**Review Article**

Library Automation in Bangladesh: A Case Study of University Libraries

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***Abstract:***

***Objectives***

***The aim of the study is to identify using of library software and comparative analysis between public and private university libraries of Bangladesh. The objectives are to determine what software are used in university libraries and what are the reasons behind using these software, find out the professionals preference of library software and satisfaction level, identify problems obstructing software installation, etc.***

***Methodology***

***An interview method used to gather data from selected highly top ranked public and private university libraries of Bangladesh. A structured questionnaire used for collecting data.***

***Findings***

***Findings publish the collection of books of the public university library is better than private university library. But e-journal, public universities are far behind than private universities. Private university library is more equipped (computer, barcode scanner, scanner and RFID etc.) than public university libraries.The study also shows that Private university libraries regularly conducting survey of user satisfaction on the other hand public university libraries doing rarely.***

***Practical implications***

***The results of the study will be useful for the both public and private university libraries for further improvement. These will get a proper concept usage of library automation software.***

***Originality/value***

***The insights and views obtained from for the both public and private university libraries are original.***

***Keywords: Library automation, Software, User demand, Computerized, RFID, Digitalization.***

# Introduction

People search for knowledge has steered to the creation and accumulation of incredible total of information. There is no bounds and limits for searching of knowledge. Digital library may help to search such kind of knowledge. This hard­ earned knowledge and information is suitable for the entire mankind and therefore accountable to be well-kept. Mainly libraries are induced for the methodical purchase, organization, reservation and dissemination of knowledge and information.

Different library automation software helpful to increase, preserve and disseminate of library collection. In Bangladesh many public and private university libraries are recently used automation and digital library software. The term of digital library is well-known by the help of automation software. But in recently some of public and private universities library are trying to use or launch library automation software. That is why library staff or user is up to date.

The relevance of the implementation of ICT in library deeds such as acquisition, cataloguing, circulation, serials management, etc. is no longer database as libraries as widely have felt the necessity to move from their several past into integrated systems and networked operations.

The main or scope of the study differences that lie in the search strategies. So that maximum relevant information is retried according to the user needs(Shimrey & Ahmed).

The advent of technologies and the internet has revolutionized the functions of information making, organizing, preserving and academic communication. The enormous ability of these tools to access, construe and build modern information has raised its close of importance in

the range of literacy, variations the working design of information professionals as well as consumers' information seeking behavior. This shifting breeze is also forceful the libraries and information hubs in Bangladesh in accepting the current technologies and digital information assets to make the library facility up to date(Siddike, Munshi, & Sayeed, 2011).

Bangladesh moves in the computer village in 1964 with the connection of an IBM 1620 apparatus at the Atomic Energy Commission in Dhaka. The 1980s are measured the opening of the automation age as far as libraries and information centers in Bangladesh are worried(Siddike et al., 2011).

The information and Communication Technology (ICT) emergence has had a drastic and far getting impact on all phases of professional creativity, mostly in the knowledge and information areas. The internet has additionally a new aspect to information technology ( IT) and knowledge­ sharing stages, giving increase to rich ideas such as digital library (DL), e-learning, knowledge organization and archiving of original culture and heritage (Begum, Rashid, & Mahamud, 2012).

Information technology is not static. With the course of time, library adopts new and modern today will be old tomorrow.

# Literature Review:

Libraries are always shows a dynamic role as a social institution where all kinds of information sources are available for end users. Both the library staff and employers must be bodily existing in the library in command to altercation the information, presented in any format. Now present situation has altered with the appearance of ICT constructed products & automated services in libraries. In this modern digital era, libraries are totally dependent on ICT constructed products & automated services to fulfill the hi-tech users' need. In short-term this article analyses a few studies showe doverseas as well as in Bangladesh on Library automation software application and use. In well-lit of this topic, a review of available literature is made here to make the study more strengthen and widen. The present study is an attempt to clearly establish library automation

software used in educational libraries in Bangladesh.

Begum, Rashid and Mahmud (2012) conduct a case study on Bangladesh about Green stone digital library software .This study defines the actions of DLNETSA and present situation of exhausting greenstone digital library software as library institutional warehouse in Bangladesh.

A study by Ngozi B., Victor N., Uloma D. (2014) was described the characteristics of Open Source Software that succeed them to be operative library automation software, and counted and for a short time argued the various OSS existing for integrated library management. In this paper they also suggested on the key factors that should be prioritized for the achievement of a successful automation of the library services with the open source software.

A study by Shariful Islam (2013) was that the prime objective of the study is to discover the digitization and digital librarianship creativities by the librarians and information professional in the private and public university Libraries of Bangladesh.

Govardhan and Shivshankar (2014) in their study "Library Management Software's : Libsys 7 & Koha" they describe library software has become the most powerful tool for changing the scenario of libraries from traditional to automated, and from automated to electronic. They also describe the open source library management software and to point-out views of librarians and users about software which is used for automation packages Koha and commercial package of LibSys. It is also describe the objective of open source and commercial library software and its operations to find out best open source software and to set priorities for software selection to evaluate LIBSYS & KOHA Library Management Software's.

Otunla (2016) investigated statistical data on present situation of library automation, type of library software recycled and number of elements recycled by academic libraries in Osun State, Nigeria. He also starts out obstacles towards the

execution of library automation in academic libraries. The paper originate that out of 13 higher institutions surveyed, 7 libraries have been automated while the remaining libraries are planning to do so. It was also originate that 5 universities and 2 polytechnics libraries were automated while none of the colleges of education libraries in the state were automated.

He found in the findings that 5 (71.4%) of the 7 libraries that had implemented automation process were via KOHA Library Integrated Systems Software while one library used VIRTUAL and the other one indicated an in-house software known as link Digital Library as others. Additional information by the respondents revealed that 2 (28.6%) of the respondents transferred from one software or the other before the current software they are using. The reason for migrating as indicated by the respondents was that the former software could not perform the functions they wanted and that they can no longer afford the high annual subscription rate to proprietary software. Ray and Romesh (2017) conduct an over view of Open Source Software (OSS) for Management of Library and Information Services.

They said the paper that today all most all day-to­ day activities of the library are completed through the open source equipment. This equipment takes in the digital library, Integrated Library System, Content management system, OPAC, Citation management etc. Efficiently using this software to provide innovative services to their valued users without having high budget for library professional now.This paper also describes the basic features of the utmost popular and leading open source software used in the library for different purposes. Here author also discuss about the advantages and limitations of open source software.

# Statement of the problem

Library automation software exercise of public and private university library of Bangladesh has increased popularity and found concern in the current decades. So, bearing in mind all of the universities, it can be said, only a few numbers of libraries are in decent situation in using library automation software. The quantity of libraries in exhausting library software is moderate, but the supreme number of libraries have not been yet

approved library automation software even there are some libraries which are not aware of this at all.

The study aims to show the minimum of the position of using library automation software in various public and private university libraries of Bangladesh. Brief history and description of different library automation software, Preference and future plan of libraries about library automation software, problems which libraries are faced to and finally the recommendations.

# Objectives:

The core objective of usage of library software comparative analysis between public and private university libraries of Bangladesh.

Some other objectives are mentioned below

1. To find out what software are used in different libraries and what are the reasons behind using these software.
2. To find out the information professionals preference of library software and their satisfaction with the current software they are using.
3. To find out the problems obstructing software installation in public and private university libraries

# Research question:

In order to achieve the above objectives, the following research questions are used

1. What is the current position of using library automation software in public and private universities?
2. Which software is favorite of the library personnel?
3. What obstacles arise in front of library automation and digitization?
4. Does the library offer training program on library automation software or arrange seminar, conference, and workshop?
5. What is the satisfaction level skilled from using library automation software?

# Research Area:

**Rajshahi university central library:**

The Rajshahi university central library was established in1953. It has three stored building

excellently designed for the main purpose of library. It looks very beautiful inside of the building. The key advantages of this are quite comfortable environment in the inside for the users. Storage and lending are mainly of the ground floor. First floor is well-designed for reading room, here are two parts.

One part is being used for arts, social science, business administration and law students. Another part is being used by science and engineering students.

The second floor is being used for catalogue, automation and administration. This library one of the biggest library in Bangladesh, last 6 decades it was supported to the students, teachers, researchers or general readers.

The total collection of this library is 350000. The library has a huge achieve newspaper and "ephemeral" publication.

# North South University Library:

North south university library was established in 1992. It is one of the leading private university libraries in Bangladesh. This library first fully automated Library in Bangladesh, using Biblingual library management system which is developed by NSU and supports to MARC-21, web-based online circulation, browse databases of books, CDs, journals, newspaper and magazines, full-text online books and journals , institutional repository, auto e-mail alert services etc.

Any users can easily check his borrowing books, renew his books or reserve books through library website. NSU library is the pioneer for subscribing online journals in the country.

# Data collection methods:

This is based on a questionnaire survey of library professional employed in the university libraries in both public and private university in Bangladesh. A structured questionnaire was used to collect the data as per objectives of the study. The collected data was analyzed using latest version of MS-Excel for appropriate statistical analysis and description.

# Data collection tools:

Sources of Data: Different sources are used to collect data. Each sources works as a potential

tools.These are given bellow

* Personal interview
* Mail communication
* Using social media apparatuses (Facebook, messenger etc.)
* Questionnaire survey (method)

# Personal interview:

Collected information is from the assistant librarian of one private and one public university by formal interview. Interview is the decisive discussion of collecting information that is why I applied this method. These discussions were very much useful and effective for me by making recommendations for library automation software relative analysis between public and private university libraries.

Interview refers to gathering in depth information from individuals through a one-on­ one session over the phone or face to face.This process is called interview method.

# Mail Communication:

For collecting data also used e-mail. The university of Rajshahi central library where communicated with Noni Gopal(Assistant Librarian of RUCL) through mail. He gives me lots of information about this library like as collection­ resource or other equipment.

Communicated is with Mr. Ede-Amin(Library Officer of NSU). He gives us also much information about North south library collection. Here we know about how much collection is there and which software are they used he told us.

# Social Media Tools:

We are also used some social media tools like Facebook or Messenger. By this method we have collected some information about RUCL and NSU.

# Data Analysis:

***Table-1. Collection information of RUCL and NSU University***

|  |  |  |
| --- | --- | --- |
| **Collection amount** | **Rajshahi University Central Library** | **North South University Library** |
| Books | 318256 | 51008 |
| E-journal | 42572 | 64624 |
| Others | 894 | 2288 |
| Total | 361722 | 117920 |

Among the table: 1we show that, the collection of books of the public university library is better than the collection of private university library. But e-journal collections, public university library are far behind position than private university library.

***Tab/e-2. Physical Apparatus of Rajshahi University Library***

|  |  |
| --- | --- |
| **Name of Equipment** | **Reasonable factors** |
| Computer |  |
| Barcode scanner | X |
| Scanner |  |
| RFID | X |

***Table-3. Physical Apparatus of NSU Library***

|  |  |
| --- | --- |
| **Name of Equipment** | **Reasonable factors** |
| Computer |  |
| Barcode scanner |  |
| Scanner |  |
| RFID |  |

Rajshahi university library. That means NSU library more upgrade than Rajshahi university library.

***Table-6. User training on automation software***

|  |  |  |
| --- | --- | --- |
|  | **Rajshahi****University library** | **NSU Lidrary** |
| Very frequently |  |  |
| Frequently |  |  |
| Rarely |  |  |
| Never |  |  |

For users keeping up to date, properly library materials use, there is no alternative way of automation training program. NSU is arranging very frequently automation training program but Rajshahi university far behind from this training program.

***Table-7. Satisfaction level of the librarian is using software***

Automation and digitization scenario of library is an essential when sufficient number of computers are in library. Table 2&3 shows that NSU library used more apparatus than Rajshahi university library. Rajshahi university library only used computer and scanner but NSU library used

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Very satidfied** | **Satidfied** | **No response** |
|  | **RUCL** | **NSUL** | **RUCL** | **NSUL** | **RUCL** | **NSUL** |
| a) Automation software |  |  |  |  |  |  |
| b) Digital library software |  |  |  |  |  |  |
| c) No response |  |  |  |  |  |  |
| Both a & b |  |  |  |  |  |  |

The table-7 shows that, NSU librarian

is very

computer, barcode scanner, scanner and RFID etc.

***Table-4. library software in Rajshahi university library***

|  |  |
| --- | --- |
| **Software** | **Rajshahi University** |
| KOHA |  |
| Mirror | X |
| Winisis | X |
| No software use |  |

***Table-5. library software NSU library***

|  |  |
| --- | --- |
| **Software** | **Private University** |
| KOHA | Yes |
| Mirror | No |
| Winisis | Yes |
| No software use | Yes |

According to table 4 & 5 shows that NSU library is used more library automation software than

satisfied and satisfied for using automation and digital library software. RUCL librarian satisfied with using automation softwarebut no response about digital library software because they aren't yet launched.

***Table-8.User satisfaction and requirements about using library automation software***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **RUCL** | % | **NSUL** | % |
| Frequently | 0 | 0 |  | 100% |
| Weekly | 0 | 0 | 0 | 0 |
| Monthly | 0 | 0 | 0 | 0 |
| No response |  | 100% | 0 | 0 |
| **Total** | **1** | **100%** | **1** | **100%** |

Table: 8 shows that in Bangladesh most of the private university libraries are used library automation software so that user satisfaction level are very high but public university libraries are not to response by using of library automation software.

|  |  |
| --- | --- |
|  |  |
|  |  |  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| Frequently | Weekly | Monthly | No Response |
| * RUCL
 | 0% | 0% | 0% | 100% |
| * NSUL
 | 100% | 0% | 0% | 0% |

***Figure: User satisfaction of using library automation software***

**User satisfaction and requirements about usng library automation software**

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**1:**

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I>.

120%

100%

80%

60%

40%

20%

0%

# Findings and Interpretation:

Aloof from the upstairs problems, the following causes are also mentionable-

# Library Collection:

Library collection of public university library is better than private university library but in private university librarye- journal and other digital collection is reach than public university library.

**Insufficient physical infrastructure:** Automation and digitization is suitable when physical infrastructure is well set-up. In Bangladesh insufficient physical infrastructure of the university library hamper the growth of digitization

**Insufficient number of trained professionals:** In Bangladesh computer is so much attractive, but our many professionals age are old so they have some technophobia.They are only known to operate computer but they have no idea about to run computer.

# Satisfaction Level:

In Bangladesh most of the private university libraries are used library automation software as a result user satisfaction level is so high but public university library is not using library automation software so that private university library users are more satisfied than public university libraries.

# Administrative difficulty:

Administrators, Policy makers and government are not fully concerned about the effectiveness of

ICT including automation and digital technologies. Though our information professionals still unsuccessful make its clear but they are trying.

**Disappointment of internet connection:** Bangladesh is a developing countries but in our country technology behind than other developing countries. Especially internet connection is very poor that is why professionals are not satisfied. So they can't fulfill their task because of technological interruptions.

# Lack of financial support:

Financial support may help to made development of library automation and digitization.

Insufficient financial support complex to make of automation and digitization.

# Discussion and suggestion:

* Both public and private university library

should be implemented of automation process, because this help to library

operations and services.

* Library automation increases the speed,

efficiency, capability of the library staff(Ukachi,

Nwachukwu, & Onuoha, 2014).

* Library authority should support the library

automation project, through arrangement of enough finding and meeting other library's

need.

* Arranging training program.
* University librarian should arrange more

training session for the development of library

profession and library services. By this way users are also benefited.

* Library automation is started with library

automation management software. It should have a necessary modules to automate the library, such as administrator, members, acquisition, cataloguing, circulation and serial

control (Kashif Khan, nov.2017).7

* Public university library authority should

concentrate on user satisfaction because users

are the heart of library.

* Private university should increase the library

collection. Without library collection a library never be a reach library.

**Conclusion:**

The key requirement for a university is a decent library with a well-adjusted and sufficient collection, which can fulfill the demands of the university capacities and support to stimulate innovative study and research programs. A university is rated largely by its strength of library. No university can develop effective work, in the academic sense, without a strong library at its center. Automation and Digitization of the university libraries have become useful requirement and authenticity with technology involvements to provide better entrance to information sources, preservation and dissemination as prerequisite, at any time; any where and any place as it were.

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