

# *Chapter VI*

*Data Presentation, Analysis  
and Findings*

## **CHAPTER – VI**

### **POST AUTOMATION PROBLEMS: DATA PRESENTATION, ANALYSIS AND FINDINGS**

The college libraries have a significant role in higher education. The regret is that, majority of college libraries do not have proper facilities to meet the needs of their users. The major problems that the college libraries are facing are inadequate budget, limited collection, poor infrastructure and lack of qualified library staff. In most colleges, there is neither a library hall nor a sufficient big room, thinking of separate library building is just impossible. Any unutilized room of the college, which is somewhere out of sight would be considered adequate to house few shelves of books. These college libraries are generally opened for only 6 to 8 hours a day. Bhatt (2010), has pointed out that different studies, conducted by a number of scholars like Mukherjee, Sardana, , Hingwe, Rana, Girija Kumar, Krishna Kumar, Rewadikar, Naidu, and Anand have explicitly established that the condition of the college libraries in India are far from satisfactory.

The University Grants Commission (UGC) is aware of the slow progress of the college libraries. UGC has made significant efforts in providing- the grant for books, equipments and infrastructure development of college libraries. As Watane (2005) has indicated that the library professionals, though, desire to utilise liberal grants provided to the college by UGC for purchasing library documents, equipment for building construction and appointing library staff, but it is observed that the library facilities in majority of the college libraries are not very satisfactory.

#### **1. MAJOR FACTORS RESPONSIBLE FOR AUTOMATION IN COLLEGE LIBRARIES**

Computers are used in libraries for many reasons including financial, managerial, economic, technical and technological. The major factors responsible for automation in

college libraries are - Librarian, Management and Resources. The efficient coordination amongst these three is very important for the successful implementation and thereafter proper maintenance of library automation.

*(a) MIND-SET AND PERCEPTION OF THE LIBRARIAN*

The mind-set, perception, eagerness, alertness, initiatives of the librarian plays a major role in the process of implementation of new technologies in the library. The management of library in this era of information technology is very different. To be a successful librarian, a professional should have the courage to apply innovative ideas into the library.

*(b) ATTITUDE OF MANAGEMENT*

Another important factor is the attitude of management. The management of the library should have positive approach towards the development of library of an institute. When the librarian takes the initiative then he should be able to convince the authorities and vice-a-versa, at some places the initiative comes from the top and the librarian is encouraged or required to do it. The best blend is when the initiative of both, the librarian and the management gets synergized.

*(c) AVAILABILITY OF RESOURCES*

One more important factor is the availability of resources with the institution. The resources here mean both financial and human resource, i.e. skilled and trained library personnel.

To shape the future of the academic libraries in the evolving information environment, UGC has developed an autonomous inter-university centre - Information and Library Network Centre - INFLIBNET<sup>1</sup>. The centre is involved in creating infrastructure for

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<sup>1</sup> Information taken from the website [www.inflibnet.ac.in](http://www.inflibnet.ac.in)

sharing of library and information resources and services among academic and research institutions. INFLIBNET works collaboratively with Indian university libraries.

Library automation in university libraries of the country started with the initiatives of INFLIBNET. This centre, based on requirements of college and university libraries, designed and developed, state-of-the-art integrated library management software, Software for University Libraries - SOUL. The basic purpose of the software was to computerize all the functions of university libraries. It is user-friendly software developed to work under client-server environment.

The INFLIBNET centre is based in Ahmedabad, Gujarat. Influenced by the university libraries, the maximum college libraries of Gujarat have procured library management software - SOUL from the INFLIBNET centre for the automation purpose.

Along with UGC, the National Assessment and Accreditation Council (NAAC) inspection has also played prominent role in the development of college libraries. The college authorities now understand the importance of well developed library and are now taking keen interest in the growth and expansion of library.

The researcher is working as a librarian with the undergraduate management college at Surat, Gujarat. While pursuing with her research on the present study, she felt the need to take the feedback of the small college librarians about the post automation problems being faced by them.

The advancement of ICT has brought significant change not only in the library and information services but also in the changing roles and expectations from the library and information professionals.

Keeping the above objectives in mind, the researcher had organized Librarian Development Programme (LibDP) – One day workshop on “Human Approach in Librarianship” on 6<sup>th</sup> September 2008 at the researcher’s institute, i.e. BRCM college of Business Administration, Surat, Gujarat.

The researcher had framed a questionnaire for the small college librarians to meet the objectives of her research study (see Appendix D). The questionnaire was distributed to the participants of the above mentioned workshop.

## **2. DATA PRESENTATION, FINDINGS AND ANALYSIS**

The questionnaire was circulated among 151 participants of the workshop. Out of these, 89 filled questionnaires were received back. The collected questionnaires revealed that 71 libraries were automated with the help of one or the other library management software. The other questionnaires were not of any use for the present study, as it did not meet the basic purpose of the research, i.e. post automation problems, as their libraries were not automated.

This section presents the data collected through this questionnaire along with the findings and analysis.

### *(a) COURSES OFFERED*

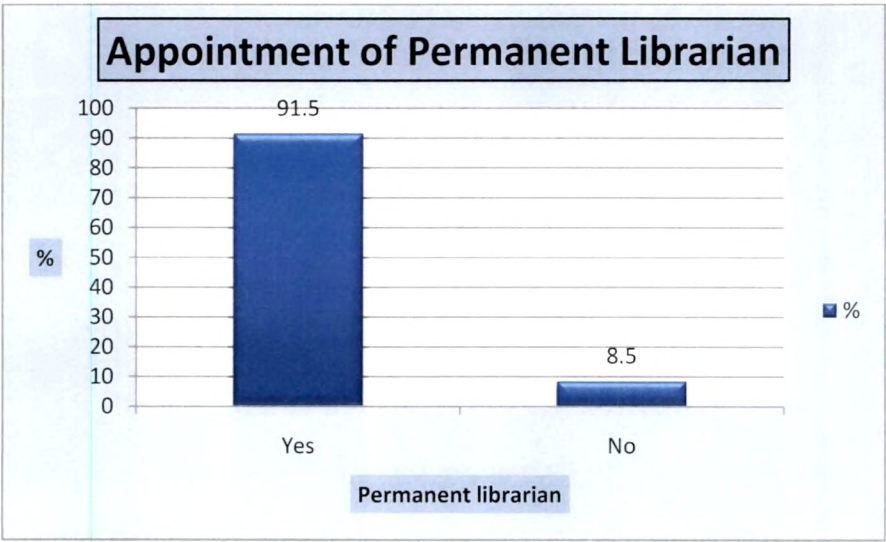
The courses being offered in the sample institutes are varied. This includes the different courses of Arts, Commerce, Science, Engineering, Management, Computer, Medical Science, Education, Law, and Social Science faculties. Out of the total 71 respondents, two respondents belonged to school library and one respondent belonged to public library.

### *(b) APPOINTMENT OF PERMANENT LIBRARIAN*

An attempt was made to find out whether the librarians appointed in these libraries are permanent or not. The data is presented in Table 6.1.

**Table 6.1 - APPOINTMENT OF PERMANENT LIBRARIAN**

Permanent Librarian	Number of libraries	%
Yes	65	91.5
No	06	8.5



**Figure 6.1 – APPOINTMENT OF PERMANENT LIBRARIAN**

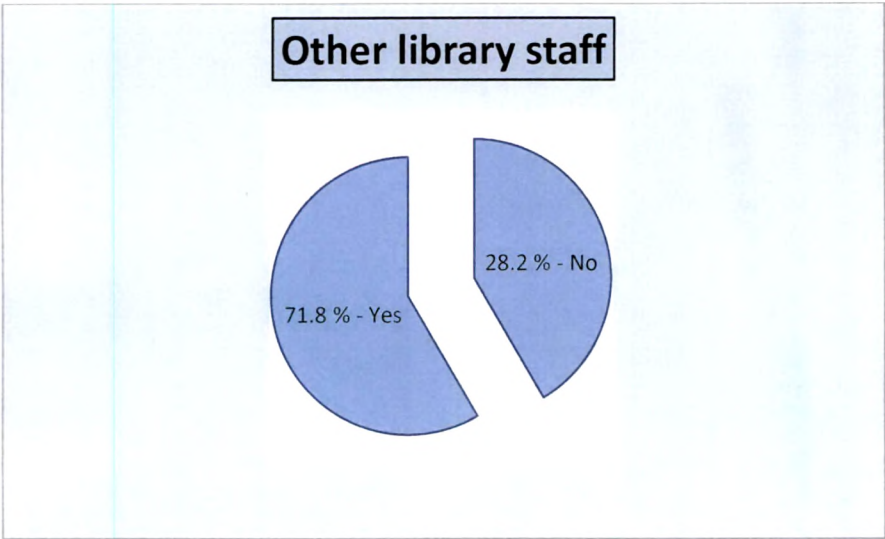
The data presented in Table 6.1 is displayed graphically in Figure 6.1. From the above figure, it is evident that 91.5% of the respondent libraries, i.e 65 libraries have permanent librarian. In the others, the position of permanent librarian is vacant, and the library is being run by temporary or adhoc staff member.

*(c) OTHER LIBRARY STAFF*

An effort was made to find out that besides the librarian whether the other library staff is appointed in the library. The data is presented in Table 6.2.

**Table 6.2 -OTHER LIBRARY STAFF**

Other library staff	Number of libraries	%
Yes	51	71.8
No	20	28.2



**Figure – 6.2 OTHER LIBRARY STAFF**

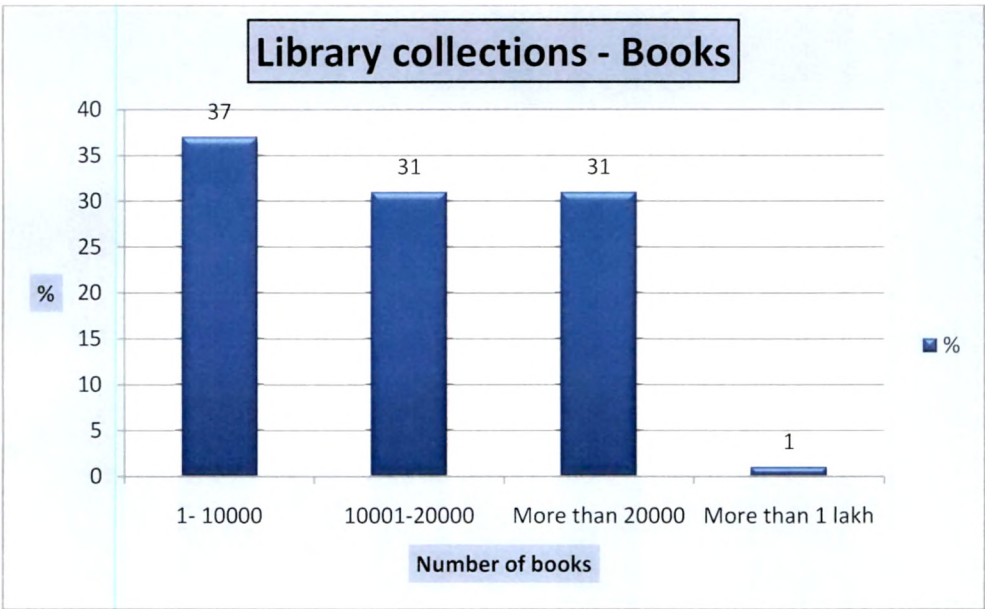
The data presented in the above Table 6.2 clears that almost 72% respondents are having other library staff, either library clerk or attendant (library peons) to assist them in the library. The other 28% of respondents are managing their library single handedly.

*(d) LIBRARY COLLECTIONS-BOOKS*

The following table reveals the collection of books in the library. The data is presented in Table 6.3.

**Table 6.3 - LIBRARY COLLECTIONS - BOOKS**

Number of books in the collection	Number of libraries	Percentage
1- 10000	26	37
10001-20000	22	31
More than 20000	22	31
More than 1 lakh	01	1



**Figure 6.3 - LIBRARY COLLECTIONS – BOOKS**

It is apparent from the above Figure 6.3 that 26 libraries are having the book collections in the range of 1-10000, 31 libraries are having in the range of 10001-20000, the other 31 libraries are having the collection of more than 20000 books, only one library, i.e. a public library, being run by the Surat Municipal Corporation (SMC), is having the collection of more than one lakh books.



(e) LIBRARY COLLECTIONS – PERIODICALS/JOURNALS

The following table reveals the collection of periodicals/journals in the library. The data is presented in Table 6.4.

Table 6.4 - LIBRARY COLLECTIONS – PERIODICALS/JOURNALS

Number of periodicals subscribed	Number of libraries	%
00-50	31	43.6
51-100	11	15.5
101-150	08	11.4
151-200	21	29.5

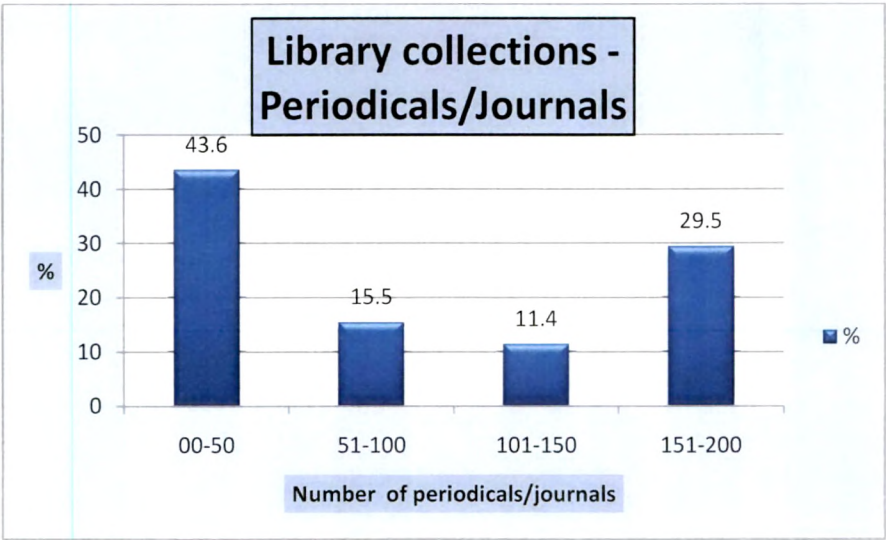


Figure – 6.4 LIBRARY COLLECTIONS – PERIODICALS/JOURNALS

Figure 6.4 displays graphically the data presented in Table 6.4. Out of 71 libraries, 31 libraries are subscribing periodicals in the range of 1-50. The other 11 libraries are

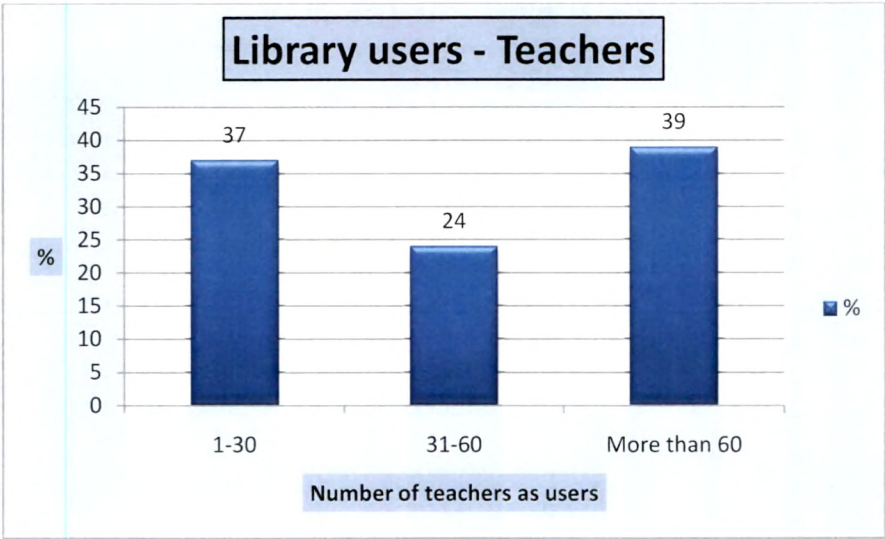
subscribing in the range of 51-100. The 8 libraries are subscribing in the range of 101-150 and 21 libraries are subscribing in the range of 151-200.

(f) *LIBRARY USERS- TEACHERS*

The following table represents the number of staffs as users of the library. The data is presented in Table 6.5.

**Table 6.5 - LIBRARY USERS - TEACHERS**

Teachers as users	Number of libraries	Percentage
1-30	26	37
31-60	17	24
More than 60	28	39



**Figure – 6.5 LIBRARY USERS - TEACHERS**

The data of Table 6.5 indicates that 26 libraries are having the number of staff as users in the range of 1-30. The other 17 libraries are having in the range of 31-60. The rest of the libraries are having more than 60 number of staff members as users.

(g) LIBRARY USERS – STUDENTS/MEMBERS

An attempt was made to find out the number of students as users of the library. The data is presented in Table 6.6.

Table 6.6 - LIBRARY USERS – STUDENTS/ MEMBERS

Number of student users	Number of libraries	Percentage
1-500	26	37
501-1000	16	23
More than 1000	29	40

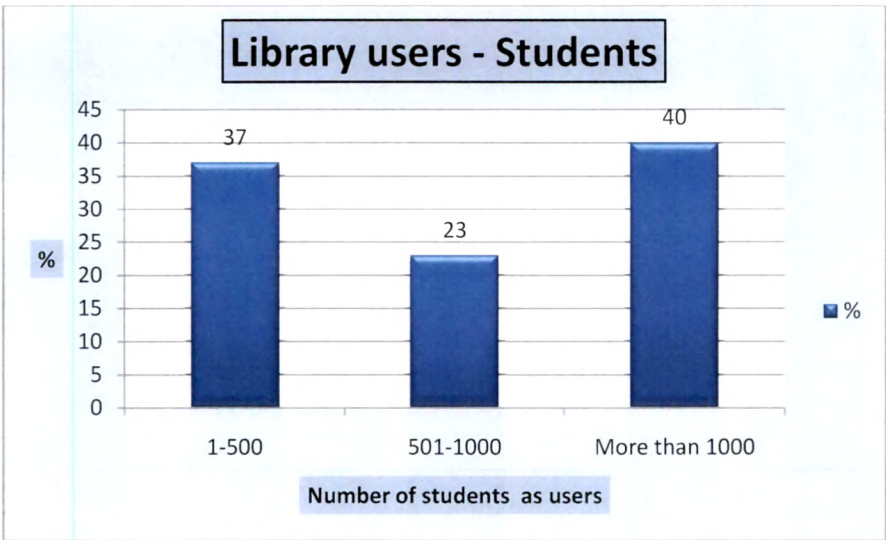


Figure – 6.6 LIBRARY USERS- STUDENTS/MEMBERS

It can be seen from the above Figure 6.6 that 26 libraries are having the number of students/members as users in the range of 1-500. The other 16 libraries are having in the range of 501-1000. The rest of the libraries are having more than 1000 number of students/members as the users.

(h) LIBRARY AUTOMATION

The following Table 6.7 and Figure 6.7 represent the number of libraries that opted for automation of their libraries.

Table 6.7 - LIBRARY AUTOMATION

Automated Library	Number of libraries	Percentage
Yes	71	79.7
No	18	20.3

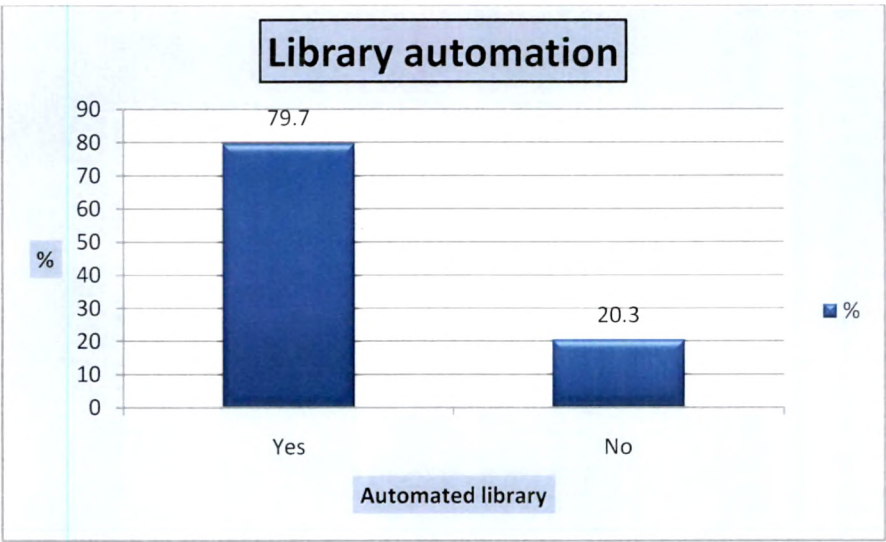


Figure – 6.7 LIBRARY AUTOMATION

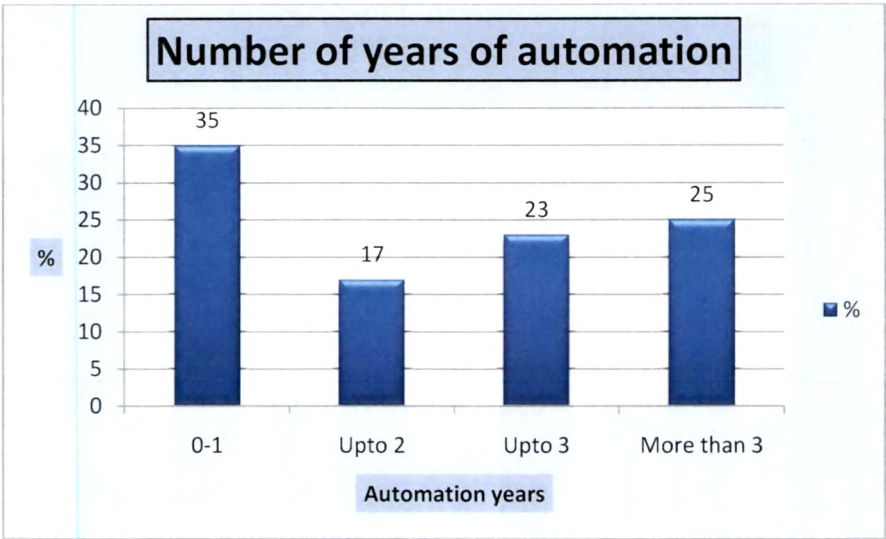
As represented in Figure 6.7, out of 89 respondents, 71 libraries have automated their library with the help of library management software. The other 18 libraries are being managed manually.

(i) *NUMBER OF YEARS OF AUTOMATION*

An attempt was made to find out the number of years of automation of the library. The data is presented in Table 6.8.

**Table 6.8 - NUMBER OF YEARS OF AUTOMATION**

Automation years	Number of libraries	Percentage
0-1	25	35
Upto 2	12	17
Upto 3	16	23
More than 3	18	25



**Figure 6.8 – NUMBER OF YEARS OF AUTOMATION**

From the above Figure 6.8, it is being revealed that 25 libraries are in their initial stage of automation, i.e. less than a year. Twelve libraries are in the range of 1-2 years of automation, the other 16 libraries have automated in the range of 2-3 years and the rest of the libraries, i.e., 18 libraries are managing their computerized libraries for more than 3 years.



(j) STATUS OF AUTOMATION

An effort was made to understand whether all the functions of library management are automated or only a few of them. The data is presented in Table 6.9.

Table 6.9- STATUS OF AUTOMATION

Options	Number of libraries	Percentage
Partial	55	77.5
Full	16	22.5

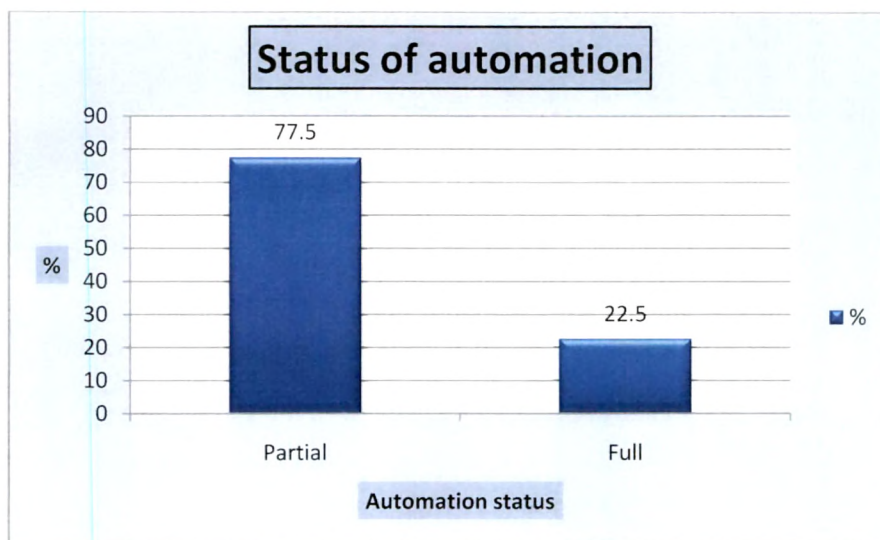


Figure 6.9 – STATUS OF AUTOMATION

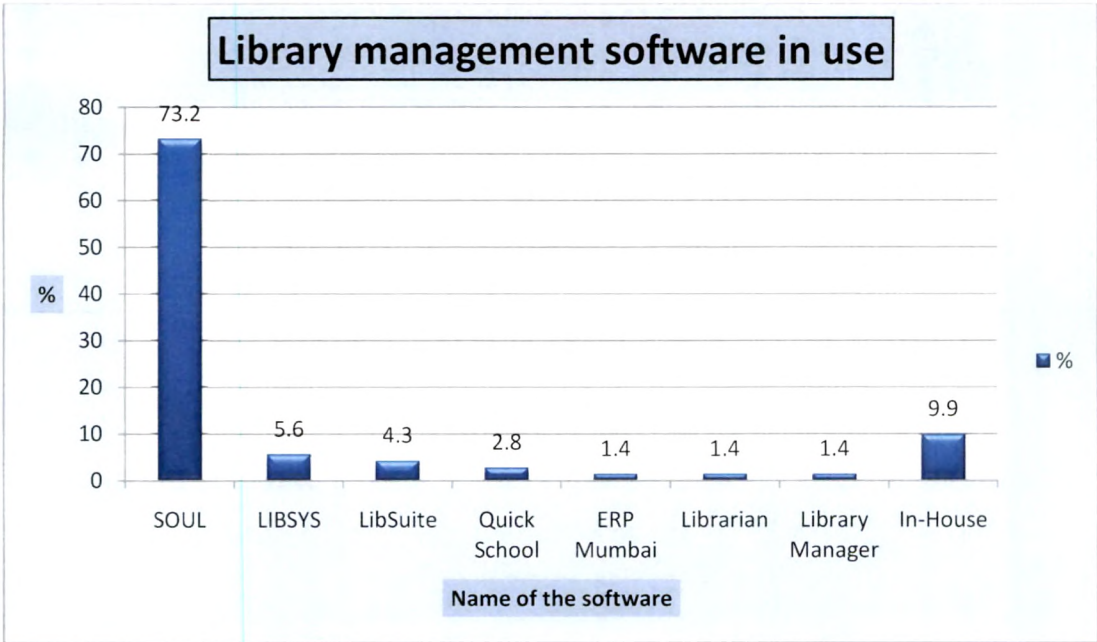
It is very much clear from the above Figure 6.9, that out of 71 libraries, only 16 libraries are fully automated, the rest 55 libraries are partially automated, i.e. these libraries are not using all the modules of the library management software. This figure reveals the clear picture of library automation in college libraries.

(k) LIBRARY MANAGEMENT SOFTWARE

The following table represents different library management software being in use for the purpose of automation. The data is presented in the Table 6.10.

**Table 6.10 - LIBRARY MANAGEMENT SOFTWARE**

Name of the software	Number of libraries	Percentage
SOUL	52	73.2
LIBSYS	4	5.6
LibSuite	3	4.3
Quick School	2	2.8
ERP Mumbai	1	1.4
Librarian	1	1.4
Library Manager	1	1.4
In-House	7	9.9



**Figure – 6.10 LIBRARY MANAGEMENT SOFTWARE**

The data presented in Table 6.10 is shown in the above Figure 6.10. Out of 71 respondents, 52 libraries are using SOUL library management software, 4 libraries are using

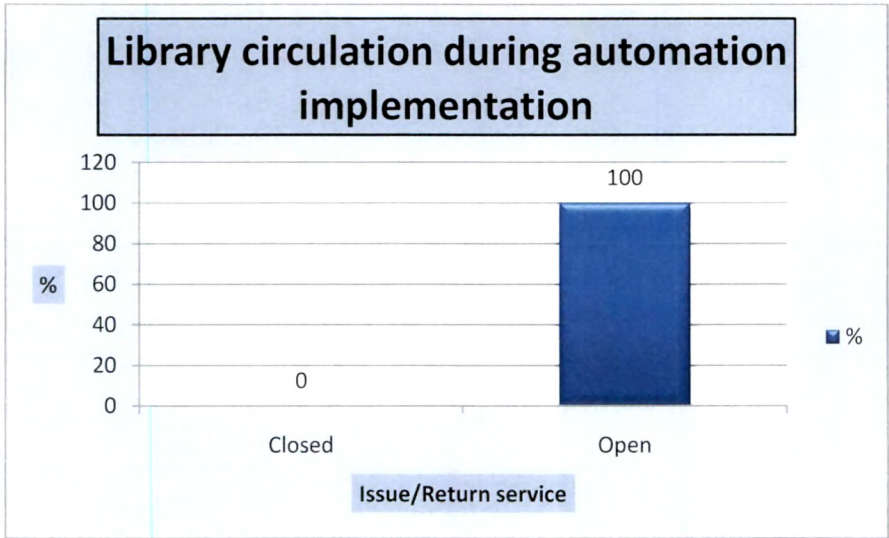
Libsys software, 3 libraries are managing with Libsuite software, 2 libraries are using Quick School software, 1 library is using ERP Mumbai software, 1 is using Librarian Software, 1 is using Library Manager software and the rest of the 7 libraries have developed the in-house library management software for their libraries.

(1) *LIBRARY CIRCULATION DURING AUTOMATION PROCESS*

The following table shows whether the circulation desk remained active during the automation process or was closed. The data is presented in Table 6.11.

**Table 6.11 - LIBRARY CIRCULATION DURING AUTOMATION PROCESS**

Issue/Return service	Number of libraries	Percentage
closed	00	00
Open	71	100



**Figure 6.11 - LIBRARY CIRCULATION DURING AUTOMATION PROCESS**



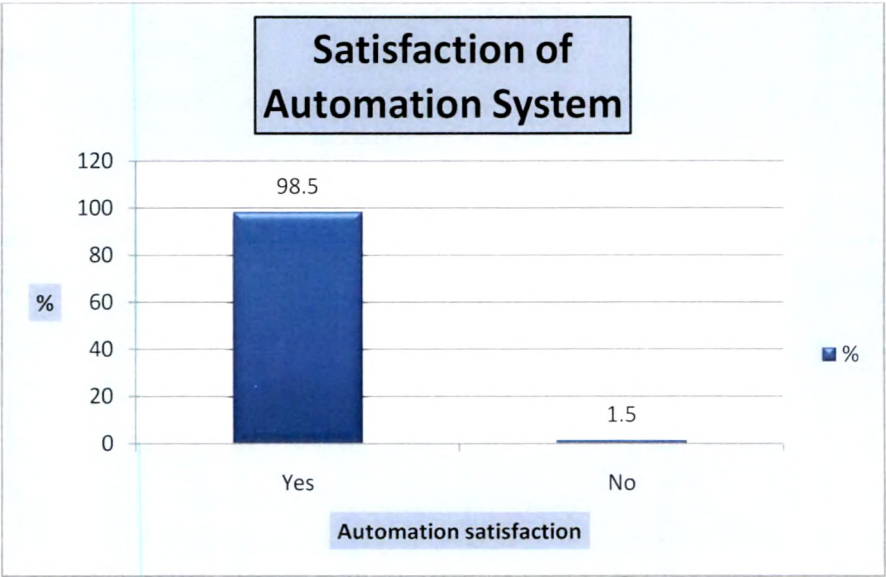
The data presented in Table 6.11 has been displayed graphically in Figure 6.11. This indicates that none of the libraries had closed their circulation counter during the process of automation. The data of Table 6.11 is presented in Figure 6.11.

*(m) SATISFACTION AFTER AUTOMATION*

An attempt was made to find out the satisfaction of the librarians after application of automation in the library. The data is presented in the Table 6.12.

**Table 6.12 - SATISFACTION AFTER AUTOMATION**

Satisfaction	Number of libraries	Percentage
Yes	70	98.5
No	01	1.5



**Figure – 6.12 SATISFACTION AFTER AUTOMATION**



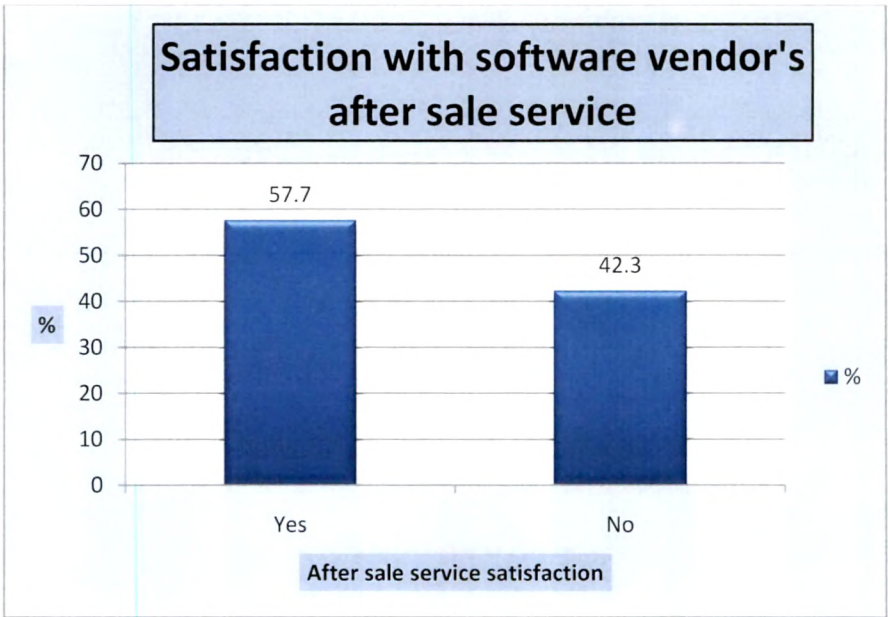
The data presented in Table 6.12 have been displayed in Figure 6.12. It is clear from it that except one librarian all the other 70 librarians are satisfied with the application of automation system in the library.

*(n) SATISFACTION WITH SOFTWARE VENDOR'S AFTER SALE SERVICE*

An attempt was made to find out the satisfaction of the librarian with the after sales service of software vendor.

**Table 6.13 - SATISFACTION WITH SOFTWARE VENDOR'S AFTER SALE SERVICE**

Options	Number of libraries	Percentage
Yes	41	57.7
No	30	42.3



**Figure – 6.13 SATISFACTION WITH SOFTWARE VENDOR'S AFTER SALE SERVICE**

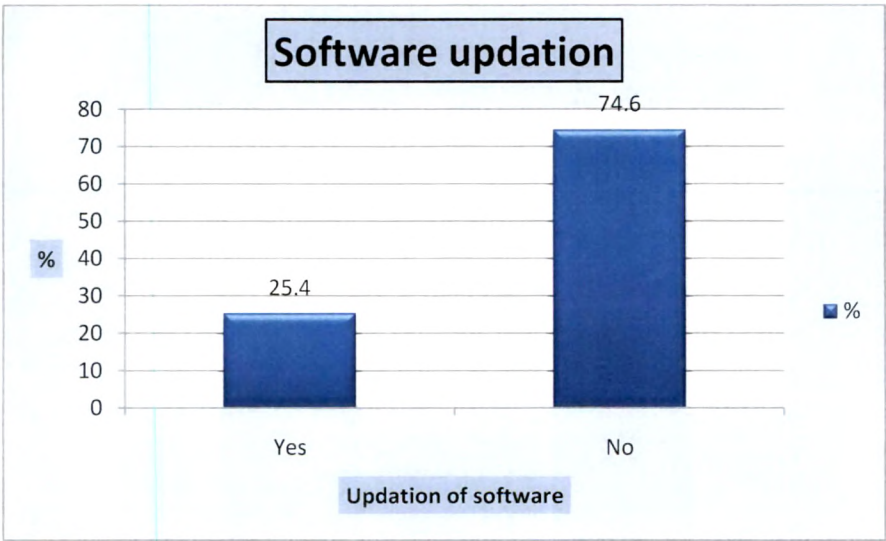
The data presented in Table 6.13 are plotted in Figure 6.13 shows that out of 71 respondents, 41 respondents are satisfied with the after sales service of software vendor; the other 30 respondents have shown their dissatisfaction for the after sales service.

*(o) SOFTWARE UPDATING*

An attempt was made to find out the status of regular updating of the software. The data is presented in the following table.

**Table 6.14 - SOFTWARE UPDATING**

Options	Number of libraries	Percentage
Yes	18	25.4
No	53	74.6



**Figure 6.14 - SOFTWARE UPDATING**

The data presented in Table 6.14 are shown graphically in Figure 6.14. This clears that the 18 respondents have agreed that the software is being updated regularly, the other 53 respondents have stated that the software is not been updated regularly.

(p) PROBLEMS AFTER AUTOMATION

The problems being faced by the librarians after automation are being classified in seven different categories as mentioned below. The respondents are facing either one or multiple problems. They are Software related problems, hardware related problems, back up problems, network based technological problems, problems related to computer illiterate library staff, problems related to dissatisfaction of users due to their lack of computer skills and financial constraint mainly due to lack of post automation budget.

(i) SOFTWARE RELATED PROBLEMS

An attempt was made to find out the number of librarians facing the software related problems. The data is presented in Table 6.15.

Table 6.15 - SOFTWARE RELATED PROBLEMS

Software Problems	Number of libraries	Percentage
Yes	41	57.7
No	30	42.3

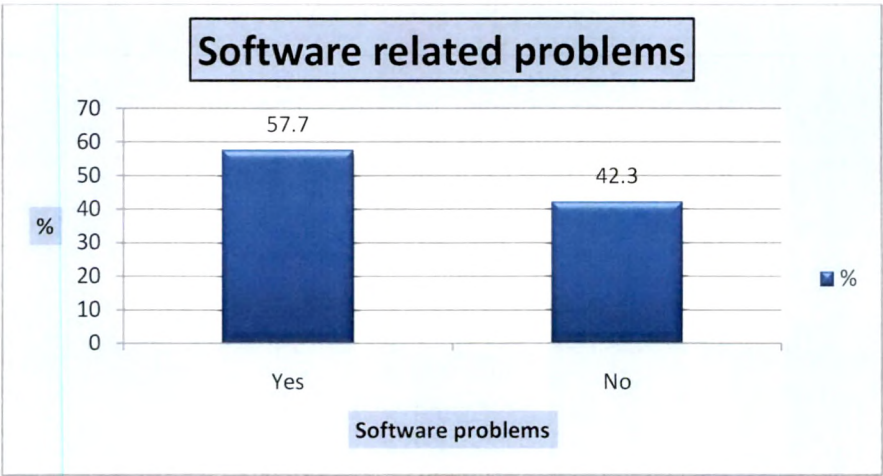


Figure 6.15 - SOFTWARE RELATED PROBLEMS



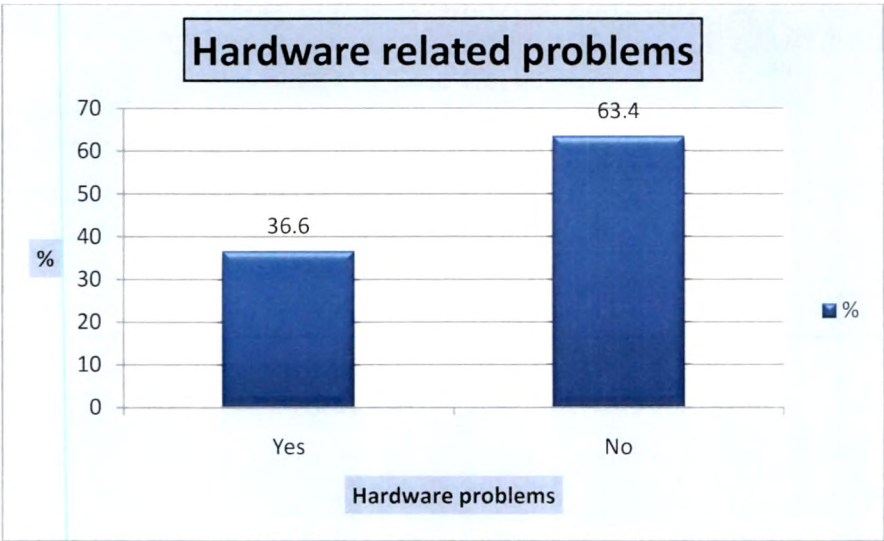
The data shown in the Table 6.15 are represented graphically in Figure 6.15. This clears that out of 71 respondents, 41 librarians are facing the software related problems.

(ii) *HARDWARE RELATED PROBLEMS*

An attempt was made to find out the number of librarians facing the hardware related problems. The data is presented in Table 6.16.

**Table 6.16 - HARDWARE RELATED PROBLEMS**

Hardware problems	Number of libraries	Percentage
Yes	26	36.6
No	45	63.4



**Figure 6.16 - HARDWARE RELATED PROBLEMS**

The data shown in Table 6.16 are represented graphically in Figure 6.16. This indicates that out of 71 respondents, 26 respondents are facing hardware related problems.

(iii) BACK UP RELATED PROBLEMS

An attempt was made to find out the number of librarians facing the backup related problems. The data is presented in Table 6.17.

Table 6.17 - BACK UP RELATED PROBLEMS

Back up problems	Number of libraries	Percentage
Yes	10	14
No	61	86

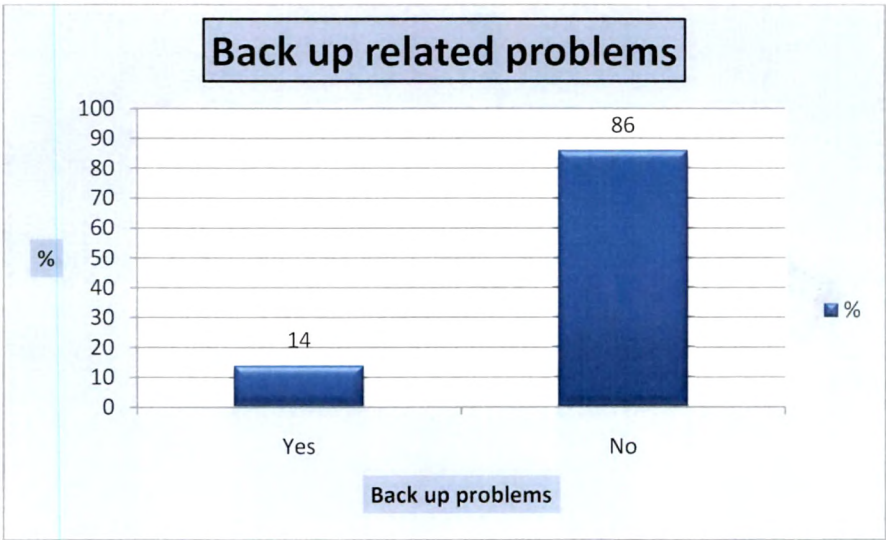


Figure 6.17 - BACK UP RELATED PROBLEMS

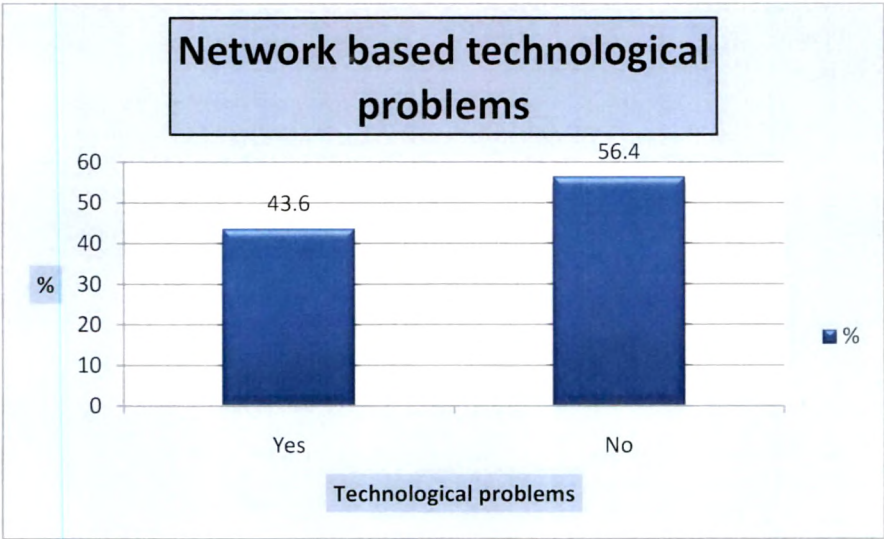
The data shown in Table 6.17 are represented graphically in Figure 6.17. According to it out of 71 respondents, 10 respondent libraries are facing back up problems.

(i) NETWORK BASED TECHNOLOGICAL PROBLEMS

An attempt was made to find out the number of librarians facing the network based technological problems. The data is presented in Table 6.18.

**Table 6.18 - NETWORK BASED TECHNOLOGICAL PROBLEMS**

Technological problems	Number of libraries	Percentage
Yes	31	43.6
No	40	56.4



**Figure 6.18 - NETWORK BASED TECHNOLOGICAL PROBLEMS**

The data as shown in Table 6.18 are represented graphically in Figure 6.18. This implies that out of 71 respondents, 31 libraries are facing network based technological problems.

*(iv) UNSKILLED LIBRARY STAFF*

An attempt was made to find out the number of libraries having library staffs which are unskilled in computer. The data is presented in Table 6.19.

**Table 6.19 - UNSKILLED LIBRARY STAFF**

Unskilled staff	Frequency	%
Yes	27	38
No	44	62



**Figure 6.19 - UNSKILLED LIBRARY STAFF**

The data shown in Table 6.19 are represented graphically in Figure 6.19. This indicates that out of 71 libraries, 27 libraries are facing the problem of unskilled library staff.

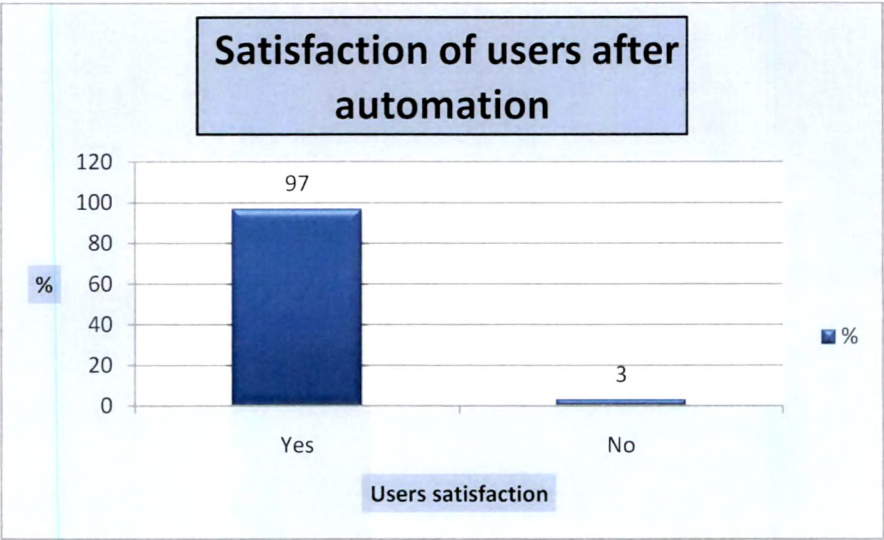
(v) *USER SATISFACTION*

An attempt was made to find out whether the users of automated libraries are satisfied or not after application of automation in library. The data is presented in Table 6.20.



**Table 6.20 - USER SATISFACTION**

Users satisfaction	Number of libraries	Percentage
Yes	02	3
No	69	97



**Figure 6.20 - USER SATISFACTION**

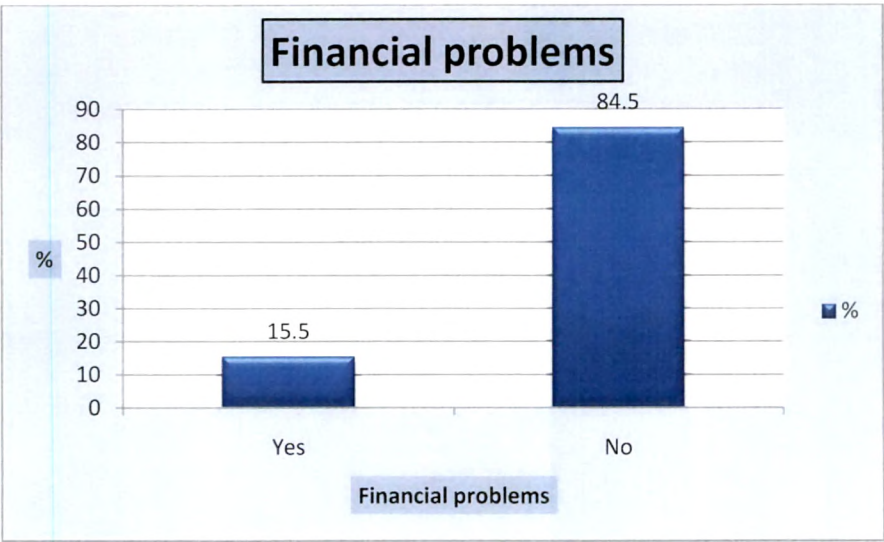
The data shown in Table 6.20 are represented graphically in Figure 6.20. This shows that out of 71 respondents, 69 respondent librarians have shown users satisfaction of automation system, only 2 respondents have shown users dissatisfaction due to lack of awareness in the users in handling the automation system.

*(vi) FINANCIAL PROBLEMS*

An attempt was made to find out the number of libraries facing financial problems after automation. The data is presented in Table 6.21.

**Table 6.21 - FINANCIAL PROBLEMS**

Financial problems	Number of libraries	Percentage
Yes	11	15.5
No	60	84.5



**Figure 6.21 - FINANCIAL PROBLEMS**

The data shown in Table 6.21 are represented graphically in Figure 6.21. This shows that out of 71 respondents, 11 respondents are facing the financial problems.

The problems faced by the librarians after automation, other than the one mentioned above are listed below.

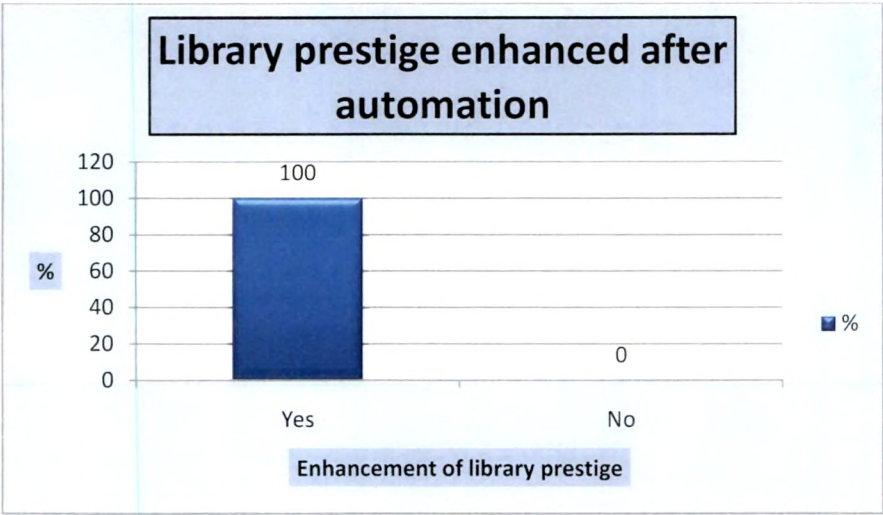
- Power supply is the major problem
- Lack of proper infrastructure
- Less co-operation from management
- Lack of ICT skills among students
- Limited facility in in-house customized software

(q) *PRESTIGE OF LIBRARY ENHANCED AFTER AUTOMATION*

An attempt was made to find out whether the prestige of library has been enhanced after automation. The data is presented in Table 6.22.

**Table 6.22 - PRESTIGE OF LIBRARY ENHANCED AFTER AUTOMATION**

Enhancement of library prestige	Number of libraries	%
Yes	71	100
No	00	00



**Figure 6.22 –PRESTIGE OF LIBRARY ENHANCED AFTER AUTOMATION**

The data presented in Table 6.22 are represented graphically in Figure 6.22. This figure reveals that, all the 71 respondents agree that the prestige of library has been enhanced after automation.

#### 4. SUGGESTIONS TO AVOID POST AUTOMATION PROBLEMS IN LIBRARIES

The basic purpose of the questionnaire was to understand the various post automation problems that the librarians are facing and to get the maximum possible solutions to these problems. The suggestions were asked from the respondents. The various suggestions received by the respondents are described below.

*a) A DETAILED PRACTICAL STUDY OF THE DEMO VERSION IS ESSENTIAL*

It is very much essential to go through and understand in detail, each and every module in the demo version of the software.

*b) THE COST OF SOFTWARE SHOULD BE ECONOMICAL*

The automation process involves many other peripherals beside library software. This requires separate financial budget. It is important that the cost of software should be such that it is affordable to a small library having limited budget for the automation purpose.

*c) THE HIGH SPEED PC MUST BE PROVIDED TO THE LIBRARY*

To access the database, it is recommended that the computer being provided should be latest with high speed configuration.

*d) OPERATING SYSTEM SHOULD BE COMPATIBLE WITH THE SOFTWARE*

The operating system installed in the computer should match with the requirement of software operation.

*e) SOFTWARE SHOULD BE MORE USER-FRIENDLY*

The language of the software should be simple and understandable. Once trained, one should find it easy to operate on his own.

*f) ACCURACY IN DATA ENTRY IS REQUIRED*

Data entry is the initial and the most imperative function of library automation. Accuracy in data entry avoids duplication of work.

*g) REGULAR BACK UP IS MUST*

The regular back up on day to day basis is required.

*h) CONSULT THE EXPERIENCED LIBRARIAN BEFORE HEADING FOR AUTOMATION*

It is always desirable to consult the librarians who have already automated their library. This may help in avoiding the problems which they had come across during and after the implementation process.

*i) SUPPORT OF TECHNICAL EXPERT (IT) IN LIBRARY IS NEEDED*

Library professionals are not well versed with the technicalities of the automation process. It is preferable to have technical experts involved in the whole process of library automation.

*j) USER AWARENESS PROGRAMMES SHOULD BE ORGANISED FOR ADJUSTING INTO THE NEW ENVIRONMENT*

The automated environment is quite different from the traditional manual environment of library. It is advisable to have user awareness program to get the users acquainted with the new system.

*k) THE LIBRARY STAFF FROM TOP TO BOTTOM SHOULD BE TRAINED IN AUTOMATION*

It has been observed that only the library staff concerned with the automation process is being trained and not the whole staff. It is always better to train all the library staff, from top to bottom, about the automation process.

*l) HARDWARE SHOULD BE UPDATED REGULARLY*

The information and communication technology is changing very fast. To get the best result of the automation the latest configured hardware should be procured regularly.

*m) SOFTWARE VENDOR SHOULD BE EASILY ACCESSIBLE*

This is the most important aspect of automation. Once the software is installed, the job of the vendor does not end but in fact it begins from there. Major librarians are facing this problem of non accessibility of the software vendor due to far off location. Sometimes they are not even accessible either on phone or through email.

*n) LIBRARY PROFESSIONALS SHOULD TAKE KEEN INTEREST IN DEVELOPING THEIR KNOWLEDGE TO KEEP PACE WITH THE TECHNICAL AND TECHNOLOGICAL ADVANCEMENT*

It is being felt that library professionals must acquaint themselves with the technical and technological knowledge necessary for the operation of the advanced technology applied in the library. One cannot always depend on the technical experts for any small technical difficulty.

- o) Once the system is implemented with particular library management software, one cannot go for software due to financial constraints.
- p) As mentioned earlier ICT is developing at a rapid speed. One has to pay for the latest invention. If this technology is available in other software, one cannot procure that software, due to financial constraint.

## 5. DATA ANALYSIS

Even now some colleges do not have permanent librarians. The college library must have a permanent librarian. The above study reveals that the college libraries are managed by a single professional. The picture clears that in general, in colleges, "Library is a one man show". The librarian should have other library qualified personnel to assist him/her in the library management. The number of assistants depends on the total strength of users of an institute. Out of 71 libraries, 55 libraries are only partially automated and majority of them i.e. 73.2% are using SOUL. It means they have basically automated their catalogue database, hence 98.5% of them claim they are satisfied. However, a little more probing reveals that 42.3% are not happy with the after sales service and 74.6% have not gone for software updating. Further 57.7% are facing software related problems and 36.6% are facing hardware related problems. Also 43.6% are facing network related technological problems and 38% face unskilled staff problems. Although 84.5% say that they do not face any financial problems but the fact that 74.6% have not gone for software updating and 36.6% are facing hardware related problems indicates that there is a budgetary constraint although not vocalized by the librarians. The library should have automation budget for overcoming the post automation financial problems. The library professionals should acquaint themselves with the latest technological developments in the field. The fact that librarians were profuse in giving suggestions indicates that they do face many post automation problems. There should be some resources for the awareness about managing the post automation problems.

Library automation implementation is easy but it is very difficult to manage and maintain the system. The conclusions emerging from these findings are presented in the next chapter.

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