

# **Total Quality Management Application in Libraries: A Review of Literature**

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## **ABSTRACT**

*Total Quality Management is an effective management philosophy and method of continuous improvement that can play an integral role and help libraries to bring total quality to libraries' products and services. This study includes reviews of various research articles and papers on different aspects of the Total Quality Management (TQM) philosophy. The given review of literature is categorized and based on different themes of TQM. The review of literature highlighted the basic concepts of TQM, gives suggestions, and shared the experiences of libraries that are using TQM. The study also highlighted the major problems or barriers in the application of Total quality management. From the studies reviewed in this paper, it is concluded that this theory or philosophy can help libraries to bring quality to their products and services without any financial burden. For continuous improvement, this philosophy application just needs long-term commitment and support from leadership.*

**KEYWORDS:** Total Quality Management, Total Quality Management & Libraries, ICT, TQM Barriers.

## **1. INTRODUCTION**

The concept of quality is as old as the business organizations exist and it has a different meaning to different people. The word quality roots are from the Latin word “quails” which means “of what kind, of such a kind” The quality has a unique attribute, it is easy to recognize but difficult to define. Quality has become a buzzword in today’s competitive environment because maintaining & bringing quality to an organization’s products and services have the foremost goal of every organisation. In business, manufacturing, and other organizations quality is judged by the inferiority and superiority of something. Quality is always judged from different parameters like fitness for purpose, reliability, sustainability, performance, durability, conformance, maintainability, etc. No doubt, in the market number of tools and Standards like Six Sigma, ISO, European Foundation for Quality Management (EFQM) and Australian Business Excellence Framework (ABEF) are available, but their roots begin from TQM. If any organization works under the shadow of TQM, it can better use the available tools and standards.

Total Quality Management is defined as a philosophy and set of guiding principles that help in the foundation of the continuously improving organisation. Total Quality management is not an individual's initiative; it is a collective

effort toward the achievement of common goals. TQM is not a remedial procedure for better products; it is a march towards excellence and perfection. (National Assessment and Accreditation Council, 2003)

“Hallmarks of TQM include employee involvement and training; problem-solving teams; statistical methods; long-term goals and thinking; and recognition that the system (not employees) is responsible for most inefficiencies” (Jurow & Barnard, 1993).

Like other fields or sectors, Total quality management (TQM) principles are equally applicable in the library field. Today information is published in a different format, so it's not easy for users to buy or approach the range of information resources. Products and resources available in the market are not quality products. The library can take responsibility to provide genuine products and services. The library can follow TQM principles like customer focus, leadership, people involvement, continuous improvement, error-free process, etc. to make library products and services better.

### **2. OBJECTIVE OF STUDY**

- ✓ To review the studies on basic concepts of Quality Management and Total Quality Management in the context of libraries.
- ✓ To share the studies related to the application of Total Quality Management in libraries.
- ✓ To highlight the studies on Total Quality Management Application in libraries in Information Technology Environment.
- ✓ To review literature highlighting the Barriers to TQM Application in libraries.

### **3. METHODOLOGY**

The purpose of this study is to review the literature available on Quality Management & Total Quality Management. The review of literature is categorised under four themes and the study is based on secondary data, various sources such as research articles, journals, magazines, thesis, books, websites, etc. are accessed and consulted.

### **4. REVIEW OF LITERATURE**

#### **Basic Concepts of Quality Management and Total Quality Management in context to libraries**

There are numerous quality management standards and models available in the market. This section of the review of literature shared studies that describe basic concepts of Total Quality Management philosophy and suggests the ways that libraries can opt to bring quality to their products and services.

**Loney (1993)** in his research article focused on the training and skills requirement and implementation of a quality customer service plan to satisfy their users' needs and demands. The study gives stress on Total Quality Management training for employees of the library, so they can play a significant role in satisfying customers' needs and demands. To understand and appreciate the system dimensions of TQM, author Susan Barnard suggested “Total Quality Management: A Model for Research Libraries” which he presented at the 1992 ALA midwinter meeting. The model has four-phase and ten steps, every phase has a step that talks about customer issues like customer service, customer assessment, customer satisfaction, and customer focus tools & techniques, etc. The study gives stress compulsory in job TQM training.

**Rowley (1996)** explores some of the key issues associated with the effective implementation of total quality management in a library and information service environment. The author identified six elements that are keys to the successful implementation of TQM such as quality as customer-defined; internal & external customers; employee involvement; error-free processes; performance measurement; and continuous improvement. Except for the above elements author highlights some other issues that need to be addressed on the road to the successful execution of TQM. These include: defining quality; clarifying customers; establishing quality as a strategic issue; organizational structure; organizational culture; and human resource management. For effective implementation of TQM in the library and information service, it is very important to establish some basic definitions by answering questions such as 'what is quality?' 'who are our customers?' 'How can quality be measured? Strategic issue & top management commitment is very important for the successful implementation of TQM.

**Raina (1999)** in his book shared his knowledge and experience gained over the last 14 years in establishing, developing, and modernizing the library system in the Indian Institute of Management, Lucknow. The book guides the library professionals, on how they can provide the right information to the right user at the right time at the right cost. The book appeals that the professionals in the information sector have to give their best and to make sure that the resources they acquire, the facilities they provide, and the services they render should be user-centric. The author of the book outline basic principles, concepts, tools, and techniques for acquiring quality learning resources, processing the same by using time-tested standards procedures for the ease and convenience of the users, retrieving and disseminating the same to meet the requirements of the users. The author also discussed the instruments & techniques like acquisition policy, organisation of reading material, staff manual, feedback mechanism, TQM, and marketing orientation in library and information centers. The book also discussed the Role Analysis Technique (RAT) which helps employees to get a better understanding of their role in an organization.

**Hsieh, Chang, and Lu (2000)** in their study reviewed the quality management tools and techniques developed over the last five decades for the quality management of libraries' products and services. The study categorized those tools and techniques into three broad approaches which are administrative management, technical services, and public services. The main purpose of the above approaches was to assess and improve the service quality of libraries. The study further discussed the key quality management approaches like quality by inspection, quality by process control, and quality by design to maintain quality in library services.

**Johannsen (2000)** discussed how information becomes knowledge, highlight the basic steps of knowledge creation (Create, Accumulate, Share, and Exploit) in the Information Technology age, and the basic difference between Information Management and Knowledge Management. The study mainly focused on the question, of how knowledge and information can be managed with the help of TQM. The study also deals with knowing the answers to what extent the problem-solving tools of Total Quality Management (TQM) help and influence Knowledge Management in KM and IM centers. The study also explores the concept of Quality Control (QC), basic QC tools, and their influence on KM. The study further reveals the application and use of Quality Control in the Creation, Accumulation, Share, and Exploitation of knowledge management processing play an integral role. The integral purpose of TQM & QC tools is to improve the products and services of libraries and information centers.

**Dash (2008)** discussed the basic concepts of TQM and its essence in libraries. The researcher explains Demirs' 14 steps & Sirkin's principles that managers in any type of organisation can take & follow to implement the Total Quality Management philosophy to enhance/ improve library services. The study also answers the question "Why library should adopt TQM". Libraries are the most ancient, social, and cultural institutions in existence and with their existence, they have a recorded body of knowledge. To maintain the body of knowledge, they have to perform many functions that are possible only with effective management. TQM is an effective management philosophy and system of continuous improvement that can play an integral role. The study highlights the Key components of TQM, like employee involvement and training, problem-solving teams, statistical methods, long-term goals, and thinking and recognition that the system, not people produces inefficiencies. The study represents TQM as a systematic process that focuses on understanding customer needs and improving customer services.

**Albu, Cristian, and Pistol (2012)** argue that to bring quality to library services, the librarian should look for new methods of improving the quality. Libraries can be able to provide quality services only if the entire staff of all the departments knows quality tools, models, and principles. The service provided by the university library should take into consideration the interests of the users, the interests of the society, the university community, and the providers. The total quality (TQ) concept ensures smooth functioning of the university library and gives stress to user satisfaction and make sure user should be consulted before adding new products and services to the library. The study also highlights the WWWHW method (What, Who, Where, When, How) and SWOT analysis method of TQM that can help libraries to better know their strength, weakness, opportunity, and threats and What, Who, Where, When, How and What for questions.

**Reddy (2012)** in the research paper entitled "Total quality management and knowledge management integrations in library and information centers: A study" expressed the concept of Knowledge Management and Total Quality Management. The study compares both the concepts and how these concepts are applicable in library settings. The study describes the concept, source, environment, and characteristics of Knowledge Management. The study further discusses the Total Quality Management philosophy, definition, characteristics, history, and how it can use in libraries. the study discusses the commonality between TQM and KM are similar aims; areas receiving particular attention; the position of the organization in regards to management; as well as issues concerning the financial benefit of implementing these systems. The study proposed a TQM and KM integration model.

**Singh (2013)** in the research paper entitled "Total quality management to library and information services in Indian open universities" discusses the effectiveness, comprehensiveness, and structured approach of TQM to revamp the quality of products and services of libraries. The objectives of the study are to understand the concepts of Quality, Quality Control, Quality Assurance, and TQM. The study further discusses the process of TQM technique, tools, and standards like Statistical Process control, ISO 9000 series, Pareto Analysis, Matrix Diagram, Histograms, Tree Decision Diagram, Critical Path Analysis, Fishbone or Ishikawa Diagram. The study suggests some points that should be followed like Quality Assurance should be an integral part of university projects; standards/norms should be developed for assessing the Quality of products and services; new methodologies and mechanisms should be evolved; funds should be allocated for improvement of library products and services; training of library staff should

be an integral part of TQM program. The study concludes that if the library wants to create a positive image they should adopt TQM in their work.

**Halkar and K (2014)** discuss the concept of TQM in their paper named " TQM in Libraries: Challenges to Stimulate Change". The paper describes TQM, the Objectives of TQM, the TQM system in the library, how libraries are improving services with TQM, application of TQM in libraries. Every institution/company whether it is government or nongovernment are focusing quality of products and services. Libraries are serving institutions that have a great need to maintain their products and services quality. In today's competitive environment libraries have to change their role, they have to maintain the standard according to the requirement of the user of libraries. The only way to maintain and improve the quality of products and services in libraries is through TQM. TQM is a managerial approach, which every organisation keeps in mind while running their business and works for the continued upliftment of the organisation's products and services. The paper mainly focuses on the concept of TQM and its use in libraries for user satisfaction and the cost-effectiveness of products and services. In the end, the study concludes that TQM is a need of the hour and libraries have to adopt it if they want to intermediate between Product/service and users of libraries.

#### **Application of Total Quality Management in Libraries**

Application of Total Quality Management required long-term commitment or patience. In today's competitive world every organizations whether profitable or non-profitable is facing a financial crunch. TQM philosophy can help an organization overcome every type of problem. Under this theme review of the literature shows how libraries apply TQM libraries and how they get benefited.

**Raina and Dayal (1999)** in their study share the IIML (Indian Institute of Management Lucknow) library experience, and how the library develops its collection from 1989 to 1999. The study addresses some basic issues related to the acquisition of reading material in the library like selection should have to be qualitative and not quantitative, March and March like pressure should not be there, vendor patronage should be avoided, principle agenda of selection should be users requests. The study also describes the collection development policy and budget allocation policy both framed under the postgraduate program (PGP). The study also reveals that IIML collection is developed by user participation and active collection.

The IIML library collection is developed only from library users' points of view and other factors. Expert staff suggestion is ignored for the collection development of the IIML library. Subject expert advice and suggestion should be taken to develop the IIML collection.

**Wang (2006)** expressed his view in a research paper entitled "From "user" to "customer": TQM in academic libraries?" to provide a retrospective overview of Total Quality Management from the perspective of library services. The researcher did a comparative analysis of TQM in the context of the library. The study mainly focused on the five themes (Customer focus, Systematic improvement of operation, Developing human resources, long-term thinking, and Customer to quality) that are commonly advanced in TQM. The study expresses how the term "User" changed and was treated as a "Customer". The study finds out from the theoretical principles and experimental implementation that the process of implementing TQM in libraries required a conceptual change in library

professionals and a cultural transformation in the organizational operations. The study further explores that long-term thinking, commitment, teamwork, constant support of the top management, and strong leadership are required for better implementation of TQM. The study expresses that customer problems of libraries have more in common with customer problems of other businesses, so TQM philosophy; principles are equally applicable in any type of library. The study concludes that it will be too early to predict that TQM is a perfect model for library management. TQM model can be perfect, but the approach should be right then it will give perfect results.

**Zhan and Zhang (2006)** discuss the concept of Total Quality Management and throws light on the opportunity of TQM application in libraries. In the beginning, it describes the concepts of Quality and TQM and how it grows from quality management to Total Quality Management. The paper also introduces Quality gurus who coined the term TQM and showed the seeds of Quality and established, it as TQM philosophy. The author shared the experience of Hainan University Library, and how the university implemented TQM in July 2004 and passed the authentication of ISO 9000: 2000 in 2005. The study demonstrates how a silent, average library has made a difference and become an international arena. The study points out that with the help of the TQM, libraries can take remedial action to solve the problems.

**Singh, J. (2010)** designed the study to investigate the problems and explore the existing level of TQM in the university libraries of Delhi University, Jawaharlal Nehru University, and Jamia Millia Islamia University, Delhi. The study is conducted with the objectives to check the total Quality Management and its impact on university education, application on library work culture, to examine the application of TQM with particular reference to University Libraries, the practical role of information management i.e. acquisition, organization, and dissemination of knowledge. The data analysis results show that there is a difference in opinion on, the rating of TQM, Culture, and Quality of Service, TQM and Cultural Dimensions, the existing level of Cultural dimension in University Libraries, and Quality in University Libraries from the User's viewpoint, etc. Among the three universities of Delhi, Jamia Millia Islamia university library is in first place in the application of TQM and DU and Jawaharlal Nehru University respectively in second and third place.

**Sivankalai and Yadav (2012)** analyse and evaluate TQM application in academic libraries. The main objectives of the study are to check the level of awareness of TQM among library professionals and to draw suggestions for the effective implementation of TQM. The study covered library professionals working in academic libraries. The structured questionnaire was used to collect data from the different college librarians of Engineering, Arts, and Science colleges. The study depicts that professionals working in the libraries are aware of TQM, but 73.3% of professionals didn't attend any conferences, seminars, workshops, or programs on TQM. The study recommends that librarians should be trained and they should be sent to attend training, seminar, and workshop.

**Senthilvelan and Balasubramani (2013)** in their study explore the application of TQM in library services in the Engineering University Library at Coimbatore. The study mainly focused on exploring the application of TQM in the library's circulation section. The study raises the questions/points (Membership Service, OPAC, Issue/Return of Books Service, Interlibrary Loan through DELNET, Orientation of the Library Users, Shelving of Books, Response to Query) that can help in the improvement of Circulation service of the library. The data analysis depicts that most of the students rate the circulation service of a library as Excellent, Very Good, Good, and very few rate Average

and Poor. The study finds that TQM implementation in the Engineering University Libraries services gave good results and it will also transform the traditional image of the library.

**Ram (2018)** in the survey study explores the TQM application in select seven university libraries in India namely Aligarh Muslim University, Indira Gandhi National Open University, Delhi University, Banaras Hindu University, Jawahar Lal Nehru University, Jamia Milia Islamia University, and Allahabad University. The key objectives of the study are to check the viewpoint of library staff about the application of Total Quality Management & its strategies in the university library and to know the library users' view for evaluation of the application of Total Quality Management in university libraries. The data analysis results of the librarian's questionnaire depict that all the university libraries are very much positive for TQM implementation in their library, and a few universities IGNOU, DU, Jawahar Lal Nehru University, JNU, and Allahabad University tried to implement TQM, but only JNU employed staff to implement TQM in the library. Users' data analysis depicts that 100% of users voted, and TQM should be applied in the library. The library users are not satisfied with the sources and services of the library. The study suggested that to satisfy users and to know their problems library should conduct a customer survey and a suggestion box should be placed, library staff should be trained.

**Asant and Ngulub (2020)** in their study investigated the critical success factors for total quality management implementation and implications for sustainable academic libraries of technical university libraries in Ghana and Africa in general in Ghana. The study tested six variables (i.e. top management commitment, employee innovation employee training, organisational culture, teamwork and effective communication, and quality performance) and left two-variable namely strategic planning and human resource management of Critical Success Factor. This study established that out of the eight variables tested, six of them indicated an important positive relationship with total quality management implementation.

#### **Total Quality Management Application in libraries in Information Technology Environment**

In this information technology environment users' needs are changing and resources are published in different electronic formats. Due to easy publishing, resources are available in huge amounts, so the library has a responsibility to acquire only those e-resources that have quality and are published by the well-established or authorized agency of the field. Under this review of literature title Total Quality Management philosophy application is checked by surveying the users' satisfaction with e-resources.

**Ball (2002)** argued that the quality of the products and services must be permanently optimized by the library to customers' needs and requirements in this information explosion era. Quality must be defined from the customer's viewpoint since there cannot be any standardized quality criteria. The study discussed the selected quality criteria for library services such as topicality, precision and relevance, reliability, completeness and speed, and distribution flexibility based on selected examples of modern electronic services. The said criteria for quality management of library services in the digital era can be very helpful to overcome any dramatic changes in technology, financial crises and enhance customer satisfaction and gain new customers, demonstrate efficiency.

**Ambati, Sankar, Pratha, and Jawahar (2005)** carried out a study on Quality management in digital libraries and discuss the important quality problems faced in phases of digital content development and web hosting on a large scale. The study shares the experience of the Digital Library of India Project that's main aim is to produce quality content and preserve the rare and age-old collection of books related to India History, Geography, Culture, Agriculture, Medical Science, Technologies, Philosophy, epics among others. The study discusses the issues of quality in digital libraries like the nature of quality issues like manual error and machine error, quality issues, and challenges like incomplete and incorrect metadata, book duplication, image quality, text, and HTML quality. Further, the researcher discusses the Quality Management Framework at the RMSC Hyderabad. The study gave the digitization process before implementing QMF. The steps are - the pre-scanning Process, Scanning Process, Post Scanning Process, and Web Enabling Process. The Quality Management Framework for the Digital Libraries consists of the following components: Quality Control, Quality Assurance, and Quality Improvement.

**Premachandu (2005)** researched the Influence of Total Quality Management on Information Technology Environment in the University Libraries in Andhra Pradesh, India. The key objectives of the research are to measure all the functions of the university libraries, identify the availability of physical facilities, and the quality of staff in terms of recruitment, standards, and specifications adopted in the library, study the quality improvement initiatives, to measure the human relationships within the library system and to measure the 'user satisfaction in all aspects of services in the university libraries. The study covers 15 university libraries of Andhra Pradesh that are successfully functioning with their set goals and objectives. The data analysis and major findings of the study show that Central Universities are in better condition and one step ahead in every aspect as compared to state universities, the major reason is funding. All university libraries have a positive attitude regarding the implementation of the quality improvement program. Library professional staff viewpoint about the quality of physical facilities, motivation, staff morale, recruitment policy, academic status, in-service training, incentive, etc are satisfactory but some of the professionals are unhappy. On the other hand in users' perception of the functioning of the university library is quite satisfactory. From the users' point of view, the central University and professional university libraries have automation in the library and good electronic information sources & services as compared to other categories of university libraries. Overall users of all the university libraries are quite happy with the physical facilities but dissatisfied with the facilities such as cafeteria, transport, rest-room, etc.

### **Barriers to TQM Application**

There may be many barriers to the application of Total Quality Management in libraries. This section of the review of literature lights on some of the common barriers from the experience of libraries that applied TQM. The studies reviewed in this section also suggest solutions get rid of the barriers.

**Jurow and Barnard (1993)** examine the planning and implementation issues of TQM in libraries. The study first discussed what TQM is, and where it comes from, and highlights the potential benefits and barriers to the adoption and implementation of TQM in libraries. On the benefits aspects of TQM, libraries should break down interdepartmental barriers to solving problems; the internal customer concept can be used for the people inside the organization who receive the output of the organization's processes whether it is goods, or information, or services. Continuous improvement is the first and foremost approach of TQM the study shares the motto "Continue to

improve it even if it isn't broken". The study highlights the barriers that affect TQM application and give solution on how to overcome these barriers. In this study, the author shared library experience who has begun to think about using or who is already using TQM in a library setting.

**Moghaddam & Moballeghi (2008)** present an overview of Total Quality Management in the library and information science sector. The study describes various principles and elements of total quality management that were used in industries to fulfill their customers' demands. But these principles are equally applicable in service sectors like the library. Numerous studies are reviewed by the author and describe the experiences of libraries that adopted total quality management methods. In the study, the author also explained the barriers to TQM implementation in libraries like rigid organization culture, authoritarian management, cultural barrier, etc. The authors suggested that to succeed in maintaining quality in an organisation there must be support at the very top and commitment at all levels. Subordinates at all levels must be part of the process. The paper also suggested that there is a need for an increased focus on the area of organisational change related to TQM. It is also suggested that for successful TQM implementation, there is a requirement of a thorough understanding of critical success factors, managerial tools, and techniques to overcome every circumstance.

**Suleman (2015)** explores the barriers and challenges faced by public secondary schools in the implementation of total quality management (TQM) in the Kohat District. The study discovers that ineffective leadership; lack of funding and resources; insubordination of the workforce; lack of management commitment; poor and ineffective planning; political interference; and poor teachers' status and morale are common barriers and challenges faced by public secondary schools in implementing TQM. The study strongly recommended that all the institutions should be bound by the competent authorities to adopt the philosophy of TQM, a special professional in-service training program regarding TQM implementation; secondary school heads should be equipped with the modern techniques of TQM implementation. Besides, sufficient funding and infrastructure facilities should be provided to each school on a priority basis.

## **RESULTS**

The review of literature is categorised into four parts. The first part of the review of literature is "**Basic concepts of quality management and total quality management in context to libraries**". The studies reviewed in this part highlight quality management, quality control, quality assurance, Total Quality Management, and their history, Key elements, approaches, tools, techniques, research Models, etc.

The second part of the review of the literature "**Application of Total Quality Management in Libraries**" lights on the experiences' of libraries that applied and adopted the Total Quality Management philosophy. The review of the literature shows the opinion of library professionals and library users about the application of TQM. The review of literature also shows the awareness of TQM, tools, and techniques among library professionals. The studies reviewed in this paper also suggested how libraries can better implement TQM.

The third part "**Total Quality Management Application in libraries in Information Technology Environment**" shared the experiences of the libraries that applied TQM in ICT or digital settings. The review of the literature suggested that libraries should be a digitization process and quality criteria to maintain the quality of products and services.

The fourth part of the review of the literature “**Barriers in TQM Application**” highlights the hurdles & barriers different libraries faced in the application of Total Quality Management. The studies reviewed in this section suggest solutions to get rid of the barriers.

### **CONCLUSION**

From the above review of literature, it has become clear that the Total quality management (TQM) theory can help libraries to maintain the overall quality of their products and services. The literature review also proved that if businesses and industries can apply TQM or can take advantage of this, why libraries like other service sectors should not take advantage of this? The literature review depicts that those libraries that use TQM found that they perform better under the guidance of this theory. In this information technology environment, most of the products and services are provided in electronic format and mode. TQM philosophy can help libraries to check products and service quality. In the implementation of TQM, there are so many barriers like its technical terminology, rigid organisation culture, authoritarian management; cultural barrier, etc. The above barriers can be resolved by providing proper training to concerned staff of the library.

### **REFERENCES**

- [1] Albu, C., Cristian, A. & Pistol, N. (2012). Aspects regarding the application of the quality principles in the university library. *Library Management*, 33 (3), 151 - 158 Permanent link to this document: <http://dx.doi.org/10.1108/01435121211217081>
- [2] Ambati, V., Sankar, S., Pratha, L. and Jawahar, C. V. (2005). Quality Management in Digital Libraries. ICSE-2005; 1-8
- [3] Asante, E and Ngulube, P. (2020). Critical success factors for total quality management implementation and implications for sustainable academic libraries. *Library Management*, 41(6/7), 543–563 <https://doi.org/10.1108/LM-02-2020-0017>
- [4] Ball, R. (2000). Quality management of library services in the digital era. 157-163
- [5] Dash, J. (2008) Total Quality Management in Libraries - A Perspective Approach. *6th International CALIBER* (pp. 414-419). Allahabad, Allahabad: INFLIBNET.
- [6] Halkar, G. & Govindrajulu (2014). TQM in Libraries: Challenges To Stimulate Change. *Asian Journal of Multidisciplinary Studies*, 2(1) 150-154.
- [7] Hsieh, Pao-Nuan, Chang, Pao-Long & Lu, Kuen-Horng (2000). Quality Management Approaches in Libraries and Information Services. *Libri*, 50(0), 191-201
- [8] Johannsen, C. G. (2000). Total quality management in a knowledge management perspective. *Journal of Documentation*, 53(1), 42-54. Retrieved from <http://dx.doi.org/10.1108/EUM0000000007108>
- [9] Jurow, S. & Barnard, S. B. (1993). Introduction. *Journal of Library Administration*, 18(1/2), 1-13, [http://dx.doi.org/10.1300/J111v18n01\\_01](http://dx.doi.org/10.1300/J111v18n01_01)
- [10] Loney, T. (1993) TQM Training:, *Journal of Library Administration*, 18:1-2, 85-95, DOI: 10.1300/J111v18n01\_07
- [11] Moghaddam, G. G., & Moballeghi, M. (2008). Total quality management in library and information sectors. *The Electronic Library*, 26 (6), 912-922. DOI 10.1108/02640470810921664

- [12] National Assessment and Accreditation Council & Office of the Commissioner at Department of Collegiate Education (2003). Total Quality Management for Tertiary Education. Bangalore: Retrieved from <http://www.naac.gov.in/docs/Total%20Quality%20Management%20for%20Tertiary%20Education.pdf>
- [13] Premachandu, P. (2005). *The Influence of Total Quality Management in Information Technology Environment in the University Libraries in Andhra Pradesh, India: A Case Study* (Doctoral dissertation, Sri Krishnadevaraya University, Anantapur, Andhra Pradesh). Retrieved from <http://hdl.handle.net/10603/85027>
- [14] Raina, R. (1999). *TQM in Library and Information Services*. New Delhi: Infuse, Inc.
- [15] Raina, R. R. & Dayal, K. (1999). TQM in library acquisition: an approach at IIML. *Annals Of Library Science and Documentation*, 46(4), 127-132
- [16] Ram, M (2018). Application of Total Quality Management in University Libraries. *International Journal of Research in Humanities and Social Studies*, 5(10), 25-31
- [17] Reddy, T. R. (2012). Total quality management and knowledge management integrations in library and information centers: a study. *Journal of Research in International Business and Management*, 2(11) 292-298
- [18] Rowley, R. (1996). Implementing TQM for library services, *Aslib Proceedings*, 48(1) 17- 21 Permanent link to this document: <http://dx.doi.org/10.1108/eb051405>
- [19] Senthilvelan & Balasubramani (2013). Application of Total Quality Management in Library Services in Engineering University Library at Coimbatore. *Asian Journal of Information Science and Technology*, 3(1), 5-7
- [20] Singh, J (2010). *Application of Total Quality Management in University Libraries of University of Delhi, Jawaharlal Nehru University Jamia Millia Islamia: A Survey* (Doctoral dissertation, Mangalayatan University). Retrieved from <http://hdl.handle.net/10603/6009>
- [21] Singh, K. (2013). Total Quality Management to Library and Information Services in Indian Open Universities. *Journal of Business Management & Social Sciences Research*, 2(6), 24-26. Retrieved from <http://www.borjournals.com/a/index.php/jbmssr/article/view/233/pdf>
- [22] Sivankalai S., & Yadav, T. K. (2012). Total Quality Management in Academic Libraries: A Study. *International Journal of Educational Research and Technology*, 31(1), 66-72. Retrieved from [http://www.soeagra.com/ijert/ijert\\_march2012/11.pdf](http://www.soeagra.com/ijert/ijert_march2012/11.pdf)
- [23] Suleman, Q. & Gul, R. (2015). Challenges to Successful Total Quality Management Implementation in Public Secondary Schools. *Journal of Education and Practice*, 6(15), 123-134
- [24] Wang, H. (2006). From “user” to “customer”: TQM in academic libraries?. *Library Management*, 27 (9) 606-620
- [25] Zhan, C. & Zhang, H. (2006). How does a dandelion seed from overseas root and thrive. *Library Management*, 27(6/7), 344–353 <http://dx.doi.org/10.1108/01435120610702332>
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