Perceived Quality

SERVQUAL is a survey instrument to measure the gap between customers' expectation for excellence and their perception of actual service delivered. The SERVQUAL instrument helps service providers to understand both customer expectations and perceptions of specific services, as well as quality improvements over time. It may also help target specific service elements requiring improvement, and training opportunities for staff. Introduced in 1988, SERVQUAL has been used in replication studies in a wide range of service industries: health care, banking, appliance repair, and several other professions including libraries.

PB&Z's customer-based approach for conceptualizing and measuring service quality offers an alternative for defining the quality of library services. It emphasizes the service nature of libraries, in which the traditional collectionbased criteria of quality may be part of, but not the entire component, of excellence. Service quality contributes to value experienced by customers. Value becomes an outcome of excellent service. The SERVQUAL instrument, modified for use in library service settings, provides an outcome measure for managers to gauge their service activities.

Methodology

The study is designed to know the views of the Librarians/ Heads of the Agricultural University Libraries on total quality management in order to provide quality library services. Keeping in view the purpose of the study a questionnaire using 5-point Likert scale was designed for collecting the data. The questionnaire was designed after going through related theories, methods and conclusions of related studies and experience of author in providing services to the library patron.

Scope of the Study

The present study is made to know the view of Librarians / Heads of the Libraries in Agricultural University Libraries on total quality management in four states of Northern India namely Punjab, Haryana, Himachal Pardesh and Uttarakhand. The selected libraries are:-

- 1. Punjab Agricultural University Library Ludhiana (Pubjab).
- 2. CCS Haryana Agricultural University Library Hisar (Haryana)
- 3. Y S Parmar University of Horticulture and Forestry, Solan (Himachal Pardesh)
- Gobind Ballabh Pant University of Agriculture and Technology, Pant Nagar (Uttarakhand)

Management of Service Quality

Management of quality in libraries seems to be of recent origin but actually element of quality management in libraries is implicit in the 'Five Laws of Library Science' as stated in 1931by Dr. S.R. Ranganathan, who is regarded as the father of Library Science in India. The Fourth Law of Library Science 'Save the time of the Reader' has similar implications as are advocated in the TQM process. His explanation for the term 'Documentation' as pinpointed, exhaustive and expeditious organization and retrieval of information is what is the sum and substance of the TQM approach in library context. Regarding applicability of TQM in library and information centres' can be described in terms of three functions - Acquisitions of Information; Organization of Information and Dissemination of Information.

The concept of quality management originated in Japan and later moved into the USA and the UK, initially in the manufacturing sector. Since then, the theory of quality management has been growing fast. It has become a management philosophy in its own right and has taken shape in a series of international standards in the ISO 9000 series. The philosophy is increasingly being applied in the service sector, including libraries. Library and information managers (LIMs) are these days deluged with advice as to how to acquire and organize learning resources and satisfy the complex and ever-increasing information needs of their users (Moghaddam and Moballeghi, 2008).

The study includes Librarians' view regarding following five attribute of management:-

- 1. Leadership
- 2. Strategy and Policy
- 3. Staff Management
- 4. Process Management and;
- 5. Resource Management

Leadership

The quality of library services is greatly influenced by the performance of the employees and Leadership reflects the employee's performance. Hence, the leadership also influences the quality of library services. The following questions were asked from the Librarians/ Heads of the University Libraries:-Leadership plays a vital role in providing effective and efficient library services

- 1. I prefer to work as facilitator and motivator rather as authoritarian
- 2. I consider the importance of different teams for the improvement of processes, Procedures and practices.
- 3. I recognize performances on team basis rather on individual basis.
- 4. I believe that all of us have more or less equal potential.
- 5. I praise orally in public for outstanding performance and condemn privately for Poor performance.
- 6. I believe that person at the top is in the best position to make major decisions.
- 7. I can easily categories my subordinates as good and bad.

The responses received have been reproduced in the form of tables.

| Statement No. | PAU Ludhiana | HAU HISAR | YSPU Solan | GBPU PANT NAGAR | Mean score |
|------------------|-----------------|--------------|---------------|--------------------|---------------|
| 1 | 5 | 5 | 5 | 5 | 5 |
| 2 | 5 | 5 | 5 | 5 | 5 |
| 3 | 5 | 5 | 4 | 4 | 4.5 |
| 4 | 5 | 5 | 4 | 4 | 4.5 |
| 5 | 4 | 5 | 3 | 3 | 3.75 |
| 6 | 5 | 5 | 3 | 3 | 4 |
| 7 | 5 | 5 | 5 | 5 | 5 |
| 8 | 5 | 5 | 5 | 5 | 5 |
| Mean | | | | | |
| score | 4.89 | 5 | 4.25 | 4.25 | 4.59 |

Table 1

It is shown in the table 1 that the statements at sr. no. 1,2,7 and 8 are highly agreed upon by all the librarians and opt highest score at 5 whereas the statement at sr. no. 5 is agreed only to some extent by the Librarians of YSPU, Solan and GBPU, Pant Nagar and rated at score 3. Thus the librarians of all the libraries under reference consider the importance of role of leadership in providing quality services, work as facilitator and motivator, believe that person at the top is in the best position to make major decisions and they easily categories the subordinates as good and bad. The Librarians of YSPU, Solan and GBPU, Pant Nagar are agreed only to some extent with the statement that all of us have more or less equal potential. The overall mean score of this statement is lowest i.e. 3.75 among the eight statements. Further among the University, the HAU, Hisar gives highest importance to leadership factor by scoring point 5 followed by PAU, Ludhiana by scoring mean score 4.89 YSPU, Solan and GBPU, Pant Nagar have the mean score of 4.25.

Strategy And Policy

With regard to framing and implimenting policies and stategies in order to offer provide better library services, the following questions were asked from the Librarians/ Heads of the University Libraries:-

- 1. All the services, processes and practices are planned keeping in view of the needs and expectations of the users
- 2. Library policies, mission, values and strategies are made clear to the staff.
- 3. In-charges have been delegated authorities in accordance to responsibilities
- 4. Various section In charges are fully involved in making policies

- 5. The decisions are taken on the basis of the information supplied to me from various sections of the library.
- 6. Crucial information is kept upto myself.
- 7. I explain my expectations to the subordinates and learn their expectations.
- 8. It is planned to make optimum use of information communication technologies (ICT) in providing library services.
- Staff meetings are organized to involve the staff in providing best services
 Strategy And Policy

| | 0, | | - | | |
|------------------|-----------------|--------------|---------------|--------------------|---------------|
| Statement No. | PAU Ludhiana | HAU HISAR | YSPU Solan | GBPU PANT NAGAR | Mean score |
| 1 | 5 | 5 | 5 | 5 | 5 |
| 2 | 5 | 5 | 5 | 5 | 5 |
| 3 | 5 | 5 | 4 | 4 | 4.5 |
| 4 | 5 | 5 | 4 | 4 | 4.5 |
| 5 | 4 | 5 | 3 | 3 | 3.75 |
| 6 | 5 | 5 | 3 | 3 | 4 |
| 7 | 5 | 5 | 5 | 5 | 5 |
| 8 | 5 | 5 | 5 | 5 | 5 |
| Mean | | | | | |
| score | 4.89 | 5 | 4.25 | 4.25 | 4.59 |
| | | | | | |

Table 2

It is evident from Table 2 that highest score is given to statement no. 4 and 8 at mean score 4.75 and the lowest score is given to statement no. 3 & 6 at mean score 4.25. The Librarians of these University libraries involve the section incharges in making policies and make optimal use of ICTs in providing library services. Among the Universities, PAU Ludhiana gives highest mean score of 5 followed by HAU, Hisar and GBP Pant Nagar at a mean scores of 4.78 and 4.33 respectively whereas YSP Solan gives lowest mean score of 3.89 to policy decisions.

Staff Management

Skilled and dedicate staff of any institution is considered as the builiding blocks. By listening to their suggestion, motivating them for work, providing necessary trainings, involving them in enhancing the library service quality, a librarian can increase the work efficiency of the library staff. In this regard the following questions were asked from the Librarians/ Heads of the University Libraries:-

- 1. Suggestions are always welcomed from library staff.
- Library Staff is considered as an asset to be developed rather than commodity to be used

- 3. I have faith in my subordinates ability, potential, knowledge and skills.
- 4. To make better communication with the sections heads, telephone/ intercom facility is provided in all sections.
- 5. Reasonable Authority is delegated to the Staff responsible for a particular Job.
- 6. The staff is motivated on regular basis for being quality consciousness.
- 7. I want to use workers heads and hearts in addition to their hands.
- 8. Staff is encourage for further education and training for improvement
- 9. I help my subordinates in career planning.

Staff Management

| Statement No. | PAU Ludhiana | HAU HISAR | Y S P Solan | GBP PANT NAGAR | Mean Score |
|---------------|-----------------|--------------|----------------|-------------------|---------------|
| 1 | 5 | 5 | 4 | 3 | 4.25 |
| 2 | 5 | 5 | 4 | 4 | 4.5 |
| 3 | 5 | 5 | 4 | 3 | 4.25 |
| 4 | 5 | 5 | 4 | 4 | 4.5 |
| 5 | 5 | 5 | 4 | 4 | 4.5 |
| 6 | 5 | 5 | 4 | 5 | 4.75 |
| 7 | 5 | 5 | 4 | 5 | 4.75 |
| 8 | 5 | 5 | 4 | 4 | 4.5 |
| 9 | 5 | 5 | 4 | 5 | 4.75 |
| Mean Score | 5 | 5 | 4 | 4.11 | 4.53 |

Table 3

It is evident from the Table 3 that highest mean score i.e. 4.75 is given to statements no. 6, 7 & 9 whereas the lowest mean score i.e. 4.25 is given to statement no. 1. Librarians are of the view that staff is motivated for quality library services, in additions to the hands- heads and hearts are used and they help their subordinated in career planning. The mean score is highest i.e. 5 in PAU Ludhiana and HAU Hisar and lowest i.e 4 in YSP Solan.

Process Management

By doing right things at the right time and in the right directions librarian may enhance the quality of library services. The following questions were asked from the Librarians/ Heads of the University Libraries related to process management.

- 1. Rules and regulations are followed and reports against those who violate
- 2. Staff is authorized to identify key processes and related small activities
- 3. I give chance to every employee to improve

the processes of his/her work

- 4. New books are processed for use with in a month of payment.
- 5. The newly added books are conveyed to the indenting departments.
- 6. Proper arrangement of books on the shelves is ensured
- 7. Library membership is given within a week after application
- 8. Books are issued within 5 minutes to members
- 9. OPAC/Catalogue is updated.

Process Management

| Statement No. | PAU Ludhiana | HAU HISAR | Y S P Solan | GBP PANT NAGAR | Mean Score |
|------------------|-----------------|--------------|----------------|-------------------|---------------|
| 1 | 5 | 5 | 4 | 3 | 4.25 |
| 2 | 5 | 5 | 4 | 4 | 4.5 |
| 3 | 5 | 5 | 4 | 3 | 4.25 |
| 4 | 4 | 5 | 4 | 5 | 4.5 |
| 5 | 5 | 5 | 4 | 4 | 4.5 |
| 6 | 5 | 5 | 4 | 4 | 4.5 |
| 7 | 5 | 5 | 4 | 5 | 4.75 |
| 8 | 5 | 5 | 4 | 5 | 4.75 |
| 9 | 5 | 5 | 4 | 5 | 4.75 |
| Mean | | | | | |
| Score | 4.89 | 5 | 4 | 4.22 | 4.53 |

Table 4

It is shown in the table 4 that the statements at sr. no. 7, 8 & 9 are highly agreed upon by highest mean score at 4.75 whereas the statement at sr. no. 1 & 3 are lowest agreed upon by scoring 4.25. Librarians are particular in providing library membership within a week time to its patrons, issuing books within 5 minutes after reaching at counter and updating the OPAC. They are agreed to the great extent that rules and regulations be followed and report against those who violets chance should be given to the employees to improve the processes of their work. Further among the University, the HAU, Hisar gives highest importance to process management by scoring mean score 5 followed by PAU, Ludhiana by scoring mean score 4.88. GBPU, Pant Nagar and YSPU, Solan have the mean score of 4.22 and 4 respectively.

Resource Management

The library has the resources- reading material, budget, equipments, hardware & software, communication technologies, multimedia labs building, staff etc. The proper management of these resources in libraries definitely enhances the quality of library services. The following questions were asked from the Librarians/ Heads of the University Libraries related to

Resource management

- 1. Optimum use of the library resources.
- 2. Proper allocation of library budget for optimum utilization
- 3. Budget for books and journals are allocated in the meeting of Library Committee.
- 4. Librarian is involved in the process of planning annual budget of the Library.
- 5. All reading material is purchased on the basis of quality rather than price
- 6. All equipments and instruments are kept functional
- 7. Full use of ICTs is made with paper based culture.
- 8. It is believed in job analysis, division and description.
- 9. The cleanliness of library building, books and furniture is ensured.

Resource Management

| | neo | ource n | iunu 60 | mem | |
|---------------|-----------------|--------------|----------------|-------------------|---------------|
| Statement No. | PAU Ludhiana | HAU HISAR | Y S P Solan | GBP PANT NAGAR | Mean Score |
| 1 | 5 | 4 | 4 | 3 | 4 |
| 2 | 5 | 4 | 4 | 3 | 4 |
| 3 | 5 | 3 | 3 | 5 | 4 |
| 4 | 5 | 5 | 4 | 5 | 4.75 |
| 5 | 4 | 5 | 4 | 4 | 4.25 |
| 6 | 5 | 5 | 4 | 5 | 4.75 |
| 7 | 5 | 5 | 4 | 4 | 4.5 |
| 8 | 5 | 5 | 4 | 3 | 4.25 |
| 9 | 5 | 5 | 4 | 4 | 4.5 |
| Mean | | | | | |
| Score | 4.89 | 4.56 | 3.89 | 4 | 4.33 |

Table 5

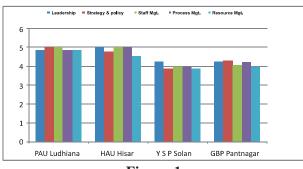
It is observed, as depicted in table 5, that the statements no. 4 & 6 are highest agreed upon by obtaining mean score of 4.75 whereas the statements no. 1-3 are lowest agreed upon among the nine statements by obtaining mean score of 4. The University Librarians of the Agricultural University Libraries agreed to almost full extent that they are involved in planning annual budget and all the equipments and instruments are kept functional. They are agreed to great extent w.r.t. other statements regarding resource management- optimum use, proper allocation of budget in the meeting of library advisory committee, reading material is purchased on the basis of quality rather than price, cleanliness of library building, books,

furniture etc. Among the Universities PAU Ludhiana has the highest mean score (4.89) of resource management followed by HAU, Hisar (4.56) and GBP Pant Nagar (4) respectively. YSP Solan has the lowest mean score of 3.89 w.r.t. resource management.

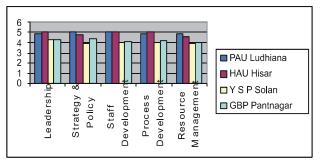
Conclusion

It is observed that the Librarians in the agricultural university libraries are managing quality of their library to the great extent. The Librarians of PAU Ludhiana and HAU Hisar have given importance of all the five attributes to almost the full extent. The Librarians of GBP University of Agriculture and Technology, Pant Nagar and YSP University of Agriculture and Forest have given importance to these attributes to the great extent. A clear picture of their views on the five attributes has been shown in the below stated Table 6 and figures 1 & 2.

| | PAU Ludhiana | HAU HISAR | Y S P Solan | GBP PANT NAGAR | Mean Score |
|------------------------|-----------------|--------------|----------------|-------------------|---------------|
| Leadership | | | | | |
| Strategy & | 4.88 | 5 | 4.25 | 4.25 | 4.59 |
| Policy | 5 | 4.78 | 3.89 | 4.33 | 4.5 |
| Staff Management | 5 | 5 | 4 | 4.11 | 4.53 |
| Process Management | 4.88 | 5 | 4 | 4.22 | 4.53 |
| Resource Management | 4.88 | 4.56 | 3.89 | 4 | 4.33 |
| Mean Score | 4.93 | 4.88 | 4 | 4.18 | 4,5 |
| Score | 4.95 | 4.00 | 4 | 4.10 | 4.5 |









The highest mean score i.e. 4.93 is of PAU, Ludhiana followed by 4.88 of CCSHAU Hisar. The mean score of GBP University of Science & Technology, Pant Nagar and YSP University of Agriculture and Forest, Solan is 4.18 and 4.00 respectively against the overall mean score 4.5 in all the Universities. Among the attributes, Leadership has the maximum mean score of 4.59 followed by Staff Management and Process Management having mean score of 4.53 and Resource Management having mean score of 4.33.

References

- 1. Brophy, Peter and Coulling, Kate. "Quality management for information and library managers", Mumbai, Jaico, 1996.
- Date, Dhanashree A. and Gokhale, Pratibha.
 "Implementation of ISO 9000 in Industrial Libraries", Library science with a slant of Documentation and Information Studies, 1999; 36(2): 65-72.
- De Prospo, E. R. et..al, "Performance measures for public libraries", Chicago: Public Library Association, 1973, 71.
- 4. Du Mont, Rosemary and Du Mount, Paul E. "Measuring library effectiveness: A review and an assessment", Advances in Librarianship, 1979; 9: 103-141.
- Hernon, Peter and Altman, Ellen, "Assessing service quality: satisfying the expectations of library customers" Chicago: American Library Association, 1998, 2.
- 6. Kaur, Kiran Mohamad, Pauziaah and George, Sossamma. "Quality management service at the University of Malaya Library" Library Management, 2006; 27(4): 249-256.
- 7. Moghaddam, Golnessa Galyani and Moballeghi, Mostafa, "Total quality management in library and information sectors" The Electronic Library, 2008; 26(6): 912-922.
- 8. Parasuraman, A. et.al. "SERVQUAL: a multiple item scale for measuring consumer perceptions of service quality". Journal of Retailing, 1994; 64(1): 12-40.
- 9. Orr, R. H. "Measuring the goodness of library services: a general frame work for considering quantitative measures. Journal of Documentations, 29(3): 315-332.
- 10. Sarkar, Debashis. "The managers handbook for total quality management" New Delhi: Sage, 1995; 1-2.
- 11. Thapisa A.P.N. and Gamini, Venus "Perceptions of quality service at the University of Botswana Library: what Nova says" Library Management, 1999; 20(7): 373-383.
- 12. Verma, R. K. "Measuring quality management level with reference to ISO 9000 and TQM for special libraries in India", Annals of Library Science and Information Studies, 2002; 49(4): 141-163.

Table 6