# AUTOMATION IN MEDICAL COLLEGE LIBRARIES OF BIRATNAGAR

**A Thesis**

**Submitted to the**

**Central Department of Library and Information Science**

**For the Fulfillment of the Requirements for the**

**Masters' of Arts in Library and Information Science**

**Submitted by**

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**Central Department of Library and Information Science**

**Faculty of Humanities and Social Sciences**

**Tribhuvan University**

**Kirtipur, Kathmandu**

**2023**

# DECLARATION

I, Urmila Rai, hereby declare that the thesis entitled "**Automation in Medical College Libraries of Biratnagar**" submitted for the Master's Degree in Library and Information Science is my original work and has not been submitted to any other University for the award of any degree. I further declare that all the sources of information used in this research work have been duly acknowledged and cited in the bibliography section. I am aware of and understand the University's policy on plagiarism.

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## LETTER OF RECOMMENDATION

This is to certify that the thesis submitted by Urmila Rai entitled "**Automation in Medical College Libraries of Biratnagar**" is original work prepared under my supervision and guidance; hereby recommend this thesis for partial fulfillment of the requirements for the Master's degree in Library and Information Science.

…………………………………

 Assistant Prof. Nira Manandhar

Thesis Supervisor

Date: 20nd December, 2023

## LETTER OF ACCEPTANCE

We certify that this thesis entitled "**Automation in Medical College Libraries of Biratnagar**" prepared and submitted by Urmila Rai to the Central Department of Library and Information Science, under the Faculty of Humanities and Social Science, Tribhuvan University, for the partial fulfilment of the requirements for the Master's degree in Library and Information Science has been found satisfactory. Therefore, this thesis as a part of the said Degree has been accepted and approved.

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Assistant Prof. Nira Manandhar

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# ACKNOWLEDGEMENTS

# ABSTRACT

This thesis entitled "**Automation in Medical College Libraries of Biratnagar**" investigated the status of library automation in the medical college libraries of Biratnagar. Medical college libraries and even non-medical libraries of Kathmandu valley are working for establishing fully automated libraries, while, in Metropolitan municipality Biratnagar the work of library automation is not much focused. Therefore, this research has been done with the main objective of exploring the current status of automation in the Medical College libraries of Biratnagar as well as the obstacles faced for adopting automation. Users of medical libraries are engaged in professions related to human health and require information without delay. Incorrect or late information can have a major adverse effect on their work. There is a need for full library automation to support the day-to-day research and educational activities being conducted in medical colleges. For this study, many national and international researches, studies, articles, journals, online program etc. were reviewed. In this research, primary data was collected through observation and interview methods. The collected data was analyzed through the qualitative method. Analysis of data revealed that there is mainly lack of public awareness regarding library automation, poor selection of software, lack of skilled manpower, financial problems, and less administrative support. Therefore, researcher recommend that the libraries of all medical colleges in Biratnagar need to use fully automated software and assist the administration in appointing professional librarians.

**Keywords:** Libraries-Automation, Medical Libraries

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AUTOMATION IN MEDICAL COLLEGE LIBRARIES OF BIRATNAGAR A Thesis Submitted to the Central Department of Library and Information Science For the Fulfillment of the Requirements for the Masters' of Arts in Library and Information Science Submitted by URMILA RAI Symbol no: 281804 TU Registration Number: 9-1-9-702-2006 Central Department of Library and Information Science Faculty of Humanities and Social Sciences Tribhuvan University Kirtipur, Kathmandu 2023 ii CHAPTER-I INTRODUCTION 1.1 Background of the Study A library is the only proud organization that compiles, arranges, and safeguards knowledge and information and promptly responds to the demands of readers and scholars. In other words, our academic and social life benefit greatly from the library. A library is a structured collection of informational materials that are made available to a specific community for use as a resource or for loan (Adams S. , 2002). This informational material can be in the form of books, newspapers, CDs, journals, research papers, etc. A library is a place where we may access information physically or digitally. A library's collection may include books, periodicals, newspapers, manuscripts, films, maps, prints, documents, microforms, CDs, cassettes, videotapes, DVDs, Blu-ray discs, e-books, audiobooks, databases, and other formats. A library can be of various types, such as a school library, college library, office library, community library, etc. (Aabø, 2012). Libraries are prestigious institutions that gather, communicate, and preserve knowledge and information to satisfy the demands of readers and scholars. Today, libraries are viewed as sites where readers may find information from internet databases, full-text publications, and other sources. The library is an important component of any educational institution, serving as the hub of teaching and learning activities where students, researchers, and professors can access immense resources of information.

**Computers are being** utilized **for day-to-day housekeeping** activity **of the library in the age of information** communication technology, **which saves** the **time** of **end users and library professionals while also avoiding duplication of** labor **and making the library service smooth and effective. The library** environment **has** evolved **dramatically in terms of collection** , organization, **and services in the age of ICT** . Concurrently, **user expectations and attitudes have shifted in**

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various forms. Users' information-seeking behavior has also altered dynamically. They want timely access to relevant, authentic information in a single location. In the present scenario library concept developed in paperless which is called 1 a digital library. Controlling and distributing library items has become challenging due to the uncontrolled flow of information. Therefore, a library professional should make use of cutting-edge technologies to satisfy the information needs of the user community and prevent information obsolescence. The invention of the modern computer itself paved the way for dramatic

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# LIST OF ABBREVIATIONS

| | | |
|---|---|---|
| CDLIS | : | Central Department of Library and Information Science |
| BMCTHL | : | Birat Medical College Teaching Hospital Library |
| BMCL | : | Birat Medical College Library |
| NHCL | : | Neuro Health College Library |
| NMCTHL | : | Nobel Medical College Teaching Hospital Library |
| BNCL | : | Biratnagar Nursing Campus Library |
| BC | : | Before Crisis |
| OA | : | Open Access |
| ICT | : | Information Communication Technology |
| AACR | : | Anglo American Cataloguing Rules |
| OPAC | : | Online Public Access Cataloguing |
| OCLC | : | Online Computer Library Centre |
| RLIN | : | Research Libraries Information Network |
| WLN | : | Washington Library Network |
| MARC | : | Machine Readable Catalogue |
| CD-ROM | : | Camped Disk Read Only Memory |
| IOLS | : | Integrated Online Library System |
| LMS | : | Library Management Systems |
| TUCL | : | Tribhuvan University Central Library |
| KUCL | : | Katmandu University Central Library |
| CDS/ISIS | : | Computerized Database System/Integrated Set of Information System |
| LAN | : | Local Area Network |
| WAN | : | Wide Area Network |
| CCF | : | Computer Communication Format |
| ISO | : | International Standard Organization |
| R&D | : | Research and Development |

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**CHAPTER-I**

**INTRODUCTION**

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## 1.1 Background of the Study

A library is the only proud organization that compiles, arranges, and safeguards knowledge and information and promptly responds to the demands of readers and scholars. In other words, our academic and social life benefit greatly from the library. A library is a structured collection of informational materials that are made available to a specific community for use as a resource or for loan (Adams S. , 2002).

This informational material can be in the form of books, newspapers, CDs, journals, research papers, etc. A library is a place where we may access information physically or digitally. A library's collection may include books, periodicals, newspapers, manuscripts, films, maps, prints, documents, microforms, CDs, cassettes, videotapes, DVDs, Blu-ray discs, e-books, audiobooks, databases, and other formats. A library can be of various types, such as a school library, college library, office library, community library, etc. (Aabø, 2012).

Libraries are prestigious institutions that gather, communicate, and preserve knowledge and information to satisfy the demands of readers and scholars. Today, libraries are viewed as sites where readers may find information from internet databases, full-text publications, and other sources. The library is an important component of any educational institution, serving as the hub of teaching and learning activities where students, researchers, and professors can access immense resources of information.

Computers are being utilized for day-to-day housekeeping activity of the library in the age of information communication technology, which saves the time of end users and library professionals while also avoiding duplication of labor and making the library service smooth and effective.

The library environment has evolved dramatically in terms of collection, organization, and services in the age of ICT. Concurrently, user expectations and attitudes have shifted in various forms. Users' information-seeking behavior has also altered dynamically. They want timely access to relevant, authentic information in a single location. In the present scenario library concept developed in paperless which is called

a digital library. Controlling and distributing library items has become challenging due to the uncontrolled flow of information. Therefore, a library professional should make use of cutting-edge technologies to satisfy the information needs of the user community and prevent information obsolescence.

The invention of the modern computer itself paved the way for dramatic developments in almost every library. The development of computers has greatly support librarians and library services. Throughout the world, librarians are discussing the benefits and drawbacks of library automation.

The use of computers to carry out some of the standard library tasks, such as acquisition, cataloging, circulation, stock verification, etc., is referred to as "library automation." Library automation can be defined simply as the use of computer and networking technologies in the library. It is said that newer information has been produced in the last 30 years than in the previous 5000 years. Approximately, over 1000 books are published internationally every day and the volume of all printed knowledge doubles every five years (Drabenstott, 1987).

The computer is gaining popularity in the field of librarianship and information services due to its exceptional efficiency, performance, and ability to manage massive amounts of material. Many library and information routines are expertly done by computers. The computer has demonstrated its worth in library acquisition, cataloging, categorization, circulation, serials control, and information storage and retrieval. Many innovative services, such as SDI and current content services, have also been launched with the assistance of computers.

The use of computers and related technology allows for the presentation of the appropriate information to the right reader at the right moment, in the right shape, and in the right personal manner. Automation of library activities delivers services in a very efficient, quick, effective, appropriate, and cost-effective manner (Wawu, 2019).

The capabilities of computer-associated peripheral media, as well as their application in library activities and services, resulted in a considerable quantitative and qualitative increase, particularly in online technology. Library automation has many issues to explore, but this study is confined to the status of medical library automation at Biratnagar Medical Colleges. The history of library automation began in the 1950s and 1960s in America and Europe (Das, 2015).

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In Nepal, library automation was introduced in the 1980s in some public or mission libraries but some academic and other libraries were familiarized in housekeeping operations with computers during or after 1990.

### 1.1.1 Medical Library

A medical library is a special library that provides specialized information resources on a particular subject, serves a specialized and limited clientele, and delivers specialized services to a targeted group of users.

A health or medical library is designed to assist physicians, health professionals, medical students, patients, medical researchers, and information specialists in finding health and scientific information to improve, update assess, or evaluate health care. Medical libraries are commonly found in hospitals, medical institutions, the private sector, and medical or health groups.

Medline, Hinari (research4life), and a variety of electronic database resources, print, and digital journal collections, and print text and reference volumes are all available in a typical health or medical library.

Medical libraries, often known as hospital libraries or health libraries, are designed to suit the needs of physicians, health professionals, medical researchers, medical students, patients, and consumers with an interest in medicine. Most medical libraries are attached to hospitals, medical research institutes, medical colleges, and similar institutions and are meant to aid active medical professionals, researchers, and the general public who are interested in exploring the medical sector (t Io, 2020).

Generally, medical librarians have degrees in a biological or medical field instead of formal library training. The specific nature of the medical library collection is tailored according to type of care that the library's institution specializes in. Some hospitals also maintain a library for the entertainment and leisure of patients rather than research, education, or professional development.

A library is essential for any learning institution so in medical colleges also. Any learning institution is considered incomplete without a library. A well-equipped and well-maintained library forms the foundation of a modern education system. Hence, academic medical libraries must be capable of providing an extremely valuable service to their patrons by providing access to reliable information in time. Services of medical

libraries play a crucial role in supporting medical professionals since it has a direct impact on health issues of patients. The service should ensure that medical professionals have access to the latest advancements, treatments, and practices. The service of medical libraries should support its users by providing access to relevant databases, and guidance in exploring complex scientific literature. Beside this, users must be provided with necessary guidance for citation management and research methodologies (Green, 1992).

With the intervention of new technologies in the library sector, library activities are being automated. Automation helps in managing vast collections of libraries by handling them efficiently leading to better utilization of the library resources. Automation is also necessary in medical libraries as automation simplifies various processes of library enhancing quicker and more extensive access to information.

## 1.2 Statement of the Problem

In the capital city of Nepal, many libraries have been automated and run successfully. The condition of libraries is not same in metropolitan city of Biratnagar where many libraries along with five medical libraries are providing services to the users. The users of medical libraries need information without delay since they are involved in a profession that is related to human health. Wrong or late information may have a big adverse effect on their work. Medical colleges are the institutions that have to be equipped with advanced library services to enhance day to day research and academic activities being conducted in the institution. Hence, in this it has been attempted to find the status of automation in medical libraries of Biratnagar.

## 1.3 Research Questions

1. What is the status of library automation in the medical college libraries of Biratnagar?
2. What are the obstacles for adopting automation in the libraries of the medical colleges of Biratnagar?

## 1.4 Objectives of the Study

- To explore the status of library automation in the medical college libraries of Biratnagar.
- To find out the obstacles in adopting library automation in the medical college libraries of Biratnagar.

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## 1.5 Significance of the Study

Medical libraries have potential to bring various advancements in their libraries. Library services have direct impact on medical education, practice and research. With automation, medical libraries can provide latest medical information via journals, research papers, and databases. Automation facilitate fast service of the library not only in library premises but beyond the library walls also. Users will be able to access most recent and relevant information resources without restriction of time and location. This study has attempted provide valuable insights into the library practices being implemented in medical college libraries of Biratnagar and the importance of automation in medical libraries.

## 1.6 Scope and Limitation of the Study

The study covers library automation in medical college libraries of Biratnagar, Province no. 1. It identifies only the status and obstacles of automation in medical college libraries. It does not aim at obtaining an in-depth knowledge of specific software packages. In the Medical College libraries in Biratnagar, the study will examine the automation status of the library for library management. Specifically, the study focuses only on the medical college libraries of Biratnagar, which are as follows:

1. Birat Medical College Teaching Hospital Library
2. Nobel Medical College Teaching Hospital Library
3. Biratnagar Nursing Campus Library
4. Neuro Health College Library
5. Birat Health College Library

This research surveys all the medical college libraries of Biratnagar, focusing on the status of library automation and the obstacles in implementation of library automation. Automation is the use of electronic devices that can complete tasks easily, quickly and efficiently, largely reducing human effort. In libraries, automated techniques are used for various tasks like library serial control, cataloging, acquisition, circulation control, etc. Library automation helps readers get information as fast as possible; this will completely focus on the law of Dr. Ranganathan "Save the time of the reader".

 In this age of information technology, readers want information to be obtained quickly and with the least effort. Hence, it is necessary to use automation in the library. This

will provide the best services to the reader and library staff and help them complete tasks quickly and efficiently.

Various integrated library software is available for various operations done in libraries like acquisition, cataloging, serial control, circulation, and user access. In this study, library using computers to manage data and provide services to users have been taken as the beginning of library automation. In this study status of library automation has been evaluated on the basis of three criteria fully automated, partially automated, and initial automation.

## 1.7 Definition of Literary Terms

**Fully automated library:** All housekeeping operations of library such as acquisition, cataloging, serial control, circulation and OPAC are operated by using library software.

**Partially automated library:** If library does not perform all housekeeping operations by software, it is called partially automated. Software being used partially for some particular housekeeping operations

**Initial automation:** If library does not use the software but uses devices like a computer, scanners, printers etc. to manage library, that has been referred as the initial stage of automation in the library.

**Medical College Libraries:** A medical library is a special type of library where collections are specific and focused on special users like medical students, doctors, etc.

## 1.8 Organization of the Study

The thesis is divided into five chapters. The first chapter consist of the background of the study, the meaning of the medical library, the statement of the problem, the research questions, the objectives of the study, significance of the study and limitations of the study.

Second chapter deals with the literature review of the previous studies on library automation.

Third chapter has attempted to discuss the research methodology, research design, population, and data collection procedure used to conduct the research.

The fourth chapter is the main part of the thesis which consists interpretation from data analysis.

The fifth chapter includes the summary, finding, conclusion, and recommendations

based on the analysis presented in the previous chapters. Lastly references are listed for the work cited in the thesis.

# CHAPTER - II

# LITERATURE REVIEW

## 2.1 Literature Review

Many national and international library automation studies, research articles, online programs, and other materials were reviewed. In the present scenario, library automation is extremely important, but very few people are aware of this. Historical research is comparatively more attractive among the younger generation.

The term automation was introduced and used first by D.S. Harder in 1936. He outlined it as "automation is the handling of components between progressive production processes". Since then, the term has been applied to a large form of automatic machinery and automatic systems, and actions for human efforts of intelligence (Patel, 2014).

According to the Encyclopedia Britannica, "automation" is "the name given to an automatic system of working." The distinction between automation and mechanization is particularly subtle: "the technique of producing equipment or a system that operates automatically." In general, automation is the automatic, as opposed to human, operation or control of a process, equipment, or system; or the techniques and equipment used to achieve this. Automation in libraries refers to the method of automating in-house functions such as circulation, cataloging, acquisitions, serials controls, and so on (Royster, 2016).

Traditionally, library automation refers to the computerization of the entire library housekeeping operations like acquisition, cataloging, circulation and serials control. But today it is also referred to as handling a large quantity of data and information more efficiently and quickly with the help of computers and other modern information technologies (Nebeolise & Osuchukwu, 2014).

The term "automation" comes from the Greek word "automate," which means "something capable of spontaneous motion or self-movement." D.S. Harder, who worked for General Motors in the United States at the time, coined the term "automation" in 1936. He used the phrase "automated handling of parts between progressive manufacturing processes." Automation is a technology of automatic working in which the handling methods, process, and design of professional material

are merged, resulting in an autonomous and self-regulating process chain (Das & Chatterjee, 2015).

Library automation is the concept of reducing human intervention in all library services so that any user can receive the desired information with maximum comfort and at the lowest cost. Major areas of automation can be classified into two organizational library databases and all housekeeping operations of the library.(Ghante & Yakkaldevi, 2014)

Library automation is a broad phrase that refers to a variety of actions aimed at increasing the quality of library and information center products and services. It improves the speed, productivity, sufficiency, and efficiency of the library's professional staff while also saving manpower by eliminating some regular, repetitive, and clerical duties such as filing, sorting, typing, duplication checking, and so on (Lakpathi, 2014).

Library automation refers to the use of computers, and media such as magnetic tapes, disks, optical media, etc. Computers are capable of introducing a great degree of automation in operations, and functions since they are electronic, programmable, and capable of controlling the processes being performed. Automation of library activities provides services very efficiently, rapidly, effectively, adequately, and economically (Gireesh Kumar, 2017).

The article, A Practical Approach to Library Automation discusses the aims, objectives, and need for the change of library tools and techniques under the changing environment with the concepts of automation of library activities, areas, and services such as acquisition, database management, classification, and cataloging circulation, serial control, information retrieval, communication networks, and documentation services, etc. (Bhardwaj & Shukla, 2000).

The concept of library automation and multimedia is discussed by Singh, in his article "Compatibility of library automation software package with multimedia". He stated that a library automation software package having compatibility with multimedia should be the choice of libraries and information centers thinking of 21st-century information handling. According to him, library automation involves total computerization of library activities starting from acquisition, to management and circulation to reference service. Library technology involves the use of Xerox machines and barcode readers to

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electronic security gates. If the software supports some of these technologies, then it has compatibility with multimedia (Singh, 2003).

"Library Automation and Networking for Managing Library and Information Services" reveals the history of library automation in brief. It traces the establishment of networks and the use of information technology in library services in the Indian scenario. The article reviews what library automation is why it is needed and the areas of library automation and networking. It concludes that the success of library automation and networking depends mainly upon the proper planning and appropriate decisions taken by the authorities from time to time (Sinha & Satpathy, 2004).

A system in which a workplace or process has been modified to replace or minimize human labor with mechanical or electronic technology is referred to as automation. Library automation refers to the arrangement, storage, location, and retrieval of encoded data in computer systems. The use of data processing devices to execute routine library activities such as acquisitions, cataloging, circulation, serials, and online public access catalog (OPAC), among others, is known as library automation. Although these activities are not always carried out in traditional ways, they are traditionally associated with libraries: Library automation can thus be distinguished from related fields such as information retrieval, automatic indexing and abstraction, and automatic textual analysis.

Library automation is the use of a computer to automate routine library activities such as cataloging and circulation. A library uses computers and other technologies to assist its systems and services during the automation process. The transfer of a library's procedures from manual to computerized, such as from a card catalog to an OPAC or from manual circulation cards to an integrated library system, is known as library automation. Automation is a process of using machinery for easy working and saving human power and time. The main purpose of library automation is to free the librarians and library staff and to allow them to contribute more meaningfully to the spread of knowledge and information. In Library Science automation is 'the technology concerned with the design and development of the process and system that minimizes the necessity of human intervention in their operation (Levine-Clark & Dean, 2013).Beginning in the 1960s with the development of the machine-readable catalog record (MARC), the process of

automation has expanded to include the core functions of acquisitions, cataloging and authority control, serials control, circulation and inventory, and interlibrary loan and document delivery. The library automation field is currently dominated by a handful of systems vendors (Auto-Graphics, EOS International, Ex Libris, Follett, Innovative Interfaces, Polaris Library Systems, SirsiDynix, TLC, and VTLS) (Ngozi, 2020).

The term "Library Automation" refers to the use of a computer to do various traditional library operations such as acquisition, cataloging, circulation, stock verification, and so on. The employment of computer and networking technology in libraries is known as library automation. The use of machinery to make work easier while saving human labor and time is referred to as automation. The primary goal of library automation is to free librarians and library employees to contribute more effectively to the spread of knowledge and information. In Library Science, automation is described as "the technology concerned with the design and development of processes and systems that minimize the need for human intervention in their operation."

## 2.2 Review of Articles in Nepalese Context

Library automation was started in 1992 in Nepal Similarly, since 1995 TU Central Library has maintained a house database to enable readers to search for reading materials in the library through an intranet network (TUCL, 2004 p.13) at that time, CDS/ISIS was installed for library automation work. Since 2007, TUCL has installed Koha software which is an open-source integrated library software (Tribhuvan University Central Library, 2009 p. 37) (Sharma, 2022).

Koha is a full-featured ILS with modules for OPAC, Circulation, Acquisition, and Cataloguing. Since 2010, TUCL has been working on transferring data from CDS/ISIS and Win/SISI software into Koha. However, due to technical challenges in its installation, this software was discontinued. The Tribhuvan University Central Library in Nepal offers remote access facilities. Since 2014 AD, circulation and other elements have been present. Presently, the OPAC system contains more than 300,000 documents. However, limited resources and a staffing shortage prevented the entire collection from being mechanized. The computer catalog has been updated with recently added books. It had microfilm and microfiche reader technology prior to automation, which happened in early 2028 BS, but no documentation exists about when, how, or when it was made

available. In October 2004, microfilming equipment at the TU Central Library was restored thanks to funding from the Japanese Government's Cultural Grant Aid. Microfilmed are a few priceless and unique items from the library's collection. But owing to a lack of technology, these microfilm attempts have been shelved, and the digitalization process has taken their place. There is a dearth of material concerning the types, requirements, attributes, and uses of library automation utilized in Nepalese libraries. However, significant work is currently being done on Master's Degree Dissertations in numerous Nepalese libraries on IT implementation and library automation. Kathmandu University library automation explained how SOUL is used there and emphasized how its modules and capabilities are appropriate and adaptable to automate any kind of library. He also talked about how barcodes have made circulation and transaction processes fast and methodical across all collections. All of the college library software in Nepal is utilized for automated purposes, specifically for data entry and circulation.

**2.3 Conceptual Framework**

Figure 1: Conceptual Framework
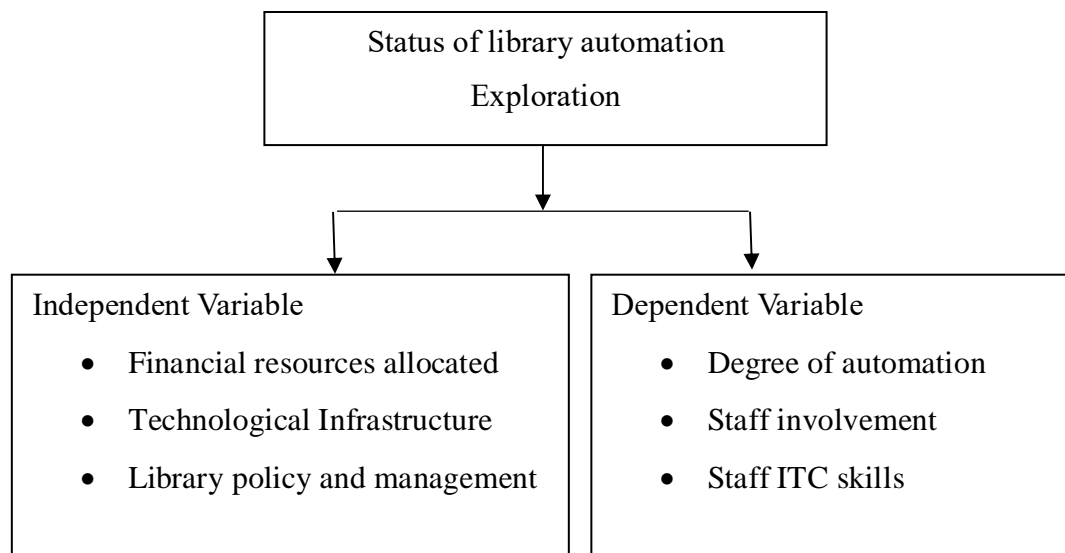
## CHAPTER-III

## RESEARCH METHODOLOGY

The research technique is the path researchers must take to do their research. It demonstrates how these researchers construct their problems and objectives and deliver their findings based on the data collected during the study period. This research design and technique also demonstrate how the research outcome will be reached by the study's purpose. It describes the research strategy, study population, and data analysis procedures. In this chapter, the process used to determine the study's objectives is covered. It contains information about the study population, data analysis techniques, and research methodology.

### 3.1 Research Design

The research design is meant to give an appropriate framework for a study. The strategy for research decisions is critical in the research design process because it affects how relevant information for a study will be gathered the research design process contains numerous interrelated decisions. The current status of automation the five Medical College libraries as well as obstacles of implementation of library automation is examined in this study.

Figure 2: Research Design Frameworks

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│   Library automation on medical college libraries of     │
│                      Biratnagar                          │
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                  │    Objective     │
                  └──────────────────┘
                            │
                            ▼
                  ┌──────────────────┐
                  │   Data Sources   │
                  └──────────────────┘
                            │
                            ▼
                  ┌──────────────────┐
                  │  Primary Source  │
                  └──────────────────┘
                            │
          ┌─────────────────┴─────────────────┐
          ▼                                   ▼
  ┌────────────────┐                  ┌────────────────┐
  │ • Observation  │                  │  • Interview   │
  └────────────────┘                  └────────────────┘
          └─────────────────┬─────────────────┘
                            ▼
                  ┌──────────────────┐
                  │ Data Collection  │
                  └──────────────────┘
                            │
                            ▼
          ┌─────────────────────────────────┐
          │  Data Analysis and interpretation │
          └─────────────────────────────────┘
                            │
                            ▼
          ┌─────────────────────────────────┐
          │  Conclusion and Recommendations │
          └─────────────────────────────────┘
```
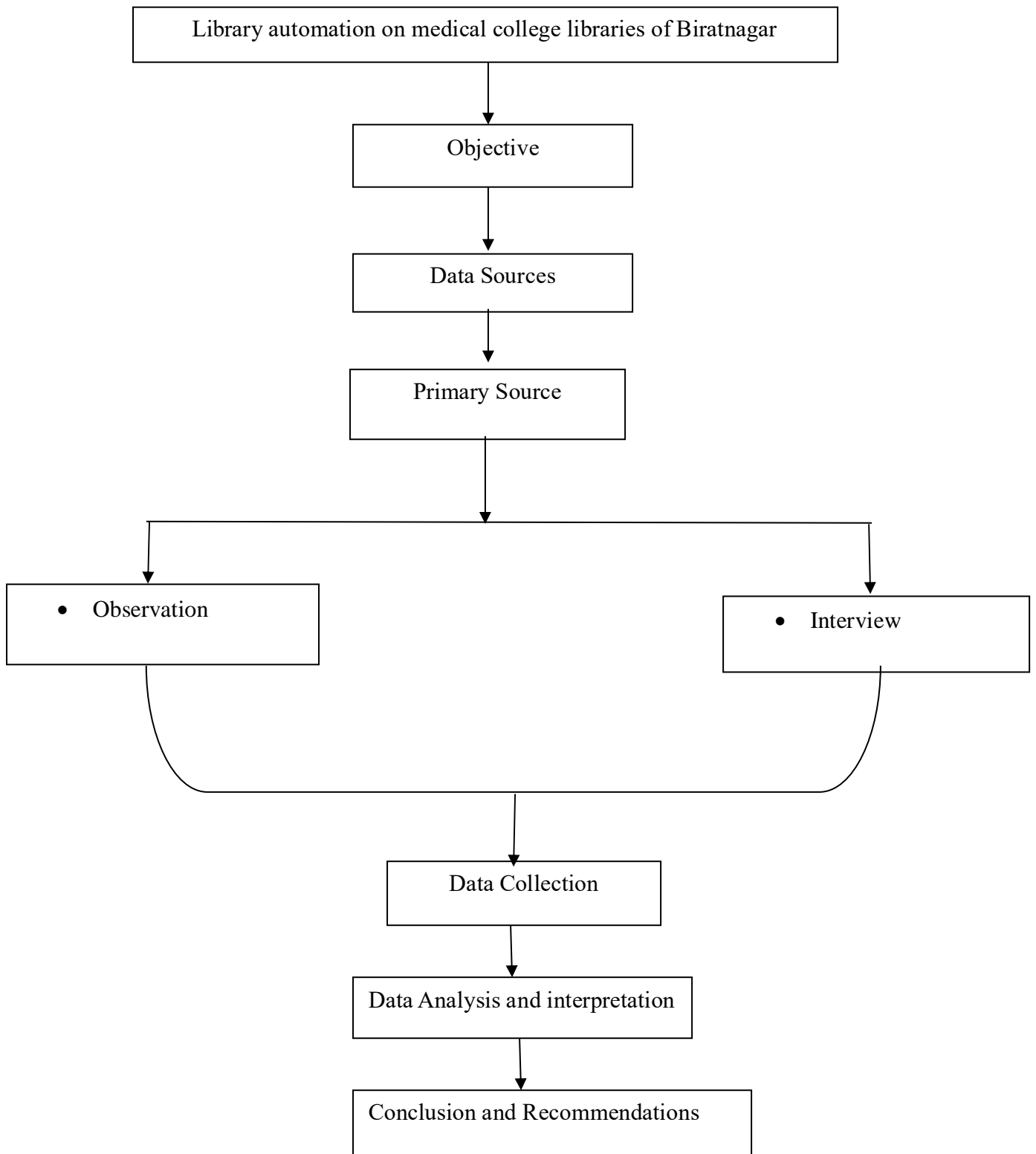
## 3.2 Population

The librarians or library staff of medical college libraries of Biratnagar are the population for this study. The medical college libraries are Birat Medical College Teaching Hospital Library, Nobel Medical College Teaching Hospital Library, Biratnagar Nursing Campus Library, Neuro Health College Library, and Birat Health College Library.

## 3.4 Data Collection Procedure

The primary data was collected using observation and interview methods.

### 3.4.1 Observation

Observation is one important primary method for data collection. The observation areas were the five medical college libraries. An observation checklist was prepared, and observation was done physically by visiting the libraries. All the medical colleges' libraries in Biratnagar are in the age of information technology now, so I had observed how the documents are managed manually or automated. And observing the facilities of the Internet in their library, if the library has been automated, then what kind of automation is there, like initial, partial, or full automation, and also in library management, how many computers are used in library housekeeping operations? I had observed how much staff has been handled in the library. I was also able to think after observation about what kind of work needs to be updated in Biratnagar Medical College libraries.

### 3.4.2 Interview Method

Ten questions were prepared for interview focusing on the objectives of the study, i.e., to find out the current automation status in the medical college libraries and the obstacles in implementing automation in the libraries. Librarians of libraries were requested for their time to conduct face to face interview. All librarians of the libraries were interviewed according to their convenient time.

## 3.5 Data Analysis Procedure

The primary data was collected through observation and interviews and analyzed and interpreted.

**CHAPTER- IV**

**DATA ANALYSIS AND PRESENTATION**

As mentioned in the research methodology, data were collected by observation, and interview method. The data collected from interviews and observations were analyzed in qualitative methods. This involves examining the data to explore the research questions. Further, the analysis includes organizing the data into categories and identifying the status. Furthermore, analysis was done to conclude and make recommendations. The data were presented in descriptive form presenting in tables where necessary.

## 4.1 Observation

According to checklist observation was done in five medical college libraries of Biratnagar.

### 4.1.1 Practices adopted for library housekeeping operations

Birat Medical College Teaching Hospital Library (BMCTHL) is adopting Midas library software for organizing the database. It is one kind of offline health service software that is being used in BMCTH library. Midas provides facilities for storing documents electronically and for general information retrieval. This software manages the database without the provision of any ACCR rules. Beside these circulation, data entry (catalogue) etc. are done by the software. BMCTHL has not been able to computerize other housekeeping activities like acquisition, serial control, and OPAC. In other words, we can say that BMCTH is in partial automation since the cataloging and circulation parts are facilated using the software Midas, but it has not been able to automate other areas of housekeeping jobs. Midas does not facilitate all the activities. So, for the full automation of the library, BMCTHL has to adopt some other software facilities.

In Nobel Medical College Teaching Hospital Library (NMCTHL) data is managed in an Excel sheet in computer, and all housekeeping work is done manually. So, we can say noble medical college teaching hospital library in the initial process of automation. Biratnagar Nursing Campus Library is adopting Mitra™ ERP library software for organizing the database. The software provides facilities for storing documents electronically and for general information retrieval. This software manages the database without the provision of any ACCR rules. BNCL has not been able to computerize other

housekeeping activities like acquisition, serial control, and OPAC but except for circulation, data entry (catalogue) etc. The software is being used. In other words, we can say that BNCL is in the stage of partial automation. Mitra$^{TM}$ ERP does not facilitate other activities. So, for the full automation of the library, BNCL has to adopt some other software facilities.

Neuro Health College Library is very small library where collection is less so all the documents are recorded in excel sheet in computer. All housekeeping operation are being done manually so that it is an initial process of automation.

Birat Health College Library is adopting Q-Library Scoms library software for organizing the database. Q-Library Scoms provides facilities for storing documents electronically and for general information retrieval. This software manages the database without the provision of any ACCR rules. BHCL has not been able to computerize other housekeeping activities like acquisition, serial control, and OPAC but except these housekeeping activities circulation, data entry (catalogue) etc. are being done by using the software. In other words, we can say that BHCL is in partial automation Q-Library Scoms does not facilitate other activities. So, for the full automation of the library, BHCL has to adopt some other software facilities.

Birat Medical College Teaching Hospital is adopting Midas library software for organizing the database. It is one kind of offline health service software but it also used in BMCTHL. Midas provides facilities for storing documents electronically and for general information retrieval.

This software manages the database without the provision of any ACCR rules. BMCTHL has not been able to automate other housekeeping activities like acquisition, serial control, and OPAC. Except these housekeeping activities circulation, data entry (cataloguing) etc. are done by the software.

In other words, we can say that BMCTH is in the stage of partial automation. The cataloging and circulation services are being simplified using the software Midas. It has not been able to automate other areas of housekeeping jobs because Midas does not facilitate those activities. In this library Internet facility is available in all the department and 27 computers are being used. I have seen eight staff there.

**4.1.2 Availability of internet facility and computers in library.**

Internet facilities are available in all libraries for all except in Neuro Health College Library it was provided for staff using computer for library work. Number of computers being used in libraries are 27 in BMCTHL, 15 in NMCTHL, 12 in BNCL, 1 in NHCL and 15 in BHCL.

**4.2 Interview**

Interviews are another qualitative method that has been used in this research. To acquire more details about the automation status and obstacles to full automation of the five medical college libraries, an interview was conducted. The researcher prepared ten questions to fulfill the objectives of this research. Therefore, the interview was a face-to-face interaction with librarians.

**4.2.1 Library Staff and their experience in library**

The researcher had some interviews about the Library Staff and their experience in library science. That result as follows:

**Table 1, 4.2.1 Library Staff of Five Medical College Libraries**

| Title | BMCTHL | NMCTHL | BNCL | NHCL | BHCL |
|---|---|---|---|---|---|
| No. of officer level professional | 1 | NIL | NIL | NIL | NIL |
| No. of semi-professional | NIL | 3 | 1 | NIL | NIL |
| No of Non professional | 4 | 2 | 1 | 1 | 1 |
| No. of Supporting staff | 2 | 2 | 1 | 1 | 1 |
| No. of IT | 1 | 1 | NIL | NIL | NIL |
| **Total** | **8** | **8** | **3** | **2** | **2** |

BMCTHL has a professional staff that has three years of experience in the field of library science and has completed various courses in IT skills. Four non-professional staff were reported to have basic computer knowledge, one IT staff, and two support staff. They have controlled the library of Birat Medical College Teaching Hospital. NMCTHL There is no professional staff, but there are three semi-professional staff. One staff member has 5 years of experience, and the other two semi-professional staff members have 2 years of experience in library science. The staff was found to be running this library. BNCL There is no professional staff, but one semi-professional staff with 3 years of experience, one non-professional staff with 4 years of experience, one IT staff, and one assistant staff are running this library. NHCL is no professional

staff or semi-professional staff. There is non-professional staff control over the overall library. That staff experience was 1 year. That library has Basic computer knowledge. And their qualification is bachelor in education. BHCL is no professional staff or semi-professional staff. There is non-professional staff control over the overall library. That librarian experience in this field Three year and qualification is +2 in Arts. The qualification level of staff in five medical college libraries is shown in the above the table, and their experience is described in paragraphs. To achieve this, interviews were conducted with librarians. According to the interview between these librarians, even though there are professional staff, they do not have full automation, and some libraries are handled by semi-professional staff and non-professional staff, and that too is not fully automated.

### 4.2.2 Five library Financial Resources.

Finance is an essential factor for business, industry, educational institutes, and libraries. Libraries are investment and social welfare bodies rather than profit-making bodies; the financial requirements of libraries are different than those of businesses and industries. The sources of funds in the case of medical libraries differ on the basis of the type of college. Medical college libraries are run by a parent organization, which is the financial source of all libraries. The financial resources of Biratnagar library have to depend on their own organization. They require continuous financial support to improve their services and for full automation. However, no medical institution has given the Biratnagar medical college library a yearly budget.

### 4.2.3 Organization Records of the available Documents in the Medical Libraries.

**Table 2, 4.2.3 the available records of documents in the five medical libraries**

| Title | BMCTHL | NMCTHL | BNCL | NHCL | BHCL |
|---|---|---|---|---|---|
| No. Of Medical Books | 5,000 | 15,000 | 11,195 | 339 | 10,000 |
| No. of Non-Medical Books | 3,000 | NIL | NIL | NIL | 51 |
| No Journal titles | 200 | 1800 | 200 | 15 | 50 |
| Magazines/ Newspapers | 9 | 5 | 8 | 5 | 6 |
| CD / DVD | 200 | 2000 | NIL | 40 | 50 |

The purpose of this collection is to find out how the Medical College Library of Biratnagar has managed the documents available in the library. Manual or automated.

In BMCTHL medical college library available the medical and non-medical books have been managed using Midas software. However, the periodicals, newspapers, CDs, and DVDs have been managed in excel. NMCTHL medical college library available except CD/DVD, all managed excel on computer. BNCL medical college library available except journal and newspapers managed in excel in computer, and all books managed in Mitra$^{TM}$ ERP software. NHCL medical college library available books managed in excel in computer. BHCL medical college library available the medical and non-medical books have been managed using Q-Library Scoms software. However, the periodicals, newspapers, CDs, and DVDs have been managed in excel.

Total collection given the table:

The available documents was managed some by software and some by a library that uses Excel on a computer. The documents obtained by the medical libraries of Birtnagar, which have used the software entered all books into the software, while other documents have been entered into the computer's Excel. And for those who have not used the software, they have entered all the documents in the computer's Excel. This report shows that those who have used the software are in partial automation, and those who have not used the software are in initial automation.

## 4.2.4 Automation Beginning of Biratnagar's Medical College Libraries.

The medical college libraries in Biratnagar are only beginning the process of automation. The software used for automation is also local, not international standards. BMCTHL college was established in 2070 B.S., and the automation of the library was started with PMB library software in 2076 B.S., but now Midas library software was used for automation. NMTHL college was established in 2061 B.S., and the automation of the library was started with Midas library software in 2076 B.S., but now they do not use that software and all housekeeping work is done manually. BNCLThis college was established in 2023 B.S., and the automation of the library was started with Mitra$^{TM}$ ERP software in 2072 B.S. NHCL college was established in 2064 B.S., and there is still no automation. But they are planning for automation. BHCL college was established in 2060 B.S., and the automation of the library was started with Q-Library Scoms software in 2068 B.S. When the researcher interviewed the librarians of the five libraries in Biratnagar, it was clear from the interviews that the first library to adopt

automation was BHCL, which was started in 2068. Full automation has not yet been implemented.

### 4.2.5 Installation of the Software

In terms of the installation of software in the medical college libraries of Biratnagar, it has been found that proprietary software and in-house software are used. Although it is for book lending, it cannot be considered good for full automation operations—their all-offline software.

BMCTHL library has been installed as Midas software and is proprietary software. All the work, from its installation to cost optimization, is done by them. This software is offline software.

### Midas Software

This software developed by Midas Technology Thapathali. It is Windows-based software, user-friendly software developed to work under client-server environment. Midas is design using client-server architecture, which imparts extra strength to storage capacity, multiple accesses to single database, various levels of security, backup and storage facilities etc. It is the proprietary software.

- A data base definition component allowing the user to define the data to be processed for a particular application.
- Circulation includes book check in, checkout, member status and reservation of resources
- Cataloguing includes detail of the cataloging procedure of library resources.
- Inventory includes total books available in the library, books missing, damage etc.
- It is facility barcode system and library card print facility.
- We can download data in excel sheet.

The software can be easily used by anyone. Librarian said that even though the support is weak and the backup security is strong, librarian also faced the problem of data loss. It cannot be made OPAC, it is not possible to build a fully automated library for this software.

Although NMCTHL library used Midas software earlier, now it does not use any software and everything is done manually. Data loss was reported due to the non-use of

Midas software. So now days this library data entry on compute excel sheet. In BNCL library, Mitra$^{TM}$ ERP software is used for automation, which is an in-house type of software. Its installation was developed by the IT staff of the organization.

Mitra$^{TM}$ ERP software software developed by IT staff of the organization. It mainly developed to college be it Admission, Examination, HR, as well as used for library etc. librarian said that all are good. I got the information from the librarian that the software is running fine.

NHCL is No software was installed. Because this library was so small and the documents are also so few.

In BHCL library, Q-Library Scoms software is used for automation, which is an in-house type of software. Its installation was developed by the IT staff of the organization. Q-Library Scoms software was developed by the IT staff of the organization. It mainly developed to college Admission section but it was also used in library managed. It is in-house type of software. Among the medical college libraries in Biratnagar, BMTCTHL used proprietary software, and BHCL and BNCL libraries use in-house software. And the other two medical libraries don't use any software. The result is tabulated below.

**Table4, 4.2.5 Installation of Software in Five Medical College Libraries**

| Name of library | Name of Software | Nature of the Software | Installation | Remarks |
|---|---|---|---|---|
| BMCTHL | MIDAS | Proprietary | IT Staff from the Vendor | |
| NMCTHL | MIDAS | Proprietary | IT Staff from the Vendor | **Not Yet** |
| BNCL | Mitra$^{TM}$ ERP | In-House | IT Staff | |
| NHCL | NIL | - | - | |
| BHCL | Q-Library Scoms | In-House | IT Staff | |

**4.2.6 Modules Used in Library Operations of Five Medical College Libraries**

The researcher interviewed five medical college librarians about the housekeeping operations, and they gave me answers. Except for the BMCL, BNCL, and BHCL the Two libraries used a Serial control is a manual system. The following table summarizes the automation status of five medical libraries.

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**Table 3, 4.2.6 Housekeeping Modules Used in Library Operations of Five Medical College Libraries**

| House Keeping operations | BMCTHL | NMCTHL | BNCL | NHCL | BHCL |
|---|---|---|---|---|---|
| Acquisition | Manual | Manual | Manual | Manual | Manual |
| Cataloging | computerized | - | computerized | - | computerized |
| Circulation | Computerized | Manual | computerized | Manual | Manual |
| Serial control | Manual | Manual | Manual | - | - |
| OPAC | - | - | - | - | - |

BMCTHL library is partially automated because it does catalog, circulation, done by software. NMTHL library is still not automated because library housekeeping functions are done manually. And data entry done by excel on computer. The BNCL library is also in the partially stages of automation because it only does catalog and circulation. NHCL library is very small, and collection also small so that still not use software but data entry on excels of computer. BHCL library is also in the partially stages of automation because catalog and circulation done by software.

According to the interview, there are five medical college libraries in Biratnagar. Three libraries are in the partially stages of automation, and two library is initial stages of automated. The following the table 6 summarizes the automation status of five medical libraries. It was discovered that three of the five libraries used the software's cataloging and circulation control modules to provide services in their libraries but not the acquisition, serials control, or OPAC modules. The same is shown in the above table. The study shows that the majority of libraries are using cataloging and circulation modules. Cataloging and circulation modules are essential for the day-to-day activities of the library when compared to other modules. In order to be fully automated, all the housekeeping modules should be active, but in the medical college library of Biratnagar, all the housekeeping modules are not active.

Here, researcher have distributed library automation levels based on the housekeeping function in libraries. There are three types: fully automated, partially automated, and initially automated.

**Table 4, 4.2.6 Automation Status of Five Medical College Libraries**

| Name of library | Type of Automation |
|---|---|
| BMCTHL | Partial automated |
| NMTHL | Initial automated |
| BNCL | Partial automated |
| NHCL | Initial automated |
| BHCL | Partial -automated |

**4.2.7 Obstacles of Implementation of Library Automation**

In BMCTHL library, there is partially automation, but there is no full automation. According to the librarian, there is no administrative support, Lack of facility for the improved version of the software. And a lack of funds due to not full automation.

NMTHL was informed that the Midas software was previously placed in this library, but it was stopped during the process of automation, because of data loss and software didn't data recovery so that and now this software is not installed and all the work is done manually. The main barriers are a lack of funds, Lack of administrative support, Lack of professional staff and lack of awareness about library automation. The researcher received that information from this library.

In BNCL library, while the initial stage of library automation has been automated using Mitra$^{TM}$ ERP software, it still does not have full automation. Because of a lack of Administrative support, lack of facility for the improved version of the software and a lack of funds and lack of professional staff. NHCL library is small in terms of collection and area. Still not used software, so the main barriers are the lack of funds, administrative support, and professional staff, lack of awareness about library automation as well as least of books I got that information. BHCL library, while the partially stage of library automation has been automated using Q-Library Scoms software, it still does not have full automation. Because of a lack of administrative support and a lack of funds. As seen from the responses of the librarians of five libraries, a lack of administrative support is the main hindrance to switching over to automation, and another main cause seemed to be the lack of professional staff.

Obstacles are shown in the table below:

**Table 7, 4.3.7 Obstacles to implementation of library automation in five medical college libraries in Biratnagar.**

| S.N. | Obstacles of fully implementation library automation | BMCTHL | NMCTHL | BNCL | NHCL | BHCL |
|---|---|---|---|---|---|---|
| 1 | Lack of funds | ✓ | ✓ | ✓ | ✓ | ✓ |
| 2 | Lack of the staff Training program | | | ✓ | ✓ | ✓ |
| 3 | Lack of administrative support | ✓ | ✓ | ✓ | ✓ | ✓ |
| 4 | Lack of facility for the improved version of the software. | ✓ | - | ✓ | - | ✓ |
| 5 | Lack of professional staff | | ✓ | ✓ | ✓ | ✓ |
| 6 | lack of awareness about library automation | | ✓ | ✓ | ✓ | ✓ |

Library automation helps library staff to serve users effectively and efficiently, but it is also important to know how to maintain the automation system. What kind of problems did the library of Biratnagar Medical College have to face before installing library automation? And what is the reason for not being fully automated? Researcher interviewed and traced the reason for not being fully automated. According to the respondents the main challenges are lack of funds for improvement and training of hardware and software, lack of administrative support, lack of awareness about library automation, technical problems, and the fact that their librarians received the report.

# CHAPTER-V

## SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Summary

The current status of automation the five Medical College libraries is examined in this study. This research was carried out in order to examine the status of library automation in the medical college libraries of Biratnagar and find out the obstacles to the implementation of full automation.

To accomplish this, the library management of Five Medical College in Biratnagar was observed, and the librarians were interviewed. In this research, the researcher has collects data from primary sources and analyzes it using a qualitative method.

The primary data was collected through observation and interviews and analyzed and interpreted. In the medical college, Biratnagar area all medical college libraries are in researcher study area. This study has presented the current status of automation condition and obstacles of implementation for automation in medical college libraries in Biratnagar.

### 5.2 Findings

From the interpretation and analysis of the data derived from the study of all medical college libraries, the following findings have been documented:

### 5.2.1 Installation of Software

According to research, all medical college libraries have automated processes using proprietary software and in-house software. It is also found that medical librarians only use software for main databases record-keeping. Because it cannot be made OPAC, it is not possible to build a fully automated library for this software.

### 5.2.2 Library Personnel

According to the researcher, the skilled manpower in the libraries of most of the medical colleges in Biratnagar is comparatively low. In today's era of information technology, there is a need for skilled professional staff to connect the library with information technology. Because professional staff have good knowledge about library software and automation knowledge.

### 5.2.3 Insufficient Funds

All the medical college libraries in Biratnagar are struggling with the problem of funds. At the time of admission, the Medical College also charges an additional fee from each student for library use. However, these charges are not used to automate the library. There is no alternative source of funding for medical colleges, and their fixed budget is insufficient. It goes to say that the source of all medical college budgets is the organization.

### 5.2.4 Lack of awareness of library automation

In Biratnagar Medical College Library, looking at the overall view, it is seen that there are many employees, which is a good aspect for managing the library. But it had found that there was no initiative from the librarians to take the library to full automation, and the librarians had little knowledge about automation.

### 5.2.5 Inadequate Administrative Support

The research showed that all medical college libraries in Biratnagar received minimum administrative support. The administrative support provided to the library is still insufficient, the library is a non-profit department and does not seem to be appreciated. It still poses challenges for library automation.

### 5.3 Conclusions

The main objective of this study was to explore the status of library automation in the medical college libraries of Biratnagar and find out the obstacles to the implementation of full automation. To accomplish this, the Library Management of Five Medical College in Biratnagar was observed and the librarians were take interviewed.  In this research, the researcher collects data from primary sources and analyzes it using a qualitative method.

The study has shown that even though three libraries of medical college libraries in Biratnagar use library software, they cannot be fully automated with that software.

If it is seen that new software should be used to make the libraries fully automated. And two Medical College Library of Biratnagar still not used the library software and they have done data entry in computer Excel.

All medical college libraries have automated processes using proprietary software and in-house software. It is also found that medical librarians only use software for main database record-keeping. It is not possible to build a fully automated library for this software.The skilled manpower in the libraries of most of the medical colleges in Biratnagar is comparatively low.

All the medical college libraries in Biratnagar are struggling with the problem of funds. There is no alternative source of funding for medical colleges, and their fixed budget is insufficient. It goes to say that the source of all medical college budgets is the organization.

However, an evaluation is very important for selecting the appropriate software for the automation of the library. There are many directories and other tools available on the market that help librarians select suitable software for their libraries. Still, it is not enough to choose the correct one at this time because this is a digital world. To be successful in the present century, libraries have to be more proactive and more customer service-oriented library automation. Therefore, all the medical college libraries of Biratnagar should be concerned about the above-mentioned problems and try to make their services more user-friendly by using information technology to meet the needs of the users and solve all the problems.

## 5.4 Recommendations

Based on the findings of this study, researcher have made the following recommendations. The following recommendations should be followed by all medical college libraries of Biratnagar who wish to fully automate their library processes. There are recommendations for medical college administrators and librarians.

- All medical libraries in Biratnagar should use software that meets international standards.
- All medical college library software should be installed to be more reliable, efficient, flexible, expandable, safe, user-friendly, module-based, and updated with the latest technology.
- It seems that professional or semi-professional staff should be appointed in all medical college libraries to make full automation successful in the medical library of Biratnagar.

- Librarians should be taught basic skills about software and hardware, as well training about digital library. Which will enable them to identify appropriate software for library needs.

- In addition, the medical college also charges fees for extracurricular activities, such as library use, from each student at the time of admission so that funds can be used for library automation.

- All the medical college libraries used the open-source software which is available on the market in free (reliable price).

- It is necessary to further improve the administrative support provided to the library because administrative support is very important for the entire development of the library, from the skilled manpower to the allocated funds.

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**ANNEX**

**Annex –I: Checklist of Observation**

This checklist is the five Medical College library.

1. How library housekeeping works are done? Manually /automated

2. Availability of internet facility.

3. If automated. What is the status of automation? - Initial / partial/ full automation

4. Number of computers being used in library management of library housekeeping operations

5. Number of library staff

**Annex-II: Questionnaires for Interview**

Analyzing the data obtained from the five Medical College Libraries as well as the status and obstacles to library automation studied in the five medical libraries The interview used close-ended and open-ended questions.

1. **Library / Institutional information details**
   I. Name: --------------------------------------------------------------------------
   Type of institution: Private / public
   II. Address / Website: -------------------------------------------------------------
   II. Telephone number (off): --------------- Fax-----------Email--------------------
   IV. Year of establishment: ---------------------------------------------------------
   V. Opening hours: ------------------------------------------------------------------

   2. **Status of staff**

   I. What about the knowledge and experience of staff in library science?
   II. What about the IT skills of library staff?
   III. Staff qualification
   i. Professional: ------------------------------------------------------------------------
   ii. Semi-Professional: ----------------------------------------------------------------
   iii. Non-professional: ----------------------------------------------------------------
   iv. IT Professional: ------------------------------------------------------------------

3. **Financial Resources**

   I. UGC-----------------------------------------------------------------------------
   II. From Parent Organization------------------------------------------------------
   III. Others Resources--------------------------------------------------------------
   VI. Do you have separate budge for library automation?
   Yes ……………………….. 　　　　No……………………………

4. **How to manage available documents in your library like: manual and automation?**
   I. Books: --------------------------------------------------------------------------
   II. Journals: ----------------------------------------------------------------------
   III. Dissertation / Thesis: ----------------------------------------------------------
   IV. CD-ROMs: ---------------------------------------------------------------------
   V. Reports: ------------------------------------------------------------------------
   VI. Total computer in E-library: ------------------------------------------------------

5. **How do you manage the documents available in your library?**

   I. By library software
   II. By only using Excel
   III. Only manual

6. **What kind of Software installation is in your library?**

I. About software in short: ----------------------------------------------------------------

II. Type of software you choose:
  a. Proprietary []
  b. Open source []
  c. In-House []

III. Year on which automation commenced: --------------------------------------------

IV. The usefulness of software: ------------------------------------------------------

V. Difficulties in using of software: --------------------------------------------------

VI. Authority support in using the software: ------------------------------------------

VII. Perception of library staff about software: --------------------------------------

**8. Is your library automated? If so, please select one of the following levels of automation options:**
  (I) fully automated------------------------------------
  (II) Partially automated---------------------------------
  (III) Initial stage--------------------------------------------

**9. Which housekeeping modules are automated and which are done manually?**
  I. Acquisition ----------------------------

  II. Circulation -----------------------------

  III. Technical processing -----------------

  IV. Serials Management -------------------

**10. Obstacles in the implementation of automation.**
  I. Library staff's view on adopting automation (are they interested or resist to change)
  II. Users demand for automation
  III. Authority support for implementation
  IV. Fund
  V. Physical / technical obstacles
  VI. Less awareness about the library automation

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**Annex – III: Institutional Profile**

## 1. BIRAT MEDICAL COLLEGE TEACHING HOSPITAL

Birat Medical College Teaching Hospital (BMCTH) is the newest medical school in Nepal. Established in 2014 A.D. as an extended program of Kathmandu University, BMC is now gearing up for its fifth intake. Each year 100 national and international students join us to pursue their lifelong passion and goals.

Despite being very new, BMCTH has a significant history when considering Nepal. In 1991, a clinic with just one bed served as the foundation for what is now known as Birat Medical College and Teaching Hospital. Our chairman, Dr. Gyanendra Man Sing Karki, has always been a visionary leader and a proud Nepali citizen. After completing his MD in the former USSR with a focus on oncological gynecology and obstetrics, Dr. Karki has always known he wanted to help Nepal's healthcare system. He was aware that his commitment to his people surpassed any money advantages, despite the enormous chances that were offered to him all over the world. Dr. Karki has long maintained that Nepal should be developed as a whole, not simply as its capital, instead of being concentrated where the benefits are greatest. Dr. Karki established his solo practice in 1993 after relocating to Biratnagar, a city in southeast Nepal, since he felt that healthcare needed to be decentralized. Many in need were assisted by being able to offer an extremely specialized service to a community that was in dire need of it. By 1994, the clinic that had only one bed had grown to 25 beds in the Birat Nursing Home. Being among the first private medical facilities outside of the city, our facility was able to treat a large number of patients who would not have otherwise been able to travel to India or Kathmandu. but our center was able to provide healthcare services for neighboring Indian patients as well.

 The Birat Nursing Home, which still stands today, was able to expand by the year 2000 to become a 50-bed tertiary care hospital on its grounds. Birat Hospital was able to significantly benefit our people and the nation as a whole at this facility. We established ourselves as the first modern laparoscopic gynecological surgery clinic in Nepal by leveraging various technological advancements, services, and procedures that were introduced there. By 2004, we realized how important it was to transfer our enormous body of information to the following generation. We began our academic mission by founding Birat Health College (BHC), a nursing school, with this goal in mind.

Currently, nearly 900 students are enrolled in 11 different health-related programs at Birat Health College. In addition to providing Nepal with thousands of the highly needed health workers, BHC has assisted Birat Nursing Home in maintaining the caliber and quantity of its workforce.

We were prepared to broaden the scope of our academic healthcare mission by 2011. We submitted the Letter of Intent (LOI) to open a new medical school in Nepal during this year. In August 2014, BMC officially opened as the newest medical school after three years of continuous lobbying and building. By November of the same year, we welcomed our first class of 75 students, and we currently have nine batches of 100 students enrolled. From that point on, BMC has continued to grow both its academic and medical facilities. By 2015, we established a new stand-alone community-oriented teaching hospital that as of 2018 is a comprehensive 350-bedded tertiary care hospital. Combined we see thousands of patients each day and are well-geared toward becoming a prominent medical institute of the future.

**Birat Medical College and Teaching Hospital Library**

**Services**

- The library is open from 9:00 AM to 11:00 PM. There are two shifts, and it is also open on Saturday.

- This library has given everyone in the library area access to the internet. Students have access to 21 PCs as well as provided e-resources of research4life online e-resource in this medical college mainly use the "Hinari"

- All the visitor provided isnternet facilities.

- In the BMCTHL; Staff, doctors, and students who will be using this library. Two books have been given to the teacher for a 20-day loan period and three volumes are given to the pupils for 15 days.

- In this library have been provided 400 capacity seat readings attached to the circulation counter. There is a separate reading room with 30 seats for teachers and five discussion rooms with nine seats for students.

- The Birat Medical College Teaching Hospital Library was located on the third floor. It was a place where 400 readers could sit and read. All document materials were managed in different sections like a textbook are general section,

a non-medical section, a journal section, and a reference section. It was arranged separately. The faculty room for faculty members, the discussion room for group discussions, and the social area were arranged.

Photo of Birat Medical College Teaching Hospital Library

## 2. NOBEL MEDICAL COLLEGE TEACHING HOSPITAL

Nobel Medical College has continuously upheld academic standards that are on par with those of other medical councils and universities around the world. It is accredited by the Nepal Medical Council (NMC), the Ministry of Education in Nepal, the Ministry of Health in Nepal, and the Medical Education Commission in Nepal. Internationally recognized faculty members who are professionally dedicated to the medical industry teach at the university. Their selfless devotion and genuine participation have always been supportive of medical bodies gaining recognition around the world.

At full capacity, the hospital currently has 764 beds. Patients from different communities in Nepal and the nearby Indian state of Bihar are served by it. Eminent superspecialist doctors provide a number of superspecialty services there. It is anticipated that the hospital will add 1050 additional beds.

The hospital at Nobel Medical College is a tertiary medical service center. It offers specialty and super specialty services, including state-of-the-art diagnostic facilities to ensure the delivery of holistic patient care. The hospital is staffed with dedicated and highly competent members of the medical fraternity, along with trained personnel who work with sophisticated equipment.

Nobel Medical College offers graduate and diploma courses recognized by Kathmandu University and CTEVT, respectively. At present, a total of 1151 students are enrolled in medical and paramedical courses. More than 1300 staff, including both teaching and non-teaching, are on the payroll of the college and render their services with sincerity and competency. Faculty members of the institution hold eminent positions in various fields associated with medicine and health care, both nationally and internationally.

**Nobel Medical College Teaching Hospital Library**

**Services**

- The library is open from 8:00 AM to 10:00 PM. There are two shifts, and it is also open on Saturdays from 10:00 a.m. to 4:00 p.m.
- This library has given everyone in the library area access to the internet. Students have access to 15 PCs as well as provided Hinari e-resources.

- In the NMCTHL Staff, doctors, and students who will be using this library. Two books have been given to the teacher for a 15-day loan period and four volumes are given to the students for 15 days of home usage.
- There is a reading room with 100 seats that is well-lit. A carrel study desk is also present.
- On the fifth floor was the Nobel Medical College Teaching Hospital Library. There were 100 seats available for readers with carrels study desks. The management of all document materials was done in several sections, such as the textbook, reference, and journal sections. A medical textbook is also included in the reference section.

**Photo of Nobel Medical College Teaching Hospital Library**



**3. BIRATNAGAR NURSING CAMPUS**

Biratnagar Nursing Campus is the only nursing campus of Tribhuvan University, located in the heart of Biratnagar. It was established in 2023 BS as a training center. It has crossed the 54-year mark by crossing different times and periods. It currently operates certificate-level nursing, undergraduate-level nursing, and BSc nursing. There

are strengths on this campus from a political, economic, social, environmental, and legal point of view.

The work has been done in collaboration with the University Grants Commission, the Federal Government, the State Government, the Local Government, and various stakeholders to build an excellent campus in five years as well as a strategic plan through a collective process.

The excellent Assurance and Accreditation (QAA) system was designed to establish that educational institutions are the best academic bodies to give excellent education to a specified standard. It is critical to create and increase this level of education as soon as possible to ensure fair access to higher education while also preparing competent and competitive people in modern knowledge, science, and technology. Quality Practical Education to prepare the timely technical workforce for the development of a healthy and successful society to produce a model skilled manpower for Province No. 1's only campus, Tribhuvan University, Biratnagar Nursing Campus. A five-year strategic plan has been developed to establish it as a nursing campus.

**Biratnagar Nursing Campus Library**

**Services**

- The library is open from 8:00 AM to 5:00 PM. There is one shift.
- Provided internet access in the library area as a whole. There are 12 computers in the E-library. Hinari's search facility is made available to the reader.
- In a circulation service 3 books are issued to the students for home use for 15 days and 2 books are issued to the teacher for 15 days.
- There is a well-lighted 50-seated study table.
- The Biratnagar Nursing Campus Library was located on the ground floor. It was a place where 50 readers could sit and read. All document materials were managed in different sections, like a textbook, a journal section, and a reference section. It was arranged separately.

**Photo of Biratnagar Nursing Campus Library**



## 4. NEURO HEALTH COLLEGE

In 2008 A.D., it was established as a private health education institution. It is situated on Phadindra Marga, Biratnagar-13, in the Morang district of Nepal. The Nepal Health Professional Council and the Nepal Nursing Campus both recognize NHC, which is a part of Tribhuvan University (TU). Programs for PCL General Medicine—Health Assistant (HA) and PCL Nursing (Staff Nurse) are offered. Offering top-notch health education, this is one of Biratnagar's most esteemed nursing schools.

**Neuro Health College Library**

**Services**

- The library is open from 8:00 AM to 4:00 PM. There is one shift.
- Internet facility was also available on the desktop of a librarian.
- In a circulation service, two books are issued to the students for home use for seven days and one book is issued to the teacher for seven days.
- There is a well-lighted 15-capacity seated reading room attached to the circulation counter. It is close access. It is a small library.

- The Neuro Health College Library was located on the second floor. It was a place where 15 readers could sit and read. All document materials were not managed in different sections. It is a closed-access system.

## 5. BIRAT HEALTH COLLEGE

The Birat Health College and Research Centre (BHC) was established in 2061 B.S. by a group of scholars, intellectuals, and extremely committed professionals who made a solemn commitment to educate its students. Raising their profile in the fields of health technologies and medicine. In this cutthroat twenty-first century, it has been offering top-notch education to students, which not only helps them develop perfect human resources but also ethically inspires them to become ideal citizens of their country and, of course, the entire world. Located in a serene area, deliberately removed from the cacophonous noises and throngs of Biratnagar. With Biratnagar, the College has demonstrated academic distinction in the medical profession, which is reflected in the results. Biratnagar has demonstrated academic competence in the medical area, which is evident in the charm and reputation it has achieved in a short period. The college's role is to satiate the technical and academic thirst of forward-thinking brains for Medical Science and Research.

**Birat Health College Library**

**Services**

- It is open 8:00 am – 5:00 pm. One shift.
- Internet access was provided in the library area whole. There are 16 computers in the E-library. The Hinari search facility is made available to readers.
- In the BMCL Staff, doctors, and students who will be using this library. Two books have been given to the teacher for a 20-day loan period and three volumes are given to the students for 15 days of home usage.
- There is a well-lighted 50-seated reading room attached to the circulation counter. Separate reading room not managed for teachers.
- The Birat Medical College Library was located on the second floor. It was a place where 50 readers could sit and read. All documents' materials were not managed in different sections like a textbook has a general section, a non-

medical section, a journal section, and a reference section; all materials were kept in one room. The study table and chair are all of plastic.

**Photo of Birat Health College Library**

**Annex –IV: Curriculum Vitae**

**Name: Urmila Rai**
**E-mail:**urmilarai061@gmail.com
**Personal Details:**

| Name | Urmila Rai |
|---|---|
| Date of Birth | 24-08-1989 |
| Father's Name | Mr. Ait Bahadur Rai |
| Mother's Name | Mrs. Mina Devi Rai |
| Permanent address | Dhankuta Municipality-2, Dhankuta |
| Temporary Address | Tankisinuwari-2, Biratnagar |
| Marital Status | Married |
| Languages | Nepali, Hindi, English, Rai |

**Academic Qualification:**

| Date | Level | Institution/University |
|---|---|---|
| 2006 | SLC | Nepal Board |
| 2009 | I. Ed | Dhankuta Multiple Campus (T.U) |
| 2013 | B. Ed | Mangal Multiple Campus (T.U) |
| 2022 | M.LI.SC. | Tribhuvan University (T.U) |

**Practical Experience in project work:**

Microsoft Office Word
Knowledge about Reference Manager Tool Endnote.
MS-Word word was used in typing the text and making the tables although MS-Excel
was also used for the tabulation and draw the figures.