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**A STUDY OF TQM IN PROFESSIONAL COLLEGE LIBRARIES IN  
MAHARASHTRA: WITH SPECIAL REFERENCE TO  
ENGINEERING AND PHARMACY COLLEGE LIBRARY  
IN NORTH MAHARASHTRA UNIVERSITY, JALGAON**

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**Abstract**

*Total quality management is an approach to the art of the management that originated in Japanese industry in the 1950's and has become steadily more popular in the west since the early 1980's. TQM include customers driven quality, top management leadership and commitment, Continues improvement, fast and a TQM culture.*

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**KEYWORDS:**

TQM , commitment , organization.

**1. Introduction**

Total Quality Management is a system of continuous improvement employment participative management and center on the needs of customers. The concept of TQM presupposes employee's involvement, problem solving teams, statistical method, long term goals and thinking, analysis of the problems continuous sharpening of the quality performance leading to excellence.

Total Quality Management (TQM) is an enhancement to the traditional way of doing business. It is a proven technique to guarantee survival in world-class competition only by changing the actions of management will the culture and actions of an management will the culture and actions of an entire organization be transformed. TQM is for the part common sense. Analyzing the three words we have.

**TOTAL – MADE UP OF THE WHOLE**

Quality- Degree of excellence a product or service provides  
Management- Act, art or manner of handling, controlling, directing etc.

Therefore TQM is the art of managing and a set of guiding principles that represent the foundation of a continuously improving organization. It is the application of quantitative methods and human resources to improve all the processes methods and human resources to improve all the processes within an organization and exceed customers' needs and in the future. TQM integrates fundamental management techniques, existing improvement efforts and technical tools under a disciplined approach.

## 2. THE PRESENT STUDY

The present study is based on the implementation of TQM in the area of library and information science. It also reveals the importance of TQM in libraries and information centers. TQM is an essential part of effective library management and library services. In which libraries continuously improvement of library services TQM is most important factor. Technical Processing also essential part of library management. It's most important for save the time of reader and satisfaction of the library users. The main factor focus is on the implementation of TQM in technical processing in library.

## 3. OBJECTIVE OF THE PRESENT WORK:

The study based on the implementation of TQM in the area of Library and Information Science is an essential part of effective Library management and library services.

In view of above the following objectives of study have been considered.

1. To study the TQM in technical processing in libraries.
2. To examine how many libraries adopted TQM.
3. To examine how many libraries used quality assurance tools of quality
4. To study the benefit step of TQM
5. To study the technical processing (i.e. cataloguing, classification) circulation, shelving
6. To study the advantages and function of Technical processing.
7. To study the kind of catalogue.
8. To study the scheme of classification
9. To study the system of circulation
10. To find out sources of finance in Engineering and Pharmacy College Libraries.

## 4. SCOPE OF THE STUDY:

Entire study is based on the questionnaires received from librarians engineering and pharmacy colleges in N.M.U., Jalgaon. The researcher 28 questionnaires to the Engineering and Pharmacy colleges in N.M.U., Jalgaon Out of these 23 Colleges gives immediate response to the Questionnaire. So that the study is based on these questionnaires received back by the current situation of Engineering and Pharmacy College Librarians in N.M.U., Jalgaon regarding TQM in Technical Processing

### 4.1 Area of Research

The Researcher has selected the area of Engineering and Pharmacy College libraries coming under the N.M.U., Jalgaon and is situated in Jalgaon, Dhule, and Nandurbar District. The purpose behind the selection of this area is to study of the improvement facilities and the current status of the libraries. Researcher visited to 16 - Engineering and 12 - Pharmacy colleges Total 28 Colleges in North Maharashtra University, Jalgaon for collected data through personally interviewed with questionnaires. The researcher has personally interviewed 28 questionnaires to all pharmacy and Engineering college libraries. All 28 College are situated in three different district as 9 Engineering and 5 Pharmacy College in Jalgaon District, 4 Engineering and 5 Pharmacy College in Dhule District and 2 Engineering and 2 Pharmacy college in Nandurbar district.

## 5. ANALYSIS

### ·Introduction

There are total 28 Colleges. (16)Engineering and (12) Pharmacy Colleges in North Maharashtra University under. Out of 26 colleges selected by researcher for the research through a sampling method. Because in 2 colleges librarian not work. Only library clerk is working. There are 23 colleges will

response properly. Library is managed by a professionally qualified and competent team. It is suggested that the performance of the team

#### Qualification

Qualification	Frequency of response	Percentage of Response
UG +M.Lib	13	56.52
PG+ M.Lib	3	13.04
UG +M.Lib + M. Phil	6	26.09
PG +M.Lib, M. Phil	0	0
UG+ M.Lib. + M.Phil. + Ph.D.(Pursuing)	1	4.35
PG+ M.Lib. + M.Phil.+ Ph.D.	0	0
Any Other (Net/Set)	0	0

#### • Total Collection of the library

The collection forms the nucleus of a library system and occupies the pivotal position in the overall status of the library concerned. Though mere numerical value of the collection is not the decisive factor to judge the standard of a library, but the efficiency and effectiveness of a library depends largely both on quantity and quality of its collection. It is an accepted fact that a library cannot serve its clientele effectively without a strong, balanced, and need based collection.

The libraries were, therefore, asked to furnish information about the irrespective collection of different documents. The findings are appended below in the table.

For the sake of clarity and convenience in interpretation, the collection of these libraries has been classified.

Table no. 5.2 Percentage of libraries having different number of books

Sr. No.	Range	Collection of books in Engineering College	Percentage	Collection of books in Pharmacy College	Percentage
1.	Below 5000	1	4.35	5	21.74
2.	5001-10,000	0	0	3	13.04
3.	10,001-20,000	8	34.78	0	0
4.	20,001-30,000	0	0	0	0
5.	30,001-40,000	2	8.70	0	0
6	More than 40,000	4	17.39	0	0

As per AICTE in Engineering College Collection of books 50 as per course and 250 volumes per course division. In Pharmacy college collection books 100/50 and 500 X B/ 500 X B.

Table refers to the percentage of libraries having different number of books. It can be inferred

from the above table that, 6 (26.09%) libraries were having less than 5000 books; followed by 3 (13.04%) libraries having 5001–10,001 collection. The table reveals that, 8 (34.78%) libraries were having a collection ranging from 10,001-20,000. 8.70% libraries having 30,001-40,001 Collection. Only 4 (17.39%) out of 23 libraries surveyed having more than 40,000 books. The libraries having lesser collection may be in the newly established colleges and the libraries with large collections are old ones. Another reason of larger collection seems to be the libraries are not exercising the 'weeding out of books' which leads to heaping of out-dated/ unused books.

#### •what is benefit of TQM?

TQM is process of continuously improvement & maintenance of quality service & product. As well as development of staff & create an effective public relations.

**Table no. 5.3 Benefit of TQM**

Benefit of TQM	Frequency of Response	Percentage
Yes	21	91.30
No	02	8.70

Maximum librarian is qualified librarian in Engineering and pharmacy college, Jalgaon. Libraries in which 91.30% librarians know Benefit of TQM and only 8.70% librarians are unknown benefit of TQM.

#### **Graph No. 5.1 Percentage of TQM Benefit**

Maximum librarian are Qualified face a number of problems in library organization e.g. improper planning, insufficient resources lack of training & education etc. due to very less libraries adopted TQM in their own library.

· Do you adopted TQM measures for your library management?  
For an adopted TQM face a number of problems in library organization. E.g. Improper Planning, insufficient resources lack of training & education etc. due to very less libraries adopted TQM in their own library.

**Table No. 5.4 Adopted TQM**

Adopted TQM	Frequency of Response	Percentage
Yes	13	56.52
No	10	43.48

Table no. 5.4 and Graph No. 5.2 shows that 56.52% libraries are adopted TQM for measures library management & 43.48% libraries are not adopted TQM measures for library management. This analysis meaning of near about 56 percent library standard of adopt the adopt the TQM

#### Graph No 5.2 Percentage of Adopted TQM Measures

· Are you Used Tools of Quality Management for measuring quality of services?  
Using of Quality tool for measuring quality of services e.g. Time limit identified cause of problem. Identifying targets etc. due to use of tools is very important for measuring quality of library services.

**Table no. 5.5 Tools of Quality Management**

Sr. No.	Tools of TQM	Frequency of Response	Percentage
1	Flow Chart	6	26.08
2	Pareto Chart	1	04.34
3	Scattered Diagram	0	0
4	Run Chart	0	0
5	Control Chart	1	04.34
6	Histogram	2	08.70
7	Cause & Effect Diagram	2	08.70

**Graph No. 5.3 Percentage of Used tools of Quality Management**

Only 30.43% libraries used Tools of Quality Management and 60.57% libraries not used. The verification of aforesaid Table No. 5.5 & Graph No. 5.3 reveals that the emphasis of higher education libraries is used of flow chart 26.08%, Pareto Diagram 4.34%, Scattered Diagram, 0%, Run Chart, 0%, Control Chart, 4.34%, histogram Chart, 8.70% and Cause of Effect Diagram

· Do you provide Right information in a right time to right user  
 “INFORMATION” is most important aspect for researcher and scientist student for their activity library is social organization so their one of the important work is provide right information in a right time to right user. 85.19 % libraries done work sincerely & perfectly they provide right information in a right time to right user.

#### Technical Processing

Efficient, effective, exhaustive and speedy service can be provided all the reading materials are properly & systematically organized. The organization of library material is dependent upon varies tools like classification, cataloguing etc.

· Do you used classification scheme in your library? Which classification scheme used?  
 Number of function of classification e.g. book display, identifying & locating document, compilation of bibliography & all the function of classification needed for a run a library very effectively.

**Table No. 5.6 Classification Scheme**

Used Classification Scheme	Frequency of response	Percentage
Yes	20	86.96
No	3	13.04

Table No. 5.6 shows that 86.96% libraries are doing classification in their library. Only 13.04% libraries are not used classification

**Graph No. 5.4 Use of Classification Scheme**

**Table no. 5.7 Scheme of Classification**

Obs. No.	Scheme of Classification	Frequency	Percentage
1	D.D.C.	18	78.26
2	U.D.C.	2	08.70
3	C.C.	0	0
4	B.C.	0	0
5	L.C.	0	0

**Graph No. 5.5 Percentage of Classification Scheme**

The table no.5.7 and Graph no. 5.5 shows that 13.04 % library didn't use any classification scheme.78.26% library used DDC & 08.69 % library are used UDC. Another Scheme of Classification e.g. CC, BC, LC are not used any library in Engineering and Pharmacy college libraries.

**Are you Prepared Catalogue in library**

Catalogue is most essential tool of retrieval information & other maintained work of libraries. Due to prepared of catalogue is most important in all libraries.

**Table no. 5.8 Prepared catalogues**

Prepared Catalogue	Frequency of Response	Percentage
Yes	15	65.21
No	8	34.78

**Graph no. 5.6 Percentage of Prepared Catalogue**

Table No. 5.8 & Graph No. 5.6 Show that 65.21% Libraries prepared catalogue &34.78% Libraries not prepared catalogue for some cause.

Which catalogue code is use in library?

**Table no. 5.9 Catalogue code**

Obs. No.	Code	Frequency of Response	Percentage
1	AACR II	11	47.82
2	CCC	2	08.70
3	Not Used	10	43.48

Table no. 5.9 Shows that the data regard in this context was analyzed that43.48% libraries are not used catalogue code. 47.82% Libraries used AACR II and 08.70f% Libraries used CCC.

**Graph No. 5.7 Percentage of Catalogue Code**

**Conventional form of catalogue? Which is use?**

In a recent era number of libraries use computer in housekeeping operations but like Jalgaon district area 39.14% Libraries used conventional form of catalogue. And 60.87% libraries not used

**Table No. 5.10 Conventional form of catalogue**

Sr. No.	Conventional Catalogue Form	Frequency of response	Percentage
1	Card Form	6	26.0
2	Book Printed Form	2	8.70
3	Sheaf form	1	4.35

Table no. 5.10 Shows that 26.05% Libraries used card form catalogue, 8.70% libraries used Book printed form, and 4.35% libraries use sheaf form.

Graph No. 5.8 Use Conventional Form

**Do you use type writer for preparing catalogue Computer Print?****Table no. 5.11 Equipment of prepared catalogue**

Sr. No.	Prepared catalogue	Frequency of Response	Percentage
1	By type writer	6	26.09
2	By handwritten	8	34.78

**60.87% libraries used type writer for preparing catalogue and 39.13% libraries not prepared catalogue.**

**Table no. 5.11 and Graph No. 5.9 Shows that 26.09% library catalogue prepare by type writer 34.78% library catalogue prepare by handwritten. 39.13% libraries not prepared catalogue**

**Graph No. 5.9 Percentage of use Type writer or handwritten**

Which type of catalogue is used in your library?

**Number of catalogue use in libraries. In Engineering and Pharmacy College libraries mostly used subject catalogue.**



**Table No. 5.12 Type of Catalogue**

Sr. No.	Type of catalogue	Frequency of Response	Percentage
1	Author catalogue	11	47.82
2	Name catalogue	1	04.35
3	Title Catalogue	12	52.17
4	Subject catalogue	14	60.87
5	Dictionary Catalogue	0	0
6	Classified Catalogue	5	21.74
7	Co-operative Catalogue	0	0
8	Centralized Catalogue	1	04.35
9	Union Catalogue	1	04.35

Table No. 5.12 & Graph No. 5.10 shows that 47.82% libraries used author catalogue, 04.35% libraries used Name catalogue, Title catalogue 52.17%, Subject catalogue 60.87%, classified catalogue 21.73%, Centralized catalogue & Union Catalogue 4.35%, Dictionary catalogue and Co-operative catalogue not used any Engineering and pharmacy college.

Graph No. 5.10 Use type of Catalogue

#### **Which non- conventional Form is use**

In a digital era all library work especially technical processing done by a computer different software is used for done a library work. E.g. SOUL, LYBSIS etc. But it is very costly due to among libraries are not purchase any software

Out of 23 Libraries only 43.48% libraries are use non – conventional form i.e. OPAC, visible Index & 56.53% Libraries not fulfill an answer that question.

**Table no. 5.13 Use Non- Conventional Form**

Sr. No.	Form of Catalogue	Frequency of Response	Percentage
1	Visible Index	1	04.35
2	OPAC	9	39.13

Graph No. 5.11 Percentage of Use Non-Conventional Form

The collect data were analyzed and it reveals that 43.47% libraries use non –conventional form & 56.53% libraries not use Non-conventional form. Out of that 4.34% Visible Index and 39.13% OPAC.

#### **· Arrange Shelf Systematically**

It was found that Engineering and pharmacy college Libraries arrange shelves systematically. The 100% Libraries arranged shelf systematically



**Table no. 5.14 System of Book Arrangement**

Sr. No.	System of Books Arrangement	Frequency of Response	Percentage
1	Size	0	0
2	Accession Number	6	26.09
3	Combination of Sequence	1	4.35
4	Classified Arrangement	9	39.13
5	Broken Arrangement	1	4.35
6	Special Sequence	0	0
7	Block Arrangement	0	0
8	Subject Wise	18	78.26

**Graph No. 5.12 Use System of Book Arrangement**

Table no. 5.12 also indicate that 0% library use size wise book arrangement, 26.08% libraries use accession Number wise arrange, 4.35% libraries used Combination of sequence, 39.13% libraries used Classified arrangement, 4.35% Libraries used broken arrangement, 0% libraries used Special sequence and Block arrangement . Mostly used 78.26% libraries use subject wise system for arrange a book systematically.

#### • Duties of Shelving

The following duties of shelving are most important for the looking attractive library & maintain a quality of shelving as well as library.

**Table No. 5.15 Duties of Shelving**

Sr. no.	Duties of Shelving	Frequency of Response	Percentage
1	Dusting & Cleaning	18	78.26
2	Arrange book Systematic	23	100
3	To fetch returned book	14	60.87
4	To send books in binding section for binding process	17	73.91

**Graph No. 5.13 Percentage of Shelving Duties**

Table no. 5.15 & Graph no. 5.13 shows that 100% library done a work of arrange book systematic. 78.26% libraries done a work of dusting and cleaning, 60.87% libraries to fetch returned book & 73.91% library to send book in binding section

#### • Use Books Support for partly field Books

These should be provided in large numbers at least two book support is required for one plank so that the books are mode to stand erect.

**Table no. 5.16 Use of Book Supports**

Use book support	Frequency of response	Percentage
Yes	12	52.17
No	11	47.83

Book support is essential equipment for arrange a book correctly in rank. Table No. 5.16 shows that 52.18 % library used Book Supports for partly field books& 47.83% libraries are not used book supports for partly – filled shelves.

**Graph No. 5.14 Use Book Support for Shelves**

• **Use book Lift & Book Trolley**

If the book Stack is spread over many floors, it is desirable that book lifts or dumb elevators, as these are called should be provided. Similarly, to carry books from one end to the other end of each floor, there should be a book trolley so that the time and energy of the staff are not wasted unnecessarily in performing those jobs which can be done quickly through machine operations

**Table No. 5.17 Use Books lift & Trolley**

Equipment	Frequency of response	Percentage
Books Lift	0	0
Books Trolley	6	26.08

It can be observed from Table No. 5.17 that only 26.08% libraries use book trolleys for carry out of books one place to another place. Books lift all college libraries not used.

**Graph No. 7.15 Use carry of the Books**

• **Which Guide Boards Use**

In the library guide of board is very important. Guide of board help of Showing Correct way & correct instruction. It's most important benefit for user that saves the time of user.

**Table No. 5.18 Use Guide Boards**

Obs. No.	Guide Boards	Frequency of Response	Percentage
1	Tier Guide	1	4.35
2	Gangway guides	0	0
3	Shelf Guides	6	26.09
4	Plank Guides	0	0
5	General Instruction Guides	15	65.21

The analysis of data shows that 73.91% libraries use guide boards & 26.09% library not use guide board for correct instruction to users. The number of library used general Instruction guide board (65.21%), another 26.09% libraries use shelf guide board.& 4.35% libraries tier guide board . Gangway and Plank Guide board are not used in Engineering and Pharmacy college library. Table No. 5.18 & Graph 5. indicates of details it.

#### Graph No. 5. 16 Use Guide board in Library

##### • Which System use of 'stock Verification'

Under the survey shows that maximum libraries carry out stock verification. In 95.96% Libraries doing stock verification & another 4.34% Libraries not using stock verification

**Table no. 5.19 System of Stock Verification**

Obs. No.	Stock Verification System	Frequency of Response	Percentage
1	By Accession Register	14	60.87
2	By Separate Register	2	8.70
3	By Numerical Counting	4	17.39
4	By Shelf List	2	8.70
5	Preparing Separate Card for each Book	2	8.70
6	Separate sheet Containing Accession	6	26.09

Table No. 5.19 shows that the libraries are carry out stock verification by some system e.g accession register 60.87% , separate register 8.70%, Numerical Counting 17.39%, Shelf List 8.70%, preparing separate cards for each book 8.70%, separate sheets containing accession 26.09%.

**Graph No. 5.17 Use System For Stock Verification****• Sufficient Human Resources**

In the libraries there are so many resources, such as reading material, human resources and techniques resources. But today human resources are acknowledged as the most valuable and important asset in any organization as well as in the libraries.

**Table No. 5.20 Human Resources**

Sufficient Human Resources	Frequency of response	Percentage
Yes	15	65.21
No	8	34.79

Table no. 7.25 shown that 65.21% libraries have sufficient human resources & 34.79% libraries have not sufficient staff.

**Graph No. 5.18 Percentage of Human Resource****• Budget of Your Library? What is source of finance?**

Budget is most essential resources in any organizations. All work depends on the Budget. In Engineering and Pharmacy College all college Libraries have sufficient resource.

**Table no. 5.21 Library Finance Raised**

Obs. No.	Sources of Finance	Frequency of Response	Percentage
1	State Government	1	4.35
2	Institute Fund	17	73.91
3	Student Fees	16	69.56
4	Gift & Donation	4	17.39
5	Service Charge	2	8.70
6	Other	6	26.09

The distributors of expenditure on various items was depended on the how is the library finances raised. Table no.5.21 Shows the maximum libraries are depended on the Institute fund & student fees. Another 6.08% libraries received other sources, 17.39% libraries received gift and donation , 8.69% libraries recived service charges and only one (4.35%) Institute raised on State government .

**Graph No. 7.19 Percentage of Library Finance Raised****•Annual Budgets:**

The details of the annual Budget of Engineering and Pharmacy College are shown in the Table No 5.22

**Table no. 5.22 Annual Budget**

Annual Budget	Engineering	Percentage	Pharmacy	Percentage
Upto 50,000	0	0	3	13.04
1 to 5 lakh	6	26.09	2	8.70
6-10 lakh	4	17.39	1	4.35
11-15 lakh	1	4.35	0	0
16-20 Lakh	2	8.70	0	0
21-25 Lakh	2	8.70	0	0
26-30 Lakh	1	4.35	0	0

Table No. 5. 22 shows that up to 50,000 only 13.04% library annual budget in pharmacy college, 1-5 lakh 26.09% annual budget in engineering college and 8.70% annual budget in Pharmacy college, 6-10 lakh annual budget 17.39% in engineering college

**Graph No. 5.20 Percentage of Annual Budget****•Have u sufficient budget of your library**

Table no. 7.28 & shows that 91.30% libraries sufficient library budget and 8.70% libraries not satisfied library budget

**Table No. 5.23 Sufficient library Budget**

Sufficient budget for library	Frequency of response	Percentage
Yes	21	91.30
No	2	8.70

**•Fulfilling user requirement & users satisfaction**

Library is social organization. The main work of libraries is providing right information & provides quality services for their users. User Satisfaction in most important of any library or information Centre.

**Table No. 5.24 User requirements of library services**

Fulfill User's requirement	Frequency of Response	Percentage of Fulfill User's Requirement
Yes	19	82.61
No	4	17.39

The collect data analyzed that 82.61% library is fulfill users requirement & 17.39% library is not fulfill users requirement

• **Library Users are satisfied with library and its Services**

**Table 5.25 User's satisfied to Library services**

Library Users Satisfied with library and library services	Frequency of Response	Percentage
Yes	21	91.30
No	2	8.70

Table no. 5.25 shows that 91.30 % libraries satisfied to users with library and library services and 8.70% libraries are not satisfied to users with library and library services

• **Library Software Use In library**

Library Software has been designed to automate and manage all types of libraries. Library Software is capable of managing Issues, Returns, Magazine/Newspaper Subscriptions, Fine and Balances of payments due from Members, Cataloguing, OPAC / powerful web based search facility, various reports for record-keeping and review purposes, according to end user requirements. E.g. MAITAYEE, LIBSYS, SOUL, TULIPS are also software packages used by various libraries.

**Table no. 5.26 Use Library Software**

Library Software	Frequency of Response	Percentage
Prepared by Home Made Lib. Software	3	13.04
Soul	1	4.35
Softlib	1	4.35
Lib. Manager	5	21.73
SLIM	2	8.70
LYBSIS	2	8.70
Skymax	1	4.35
RFID	1	4.35
No Use Lib. Software	7	30.43

This table no. 7.31 shows 69.57% libraries use library software. And 30.43% libraries not use library software. 13.04% libraries use homemade library software, Soul, Softlib, Skymax, and RFID this software only 4.35% library used. Slim and LYBSIS library software 8.70% libraries used 21.73% Library Manger Software used in library 30.43% library not used library software

#### •Circulation System

A circulation system a library user in the use of books and other library material that have been sent by the technical processing division of the library to the maintenance division most effectively.

**Table no. 5.27 Use Circulation Systems**

Sr. No.	Circulation System	Frequency of Response	Percentage
1	Register System,	11	47.83
2	Card System	9	39.13
3	Semi Mechanical System	2	8.70
4	Automated System	8	34.78

Table No. 5.27 Shows that 47.83% library used register system, 39.13% libraries use Card system, 8.70% libraries use Semi- mechanical system and 34.78% libraries used automated system for circulation book to users.

#### **Graph No. 5.21 Percentage of circulation System**

#### • Do u Circulation System are used by Computerized

In a computerized circulation system there is no need to maintain and issue multiple borrowers' card with unique identification number to be used by the software to access member databases and the multiple borrowing facilities is controlled by the software. In Computerized circulation system the borrower present before the counter assistant inputs the identify numbers of the borrower through keyboard activities his database record. Depending upon permissibility the document's accession number is entered in the computer and book is issued to the borrower.

**Table No. 5.28 Circulation System Used by Computerized**

Computerized Circulation System	Frequency of response	Percentage
Yes	13	56.52
No	10	43.48

Table no. 5.28 & Graph No. 5.22 Shows that 56.52% libraries use computerized circulation system and 43.48% libraries not use computerized circulation system books for users.



**Graph No. 5.22 Computerized Circulation system****•Barcode System Used For Circulation Control?**

Automation and Networking of libraries are being done with a view to provide effective and efficient services to its clientele. A library is not fully automated, if this automatic method of identification is not included. The application of barcode system is principally quite suitable for circulation job of library inventory and periodical control can also be effectively carried with the help of barcode technology

**Table No. 5.29 Used Barcode System to circulation control**

Barcode System Used for Circulation Control	Frequency of response	Percentage
Yes	6	26.09
No	17	73.91

Table No. 5.29 shows that 26.09% library used Barcode technology for circulation control and 73.91% libraries not used barcode technology.

**Graph No. 5.23 Circulation control By Barcode System****• How many days books issuing to Users?**

Issue/Return of library materials is the routine operation of any library. Every library preparing schedule chart prepares. How many books issue for users and how many days.

**Table No. 5.30 Issued Books to User's**

Books issuing (days)	Students	percentage	Teachers	percentage
1-5 days	2	8.70	0	0
5-10 days	14	60.87	1	4.35
10-15 days	7	30.43	2	8.70
15-20 days	0	0	2	8.70
20-25 days	0	0	1	4.35
1-5 month	0	0	7	30.44
6-10 month	0	0	9	39.14
More than 10 month	0	0	1	4.35

Table No. 5.30 shows that 8.70% libraries books issue for students only 5 days, 60.87% libraries books issue for students and 4.34 % for teachers only 5-10 days, 30.43% libraries books issue for students and 8.70% libraries books issue for teachers 10-15 days. 4.35% library books issue for teachers 20-25 days 30.44% library books issued for teachers 1-5 month, 39.14% library books issued for teachers 6-10 month, 4.35% library books issue for teachers more than 10 month means 1 Year.

#### Graph No. 5.24 Books Issue (Days) to users

##### • Facility is available for the user to search the books in the library?

OPAC (Online Public Access Catalogue) Facilities to search the bibliography, databases including Boolean operations. OPAC of SOUL is the window to the library collection. This user friendly and it helps the reader in searching the required documents, user can search databases by author, Title, Corporate body, Conference names, Subject Headings, Including call numbers etc. Thus Library user can retrieve catalogue records directly from computer database, the library is said to have on OPAC.

**Table No. 5.31 Facility Available to search the Book**

To Search the books in library	Frequency of Response	Percentage
Catalogue	11	47.83
OPAC	9	39.13
Both	3	13.04

Table No. 5.31 shows that 47.83% library users search the books by catalogue, 39.14% library users search the books by OPAC system, and 13.04% library users Both system use search the books

#### Graph No. 5.25 Percentage of facility for search the books

##### • how many books are issued for users at a time?

Mostly library are issued to student only 5-8 books and 10-15 book issued to teachers or faculty member

**Table No. 5.32 Books Issued for User's**

Books issued	student	Percentage of issued for students	Teachers / faculty member	Percentage of issued for teachers or faculty member
1-5	22	95.65	5	21.74
5-10	1	4.35	11	47.83
10-15	0	0	7	30.43
more than 15	0	0		0

Table No. 5.32 Shows that 95.65% library 1-5 books issued at a time to students and 21.74% library books issue at a time to teachers or faculty member, 4.35% library 5-10 books issued at a time to students and 47.83% library 5-10 books issue to teachers at a time. 30.43% library 10-15 books issue to teachers or faculty member at a time

#### Graph No. 5.26 Books issued to students and Faculty Member

**Table no. 5.33 Books issued for users**

Books issued	Research Scholar	Percentage of issued to research scholar	Other Staff	Percentage of issued to other staff
1-5	5	21.74	14	60.88
5-10	5	21.74	1	4.35
10-15	2	8.70	1	4.35
more than 15	1	4.34	0	0

Table No. 5.33 shows that 21.74% library 1-5 Books issue to the research scholar and 60.80% library 1-5 books issue to Other staff, 21.74% library 5-10 books issue to the research scholar and 4.35% library 5-10 books issue to the Other staff. 8.70% library 10-15 books issue to the Research Scholar and 4.35% library 10-15 books issue to other staff 4.35% library more than 15 books issued at a time to research scholar.

#### Graph No. 5.27 Books issued to Research Scholar and Other Staff

#### 33. How Many Time Students are renewal books?

Renewal means extension of the loan period of recharge the same book to the same borrower. Some important books loan out to the borrower could not finished or consulted due to some reason and borrower want retain the book with him for a long period some time for studying thoroughly. Under this circumstances if this required book is not in demand by the other. The request of the borrower can be considered and renewed the book by second at the cost of other genuine readers. Sometime the request of renewal is received on telephone. The counter assistant must be informed the situation and directed him about the renewal. If not possible the borrower should be informed on telephone.

**Table No. 5.34 Renewal Books**

Sr. No.	Students are renewal books	Frequency of Response	Percentage
1	One Time	14	60.87
2	Two Time	8	34.78
3	Three Time	0	0
4	Four Time	1	4.35

Table No. 5.34 shows that 60.87% libraries only one time renewal books, 34.78% libraries two time renewal books, 4.35% library four time renewal books and 0% library three time renewal books

#### Graph No. 5.28 Percentages of Renewal Book

#### 34. Do you use Inter library Loan System in Your library?

Inter library loan is the oldest form of library cooperative among the libraries. A member of library who wants to get a book from another can be lent on the basis of inter library loan. This work is also performed by the circulation section. In some libraries this work is performed by the reference section. On the demand of the books available in other library can be requested to send on the borrower is informed accordingly and issued him to consult for a limited period

Table No. 5.35 Inter Library Loan System

Use Inter Library Loan System	Frequency of Response	Percentage
Yes	9	39.13
No	14	60.87

Table No. 5.35 shows that 39.13% library use Inter loan Library system and 60.87% library not use inter library loan system

#### Graph No. 5.29 Percentage of Inter Loan Library System

#### 35. In case of Student lost / damaged books? Which type of punishment to student?

The books are lent out to the members for home reading for a stipulated period. It is commonly found in all kinds of library that member have either lost the book or damaged it particularly or fully. According to rule of the library, if the book is lost or injured by the member shall have to replace the book or shall pay the cost of replacement. If book is one of the volumes of a set the reader may be asked to replace the whole set. If the borrower wants to pay the cost of lost or damaged book he/ she have to pay the double price of the recent publication with a postage charge.

Table No. 5.36 Punishment to student for Lost or Damaged book

Lost/ Damaged Books Punish the Students	Frequency of response	Percentage
Double cost of books	5	21.74
Recover New Book or Double cost of Books	4	17.39
New Book Purchase	5	21.74
Paid Cost of Book	5	21.74
Price of Book or Replace copy with Fine	1	4.35
Price of book or recover new edition copy	3	13.04

Table no. 5.36 shows that 21.74% libraries get double cost of books in case lost / damaged the book, 17.39% Libraries recover new book or double cost of books, 21.74% libraries get new book purchase, 21.74% libraries get paid cost of book, 4.35% library get price of book or replace copy with fine, 13.04% library get price of book or recover new edition copy in case users lost / damaged the books.

**Graph No. 5.30 Percentage of Punishment to students for lost and damaged the books**

**36. Do you use books reserved system for users in your library?**

Many books especially text books and other related reading materials remain in great demands. The libraries are incapable of meeting all the demands of the readers due to stringency funds. Due to this reason an adequate number of copies of certain books cannot be purchased. IF the requisite numbers of copies are purchased.

**Table 5.37 Books Reserved System**

Book Reserved system for users	Frequency of response	Percentage
Yes	14	60.87
No	9	39.13

Table no. 5.37 shows that 60.87% library books reserve system use for the users and 39.14% library not use this system.

**Graph No. 5.31 Percentage of Books Reserved System**

**37. Do you circulation section record maintain in your library**

Engineering and Pharmacy college library Maintain Circulation section record. Every library daily maintain a record overdue charges, issued book, no. of membership., lost & damaged books, reservation books, daily visitors register, newspaper register, periodical register etc.

**Table No. 5.38 Type of Circulation Record Maintain**

Sr. No.	Type of Record Maintain	Frequency of Response	Percentage
1	Overdue Charges	13	56.52
2	Lost & Damaged Books	17	73.91
3	Reservation Books	8	34.78

Table No. 5.38 show that 56.52% libraries overdue charges record maintain , 73.91% library lost or damaged books record maintain, 34.78% library reservation books record maintain

**Graph No. 5.32 Record maintain of Circulation Section**

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**Conclusion**

Maximum libraries are using Total Quality Management in technical processing in Engineering and Pharmacy College Libraries. Minimum libraries used conventional form of catalogue. Maximum libraries use classification Scheme. Maximum libraries books arrange by subject wise. Maximum libraries use Stock Verification system by accession register. Mostly Engineering college libraries use library software and minimum Pharmacy college library used library software. Maximum libraries books Circulation by computerized. Minimum libraries used barcode system. . Maximum libraries record maintains.

Maximum library user is satisfied with their library and its library services. It means Engineering and Pharmacy college libraries are maintaining Total Quality Management in technical processing and due to that these libraries satisfying their user.

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