

## Use of Library Automation Software in First Grade Colleges of Four Districts of Karnataka: A Study

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**Abstract** - *The present paper provides the use of library automation software in first-grade college libraries affiliated to the University of Mysore. A structured questionnaire was used to collect primary inputs from college libraries to understand the present status. A total of 160 colleges were taken up for the study in which 135 (84.37%) colleges responded, 15 first grade college libraries did not have librarians, and ten librarians did not respond. The study's findings reveal that 94 college libraries have automated. Among them, 67 (71.27%) of librarians have adopted 'Open Source' library automation software, followed by 24 (25.53%) of librarians have adopted 'Commercial' library automation software, about 03 (03.19%) of librarians have adopted 'In-House library automation software. The study's findings reveal that all autonomous colleges are automated. The most used library automation software in libraries is 'Koha' which 28 (29.78%) librarians have adopted, followed by 25 (26.59%) of librarians having adopted 'E-Granthalaya', 23 (24.46%) have 'EasyLib'. It is suggested that if the librarians have problems in handling the software and difficulties in automating the libraries, the librarian should discuss on the open discussion forum, thereby getting relevant features related to their library environment and answers to questions. It is a forum where experienced librarians answers. Librarian should take initiatives, thereby connecting with others and professionally enhancing support for the library's development and uplifting their skill.*

**Keywords:** Library Automation, College Libraries, Automation Software, Karnataka District

### Introduction

Library automation entails various electronic machines like computers, barcoding systems, scanners, RFID, the Internet, etc. Automation's fundamental goal is to enhance access to the collection and efficiency of existing services. Apart from being used as a data-processing tool, computers in libraries are used for the storage of information as well as for accessing and retrieval of bibliographic information. To achieve this objective integrated library automation package is essential. There are several commercial automation packages and open source software available.

## **Review of literature**

Computers in libraries have immensely enhanced library services' effectiveness, including efficient organization and retrieval of information activities. Since the application of information technology in libraries, one of the most significant challenges before the library managers are selecting the right library automation software package to cater to a particular library (Onoriode&Ivwighrehweta, 2014; Husain & Ansari, 2007).

Further, Uwaifo (2007) determined the attitudes of academic librarians in Nigeria. The majority of the librarians registered a high and positive attitude towards library automation. Ponelis and Adoma (2018) stated that Open source ILS has become more popular globally. Haider (1998) explained that automation activities were started in the late 1960s and, since 1990, there has been the main focus of the LIS profession in Pakistan. Few private university libraries had implemented integrated library systems, whereas large public sector university libraries, college libraries, and public libraries lacked automated systems. UNESCO developed CDS/ISIS, INMAGIC and ORACLE as the popular software used in Pakistani.

## **Objectives of the study**

- To know the ICT infrastructure available for automation of first-grade college libraries.
- To find the type of automation software adopted in college libraries.
- To know the software package adopted by different college libraries affiliated to the University of Mysore.
- To find out which areas of library functions and services are automated in the college libraries.

## **Methodology**

The data was collected from four districts, Mysuru, Mandya, Chamrajnagara and Hassan, coming under the University of Mysore's jurisdiction. The First Grade Colleges affiliated to the University of Mysore, Mysuru has been categorized into four types, i.e., Government Colleges, Private Aided Colleges, Private Unaided Colleges and Autonomous Colleges. The present study used a structured questionnaire as a tool. The details of affiliated colleges to the University of Mysore were taken from the University of Mysore's official website. The questionnaires were distributed to all the 160 librarians of first-grade colleges affiliated to the University of Mysore. Besides distributing the questionnaires, informal personal interviews with selected librarians were conducted, and observation in the libraries was also done. A total of 135 duly filled-in questionnaires were received, with a response rate is 84.37 % (135). It was found that 15 first grade college libraries did not have librarians and ten librarians did not respond. The collected data are tabulated using the SPSS statistical package.

## **Data analysis and interpretation**

### **Availability of ICT infrastructure**

The availability of ICT infrastructure in the libraries is shown in the Table-1. It can be seen that 114 (84.44%) of libraries are having 'Desktops', followed by 82 (60.74%) have 'UPS', 74 (54.81%) 'Web Cameras', 67 (49.62%) 'Servers', 54 (40.00%) 'Printers', 51 (37.775) 'Barcode Readers', 48 (35.55%) 'LCD Projectors', 47 (34.81%) 'USB Hard Disk', 34

(25.18%) 'Photocopy Machine' and 29 (21.48%) of libraries are having 'OPAC terminals for users'.

**Table-1: Availability of ICT infrastructure**

ICT Infrastructures	Government (N=60)	Private Aided (N=19)	Private Unaided (N=47)	Autonomous (N=09)	Total (N=135)
Desktops	56(93.33)	19(100)	30(63.82)	09(100)	114(84.44)
OPAC terminals for Users	13(21.66)	05(26.31)	02(04.25)	09(100)	29(21.48)
Servers	28(46.66)	13(68.42)	18(38.29)	08(88.88)	67(49.62)
Printers	17(28.33)	15(78.94)	13(27.65)	09(100)	54(40)
Barcode Readers	23(38.33)	08(42.10)	11(23.40)	09(100)	51(37.77)
UPS	28(46.66)	18(94.73)	27(57.44)	09(100)	82(60.74)
Web cameras	35(58.33)	12(63.15)	19(40.42)	08(88.88)	74(54.81)
LCD projectors	14(23.33)	15(78.94)	12(25.53)	07(77.77)	48(35.55)
USB Hard Disk	15(25)	12(63.15)	14(29.78)	06(66.66)	47(34.81)
Photocopy machine	15(25.00)	08(42.10)	04(08.51)	07(77.77)	34(25.18)

*Note: Figures in parentheses indicate percentage*

The Table-1 also depicts that 56 (93.33%) of 'Government' colleges, 19 (100.00%) of 'Private Aided' colleges, 30 (63.82%) of 'Private Unaided' Colleges and 09 (100.00%) of 'Autonomous' Colleges are having 'Desktops' in their libraries. It is clear from the above table that all the 'Autonomous' colleges are have good ICT infrastructure facility in the libraries compared to Government, Private Aided and Private Unaided colleges.

### Internet connectivity

The information about the availability of Internet connectivity in the libraries is presented in Table-2. A total of 94 (69.62%) of libraries had Internet Connectivity and the remaining 41 (30.37%) libraries did not have the availability of Internet Connectivity.

**Table-2: Internet connectivity**

Internet Connectivity	Government (N=60)	Private Aided (N=19)	Private Unaided (N=47)	Autonomous (N=09)	Total (N=135)
Yes	46(76.66)	17(89.47)	22(46.80)	09(100.00)	94(69.62)
No	14(23.33)	02(10.52)	25(53.19)	00(00.00)	41(30.37)

*Note: Figures in parentheses indicate percentage*

**$\chi^2= 20.444$  ,  $df=03$ ,  $P =0.00013732$**

The above Table-2 also depicts that 46 (76.66%) of 'Government' colleges, 17 (89.47%) of 'Private Aided' colleges, 22 (46.80%) of 'Private Unaided' colleges and 09 (100.00%) of 'Autonomous' colleges have Internet Connectivity at the library. About 14 (23.33%) of 'Government' colleges, 02 (10.52%) of 'Private Aided' colleges and 25 (53.19%) of 'Private Unaided' colleges did not have the availability of Internet Connectivity at the library.

The  $\chi^2$ -test conducted for 03 d.f. at the 5% level of significance shows that there is an association between Internet connectivity and the type of colleges ( $\chi^2=20.444$ ,  $p=0.00<0.05$ ).

**Wi-Fi facility**

The availability of Wi-Fi facility at the libraries of First Grade Colleges affiliated to the University of Mysore, Mysuru has been depicted in Table-5. It shows that 77 (81.91%) of libraries have Wi-Fi facility at the library and 17 (18.08%) libraries did not have Wi-Fi facility at the library.

**Table-3: Wi-Fi Facility**

Wi-Fi Facility	Government (N=46)	Private Aided (N=17)	Private Unaided (N=22)	Autonomous (N=09)	Total (N=94)
Yes	29(63.04)	17(100)	22(100.00)	09(100)	77(81.91)
No	17(36.95)	00(0)	00(0)	00(0)	17(18.08)
<i>Note: Figures in parentheses indicate percentage</i>					
<b><math>\chi^2=21.656</math>, <math>df=03</math>, <math>P=0.00007691</math></b>					

ANOVA					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.208	3	1.069	8.980	.000
Within Groups	10.717	90	.119		
Total	13.926	93			

The Table-3 also depicts that 29 (63.04%) of 'Government' colleges, 17 (100.00%) of 'Private Aided' colleges, 22 (100.00%) of 'Private Unaided' colleges and 09 (100.00%) of 'Autonomous' colleges libraries have Wi-Fi facility at the library. About 17 (36.95%) of 'Government' colleges did not have Wi-Fi facility at the library.

The  $\chi^2$ -test and ANOVA conducted for 03d.f. at the 5% level of significance shows that there is an association between Wi-Fi Facility and type of colleges ( $\chi^2=21.656$ ,  $p=0.00<0.05$ ).

**Type of automation software adopted**

The type of automation software adopted in the libraries has been summarized in Table-4. The data depicts that 67 (71.27%) of librarians have adopted 'Open Source' library automation software with mean value 1.7014 and SD 1.0511, followed by 24 (25.53%) of librarians have adopted 'Commercial' library automation software with mean value 2.4583 and SD 0.9119. About 03 (03.19%) of librarians have adopted 'In-House Developed' library automation software with mean value 2.3333 and SD 0.4714.

**Table-4: Type of automation software adopted**

Software Adopted	Government (N=48)	Private Aided (N=15)	Private Unaided (N=22)	Autonomous (N=09)	Total (N=94)	Mean	SD
Commercial	04(08.33)	08(53.33)	09(40.90)	03(33.33)	24(25.53)	2.4583	0.9119
Open Source	44(91.66)	05(33.33)	12(54.54)	06(66.66)	67(71.27)	1.7014	1.0511
In-House Developed	00(0)	02(13.33)	01(04.54)	00(0)	03(03.19)	2.3333	0.4714
<i>Note: Figures in parentheses indicate percentage</i>							
<b><math>\chi^2=25.854</math>, <math>df=06</math>, <math>P=0.00023702</math></b>							

The Table-4 also depicts that 44 (91.66%) of ‘Government’ colleges, followed by 12 (54.54%) of ‘Private Unaided’ Colleges and 06 (66.66%) of ‘Autonomous’ colleges librarians have adopted ‘Open Source’ library automation software. About 08 (53.33%) of ‘Private Aided’ college librarians have adopted ‘Commercial’ library automation software.

The  $\chi^2$ -test conducted for 06d.f. at the 5% level of significance shows a significant relationship between the type of automation software adopted and the type of colleges ( $\chi^2=25.854$ ,  $p=0.00<0.05$ ). Hence, there is an association between the type of automation software adopted and the type of colleges.

### Software packages adopted

The information about the software packages adopted by the librarians in the libraries has been depicted in Table-5. It is noted that 28 (29.78%) of librarians have adopted ‘Koha’ library automation software in their libraries, followed by 25 (26.59%) of librarians have adopted ‘E-Granthalaya’, 23 (24.46%) have ‘EasyLib’, 07 (07.44%) have ‘NewGenLib’, 04 (04.25%) have ‘LibSoft’, 03 (03.19%) of librarians have adopted ‘Slim++’ and ‘In-House Developed Software’ and 01 (01.06%) of the librarian has adopted ‘WINISIS’ library automation software in the library.

**Table-5: Software packages adopted**

Software Used	Government (N=48)	Private Aided (N=15)	Private Unaided (N=22)	Autonomous (N=09)	Total (N=94)
E-Granthalaya	20(41.66)	03(20.00)	02(09.09)	00(0)	25(26.59)
EasyLib	12(25)	02(13.33)	06(27.27)	03(33.33)	23(24.46)
KOHA	14(29.16)	05(33.33)	08(36.36)	01(11.11)	28(29.78)
LibSoft	00(0)	01(06.66)	03(13.63)	00(0)	04(04.25)
NewGenLib	01(02.08)	00(0)	01(04.54)	05(55.55)	07(07.44)
SLIM++	01(02.08)	02(13.33)	00(00.00)	00(0)	03(03.19)
WINISIS	00(0)	00(0)	01(04.54)	00(0)	01(01.06)
In house	00(0)	02(13.33)	01(04.54)	00(00)	03(03.19)
<i>Note: Figures in parentheses indicate percentage</i>					
<b><math>\chi^2=66.274</math>, <math>df=21</math>, <math>P=0.00000137</math></b>					

The Table-5 also depicts that 20 (41.66%) of ‘Government’ college librarians have adopted ‘E-Granthalaya’ library automation software in their libraries, followed by 05 (33.335) of ‘Private Aided’ colleges have adopted ‘Koha’ library automation software, 08 (36.36%) of ‘Private Unaided’ colleges have adopted ‘Koha’ library automation software and 05 (55.55%) of ‘Autonomous’ colleges librarians have adopted ‘NewGenLib’ library automation software. The  $\chi^2$ -test conducted for 21 d.f. at the 5% level of significance shows that there is a significant relationship between Software Packages Adopted and type of colleges ( $\chi^2=66.274$ ,  $p=0.00<0.05$ ). Hence, there is an association between the Software Packages Adopted and the type of colleges.

### Modules automated

The modules automated in the First Grade College libraries have been summarized in Table-6. It depicts that 87 (92.55%) of librarians have automated the ‘Catalogue’ module in their

libraries, followed by 69 (73.40%) have automated 'Circulation' module, 68 (72.34%) have automated 'OPAC' module, 44 (46.80%) opine 'Administration' module, 30 (31.91%) have automated 'Acquisition' module and 29 (30.85%) of librarians have automated the 'Serial Control' module in their libraries.

**Table-6: Modules automated**

Modules Automated	Government (N=48)	Private Aided (N=15)	Private Unaided (N=22)	Autonomous (N=09)	Total (N=94)
Acquisition	10(20.83)	05(33.33)	07(31.81)	08(88.88)	30(31.91)
Administration	27(56.25)	02(13.33)	06(27.27)	09(100)	44(46.80)
OPAC	39(81.25)	11(73.33)	09(40.90)	09(100)	68(72.34)
Catalogue	47(97.91)	14(93.33)	17(77.27)	09(100)	87(92.55)
Circulation	36(75.00)	13(86.66)	11(50.00)	09(100)	69(73.40)
Serials Control	11(22.91)	08(13.33)	05(22.72)	05(55.55)	29(30.85)

*Note: Figures in parentheses indicate percentage and because of multiple choice options the percentage is exceeded to more than 100%.*

The Table-6 also depicts that 47(97.91%) of 'Government' colleges, followed by 14 (93.33%) of 'Private Aided' Colleges and 17 (77.27%) of 'Private Unaided' college librarians have automated the 'Catalogue' module in their libraries. About 09 (100.00%) of 'Autonomous' college librarians have automated Catalogue, Circulation, Administration and OPAC modules.

### Suggestions

The correct use of the module automatically complements the activities of the subsequent modules in some way or other. As many college libraries have automated catalogue module, the catalogue links or network accessibility to library catalogue can be provided. The integration of OPAC is a must for all the college libraries to serve the user communities. Initiatives should be taken to establish a union catalogue of college libraries that will facilitate inter-library loans.

### Conclusion

Any problems in handling the software and difficulties in automating the libraries, the librarian should discuss on the open discussion forum, thereby getting relevant features related to their library environment and answers to questions. It is a forum where experienced librarians answers. Librarians should take initiatives, thereby connecting with others and professionally enhancing support for the library's development and uplifting their skill.

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