



IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT IN THE UNIVERSITY LIBRARIES OF ASSAM: A STUDY CENTERED ON LIBRARY CLASSIFICATION AND CATALOGUING

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Abstract: Purpose: The purpose of this study is to identify ways by which classification and cataloguing services in the university libraries can be made more effective through the application of TQM techniques.

Methodology: A total of five renowned universities of Assam are purposely sampled. The study assesses the current culture for quality management systems and also focuses on the cataloguing and classification skills of the staff. The user satisfaction level is also studied and the challenges they face in retrieving information. It investigates the idea of how timeliness is maintained, what schemes and rules are followed by those libraries and through what mode based on the principles of TQM.

Findings: Study revealed that shortage of professional staff acts as the main barrier to process TQM. Recommendations are made to prioritize the needs of the users by providing excellent training to the staff.

Value: The study has proven the users' requirements and the necessary actions that have to be implied to improve the efficiency of the staff. Moreover, it also focused on the proper utilization of time.

Index Terms - TQM; University Libraries; Library Cataloguing; Library Classification

I. INTRODUCTION

The implementation of Total quality Management (TQM) in university libraries, with a focus on library classification and cataloguing, aims to enhance the efficiency and effectiveness of these critical functions, to better meet the needs of library users. TQM principles emphasize customer focus, continuous improvement, and the involvement of all staff in quality enhancement.

In this context, the implementation of TQM involves standardizing cataloguing and classification practices, training staff on TQM principles and best practices, and establishing quality control measures to ensure the accuracy and consistency of metadata creation and organization of library materials. Additionally, leveraging technology and collaboration among library professionals can further streamline and improve cataloguing and classification process.

The focus on TQM in university libraries aims to enhance the overall quality of cataloguing and classification services, leading to improved user satisfaction, better access to resources, and the promotion of a culture of ongoing quality improvement within the library.

By implementing TQM principles, university libraries can proactively address challenges and continually improve their cataloguing and classification practices to better support the academic and research needs of their communities.

1.1 Total Quality Management

Total quality management (TQM) was started in Japan in 1954 by William Deming, a management consultant. It is a management approach which focuses on long-term success through customer satisfaction and seeks to improve the quality and efficiency of processes within an organization

It is a way of managing to improve the effectiveness, efficiency, flexibility and competitiveness of an organization as a whole and it involves whole organization getting organized and committed to quality in each department, each activity and each person at each level.

Definition of TQM

According to the American Society for Quality: A core definition of total quality management (TQM) describes a management approach to long-term success through customer satisfaction. In a TQM effort, all members of an organization participate in improving processes, products, services, and the culture in which they work.

According to W. Edwards Deming, Joseph Juran and Philip B: Total quality management (TQM) is an approach to serving customers that involves totally reengineering processes and systems to improve products and services in the way customers expect while considering the needs of employees and relationships with suppliers.

Principles of TQM

There are eight principles of TQM

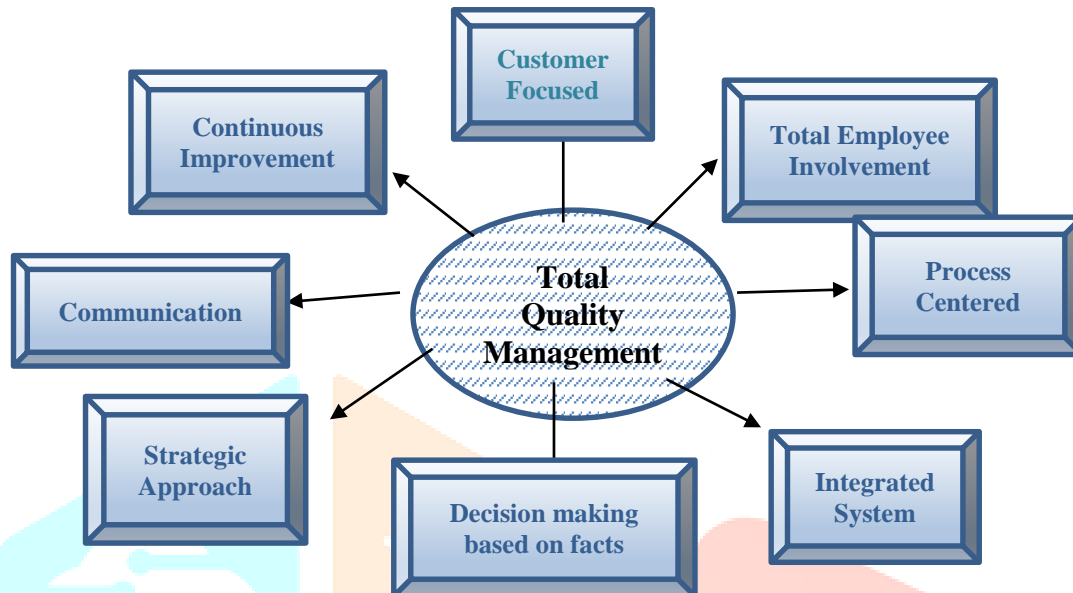


Figure1: TQM principles

Stages of TQM

The stages of TQM are:

Planning: Identification of issues associated with any activity and find out the root cause to eradicate it.

Doing: Developing strategies to resolve any problem and also makes an assessment of the effectiveness of the strategies.

Checking: The performance of the employees are evaluated on the basis of comparison made between the old and new data for supporting the efficiency in the entire process

Acting: The Documentation of the solution are done and are made ready to be processed and thus gets ready to face other challenges

1.2 Application of Library Classification and Library Cataloguing to justify TQM

The cataloguing and classification of library resources are essential processes that help to organize and provide access to the collection. Here's a closer look at each process:

Classification: Classification is the process of assigning a systematic arrangement or call number to each item in the library's collection based on its subject matter. Common classification schemes include the Dewey Decimal Classification (DDC) and the Library of Congress Classification (LCC), etc. By assigning a unique call number to each item, materials on similar topics are grouped together, making it easier for library users to locate relevant resources.

Cataloguing: Cataloguing involves creating bibliographic records for each item in the library's collection. These records typically include details such as title, author, publication information, subject headings, and other descriptive information. Cataloguers follow international standards, such as Anglo-American Cataloguing Rules (AACR) or Resource Description and Access (RDA), to ensure consistency and accuracy in describing library materials. The records are then entered into the library's catalog, which can be accessed by patrons to locate specific items within the collection.

Together, cataloguing and classification enable libraries to effectively organize their collections and make resources easily accessible to patrons. These processes provide a foundation for efficient information retrieval and support the library's mission to provide knowledge and information to its users.

It's important for library staff to be trained in cataloguing and classification practices to ensure the accuracy and consistency of the catalog records and call numbers. Additionally, advancements in technology have led to the automation of these processes in many libraries, further improving the efficiency and accessibility of library resources.

When applied to cataloguing and classification in a library, TQM principles can have several potential impacts which is justifiable with the following points.

Standardization: TQM will ensure that consistent and standardized practices are followed in cataloguing and classification processes which will ultimately help in maintaining accuracy and reliability in the organization of library materials.

Continuous Improvement: TQM encourages the ongoing identification and rectification of errors or inefficiencies in cataloguing and classification. This helps in ensuring that the library's organizational systems are constantly refined and optimized.

User Focus: TQM put more emphasizes on meeting customer needs. In the context of library services, this would involve ensuring that the cataloguing and classification systems are designed to meet the needs of library users, making it easier for them to access and find materials.

Performance Measurement: TQM involves using data and metrics to measure performance. In library cataloguing and classification, TQM principles can be used to measure the accuracy and efficiency of these processes leading to adjustments and improvements as necessary.

Employee Involvement: TQM promotes the involvement of all employees in the organization's improvement efforts. Staff responsibility for cataloguing and classification, can be encouraged to participate in decision-making, problem solving and innovation to improve these processes.

1. Objectives of the Study

- i. To examine the application of TQM in the University Libraries with special reference to Library Classification and cataloguing
- ii. To know about the involvement of library staff in Library Classification and Cataloguing
- iii. To examine the satisfaction of users with regard to the processing services provided by the University libraries.
- iv. To what extent timeliness is managed in cataloguing and classifying resources in the libraries.

2. Research Limitations

Libraries are ideal places to implement TQM. They are service organizations dedicated to their customers. The Library Classification and Library cataloguing of the Technical processing Section plays a key role in the functioning of the library. So based on certain facts some of the problems have been identified, which are:

There exist a few research on application of TQM Library Classification and Library Cataloguing, hence supporting it with evidence from related literature on the topic was difficult. Due to time constraints, it was not possible to include all the universities of Assam. Only five universities namely Assam Agriculture University, Assam University, Dibrugarh University, Gauhati University and Tezpur University were selected by convenience and their high grades. Observations are made on the basis of certain parameters of TQM, such as Employee Participation and Involvement, Management, Customer Focus. As this study mainly focuses on Library Classification and cataloguing so the assessment of the current culture is made to analyze what plan should be made and what actions should be put forward to provide a defect free environment owing to the factor of TQM.

3. Review of Literature

While reviewing literature, it has been found that there exist only a few number of studies in TQM in Libraries. Some of them have been selected to present here which are pertinent to the area under study. These literatures will try to develop new ideas and understanding of the TQM concept and how Library Classification and Cataloguing can effectively contribute to the idea of attaining TQM. Few such literatures are mentioned as follows:

Donna, Thomason, & Elizabeth. (1993), in their paper entitled, "Turning the library Upside Down: Reorganization using Total Quality Management Principles", emphasized on teamwork based on staff strengths. They recognized that, the concept and techniques of TQM can guide librarians in examining processes and using human resources to the fullest.

A&A.(2014), in their Paper entitled, "Total quality management in college library", TQM is a way of managing to improve the effectiveness, efficiency, flexibility and competitiveness of an organization as a whole and it involves whole organization getting organized and committed to quality in each department, each activity and each person at each level. For the success of TQM effecting training, effective implementation and executive involvement is essential.

Chitra & Sanjiv (2015), in their research paper entitled, "Analyzing quality management move towards quality service in libraries", pointed out that, Libraries are perfect consigns to implement TQM because these are service oriented organizations devoted to their users. For successful implementing of TQM in libraries, it is required to make the change in attitude of the library professionals and continuous improvement is essential for its effective execution. It helps in maintaining effective communication between users and staff.

Suzhen & Margaret (2019) in their article "Teaching a Cataloging/Metadata Course in a Changing World: Experience and Reflection", mentioned that, that knowledge and skills related to cataloging, classification, metadata management, and information organization are among the core skills of librarianship. LIS educators for information organization should watch the latest trends and developments.

Pritchard, Sarah M.(1994) in the research paper entitled "Customer-Service Training in Academic Libraries", states that libraries are still searching for information about TQM. Academic libraries seem to be the first libraries to try TQM. The author emphasized in finding out how other libraries are implementing TQM in their workplaces

F. O., A. S, O. B. & B. O. (2023), in their research paper “Cataloguing and Classification As Predictors Of Library Use Among The Users Of Libraries Of Public Universities In Kwara State”, stated that Cataloguing and Classification are integral components of knowledge organization in libraries and information centers. Through the cataloguing and classification, images of libraries have been redeemed and it has helped in increasing the level of patronage of libraries because it boosts users' confidence in the prompt identification, location and retrieval of information resources on the library shelves.

Besides all other surveys, some websites, and other periodicals are studied to fulfill all the objectives and the area of research.

5. Research Method

The research method adopted in this research paper is survey research method. Data are collected and inferences are drawn based on complete observation of the behavioural traits of the librarians, the other staff members and the users. The method enables the qualitative analysis of the library personal towards their services. Each and every unit of the data is intensively studied to give a clear view on the skills of the library professionals. Document analysis are also done on a great deal. Apart from that, survey data was collected through interviews and largely through questionnaires that were emailed to the respondents in the various university libraries.

6. Result Analysis

The collected data were analyzed by using percentage approach and are presented through tables and figures for drawing meaningful inferences.

1. Basic Information about Universities

Table No 1: Demographic Details

SINo	Name of the Universities	Library Name	Year	Library Website	Address	Library Working Days
1	Assam Agricultural university(AAU)	BMPugh Library	1969	http://www.aau.ac.in	Jorhat	Mon-Sat- 8am to 8pm Sunday -9:00 am to 1:00pm
2	Assam University (AU)	Rabindra Library	1994	https://aus.ac.in	Silchar	Mon-Sat- 8:00am to 8:00pm
3	Dibrugarh University	Lakshminath Bezbarua Library	1965	www.dibru.ac.in	Dibrugarh	Mon-Sat- 9:30 am- to 9:30 pm Sunday- 11:00 am to 9:30 pm
4	Gauhati University (GU)	KK Handique Library	1948	www.gauhati.ac.in/library-k-handiqui-library	Gopinath Bordoloi Nagar	Everyday open
5	Tezpur University(TU)	Central Library	1994	http://www.tezu.ernet.in/Library/index.php	Napaam	Everyday open

Table No 1 provides with the demographic details of the various universities of Assam that have been taken for the study. Here we can find the website, address details and opening hours of the library.

2. Library Technical Processing activities

Table No 2: Library Processing Activities

SINo	Processing Activities	Name of the University					N=5	%
		AAU	AU	DU	GU	TU		
1	Classification							
	DDC	√	√	√	√	√	5	100
	Colon	-	-	-	-	-	-	-
	UDC	-	-	-	-	-	-	-
	Web Dewey	-	√	√	-	-	2	40
	Other	-	-	-	-	-	-	-
2	Cataloguing							
	AACRI	-	-	-	-	-	-	-
	AACR II	√	-	√	√	-	3	60
	MARC 21 format for bibliographic record	-	√	√		√	3	60
	Union Catalogue	-	-	-	-	-	-	-
	Opac/ Web Opac	√		√	√	√	4	80
	Maintenance of online Catalogue	√	√	√	√	√	5	100

As mentioned in the table above, it is quite clear that almost all the five universities perform the technical processing activities, and DDC is taken as the standard classification scheme. Assam University and Dibrugarh University follow Web Dewey also. Dibrugarh University follows both the manual AACR II rules of cataloguing and the MARC 21 format for bibliographic record. Meanwhile Assam Agriculture University and Gauhati University follows the AACRII rules at present. The Online Catalogue is maintained by all the universities from the list i.e. 100%

3. Time Management for processing

In order to assess the time management in classification and cataloguing of documents, it is necessary to know the duration required for books or other document to reach shelf.

Table No 3: Time taken for a document to reach shelf

SINo	Time	Frequency	Percentage
1	Less than one week	3	16.66
2	1-2 week	12	66.66
3	More than 2 weeks	2	11.11
4	No response	1	5.55
	Total	18	100

In the above table, it has been seen that, a maximum of 66.66% of the total number of library professionals stated that a time of 1-2 week is taken for a document after acquisition to reach the shelf. This means an average rate of duration is taken for the other technical processing work. Hence time is managed in the universities for the normal usual task in a quality way.

4. Library Professionals

Table No.4: Gender-wise Distribution of Respondents

SINo	Name of the Universities	Staff Strength	Questionnaire Distributed	Respondents	Gender			
					Male	%	Female	%
1	AAU	17	7	5	2	10	3	20
2	AU	26	12	6	5	25	1	6.66
3	DU	37	9	8	3	15	5	33.33
4	GU	29	13	10	5	25	5	33.33
5	TU	17	8	6	5	25	1	6.66
	Total	126	49	35	20	100	15	100

It has been clearly represented in table No 4, the total number of staff and the total number of male and female respondents among the library professionals. It has been found out that the percentage of male respondent (57.14%), is more than female respondent (42.85%). A good number of professional staff are working cordially in all the listed universities, which is a good factor for maintaining TQM.

5. Library Professionals extra-Curricular Details

An attempt has also been made to know about the library professionals extra or other professional courses in the respective field.

Table No 5: Responses in terms of courses undertaken

SINo	Courses	Responses						
		AAU	AU	DU	GU	TU	Total	%
1	Training Programme	2	5	4	5	4	20	43.47
2	Workshop	3	5	6	4	5	23	50
3	Refresher Course	-	-	1	1	-	2	4.34
4	Any other	-	-	-	1	-	1	2.17
Total(N)=		5	10	11	11	9	46	100

From Table No 5 it has been found that, 50% of the professional staffs from the listed universities have either attended or participated in workshops. Whereas, (43.47%), of the staffs have taken various training programme. A very least percent (2.17%), have taken refresher course. Dibrugarh University and Gauhati University staffs, lead in participating in the varied courses. This table will clearly indicate the efficiency level of the staffs to ensure that they are up-to-date with the latest standards and practices.

6. Problems faced in Cataloguing and Classification by Library Staff

Table No 6: Frequency wise distribution of problems

SINo	Problems	Frequency	Percentage
1	Use of outdated cataloguing and classification tools	2	9.09
2	Inadequate knowledge of cataloguing and classification rules.	4	18.18
3	Poor interpretation of rules	2	9.09
4	Backlogs	6	27.27
5	Lack of Stationery	2	9.09
6	Shortage of professional staff	6	27.27
Total		22	100

From the above table it has been found that, a maximum of 27.27% stated that, various problems faced in cataloguing and classification is due to lack of professional staff and backlogs. While 18.18% reported that, problems are normally faced due to inadequate knowledge of cataloguing and classification. And there are also other problems related to these, and respondent views are also mentioned accordingly.

7. Users satisfaction level of library services

Table No 7. Satisfaction level of users

SINo	Services	Level of satisfaction									
		Very satisfied	%	Satisfied	%	Neutral	%	Dissatisfied	%	Very Dissatisfied	%
1	Lending Services	70	28	150	60	-	-	30	12	-	-
2	Easy Access to the Internet	60	24	130	52	30	12	30	12	-	-
3	Information and Research Services	50	20	90	36	70	28	20	8	20	8
4	Quick and timely delivery of resources	50	20	100	40	20	8	80	32	-	-
5	Record Maintenance	30	12	100	40	90	36	30	12	-	-
Total (N) = 250											

From the table above, it is quite clear that, a maximum of 28% users are very satisfied and 60% are satisfied with the lending services. Dissatisfaction level can be seen in case of information and research services, which is 8% respectively; while 40% of the users are satisfied with both the services of quick and timely delivery of resources and record maintenance.

8. Challenges of Cataloguing and Classification for Users

Table No 8: Challenges for users about cataloguing and Classification Process

SINo	Challenges	Yes	%	No	%
1	Inadequate knowledge of how information resources are arranged	100	17.85	150	21.42
2	Lack of awareness of cataloguing and classification in the library	150	26.78	100	14.28
3	Poor awareness of online cataloguing system	90	16.07	160	22.85
4	Improper arrangement of catalogue cards	110	19.64	150	21.42
5	Inadequate availability of catalogue cards cabinets	110	19.64	140	20
	Total	560	100	700	100

The above table shows the users challenges in terms of library classification and cataloguing and it is found that, 26.78%, of the user face challenges due to lack of awareness of cataloguing and classification in the library. But 22.85%, firmly denied about the poor awareness of online cataloguing system. Other such challenges are also listed in the table and their responses are showed in percentages.

7. Findings

- i. The findings revealed that the staff members face difficulty in cataloguing and classification mainly due to shortage of professional staff and engaging in backlogs which is estimated to be 27.27%.
- ii. 66.66% stated that the staff is very prompt in performing all the processes after resources are acquired, as they finish the technical processing task in 1-2 week which is considered to be defect free and good. But a nominal of 5.55% did not response regarding their maintenance of timeliness.
- iii. The staff is efficient in managing the library can be known from the fact that how many courses they have undertaken. As discussed in table no 5, it has been identified that 50% of the staff have attended or participated in workshops and 43.47% stated that they have undergone training programme related to the field of library science.
- iv. From the analysis it can be known that, a maximum of 28% users are very satisfied and 60% are satisfied with the lending services which indicates that users' get the required information timely and easily. Dissatisfaction level can be seen in case of information and research services, which is 8% respectively. While 40% of the users are satisfied with both the services of quick and timely delivery of resources and record maintenance.
- v. It is also revealed that, 26.78%, of the user face challenges due to lack of awareness of cataloguing and classification in the library. But 22.85%, firmly denied about the poor awareness of online cataloguing system.

Recommendations

- i. It is suggested that, a proper cataloguing and classification team should be available to guide users and make them aware of both the processes.
- ii. It is encouraged that the classifiers and cataloguers collaborate and communicate among themselves to prioritize the needs of the users.
- iii. A standard norm and new method should be developed to assess the quality of technical processing services with particular reference to university libraries.
- iv. The employees of the university libraries must quickly response to meet users' need. And the university library authority should collect feedback from the users'.
- v. It has been found from the study, that all the libraries under study are not using any Union Catalogue. Therefore, it is recommended to purchase up-to-date National Union Catalogue.

8. Conclusion

Management of libraries has become very important these days. Librarians are to deal with number of problems in their day to day working. TQM is one concept to achieve excellence in work and is a good management philosophy. It's driven by customer needs and expectations.

Total commitment, dedication, team work and long term commitment to training & development for all staff are included in TQM. The success of TQM varies library to library as each library is different from one another. TQM is most essential for each library for his existence or survival.

In summary, TQM can significantly impact cataloguing and classification in libraries by promoting standardization, continuous improvement, user focus, performance measurement, and employee involvement. This can ultimately lead to more efficient and effective library services.

Statement on using of AI Tool:

During the preparation of this work the author(s) used [ChatGPT] in order to [get a clear idea of how Total Quality can be implemented in Library Classification and Library Cataloguing]. After using this ChatGPT, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

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