

**FEATURES OF LIBRARY SOFTWARE USED IN ACADEMIC LIBRARIES
OF KATHMANDU VALLEY: A COMPARATIVE STUDY**

**A thesis submitted to the Central Department of Library and Information Science in Partial
fulfillment of the requirement for the Master Degree in Library and Information Science**

Submitted by

SAROJ DHAKAL

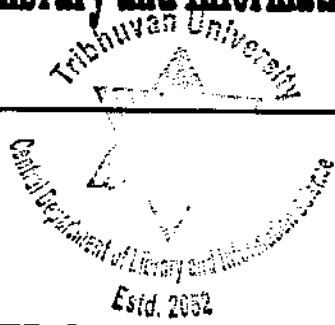
Central Department of Library and Information Science

Faculty of Humanities and Social Sciences

Tribhuvan University

Kirtipur, Kathmandu


March 2011



LETTER OF RECOMMENDATION

This is to certify that Mr. Saroj Dhakal has prepared this dissertation entitled "FEATURES OF LIBRARY SOFTWARE USED IN ACADEMIC LIBRARIES OF KATHMANDU VALLEY: A COMPARATIVE STUDY", under my supervision and guidance. I recommend this dissertation for final approval and acceptance.

Date: March 2011


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LETTER OF ACCEPTANCE

The thesis here to attached, entitled "FEATURES OF LIBRARY SOFTWARE USED IN ACADEMIC LIBRARIES OF KATHMANDU VALLEY: A COMPARATIVE STUDY", Prepared by Mr. Saroj Dhakal in partial fulfillment of the requirements for the MASTER'S DEGREE OF LIBRARY AND INFORMATION SCIENCE is hereby accepted and approved.



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ACKNOWLEDGEMENT

First of all, I am very much indebted and pay due and sincere gratitude to my supervisor, Mr. Bhim Dhoj Shrestha by whom I could finish and bring my research work in this shape due to his encouragement, guidance, support and corrections. I am also indebted to my respected teacher, Head of the Department, Dr. Madhusudan Karki and mentors, Mr. Rudra Prasad Dulal, Dr. Mohan Raj Pradhan, Mrs. Nirmala Shrestha, and Mr. Bishnu Prasad Aryal for their directions and feedbacks. I wish to thank to the CDLIS and the staffs of the Department for their assistance in the preparation of this work.

I would also like to express my gratefulness to the Chief Librarian of TUCL, Mr. Krishna Mani Bhandari and Deputy Administrator, Mrs. Parbati Nepal, and Deputy Librarian, Mr. Chiranjibi Neupane for providing the information despite of their busyness. I am equally thankful to the librarians: Mr. Prem Raj Adhikari, of KUSOML, Mr. Bishnu Prasad Aryal, of PYCL, Mr. Anil Man Shakya, of SXCL. I am grateful to all the respondents who have provided information with great interest and cooperative manner.

I am also grateful to my colleagues for their suggestions and co-operation.

As well, I have become a benign to my parents, Mr. Nanda Lal Dhakal and Mrs. Sabitra Devi Dhakal with my due gratitude for the affection and support of my education. Share of joys and sorrow moments of my beloved, Usha Regmi is equally remarkable to this work.

As the time run, it is his matchless help and support to accomplish my research work by which I could never forget the name, Mr. Tulasi Bhattarai throughout my life.

Date: March 2011

Saroj Dhakal

ABSTRACT

The thesis entitled "Features of library software used in academic libraries of Kathmandu Valley: a comparative study" research study has based upon the use of library software and the features of them. In the field of library, library software are playing vital role to organize the libraries, disseminate the information and to serve the users promptly as and when needed. As comparison, the features of some library software are studied here for this research work and are mentioned respectively with the reference of their host libraries. They have facilitated in the collection development, storage, organization, cataloguing, circulation information provided for the users. Good library software is needed for the library house keeping jobs but it has seemed difference in the software used in the libraries. So that it has tried to seek the best library software to refer for use in libraries on the basis of their quality and economy in work.

The problem of this study has focused to find out the applications of library software with their updated features in this globalised advent of technology. The objectives of this study have to find out the features of library software used in academic libraries, easiest and user friendly software, advanced with the existing conditions.

Application of library software has great importance for fast, easy and accurate information retrievals for scholars, students, researchers and academics. Most of the libraries or information centers are using software such as CDS/ISIS, WINISIS, KOHA, SOUL, MIDASLMS, LIBINFO, LIBRA, etc. In Nepal, libraries are using CDS/ISIS, WINISIS, KOHA, SOUL, MIDASLMS, LIBINFO, and LIBRA as main software. CDS/ISIS, WIN/ISIS and KOHA are being used in TUCL, SOUL is being used in KUSOML, MIDASLMS is being used in PYCL, LIBINFO is being used in SXCL and LIBRA is being used in ACEML for its bibliographic database for information retrieval.

Applications of library software make fast and easy access for information retrieval. Effective services with the new technology that can help improve in the librarian's image; that large number of users and library professional are satisfied by using advance IT tools for information retrieval.

The research study has focused both the information users and library professionals who use library software for information retrieval. It has also try to find out user friendly library software. Data and information presented in this study has collected through personal interview with the users and library professional of the libraries in Kathmandu and responses to questionnaires given

to the users and library professional of the TUCL, KUSOML, PUYCL, SXCL and ACEML Libraries. Questionnaire has prepared with closed ended type methods for both the library professional and other for the information users. 100 questionnaires were distributed, however only 90 questionnaires have returned.

Among the studied software, LIBINFO and LIBRA library software have found more useful in the present context with relevant features. Without a skilled manpower i.e. semi library professional, KOHA library software can not handle properly though it is open source software and free of cost. It has found less useful for all the libraries which have lacked of proper infrastructure as well due to the difficulties in software installation and high cost of customization charge.

Mr. Saroj Dhakal
CDLIS, T.U., Kirtipur

DEDICATION

To,

**My benevolent
Parents**

PREFACE

It focuses on the features of different computer software used in many academic libraries of Kathmandu valley as a comparative study about how they are using and to which extent they are performed for the library service. How much are they effective to organize, search and retrieve the document in the myriad of information collection. It also saves the time, money and efforts of the Library Professionals and Information users for information retrieval with accuracy and fast.

The research study consists of six chapters: the first chapter has described the background of the study, statement of the problem, objectives, scope and limitation of the study, significance of the study, definitions of terms and organization of the study. The second chapter has dealt with the related literature review on features of library software packages. The third chapter has focused on the study area, the relevant libraries with their library using software. Research methodology, research design, population, sampling procedure, data collection procedure, etc have been included under the chapter fourth. Similarly chapter fifth has represented the data analysis, presentation and interpretation of collected data putting under the heading analysis and presentation of findings. Tables as well as figures have also been included to describe data collected from the users and library professionals in the chapter. The summaries of findings, conclusion and recommendations have been included in the last chapter six.

CATALOGUE OF THESIS

Main card

D

025.04

D535f Dhakal, Saroj

Features of library software used in academic libraries of Kathmandu Valley: a comparative study/ Saroj Dhakal. – Kirtipur: Central Department of Library and Information Science, 2011.

xviii,77p.:ill.;30cm.

Dissertation: Master degree of Library and Information Science from CDLISc.

1. Libraries-Automation 2. Academic libraries-Computer software I. Title

O

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D

025.04

D535f Dhakal, Saroj

Features of library software used in academic libraries of Kathmandu Valley: a comparative study/ Saroj Dhakal. – Kirtipur: Central Department of Library and Information Science, 2011.

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1. Libraries-Automation 2. Academic libraries-Computer software I. Title

O

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LIBRARIES-AUTOMATION

025.04

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O

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D ACADEMIC LIBRARIES-COMPUTER SOFTWARE
025.04
D535f Dhakal, Saroj
 Features of library software used in academic libraries of
Kathmandu Valley: a comparative study/ Saroj Dhakal. –
Kirtipur: Central Department of Library and Information
Science, 2011.
 xviii,77p.:ill.;30cm.
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Title card

D Features of library software used in academic libraries
025.04 of Kathmandu Valley: a comparative study
D535f Dhakal, Saroj
 Features of library software used in academic libraries of
Kathmandu Valley: a comparative study/ Saroj Dhakal. –
Kirtipur: Central Department of Library and Information
Science, 2011.
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TABLE OF CONTENTS

RECOMMENDATION BY GUIDE TEACHER	II
APPROVAL LETTER FROM DEPARTMENT	III
ACKNOWLEDGEMENT	IV
ABSTRACT	V-VI
DEDICATION PAGE	VII
PREFACE	VIII
CATALOGUES OF THE THESIS	IX-X
MAIN ENTRY	IX
SHELF LIST	IX
SUBJECT ADDED ENTRY	IX-X
TITLE ADDED ENTRY	X
TABLE OF CONTENTS	XI-XIV
LIST OF TABLES	XV
LIST OF FIGURES	XVI
LIST OF ANNEX	XVII
LIST OF ACRONYMS	XVIII

Chapter I

1. INTRODUCTION	1-11
1.1 Background of the Study	1
1.1.1 Library software	2
1.1.2 History of library software and automation	3
1.1.3 Library software development in Nepal	5
1.1.4 Academic libraries and library software	6
1.2 Statement of the problems	7
1.3 Objective of the study	7
1.4 Scope and Limitation of the study	8
1.5 Significance of the study	8
1.6 Definition of Terms/ Glossary	8-10

1.7 Organization of the study	10
Chapter II	
2. REVIEW OF LITURATURE	13-20
Chapter III	
3. FOCUS OF THE STUDY	21-42
3.1 Software	21
3.2 Types of software	21
3.2.1 System software	21
3.2.2 Application software	22
3.2.3 Commercial software	23
3.2.4 Open source software	23
3.2.5 Shareware (freeware) software packages	24
3.2.6 Library software: history and comparison	24
3.3 Freeware software used in Nepal	25
3.4 Academic libraries	25
3.4.1 Tribhuvan University Central Library	26
3.4.1.1 CDS/ISIS	26
3.4.1.2 WIN/ISIS	28
3.4.1.3 KOHA	28
3.4.2 Kathmandu University School of Management Library	30
3.4.2.1 SOUL	32
3.4.3 Public Youth Campus Library	33
3.4.3.1 MIDASLMS	33
3.4.4 St. Xavier's College Library	34
3.4.4.1 LIBINFO	34
3.4.5 Advanced College of Engineering and Management Library	35
3.4.5.1 LIBRA	35
3.5 Features of good library software packages	37

3.6 Functions of library software packages	38
3.6.1 Acquisitions	38
3.6.2 Cataloguing	39
3.6.3 Circulation	39
3.6.4 Serial management	39
3.6.5 Online Public Access Catalogue	39
3.6.6 Report generator	40
3.6.7 Inter library loan	40
3.6.8 Community information	40
3.6.9 Import and Export	40
3.6.10 Reference service	40

Chapter IV

4. RESEARCH METHODOLOGY	43-45
4.1 Research Design	43
4.2 Population	43
4.3 Sampling Procedure	43
4.4 Data Collection Procedure	44
4.5 Data Analysis Procedure	44

Chapter V

5. ANALYSIS AND PRESENTATION	46-63
5.1 User's view	47
5.2 Professionals' view	57

Chapter VI

6. SUMMARY CONCLUSION AND RECOMMENDATIONS	64-68
6.1 Summary and Conclusion	64
6.2 Recommendations	67

References

69-71

Annex

72-76

C.V.

77

LIST OF TABLE

Table No. 1 No. of Questionnaire distributed	47
Table No. 2 Frequency of library visit	48
Table No. 3 Purpose of library visit	49
Table No. 4 Finding out the documents	50
Table No. 5 Problem faced in getting the documents	51
Table No. 6 Software used in the library	52
Table No. 7 Ease of software use	53
Table No. 8 Web based software	54
Table No. 9 Efficiency of library software	54
Table No. 10 Retrieval manner	55
Table No. 11 Software sufficient for library database	56
Table No. 12 Professional respondents	57
Table No. 13 Software features	58
Table No. 14 Cost of software	59
Table No. 15 Occurrence of problem in software	60
Table No. 16 Effectiveness of software on library house keeping jobs	61
Table No. 17 Programming language used for software development	62
Table No. 18 Software performance for the following features	63

LIST OF FIGURES

Figure no.1: No of Questionnaire distributed	47
Figure no. 2: Frequency of library visit	48
Figure no.3: Purpose of library visit	49
Figure no.4: Finding out the documents	50
Figure no.5: Problem faced in getting the document	51
Figure no. 6: Professional respondents	57

LIST OF ANNEX

Annex no. 1 Questionnaire for professional librarians	72
Annex no. 2 Questionnaire for users	75

LIST OF ACRONYMS

ACEML:	Advanced College of Engineering and Management Library
AFW:	Alice for Windows
CDLIS:	Central Department of Library and Information science.
CDS/ISIS:	Computerized Documentation System/ Integrated Set of Information System
IAN:	Information Access Network
INASP:	International Network for the Availability of Scientific Publications.
KUSOML:	Kathmandu University School of Management Library.
MIDASLMS:	Midas Library Management System
MLISc:	Master of Library and Information Science.
OPAC:	Online Public Access Catalogue
OSS:	Open Source Software
PERI:	Program for the Enhancement of Research and Information.
PYCL:	Public Youth Campus Library
SAARC:	South Asian Association for Regional Cooperation
SOUL:	Software of University Libraries
SXCL:	St. Xavier's College Library
TITI:	Training Institute of Technical Instructor
TUCL:	Tribhuvan University Central library.
UNESCO:	United Nation Educational, Scientific and Cultural Organization
WIN/ISIS:	Windows version of CDS/ISIS

INTRODUCTION

1.1 Background of the study:

The word 'library' is derived from Latin word 'liber' with the meaning of 'a book' and the word 'libraire' in French used to denote a collection of books gathered for study, research, reference and recreation. The word is used in many other countries signifies the same meaning.

Library is regarded as a social cum service institution. Library has formed a component of the history of human civilization. In fact it is regarded as the collective development of the civilization of a country. Libraries reflect the collection of literature and the national development of a country and also national wisdom. They have functioned for collection development, organization the documents, dissemination of them and preservation for the posterity (Khanna, 1994)

As to move the library smoothly in service providing to its users, researchers, there need to organize it in well manner. For this purpose, any library should have good library software for database so that each and every user can search and retrieve the sought document promptly. Different software may get in the market but to use the best one with the features of modern automatic quality is in dilemma (Feather & Sturges, 1997)

Software is a set of instruction that controls all the operation of a computer. It is not just a program but also all associated documentation and configuration data which is needed to make these programs and operate correctly. A software system usually consists of separate programs, configuration files, system documentations, users' documentations and for software products. (Pradhan, 2004)

Library software are those programs which are being used only for library. Previously, CDSISIS software package was widely used in many libraries because it was oldest and free of cost. CDSISIS is a generalized information storage and retrieval system developed, maintained and disseminated by UNESCO. It was first released in 1985. It

is particularly suited to bibliographical applications and used for the catalogues of many small and medium sized libraries. (Pradhan , 2008)

Due to the time changing and rapid development of information technology, it has affected in the field of library and information science too. There is a need for fast processing, transmitting, easy to retrieve, easy to handle, easy to manage database, circulation, acquisition, least cost and advanced library software. So, new and advanced library software such as WIN/ISIS, KOHA, SOUL, LIBRA, LIBINFO, etc have been developed recently (Vaidya, 2008).

In Nepal, the concept of modern library with a view to provide diverse information service is comparatively a recent development. However, the past 4-5 years have been increasing activities and complexity in the library and information field. As a result, acquisition, cataloguing, circulation and serials management have become more specialized function demanding a high degree of efficiency. The development of software in library and information science is still in progress stage. However, hardworking and initiation of some professionals have developed advanced library software as compare to other library software which could cope up with above problem according to changing need.

1.1.1 Library software

Software helps to bring hardware establishment in activation and real use. To offer the Satisfaction to users and perform library activities and functions smoothly, we must select the Competent and suitable software which can meet our requirements or can be developed on contracted basis by any software company or can be developed by professional of the institution keeping in view the requirements of the library. There are increasing numbers of library software companies and their attractive advertisements / propaganda's confused the libraries which software is very much fit for their needs. Thus selection of software is most challenging job for the librarians in order to meet the current as well as future needs of library considering the available fund (Bhardwaj and Sukla, 2000)

In Nepal, libraries have been using different software developed by a number of companies or organizations. It has been seen that the libraries in Nepal have used different versions of CDS/ISIS software because it is available free of cost and is older. The Central Department of Library and Information Science has included this software in its syllabus and has been taught in detail. The KUSOML had also used the CDS/ISIS which has been replaced by SOUL commercial software in 2004. The TUCL had used CDS/ISIS for computerized catalogue and Green Stone Digital Library (GSDL) software since February, 2008 and started digitization of Master's Degree Dissertation and Ph. D. theses using this software. LIBINFO is one of the software developed in Nepal by the Information Scientists, Library Science Professionals, Computer Engineers, Architects and Management Experts. This software has been used at some of the Nepalese academic libraries like St. Xavier's College Library, Nepal Medical College, Teaching Hospital, etc.

Traditionally, Library automation was referred to the computerization of the entire library house keeping operations like acquisition, cataloguing, circulation & serials control. But today, it is referred to as to handle the large quantity of data and information more efficiently and quickly with the help of computers and other modern information technologies. Library automation is a generic term used to denote the various activities with an improving quality of products and services of library and information centers. It enhances the speed, productivity, adequacy and efficiency of the library professional staff and saves the manpower to avoid some routine, repetitive and clerical tasks such as filing, sorting, typing, duplication checking etc (Vaidya, 2008).

1.1.2 History of library software and automation

Historical development of library software and automation can be divided into two different eras; one before the advent of computers and other after the advent of computers. It is possible to return to past centuries when visionary well before the computer age created devices to assist with their book lending systems. Even as far back as 1588, the invention of the French "Book Wheel" allowed scholars to rotate

between books by stepping on a pedal that turned a book table. Another interesting example was the "Book Indicator", developed by Albert Cot greave in 1863. It housed miniature books to represent books in the library's collection. The miniature books were part of a design that made it possible to determine if a book was in, out or overdue. It could be said that actual library automation development began in the 1930's when punch card equipment was implemented for use in library circulation and acquisitions.

The actual revolution in library software and automation had come after the advent of computers. It seems that computers were used in 1950's in few big libraries of USA and UK. At that time it was very expensive and difficult to operate. And the computers were limited for scientific and numerical work. The use of computer had grown in 1960's due to its reduced cost and development of application packages. HP Luhn, in 1961, used a computer to produce the "keyword in context" or KWIC index for articles appearing in Chemical Abstracts. By the mid-60's, computers were being used for the production of machine readable catalog records by the Library of Congress. During the 1970's the inventions of the integrated computer chip and storage devices caused the use of minicomputers and microcomputers to grow substantially. The On-line Computer Library Center began in 1967, chartered in the state of Ohio. The 70's were the era of the dummy terminal that was used to gain access to mainframe on-line databases.

The 80's gave birth to a new revolution. The size of computers decreased, at the same time, technology provided faster chips, additional RAM and greater storage capacity. The use of microcomputers during the 1980's expanded tremendously into the homes, schools, Libraries and offices. The major development was the development stage of the use of electromechanical devices and computers in library and information centers. The introduction of CD-ROMs in the late 80's has changed the way libraries operate. But the Actual revolution in the library world has come only after the tremendous growth of Internet, an open computer communication infrastructure and a network of networks Enabled global level inter-connectivity of computers and computer networks and their access at low cost (Mahmood, 1998).

1.1.3 Library software development in Nepal

In Nepal, the concept of library automation with the library software has been started since last two decade. Some libraries have used one or more modules. Commonly automated modules are catalogue, acquisition, circulation and serial management. The British Council Library, Katmandu University Central Library (KUCL), American library are the few examples of automated library in Nepal.

Tribhuvan University Central Library (TUCL) and other academic libraries are partly automated and going to be fully automated library in near future. The major constrains of library software automation were absence of planning, non-availability of vendor developed software at affordable prices, restrictions on the import of hardware, lack of trained manpower, non- existence of standards, and absence of co-operation. However, the situation has been improved in comparison of the past due to the availability of PCs for a low cost and the availability of CDS/ISIS (free software) and other software as well as professional manpower.

Institute of Medicine, Nursing Campus, Maharajgunj started its automation by computerizing its catalogue in 1993 with CDS/ISIS. TUCL started CDS/ISIS in 1995 and had installed WINISIS in 2000. KUCL and its other three schools (KUSMSL, KUSOML, KUSOEL), Pokhara University and many private colleges had also started using CDS/ISIS. After 1995, the institution which could afford computer in a library gradually shifted their card catalogue into machine readable catalogue.

When multi-sited library felt difficult without maintaining all the function and services of the library, they started to offer integrated library systems. In 2004, the library of Kathmandu University installed integrated library management software developed by INFLIBNET, UGC, and India. TUCL and Nepal Medical College also implemented the LIBINFO (version-1) in 2006 considering automating all the library function and services. Similarly, Training Institute of Technical Instructor (TITI) had implemented ALICE for Windows (AFW). Besides academic libraries, British Council Library, and SAARC Center of Tuberculosis had also implemented the commercial library automation software AFW which was a PC based, DOS/Windows platform, integrated

library software for developing their automated systems. American library was also automated library with 'Sage brush Info center' software. (LIMISEC, 2009)

1.1.4 Academic libraries and library software

As the other libraries, academic libraries are concerned with to help in the study, teaching, research works of the students, teachers, users and researchers of the institutions with providing right information at the time of sought. Prompt service in finding out the information is most important. Only the remedy for it is the library software for the database. So, the library software and automation is needed. For this purpose, academic libraries are using different kinds of library software whatever type emerged but not with fully satisfaction. As the changing time, that software is not working as the librarians' need though they are using one. There is always dilemma in its choice.

On the one hand, once spent the money for the software is spent forever though the library budget is limited. On the other hand, there is not a clear view for the choice of the best one library software that can cope up with the present demand to future demand. In this condition, it is felt to study about the features of library software used in academic library of Kathmandu Valley as comparison so that one of the best library software would find for the future use with their best features as the need of today's library and librarians.

1.2 Statement of the problem

As the time changing, the status of the society also changed. The role of libraries and librarians as being of primitive, also could not cope with the demand of users. So, new library software emerged with the advent of new technology for automation in library because it is necessary to provide quick service to the users and save the time.

Different types of library software are used by librarian in different libraries but they are not using the best one from the side of users' friendly, less time consuming, easy to

handle, least price software due to the lack of knowledge about the library software and to find out the best one. The study has observed the following main problems:

1. Lack of library software using academic library
2. Problem in use of software among the users
3. Lack in uniformity of library software
4. Problems various technical features in library software.

1.3 Objectives of the study

The main objectives of the study are:

1. To find out features of library software.
2. To find out which software is easy to use and user friendly.
3. To determine the advanced library software to use.
4. To suggest the concerned librarians to use effective library software.

1.4 Scope and limitations of the study

This study has been concerned with some academic libraries of Kathmandu Valley which were using different software in their libraries. It is comparative study among that library software as mentioned below.

According to the available resources, time and different factors, the study had the following limitations:

- a. Only the features of library software are included.
- b. The included different library software are: CDS/ISIS or WIN/ISIS, KOHA, SOUL, MIDASLMS, LIBINFO and LIBRA.
- c. Academic libraries are TUCL, KUSOML, PYCL, SXCL and ACEML.

1.5 Significance of the study

This study would be a supportive measure for the improvement of library software as required. It has avoided the burden of confusion in using and choosing the best library software.

Many libraries have been used different library software but they were unknown about the software which was developed with the advanced quality, least price, user friendly, easy to use except they have been used. So, this study would identify the appropriate library software with the changing need. It would reveal the past condition of the library software and would suggest accommodating them with the best one. It would be helpful for further research to software developers too.

1.6 Definitions of the terms

Academic libraries: An academic library is a library that is attached to academic institutions serving the teaching and research needs of students and staff. These libraries serve two complementary purposes: to support the school's curriculum, and to support the research of the university faculty and students.

Automation: Automatic as opposed to human, operation or control of a process, equipment or a system or the techniques and equipment used to achieve this. In libraries, automation refers to the process of automating functions such as circulation, cataloguing or acquisitions.

Barcode: A printed horizontal strip of vertical bars used for identifying specific items or users. The codes which represent numerical data are read by a barcode reader and interpreted via software or hardware decoders. In libraries, barcodes are affixed to both books and library cards to assist in circulation and collection control.

Bibliographic database: It refers to data entered systematically in a defined structure. In a given framework of software, bibliographic elements of bibliographic items, defined by ISBD like title and statement of responsibility, edition, material designation, place and publisher, pagination, series, note, etc. ISBN/ISSN is fed in computer. The programming of

such software make possible to retrieve and disseminate the information systematically when required.

CDS/ISIS: It stands for Computerized Documentation Systems / Integrated Set of Information Systems and generalized for information storage and retrieval system developed, maintained and disseminated by UNESCO. It is mainly being used for cataloguing job of library.

Database: A structured set of data generally accessed via a software program. A simple database might be a single file containing many records, each of which contains the same set of fields, such as a series of companies with name, addresses, phone and contact fields for each one.

Dissemination: To provide information

Documents: It includes variety of forms where information is found.

KOHA: It is the world's first open source integrated library system. The name comes from the Maori word for a gift or donation. The program was written by Katipo communications for the Horowhenua Library Trust. Koha is currently maintained by a team of volunteer developers spread across New Zealand, France, Canada, and the United States (koha.org). Koha being open source software, any library can make use of this software after developing according to their requirement.

LIBINFO: It is library software. Information Access Network (IAN) is a private company established by young information scientists, with a team of library science professionals, computer engineers, architects and management experts. First time in Nepal, IAN has introduced LibInfo version 1.0 (LIBINFO manual) for library and resource center, which supports both English and Devnagari font. It can run at any environment ranging from a single computer and over a network (LAN/WAN).

Library: Library is a center of information and knowledge that works for acquiring or providing access to books, periodicals, and other multimedia that meet educational, recreational and informational needs of their users.

Library automation: By using computer hardware and software the library jobs can be done automatically. Such advanced technological application in library services is known as library automation.

Library software: Software is a program that is prepared by computer engineers using some programming languages. The programming makes repetitive jobs done automatically. Library software is prepared mainly targeting on the house keeping jobs of library like acquisition, circulation, cataloguing, etc.

MIDASLMS: MIDAS Library Management System is developed by MIDAS Technology Private Ltd. Nepal. It can run on a single computer and also over a network. It can handle all the general housekeeping operations of the library such as acquisition, cataloguing, circulation, serial controls, user search services. But it cannot support some other advanced services which will be available in modern library software.

SOUL: It stands for software for university libraries. It is library automation software designed and developed by the INFLIBNET, UGC, and India. It is user friendly software developed to work under client-server environment.

WIN/ISIS: It is the window version of CDS/ISIS developed by UNESCO.

1.7 Organization of the study

Sequence of the topic and sub topics of the study are organized in suitable manner so that the study has become easy to understand.

This study consists of six chapters.

The first chapter has contained introductory chapter with general background of the study, statement of the problems, objectives of the study, scope and limitation of the study, significance of the study, definition of the terms/glossary and organization of the study. The second chapter is concerned with the review of some literature related to this study. The third chapter has denoted focus of the study. The fourth chapter has described research methodology used in this study which has contained the research design, population, sampling procedure, data collection procedure, data analysis procedure. The fifth chapter has dealt with the analysis and presentation of data. The sixth chapter has described the

summary, findings and recommendation of this study. References / bibliography and appendices are put after the sixth chapter.

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REVIEW OF LITERATURE

Past literature is the mirror of present and future which helps to develop a thorough understanding and insight into previous research method that relates to the present study. Hence, literature related to the research topic has been quoted here. It will make the study authentic, systematic, and stronger and finds the foundation for.

Although plenty of literature has been published providing the information about the names, features availability, cost etc. of the Library software packages, they hardly help librarians or information managers in the selection procedure, because they are not providing a comprehensive account on the software packages. Therefore, to fulfill the gap of literature on focused area, it attempts to study the books, journal articles, and other publications related to the library software and automation which deals with general aspect of library software and automation in international level as well the development of library management software over the past decades. He draws out the characteristics and trends in progress of library automation software with special reference to packages available in library milieu.(Mukhopadhyay, 2005).

Most of the libraries or information centers in Nepal are using the different library software such as WIN/ISIS, MAITRAYEE, LIBSYS, SOUL, KOHA, ALICE, ATHEND, MIDASLMS, LIBRA, LIMS and INFOLIB, etc (Nyaichyai, 2006).

‘SOUL is most preferable library software. It is developed by the INFLIBNET center of UGC India for library automation having retrospective conversions facility. Now soul is used in Kathmandu university libraries.’ (Vaidya, 2008)

Those software which are more effective for the information retrieval for information seeker, fulfills the fourth law of library and information science, as stated by ‘Ranganathan, it saves the time of the professional or the information seekers and money also. Those software through provide the exact information for the information seekers and adds laurels to get the library professional image.

Many libraries in Nepal are using the UNESCO’s software CDS/ISIS and WINISIS more popularly for the information retrieval and dissemination. It is because they are distributed in

free of cost and are easier to apply for both information seekers and professionals. Another strong reason behind is that it is taught by many library training institutions and ever prescribed by Tribhuvan University Central Department of Library and Information Science in the course of study of MLISc (Nyaichyai, 2006).

TUCL is the largest old academic, University library among the other university libraries in Nepal. TUCL has installed CDS/ISIS software in 1993 for its bibliographic database creation and retrieval with the financial and technical support from IDRC, Canada under Nepal automation project. This software reduces manual information retrieval system and save the time, money and efforts of the information users and library professionals.

According to Aryal, (2005), library software and library automation means automating all the housekeeping operations of the library, such as acquisition, cataloguing, serial control, circulation, OPAC, etc. All the libraries at KU previously used CDS/ISIS which is replaced by SOUL in 2004, software developed by the INFLIBNET center of UGC, India for library automation having retrospective conversion facility from CDS/ISIS to SOUL and SOUL to CDS/ISIS.

KU has set up its own V-SAT and with this facility it has been providing services of internet, email, allows full text access of e-journals and other online information resources, and resources from PERI, HINARI, etc. library automation is the need of present age. With this thought, KU library automation began its operation from February 1, 2005, and was in the process of implementing barcode technology in its collection to make circulation system and transaction works thematic and fast.

It is found that the literature in the field of library software packages being used in Nepalese libraries is not available so far, especially on their need, kind, characteristics and suitability. However, there are some important works going on Master Degree Dissertations on library automation and application of IT in different libraries in Nepal.

(Aryal, 2006), in his article "*Library automation in Kathmandu University*" described the application of SOUL in Kathmandu University and highlighted its suitable and flexible features and modules for automating any type of libraries. Further he discussed the circulation and transaction works has been systematic and fast with the implementation of barcodes in all its collection.

"Need of Library automation in the British council" (Sakya,1996), highlights the meaning and core modules of library software and library automation systems and why library software and library automation is important in modern library for their efficiency and efficacy.

Airy (1999), in *"Preparing Thesis Bibliography with Reference to Health Literature 1995-1998 using the software CDS/ISIS"* explains "the latest trend of library profession is not a huge collection of books but of paperless library' and up-to-date library instead of being document – rich thrives to be access – rich for access to information, computer with good library software is an essential tool to be used". It will be better decision to automate all the library services in fact because library software and the work library automation will result in greater accuracy, speedy processing, networking, sorting and printing, better use of reading materials, ease of use, bibliographic controls, quality service, reputation of library.

Shrestha, (2000), presents a cursory assessment of the CDS/ISIS software in *"Preparation of bibliographic index on serial article of health science literature with reference to CDS/ISIS software package"*. It focuses on the preparation of bibliography with theses as a bibliographic level. It also highlights upon the importance of library software and automation.

Pradhan, (1995), discusses data files, data elements and example of CDS/ISIS Pascal required for acquisition, cataloguing and circulation systems of library are given various programs needed to develop these systems and check points of the same are also mentioned.

Joint, (2006), in his article *"Evaluating library software and its fitness for purpose"* provides a conceptual paper based on existing software evaluation models. The main purpose is to adapt general principles used for evaluating software quality to more specific requirements characteristic of information retrieval and educational applications in library environments. It also provides a model of software quality which embraces a number of top level factors. These are functionality, reliability, usability, efficiency, maintainability and portability.

Concept of library software, automaton and multimedia is discussed by (Singh, 1998), 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 reader to electronic security gate. If the software supports some of these technologies then it has compatibility with multimedia.

“Granthalaya: A Library software Package” by INSDOC discusses installation process, its salient features, module details, hardware/software requirements and directory structure. Granthalaya software is versatile and can be used in any type of library.

According to Bhardwaj and Sukla,(2000) library software and automate through it enhances the speed, productivity, adequacy and efficiency of the library professional staff and save the manpower to avoid some routine, repetitive and clerical tasks such as filing, sorting, typing, duplication checking etc.

Library software and automation: an overview by Rashid, (1996) reviews the significant developments in the area of library software and its impact in automation, size, library management system, and information retrieval system, OPAC, CD-ROMs and networking. Further he added that librarians and vendors are working together to improve service and systems and develop new products in response to user needs.

Bhardwaj and Shukla, (2000), in the article *A Practical approach to library software and automation* discusses the aims, objectives and need for the change of library tools and technique under the changing environment with the concepts of automation of library activities, areas and services such as acquisition, database management, classification and cataloguing circulation, serial control, information retrieval, communication networks, and documentation services etc.

Sinha and Satpathy, (2004), in *“Library software, automation and networking for managing library and information services”* reveal the history of library software and automation in brief. It traces the establishment of networks and use of information technology in library services. The article reviews what library software is and why it is needed and the areas of library automation and networking. It concludes that the success of library software, automation and networking depends mainly upon the proper planning and appropriate decision taken by the authorities from time to time.

The market of library software package is unstable and subject to rapid expansion and contains growing diversity of microcomputer products. Software for library has to be decided before the

selection and procurement of hardware. In fact, every librarian and information officer should keep in mind the requirement of the library automation and fitness of software for their purpose. Then he should select such software which should fulfill his requirements and also compatible with the future technology and multimedia.

In this regard, Rowley, (1993) proposed a strategy for selection and evaluation of library software. He suggested the criteria included certain factors like cost, history, originator, supplier, services, functions, support, maintenance, technical consideration and capability, ease of use and interface integration.

Malwad, (1995), in the article "*Selection Criteria for Library Software*" discussed the software packages, which are available in the market for a wide range of applications including library house-keeping operations, and information storage and retrieval. Their capabilities differ, prices vary and their versions keep on changing. Selection of suitable software package is an important factor in library automation system. The selection is based on specific needs of the institution, its environment, budget, user's aims and objectives.

Criteria for evaluation of library software packages" by Lasik highlights the procedure, features and aids to evaluate software packages. He considered an evaluation is basically a judgment of worth. Further he added the ability to evaluate the return on our investment gives us the basis on which to choose between alternative. It is a matter of comparison of actual result with external standard, in the light of existing institutional realities which may be relevant to evaluating the future trajectory of the program or services and provide an objective basis for decision making.

Bhardwaj and Sukla, (2000), in the article "*A Practical approach to library automation*" discusses that software selection is a very complicated issue, on the observation of experts. The discussion should be made by the selection committee and most suitable in regard of flexibility, capacity, expandability, security, economically, user's friendly, module based and updated with the latest technology is to be procured. He further discusses the leading names of the software packages with its features which are available in the market.

Muir, (2005), in his article "*An introduction to the open source software issue*" traces the issue on Open Source Software (OSS). He described features and utilization of open source software and what is happening with OSS applications in universities and other libraries in the

western world like USA, Canada, Newzeland etc. According to this article, OSS allows programmers to alter the software and redistribute it, with the requirement that they make these changes available to other developers.

Adeniran, (1999), "*Library software in use in southern Africa: a comparative analysis of search engines, database fine-tuning and maintenance tools*" studied all types of libraries in the following countries: Botswana, Lesotho, Mozambique, Namibia, South Africa, Swaziland and Zimbabwe. This study identified 29 software packages from 22 per cent usable survey returns. The study examines the various search engines, facilities to modify or fine-tune preset database structure, import and export facilities, and other tools available on all off-the-shelf packages in the region. The operating environments and modes are also examined. Software designers in developed countries have created a variety of applications for library and documentation work. The cost of development and maintenance of software can be very high and the libraries have to pay a large amount of money to automate their procedures. Realizing this dire need of libraries in developing countries, the Netherlands government decided to take the initiative to develop a library software package within a developing country.

The services like acquisition, cataloguing, circulation etc., discussed the traditional methods of management of technical services employed prior to automation and also notices the tremendous changes in the infrastructure of library software, technical problems that has arisen in making them most effective and useful in university libraries in the light of information technology.

They highlighted the importance of suitable provision in library software packages for evaluating the performance of different sections of library and its various stake holders.

As to prior to use the best one library software in academic libraries from the modern perspective view with advent technology, it is being studied the library software used in various academic libraries of Kathmandu Valley and to recommend one in its unique qualities.

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FOCUS OF THE STUDY

3.1 Software:

A set of command is known as program, and a set of programs is known as software. The hardware operates on the basis of a set of programs of software (Sharma, 1993). Basically, software is the program that runs the computer to produce the required results. It is said that, "A computer without software is similar to a man without his brain, or a library with neither books nor librarians". Therefore, on principle, the selection of software comes before hardware. The author emphasized the software needed for library housekeeping routines and information retrieval services in detail (*Malik, 1994*) . Related features of the software have been included in related chapters to show their details.

3.2 Types of Software:

Although the range of software available today is vast and varied, most software can be divided into two major categories.

3.2.1 System Software:

System software is a set of one or more programs, designed to control the operation and extend the processing capability of a computer system. In general, a computer's system software performs one or more of the following functions.

- Supports the development of other application software
- Supports the execution of other application software
- Monitors the effective use of various hardware resources, such as CPU, memory, peripherals, etc.
- Communicates with and controls the operation of peripheral devices, such as printer, disk, tape, etc.

The programs included in a system software package are called system programs, and the programmers who prepare system software are referred to as system programmers (Sinha, 2003). Some of the most commonly known types of system software are:

- Operating System

- Programming Language Translators
- Communication software
- Utility Programs

3.2.2 Application software:

Application software is a set of one or more programs, designed to solve a specific problem, or do a specific task. Some of them are available in the market-place as software packages. They are as follows:

- Word Processing Software
- Spreadsheet Software
- Database Software
- Graphic Software
- Personal Assistant Software
- Education Software
- Entertainment Software
- Desktop Publishing Packages
- Library Management Software
- Expert systems

Today, readymade software packages are available in the market for a wide range of applications and their capabilities differ, prices vary and their versions keep on changing. Selection of suitable software package is an important factor in library automation system. There are not many publications or case studies discussing the criteria for selecting suitable software. The selection is based on specific needs of the institution, its environment, budget, user's aims and objectives (Malwad, 1995).

One of the software distributors Soft-link Asia declared "Our Mission is to make information accessible to specialists, as well as general groups of society, through effective employment of information technology in libraries- the epicenter of knowledge storage and discrimination center". The software featured is a mixture of commercial software, shareware, and Open Source Software. These three basic kinds of software packages can be seen in the present day context.

3.2.3 Commercial Software:

Hundreds of commercial library software have been developed and run successfully today in the world and there are many software directories and other tools available that help librarians to select suitable software for their libraries (Malik, 1994).

Commercial software typically provides solutions to particular application problems. Since they are developed on a commercial scale in a competitive market for use by a variety of customers, a great amount of skill and effort is put in their development. Therefore they are reliable, easy to use and in many instances, well-documented (Malwad, 1995).

In the context of developing countries, LIBSYS, Alice, SLIM, EASYLIB, SOUL are few examples of the most popular commercial library automation software. Some software is expensive and some have reasonable price. It is beyond expectation to use commercial software for some libraries, due to the lack of budget to buy and sustain the software package as the recurring cost involved by way of maintenance and newer versions. But the library which is financially strong can purchase and use commercial software to automate their library. The British council Nepal, TITI and SAARC Tuberculosis Center has used Alice for Windows software.

3.2.4 Open Source Software:

Open-source software is an antonym for closed source and refers to any computer software that is released free of cost and its licenses usually prohibit modifications and commercial redistribution. Source code is available under a license that permits users to study, change, and improve the software and to redistribute it in modified or unmodified form. A definition of open source is “free distribution and redistribution of software and source code; licenses that allow distribution of modifications and derived works and non-discrimination against persons, groups or fields of endeavor” (OSI; www.opensource.org).

The term is most commonly applied to the source code of software that is made available to the general public with either relaxed or non-existent intellectual property restrictions. This allows users to create user generated software content through either incremental individual effort or collaboration. Open source software gained popularity with the rise of the internet and its

enabling of diverse production models, communication paths and interactive communities. There are very few cases of software that is free software but is not open source software, and vice versa. The difference in the terms is where they place the emphasis.

3.2.5 Shareware (freeware) Software Packages:

Shareware is software that is released free of cost in binary format but only for a limited trial period after which users are encouraged to purchase the software. It is public domain software which is usually obtained through shareware libraries. It is also called freeware software packages and its licenses usually prohibit modifications and commercial redistribution. Free software is defined in terms of giving the user freedom. This reflects the goal of the free software movement. Shareware is essentially available free of charge although users are likely to be asked to pay a nominal charge to the library to cover the costs of copying the software and the disks on which it is provided. In addition, the original writers of the software usually charge registered users for manuals. This type of software can be used by anybody for non-commercial purposes. CDS/ISIS developed by UNESCO, is one such freeware, specially designed for handling textual information which is very popular in developing countries.

3.2.6 Library software: history and comparison

Due to the vast explosion of information, the librarians are facing difficulties to meet the user demand and are forced to take up the task of systematic organization of the recorded knowledge. On the other hand, the computer programs are being very much advanced day by day in each and every activity. Librarians also are moving with this fast development of computers using various kinds of databases, software and library automation software packages and automating their diverse activities in the libraries, as a solution for this matter (*Wright, 1996*).

It has been seen increasing activity and complexity in the information field. As a result acquisition, cataloguing, circulation and serial management have become more specialized function demanding a high degree of efficiency. This growing complexity can be managed easily with the use of good library automation software packages (*Pradhan, 1995*).

3.3 Freeware Software used in Nepal:

Introduction of CDS/ISIS software had an enormous impact on library automation in Nepal. In 1986, UNESCO distributed CDS/ISIS software free of charge in academic libraries. ISIS software permitted the creation of individual data entry formats suitable for the needs of the libraries. The university and college libraries decided to use a common data entry format, which enable convenient exchange of data. Another strong reason is that the training is provided by many library training institutions and even prescribed by Central Department of Library and Information Science, Tribhuvan University (TU) in its MLSc syllabus.

However, in the last two decades, several attempts were made in Nepal at the institutional level for computerization of library and information services as well as number of libraries have started commercial software packages to automate their libraries. Now, a few organizations and library associations are also making efforts in this direction. As mentioned in the first chapter, there are six universities and one deemed university in Nepal. The total number of affiliated, constituent and private colleges all over the country under these universities is about 548. Out of the 548 colleges, 250 colleges are situated in Katmandu (UGC 2005-2006). Among them only 30 libraries have been studied where the computer is used for automation in their libraries. Other libraries are not included because they have not used any library software for automation in their library.

3.4 Academic Libraries

Library is a social institution, which provides the relevant information to the readers. Its aim is to enable the users to make the most effective use of the resources and services to the users. The information system of Nepal incorporate various library systems like academic library, public library, national library, government library, special library, etc. Among these, academic libraries of Nepal are described with the characteristics and history, the growth, profile and services provided of by them. The focus is given to the library software used in academic libraries in this study.

3.4.1 Tribhuvan University Central Library (TUCL), Kirtipur:

Tribhuvan University, founded in 1959 AD, is the first university situated in Kirtipur, five kilometers to the south-west of the capital. Tribhuvan University Central Library (TUCL) was established along with the University in 1959. The library began with a collection of 1200 volumes of books. Now, the collection exceeds 3, 15,000 volumes of books and other documents. Over 450 titles of periodicals are received every year on subscription or as gifts. It is the largest library in the Kingdom in terms of collection, services and the number of members.

The library uses the Dewey Decimal Classification System for arranging the books on shelves. It has also maintained the traditional system of card catalogues for searching the materials. It has different sections. But in addition to this, since 1995, it has been providing computer database searching facilities through OPAC (Online Public Access Catalogue). About 59,000 library materials including books, dissertation, reports etc. are computerized using CDS/ISIS and WINISIS software packages. TUCL is going to be fully automated library using new Library Management software named KOHA. The library has 67 full time staff. Out of this, there are 12 professionals and 55 are non professionals staff.

TUCL is the national coordinating institute for International Network for the Availability for Scientific Publication (INASP). PERI is one of the program under INASP. Through this, TUCL provides full text database of world's more than 25000 high-quality scientific journals and access to contents, abstracts from 20,000 scientific journals from different databases which are available in TUCL website <http://www.tucl.org.np>. Library software used by TUCL is described below.

3.4.1.1 CDS/ISIS

The full form of CDS/ISIS is Computerized Documentation System/Integrated set of information System or simply ISIS. It has been designed and developed by UNESCO's Division of Software Development and Applications office of Information program and service. The windows version is called WINISIS.

It is a menu-driven generalized information storage and retrieval system, designed specifically for computerized management of structured non-numerical data bases. (UNESCO, 1989). The first version of CDS/ISIS was released in 1985, similarly, its 2nd version 2.3 in 1989, 3rd 3.07 version in 1992 and latest version 3.08 is available now. The range of ISIS users includes all types of libraries, as it is distributed free of charge. More than 5,000 libraries are licensed users worldwide. It is a non-numeric database specially designed for bibliographic records, and is multilingual. A database can hold 16 million records. It provides variable length fields, repeatable fields, and sub-fields. It has powerful indexing and searching techniques. It provides a stop word file. Advanced programming can be done using PASCAL language. Data can be exchanged according to international standard ISO 2709 (Sharma, 1993). It can run on LAN. Well elaborated documentation is available. Although CDS/ISIS cannot perform all housekeeping operations easily, its use is rapidly increasing. In Nepal, the distributing agents were ICIMOD and RONAST. Many Nepalese Library Associations are offering training courses on CDS/ISIS in the version of WIN/ISIS and hundreds of librarians have become trained users. It is also put in the course of MLISc.

Features

1. The system allows its users to create non-numerical data-bases
2. Handling of variable length records, field and subfield
3. Handling of repeatable field
4. Data are created and modified in data entry worksheet
5. Data base can contain over 1,60,000,000 (16 millions) records
6. It allows a user to create data base on his/her own
7. Sorting and printing facility in desired format, (catalogue or index format)
8. Its indexing capabilities are extremely dependable and fast
9. Its search facilities are simple, accurate, and rapid
10. Integrated application program language of CDS/ISIS allows the user to introduce new software
11. Compatibility between the DOS and windows version
12. Powerful hypertext function to design complex user interface
13. Data can be imported and exported based on ISO-2709 format

3.4.1.2 WINISIS

The window version of the CDS/ISIS is called WINISIS developed and released by the UNESCO in June 1997 has several additional useful features. The first window version was distributed for testing in May 1995 and the first WINISIS version officially released was version 1.31 launched in November 1998. WINISIS uses the same database structure as CDS/ISIS. Database created by DOS version of the CDS/ISIS system do not require any changes to be processed by the Windows version of this system. WINISIS, which is fully compatible with the MS-DOS version of CDS/ISIS, is designed for both current MS-DOS users who wish to shift to the windows environment, and for new users. It includes all the features of the MS-DOS version except some database utilities such as the database re-initialization. WINISIS is in c++, facilitating the portability level.

Features of the WINISIS

1. An integrated application programming language(CDS/ISIS Pascal and the CDS/ISIS Dynamic Link Library (ISIS_DLL)
2. Allow the user to build relational data bases
3. Powerful hypertext functions allow designing complex user interface.
4. Compatibility between the DOS and Windows versions
5. Maximum record size has been increased almost 4 times (30 KB in the Windows version as compared with 8 KB in the DOS versions)
6. Availability of graphical user interface (GUI)
7. Increased length of a format (up to 26,000 characters) and its output (up to 64,000 characters)
8. Availability of new numerical and string functions.
9. Guided search interface is available for inexperienced users of the package, apart from the standard search interface.

3.4.1.3 KOHA

KOHA is the world's first open source integrated library system. The name comes from the Maori word for a gift or donation. The program was written by Katipo communications for the Horowhenua Library Trust. Koha is currently maintained by a team of volunteer developers spread across New Zealand, France, Canada, and the United States (koha.org)

Koha as being open source software, any library can make use of this software after developing according to their requirement. There is a source for mailing list for the development team. Online user group and help for its users are also available. It has been released under the general Public License (GPL). The characteristic of the license is that free to use, modify and distribute the program at no cost. It does not, however, support document distribution and indexing. It is basically designed to work on Linux operating system, but it can be installed on systems with windows 2000 and Windows NT also. This software is dependent on other freeware software like Apache Web Server, Mysql or any other SQL based Relational Database Management System, Perl Interpreter, Following Perl modules. Regarding the size of the database, a big server with lots of RAM will increase the capacity of data. The latest version includes support for importing and exporting of MARC records and supports Z39.50 standard also. Installation support and manuals are available. Koha supports all major library housekeeping operations except serial control.

Different modules supported by Koha are listed below:

- Acquisition
- Circulation
- OPAC
- Membership
- Accounts and reports
- A library catalogue front end/ OPAC
- A library system intranet
- A circulation tracking system
- An acquisition/budgeting system
- A simple web based interface for patrons and library staff
- The search interface is easily customizable

- Simple acquisition system for smaller libraries
- Able to catalogue websites as normal items
- Web based OPAC and circulation system
- Auto- remind notice and fines
- Barcode support
- Full MARC support

Health Net Nepal has been organizing a training program for KOHA open source software since 2008 then several Nepalese libraries are implementing Koha integrated software due to the free of cost. No one library is using it fully but partly for the library housekeeping jobs. They are using it just as to their need.

3.4.2 Kathmandu University School of Management Library (KUSOML), Balkumari:

Kathmandu University School of Management (KUSOM) was established in August 1993 as a premier management development institute under Kathmandu University. It is located at Pinchhe Tole, Sasatanchha, Balkumari, Lalitpur, Nepal. Kathmandu University Central Library, Dhulikhel has maintained Management and Education Library (KUSOML) at the School of Management. The library serves for the academic disciplines in Education and Management.

Kathmandu University School of Management Library (KUSOML) holds approximately 12,017 collection including books, journals and magazines. One professional, three semi-professionals and one non professional full time staffs are there in the library. Access of PERI recourses is also available in the library. The library has 1046 users to serve. All the documents are organized by the Dewey Decimal Classification (DDC) system.

The Subscribed Journals and Magazines

- Asia Pacific Journal of Human Resources
- Business Week
- Decision
- Financial Analysts Journal
- Harvard Business Review

- Journal of Accounting Research
- Journal of Business
- Journal of Emerging Market Finance
- Journal of Entrepreneurship
- Journal of Finance
- Journal of Financial Quantitative Analysis
- Journal of Marketing
- Journal of Marketing Research
- Journal of Money, Credit and Banking
- Management Review Journal
- Sloan Management Review
- South Asia Economic Journal
- The Economist
- The Boss

Online Resources

Kathmandu University School of Management Library (KUSOML) is linked with the PERI. PERI stands for Programme for the Enhancement of Research Information, delivers global information to researchers in developing countries. It stimulates and supports the publication and dissemination of in-country research findings. It is a programme of the International Network for the Availability of Scientific Publications (INASP), UK.

The username and password to access the sites can be obtained from KUSOM Library.

The available resources are:

- MCB Emerald
- EBSCO Host
- Oxford University Press
- African Online Journals
- Cochrane Medical Library
- Blackwell Synergy
- Springer Link
- Cambridge University Press Journals

- Hinari

The University purchased Software for University Libraries (SOUL) developed by INFLIBNET Centre, UGC of India and installed in KUSOML too which made KUSOML library as to have library automation in Nepalese context. The web-based Online Public Access Catalogue (OPAC) is a remarkable feature of the software by which a user would be able to find out his/her requirements and his status himself online.

3.4.2.1 Software for Universities Library (SOUL)

SOUL is library automation software designed and developed by the INFLIBNET, UGC, India (Aryal, 2006). It is user friendly software developed to work under client-server environment.

It has the retrospective conversion facility from CDS/ISIS. During 2004, KUSOML had started SOUL and entered in to the phase of library automation. It has various modules like acquisition, circulation, cataloguing, serial control and Online Public Access Catalogue module (OPAC).

Features of SOUL

1. Windows based user-friendly software, well-designed screens, and logically arranged functions with extensive help messages.
2. Based on client server architecture allowing scalability to the users.
3. Uses RDBMS to organize and query the data
4. Does not need extensive training to use.
5. Specially designed to work in large academic libraries as it is capable of handling large records.
6. Multi-user and multi-lingual software
7. Supports internationally known standards such as CCF, MARC 21 and AACR-2 etc.
8. Provides export and import facility and adhere to ISO 2709 format
9. Versatile OPAC and very user-friendly with all in-built options
10. OPAC accessible aver the web
11. Provides comprehensive list of reports, master databases and authority files

12. Provides facility to create, view and print records in devanagari or other regional languages of India
13. Functionally it covers every conceivable operation of a university library
14. Affordable cost
15. Fully tested at a number of university libraries and critically evaluated by a team of experts and practicing librarians.

3.4.3 Public Youth Campus Library (PYCL), Dhobichaur:

Public Youth Campus was established in BS.2030, situated in Dhobichaur, Chhetrapati, Kathmandu. It is constituent campus of Tribhuvan University which offers the Intermediate to Master Level course in Management. It has about 5000 students. The library of Public Youth campus holds approximately 31,000 collection including books, Journals magazines and thesis. One professional, one paraprofessional and other non-professional full time staffs are working in different sections such as technical or processing section, circulation section and administrative section serving the researchers, faculty members, students and other administrative staffs. It has installed MIDAS LMS software packages for automation of the library.

3.4.3.1 MIDASLMS

MIDAS Library Management System is developed by MIDAS Technology Private Ltd. Nepal. It can run on a single computer and also over a network. It can handle all the general housekeeping operations of the library such as acquisition, cataloguing, circulation, serial controls, user search services. But it cannot support some other advanced services which will be available in modern library software.

PYCL, Nepal has used this software for the automation of library.

Features:

1. MIDAS LMS is also a modular software package
2. Facilitates a core library housekeeping operations.
3. Does not support barcode technology
4. Operates on single user environment as well as on multi-user environment

5. Lacking retrospective and special data protection function
6. Menu driven- use by both library staff and users
7. Simple search facility
8. Facilitates import and export data
9. Facilitates a report generation of library statistics
10. Inventory includes total books available in the library, books missing etc.

3.4.4 St. Xavier's College Library (SXCL), Maitighar:

St. Xavier's College, Maitighar, Kathmandu, is an educational institution of higher learning established in 1988 and managed by the Nepal Jesuit Society. Jesuits began their educational work in Nepal in 1951 with the opening of St. Xavier's School, Godavari, followed by St. Xavier's School, Jawalakhel and St. Xavier's School, Deonia.

Jesuits have served people of all faiths, all over the world, as educators, scientists, explorers and social reformers since 1540. That centuries old tradition of service to others is the cornerstone of Jesuit education. Education at Xavier's prepares each student to live and lead in all the endeavors. It fosters critical thinking, positive action and service to others. It challenges students to go beyond career preparation. It encourages the student to be job creators rather than job seekers, creative designers of the future.

St. Xavier's College Library (SXCL) has approximately 26,750 collections in which 26,000 are books and 285 are magazines and journals and 500 audio-visual materials. It serves more than 3000 users with the categories of students, teachers, users and researchers. One professional, two non-professional and one helper staffs are there in library section. It has used the LIBINFO library software for library database and its housekeeping jobs.

3.4.4.1 LIBINFO

Information Access Network (IAN) is a private company established by young information scientists, with a team of library science professionals, computer engineers, architects and management experts. First time in Nepal, IAN had introduced LibInfo version 1.0 (LibInfo manual) for library and resource center, which supports both English and Devnagari font. It

can run at any environment ranging from a single computer and over a network (LAN/WAN). Nepal Medical College, Library of Supreme Court and other few libraries are using this software.

Features of LIBINFO

1. Circulation includes book check in, checkout, member status and reservation of resources
2. Cataloguing includes detail of the cataloging procedures of library resources.
3. Inventory includes total books available in the library, books missing etc.
4. Report feature provides overall library statistics including total number of members, books circulated by every faculty, revenue generation of the library and most used title of books and other resources of the library.
5. Software is integrated with barcode system

3.4.5 Advanced College of Engineering and Management Library (ACEML), Kupondole:

With the vision to establish world class academic institution Advanced College of Engineering and Management (ACEM) was established on 2000 under the affiliation of Tribhuvan University. It is located at Kupondole, Lalitpur. ACEM has been offering Bachelor level academic program on Electronics and Communication, Civil, and Computer Engineering since last seven years and Electrical Engineering from 2010.

Advanced College of Engineering and Management Library (ACEML) has approximately 33,254 collections in which 19024 are books, 12,960 are manuals, 1,233 are reports and journals and magazines are 47. It has one professional, one semi-professional and two non-professional staff. It has used LIBRA software for library database and its library housekeeping jobs.

3.4.5.1 LIBRA

LIBRA is developed by Kalika Computer Services supported by Buddha Academic Enterprises Pvt. Ltd., Anamnagar, Kathmandu. Buddha Academic Enterprises is a renowned and established organization that has been importing and exporting publications for a long time. As

such the library management software, LIBRA comes with full commitment that any future maintenance or troubleshooting would be handled with high importance.

Objectives

Main objective of the program is to give service for collection, storage, processing and dissemination of information. Training to process the documents is also given to staff of library. Following are main purpose of the software:

1. Computer cataloguing / indexing using software
2. Data entry of books and students
3. Prepare card for members
4. Provide detail information of collection of library
5. Circulation system using barcode technology
6. Searching facility of all documents
7. Provide list of documents of books

Key features of software:

1. Cross-platform support (Linux, Windows, Feroda, DEBIAN, Solaris, Unix)
2. Barcode label and identity card generator embedded
3. Import and export of MARC data supported
4. Online Public Access Catalogue Support (OPAC)
5. Bibliographic data entry of books in standard format and field
6. Searching facility by author, title, subject, keyword or publisher
7. Detail data entry of member
8. ID card prints facility

9. Easy and systematic circulation (Issue and return) process
10. No need of books card and books pocket
11. Easy to imply rules and regulation (fine, due, date, expiry date, member notice, etc)
12. Easy to serial, periodical management
13. Easy user interfaces
14. Barcode and spine label print facility available

3.5 Features of Good Library Software Packages

The library should have the best software for fulfilling the entire activity and to satisfy the users. Besides storage and retrieval, there are other housekeeping functions also which should be there in the software. Computerization of operation requires procurement of hardware and software.

The first step towards this will be the automation of the individual libraries and information centers and for this each organization has to follow and maintain certain standards. Several options are available for acquiring upgrading a library management system. (*Rowley, 1993*)⁵³

1. Buy or license a commercial software package
2. Join or make use of the system of a cooperative
3. Develop own system

Different types of libraries required library software packages with different dimensions and capabilities. For example, The University library where big collections and heavy circulation work has to be perform, a fully integrated software package is required with good response time and strong searching facilities, whereas for research libraries or other special libraries where the collections are limited but the readers have very specific requirement, a software with good searching capability is needed, which will enhance the search and present the result what is exactly required (*Ahmad, 1993*).

Even though, the software directories with the names and commercial details are available, it doesn't help librarian for the critical selection. It is obvious that by looking into the brochure or by the demonstration of the software for picture, inside capabilities and drawbacks of the software cannot be identified. Some of the most important and basic things like, the ease of inputting records, editing, cursor navigation, response time and user friendliness can be experienced only by using the software. The software should be tested by taking actual examples and by entering and manipulating several dozens of records in to the packages (Ahmad, 1993)

A software package used for library work and services should have at least the following qualities (Sharma, 1993)

1. Database Management System (DBMS) features
2. High level integration
3. Data entry facility
4. Data updating/editing
5. Search/inquiries
6. Report/Display/Print
7. Menu driven and user friendly
8. Compatibility
9. Reputation of the sponsoring
10. Scope for local variation

3.6 Functions of Library Software Packages

A good library software package should be the integrated for the entire range of library activities. The main functions of software packages can be listed as follows:

3.6.1 Acquisitions

This module automates the book ordering process, keeps track of items on order and allows for tight control of budgets. Acquisitions is usually linked to the cataloguing module providing an easy means of checking for items before ordering to ensure against duplication , and enabling library users to see (and Often reserve) items on order. A brief catalogue record is created at

the time of ordering which allows the item to be put into circulation as soon as it is received in the library.

3.6.2 Cataloguing

This is usually the core module of an automated library system, without which no other modules will function. It allows bibliographic records to be created, imported to the system and parameters relating to them to be set. The catalogue can usually be searched via a menu or a command driven system. Systems are usually flexible enough to give a choice in how the information is displayed in a record. Such records can also be edited and deleted and may include provision for entering abstracts and free text.

3.6.3 Circulation

The circulation module is used for issuing, returning books or other items of stock, renewals, reservations, overdue and the calculation of fines. It also enables the production of notices to library members. Lending periods and types of membership can be defined.

3.6.4 Serial Management

The serial module, sometimes incorporated in to the acquisitions module, allows new issues of journals or magazines to be booked in without having to manually enter the details for each one, It predicts when items are due to arrive and can generate automatic claims for items not received. Most systems also create internal circulation lists for journals.

3.6.5 Online Public Access Catalogue (OPAC)

The OPAC sometimes comes as part of the cataloguing module but with some systems it is a module in its own right. It enables library users to search the catalogue using a more user-friendly searching environment than the cataloguing module itself, with a menu driven or windows-style interface. The sort of searching which can be carried out as defined by system or the library.

3.6.6 Report Generator

A report generation facility is often provided as a module on its own although many systems incorporate reporting function within their other modules, e.g. circulation reports will be generated from within the circulation modules. Stock reports from the cataloguing module, etc. A separate reports module often allows for greater flexibility in the type of reports that can be generated by the system, but it may also involve more work in setting up.

3.6.7 Interlibrary Loan

Generating requests to other libraries, notifying the users of the availability of items, keeping records of item requests, loan or returns, include in this module.

3.6.8 Community Information

This module provides and keeping tracks of the names and address of contacts such as local organizations and it allows a particular library to develop its own database of information it might like to offer its public.

3.6.9 Import/Export

This module allows the import and export of catalogue records to/from the system in UKMARC format and into and out of other systems, e.g. the GCS catalogue. As the GCS system holds records in UKMARC format, it is essential that, software should have this facility in it.

3.6.10 Reference Service

It is proving helpful in answering user questions and providing them the required information. Libraries are collections of materials and other sources of recorded information. Libraries and information centers have changed significantly over the course of history; they always remain responsible for acquiring or dissemination access to information and other media that meet educational, recreational and informational needs of their users. They have continued to keep the business information, legal, historical and religious information as records of a civilization

Civilization is to quest for knowledge. The process of evolution in human civilization from the stage of 'Chimpanzee' to modern human of 21st century, their intelligence on information sharing has significantly contributed in communication. For efficient communication the primitive human before and while in Stone Age, did their best to read different types of information in their weapons, location, prey etc.

The primitive human also recorded information by various styles, forms of drawings and shapes of materials. The following generations learnt consequently the practice, style and culture of recording information got importance. The importance of information which the human being experienced as a powerful means of getting things done has continued the drawings, sketches and shapes of material for future generation use. The history of civilization from east to west and from pre-ancient to post-modern era, has given the proof.

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Chapter IV

RESEARCH METHODOLOGY

Research is the process of a systematic and in-depth study or search of any particular topic, subject or area of investigation backed by the collection, compilation, presentation and interpretation of relevant details or data. It is careful search of inquiry into any subject matter which is an endeavor to discover or to find out valuable facts, which will be useful for further application or utilization (Wolff and Pant, 2007).

4.1 Research Design:

Research design is a plan and strategy of investigation conceived for the collection and analysis of the data. It presents a series of guide posts to enable the researcher to progress in right direction in order to achieve the goal. The design may be a specific presentation of the various-steps in the research process. For this research work, users and librarians of the related libraries were studied and were taken for case studies so that it could reveal practical need of the library software and their features used for the databases. As well questionnaire, interviews and observation methods were taken.

4.2 Population:

The population of the study are libraries which have used different library software. All libraries are academic libraries. They are Tribhuvan University Central Library (TUCL), Kirtipur, Kathmandu University School of Management Library, (KUSOML),Balkumari, Public Youth Campus Library (PYCL), Dhobichaur, St. Xavier's College Library (SXCL), Maitighar and Advanced College of Engineering and Management Library (ACEML), Kupondole.

4.3 Sampling Procedures:

Sample procedure is random one. Samples have chosen randomly from purposively selected population. Altogether five libraries were taken as a sample for study. The study has hoped the selected sample represents all the academic libraries of Kathmandu Valley. 100 respondent has been selected for this research but only 90 responds has returned the questionnaire.

4.4 Data collection procedure:

Data are collected from the following methods:

I. Questionnaire:

Structured and closed ended types of questionnaires were distributed hand to hand to users and library professionals. Altogether 100 questionnaires were distributed to the users and library staffs/ professionals of different libraries, out of which 90 respondents were responded.

II. Interview:

In this step, the researcher has conducted structured and unstructured interviews with knowledgeable librarians in software packages, professionals, core professionals for gathering concerned data, facts and figures. By this, the researcher has found historical background and present scenario. As well some users of all selected libraries were interviewed to know their views to use library software / database.

III. Observation:

After observing these libraries which were using library software for their library, he had found the present scenario.

4.5 Data Analysis Procedure:

The data in the form of questionnaire are collected, edited, coded, tabulated and classified for analysis. All those collected data was aggregated into a form that presented the summary of answers from respondents. Primary and secondary data taken from various libraries were also analyzed. Processed data were interpreted in the form of tabulation. The result of analysis could be found in the tables and figures making references relevant to the research relations studied, and drawing conclusions about them.

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Chapter V

ANALYSIS AND PRESENTATION

Data were collected from five different libraries namely: Tribhuvan University Central Library (TUCL), Kathmandu University School of Management Library (KUSOML), Public Youth Campus Library (PYCL), St. Xavier's College Library (SXCL) and Advanced College of Engineering and Management Library (ACEML). Both information users and library professionals responded within a time frame. Different types of responses were found on the way of data collection in the form of the questionnaires distributed in different libraries' premises. Altogether 90 respondents out of 100 respondents returned questionnaires with answers. The responses found for the questionnaires are presented in the form of table and then the tabulated data are presented diagrammatically in the form of bar diagram, pie chart. It is hoped that those figures sufficiently and correctly represented those all responses and they are classified into two groups, namely library professional responses (15) and information user responses (85). Responses are described in two categories: one is users' view point and another is professional librarians' view point.

The libraries taken for the data collection in the research study and total number of responses collected from the researcher is given the form of the table as well as bar diagram and pie chart given below.

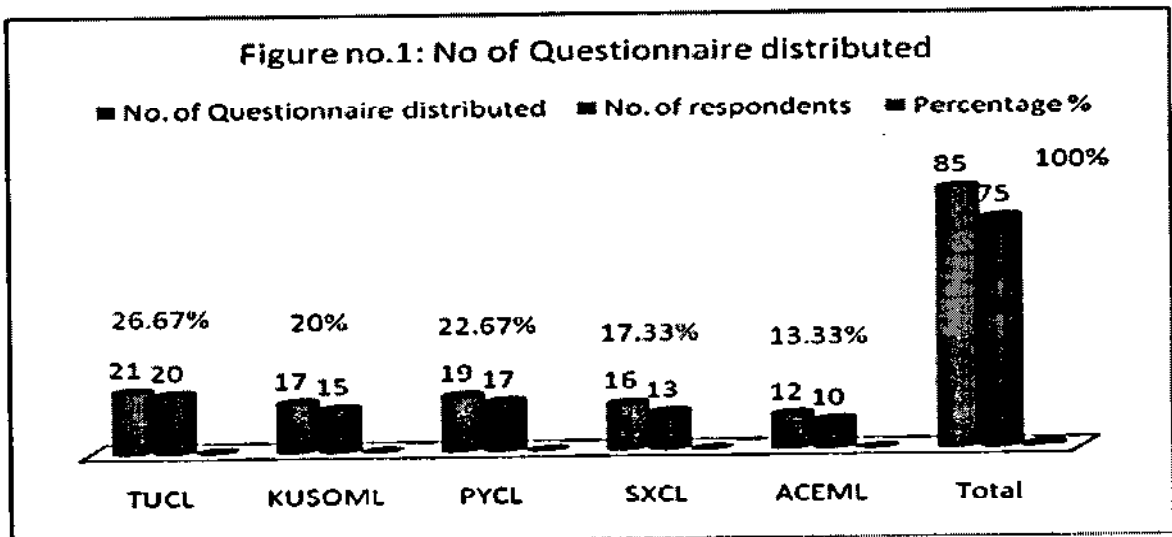
5.1 User's view

Table No. 1 No. of Questionnaire distributed

Name of the library	No. of Questionnaire distributed	No. of respondents	Percentage %
TUCL	21	20	26.67%
KUSOML	17	15	20%
PYCL	19	17	22.67%
SXCL	16	13	17.33%
ACEML	12	10	13.33%
Total	85	75	100%

Source: Data collection from questionnaire

Table no. 1 has shown the questionnaires distributed and returned. 20 questionnaires were returned by the respondents of TUCL out of 21, 15 from KUSOML out of 17, 17 from PYCL out of 19, 13 from SXCL out of 16, 10 from ACEML out of 12. Altogether 75 questionnaires were returned out of 85. It is shown clearly in figure no. 1



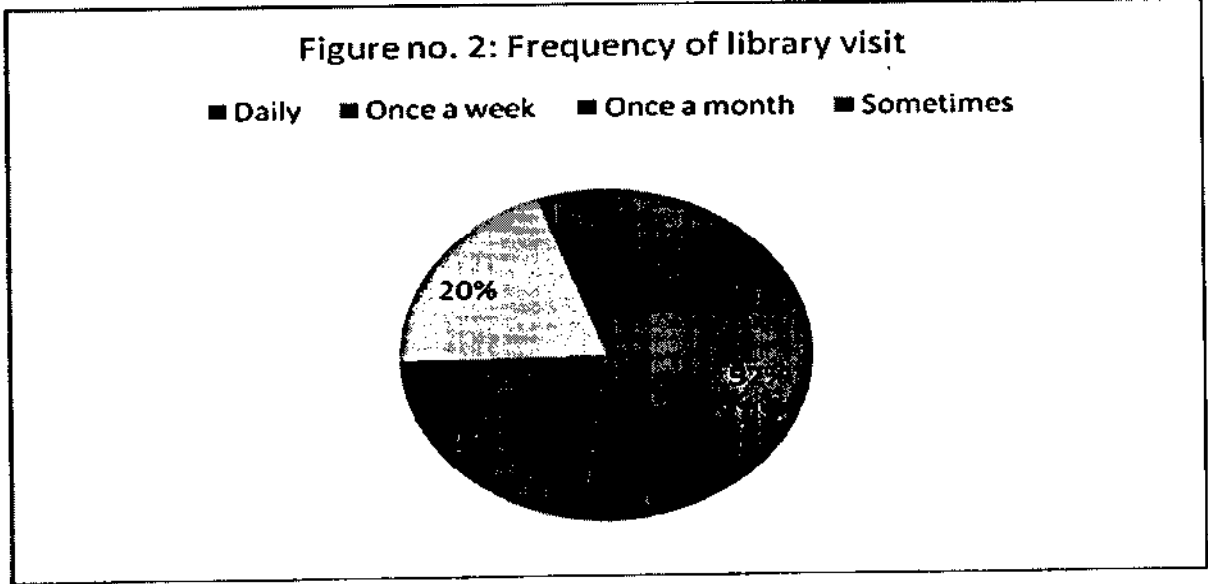
Question no. 1 was made to know the library using habit or the frequency of library visit by the studied users which are shown in table no. 2.

Table No. 2 Frequency of library visit

Frequency	No. of users	Percentage %
Daily	39	52%
Once a week	17	22%
Once a month	15	20%
Sometimes	4	6%

Source: Data collection from questionnaire

Table no. 2 has shown the frequency of library visit of users. 52% users are daily users, 22% are once a week users, 20% users are once a month users and only 6% users are sometimes users. It is shown clearly in figure no. 2.



Question no. 2 was made to know the purpose of library visit by the studied users which are shown in table no. 3.

Table No. 3 Purpose of library visit

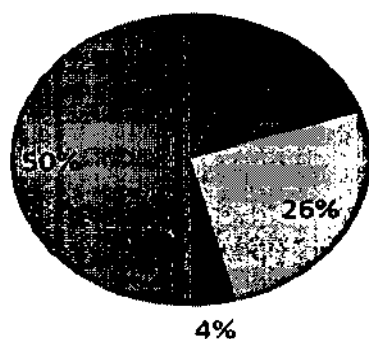
Purpose	No. of users	Percentage %
Reading newspaper	10	14%
Research purpose	20	26%
Reading books	39	52%
Visit only	6	8%
Total	75	

Source: Data collection from questionnaire

Table no. 3 has shown the purpose of the users. 14% have used library for reading newspaper, 26% users have used for research purpose, 52% have used for reading books and rest 8% users have used as visit only.

Figure no.3: Purpose of library visit

- Reading newspaper ■ Research purpose ■ Reading books
- Visit only ■ Total



Question no. 3 was made to know the method of finding out the documents in library by the studied users which are shown in table no. 4.

Table No. 4 Finding out the documents

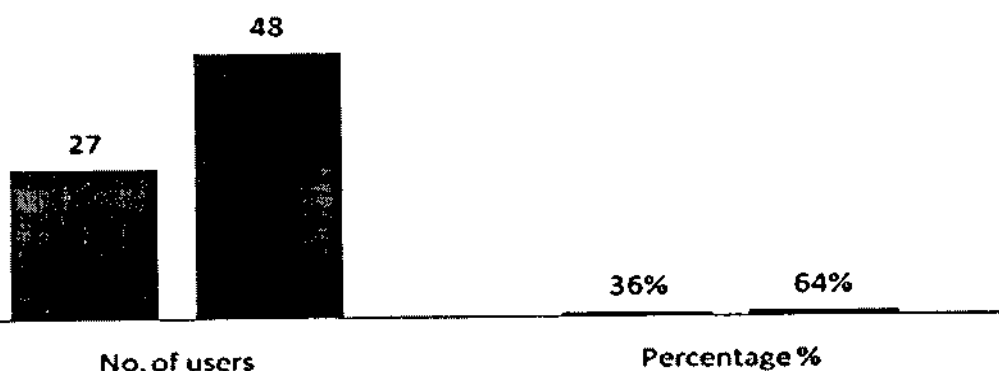
Methods of searching	No. of users	Percentage %
Manual catalogue	27	36%
Computer database	48	64%

Source: Data collection from questionnaire

Table no. 4 has shown that 27 (36%) students have used manual catalogue to find out the document in the library and 48 (64%) students have used computer database to find out the document in the library. It is shown clearly in figure no. 4.

Figure no.4: Finding out the documents

■ Manual catalogue ■ Computer database



Question no. 4 was made to know whether the users face problems or not in getting the document from the database which is shown in table no. 5.

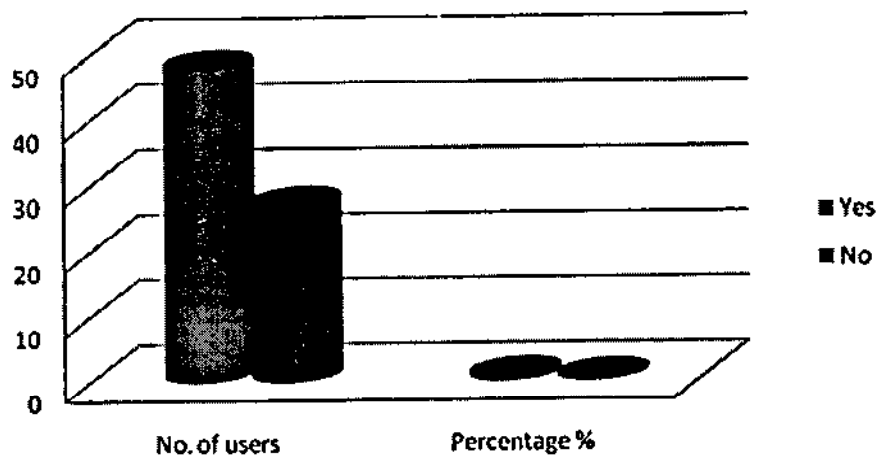
Table No. 5 Problem faced in getting the documents

Problem faced	No. of users	Percentage %
Yes	48	64%
No	27	36%

Source: Data collection from questionnaire

Table no. 5 has shown that 48 (64%) students have faced problems in getting the documents from the database and 27 (36%) students have not faced the problems in getting the documents from the database. It is shown clearly in figure no. 5.

Figure no.5: Problem faced in getting the document



Question no. 5 was made to know the software used in library that the users visited. It is shown in table no. 6.

Table No. 6 Software used in the library

Name of the library	Software used	Kind of software
TUCL	CDSISIS and KOHA	Open source
KUSOML	SOUL	Purchased
PYCL	MIDASLMS	Purchased
SXCL	LIBINFO	Purchased
ACEML	LIBRA	Purchased

Source: Data collection from questionnaire

Table no. 6 has shown that TUCL has used CDS/ISIS and KOHA open source software, KUSOML, PYCL, SXCL and ACEML have used by purchasing SOUL, MIDASLMS, LIBINFO, LIBRA , respectively.

Question no. 6 was made to know how the software was in handling which is shown in table no. 7.

Table No. 7 Ease of software use

Software used	Easy to handle	Difficult to handle
CDSISIS	Yes	-
KOHA	-	Yes
SOUL	Yes	-
MIDASLMS	Yes	-
LIBINFO	Yes	-
LIBRA	Yes	-

Source: Data collection from questionnaire

Table no. 7 has shown that only the KOHA is difficult to handle except other software.

Question no. 6 and 7 were made to know whether the software is online and web based software to provide the services or not? It is shown in table no. 8.

Table No. 8 Web based software

Software used	Web based	
	Yes	No
CDSISIS	-	√
KOHA	√	-
SOUL	√	-
MIDASLMS	-	√
LIBINFO	√	-
LIBRA	√	-

Source: Data collection from questionnaire

Table no. 8 has shown that CDS/ISIS and MIDASLMS are not web based software and other four KOHA, SOUL, LIBINFO and LIBRA are web based library software.

Question no. 9 was made to know the efficiency of library software in search and retrieval which is shown in table no. 9.

Table No. 9 Efficiency of library software

Name of software	Excellent	Good	Poor	Very poor
CDSISIS	-	-	√	-
KOHA	-	√	-	-
SOUL	-	√	-	-
MIDASLMS	-	√	-	-
LIBINFO	√	-	-	-
LIBRA	-	√	-	-

Source: Data collection from questionnaire

Table no. 9 has shown that LIBINFO is excellent, others four KOHA, SOUL, MIDASLMS and LIBRA are in good and CDS/ISIS is in poor condition in search and retrieval efficiency.

Question no. 10 was made to know the time factor for retrieving the document and information from the computer software database. It is shown in table no. 10.

Table No. 10 Retrieval time manner

Name of software	Less than one minute	One minute	Two minute	More than two minutes
CDSISIS	-	-	-	√
KOHA	-	√	-	-
SOUL	-	√	-	-
MIDASLMS	-	√	-	-
LIBINFO	√	-	-	-
LIBRA	-	√	-	-

Source: Data collection from questionnaire

The above table has shown that information can be retrieved in less than one minute in LIBINFO library software database, one minute in KOHA, SOUL, MIDASLMS and LIBRA library software database. As well in more than two minutes in CDS/ISIS library software database.

Question no. 11 was made to know whether the software is sufficient for the library database or not? It is shown in table no. 11.

Table No. 11 Software sufficient for library database

Name of software	Sufficiency of software	
	Yes	No
CDSISIS	-	√
KOHA	-	√
SOUL	√	-
MIDASLMS	-	√
LIBINFO	√	-
LIBRA	√	-

Source: Data collection from questionnaire

Table no. 11 has shown that SOUL, LIBINFO and LIBRA library software are sufficient for library database and CDS/ISIS, KOHA and MIDASLMS are the not sufficient for the library database.

5.2 Professionals' view

Different questionnaire from the users were distributed to the library professionals of concerned libraries which is shown in table no. 12.

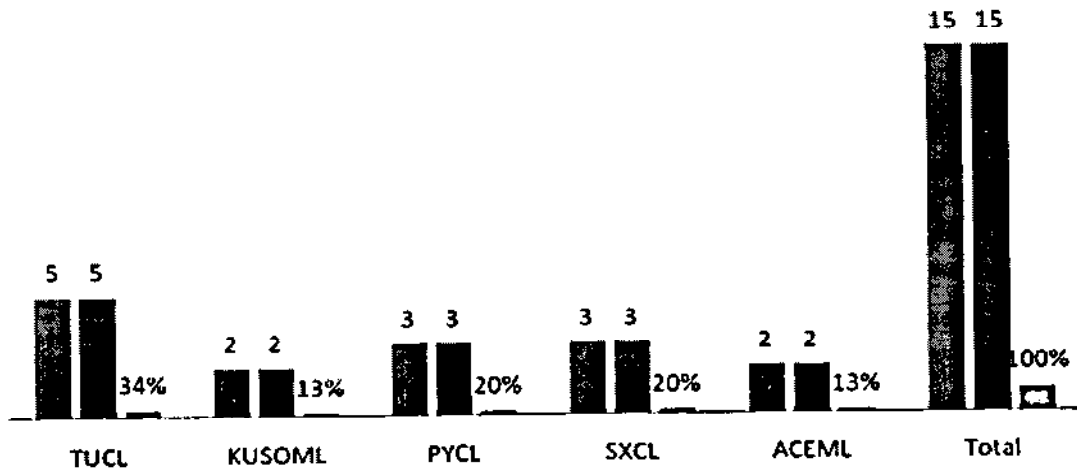
Table No. 12 Professional respondents

Name of library	Questionnaire distributed	Returned	Percentage%
TUCL	5	5	34%
KUSOML	2	2	13%
PYCL	3	3	20%
SXCL	3	3	20%
ACEML	2	2	13%
Total	15	15	100%

Source: Data collection from questionnaire

Figure no. 6: Professional respondents

■ Questionnaire distributed ■ Returned ■ Percentage%



Question number 1, 2, 3 and 14 were made to know the views of the professionals on features and about whether the used library software was user friendly? Whether were they providing web based library database service and whether the used software could work in multilingual script which is shown in table 13 according to their responses?

Table No. 13 Software features

Name of software	User friendly software		Web based database service		Multilingual script	
	Yes	No	Yes	No	Yes	No
CDSISIS	-	-	-	√	-	√
KOHA	-	√	√	-	√	-
SOUL	-	√	√	-	-	√
MIDASLMS	√	-	-	√	-	√
LIBINFO	√	-	√	-	√	-
LIBRA	√	-	√	-	√	-

Source: Data collection from questionnaire

Table no. 13 has shown some features of the included library software. As shown table, it is seemed that MIDASLMS, LIBINFO and LIBRA have the quality of user friendly software whereas KOHA, SOUL has lacked it. Likewise KOHA, SOUL, LIBINFO and LIBRA have the of web based quality whereas CDS/ISIS, MIDASLMS has lacked it. KOHA, LIBINFO and LIBRA have the feature of multilingual script whereas CDS/ISIS, SOUL and MIDASLMS have no this feature.

Question no. 5,6 and 7 were made to know the cost of software in different aspects such as purchasing cost, maintenance cost and training charge, etc which is shown in table no. 14.

Table No. 14 Cost of software

Name of software	Cost	Maintenance Cost	Training provision
CDSISIS	Free	Free	With charge
KOHA	Free	60,000.00	With charge
SOUL	1,00,000.00	25,000.00	With charge
MIDASLMS	30,000.00	10,000.00	No provision
LIBINFO	75,000.00	15,000.00	Free
LIBRA	60,000.00	15,000.00	Free

Source: Data collection from questionnaire

The above table no. 14 has shown that only the CDS/ISIS software can be got with free of cost but should pay in training provision. KOHA is also a free of cost but should pay Rs. 60,000.00 for maintenance cost and extra cost for training too. Rs. 1, 00,000.00 of software cost and Rs. 25,000.00 of maintenance cost and training cost should pay for SOUL software. MIDASLMS can be got by paying Rs. 30,000.00 for software, Rs. 10,000.00 for maintenance cost and without training provision. LIBINFO can be purchased by paying Rs. 75,000.00 and Rs. 15,000.00 for maintenance cost of yearly basis and training is free for the staff. LIBRA can be purchased by paying Rs. 60,000.00 for software and Rs. 15,000.00 for maintenance cost and free training.

Question no. 8 was made to know about the occurrence of problems in the software which is shown in table no. 15.

Table No. 15 Occurrence of problem in software

Name of software	System hang	Difficult to use	Lack of customer service	Maintenance time served by provider
CDSISIS	Yes	Yes	Yes	No
KOHA	No	Yes	Yes	2 to 3 days
SOUL	No	Yes	No	1 days
MIDASLMS	Yes	No	No	1 day
LIBINFO	No	No	No	1 day
LIBRA	No	No	No	1 day

Source: Data collection from questionnaire

Table no. 15 has shown that CDS/ISIS and MIDASLMS software are suffered from system hang and rest others do not have the same. It is seemed that CDS/ISIS, KOHA and SOUL software are difficult to handle and rest are easy to handle. Customer service is lacked in CDS/ISIS and KOHA software but not in others. Maintenance service provider can be got within one day for SOUL, MIDASLMS, LIBINFO and LIBRA and no one for CDS/ISIS and for KOHA within two or three days only.

Question no. 10 was developed to know the effectiveness of software on library house keeping jobs which is shown in table no. 16.

Table No. 16 Effectiveness of software on library house keeping jobs

Name of software	Acquisition	Circulation	Cataloguing	Bar code support	Serial control	Report generation
CDSISIS	No	No	Yes	No	No	No
KOHA	Yes	Yes	Yes	Yes	Yes	Yes
SOUL	Yes	Yes	Yes	Yes	Yes	Yes
MIDASLMS	Yes	Yes	Yes	Yes	Yes	Yes
LIBINFO	Yes	Yes	Yes	Yes	Yes	Yes
LIBRA	Yes	Yes	Yes	Yes	Yes	Yes

Source: Data collection from questionnaire

Table no. 16 has shown that CDS/ISIS software does not work in acquisition, circulation, barcode generator, serial control, report generation except cataloguing. KOHA, SOUL, MIDASLMS, LIBINFO and LIBRA software can work in all the housekeeping jobs of library like acquisition, circulation, barcode generator, serial control, report generation and cataloguing.

Question no. 15 was made to know the programming language of the software which is shown in table no. 17.

Table No. 17 Programming language used for development

Name of the software	Programming language used for development
CDSISIS	PASCAL
KOHA	PHP and PEARL
SOUL	-
MIDASLMS	DELPHI
LIBINFO	PHP
LIBRA	PEARL

Source: Data collection from questionnaire

Table no. 17 has shown that CDS/ISIS software is made on Pascal programming language. KOHA software is made on PHP and PEARL programming language, MIDASLMS on DELPHI, LIBINFO on PHP and LIBRA on PEARL programming language.

Question no. 16, 17, 18 and 19 were made to know whether the software represent the features of the following? It is shown in table no. 18 with all the point of four questions.

Table No. 18 Software performance for the following features

Name of software	Average time to retrieve data	Database security Mechanism	Data Import facility	Efficiency	Serial control	Report generate
CDSISIS	No	No	Yes	Good	No	No
KOHA	Yes	Yes	Yes	Good	Yes	Yes
SOUL	Yes	Yes	Yes	Good	Yes	Yes
MIDASLMS	Yes	Yes	Yes	Poor	Yes	Yes
LIBINFO	Yes	Yes	Yes	Excellent	Yes	Yes
LIBRA	Yes	Yes	Yes	Good	Yes	Yes

Source: Data collection from questionnaire

Table no. 18 has shown that CDS/ISIS does not have all the features such as average time to retrieve data, database security mechanism, data import, efficiency, serial control and report generation. KOHA, SOUL and LIBRA have all the above features and their working efficiency is good. LIBINFO has all the features and can do the work with excellent condition.

Chapter VI

SUMMARY, CONCLUSION AND RECOMMENDATION

6.1 *Summary and Conclusion*

Library and information centers have changed significantly over the course of history, they will always remain responsible for acquiring, organization of them, dissemination to users, access to information that meet educational and informational needs of their users. Well managed information helps to search and retrieve the documents in time. It is considered as an important issue for librarians, students, teachers, and scholars. Library software packages have originated with the need to organize information in central repositories.

To use the best library software is today's need to perform and to provide the information in timely manner. But there is always dilemma in its choice though there are so many library software have emerged in the market from national to international level. No clear points are there for choice of it. To use as permanently is always remains in question mark. So that this study has helped to some extent to choose one of the best library software that this study mentioned from the side of modern perspective view features.

Today's need will not be fulfilled by the previous software which do not have the provision of updated feature as the time changing and with the advent of new technology. So, this study prioritized to describe the features of the library software of some academic libraries of Kathmandu Valley.

Information scientists or librarians have started to rethink over traditional preparation of database technique and how to use modern technology for information retrieval through the updated library software with least cost and easy to handle.

For fast information retrieval from the various access points by the new information technology with the capacity of speed, accuracy, and flexibility constitute the major factors for their use. Various clerical functions and library house keeping jobs are involved in manipulation of records. Selection of useful library software is indeed a remarkable work for library service. So the software is to:

- i. Provide better control and improve efficiency.

- ii. Provide the exact needed information from the database.
- iii. Achieve higher productivity.
- iv. Extend the service offered.
- v. Access from remote area promptly.

'To provide right information to the right person at the right time with the right way in the right form or right language is its motto'

The researcher in course of study has noticed that more information users and library professional are familiar with new information technology but there are so many problems emerged equally. It is found to get the good service and exact information through the use of good library software and new technology in library.

Based upon the answers given by the both types of respondents: the information users and library professionals, the following major findings and conclusion have been found:

1. 52% users are daily users, 22% are once a week users, 20% users are once a month users and only 6% users are sometimes users.
2. 14% have used library for reading newspaper, 26% users have used for research purpose, 52% have used for reading books and rest 8% users have used as visit only.
3. 27 (36%) students have used manual catalogue to find out the document in the library and 48 (64%) students have used computer database to find out the document in the library.
4. 48 (64%) students have faced problems in getting the documents from the database and 27 (36%) students have not faced the problems in getting the documents from the database.
5. TUCL has used CDS/ISIS and KOHA open source software, KUSOML, PYCL, SXCL and ACEML have used by purchasing SOUL, MIDASLMS, LIBINFO, LIBRA , respectively.
6. Only the KOHA is difficult to handle except other software.

7. CDS/ISIS and MIDASLMS are not web based software and other four KOHA, SOUL, LIBINFO and LIBRA are web based library software.
8. LIBINFO is excellent, others four KOHA, SOUL, MIDASLMS and LIBRA are in good and CDS/ISIS is in poor condition in search and retrieval efficiency.
9. Information can be retrieved in less than one minute in LIBINFO library software database, one minute in KOHA, SOUL, MIDASLMS and LIBRA library software database. As well in more than two minutes in CDS/ISIS library software database.
10. SOUL, LIBINFO and LIBRA library software are sufficient for library database and CDS/ISIS, KOHA and MIDASLMS are not sufficient for the library database.
11. MIDASLMS, LIBINFO and LIBRA have the quality of user friendly software whereas KOHA, SOUL has lacked it. Likewise KOHA, SOUL, LIBINFO and LIBRA have the web based quality whereas CDS/ISIS, MIDASLMS has lacked it. KOHA, LIBINFO and LIBRA have the feature of multilingual script whereas CDS/ISIS, SOUL and MIDASLMS have no this feature.
12. CDS/ISIS software can be got with free of cost but should pay for training provision. KOHA is also a free of cost but should pay Rs. 60,000.00 for maintenance cost and extra cost for training too. Rs. 1, 00,000.00 of software cost and Rs. 25,000.00 of maintenance cost and training cost should pay for SOUL software. MIDASLMS can be got by paying Rs. 30,000.00 for software, Rs. 10,000.00 for maintenance cost and without training provision. LIBINFO can be purchased by paying Rs. 75,000.00 and Rs. 15,000.00 for maintenance cost of yearly basis and training is free for the staff. LIBRA can be purchased by paying Rs. 60,000.00 for software and Rs. 15,000.00 for maintenance cost and free training.
13. CDS/ISIS and MIDASLMS software are suffered from system hang and rest others do not have the same. It is seemed that CDS/ISIS, KOHA and SOUL software are difficult to handle and rest are easy to handle. Customer service is lacked in CDS/ISIS and KOHA software but not in others. Maintenance service provider can be got within one day for SOUL, MIDASLMS, LIBINFO and LIBRA and no one for CDS/ISIS and for KOHA within two or three days only.

14. CDS/ISIS software does not work in acquisition, circulation, barcode generator, serial control, report generation except cataloguing. KOHA, SOUL, MIDASLMS, LIBINFO and LIBRA software can work in all the housekeeping jobs of library like acquisition, circulation, barcode generator, serial control, report generation and cataloguing.
15. CDS/ISIS software is made on Pascal programming language. KOHA software is made on PHP and PEARL programming language, MIDASLMS on DELPHI, LIBINFO on PHP and LIBRA on PEARL programming language.
16. CDS/ISIS does not have all the features such as average time to retrieve data, database security mechanism, data import, efficiency, and serial control and report generation. KOHA, SOUL and LIBRA have all the above features and their working efficiency is good. LIBINFO has all the features and can do the work with excellent condition.
17. There seems less confidence in software handling among the librarians whoever have used the software though they used as their need and choice.
18. No one librarian could claim confidently for the single library software which is being used in the libraries as permanent use.
19. All librarians have their own choice for the software but not for the same and single one as for the uniformity

6.2 Recommendation

The aim of study was to find out the features of library software used in academic libraries of Kathmandu Valley to provide information to different types of users like students, teachers, scholars etc. from every possible approach. In order to fulfill the needs, importance and objective of it, the following recommendations have been made based upon the present research.

1. Every library should conduct orientation class to the new users for handling the database in term of search and retrieval the documents

2. Coordination among the librarians and institutions is necessary time to time
3. Coordination among the librarians and the software developers is necessary
4. Every library should make qualified manpower who can handle easily the new IT in library software is continuously required.
5. Training should be provided to the librarians and library staff by the software developers
6. Library software developers should provide training to the librarians as free of cost
7. Professional staff should be more in the library
8. KOHA is not affordable for the poor institutions
9. LIBINFO and LIBRA software are sufficient for automation but they should be provided in low cost without the maintenance and training cost so that all libraries can use them.
10. CDS/ISIS can be used in the newly opened libraries of remote areas so that they should not pay any cost for software and can handle by short training. It can be used in low cost expenditure.
11. Library software developers should add the new features of modern advent technology such as the features of multilingual support, web based facility and security with low cost.

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Appendix 1

Dear Sir / Madam,

This is my research study on the "Features of library software used in academic libraries of Kathmandu Valley: a comparative study". Its purpose is to know your view and knowledge about library software, their use to organize the information in database for search and retrieval and to automate the library from the modern perspective view. Your answer is very beneficial for choosing the best one library software. So, your cooperation in filling up this questionnaire is solicited. The information given by you will be kept confidential and used only for this research work.

Personal Information

Full name: Designation:

Name of library:Date:

Information about your library:

No. of library collection:

Total no of databases:

No. of users to be served:

No. of library staffs:Professional:.....Non-professional:

Please choose any one answer:

1. Which software are you using in your library?

- a. CDS/ISIS or WIN/ISIS b. KOHA c. SOUL d. LIBRA e. LIBINFO
 f. MIDASLMS g. Any others:

2. Is the software user friendly for database?

- a. Yes b. No

3. Are you providing the online services from your library database?

- a. Yes b. No

4. Are you providing web based services from the library software database?

- a. Yes b. No

5. How much cost did you pay for the software?

- a. Free distribution b. Rs. 25,000.00 c. Rs. 50,000.00 d. Rs. 75,000.00

- e. Rs.1, 00,000.00 or more

6. Is maintenance facility provided for the library software package?

- a. Yes b. No

If yes, please mention:

- a. Annual maintenance charges:
b. Terms and condition in brief:

7. Is there any provision for training facility?

- a. Yes b. No

If yes, please mention the available training at:

- a. Installation period b. Arrival of new version c. Need based

8. Do you have faced any problem in library software?

- a. Yes b. No

If yes, what kind of problems have you faced?

- a. Hang sometime in system b. Difficult to use c. Lack of customer service
d. Lack of administrative support e. Any others:

9. If you have faced any problems in your system; how much time does it take to get the service engineer?

- a. 3- 4 hours b. 1 day c. 2- 3 days d. 1 week or more

10. Does the software work for the following features?

- a. Acquisitions b. Circulation c. Cataloguing d. Serial control
e. Barcode support f. Report generation

11. How much the library software effective for library housekeeping job?

- a. Excellent b. Good c. Poor d. Very poor

12. How much time does it take in average to retrieve and storage the information?

- a. Less than one minute b. One minute c. Two minutes
d. More than two minutes

13. Does it support the following operating systems?

- a. DOS Yes No b. LINUX Yes No
c. WINDOWS (95/98) Yes No d. Any other:

14. Does the library software support multilingual script system?

- a. Yes b. No

If Yes, Please mention the language:

15. Which programming language is used to write this script?

- a. PASCAL
- b. ORACLE
- c. Basic/Visual Basic
- d. C/C++
- e. INGRES
- f. Delphi/MS SQL
- g. PHP/ JSP
- h. Any other:

16. Does the library software package have the provision of data security?

- a. Yes
- b. No

17. Is there any provision to maintain different user Ids and password?

- a. Yes
- b. No

18. Does the software support for importing and exporting of data?

- a. Yes
- b. No

19. Is the software sufficient for the library database as you need?

- a. Yes
- b. No

20. Would you suggest any improving to the software package?

.....

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.....

21. Would you recommend it to use in other libraries?

- a. Yes
- b. No

If yes why ?? if no why?

.....

.....

.....

.....

.....

****Thanks for your kind cooperation****

Researcher: Saroj Dhakal

Appendix 2

Dear users,

This is my research study on “Features of library software used in academic libraries of Kathmandu Valley: a comparative study”. Its purpose is to know your view and knowledge about library software, its use to organize the information in database and to search and retrieve the document that you sought. So, your answer is very beneficial for choosing the best one library software. Your cooperation will be kept confidential and used only for this research work.

General Information of users:

Full name:..... Designation:

Name of library: Date:

Level of users:

Please choose any one answer:

1. How often do you visit the library?

- a. Daily b. Once a week c. Once a month d. Sometimes

2. What is your motto to visit library?

- a. Reading newspaper b. Research purpose c. Reading books d. visit only

3. How do you find out the document in library?

- a. Manual catalogue b. Computer database

4. Have you faced any problem in getting the document from the database?

- a. Yes b. No

5. Which software is used in the library that you visited?

- a. CDS/ISIS or WIN/ISIS b. KOHA c. SOUL d. LIBRA e. LIBINFO
 f. MIDASLMS g. Any others

6. How the software is to use and to get the information?

- a. Easy to handle b. Difficult to handle

7. Are you getting online services from the library database?

- a. Yes b. No

If yes, from which library software database?

- a. CDS/ISIS or WIN/ISIS
- b. KOHA
- c. SOUL
- d. LIBRA
- e. LIBINFO
- f. MIDASLMS
- g. Any others

3. Are you getting the web based services from library database?

- a. Yes
- b. No

If yes, from which library database?

- a. CDS/ISIS or WIN/ISIS
- b. KOHA
- c. SOUL
- d. LIBRA
- e. LIBINFO
- f. MIDASLMS
- g. Any others

9. How is the library software effective for search and retrieval?

- a. Excellent
- b. Good
- c. Poor
- d. Very poor

10. How much time does it take in average to retrieve the information?

- a. Less than one minute
- b. One minute
- c. Two minutes
- d. More than two minutes

11. Is the software sufficient for the library database as you need?

- a. Yes
- b. No

12. Do you get your sought information in different language from the library database?

- a. Yes
- b. No

13. Would you suggest improving the software package?

.....

.....

.....

14. Would you recommend it to use in other libraries?

- a. Yes
- b. No

If yes, why?

.....

.....

****Thanks for your kind cooperation****

Researcher: Saroj Dhakal

Curriculum Vitae

Personal Details

Name : Saroj Dhakal
Permanent Address : Maharani Jhora-8, Jhapa, Nepal.
Contact Address : Sopan Monthly, Dillibazaar
Mobile No / Residence : 9841427871/ 9841937273
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Experience

- Working as a Librarian in Advanced College of Engineering and Management since 2064.
- Worked as a Library Assistant from 17th August, 2003 to 4th December, 2004 in Reliance International Academy (RIA), Kathmandu.

Training

- 35 Days Training from TULSSAA about "How to Manage Library".
- Basic Computer Training in MS Dos, MS Word, MS Excel, MS Powerpoint, Photoshop.

Qualification

- 2007, Master's Degree, Central Department of Library and Information Science, Tribhuvan University, Kirtipur.
- 2003, Bachelor's Degree in Education, Tribhuvan University, Mahendra Ratna Campus, Tahachal, Kathmandu.
- 1999, Higher Secondary Education (HSEB), Gauradaha M. Campus, Jhapa.
- 1996, School Leaving Certificate (Sanothimi), Janata Ma. Vi. Gauradaha, Jhapa.

Other Information

Father's Name : Nanda Lal Dhakal
Marital Status : Married
Date of Birth : 16th April 1980 (2037- 01- 03)
Nationality : Nepali