SUMMARY

INTRODUCTION

During last two decades, the preservation of high quality and standards in education has become a major concern for higher education institutions and governments; consequently, the demand for explicit quality evaluation and assurance processes has been increasing rapidly. It is true that by using a variety of Information Technology tools and techniques, university library is now able to generate various kinds of information products and services in addition to performing routine tasks. However, it is unfortunate that these remain largely underutilized and in some cases even wholly unutilized. The basic reason of selecting this problem is to raise the quality level of library and information science awareness or consciousness among the users. Library information products and services are ‘generator-driven’ rather than ‘user-driven’ and there remains a ‘linkage gap’ between the generators and the users of such products and services. On the other hand, university library have, over the years, spent enormous amount of money, expertise and other valuable resources to reach their present stage of service delivery. Mobilizing resources, particularly finances may not be a easy now as it was in the past. But there won’t be any looking back when it comes to the demands and expectations of their users. The only way out seems to be that LICs develop only in accordance with more exact and specific needs of their users. Indian university libraries are not been fully prepared to meet out the challenging need of higher education in the context of earlier revolutions, i.e., industrial revolution, white revolution, yet another new and bigger information has tremendously shaken the whole world; and globalization, privatization, liberalization have become the ‘mantras’ of the international order and the global information society. Information has become a key fugitive resource for socio-economic, cultural & political development and quality of life. Organization has increased their demand for information for reengineering and innovation so as to enhance their effectiveness and competitive position. The world “Quality” has become the buzzword and symbol of survival and growth in manufacturing and commercial sector and has also started making in-roads on information service sector. Many information providers have started working as indirect competitors to the university libraries.

Self-sufficiency has compelled universities to find other means for survival and growth in cost conscious and competition oriented setups. In addition to
worldwide escalating costs of information products, shrinking budgets and increasing fees have enhanced the operational transparency and accountability of university libraries. Information technology has extended the scope of doing business for librarians on the one hand and enhanced the expectation of users for high quality information services on the other. In spite of this, the gap between information generation and utilization has increased tremendously. All these problems posed serious challenges for proper information management which calls for immediate concern of university libraries to have a careful investigation of the whole gamut of university library service, e.g. management competence, staff skills, management philosophy, expectation and perception of internal customers. It is in this context that application of total quality management (TQM) to university libraries is important. Information is now considered as an important resource for socio-economic development of a society. So value added information service can only provide the conformance to the requirement of the users and their satisfaction. Libraries adopt management techniques to give their best in the form of service and products to its users. But it is very difficult to give best products and services, if there is no precise definition of what the best is in terms of library goals. There is no universally acceptable tool and techniques to measure, control and improve the quality of products and services in libraries. Total Quality Management (TQM) is one of such technique used for the improvement and maintenance of quality or performance of the libraries. Therefore, it is necessary for library and information professionals to understand core concepts, methods and techniques used in TQM.

The concept of Total Quality Management (TQM) after World War II for improving the production quality of goods and services. The concept originated from the Japanese, who adopted it in 1950 to resurrect their postwar business and industry, used it to dominate world markets by 1980. By then most U.S. manufacturers had finally accepted that the nineteenth century assembly line factory model was outdated for the modern global economic market. TQM is the art of managing the whole to achieve excellence. TQM is defined as both a philosophy and a set of guiding principles that represents the foundations of a continuously improving organization. It is the application of qualitative methods and human resources to improve all the processes within an organization and exceed customer needs now and in the future.
OBJECTIVES OF THE STUDY

The objectives of the study is to examine the application of Total Quality Management in central university libraries of India and to measures the perception of users as they relate to quality of information products and services, and to determine how far the library has succeeded in delivering such services to its users. The study includes only seven central university libraries of India.

➢ To find out the existing level of quality management, services and facilities in different Central University Libraries of India
➢ To compare the quality of services and facilities of different Central University Libraries of India.
➢ To know the current status of Total Quality Management approaches in Central University Libraries of India.
➢ To know the quality awareness level among the library information science professionals in the Central University Libraries of India.
➢ To assess the impact of various factors on quality management level of University Libraries.
➢ To identify the problems in planning and implementation of TQM in Central University Libraries of India.
➢ To measure the user perception of service quality in seven respective central university libraries.
➢ To find out the status of ISO certification or any certification process in Central University Libraries of India.
➢ To know the standard guidelines and quality indicators followed by Central University Libraries.
➢ To find out the need for top library and information managers to understand total quality management.
➢ To examine how the adaptation of TQM approach can help overcome some of the difficulties of changing environment.
➢ To examine the application of TQM in libraries with particular reference to users satisfaction and perceptions of library quality services.
HYPOTHESES

> There is no significant difference in the perception of services quality dimensions among research scholars and faculty member's with central university libraries of India.
> There is no significant difference in the perception of service quality dimensions of the seven central universities libraries of India.
> All the seven central university libraries are maintaining the level of quality management standards and services
> Most of the central university libraries have implemented Total Quality Management principles and practices.
> Most of the central university libraries are not certified with ISO.

METHODOLOGY

Questionnaire, observation and Interview were used as the tool for the study. Two sets of questionnaire were designed for the purpose of data collections. Part 1,2,3 of first set of questionnaire was designed for the librarians of seven respective central university libraries and second set of questionnaire, i.e., part 4 was designed for user groups. Part 1 questionnaire deals with brief profile of libraries and collected factual data and quantitative statistics of libraries, such as size of collections, status of library automations, facilities and services, staff and budget, etc. Part 2 consists for the exploring TQM principles and practices and to find out the status Planning and awareness of TQM in selected libraries. Part 3 consists five elements of TQM, i.e., Leadership, Policy and Strategies, Staff Management, Resources and Process. Part 4 of the questionnaire contains the modified SERVQUAL instrument developed by Parasuraman, et.al, (1998) to measure the outcome performance and perceptions of quality services through users. The questionnaire reflected six dimensions of quality services, i.e., Reliability, Responsiveness, Assurance, Access, communication and Tangibles. All the closed-ended questions were designed to solicit responses on a five-point Likert scale for both types of respondents to measure perception of service quality.

The questionnaires were distributed personally among the research scholars, faculty members and librarians. Sample size of research scholars and faculty members has been limited to approx 10% of the total populations and sample size of central university has been limited about 35% of total populations. 1700 questionnaires were distributed to the user community, i.e., research scholars (830) and faculty members
(870) of seven central university libraries of India, of which 1507 (89%) were received back. 763 (90%) responses were received from faculty members and 744 (89%) responses were received from the research scholars. The investigator selected only 1425 (84%) questionnaires for the analysis of data as 82 questionnaires were rejected because of incomplete responses from the respondents. Similarly 7 questionnaires were distributed to the university librarians of seven central university libraries, i.e., 100% responses were collected from the respondents.

The data collected through questionnaire and informal interview were organized and tabulated by using statistical methods, tables and percentage, mean and average mean. After gathering the questionnaires, the survey data was keyed in Excel file. Before transferring to SPSS version 16.0, the procedures of data treatment were set to validate the data for further analysis. Further to substantiate the data, statistical tests have been conducted namely ANOVA, t-test and control chart for mean. Analyses of Variance (ANOVA) test were used to identify the differences of service quality dimensions in central university libraries of India and t-test was used to measure the significant differences between perception of service quality of the research scholars and faculty members. For measuring of quality levels, mean control charts were used.

**MAJOR FINDINGS OF THE STUDY**

The major findings which emerged during the study have been summarized:

**Major Findings from the Part 1**

1. Library collection is a sum of total library materials. It makes up the holdings of a library. It is found from the table 6.1.4 that all seven central university libraries have good collections of all kinds of documents in the form of books and non-book materials but comparatively the MA Library of AMU has large collection than others libraries. The analyses reveals that the total collection of MA Library of AMU consisting of books, periodicals, CD-ROMs, theses and manuscripts etc. is (11,46,281), followed by BHU (10,46,046), followed by VBU (8 lakh), whereas NEHU has only 4 lakh total collections, which is the lowest.

2. It is found the Table 6.1.7 reveals that AMU, JMI, NEHU, and VBU libraries are using LibSys software for the automation. BHU and DU are using NewGenlib, and Trodon and JNU is using VTLS software for the automation.
The analyses show that most of the library is fully automated with world class library softwares.

3. Table 6.1.8 depicts that BHU and AMU libraries provide special services like Blind Support Services. Central library of JNU provides Newspaper-Clipping service for the researcher and VBU library also provides special service to the users, i.e., e-resources.

4. Table 6.1.5 indicates that Central Library of JNU has highest annual budget, i.e., (6 Crore) followed by BHU (4.5 Crore), followed by AMU (2.552 Crore), followed by DU and JMI has one crore respectively, whereas VBU has lowest annual budget, i.e., (72.71 Lakh).

**Major Findings from the Part 2**

Part 2 measures the status of TQM applications in the Central University Libraries of India. The investigator analyses the responses collected from the seven central university librarians and tabulated them. The major findings are given as under:

1. It can be observed from the table 6.2.1 that majority of central university libraries are under the process of applying TQM, i.e., 85.71%, whereas BHU library is still planning to apply TQM principle and practices.

2. It can be found that majority of the libraries are trying to use ISO 9000 model for quality process but it is clear that none of the central university libraries are certified with ISO.

3. 87.71% of the central university libraries are planning to get the certification from ISO.

4. Cent percent of the libraries were reported of using statistical tools for the quality control.

5. It can be derived from the table 6.2.6 that none of the libraries have appointed any additional staff for TQM.

6. The table 6.2.7 reveals that 28% of the central university libraries appointed quality consultant for total quality management.

7. It can be inferred the table 6.2.8 that all central university libraries have conducted several programs like seminars and workshops related to the quality management for improving quality services in their libraries.

8. The table 6.2.9 shows that all respondents posses experience of quality management projects.
9. Table 6.2.10 reveals that all libraries staffs are fully aware of the quality management process and practices.

**Major Findings from the Part 3**

This section deals with the description of five elements of TQM, i.e., Leadership, Policy and Strategies, Staff Management, Resource, and process. To measure the responses collected from the librarian/deputy librarian of seven central university libraries in India. The major findings are as follows:

**Leadership**

Table 6.3.8 reveals the results of ‘Leadership’ quality aspect comprising five attributes. It shows that the mean score of VBU is highest, i.e., (4.80), whereas AMU and NEHU scored, i.e., (3.40), which is the lowest, which reflects that libraries do not show their consciousness about the leadership quality.

**Policy and Strategies**

It can be observed from the table 6.3.8 that the perception of librarians with regard to element TQM, i.e., ‘Policy and Strategies’. BHU and JMI libraries got the highest mean score, i.e., (4.80), whereas NEHU and AMU scored (3.60) which is the lowest, which reflects that libraries do not show consciousness about the Policy and Strategies.

**Staff Management**

It can be concluded that the results of ‘Staff Management’ quality aspect measuring the perception of librarians in table 6.3.8. It shows that the mean score of BHU and NEHU got the highest, i.e., (4.40), whereas AMU and JNU got (3.80), i.e., lowest mean score. The overall average mean of seven central university libraries for ‘Staff Management’ dimension is (4.085), which clearly depicts that four universities, i.e., VHU (4.00), JMI (4.00), JNU (3.80) and AMU (3.80) scored lower then the overall average mean. The result shows that NEHU and BHU focus more attention towards Staff Management in libraries.

**Resources**

The perception of respective librarians of central university libraries about the TQM element of Resources, BHU is found to be the best, i.e., (4.80), amongst all, whereas, VBU scored (3.30), is lowest mean score. The overall average mean of seven central university libraries with regards ‘Resources’ element is (4.271), which clearly depicts that only two universities, i.e., JNU (3.60) and VBU (3.30) scored lower then the overall average mean. The result shows that BHU focus more
attention towards management of ‘Resources’. The score of VBU is very low, which reflects that library do not show their consciousness about the Resources management.

Process

Table 6.3.8 depicts the results of overall mean score of elements ‘Process’. The finding shows that AMU, BHU and DU libraries got the highest, i.e., (4.20), whereas NEHU and VBU scored (3.60), which is the lowest. The overall average mean of seven central university library with regard the Process of library management is (3.942), which clearly shows the three universities, i.e., JNU (3.80), NEHU and VBU (3.60) scored lower then the overall average mean. The result shows that AMU, BHU and DU focus more attention towards Process element. The score of VBU are very low which reflects that libraries do not show their consciousness about the ‘Resources’.

Major Findings from the Part 4

Part four deals with the user’s perception about the service quality of seven central university libraries of India. The dimension wise findings are as follows:

MA Library of AMU

Table 6.4.7 indicates that ‘Assurance’ got the highest mean score, i.e., (3.65) and ‘Responsiveness’ scored the least mean score (3.33). It shows the library staff’s posses good knowledge and skills to provide information to users about library collections and services. It also shows that library staff has ability to convey confidence, politeness, friendliness with respect to users. From the analysis of table, it reveals that users are very much satisfied with the ‘Tangibles’ dimension such as building and furniture, and infrastructure facilities of MA library. The perception of users about the service quality dimensions of Responsiveness is very low.

SRG Central library of BHU

Table 6.5.7 indicates that the comparative analysis of six dimensions of service quality, which were collected from the users of SRG Central library of BHU. The overall average mean of each dimensions analysis shows that ‘Assurance’ perceived the high scored, i.e., (3.76), followed by ‘Responsiveness’, i.e., (3.63), whereas the service quality dimension of ‘Tangible’ scored, i.e., (3.50), followed by ‘Communications’, i.e., (3.44), followed by ‘Access’, i.e., (3.39) and ‘Reliability’ scored the lowest, i.e., (3.33).
Central Reference Library of DU

Table 6.6.7 indicates the comparative analysis of six dimensions of service quality, which were collected from users group of Central Reference Library of University of Delhi. The overall average mean of each dimension analysis shows that ‘Assurance’ got the highest score, i.e., (3.97), followed by ‘Tangible’ and ‘Reliability’ score (3.94), whereas the service quality dimension of ‘Responsiveness’ scored (3.86) followed by Access (3.81), whereas ‘Communication’ got (3.64), which is lowest.

Dr. Zakir Hussain Library of JMI

Table 6.7.7 indicates the comparative analysis of six dimensions of service quality, which were collected from users group of Dr. Zakir Hussain Library. The overall average mean of each dimension analysis of Dr. Zakir Hussain Library users indicate that ‘Access’ perceived the highest score, i.e., (3.78), followed by ‘Reliability’, i.e., (3.55), whereas the service quality dimension of ‘Tangible’ scored, i.e., (3.50), followed by ‘Communications’, i.e., (3.36), whereas ‘Assurance’ got (3.31) and ‘Responsiveness’ achieved to be lowest, i.e., (3.27).

Central Library of JNU

Table 6.8.7 presents the comparative analysis of six dimensions of service quality, which were collected from users of Central Library of JNU. It can inferred that the dimension ‘Tangible’ perceived the highest mean scored, i.e., (3.82), followed by ‘Access’, i.e., (3.51), followed ‘Reliability’, i.e., (3.45), followed by ‘Responsiveness’, i.e., (3.37), whereas ‘Assurance’ got the lowest score, i.e., (3.08).

Central library of NEHU

Table 6.9.7 reveals the comparative analysis of six dimensions of library service quality, which were collected from the users of NEHU library. The overall average mean of each dimension analysis shows that ‘Responsiveness’ perceived the highest score, i.e., (2.61), followed by ‘Reliability’ and ‘Assurance’, i.e., (2.50), whereas the service quality dimension of ‘Access’ score, i.e., (2.47), followed by ‘Communication’ i.e., (2.44), whereas ‘Tangible’ scored the lowest, i.e., (2.31).

Central library of VBU

The comparative analysis of six dimensions of service quality, which were collected from the users of VBU has been analysed and presented in table 6.10.7. it shows that ‘Assurance’ perceived the highest score, i.e., (3.18), followed by ‘Tangible’ and ‘Reliability’ score, i.e., (2.70), followed by the service quality dimension of ‘Communications’ score, i.e., (2.63), followed by ‘Responsiveness’, i.e., (2.58), whereas ‘Access’ scored the lowest, i.e., (2.57).
Major findings of Reliability Dimension (Items Wise)

It is found that DU has got the highest mean score, i.e., (3.94), followed by JMI (3.55), followed by AMU got third position with the score of (3.51) and JNU got forth position with (3.45) score. The BHU and VBU scored (3.33) and (2.70) got the fifth and sixth position respectively. NEHU scored the lowest, i.e., (2.50) for the Reliability dimension.

Further items wise analysis indicates that ‘Giving correct answers to reference questions’ scored the highest for user groups of DU, i.e., (4.25), whereas NEHU scores (2.42), which is the lowest mean score of the respondents.

With regard to ‘Making relevant information available’ users of the Central Reference Library of DU scored the highest, i.e., (4.01), whereas NEHU scored (2.63), which is the lowest mean score of the respondents.

The item ‘keeping records consistent with actual holdings/status’ scored the highest for user groups of Central Reference Libraries of DU, i.e., (4.10), whereas NEHU scored (2.33), which is the lowest mean score of the respondents.

Regarding ‘Keeping computer databases up and running’, MA Library of AMU scored the highest, i.e., (3.88), whereas NEHU scored (2.57), which is the lowest mean score of the respondents.

The attribute ‘Making sure that overdue notices and fine notices are accurate.’ scored the highest for user groups of MA Library of AMU, i.e., (3.70), whereas NEHU scored (2.57), which is the lowest mean score of the respondents.

It can be inferred that Central reference Library of DU is more conscious and aware with service quality of Reliability dimension, whereas NEHU is the least concerned about service quality of dimension Reliability.

Major findings of Responsiveness Dimension

Table 6.11.2 shows that the overall mean score of perceptions of service quality of Responsiveness, which were collected from users of seven respective central university libraries of India to measure the readiness and timelines of library staff to provide information and services.

It indicates that the overall mean score of ‘Responsiveness’ dimension. The Central Reference Library of DU got the highest score, i.e., (3.86), followed by BHU (3.63), whereas JNU got third position with the score of (3.37), and JMI got fourth position with (3.27) score. AMU and NEHU further scored (3.12) and (2.61) and got
the fifth and sixth position respectively. VBU scored the lowest, i.e., (2.58) of Responsiveness dimension.

Further the attributes ‘Making new information available’ scored the highest for user groups of Central Reference Library of DU, i.e., (3.98), whereas NEHU scored (2.57), which is the lowest mean score of the respondents.

The item ‘Timeliness delivery of information’ scored the highest for user groups of Central Reference Library of DU, i.e., (4.16), whereas NEHU scored (2.50), which is the lowest mean score of the respondents.

The item ‘Re-shelving of books’ scored the highest for user groups of Central Library of JNU, i.e., (3.87), whereas, AMU scored (2.88), which is the lowest mean score of the respondents.

The attribute ‘Effective ILL System’ scored the highest for user groups of Central Reference Library of DU, i.e., (3.94), whereas VBU scored (2.18), which is the lowest mean score of the respondents.

SRG Central library of BHU, got the highest, i.e., (4.05), for ‘Familiarity with OPAC’, whereas VBU scored (1.97), which is the lowest mean score of the respondents.

The item ‘Recency of journals and newspapers’ scored the highest for user groups of BHU, i.e., (3.72), whereas VBU scored (2.03), which is the lowest mean score of the respondents.

After analyses, it can be inferred that Central Reference Library of DU is more conscious and aware of service quality of Reliability, whereas Central Library NEHU is least concerned about the service quality of Reliability dimension.

**Major findings of Assurance Dimension**

The Central Reference Library of DU got the highest score, i.e., (3.97), followed by BHU (3.76), whereas AMU got third position with the score of (3.65) and JMI got forth position with (3.31) score. JNU and VBU scored (3.08) and (3.18) got fifth and sixth position respectively. NEHU scored the lowest, i.e., (2.50) for the Assurance dimension.

It can be inferred from the table 6.11.3 that Central Reference Library of DU is more conscious and aware of service quality dimension of Assurance, whereas VBU is the least concerned about quality dimension Assurance. Further item wise analyses indicates that ‘Appearance of staff’ scored the highest for user groups of DU, i.e., (4.24), whereas NEHU scored (2.69) which is the lowest mean score of the
respondents. It can be inferred that the overall average mean of user groups of seven central university libraries for ‘Appearance of staff’ is (3.69) which clearly depicts that only three university libraries, i.e., AMU (3.97), BHU (3.97) and DU (4.24) recorded higher than the overall average mean.

The attributes ‘Thorough understanding of the collections’ scored the highest for user groups of DU, i.e., (4.03), whereas NEHU scored (2.31), which is the lowest mean score of the respondents.

The item ‘Familiarity of CD-ROM System’ scored the highest for user groups of Central Reference library of DU, i.e., (3.95) whereas VBU scored (2.75) which is the lowest mean score of the respondents.

The item ‘Providing individual attention to users’ scored the highest for user groups of Central Reference Libraries of DU, i.e., (3.88), whereas NEHU scored (2.61) which is the lowest mean score of the respondents.

The item ‘Recognising the regular users by the library staff’ scored the highest for user groups of MA Library of AMU, i.e., (3.80), whereas VBU scored (2.51) which is the lowest mean score of the respondents.

It can be noted that the overall average mean of user groups of seven central university libraries for ‘providing individual attention to users’ is (3.25), which clearly depicts that only two university libraries, i.e., NEHU (2.61), JNU (2.63) were recorded lower than the overall average mean.

It can be inferred from the analyses that DU is more conscious and aware of service quality dimension of ‘Assurance’, whereas VBU is least concerned about the quality dimension of Assurance.

Major findings of Access Dimension

The Central Reference Library of DU has got the highest score, i.e., (3.81), universities libraries, followed by JMI (3.78), followed by AMU which scored (3.58) and JNU got forth position with (3.51). BHU and VBU scored (3.39) and (2.57) got the fifth and sixth position respectively, whereas NEHU scored very low, i.e., (2.47) about the quality dimensions of ‘Access’.

Further item wise analysis indicates that ‘Availability of staff at reference desk’ scored the highest for the user groups of BHU library, i.e., (4.05), whereas NEHU scored (2.38), which is the lowest mean score of the respondents.
The item ‘Availability of Xerox facility’ scored the highest for user groups of Dr. Zakir Hussain central library of JMI, i.e., (3.96), whereas VBU scored (2.66), which is the lowest mean score of the respondents.

The item ‘Availability of computer terminals’ scored the highest for user groups of Central Reference Library of DU, i.e., (3.87), whereas VBU scored (2.05), which is the lowest mean score of the respondents.

The item ‘Library opening hours’ scored the highest for user groups of MA library of AMU, i.e., (4.15), whereas VBU scored (2.27) which is the lowest mean score of the respondents.

The item ‘Time spent at circulation desk’ scored the highest for user groups of Central Reference Library of DU, i.e., (4.00), whereas NEHU scored (2.62) which is the lowest mean score of the respondents.

It can easily be concluded that Central Reference Library of DU is more conscious and aware of service quality of Access, whereas NEHU is least concerned about the service quality of Access dimension.

**Major findings of Communications Dimension**

The overall mean score of perceptions of service quality of Communications, which were collected from users of seven central university libraries of India to measure the ability to keep clients informed in a language they understand and the ability to listen to them has been presented in table 6.11.5. The overall mean score of Communications dimension indicates that the Central Reference Library of DU got the highest, i.e., (3.64), followed by BHU (3.44), followed by AMU which the scored (3.37) and JMI got forth position with the score of (3.36). JNU and VBU scored (3.23) and (2.62) achieved the fifth and sixth position respectively whereas NEHU scored the lowest, i.e., (2.44) about the service quality dimension of Communications.

Further items wise analysis shows that ‘Awareness of library facilities and services’ scored the highest for user groups of BHU library, i.e., (4.10), whereas NEHU scored (2.50), which is the lowest mean score of the respondents.

The item ‘Provision of user education’ scored the highest for user groups of Central Library of JNU, i.e., (3.52), whereas NEHU scored (2.21) which is the lowest mean score of the respondents.
The item ‘Availability, clarity, easy in uses of OPAC User manual’ scored the highest for user groups of Central Reference Libraries of DU, i.e., (3.82) whereas NEHU scored (2.24) which is the lowest mean score of the respondents.

The item ‘Availability, clarity, easy in uses of CD-ROM user manual’ scored the highest for user groups of Central Reference Libraries of DU, i.e., (3.81), whereas VBU score (2.32), which is the lowest mean score of the respondents.

The item ‘Assuring the users that her/his Problem will be handled’ scored highest for user groups Central Reference Libraries of DU, i.e., (3.95), whereas NEHU score (2.59), which is the lowest mean score of the respondents.

It can be inferred from the table 6.11.5 that Central Reference Libraries of DU is more conscious and aware of service quality of Communications, whereas NEHU is least concerned about the service quality dimension of Communication.

Major findings of Tangibles Dimension

Table 6.11.6 indicates that the overall mean score of perceptions of service quality of Tangible, which were collected from users of seven respective central university libraries of India to measure the maintenance and physical facility.

It indicates that the overall mean score of Tangibles dimension. The Central Reference Library of DU has got the highest score, i.e., (3.94) followed by JNU (3.82), whereas AMU got third position with the score of (3.61) and JMI got forth position with (3.36) score. JNU and VBU scored (3.23) and (2.62) got the fifth and sixth position respectively whereas NEHU scored the lowest, i.e., (2.44) about the service quality dimension of Tangibles.

Further item wise analysis indicates that ‘Library furniture’ scored the highest for user groups of central library of JNU, i.e., (4.32), whereas NEHU score (2.54), which is the lowest mean score of the respondents.

The item ‘Temperature setting in library’ scored the highest for user groups of Central Reference libraries of DU, i.e., (3.95), whereas NEHU scored (2.21), which is the lowest mean score of the respondents.

The item ‘Proper illumination in the library’ scored the highest for user groups of JMI, i.e., (3.95), whereas NEHU score (2.39), which is the lowest mean score of the respondents.

The item ‘Maintenance of Silence in study hall’ scored the highest for user groups of Central Reference Libraries of DU, i.e., (4.00), whereas NEHU score (2.10) which is the lowest mean score of the respondents.
CONCLUSION

On the basis of findings and testing of hypothesis, there is a significant difference in the perceptions level of users of the seven central university libraries for the quality dimension of Reliability, Responsiveness, Assurance, Access, communication and Tangibles. The mean score of each dimension shows that the perception of users about the service quality dimensions in Central Reference Library of DU highest. It shows that research scholars and faculty member are very much satisfied with the services quality dimensions of TQM. On the other hand, the mean score indicates the perception of central library of NEHU users not satisfied with service quality dimensions.

From the table of mean standard charts It is concluded that the central reference library of DU is best in maintaining service quality of TQM standards and AMU, BHU, JMI and JNU Libraries also good in maintaining service quality of TQM standard, but the two other central university libraries, i.e., NEHU and VBU are not having TQM standards as far as the ‘Reliability’ dimension is concerned. NEHU and VBU libraries should try to improve the standard and services.

On the basis of aforesaid mentioned studies, conclusions were drawn and recommendations were made for providing quality based services in all libraries under study. Most of the central university libraries has good collection of all kinds of documents in book and non-book forms. They have almost the same automated operational infrastructure facilities in their libraries. TQM demands time and persistence. To succeed in an organisation there must be support at the very top and commitment at all levels. It is necessary that all groups of people in an organisation are included in the process. TQM implementation requires patience and tolerance as it is a time consuming process. Therefore, implementation of TQM is not a guarantee of the highest quality but it is a step in the right direction. TQM implements a philosophy of strong leadership participation, policy and strategy of LIS staff management, process and the education of all employees. TQM is proven to be profitable when implemented in a successful way, but there are also problems with the implementation. In the other word, there is a need for an increased focus on the area of organizational change related to TQM. Resistance to change and people’s attitudes are the primary hindrances to implementing TQM in university libraries. The other barriers are the problems of finding the money and time for training while maintaining current services in the university library. Successful TQM
implementation requires a thorough understanding of critical success factors, barriers in achieving these factors, and managerial tools and techniques to overcome these barriers. Research in developed countries listed top management commitment to TQM, training for TQM throughout the organization, customer focus and continuous improvement, and a focus on employee involvement and empowerment as the key determinants of successful TQM implementation in university library.

**ORGANIZATION OF THESIS**

This study consists of seven chapters such as introduction, **Total quality management**, University libraries under study, and Review of related literature, Research methodology, Data analysis and interpretation, Findings, Tenability of hypotheses, Conclusion and suggestions and Bibliography.

**Chapter 1** provides an introduction to the research including background, problem statement, research objectives, research questions, expected benefits, scope and limitation of research. It also summarises of the research methodology of present study.

**Chapter 2** introduces brief theoretical framework about concept of quality, quality control, statistical quality control and TQM. It highlights the objectives, principles, dimension, and tools of TQM. It discusses the contribution of TQM gurus, Deming, Juran, Crosby, Feigenbaum, and Ishikawa. It further examines the application and implementation of TQM in university libraries.

**Chapter 3** deals with the concepts of central university and brief outline the university library system in India. It also examines the profile of seven central university libraries such as history and background, collections, staff, users and present status etc

**Chapter 4** presents the literature review of the research concerning service quality concept and TQM.

**Chapter 5** presents the research strategies and detailed processes and the methods of conducting the questionnaire survey, structured interviews, and case study were described.

**Chapter 6** presented the detailed results of the data analyses and interpretation. It also includes hypotheses testing and discussion of results.

**Chapter 7** describes the findings, tenability of hypotheses, conclusion. It also indicates some suggestions regarding the service quality in academic library.