AUTOMATION OF ENGINEERING COLLEGE LIBRARIES IN NADIA DISTRICT, WEST BENGAL: A STUDY ON STATUS AND PROBLEMS

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Abstract: - *This paper shows the status of library automation of Engineering College libraries in Nadia District, West Bengal. Here we have also discussed the software used, technique of data entry, collection status, etc. It has also discussed whether a college completed automation in all sections or not and type of problems they have faced. From this study we can say that automation status of Engineering College libraries in Nadia District, West Bengal is quite good but digitization condition is very poor.*

Key Words : Engineering College, Library Automation, Library Collections, Library Software, Nadia District, West Bengal.

0 Introduction

Computer and communications technologies have drastically changed the entire human activities including library and information field. Now-a-days libraries are deeply engaged to modernize operations and activities to provide fast, integrated, interactive and comprehensive services. ICT and networking technologies are providing the library professionals with new opportunities to improve their resources and services. Today libraries are providing electronic access to a wide variety of resources, including indexes, full-text articles, complete journals and Internet/Web resources.

The term library automation has been generally used in the past for house-keeping operations of the library. Today it has extended its scope and includes all those technologies which libraries and information centres use for collection, processing, storage, retrieval, dissemination and transmission of all types of information at local, regional, national and international level.[4] Library automation not only improves the image of the library and staff but also provides additional services to the users with the existing staff.

In this study I have discussed the Automation status, whether they are fully automated or partially automated and problems of Engineering College libraries in Nadia District.

1 Objectives of the study

The followings are the objectives of the study:

♦ To know the status of library automation of Engineering Colleges in Nadia District;

♦ To understand the utility of automated library operations in the surveyed Institutions;

♦ To find out existing operating systems that is being followed in the Engineering Colleges libraries in Nadia District;

♦ To know about the faculty and student's awareness about automation;

♦ To reveal the extent of internet and e-resources usage among the library users in the surveyed colleges; and finally

♦ To find out the problems during library automation.

2 Scope

There are six (6) Engineering Colleges (1 Govt. and 5 Private) in Nadia District who provides B.E./B.Tech. degree: Kalyani Govt. Engineering College, JIS College of Engineering, Kalyani, Ideal Institute of Engineering, Kalyani, Sri Aurobinda Engineering Institute, Kalyani, Global Institute of Management and Technology, Krishnagar and Hemnalini Memorial College of Engineering college, Balindi near Kalyani. I have collected data from all colleges except Hemnalini

Memorial College of Engineering College due to just implementation of library and lack of Professional staff. Polytechnic and ITI colleges have been excluded from my study. From this study anyone can know about the status of library automation and related problems.

3 Literature Review

Malipatil and Nagaraj (2017) [1] state in their paper "Automation of engineering college libraries in Kalaburagi and Bidar districts of Karnataka State" that some colleges are not fully automated and are at the initial stage of development. They also said that among six surveyed colleges two colleges do not provide OPAC service and four colleges have implemented circulation module.

Naveen and Nagesh (2016) [2] have discussed in their paper the status and problems of library automation in government first grade colleges in Hassan district. The study was clearly presents only 23% 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. It is evident from the study out of 17 libraries 14 (82.35%) libraries are using e-granthalaya, in this some of libraries are partially completed and some of are in initial stage. Further about 3 (17.65%) colleges are using Easy Lib Software.

Sekar and Abdul Majeed (2015) [3] in their paper "Library automation in engineering college

libraries affiliated to Anna University in Thanjavur and Thirvarur districts: a study" says that the situation of the engineering college libraries affiliated to Anna University Thanjavur and Thiruvarur is good. Some institute facing problem with trained human resource and finance, some of institutes also faces the problem of good infrastructure for library automation. As per the researchers view finance is not a problem to do the computerization, now a days so many open source software's are available on internet like. (KOHA, Dspace) Govt of India, department of NIC (National Information Center) provides free of cost software i.e. E-granthalya.

Upadhyay et al. (2012) [5] have been made a study among Engineering colleges in Jabalpur City about library automation and they find that 52.63% of the Engineering College libraries were not automated for reason such as, Lack of computer facilities, Inadequate finance, Lack of trained Manpower; Management is not interested in library automation, collection from library is very less, tentativeness and lack of attitude towards automation and unsatisfactory library software problems are the major hindrances to speedy automation. Only` 47.37% of Engineering College libraries are using automation to show that the libraries must be updated on the current scenario and the other libraries will follow these updates.

4 Methodology

The method chosen for the study is survey method using structured questionnaire as the data collection tool. The researcher has personally visited the surveyed environment. Hence the personal observations of the researcher with the interaction with the respondents were also supplemented in the collection of primary data. The survey was conducted in all six selected Colleges of Nadia District. After communicate with the librarians of the colleges under study over phone I went for interview based on a questionnaire.

4.1 Sources of Data

The researcher used primary sources of data and collected the data directly from the respondents. The particulars of information relating to the Institutions were collected as secondary data from the Records, Websites of concerned Institutions.

4.2 Analysis of Data

The collected primary data and secondary data were organized and tabulated by grouping the variables of the objectives of the study. The data has been organized, analyzed and interpreted with the help of statistics.

5 Analysis

5.1 Separate Library Building

Separate Library Building is important for any library for its good environment and for smooth services to its target audience.

Name of the Library	Separate Building	
	Yes	No
Kalyani Govt. Engineering College	Yes	
JIS College of Engineering		No
Ideal Institute of Engineering		No
Sri Aurobinda Engineering Institute		No
Global Institute of Management and Technology	Yes	

Table 1: Separate Library Building

If we look the above table we can say that only the Kalyani Govt. Engineering College and Global Institute of Management and Technology have its separate building for library. But the libraries of other Engineering colleges have no separate building.

5.2 Total strength of staff

Staff is an important person in a library. A library will be useful when there are sufficient skilful staffs. A library does not exist without any staff. A library will be a storehouse of books without a single staff. So the success of a library mostly depends on the total strength of staff. The following table will show total strength of staff in different colleges:

Name of the colleges	Professional	Non-professional	Total staff
Kalyani Govt Engineering College	02	05	07
JIS College of Engineering	04	03	07
Ideal Institute of Engineering	02	02	04
Sri Aurobinda Engineering Institute	08	02	10
Global Institute of Management and Technology	03	02	05

Table 2: Staff strength (Professional and non-professional)

From Table 2 we can say that all colleges have two kinds of staffs – professional and non-professional. Total strength of staff is maximum (10) in Sri Aurobinda Engineering Institute and the minimum number of library staff is (04) in Ideal Institute of Engineering. The number of professional staff is maximum (08) in Sri Aurobinda Engineering Institute which is very good for smooth management for a library, while minimum number of professional staff belongs to BPC Institute of Technology.

5.3 Total collections

Library is said to be the storehouse of books. There are not only books in a library, but also there are journals, audio/video, CD-ROMs, microforms etc. Total collections are different in different colleges. The following table will represent this:

Name of the colleges	Books	Journals	AV(CD-ROM)	Micro-forms	Others
Kalyani Govt Engineering College	35150	Print-30 E-journal 750	700	00	00
JIS College of Engineering	88100	Print-131 E-journal-311	2900	Microfiche	1500 Theses
Ideal Institute of Engineerin	12662	Print-57	451	00	00

		E-journal - 451			
g					
Sri Aurobinda Engineering Institute	1500	Print- 16 E-journal -110	58	00	00
Global Institute of Management and Technology	31,340	Print- 129 E-journal 1050	765	00	00

Table 3: Total collections

From Table 3 we can say that total collection of books is maximum (88100) in JIS College of Engineering and minimum (1500) contains in Sri Aurobinda Engineering Institute. Total collection of E- journals is maximum (1050) in Global Institute of Management and Technology and minimum (110) in Sri Aurobinda Engineering Institute. Global Institute of Management and Technology have maximum collections of audio/video CD-ROM (2900). This college has also some microfiche. So it can be said that the poorest collections belongs to the library of Sri Aurobinda Engineering Institute.

5.4 Number of Journals currently received

Now-a-days every library receives journals according to the readers' need. There are various kinds of journals, but all types of journals are not used in a library. Different libraries use different types of journals. The following table will show this:

Name of the colleges	Subscribed print journal	Gifted	E-journals
Kalyani Govt Engineering College	25	05	750
JIS College of Engineering	121	10	311

Ideal Institute of Engineering	55	02	451
Sri Aurobinda Engineering Institute	12	04	110
Global Institute of Management and Technology	115	14	1050

Table 4**:** Currently received journals

From Table 4 we can say that total number of subscribed print journals is maximum (121) in JIS College of Engineering and minimum (12) in Sri Aurobinda Engineering Institute. It can also say that maximum number of e-journals (1050) contain in the Global Institute of Management and Technology whereas Sri Aurobinda Engineering Institute has only 110 e-journals.

5.5 Physical form of catalogue

A Library Catalogue is a record of the holdings of a library. Each entry is designed for satisfying a particular approach of a user. Entries are prepared according to a set of rules contained in a catalogue code. By the physical form of library catalogue is meant its outer appearance. In other words outer appearance or format determines physical form of library catalogue. The following table will show that which college uses which physical form of catalogue:

Name of the colleges	Card form	Book form	Computerised
Kalyani Govt Engineering College	√		√
JIS College of Engineering	√		√
Ideal Institute of Engineering	√		
Sri Aurobinda Engineering Institute		√	
Global Institute of Management and Technology	√		√

Table 5: Physical form of catalogue

From Table 5 we can say that except Sri Aurobinda Engineering Institute all other libraries use the card form of catalogue and except Sri Aurobinda Engineering Institute and Ideal Institute of Engineering colleges use computerized form.

5.6 Access system

A library system cannot be completed without reader and books make a relation between reader and librarian. So the reader has the right to enter the library and to read books. At first they have to choose the book. Either they will want the book to the librarian or they themselves choose the books. The following table shows which colleges have open access and which colleges have closed access:

Name of the colleges	Open access	Closed access
Kalyani Govt Engineering College		√
JIS College of Engineering		√
Ideal Institute of Engineering		√
Sri Aurobinda Engineering Institute	√	
Global Institute of Management and Technology	√	

Table 6: Access Systems

From Table 6 we can notice that only Sri Aurobinda Engineering Institute and Global Institute of Management and Technology maintain open access system. Other colleges maintain closed access system. The percentage of colleges where open access system is maintained

in 40% colleges and closed access maintained in 60% colleges.

5.7 Software used for Library Automation

There exists different software for library automation. Among them widely used library automation software are KOHA, SOUL, LibSys. Different software is used in different colleges. Some colleges use DSPACE for construct Digital Library. The table shows that:

Name of the colleges	SOUL	KOHA	LibSys	Others	DSPACE
Kalyani Govt Engineering College			√		
JIS College of Engineering			√		√
Ideal Institute of Engineering		√			
Sri Aurobinda Engineering Institute				√	
Global Institute of Management and Technology			√		

Table 7: Software for library automation

From Table 7 we can say that LibSys is the most widely used software for library automation among surveyed Engineering colleges in Nadia District. Only Ideal Institute of Engineering use KOHA for automation their library and other local software used by the Sri Aurobinda Engineering Institute. Only JIS College of Engineering has used DSPACE for their Digital Library.

5.8 Sections where Automation has been completed

A Library is consist of different sections like Acquisition section, Processing section,

Circulation section, Reference section, Periodical section, etc.

Name of the colleges	Catalo-guing	Acquisition	OPAC	Periodical	Circulation	Reference
Kalyani Govt Engineering College	√	√	√	√	√	√
JIS College of Engineering	√	√	√	√	√	√
Ideal Institute of Engineering	√		√	√	√	
Sri Aurobinda Engineering Institute	√	√				
Global Institute of Management and Technology	√	√	√	√	√	

Table 8: Sections where Automation has been completed

From Table 8 we can say that 100% colleges completed automation of cataloguing section. 80% colleges completed automation of Acquisition section, 80% colleges completed OPAC section, 80% colleges completed automation of periodical section, 80% colleges completed automation of circulation section and 60% colleges completed automation of Reference section with library automation software.

5.9 Data Entry of Library collection

Presently users' searching technique has been changed for their lack of time. For this purpose on-line searching is very popular. This is only possible when all documents have been entered into a database. So data entry is the primary condition for library automation. The present status of data entry of the surveyed engineering colleges are as follows :

Name of the colleges	Data entry Completed	Data entry Not completed
Kalyani Govt Engineering College	√	
JIS College of Engineering	√	
Ideal Institute of Engineering	√	
Sri Aurobinda Engineering Institute		√
Global Institute of Management and Technology	√	

Table 9: Status of data entry

From the above Table we can find out that except Sri Aurobinda Engineering Institute, all colleges have completed data entry work of their library books. So we can easily say that 80% of the surveyed colleges have completed data entry work of their library books.

5.10 Barcoding of Library books

After data entry of a document barcode is possible to operate circulation. Following Table shows the present position of Barcode status of the surveyed colleges:

Name of the colleges	Barcode completed	Barcode Not completed
Kalyani Govt Engineering College	√	
JIS College of Engineering	√	
Ideal Institute of Engineering		√
Sri Aurobinda Engineering Institute		√
Global Institute of Management and Technology	√	

Table 10: Status of Barcode

From the above table we can say that three colleges - Kalyani Govt. Engineering College, JIS

College of Engineering and Global Institute of Management and Technology have completed the barcoding of their library books but rest two colleges yet not completed this work. So it can say that only 60% colleges have completed the barcode.

5.11 Internet services

In present digital environment Internet is the backbone for any network. With the help of this anyone can access any document which belongs to any library from any part of the world. The following table will show which colleges use this service:

Name of the colleges	Yes	No
Kalyani Govt. Engineering College	√	
JIS College of Engineering	√	
Ideal Institute of Engineering	√	
Sri Aurobinda Engineering Institute	√	
Global Institute of Management and Technology	√	

Table 11: Usage Internet service

From Table 11 we can say that 100% colleges use Internet service.

5.12 Make data entry of journals

The following table represents which colleges make data entry of journals:

Name of the colleges	Yes	No
Kalyani Govt Engineering College	√	
JIS College of Engineering	√	
Ideal Institute of Engineering		√
Sri Aurobinda Engineering Institute		√
Global Institute of Management and Technology	√	

Table 12: Make data entry of journals

From Table 12 we can say that 60% colleges make data entry of journals and 40% colleges do not make data entry of Journals.

5.13 Procedure of data entry

Data is a collection of facts, such as values or measurements. It can be numbers, words, measurements, observations or even just descriptions of things. Data is taken from various sources. This table will show this:

Name of the colleges	From Book	From Worksheet	From Catalogue card	From Accession register
Kalyani Govt Engineering College	√		√	
JIS College of Engineering	√			
Ideal Institute of Engineering		√		
Sri Aurobinda Engineering Institute	√			
Global Institute of Management and Technology	√			

Table 13: Procedure of data entry

From Table 13 we can say that except Ideal Institute of Engineering all colleges make data entry directly from book and Kalyani Govt. Engineering College make data entry from both direct book and catalogue card.

5.14 Making data entry of all users

The following table presents whether data entry is made for all users in different colleges or not:

Name of the colleges	Yes	No
Kalyani Govt. Engineering College	√	
JIS College of Engineering	√	
Ideal Institute of Engineering		√
Sri Aurobinda Engineering Institute		√
Global Institute of Management and Technology	√	

Table 14: Making data entry of all users

From Table 14 we can say that only three colleges - Kalyani Govt. Engineering College, JIS College of Engineering and Global Institute of

Management and Technology make data entry of all users and others did not.

5.15 OPAC Service

An OPAC is Online Public Access Catalog of a library collection that is available to the public. With the arrival of the Internet, most libraries have made their OPAC accessible from a server to users all over the world. The table given below shows which colleges provide OPAC service:

Name of the colleges	Yes	No
Kalyani Govt. Engineering College	√	
JIS College of Engineering	√	
Ideal Institute of Engineering	√	
Sri Aurobinda Engineering Institute		√
Global Institute of Management and Technology	√	

Table 15: Usage of OPAC service

From Table 15 we can say that except Sri Aurobinda Engineering Institute, all other colleges i.e.80% colleges provide OPAC service.

5.16 Web OPAC Service

Simply stated, a Web OPAC is the library catalog on the Web or Internet. Users can search the required information by connecting to Uniform Resource Locator (URL) of Web OPAC anytime during the day and from anywhere in the world. This table shows which colleges provide this service:

Name of the colleges	Yes	No
Kalyani Govt. Engineering College	√	
JIS College of Engineering	√	
Ideal Institute of Engineering		√
Sri Aurobinda Engineering Institute		√
Global Institute of Management and Technology		√

Table 16: Usage of Web OPAC service

From Table 16 we can say that only JIS College of Engineering and Kalyani Govt. Engineering College provide Web OPAC service and other colleges do not provide this service.

5.17 Search facilities of E-journals and E-books

Some colleges have the opportunity to access this service and some colleges do not. This table represents this:

Name of the colleges	Yes	No
Kalyani Govt. Engineering College	√	
JIS College of Engineering	√	
Ideal Institute of Engineering	√	
Sri Aurobinda Engineering Institute		√
Global Institute of Management and Technology	√	

Table 17: Searching of E-journals, E-books service

From Table 17 we can see that except Sri Aurobinda Engineering Institute all colleges provide search facilities of e-book and e-journals.

5.18 Types of Problems faced relating to Automation

Name of the colleges	Data Entry related	Search related	System related
Kalyani Govt. Engineering College	√	√	√
JIS College of Engineering		√	
Ideal Institute of Engineering	√	√	√
Sri Aurobinda Engineering Institute	√		√
Global Institute of Management and Technology	√	√	√

Table 18: Types problems faced relating to automation

From above Table it is noticed that except JIS College of Engineering all other colleges have data entry related and system related problems. Without this except Sri Aurobinda Engineering Institute, all other colleges have search related problem.

5.19 Trying to solve the problem

The librarians of the colleges try to solve the problem related to IT by different ways. This table shows this:

Name of the colleges	Through vendor	Through software engineer	By consulting experts
Kalyani Govt. Engineering College	√		√
JIS College of Engineering	√		
Ideal Institute of Engineering	√		
Sri Aurobinda Engineering Institute	√		
Global Institute of Management and Technology	√		

Table 19: Trying to solve the problem

From table 19 we can say that all colleges try to solve the problem through vendor. Only Kalyani Govt. Engineering College also takes help of experts to solve IT problems.

6 Findings

►Only the library of Kalyani Govt. Engineering College and Global Institute of Management and Technology have its separate own building.

►Total collection of books is maximum (88100) in JIS College of Engineering, but minimum (1500) in Sri Aurobinda Engineering Institute.

►Total collection of E- journals is maximum (1050) in Global Institute of Management and Technology, which is very fruitful to the user in present day.

►Total number of subscribed print journals is maximum (121) in JIS College of Engineering and minimum (12) in Sri Aurobinda Engineering Institute.

►80% Colleges use the card form of catalogue and 20% colleges use book forms. 60% colleges use both card form and computerized form.

►Only Sri Aurobinda Engineering Institute and Global Institute of Management and Technology maintain open access system but other colleges use closed access system.

►Library automation software LIBSYS is the most used software for library automation.

► Digital library software DSPACE is used only in JIS College of Engineering.

► Users can access digital library in JIS College of Engineering only.

►100% Colleges have completed automation of their cataloguing section. 80% colleges have completed automation of their Acquisition section with library automation software.

►80% colleges completed automation of periodical section, 80% colleges completed automation of circulation section.

►80% of the surveyed colleges has completed data entry work of their library books.

►Three colleges - Kalyani Govt. Engineering College, JIS College of Engineering and Global Institute of Management and Technology have completed the barcoding work of their library

books but rest two colleges yet not completed this work.

►100% colleges provide Internet services.

►Only 60% colleges make data entry of journals.

►Except Ideal Institute of Engineering all colleges make data entry directly from book.

►80% Colleges have OPAC service.

► Only two colleges - Kalyani Govt. Engineering College and JIS College of Engineering provide Web OPAC service and other colleges do not provide this service.

►80% colleges have E-resources search facility.

►All colleges have a minimum problem relating to data entry, searching and system oriented.

►Maximum colleges try to solve the problem related to ICT through vendor.

7 Suggestions

■ The library automation should be completed in all respect.

■ It should be organized user orientation programme or workshop relating to library automation and its use facilities.

■ The e-resources usage is very low in these colleges. Hence, efforts should be made to develop e-resources and provide more number of electronic service facilities.

■ All colleges should give effort to construct digital library, so any user can access it beyond the college campus.

■ There is a need to increase the number of servers and client nodes in the colleges under study.

■ Proper measures should be taken for the subscription of electronic journals and bibliographic databases in the colleges under study.

■ Library staff members should be given training to utilize the library automation effectively from time to time.

■ Colleges should take membership of different e-resource consortium like INDEST, UGC-Infonet Consortia.

8 Conclusions

The success of Library Automation and Networking depends mainly upon the proper planning and appropriate decisions taken by the authority of the academic institutions from time to time. At the same time the motivation, zeal and lot of efforts of library and information professionals and well trained library staff also results in quick and early implementation of computerization of library activities. The right selection of hardware and software, man-power training of existing library professionals and data entry operators, proper planning, systematic implementation of the computerization programme leads to the path of success.

Since the most of the college libraries were hampered by lack of funds, lack of infrastructure and lack of skilled professionals to perform automation of different functions. The opinion of the respondents is quite satisfying in all the aspects for their minimal use of ICT. The study environment prevailed in terms of automation and

internet access in the libraries is at minimal level. Even then the library users are positive and encouraging in using automated services and e-resources in the libraries as they mainly depend on college library and institutional facilities. Hence, the study could conclude that the libraries, management and faculty need to be committed and work together to enhance the collector of information resources and access by using the technologies in improving the quality of higher education.

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