

## ICT Status in College Libraries of Bangladesh: A Survey

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**Abstract:** *The study conducted a survey on the affiliated honors college libraries of National University, Bangladesh through desk and field research with a view to identify the existing ICT status and the patterns of library and information services. Emphasis has been given on the colleges of the urban, semi-urban, rural and remote rural areas. As of today, National University, Bangladesh has 576 honors colleges and each of them has library but no one has reached to the level of development required for effective support in quality education. As a result, the number of users, particularly in college library goes on decreasing day by day. So the question arises: why are college libraries in Bangladesh not able to perform their noble role for improving quality education? The study has extricated the clue of this question. The survey covered 43 libraries applying mixed method i.e. both qualitative & quantitative method. It has visualized the ICT status and put some recommendations for introducing automation facilities in college libraries, so that these can be integrated with National University. As no such research had been undertaken in the past, therefore, considering the importance of upcoming “E-Learning Project” which is going to be initiated by National University with the financial support of the World Bank for enhancing quality education, the study intends to guide them in the pursuit of developing the network with college libraries.*

**Keywords:** ICT in Libraries; Library Automation; Academic Libraries; Computerization in Libraries; Quality Education; Digital Bangladesh

### Background

In Bangladesh, the present government has fixed its target for achieving 'Digital Bangladesh' by 2021. The scope of Digital Bangladesh is that the government wants to make Bangladesh fully digitized by 2021 through application of third generation information and communication technologies (ICTs). In the education sector, Digital Bangladesh visualizes that by 2021 all universities, colleges, higher secondary schools and primary schools will have computerized connectivity (Election Manifesto of Bangladesh Awami League, 2009). ICT is intended to be used as teaching-learning aids. After five years of schooling all students should have regular access to computers with Internet facilities. The goal is to improve the quality of education. Quality of education of a country is impossible without the modernization of college libraries. There is no doubt

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about the fact that development is a product of education and education is a process through which people are formally and informally learned to acquire knowledge and skills. So, the role of college libraries and librarians in the context of education sector can never be overemphasized, if it serves in an innovative way by breaking the tradition (Ogunsola, 2011). Keeping this in mind, the study has been conducted to assess the current ICT status in its affiliated College Libraries throughout the country with a view to determine the things what should be done to radically improve the quality education. An important cause of increasing illiteracy and dropout rate of Bangladesh is that the colleges of rural areas have limited access to ICT and are victims of digital divide, information gap or misinformation. As most of the students and teachers live in rural areas and they are the vital educational force in Bangladesh, therefore, it is necessary to ensure access to ICT for them to enhance quality education (General Economic Division [GED], 2013).

### **Objective of the Study**

Based on the research question, the main objective of the study was to identify the present ICT conditions of the affiliated college libraries in Bangladesh with a view to determine the causes of decreasing its users. Besides this, the study has also extricated the problems relating to application and use of automation in the college library services in Bangladesh. Through this survey the Government of Bangladesh especially the Ministry of Education and other related departments will get a clear idea about the college libraries so that they can give more emphasis on the use ICT with a view to achieve the vision of Digital Bangladesh within 2021.

### **Methodology**

Data/information has been collected from 43 libraries out of 576 affiliated honors college libraries (7 libraries from each of one division (such as Dhaka=7, Chittagong=7, Rajshahi=7, Khulna=7 and Sylhet=7 and 6 from Barisal and 2 from Rangpur Division) which constituted the major database for the present survey. Altogether the 43 libraries participated in the survey by completing and returning the survey questionnaire. The survey received response rate of 100%. These libraries have been chosen randomly and brought under investigation based on the availability of data and their geo-physical location but these are the representative of the college library systems and services in Bangladesh. The study has applied mixed method (both qualitative and quantitative method) to explore the objective. In qualitative method, the study has used a semi-structured questionnaire for librarians. Where library professionals are not available, information has been collected from the Principals of the concerned colleges. The study analyzed secondary sources and personal observations as well. In quantitative method, the study has discussed with library staff, ICT teacher/s, external service providers or IT experts. The survey questionnaire requested for information to the librarians/principals on the followings: Physical Structure, Manpower, Ratio of Library Staff to library users, Access to computer facilities, Hardware specifications, Software, Number of automated

libraries (partial or full), CD-ROM services, Internet connectivity, Cyber café facilities, Free internet access, Library websites, Barriers to the use of automation, Qualifications of the Librarians, Designation of Librarians, etc.

### Findings and Discussion

The results and discussion presented below are based on an analysis of the responses to the questionnaires sent by the 43 libraries.

#### Physical structure/Space of libraries

The librarians covered by the survey were asked to mention the type of physical structure/space in which they have housed their libraries; separate building/rented or own. The resultant data elicited from that respondent is depicted below:

**Table 1: Number of college libraries with collection and which have/haven't physical structure**

Sl. No	Name of the college libraries	Collection	Separate Building	Separate Room
1	Dhaka College	30000		√
2	New Model Degree College	9000		√
3	Govt. Bangla College	25000		√
4	Govt. Titumir College	25000		√
5	Tejgaon College	20000		√
6	Dhaka City College	13, 000	√	
7	Adamjee Cantonment College	20000		√
8	Chittagong Government College	18000		√
9	Cox's Bazar Govt. College	5300	√	
10	Chakaria College	4000		√
11	Banderban Govt. College	6000		√
12	Rangamati Govt. College	6700		√
13	Khagrachhari Govt. College	5500		√
14	Cox's Bazar City College	7000		√
15	Rajshahi Government College	30000		√
16	Pabna Govt. Mahila College	15000		√
17	Government Iswardi College	15500		√
18	Govt. Edward College	35000		√
19	Natore Government College	11000		√
20	Bogra Azizul Haque College	33000	√	

Sl. No	Name of the college libraries	Collection	Separate Building	Separate Room
21	Kurigram Govt. College	7000		√
22	Khulna B. L. College	32000	√	
23	Satkhira Govt. College	8000		√
24	Satkhira Govt. Mohila College	6700		√
25	Jessore MM College	12000	√	
26	Govt. P. C. College	11000	√	
27	Jhenaidah Government	8000		√
28	Magura Government College	8000		√
29	Sylhet M. C. College	25000	√	
30	Sylhet Govt. Mahila College	10000		√
31	Sylhet Madan Mohan College	11000	√	
32	Fanchuganj College	9000		√
33	Brindaban Govt. College	8500		√
34	Beanibazar Govt. College	9000		√
35	Goain Ghat Degree College	6000		√
36	Barisal Government College	17000		√
37	Patuakhali Government college	13000		√
38	Fuzlul Huq Govt. College	11000		√
39	Barisal Govt. Mahila College	12000		√
40	Gournadi Govt. College	5600		√
41	Govt. B. M. College	38000	√	
42	Nilphamari Govt. Mahila	9000		√
43	Nilphamari Govt. College	10000		√
	<b>Total =43 College Libraries</b>			<b>34</b>

Table 1 shows that out of 43 libraries only 9 have separate building but other infrastructural facilities are very poor. Most of them do not have shelves and necessary furniture. Separate room adjunct with the administrative office premises are allotted to use as library by the rest of the 34 colleges. These are not suitable for libraries at all. The college authority keeps even a store room organized instead of a library as they don't understand its importance. Lack of space and equipment, most of the libraries are now in a deplorable situation. The college authority with other allied bodies should, therefore, have their positive thinking to make separate building for the libraries in order to fulfill the objectives of the academic library. The current space and structure of these libraries are still in utter dismay. Such a poor and discouraging infrastructure of college libraries,

perhaps are either due to (i) lack of vision and professional decision; and (ii) non-availability of fund for providing and independent building to their respective libraries.

### Total Collection of the Library

Table 1 also reflects that 22 college libraries have a total collection of below 15, 000, while 14 have developed a total collection above 16,000 and only 3 have a total collection above 45,000.

### Human resources in College libraries

Most of the college libraries are understaffed and do not have computer trained staff. Respondents were asked to mention about the human resources available in their respective libraries which Table 2 below reveals the resultant data pertaining to the position of human resources in the college libraries of Bangladesh.

**Table 2:- Manpower**

Sl.No.	Name of college libraries	Professional Librarian	Professional Assistant Librarian	Semi Professional	Non-Professional	Data entry operator	Other	Total
1	Dhaka College	1	1	1	1	1	2	7
2	New Model Degree College	1	0	0	1	0	2	4
3	Govt. Bangla College	1	1	0	1	0	1	4
4	Govt. Titumir College	1	2	1	0	1	2	7
5	Tejgaon College	1	1	0	0	1	2	5
6	Dhaka City College	1	1	0	1	1	2	6
7	Adamjee Cantonment College	1	2	0	1	1	2	7
8	Chittagong Government College	1	2	1	1	1	2	8
9	Cox's Bazar Govt. College	1	1	0	0	0	2	4
10	Chakaria College	1	1	0	0	0	1	4
11	Banderban Govt. College	1	1	0	1	0	1	4
12	Rangamati Govt. College	1	1	0	0	0	1	3
13	Khagrachhari Govt. College	1	1	0	0	0	2	4
14	Cox's Bazar City College	1	0	0	0	0	1	2
15	Rajshahi Government College	1	1	0	1	0	1	4
16	Pabna Govt. Mahila College	0	1	0	1	0	1	3
17	Government Iswardi College	1	1	0	0	0	0	3
18	Govt. Edward College	1	2	1	1	1	2	8
19	Natore Government College	1	0	0	0	0	1	2
20	Bogra Azizul Haque College	1	2	1	1	1	2	8
21	Kurigram Govt. College	0	1	0	0	0	1	2
22	Khulna B. L. College	1	2	1	1	1	2	8

Sl.No.	Name of college libraries	Professional Librarian	Professional Assistant Librarian	Semi Professional	Non-Professional	Data entry operator	Other	Total
23	Satkhira Govt. College	0	1	1	0	0	1	3
24	Satkhira Govt. Mohila College	1	0	1	0	0	2	4
25	Jessore Government College	1	2	1	0	1	1	6
26	Govt. P. C. College	1	2	0	0	1	2	6
27	Jhenaidah Government	0	1	0	0	0	1	2
28	Magura Government College	0	1	0	0	0	1	2
29	Sylhet M. C. College	1	2	1	1	1	2	8
30	Sylhet Govt. Mahila College	1	1	0	0	0	1	3
31	Sylhet Madan Mohan College	1	2	1	0	0	1	5
32	Fanchuganj College	0	1	0	0	0	2	3
33	Brindaban Govt. College	1	1	0	0	0	1	3
34	Beanibazar Govt. College	1	1	0	0	0	2	4
35	Goain Ghat Degree College	0	1	0	0	0	2	3
36	Barisal Government College	1	2	1	1	1	2	8
37	Patuakhali Government college	1	0	0	0	0	2	3
38	Fuzlul Huq Govt. College	0	1	0	0	0	1	2
39	Barisal Govt. Mahila College	1	1	0	0	0	1	3
40	Gournadi Govt. College	0	1	0	0	1	1	3
41	Govt. B. M. College	1	2	1	1	1	2	8
42	Nilphamari Govt. Mahila College	0	1	0	1	0	1	3
43	Nilphamari Govt. College	0	1	1	0	0	1	3

The above study reveals that the total number of staffs working in college libraries ranges from a minimum of 2 staff members to maximum of 8. As per government norms, there should be a minimum of one librarian, one assistant librarian, one library assistant and two library attendants for each academic libraries if their collection is at least 3, 000. Only 13 libraries out of 43 seem to have followed the government rules or any such standard. So, each college library should be provided with minimum staff members as per the government rules in order to proper library and information services to their users. It has been seen that there is no professional librarian in 11 colleges at all. It reveals that 25.59% positions are still vacant. The table also shows that 5 out of 43 have no professional assistant librarian as well. It reflects that 11.62% posts for assistant librarian are not yet been filled-up. 14 college libraries run their services by the semi-professionals which is 32.55%. 15 colleges assign non-professional librarian and data entry operator as well to handle computers for data entry. It is needed to mention here that in state of

library attendance, all of the colleges use MLSS (Member of Lower Subordinate Staff) on no work no pay basis for cleaning, shelving, opening and closing the libraries etc. In the age of information explosion, library professionals act as intermediary between information technology and information users. The academic library professionals should, therefore, be properly trained to provide a variety of information services to their readers with the rich resources, different on -line databases and full text of e-journals.

### Ratio of library staff to library users

The number of library users or target populations served, also appearing in table 4 shows that only divisional libraries are catering for a larger number of people than others. Taking this situation into account, the use of ICTs in college library services need to go a long way towards enhancing the provision of efficient and fast access to various digital information resources and services.

**Table 3: Ratio of library staff to library users**

Sl. No	Name of the colleges	Professional Librarian	Professional Assistant Librarian	Total Professionals	Users per week	Ratio
1	Dhaka College	1	1	2	1000	1 :500
2	New Model Degree College	1	0	1	200	1 : 200
3	Govt. Bangla College	1	1	2	600	1 :300
4	Govt. Titumir College	1	2	3	1200	1 :400
5	Tejgaon College	1	1	2	500	1 : 250
6	Dhaka City College	1	1	2	600	1 : 300
7	Adamjee Cantonment College	1	2	3	1000	1:333
8	Chittagong Government College	1	2	3	600	1: 200
9	Cox's Bazar Govt. College	1	1	2	400	1: 200
10	Chakaria College	1	1	2	200	1: 100
11	Banderban Govt. College	1	1	2	200	1:100
12	Rangamati Govt. College	1	1	2	300	1:150
13	Khagrachhari Govt. College	1	1	2	300	1:150
14	Cox's Bazar City College	1	0	1	250	1:250
15	Rajshahi Government College	1	1	2	500	1:250
16	Pabna Govt. Mahila College	0	1	1	300	1:300
17	Government Iswardi College	1	1	2	200	1:100
18	Govt. Edward College	1	2	3	1000	1:333
19	Natore Government College	1	0	1	350	1:350
20	Bogra Azizul Haque College	1	2	3	900	1:300
21	Kurigram Govt. College	0	1	1	250	1: 250

Sl. No	Name of the colleges	Professional Librarian	Professional Assistant Librarian	Total Professionals	Users per week	Ratio
22	Khulna B. L. College	1	2	3	1200	1: 400
23	Satkhira Govt. College	0	1	1	150	1: 150
24	Satkhira Govt. Mohila College	1	0	1	150	1: 150
25	Jessore Government College	1	2	3	600	1: 200
26	Jessore Govt. P. C. College	1	2	3	600	1: 200
27	Jhenaidah Government College	0	1	1	150	1: 150
28	Magura Government College	0	1	1	150	1: 150
29	Sylhet M. C. College	1	2	3	600	2:200
30	Sylhet Govt. Mahila College	1	1	2	500	1:250
31	Sylhet Madan Mohan College	1	2	3	900	1:300
32	Fanchuganj College	0	1	1	125	1:125
33	Brindaban Govt. College	1	1	2	200	1:100
34	Beanibazar Govt. College	1	1	2	250	1:125
35	Goain Ghat Degree College	0	1	1	100	1:100
36	Barisal Government College	1	2	3	600	1:200
37	Patuakhali Government college	1	0	1	200	1:200
38	Fuzlul Huq Govt. College	0	1	1	120	1:120
39	Barisal Govt. Mahila College	1	1	2	100	1:100
40	Gournadi Govt. College	0	1	1	100	1:100
41	Govt. B. M. College	1	2	3	1000	1:333
42	Nilphamari Govt. Mahila College	0	1	1	100	1:100
43	Nilphamari Govt. College	0	1	1	100	1:100

Unfortunately, all of the aforesaid college library services are understaffed. There are various reasons for this of which poor conditions of service and incentives are one of the important reasons. As can be seen from Table 3, the ratio of library and information staff with library users are quite discouraging. In a situation where one librarian has to serve near about five hundred library users, coupled with the fact that in most college libraries information resources and equipment is inadequate, working in college libraries in Bangladesh is a difficult challenge. Most of the government colleges, the post of professional librarians are vacant. That's why the number is very insignificant to provide proper services to the users. The ratio reflects very poor situation though Government not yet been serious to recruit professional librarian for the government college. The rank and status of a college librarian and lecturer is same. But the lecturer gets special dignity rather than librarian. It is because of administrative body's ignorance and the bureaucratic attitude of the college authority and the policy makers as well. Keeping thousands of post vacant, what kind of quality education, the allied body thinks? It's a burning question to the general people as well.

### Library Automation

The data shows that 19 college libraries located at District Headquarters are using Desktop computers. In most of the libraries there is only one computer they have for practicing data entry in MS-WORD. Very few have one more Personal Computers. As of today none of the libraries covered by the survey found computerized library database. They didn't install any library software. Some of them use Modem (Dongle) for receiving the important circular from the National University and browsing reading materials mainly by the request of the Principal and other teachers. 13 libraries have no any computer and they do their library operations manually and provide services to their users in a traditional way.

### Access to computer facilities

**Table 4: Computer facilities available in the libraries**

Sl. No.	Name of the colleges	Servers	PCs	Laptops	Laser	Ink-jet	Dot-matrix
1	Dhaka College	1	4	0	0	1	1
2	New Model Degree College	1	3	0	0	1	1
3	Govt. Bangla College	1	4	0	0	2	1
4	Govt. Titumir College	1	5	0	1	3	1
5	Tejgaon College	0	2	0	0	0	2
6	Dhaka City College	1	2	0	1	1	0
7	Adamjee Cantonment College	1	5	0	3	1	1
8	Chittagong Government College	0	0	0	0	0	0
9	Cox's Bazar Govt. College	0	0	0	0	0	1
10	Chakaria College	0	0	0	0	0	0
11	Banderban Govt. College	0	1	0	0	0	0
12	Rangamati Govt. College	0	1	0	0	0	1
13	Khagrachhari Govt. College	0	0	0	0	0	1
14	Cox's Bazar City College	0	2	0	1	0	0
15	Rajshahi Government College	0	2	0	1	0	1
16	Pabna Govt. Mahila College	0	0	0	0	0	0
17	Government Iswardi College	0	0	0	0	0	0
18	Govt. Edward College	1	4	0	1	0	1
19	Natore Government College	0	0	0	0	0	0
20	Bogra Azizul Haque College	1	4	0	1	1	1
21	Kurigram Govt. College	0	0	0	0	0	0
22	Khulna B. L. College	1	2	0	1	0	1
23	Satkhira Govt. College	0	0	0	0	0	0
24	Satkhira Govt. Mohila College	0	0	0	0	0	0

<b>Sl. No.</b>	<b>Name of the colleges</b>	<b>Servers</b>	<b>PCs</b>	<b>Laptops</b>	<b>Laser</b>	<b>Ink-jet</b>	<b>Dot-matrix</b>
25	Jessore Government College	0	0	0	0	0	0
26	Jessore Govt. P. C. College	0	2	0	1	1	0
27	Jhenaidah Government College	0	0	0	0	0	0
28	Magura Government College	0	0	0	0	0	0
29	Sylhet M. C. College	1	3	0	1	1	1
30	Sylhet Govt. Mahila College	0	0	0	0	0	0
31	Sylhet Madan Mohan College	0	0	0	0	0	0
32	Fanchuganj College	0	0	0	0	0	0
33	Brindaban Govt. College	0	0	0	0	0	0
34	Beanibazar Govt. College	0	0	0	0	0	0
35	Goain Ghat Degree College	0	0	0	0	0	0
36	Barisal Government College	0	2	0	1	0	1
37	Patuakhali Government college	0	2	0	0	0	1
38	Fuzlul Huq Govt. College	0	0	0	0	0	0
39	Barisal Govt. Mahila College	0	0	0	0	0	0
40	Gournadi Govt. College	0	0	0	0	0	0
41	Govt. B. M. College	1	3	0	1	0	0
42	Nilphamari Govt. Mahila College	0	0	0	0	0	0
43	Nilphamari Govt. College	0	0	0	0	0	0

Table 4 shows that maximum college libraries (24 out of 43) included in the survey had no access to computers, particularly even in personal computers. Only the major district government college libraries have 1 server but still it is not working well as they didn't launch LAN among themselves. The survey found that very few college libraries arrange computers either from the donation of the local elite or by the fund of the Ministry of Education. Very recent, as a part of the digitalization process of the School and colleges with multimedia classroom, government is allocating computers and other ICT equipment for the colleges. During the survey, the study found that most of the libraries covered by the survey appreciate the present government initiatives. Some college libraries have a limited number of computers, which are not capable to automate all the library services. One major observation regarding access to computer facilities is that some college libraries have very poor number of computers and most of the district level government college libraries have not totally computer facilities.

### **Hardware Specifications**

Table 5 shows that the situation of the maximum college libraries is moribund as they have not started the use of computers even in the digital age. Less than half percent (Only 20) of the libraries covered by the survey used a combination of different Intel Pentium-based personal computers. They range from 486-based PCs to Pentium IV, in some cases



Sl. No	Name of the colleges	Pentium IV	Pentium III	Pentium II	Pentium I	Intel Pentium Celeron	Pentium Pro	486	Others
29	Sylhet M. C. College	√	√	0	0	0	0	0	0
30	Sylhet Govt. Mahila College	0	0	0	0	0	0	0	0
31	Sylhet Madan Mohan College	0	0	0	0	0	0	0	0
32	Fanchuganj College	0	0	0	0	0	0	0	0
33	Brindaban Govt. College	0	0	0	0	0	0	0	0
34	Beanibazar Govt. College	0	0	0	0	0	0	0	0
35	Goain Ghat Degree College	0	0	0	0	0	0	0	0
36	Barisal Government College	√	√	0	0	0	0	0	0
37	Patuakhali Government college	√	0	0	0	0	0	0	0
38	Fuzlul Huq Govt. College	0	0	0	0	0	0	0	0
39	Barisal Govt. Mahila College	0	0	0	0	0	0	0	0
40	Gournadi Govt. College	0	0	0	0	0	0	0	0
41	Govt. B. M. College	√	√	0	0	0	0	0	0
42	Nilphamari Govt. Mahila College	0	0	0	0	0	0	0	0
43	Nilphamari Govt. College	0	0	0	0	0	0	0	0

The survey found that 19 college libraries out of 43 have no any PC. The others have access to the personal computers which have been purchased with a view to enter the data through MS-WORD. The survey also found that no college libraries have suitable infrastructural facilities for providing even the partially automated services to its users. Any of the college libraries could not yet been started automation in their libraries. The availability of CD-ROM drives on most of the machines also means that they could be used to provide access to various CD-ROM-based products, including educational resources such as multimedia encyclopedias, databases and full-text documents.

#### Software: Operating Systems

The following 9 library services that have computers use different operating systems to run their library activities:

**Table 6: Operating systems on computer servers**

Sl. No	Name of the colleges	PCs	Operating system
1	Dhaka College	4	Windows 2000
2	New Model Degree College	3	Windows 2000
3	Govt. Bangla College	4	Windows 2000
4	Govt. Titumir College	5	Windows 2000

Sl. No	Name of the colleges	PCs	Operating system
5	Tejgaon College	2	Windows 2000
6	Dhaka City College	2	Windows 2000
7	Adamjee Cantonment College	5	Windows 2000
8	Banderban Govt. College	1	Windows 2000
9	Rangamati Govt. College	1	Windows 2000
10	Cox's Bazar City College	2	Windows XP
11	Rajshahi Government College	2	Windows 2000
12	Govt. Edward College	4	Windows XP
13	Bogra Azizul Haque College	4	Windows 2000
14	Khulna B. L. College	2	Windows 2000
15	Jessore Govt. P. C. College	2	Windows XP
16	Sylhet M. C. College	3	Windows 2000
17	Barisal Government College	2	Windows XP
18	Patuakhali Government college	2	Windows 2000
19	Govt. B. M. College	3	Windows 2000

Notable from Table 6 is the fact that the colleges located at Metropolitan areas indicated they are far behind from the windows latest version. Most of them preferred Windows 2007 though they use Windows 2000 on its server. They confessed that windows 2007 is very difficult to use and they need training on it. Some of the librarians shared that their PC is not supporting Windows 2007 version due the old model. Very few college libraries use Windows XP for their routine works.

#### **Software: Office Applications**

With regard to office application software, 9 college libraries have Microsoft Office installed on their machines, while 4 libraries (Jessore Govt. P. C. College, Barisal Government College, Cox's Bazar City College, Govt. Edward College) were used WordPerfect Office, and one (New Model degree College) installed Lotus SmartSuite when they introduced computer in their libraries. At present all of the 19 libraries which have access to computer have installed Microsoft Office on the personal computers used by staff and/or library users. Other application software installed only four college library services computers is Microsoft Internet Explorer and Microsoft Outlook. The reason for this is easy to understand, as they are bundled with the Windows operating systems that are in use in the libraries. However, it should be noted that the availability of Microsoft Outlook does not necessarily mean that it is the most widely used electronic-mail client software. Because some of the library systems have only one official e-mail account provided by their Internet Service Provider (ISP), staff who require their own private or personal e-mail accounts have to use the free Web-based e-mail services of Yahoo!,

Hotmail, Excite or others, resulting in their use of Web browsers rather than Outlook to access their accounts. In Bangladesh many special library and information services uses Lotus Notes for its e-mail system, while college libraries are going to start using Microsoft Outlook.

### Library Automation Scenario

The following table shows the scenario of partially automated college libraries in Bangladesh.

**Table 7: Number of partially automated libraries**

Sl. No	Name of the colleges	Acquisitions & budgets	Cataloguing	Circulation	Serials control	OPAC	Management	Inter-library loans	Others
1	Dhaka College	Yes	Yes	Yes	Yes	No	No	Yes	Yes
2	New Model Degree College	Yes	No	No	No	No	No	No	No
3	Govt. Bangla College	Yes	No	No	No	No	No	Yes	No
4	Govt. Titumir College	Yes	No	No	No	No	No	Yes	No
5	Tejgaon College	Yes	Yes	No	Yes	No	No	Yes	No
6	Dhaka City College	Yes	No	No	No	No	No	No	No
7	Adamjee Cantonment College	Yes	Yes	No	No	No	Yes	Yes	Yes
8	Banderban Govt. College	Yes	No	No	No	No	No	Yes	No
9	Rangamati Govt. College	Yes	Yes	No	No	No	Yes	Yes	Yes
10	Cox's Bazar City College	No	No	No	No	No	No	No	Yes
11	Rajshahi Government College	Yes	Yes	No	Yes	No	Yes	Yes	Yes
12	Govt. Edward College	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
13	Bogra Azizul Haque College	Yes	Yes	No	No	No	Yes	Yes	Yes
14	Khulna B. L. College	Yes	No	No	No	No	No	No	Yes
15	Jessore Govt. P. C. College	No	No	No	No	No	No	Yes	Yes
16	Sylhet M. C. College	Yes	No	No	No	No	No	Yes	No
17	Barisal Government College	Yes	Yes	No	No	No	Yes	No	Yes
18	Patuakhali Government college	No	No	No	No	No	No	No	Yes
19	Govt. B. M. College	Yes	Yes	No	No	No	No	No	Yes

Out of 43 libraries, only 19 have access to computers, 11 of them have a future plan to access to computers as already mentioned in table 5. No college libraries automated their major library activities. The remaining 24 college libraries are in the process of installing/procuring computers with a view to implementing automation as per commitment of the present government to make Bangladesh digital immediately. Few libraries located in the heart of the capital city and in the Metropolitan city in Bangladesh

have automated some of their library functions. Very soon, all of the honors college libraries throughout the country will receive fund from the government to automate some of their basic library functions and they will be integrated with one another, while most of the large college libraries (Large in terms of number of students) are under consideration in the next phase to automate their library functions.

In addition to the automation of basic library functions – such as acquisitions, cataloguing, circulation, and access to OPAC – some library services are also using computers for related activities, including:

- ✓ Stock control and stock-taking, at Jessore Govt. P. C. College Library Service.
- ✓ Accounting, community information and book selection, at Patuakhali Government College Library Service.
- ✓ Book reservations and access to MS Access database at Cox's Bazar City College Library and Information Service.

The application of computers to library-related activities in some of the library services is very limited, and often on a small scale, as is the case in the following libraries:

- Bogra Azizul Haque College Library has two small catalogues (one is for latest collection from the year: 2007-2009 and another one is on retrospective collection of books) compiled on computers using WordPerfect 5.1.
- Chittagong Government College Library has developed three databases as part of the reference section of the main library.
- Rajshahi government college Library is developing a periodicals' holding database.
- Khulna B. L. College Library is using computers for cataloguing and management information.
- Barisal B. M. College library Service is using computers for the maintenance of accounts, library statistics and bibliographic control.
- Sylhet M. C. College Library Service is using computers for cataloguing.

Those libraries which have not yet been automated any of their functions, and those using computers on only a small scale, have planed to automate in future, with the exception of Cox's Bazar government college library, that does not have immediate plan to do so. The reasons given for this are that their existing manual systems are adequate and automation would bring no significant service improvement to users; they have unreliable power supplies that could cripple the library's operations; and no funds are available to meet the high cost of initial software and future updates. The major reason given for automating functions was a lack of funds to extend automation to all the libraries within the system. Other reasons given were a lack of ICT experts and inadequate supporting infrastructure – for example, no continuous electricity and telephone facilities where college libraries or service points were located.

### Barriers to automation

Introducing ICT in college library services in Bangladesh are being hampered by a number of factors. Most of the cases presented in this study indicate that a lack of adequate funding and, in some cases, a lack of commitment from policy makers in education sector is the major barriers to the deployment of ICT facilities. College library services are generally poor funded, and as a result government is now looking for some external funding in this sector.

**Table 8: Barriers of introducing ICT**

Barrier	Number	%
Inadequacies of existing ICT resources	30	69.76%
Lack of budget for ICT	40	93.02%
Skill levels of library staffs	10	23.25%
Lack of automation qualified staff in the library	25	58.13%
Difficult to recruit or retain ICT-qualified staff (lack of applicants/prohibitive salaries)	10	23.25%
Reluctance among staff to use IT	12	27.90%
Library lacks updated automation strategy	15	34.88%
Lack of commitment by institutional management	8	18.60%
Difficulties in training library staff in appropriate ICT skills	35	81.39%

The 43 libraries were asked to indicate their opinion regarding the impact on the barriers listed in Table 8 had on their use of ICT. The responses show that lack of funding (93.02%) has the greatest impact on the use and implementation of automation in college libraries; inadequate existing automation resources (69.76%); skill levels of library staffs (23.25%); lack of ICT qualified staffs (58.13%) and the lack of an up-to-date automation policy (34.88%) also had a significant impact. It is not surprising that the lack of ICT budgets (i.e. funds) received the highest score as the factor having a large impact on the implementation and use of automation in academic libraries. Most academic library services in Bangladesh do not have any ICT budgets.

**Cyber café facilities:** No college libraries covered by the survey provide this service. The potential largest college libraries located at the capital city have future plan to make cyber café for their users if they receive fund from the government. Some of them have submitted the proposal to the Ministry of Education with a full-fledged library automation project where they mentioned clearly to establish cyber café in the separate room either in college library building or an individual room adjunct with the library for its user.

**Free Internet Access:** Some district level college libraries such as Dhaka College Library, Govt. Titumir College library, Adamjee Cantonment College library, Govt. Edward College library Pabna, Khulna B. L. College library, have these opportunities just for their limited number of officials. This is not open for all users.

### **Library Websites**

Unfortunately, most of the college library services indicated that they have no any websites with their own library domain except a few such as Dhaka College, Govt. Bangla, College, Edward College, Bogra Azizul Haque College, Govt. Titumir College, Tejgaon College, Sylhet M. C. College, Govt. Adamjee Cantonment College. As these colleges are affiliated under the National University, therefore, on the NU website [http://www.nubd.info/college/college\\_details.php](http://www.nubd.info/college/college_details.php) information can be found with a very short description of the colleges mainly related with location and affiliation. It has just mentioned the total collection of the libraries. Nothing mentioned about services offered, opening hours, general library information etc. in details.

### **CD-ROM Services**

Unfortunately, not all college library services have taken advantage of CD-ROM technology. Only 8 college libraries namely Dhaka College library, Titumir College Library, Govt. Bangla college library, Edward College library, Bogra Azizul Haque College library Tejgaon College library, Sylhet M. C. College library and Govt. Adamjee Cantonment College library out of 43 that participated in the survey provide their users with access to CD-ROM-based information services and products within a very limited extent. CD-ROM-based resources being provided by the libraries include educational CD-ROM resources such as the Banglapedia on CD-ROM; full-text collections and UNESCO CD-ROMs on education. 17 libraries those have automated their acquisition functions are also using CD-ROM tools for book acquisitions/selection.

### **Designation of Librarians**

77.7% of the college libraries are headed by a Librarian, while the remaining 22.2% are either headed by Assistant Librarian or by non-professionals. This generally owes the post of Librarian remaining unfilled by the college administration.

### **Qualifications of the Librarians**

63.9% college librarians have a professional Master Degree in Library and Information science; 19.4% have a Diploma Degree in Library and Information Science and 2 (5.6%) have completed a certificate course in Library science. 2 (5.6%) have an M. Phil degree in another field; while 1 (2.8%) has a Ph.D. in Library Science and 1 has no professional qualification in Library Science. In Bangladesh for the post of librarian there is no need to clear Teachers Eligibility Registration Test.

### **Major Findings**

The use of commercially available integrated library management systems is absent in academic library services in Bangladesh. Some college libraries in Bangladesh were used the free CDS/ISIS bibliographic database management software but it is not internet friendly and due to lack of technical hands, once the uses of this software has been stopped (Ali, 2003). The deployment of automation services in few largest academic libraries is being done on an *ad hoc* basis since the libraries do not have ICT strategies in place to guide them and to enable them to make effective use of them. College library services do not have budgets for procuring ICT and this is the major barrier on the way of introducing ICT (Miyani, 2009). In most cases, funding for the ICT services is not provided by the college authority or even the relevant ministry as well. Only the potential colleges at Dhaka City are being benefited from government funding. Many of the college libraries are going to establish internet connectivity, some are going to purchase computers for Internet access by library staffs, and some have been trying to develop library Websites. However, the provision of library and information services via the Web has not yet been taken place. District level government college libraries have also plan to set up a cyber café facilities to their users, and also as means of raising funds to sustain the Internet connectivity. In spite of the various efforts being made by most of the college library services in Bangladesh to acquire and use ICT, these academic libraries still need to be assisted and guided in their effective use. The assistance should come from both the government through Ministry of Education as parent organization as well as donor communities. In particular, academic library services need assistance with:

**Funding:** Government should provide adequate fund to college library services if they are to deploy appropriate ICTs and play an active role in the provision of access to global information resources

**ICT strategies:** There is a need to assist academic library services with the development of formal ICT strategies. In their absence, most of the libraries will continue using ICTs in an *ad hoc* manner, which in the long run will not be cost-effective

**Use of the Web:** There is a need to make an innovative use of the Web in the provision of college library services to users. This can be possible by equipping staff with appropriate skills relating to digital information resource management and the provision of Internet-based library and information services.

### **Suggestive Directions**

Based on the findings of the survey, it can be suggested that for accelerating the use and applications of modern ICT in the academic library from its present state, a policy of liberalization and incentives in procurement of ICT products for college libraries should be adopted. A national ICT policy and master plan should be formulated for the college libraries as well. To enhance quality education at college level, teachers and students need free access to ICT due to the availability of subject-based vast collections (Jager &

Lokman, 1999). Most of the college teachers and students are not getting opportunity to access into huge accumulation of knowledge due to lack of proper technology. But they are the vital educational force in the country. Traditional library systems cannot bear any fruitful outcome for increasing the number of users and in the development of knowledge-base society as well. The study has observed that there are various constraints in introducing and implementing ICT plan in the college libraries. The constraints like lack of clear conception, sufficient budget, willingness of the authorities concerned, qualified and trained staff, commitment of the library professionals, modern technological facilities, adequate information resources, physical and infrastructural facilities of the libraries and library standardization are the reasons for slow progress of library and information network in the country which hamper quality educations seriously. In spite of all unfavorable conditions, a start has to be made to establish real and active ICT based college library and information networks in the country. It needs concerted as well as integrated efforts of administrators, politicians, academicians, researchers and information professionals for planning and implementation of ICT plans for college libraries so that information resources of one college is accessible and made available to others who need them. After all, the ultimate aim of using ICT in libraries is to provide the right information expeditiously to the right user at the right time in a right way.

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