Status of Automation in Agricultural College Libraries

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Abstract: - *The growth and development of Information and Communication Technology (ICT) is playing vital role in the field of library and information science. The present paper shows the status and problems of library automation in agricultural college libraries under the jurisdiction of MPKV, Rahuri. It shows that only 65% of Libraries are automated and main problems for library automation are inadequate staff, lack of infrastructure, insufficient funds and lack of training to library staff. This study also gives a status view of the software packages used by libraries and modules of library automation that they are using. It was found that Automation of libraries is still in formative stages in self financed colleges. These libraries are using only for few modules of library automation like acquisition, circulation and cataloguing*

Keywords: Library Automation, problems of Library Automation, Library Management Software

1. Introduction

Library is considered as heart and soul of any learning institution, which is a pivot of the teaching-learning process. A well-equipped and well maintained library is the foundation of modern education structure. The college library plays an important role in providing overall library and information services to the patrons. College libraries are the hub of the teaching and learning activities where students and teachers can explore the vast resources of information. In the traditional libraries users have to spend more time for searching a small piece of information and for that have to depend mainly on the library professional or library staff. But in the age of information communication technology, computers are being used for day-to-day housekeeping activity of the library which saves the time avoid duplication of work and make the library service smooth and effective.

2. Objectives of the study

This paper reports of a study of the status and problems of library automation in agricultural college libraries under the jurisdiction of MPKV, Rahuri.

The major objectives of the study are:

- To find out how many libraries have undertaken automation.
- To find out which areas library functions and services are automated.
- To find out present status of library automation.
- To find out barriers to library automation faced by library staff.
- To find out whether sufficient staff is available to carry out automation.
- To know about the software used in the library automation?

3. Hypothesis of study

1. Most of the Libraries are automated.
2. Most of the Constituent College Libraries are fully automated.

4. Data analysis

The statistics in the table 4.1 show the distribution of library staff on the basis of designation. It is seen that, 23 (24.21%) are Assistant Librarian, 5 (5.26%) are Technical Assistants. There are 6 (6.32%) having Chief Cataloguer, 15 (15.79%) Issue Assistants. It is observed that, 18 (18.95%) are Library Attendants, while 28 (29.47%) are others i.e. Peon etc.

The table 4.2 shows the distribution of digital library area (Sq. ft.) made available in the library. It is observed that, 10 (25%) libraries have in the range of 101-200 Sq. ft. area, followed by 8(20%) libraries having in the range of 1-100 and 201-300 Sq. ft. area, however only 1 (2.5%) library havs in the range of 501-600 and 1001-2400, 2401-5500 Sq. ft. area. It also shows that only 2 (5%) libraries having in the range of 301-400, 701-800, 901-1000 Sq. ft. area.

Table No. 4.1: Designation wise Distribution of Library Staff

Sr. No	Designation	No of Staff	Percentage
1	Assistant Librarian	23	24.21
2	Technical Assistant	5	5.26
3	Chief Cataloguer	6	6.32
4	Issue Assistant	15	15.79
5	Library Attendants	18	18.95
6	Others	28	29.47
	Total	**95**	**100.00**

Table No. 4.2: Digital Library Area

Sr. No	Digital Library Area (Sq. fit.)	No of Libraries	Percentage
1	< 0	2	5
2	1-100	8	20
3	101-200	10	25
4	201-300	8	20
5	301-400	2	5
6	401-500	3	7.5
7	501-600	1	2.5
8	601-700	0	0
9	701-800	2	5
10	801-900	2	5
11	901-1000	0	0
12	1001-2400	1	2.5
13	2401-5500	1	2.5
	Total	**40**	**100**

Table No. 4.3: Library Automation Status

Sr. No	Library Automated	No of Libraries	Chi. Sq.	P-Value
1	Yes	26(65)	3.801	0.051
2	No	14(35)		
	Total	**(40) 100**		

Note:-Note:-Chi-Sq = 3.801, DF = 1, P-Value = 0.051

The analysis of the data as shown in the table 4.3 reveals that out of 40 libraries, 26 (65%) libraries are automated and 14 (35%) libraries are non-automated libraries.

The chi-square test is also administered to test the hypothesis that there is Level of significance (α) = 0.05, P-Value = 0.050 is less than level of significance. Hence the hypothesis 1 "**Most of the Libraries are automated"** is valid.

Table No.4.4: Present Status of Library Automation

Sr. No	Present Status	No of Libraries	Percentage
1	Completely Automated	8	20
2	Partially Automated	6	15
3	Initial Stages	26	65
	Total	**40**	**100**

In order to ascertain the extent of the automation of the libraries the librarians were asked to indicate the extent of automation of the libraries. It is observed from the data as shown in the table 4.4 that out of 40 libraries, 8 (20%) libraries are completely automated and 6 (15%) libraries are partially automated. It is observed that only 26 (65%) libraries are in Initial stage of the Library Automation.

Table No. 4.5: Library Software

Sr. No	Library Software	No of Libraries	Percentage
1	Library Manager	5	12.5
2	SOUL 2.0	4	10
3	KOHA	3	7.5
4	SLIM 21	3	7.5
5	AUTOLIB	3	7.5
6	Vriddhi	2	5
7	E-Campus	2	5
8	Godavari- agri-tech	2	5
9	E-Granthalaya	1	2.5
10	e-Krishi	1	2.5
11	No any	14	35
	Total	**40**	**100**

Librarians were asked to provide the details about the use of software in their libraries. It is observed from the data as shown in the table 4.5. Out of 40 libraries, it is observed that 5 (12.5%) libraries use Library Manager Software and 4 (10%) libraries use SOUL 2.0 software, 3 (7.5%) libraries use KOHA, SLIM 21 and AUTOLIB software. However 2 (5%) libraries use Vriddhi, E-Campus, Godavari-agri-techsoftware. It also shows that only 1 (2.5%) libraries are using E-Granthalaya and e-Krishi, while 14 (35%) libraries are not using any single software for the library automation as well as library housekeeping operations.

The table 4.6 shows the Areas of Library Automation. It is observed that 27 (67.5%) are in initial stage in the automation of the Acquisition, and 13 (32.5 %) libraries completed the acquisition with the help of library software. Followed by 17 (42.5%) initial stage in

Cataloguing and 23 (57.5%) are completed the cataloguing, 24 (60%) libraries are in initial stage providing Circulation with the help of Software and only 16 (40%) libraries are in the Complete stage, only 3 (7.5%) libraries completely automated in Budgeting and SDI/CAS.

Table No.4.6: Areas of Automation

Sr. No	Areas of Automation	Initial	Completed	Total
1	Acquisition	27 (67.5)	13 (32.5)	40 (100)
2	Cataloguing	17 (42.5)	23 (57.5)	40 (100)
3	Circulation	24 (60)	16 (40)	40 (100)
4	Serials Control	31 (77.5)	9 (22.5)	40 (100)
5	Information Retrieval Service	32 (80)	8 (20)	40 (100)
6	SDI/CAS	37 (92.5)	3 (7.5)	40 (100)
7	OPAC	26 (65)	14 (35)	40 (100)
8	Administration	32 (80)	8 (20)	40 (100)
9	Budgeting	37 (92.5)	3 (7.5)	40 (100)

Table No. 4.6. 1: Areas of Library Automation VS Category of Colleges

Sr. No	Library Areas	Constituents Colleges (n=6)		Self-Financed Colleges (n=34)		Chi-Sq.	P-Value
		Initial	Completed	Initial	Completed		
1	Acquisition	3 (50)	3 (50)	24(70.59)	10(29.41)	50.924	0.000
2	Cataloguing	0 (0)	6(100)	17(50.00)	17(50.00)		
3	Circulation	1 (16.67)	5 (83.33)	23(67.65)	11(32.35)		
4	Serials Control	2 (33.33)	4(66.67)	29(85.29)	5(14.71)		
5	Information Retrieval Service	1 (16.67)	5 (83.33)	31(91.18)	3(8.82)		
6	SDI/CAS	3 (50)	3 (50)	34(100)	0(0)		
7	OPAC	0 (0)	6(100)	26(76.47)	8(23.53)		
8	Administration	3 (50)	3 (50)	29(85.29)	5(14.71)		
9	Budgeting	5 (83.33)	1 (16.67)	32(94.12)	2(5.88)		

Note:-Note:-Chi-Sq = 50.924, DF = 1, P-Value = 0.000

The table 4.6.1 shows the Areas of Library Automation Vs Category of Colleges. It reveals that out of the total 6 Constituents libraries, 3 (50%) libraries are in initial stage in Acquisition, SDI/CAS Services and

Administration service. However 2 (33.33%) libraries are in initial stage of Serials control. It is observed that only 1 (16.67%) library is in initial stage in Budgeting while 5 (83.33%) are completed. It reveals that only 1 (16.67%) library is in initial stage in Circulation and Information Retrieval Service, while 5(83.33%) libraries completed respectively. So it is concluded that Constituents College libraries are mostly fully automated.

Apart from this the Self-Financed College libraries initially started their work on SDI/CAS Service. This was followed by Budgeting 32 (94.12%), Serials Control and Administration 29 (85.29%) in the Initial stage, and 17 (50%) libraries completed their cataloguing in the Automation followed by Circulation 11 (32.35%).

The chi-square test is also administered to test the hypothesis that there is **Level of significance (α) = 0.05, P-Value = 0.000 is less than level of significance.** Hence the hypothesis **"Most of the Constituents College Libraries are fully automated" is Valid.**

Table No. 4.7: Back-end Database of Automation Software

Sr. No	Database	No of Libraries	Percentage
1	MySQL	18	45
2	Oracle	7	17.5
3	MS Access	1	2.5
4	No any	14	35
	Total	**40**	**100**

The table 4.7 shows the Back-end Database. It is reveals that out of the total 40 libraries 18 (45%) libraries have MySQL, while 7 (17.5%) libraries have Oracle. It is observed that only 1 (2.5%) library has My Access back end database and it also shows that 14 (35%) libraries don't have any backend database because they don't have any library management software.

Table No. 4.8: Total Records in Database

Sr. No	No of Records	No of Libraries	Percentage
1	0	14	35
2	1-1000	8	20
3	1001-2000	6	15
4	2001-3000	2	5
5	3001-4000	4	10
6	4001-5000	2	5
7	5001-50000	2	5
8	50001-115000	2	5
	Total	**40**	**100**

The table 4.8 shows the No. of Records available in Database. It is reveals that out of the total 40 libraries 14 (35%) libraries have 0 record in the database. However 8 (20%) libraries have 1-100 range of record, followed by 6 (15%) libraries having 1001-2000 range of record. It is observed that only 2(5%) libraries have 2001-3000 and 4001-115000 range of record in the Database.

Table No. 4.9: Frequency of Updating Database

Sr. No	Frequency	No of Libraries	Percentage
1	Always	20	50
2	Sometime	3	7.5
3	Rarely	3	7.5
4	Never	14	35
	Total	**40**	**100**

The table 4.9 shows the Frequency of Updating the Database. It is observed that out of the total 40 libraries 20 (50%) libraries have Always Update; 3 (7.5%) libraries have Sometime Update and Rarely Update. It is observed that only 14 (35%) libraries have Never Update.

Table No. 4.10: Separate Library Server

Sr. No	Separate Library Server	No of Libraries	P-Test	P-Value
1	Yes	17 (42.5)	Test of p = 0.5 vs p < 0.5	0.215
2	No	23 (57.5)		
	Total	**40 (100)**		

Note:-Test of p = 0.5 vs p < 0.5; p value= 0.215

The table 4.10 shows the availability of Separate Library Server. It is examined that out of the total 40 libraries 17 (42.5%) libraries have Separate Library Server; 23 (57.5%) libraries don't have Separate Library Server. The P-test is also administered to test the hypothesis that there is p = 0.5 vs p < 0.5.value of Separate Library Server. The parameter value is (0.215).

Table No. 4.11: LAN Connectivity

Sr. No	LAN Connectivity	No of Libraries	P-Test	P-Value
1	Yes	20 (50)	Test of p = 0.5 vs p not = 0.5	1.000
2	No	20 (50)		
	Total	**40 (100)**		

Note:- Test of p = 0.5 vs p not = 0.5, P-Value = 1.000

The table 4.11 shows the Availability of Local Area Network in the Agricultural College Libraries. It is observed that out of the total 40 Agricultural College libraries 20 (50%) libraries have LAN Connectivity; while 20 (50%) libraries don't have LAN Connectivity. The P-test is also administered for testing of the data that there is p = 0.5 vs p not= 0.5.value of Separate Library Server. The parameter value is (1.000).

The table 4.12 shows the Separate Web Page. It is observed that out of the total 40 libraries only 5 (12.5%) libraries have Separate Web Page; however 35 (87.5%) libraries don't have Separate Web Page for the libraries.

Table No. 4.12: Separate Web Page

Sr. No	Separate Web Page	No of Libraries	Percentage
1	Yes	5	12.5
2	No	35	87.5
	Total	**40**	**100**

Table No. 4.13: Availability of Internet Facility

Sr. No	Internet Facility	No of Libraries	P-Test	P-Value
1	Yes	39(97.5)	Test of p = 0.99 vs p < 0.99	0.331
2	No	1(2.5)		
	Total	**40(100)**		

Note:-Test of p = 0.99 vs p < 0.99, P-Value= 0.331

The table 4.13 shows the availability of separate Web Sites for the libraries. It is observed that out of the total 40 libraries 39 (97.5%) libraries provide the Internet Facility to the users as well as staff; however only 1 (2.5%) library don't have Internet Facility in the Library. Test of p = 0.99 vs p < 0.99 P-Value 0.331. The 99% collages have Internet Facility. Hence the hypothesis is significant.

Table No. 4.14: Types of Internet Connectivity

Sr. No	Internet Connectivity	No of Libraries	Percentage
1	Broadband	32	80
2	Dial-up	1	2.5
3	Leased Line	6	15
4	Other	1	2.5
	Total	**40**	**100**

The table 4.14 18 shows the type of Internet Connectivity used in the library. It is observed that out of the total 40 libraries 32 (80%) libraries use Broadband connectivity; followed by 6 (15%) libraries using Leased Line connection. However only 1 (2.5%) library uses Dial-up connection of Internet Connectivity.

Table No. 4.15: Speed of Internet Connectivity

Sr. No	Speed	No of Libraries	Percentage
1	64 kb	9	22.5
2	128 kb	7	17.5
3	1 mbps	4	10
4	4.2 mbps	7	17.5
5	10 mbps	**4**	10
6	Other	9	22.5
	Total	**40**	**100**

The table 4.15 shows the Internet Connectivity Speed. It is observed that out of the total 40 libraries 9 (22.5%) libraries have 64 kb speed; followed by 7 (17.5%) libraries having 128 kb and 4.2 mbps speed respectively. However only 4 (10%) libraries have 1mbps and 10 mbps speed of the Internet Connectivity.

5. Conclusion

Library automation brings great changes in the functioning of the library and providing effective and efficient library services. Automation of libraries is still in formative stages in self financed colleges. By library automation, librarians can handle library functions more effectively and can provide good services to the users. Some of libraries are using only for few modules of library automation like acquisition, circulation and cataloguing. Libraries should introduce all modules in their library automation like OPAC, Serial Control, stock verification, budgeting and etc.

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