

TOTAL QUALITY MANAGEMENT IN WOMENS' UNIVERSITY LIBRARIES IN INDIA: A STUDY

Thesis

Submitted for the Award of the Degree of

Doctor of Philosophy

in

Library and Information Science

Submitted by

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Under the Supervision of

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ESTABLISHED 1996

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DECLARATION

I hereby declare that this thesis entitled **“TOTAL QUALITY MANAGEMENT IN WOMENS’ UNIVERSITY LIBRARIES IN INDIA: A STUDY”** submitted by me for the award of the Degree of Doctor of Philosophy in Library and Information Science to the Department of Library and Information Science, Babasaheb Bhimrao Ambedkar Central University, Lucknow is an outcome of my own efforts and is an original work. The contents of this thesis did not form a basis for the award of any previous degree to anyone else.

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CERTIFICATE

This is to certify that the thesis titled “**TOTAL QUALITY MANAGEMENT IN WOMENS’ UNIVERSITY LIBRARIES IN INDIA: A STUDY**” submitted by **Ms. Mamta Rani** is an original research work and has not been previously submitted in part or full for the award of any other degree or diploma to this or any other university.

The thesis submitted to Babasaheb Bhimrao Ambedkar University Lucknow satisfies all the requirements as stipulated in the *Doctor of Philosophy (PhD) regulation -1999 as amended in 2010* and it is fit for submission and evaluation for the award of the degree of Doctor of Philosophy of the University.

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Date:

Place: Lucknow

(MAMTA RANI)

PREFACE

TQM is a system of continuous progress and development employing perspective management and centered on the requirements of customers. The method of Total Quality Management has emerged as a new technique in the management of an organization. Many libraries have set out plans for implementing Total Quality Management due to quality-oriented perspective. It is renowned that the philosophy and method of total quality management can benefit libraries in several ways.

The present study scrutinizes the concept of Total Quality Management (TQM) in a wider perspective and highlights its role and importance in Libraries especially in University ones. It explores the status of TQM in libraries of Womens' University exclusively.

The first chapter discusses about the concept of Total Quality Management, Quality in university library and Importance of Total Quality Management in Library. It also introduces all the universities exclusively for womens' in India. In the last section of this chapter the research study, clearly states the objectives, hypotheses, scope, limitations, significance, and research methodology etc. of the study. Nature of collected data as well as statistical techniques used for its analysis is expressed within this chapter.

The second chapter presents review of literature pertaining to Total Quality management. It discusses the concept of Total Quality Management and its application in academic library, higher education, quality assurance, continuous improvement and public services etc. have been reviewed with specific reference to application of TQM in university libraries.

The third chapter discusses brief introduction of Womens' Universities along with detailed profile of Libraries are used as scope of the study.

The fourth chapter discusses the elaborate study of Total Quality Management in reference to University Libraries.

The fifth chapter presents the tabulation of statistical analysis, interpretation, and graphical representation of the collected data from libraries. Quality of library services and job satisfaction are presented respectively from users and library staff perspective.

The sixth chapter indicates major findings and conclusion of the study. It also deals with suggestions and recommendations for further future study.

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LIST OF ABBREVIATION

ASQ	-	American Society for Quality
AU	-	Avinashilingam University
BPSMV	-	Bhagat Phool Singh Mahila Vishwavidyalaya
BU	-	Banasthali University
CAS	-	Current Awareness Service
CCF	-	Common Communication Format
CD-ROM	-	Compact Disk Read Only Memory
CKP	-	Cygnus Knowledge Portal
DDC	-	Dewey Decimal Classification
DELNET	-	Developing Library Network
DVD	-	Digital Versatile Disk
EFQM	-	European Foundation for Quality Management
ETD	-	Electronic Theses and Dissertations
GSDL	-	Green Stone Digital Library Software
HRD	-	Human Resource Development
ICT	-	Information Communication Technology
IGDTUW	-	Indira Gandhi Delhi Technical University for Women's
INFLIBNET	-	Information and Library Network
IR	-	Institutional Repository
ISO	-	International Organization for Standardization
IT	-	Information Technology
KSWU	-	Karnataka State Women's University
LAN	-	Local Area Network

LIS	-	Library and Information Science
M.Phil	-	Master of Philosophy
MBA	-	Master of Business Administration
MHRD	-	Ministry of Human Resource Development
MTWU	-	Mother Teresa Women's University
MUST	-	Mody University for Science and Technology
NAAC	-	National Assessment and Accreditation Council
NKN	-	National Knowledge Networking
OPAC	-	Online Public Access Catalog
PC	-	Personal Computer
PG	-	Post Graduate
Ph.D	-	Doctor of Philosophy
QS	-	Quality Standard
SDI	-	Selective Dissemination of Information
SNDT	-	Shreemati Nathibai Damodar Thackersey women's University
SOUL	-	Software for University Libraries
SPMV	-	Sri Padmavati Mahila Visvavidyalayam
TQC	-	Total Quality Control
TQM	-	Total Quality Management
UG	-	Under Graduate
UGC	-	University Grant Commission
WAN	-	Wide Area Network

CHAPTER -1

Introduction

CHAPTER 1

INTRODUCTION

1.1 PREAMBLE

Education is one of the most valuable tools to get the best out of human being. It influences human existence at the level of body, mind and spirit. Individual growth and development by means of education is universally acknowledged. A vital role played by education is that it leads to a graceful and harmonious life (Kumar and Sangeeta, 2013). Education enhances cognitive power and appreciation of new ideas, creativity, and innovation. It empowers to face conflicting situations and problems which can crop up at any moment. It imbibes values of culture, society, and human rights interacting with individuals. Personality of an individual evolves out of these factors. Formal and Informal are the two types of education. Informal education cannot be classified in different levels but can be accessed through informal modes viz. knowledgeable person, cultural or community programs, social group, life incidents etc. while formal education can be differentiated into multiple levels such as school, college, higher education and training programs etc. accessible from school to college, institution or university.

1.2 HIGHER EDUCATION

Higher education is a formal system which offers facility of education and training in most of the highly creative and intellectual endeavors. It encompasses every segment of Indian society and reckoned as third largest educational system of the world. It provides in-depth education in all streams to harness career growth. Department of Higher Education of Ministry of Human Resource Development

(MHRD), in association with University Grant Commission (UGC) deals with evolution of the basic infrastructure of higher education in India. UGC evaluates higher education provided by universities, colleges and institutions etc.

1.3 WOMEN'S EDUCATION

Right to equality and Right to education are two core fundamental rights recognized by Constitution of India. Other rights fall within preview of these two. Constitution of India defines Right to equality as 'the equality in the eyes of law, discarding any unfairness on grounds of caste, race, religion, place of birth and sex. It also includes equality of prospects in matters of employment, abolition of untouchability and abolition of titles.' and Right to education as 'making elementary education an entitlement for children in the 6–14 age group'. Gender discrimination needs to be discarded in every walk of life though ground reality is quite shocking as women's are treated as second citizen of the society. Aforesaid rights are denied to women's as they are subjugated to men like an accessory.

Half of the global population consists of women's who- with the rise of feminist ideologies- are seeking better living conditions. Access to education is one of the most vital demands of women's rights. Women's education is a major concern with which government and society is grappling with. It is well recognized that women's power can play a vital role in overall national growth. Inadequate participation of women's in education is retarding the process of India becoming a super power.

1.4 WOMENS' UNIVERSITIES IN INDIA

Affiliated to UGC there are only 10 exclusively Womens' Universities spread throughout India. These are as following:

1.4.1 Shreemati Nathibai Damodar Thackersey Women's University (SNDT): located at Mumbai, Maharashtra, India. Established in 1916, this is the first women's university.

1.4.2 Banasthali Vidyapeeth: also known as **Banasthali University** located at Banasthali Vidyapeeth, Tonk District, Rajasthan, India. Established in 1935, it is a Deemed University.

1.4.3 Sri Padmavati Mahila Visvavidyalayam: Located at Tirupati, Andhra Pradesh, India is a women's university. In 1983, it was established as a state university by an act of Government of Andhra Pradesh.

1.4.4 Mother Teresa Women's University: is public university located at Kodaikanal in Tamil Nadu, India. It was established in 1984 by enactment of Tamil Nadu Act 15.

1.4.5 Avinashilingam Institute for Home Science and Higher Education for Women's: sometimes also referred to as **Avinashilingam University**. It is exclusively for women's, located at Coimbatore, Tamil Nadu, India. It bifurcated from University of Madras in June 1987.

1.4.6 Indira Gandhi Delhi Technical University for Women's (IGDTUW): It is the first engineering university for women's at Delhi, India. It came into existence in 1998. Indira Gandhi Delhi Technical University for Women's (IGDTUW) was upgraded from Indira Gandhi Institute of Technology to a non-affiliating teaching and research University in May 2013 vides Delhi State Legislature Act 9, 2012.

1.4.7 Mody University of Science and Technology: established in the year 1998 by Shri R. P. Mody. It is located at Lakshmangarh, District Sikar, in Rajasthan, India.

1.4.8 Karnataka State Women's University: established in 2003 at Bijapur, Karnataka, recognized under 2(f) and 12(B) of the UGC Act. It is exclusively dedicated to women's education.

1.4.9 Bhagat Phool Singh Mahila Vishwavidyalaya (Women's University): first women's state university of Northern India, established by the Government of Haryana in August 2006. It is located at Village Khanpur Kalan, District Sonapat, Haryana.

1.4.10 Jyoti Vidyapeeth Women's University: established and incorporated by Rajasthan State Legislature Act 17 of 2008. It is located at Jaipur, Rajasthan, India.

1.5 UNIVERSITY LIBRARY

The term library originates from Latin root *libr-* 'book'. A library is an organized collection of information resources, accessible to a specific group for reference or borrowing. It can refer to physical or virtual space, or both. Library collection may consist of Books, Periodicals, Newspapers, Manuscripts, Films, Maps, Prints, Documents, Microform, CDs, Cassettes, Videotapes, DVDs, E-books, Audio books, Databases etc. Size of library collection can vary from a few book shelves to innumerable items. Library can broadly be classified into sub groups like- academic, specific, reference, research, children, national, public lending etc.

University library belongs to academic library attached to any higher educational institution. Two pronged interlinked objectives of a university library are to augment academic curriculum as well as help research activities of university faculty and students. Before the advent of electronic information resources *reserves* used by instructors as class reading materials were in form of actual books or photocopies of authentic journals. University libraries should focus on collection

development in accordance with objectives and goals of the university. Librarian has to play a central role in achieving the target of the organization.

1.5.1 Library Management

Management is to derive maximum output out of minimal available resources. University library is a core and integral part of university system. Having an efficient library management system is of prime importance, at the same time a complicated task too. It deals with specific issues related to librarian and library professionals. Activities pertaining to library management are planning the acquisition of equipments; selection, acquisition, and borrowing library resources; membership management; financial and service management; staff management; maintenance of technical issues; and managing quality and user satisfaction. It can be had only through Quality and Management.

1.6 TOTAL QUALITY MANAGEMENT

Concept of Total Quality Management (TQM) is related to art of managing quality of activities, services or products of an organization. TQM is a comprehensive and structured approach to organizational management that seeks to improve the quality of products and services through ongoing refinements in response to continuous feedback (Singh, 2013).

The greatest problem of quality management is to manage something that is abstract, not available, fuzzy, not well defined, and floating..... One of its core ideas is continuous improvement, what Japanese refer to as 'Kaizen', and means philosophy of total life. In essence, quality is a habit. There are three basic principles:

- Customer driven instead of generator driven.

- Process focused rather than result oriented.
- Holistic involvement of staff i.e. making use of workers mindset along with their hands.

Taking a cue from these, quality can be enumerated as survival strategy in a competitive age, key to globalization, path to excellence, and eternal philosophy of continuous learning.

Total Quality Management/TQM is an integrative philosophy of management for continuously improving the quality of products and processes. TQM is a philosophy as well as a guiding principle that paves way for continuous improvement of any human endeavor. Its application improves various processes active within any organization and enhances customer satisfaction and hints at authentic implementation of the marketing concepts. In TQM term quality is analyzed in detail i.e. quality of products, quality of services, quality of staff management etc. In general quality relates to the characteristics or value of a product or service.

1.6.1 Quality in University Library

Library building, collection of books, periodicals, magazines, printed documents, collection of e- resources and databases, library professionals/staff, library services and users are various segments of a university library. Quality deals with all facets of a library or an organization. In university library user satisfaction means compliance to their aspirations from library or staff. Librarian should identify and resolve the basic questions as to: who are the users, what their expectations are, and how to comply with these?

It is necessary to know implications of quality in university library in order to successfully implement concept of total quality in library services. Few of these are:

- User oriented
- Reliability- the life aspect of quality
- User satisfaction
- Staff management
- Services management
- Variety in accordance with user need
- Maintainability
- Updating with new technologies
- Qualitative services at all levels
- Promptness in services
- Continuous progress

Aforesaid factors contribute to the image of the library.

1.6.2 Importance of TQM in University Library

Libraries offer a product as well as service to the society. Since its inception they were expected to deliver high quality service to the users along with being storehouse and preservers of knowledge and information. Their significance has immensely enhanced in age of information. These are the reasons library is sometimes referred to as Knowledge Resource Centre. Plenty of knowledge resources, purchase of books, having spacious accommodation are considered basics for quality improvement. Prompt and timely dissemination of service is another important aspect of quality. Drastic change in approach based on user requirements and user satisfaction is needed. It can only be achieved by incorporating Total Quality Management (Jain, 2012). Total Quality Management is a complete management system which focuses on compliance to management and user needs by providing quality services at a reasonable cost. It focuses on continuous improvement with collaborative role of all the members and emphasizes on team spirit in the library.

1.7 STATEMENT OF THE PROBLEM

Study is entitled as “**TOTAL QUALITY MANAGEMENT IN WOMENS’ UNIVERSITY LIBRARIES IN INDIA: A STUDY**”. Specific study of womens’ university libraries in India is made in this study. It aims to explore current status of womens’ university libraries. Study will focus on quality and management of library collection, services, library staff and user satisfaction in central libraries of Womens’ University in India.

1.8 OBJECTIVES OF THE STUDY

The objectives are set in accordance with the statement of problem of the study. Study of literature pertaining to the problem was carried out prior to formulating the objectives of this study. These objectives have taken into account various facets of university libraries with an intention to explore the status with the perspective of Total Quality Management. Objectives of the study are as following:

- To explore the status of Womens’ Universities in India;
- To find out the strength of collection of printed and non- printed documents in central library;
- To find out job satisfaction among library staff;
- To find out the quality of services to users provided by library;
- To explore the level of management of library services;
- To identify the problems faced by staff with implementation of new technology in library.
- To explore the infrastructure of central library of Womens’ Universities in India.

1.9 HYPOTHESES OF THE STUDY

Based on aforesaid objectives following hypotheses are formulated for the study.

H₁: Most of libraries of Womens' Universities have adequate collection of print and non- print documents.

H₂: Most of libraries provide qualitative services to users.

H₃: Level of management of library services in Womens' Universities is good.

H₄: Most of library staff needs training to adopt new technology in library services.

H₅: Most of libraries of Womens' Universities have efficient infrastructure facilities.

1.10 SCOPE OF THE STUDY

Womens' Universities throughout India fall within purview of the scope of this study. A brief introduction of Womens' Universities is depicted through table no. 1.1-

S. No.	Name of womens' universities	Place	Year	Status
1	Shreemati Nathibai Damodar Thackersey Womens' University	Mumbai, Maharashtra	1916	State University
2	Banasthali University	Distt.- Tonk, Rajasthan	1935	Deemed University
3	Sri Padmavati Mahila Viswavidyalayam	Tirupati, Andhra Pradesh	1983	State University
4	Mother Teresa Womens' University	Kodaikanal, Tamil Nadu	1984	State University
5	Avinashilingam Institute for Home Science and Higher Education for Womens'	Coimbatore, Tamil Nadu	1987	Deemed University
6	Indira Gandhi Delhi Technological University for Womens' (IGDTUW)	Delhi	1998	State University
7	Mody University of Science and Technology	Lakshmanagarh Rajasthan	1998	Private University
8	Karnataka State Womens' University	Bijapur, Karnataka	2003	State University
9	Bhagat Phool Singh Mahila Vishwavidyalaya	Sonapat, Haryana	2006	State University
10	Jyoti Vidyapeeth Womens' University	Jaipur, Rajasthan	2008	Private University

Table no. 1.1: Womens' Universities in India

1.11 SIGNIFICANCE OF THE STUDY

Total Quality Management deals with customer satisfaction and benefits to the organization and society. Libraries are expected to be originators and high quality service providers to the users. The study deals with the application of Total Quality Management in the libraries of Womens' University of India. It helps to ascertain the present status of Womens' University libraries. It focuses on the efficiency of library services and its management, job satisfaction of library staff, user satisfaction etc. Barriers to the implementation of TQM, and attempt to its application in library are analyzed in this study.

1.12 LIMITATION OF THE STUDY

The study is limited to the central libraries of state, deemed or private Womens' University of India. Only librarian or library in-charge of the concerned university were contacted. Another limitation of the study is to primarily focus on the users and library staff. Quality and management of library services and its resources like infrastructure, collection and staff etc. are examined.

1.13 RESEARCH METHODOLOGY

The study is a descriptive research inclusive of surveys and various fact-finding enquiries etc. It is based on survey method of research. Prime objective of the study is to depict status of womens' university libraries in India and evaluate incorporation of TQM within it. Questionnaire based on the objectives of the research was developed and used later on.

1.13.1 Library Survey

Survey method is commonly used in descriptive research. Survey is conducted on a group which may consist of person, community, institution, organization or library. Survey of library is also known as library study which operates mainly with

the users. It aims to collect and analyze views of the library users regarding collection, services, quality, and facilities etc. Librarian and library staff too come within the purview of library survey. It deals with few specific issues like technical, library management, application of ICT, infrastructure, and staff management etc.

This study adopted survey method to collect facts and relevant data pertaining to womens' university libraries. It will help to evaluate current status of womens' university libraries and evaluate quality and management of library services, staff, and system etc.

1.13.2 Tools for Data Collection

Research tool is a fundamental determinant for the validity of any research. This study focuses on infrastructure and application of Total Quality Management in womens' university libraries. Along with structured questionnaires used as main tool for data collection, other research tools like university websites, personal visits and informal interviews with librarian, library staff and users were also used.

Three questionnaires are developed namely for- Librarian, Library Staff and the Users. First questionnaire is meant for Librarian which aims to collect infrastructure data, and status of application of Total Quality Management; second questionnaire deals with Library Staff aiming to collect data about job satisfaction and skill development issues; and third questionnaire deals with Users satisfaction and quality of library services. Multiple questionnaires based on objectives of the study are relevant to the research problem. Detailed description of aforesaid questionnaires is as following:

1.13.2.1 Questionnaire 1: For Librarian

This questionnaire deals with librarian or library in-charge. It has mixed questions - open ended, close ended or both- having appropriate blank space for

mentioning relevant information. It is sub-divided into three parts which are as following:

Part-1 Library Infrastructure management: This part seeks information about library automation, digital library, physical infrastructure, IT Infrastructure etc. It also covers strength of professional/non-professional staff, and promotional criteria. Status of present collection of print and electronic versions along with annual collections of the last five years is taken into account. Variation in library budgetary allocations for previous five years is also included in this part.

Part-2 Library services management: This section deals with user strength, service satisfaction, and user skill development/education. It makes an effort to ascertain whether conferences/ seminars, book exhibition etc. are organized to inform about various services available at the libraries. It also aims to evaluate service quality provided and optimum resource and infrastructure utilization.

Part-3 Leadership and Top Management support: This part deals with the management of library. It is inclusive of questions pertaining to library administration, library committee, criteria of judgment on user information needs, and specifically status of implementation of Total Quality Management etc. TQM is implemented or not? If not, what are the restraints?

1.13.2.2 Questionnaire 2: For Library Staff

This is exclusively prepared for library staff. In it queries are replaced by statements. Respondent has to assess the statements on five point scale- 5. Strongly Agree, 4. Agree, 3. Neither Agree nor Disagree, 2. Disagree, 1. Strongly Disagree. Statements deal with job quality, satisfaction level, service conditions, human resource development, aptitude for library computerization, training facilities and skill development, and constraints to efficient work culture etc. Motivated staff having job

satisfaction contributes a lot towards service quality. An attempt has been made to ascertain via this questionnaire.

1.13.2.3 Questionnaire 3: For Library Users

This questionnaire is exclusively for library users and aims to get their opinion on quality of library services where statements have replaced the questions. Respondents have to mark the statements presented in five point scale namely, 5. Strongly Agree, 4. Agree, 3. Neither Agree nor Disagree, 2. Disagree, 1. Strongly Disagree. In it statements refer to physical facilities available to the users, print and e-resource collection, behavior of the staff with the users, and problems related to internet access. Quality of library service is calibrated on the scale of satisfaction level of library users.

1.13.3 Sampling

Survey method operates on a group consisting of persons, organizations, or communities. In it a sample i.e. small part or quantity of a group is arbitrarily taken out with intention to show what the whole is like. It is called sampling. In a library study the sample is taken from the group of libraries, the users of a specific library or library staff in accordance to the research problem.

Womens' University libraries of India are population of this study. There are merely 10 Womens' Universities out of 677 universities of India. Out of 10 Womens' Universities 6 are state universities, 2 deemed universities and 2 private universities. All Womens' Universities of India were visited; the questionnaire was distributed to the concerned persons in order to collect relevant data and fact related to the study.

1.13.4 Data Analysis

The data was collected from the librarians, library staff and library users from all Womens' University libraries. 09 libraries responded from all the 10 libraries. 115

questionnaires were distributed to all the library staff in libraries and total 85 filled questionnaires was received from the library staff and for the library users 900 questionnaires were distributed i.e. 100 questionnaires in each library while 834 filled questionnaires were received from users. The data was analyzed using various statistical techniques as response in percentage, average value and Chi-Square (χ^2) test with the help of MS excel and Quantpsy tool software. The analyzed data presented through suitable tables, and various forms of charts i.e. column, pie, bar and doughnut.

1.13.5 Reference Style

The American Psychological Association (APA) style is widely accepted in the social sciences and other fields. Citations in the text provide brief introduction, usually the name of the author and the date of publication, to guide the reader to the source of information in the reference list at the end of the document. The study followed APA Format 6th Edition of citation to cite the sources in the text and formulate the references of the used sources in study at the end of the each chapter and also in bibliography mentioned at the end of the thesis.

1.14 STRUCTURE OF THE THESIS

Chapter I: The chapter deals with objectives, hypothesis, scope, limitations, significance, and research methodology etc. of the study. Nature of collected data as well as statistical techniques used for its analysis is described within this chapter.

Chapter II: Empirical studies conducted in Total Quality Management and its application in university library, higher education, quality assurance, continuous improvement and public services etc. have been reviewed with specific reference to application of TQM in university libraries.

Chapter III: Brief introduction of Womens' Universities along with detailed profile of libraries are used as scope of the study.

Chapter IV: Elaborate study of Total Quality Management in reference to university libraries.

Chapter V: Tabulation, statistical analysis, interpretation, and graphical representation of the collected data from libraries are presented in this chapter. Quality of library services and job satisfaction are presented respectively from users and library staff perspective.

Chapter VI: Indicates to major findings and conclusion of the study. It deals with recommendations of the study and suggestion for further future research.

Bibliography: refers to the citations which are used in the text of thesis.

Appendices: encloses the questionnaires which was designed and used as data collection tools for the survey.

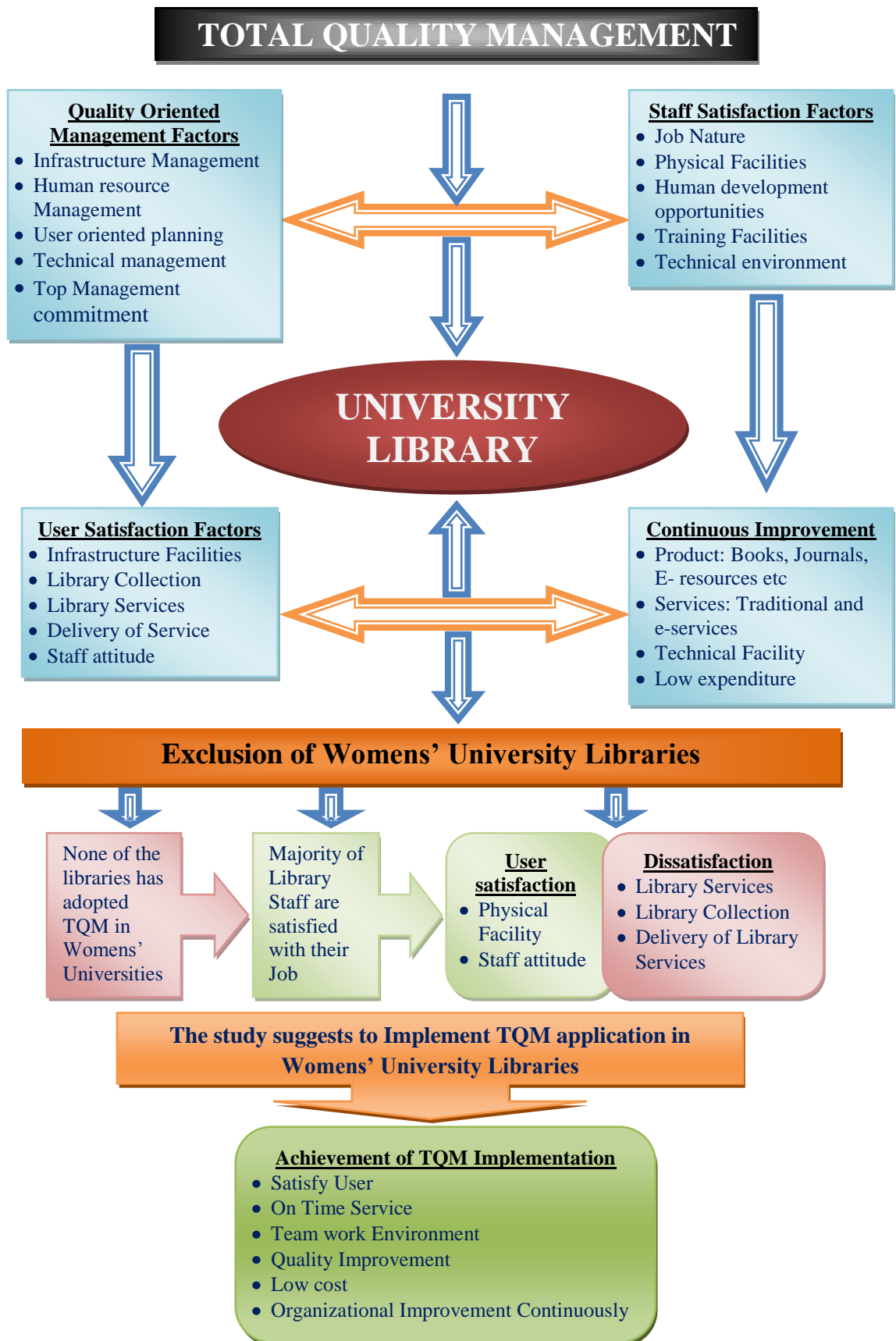


Fig 1.1 Conceptual Framework of the Study

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CHAPTER-2

Review of Literature

CHAPTER 2

REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

The review of literature is one of the core elements of any academic study. It aims to have an in-depth knowledge of a specific field or query which helps to locate, synthesize and identify previous research articles, books, reports etc. It empowers the researchers to work on other research projects of similar nature, relate it to the topic of research in the larger context and elaborate the research problem. This study has made a purposeful, precise systematic review of literature on the origin and development of conceptual topic of Total Quality Management (TQM). The chapter is primarily concerned with the previous studies conducted on application of Total Quality Management in the university libraries. It consists of various sections like TQM in university library, concept of TQM, TQM in higher education, TQM in public sector, improvement and quality assurance of TQM etc. TQM is a concept which has wide application in almost every aspect of human endeavor. Basically, it aims to achieve excellence in any human pursuit or activity. Initially, this concept was developed in reference to manufacturing sector but with passage of time, it permeated to service sector. It is pertinent to note that library is an institution which falls in the category of service sector. The reviews referred to in this study are chronologically arranged in descending order in each section.

2.2 CONCEPT OF TQM

Tasie (2016) conducted a study entitled “*An Exploratory Review of Total Quality Management and organizational Performance*”. Tasie examined that the concept of Total Quality Management (TQM) as an ingredient for an organizational

performance is of paramount importance for every organization in pursuit of competitiveness. TQM implementation has been an important aspect for improving organizational effectiveness and efficiency. A good number of scholars have investigated the links between TQM and performance. In examining the relationship between TQM and performance, scholars have used different performance indices such as financial, innovative, operational and quality performance. TQM focuses on continuous process improvement within organizations to provide superior customer value and meet customer requirements.

Jammal, Khoja and Aziz (2015) the study conducted by Jammal, Khoja and Aziz entitled “*Total Quality Management Revival and Six Sigma*” attempted to depiction the problems associated with TQM and how six sigma has helped in the renovation and rising of TQM in rational leadership, factual management, continues improvements, and employee partnership.

Gupta and Valarmathi (2009) the book consists of an introduction to TQM concepts and the tools applied in its implementation. It comprises of the topics related to employee motivation and customer satisfaction, benchmarking, seven quality tools, Statistical Process Control (SPC) techniques, Quality Function Development (QFD), Total Productive Maintenance (TPM), Failure Mode and Effect Analysis (FMEA), Taguchi methods and Quality Assurance models such as QS 9000, ISO 9000 series of standards and environment management in details.

Oluwatoyin and Oluseun(2008) This book confirmed the utility that ensues from the application of TQM in any organization. It pointed out that TQM is a strategic tool in industry which can be employed in the quest to be innovative and competitive in present scenario where cut-throat competition exists. For the successful implementation of TQM in any organization, it is one of the fundamental criteria that

irrespective to hierarchical ladder, everyone belonging to the organization should be equally involved.

Besterfield, et al. (2003) it is divided into two parts. Part one includes the practices and principles of TQM and consists of various chapters like customer satisfaction, employee involvement, TQM concepts of leadership, supplier partnership, performance measures and continuous process improvement. Part two on the other hand covers the techniques and tools of TQM which includes information technology, environment management systems, quality management system, benchmarking, total productive maintenance, designs and models.

Bhat (2002) this book is divided into four parts. Part one includes the quality system, Part two covers management issues in quality, Part three consists of technical issues in quality, and Part four comprises of topics related to management of total quality. It covers various aspects of quality systems, quality management, quality assurance, reliability and total quality management.

Mohanty and Lakhe (2002) this book focuses on elaborating methodologies and quality concepts along with number of applications related case studies. Case studies and exercises are helpful in comprehending complex concepts of TQM, various service quality models and designing the framework for its measurement. Application of TQM in service sectors like health care units, banking operations, insurance companies, technical education institutes, restaurants, hotels, travel agencies, transport operations, legal services, telecommunication services etc. are analyzed and evaluated in this book.

Li, Chen and Cheung (2000) the study titled “*Total Quality Management in Software Development Process*”, deals with core essence of TQM concept and identifies the principles of its successful implementation. It elaborates similarities

between process of development of product and software. It deals with the way Deming instilled the TQM Method in software development process while providing recommendations to the participants for ensuring successful implementation and avoiding the pitfalls.

Martínez- Lorente, Dewhurst and Dale (2000) the study entitled “*Total Quality Management: Origins and Evolution of the term*” points out the origin of the term TQM and clarifies various definitions employed by practitioners and academicians. It also analyzed the key dimensions of TQM.

Morrow (1997) Morrow conducted a study on “*The Measurement of TQM Principles and Work-Related Outcomes*” which propounds that three basic principles of TQM namely *customer focus, teamwork and continuous improvement* are an integral part of any organizational culture. It examines the relationship between implementation of TQM and work-related outcomes in reference to communication, job satisfaction, and perceptions of the work environment.

Hurley, Gropper and Roma (1996) A study conducted by Hurley, Gropper and Roma on “*The Role of TQM in Advertising: A Conceptualization and a Framework for Application*” points that the link between TQM and advertising from applied and conceptual perspective. It elaborates on the intrinsic challenges inherent in the process of successfully applying TQM in advertising.

Hackman and Wageman (1995) The study “*Total Quality Management: Empirical, Conceptual, and Practical Issues*” concluded a prognosis about the future of TQM, inclusive of speculations about the forthcoming requirements of TQM to be implanted and its evolution in the years to come.

Powell (1995) in the study “*Total Quality Management as Competitive Advantage: A Review and Empirical Study*”, Powell suggested that core features

associated with TQM e.g. process improvement, benchmarking, quality training etc. do not produce advantage. In fact, it is produced by certain behavioral, tacit, imperfectly imitable features e.g. employee empowerment, open culture, executive commitment etc. It also came to the notice that not the TQM tools and techniques but the tacit resources drive the success of TQM in an organization which adopts it to outperform its competitors with or without accompanying TQM ideology.

Sitkin, Sutcliffe and Schroeder (1994) the study entitled “*Distinguishing Control from Learning in Total Quality Management: A contingency perspective*” deals with core concepts propounded by initiators of quality movement by discussing accommodation of highly prevalent conditions of uncertainty. It also deals with the process by which basic TQM concepts are articulated, extended, and applied has not reflected the distinct, learning-oriented requirements associated with higher levels of uncertainty. TQM perspective having elaborate, theory driven approach is proposed to clearly distinguish control from learning goals while addressing limitations in the application and its conceptualization in the past.

Spencer (1994) The study “*Models of Organization and Total Quality Management: A Comparison and Critical Evaluation*” examined the TQM with reference to mechanistic, cultural, and organism models of organization in order to minimize the gap between TQM management theory and its practice. It suggested that exploration of TQM practice has the potential to expand the comprehension of these management models.

Barclay (1993) The study on “*Quality Strategy and TQM Policies: Empirical Evidence*” deals with continuous quality improvement based on employee's problem solving ability and empowerment to control work processes to develop a sustainable

competitive advantage. It examines the managerial behavior within the framework of TQM model to evaluate the consistency of the actions of executives with stipulated paradigm shifts of QSA.

Stupak and Garrity (1993) “*Change, Challenge, and the responsibility of Public Administrators for Total Quality Management in the 1990s: A Symposium, Part I*” is a study which identifies, evaluates and summarizes the practice, applicability and theory of TQM movement in reference to public sector and academic environments. The symposium analyzes the development of TQM; demonstrates TQM customer-focused successes in public sector organizations; and, finally, critiques TQM as per its practicality, significance, and durability in the public and academic sectors; anchors the techniques and practices of TQM in the theory foundations of public administration; develops a strategic plan for action for the improvement of TQM in the academic milieu; links TQM and leadership responsibilities in a specific university case.

2.3 TQM IN UNIVERSITY LIBRARY

Mishra (2016) in the study entitled “*Total Quality Management in University Library Systems*” discussed about the meaning of TQM, and its concepts, challenges, and application of TQM for University library systems & services.

Raja and Mahalakshmi (2016) investigated through a survey entitled “*Total quality management practices in accredited and ISO certified management college libraries: A comparative study*” based on structured questionnaire. The study compared TQM practices in accredited and ISO certified management college libraries. Results revealed that those management libraries with ISO certification had higher TQM practices compared to management libraries without ISO certification.

Negi (2015) Introducing the topic “*Total Quality Management (TQM) and its Applications in University library and Information Services*” defined the quality management which explains total quality management in the university library and information services. This paper was to present an overview of total quality management (TQM) in the university library and information sectors. It concluded that TQM is best defined as a philosophy under big umbrella. The paper attempted to make the readers to understand the importance of TQM, an effective system that could enhance the performance of academic libraries with the aid of earlier research and literatures.

Chauhan (2014) in this paper entitled “*Use of Total Quality Management in University library: A Special Reference to Library System and Services*” author discussed the Objectives of libraries, Quality Control, Quality Assurance systems in services and system, Quality component of Library services, TQM in LIS centre.

Harith (2013) conducted a study entitled “*Total Quality Management Indicators in Academic Libraries: In India*”. It deals with the problem of user satisfaction in academic libraries as well as service organizations and suggests a way to evaluate and calibrate it.

Kale (2013) A study conducted by Kale on “*Application of Total Quality Management in Library*” focuses on the application of TQM in library with reference to Basic components of Total Quality Management, Need for Quality Management, Total Quantity Management, Total Quality Management and Libraries, Key Elements in Total Quality Management, Implementation of Total Quality Management etc. It also provides a vital link to managerial decision makers.

Singh (2013) The study entitled “*Total Quality Management to Library and Information Services in Indian Open Universities*” explores Quality Control, Quality

component of Library services, Objectives in libraries, Quality Assurance systems in distance education, TQM in LIS sector, Policies, Resources, TQM in distance education libraries, Suggestions for service distance education and User satisfaction.

Sivakumar and Dominic (2013) the study “*Application of total quality management in academic libraries*” attempts to make the users aware of the importance of TQM as an effective tool to enhance the performance of academic libraries making a use of earlier studies and literatures.

Tuomi, Ajmal and Helo (2013) Tuomi et.al conducted a study on “*Implementing TQM initiatives in public service organizations: case of academic libraries*”. It discusses the main beliefs, development, and stages of TQM in reference to academic libraries by elaborating on strengths, weaknesses, opportunities (possibilities) and threats- SWOT- while implementing TQM initiatives. It makes a comparative study between how organizations conceive of *quality* and *TQM philosophy* along with its *utility* in public sector.

Düren (2012) The study entitled “*Total Quality Management in Academic Libraries – Best Practices*” incorporates various quality management projects, specifically in public libraries, in Germany and revealed as to how TQM can be successfully implemented and infused in management of various processes carried out in academic libraries.

Eraghi and Atharinejad (2012) the study entitled “*A New Approach Based on Total Quality Management (TQM) for Improving Academic Libraries Quality Service*” attempts to identify service improvement techniques for an university library through TQM. The research study is of descriptive- deductive mode which is the outcome of theoretical framework and research. It deals with an explanatory style as well as styles of library, articles, magazines and internet. The empirical study

specifies user needs and service improvement techniques respectively, and some pragmatic suggestions are raised for academic libraries.

Patil, Deshmukh and Patil (2012) “*Total Quality Management in University library Services*” is a study of Total Quality Management applied in University library Services. Discussing the implementation and practice of TQM in libraries, it differentiates between TQM organization and traditional organization.

Pradhan (2012) conducted a study on “*Total Quality Management in Academic Libraries*” which deals with interrelation between academic libraries and TQM. It focuses on providing quality products and services to the users. It also analyzes and suggests the ways and means by which an university library having limited resources can provide satisfactory services by means of TQM as an effective management tool.

Saroja and Sujatha (2012) the study entitled “*Application of Total Quality Management to Library and Information Services in Indian Open Universities*” intends to study the application of TQM with a provision to information services and library.

Sivankalai and Yadav (2012) the study conducted on “*Total Quality Management in Academic Libraries: A Study*” evaluated and analyzed utility of TQM in academic libraries with a perspective of examination and exposure of library professionals. It also highlights the troubles encountered by professionals and thereafter suggests measures for improvement. It takes into account the value of professionals attending various types of seminars, conferences, programs and workshops. Therefore, the organizations should conduct such library events and programs to enhance the service quality and skills of the professionals responsible to carry out various functions within the organization.

Stavridis and Tsimpoglou (2012) Stavridis and Tsimpoglou did a study on “*EFQM in Academic Libraries: The Application of a Quality Management Model at the University of Cyprus Library*” which aims to highlight value of incorporating EFQM in academic libraries. It points out the experiences and draws valuable conclusions related to achievements and challenges encountered. The program having TQM helps the library in two ways: It initiates processes helpful for the empowerment of the administration and it shapes a concrete perception of the need and methodology of self-assessment.

Taib, Warokka and Hilman (2012) The study on “*The Library’s Quality Management System and Quality Assurance in Higher Education: A Lesson from Southeast Emerging Educational Hub*” conducted by Taib et.al, discusses various innovative aspects related to development and implementation of quality assurance in higher education for the purpose of improving service quality. Findings of the study revealed that constructs collected out study sample were of prime significance for dissemination of satisfactory services provided to the customers. It also points that number of staff and nature of organization are unimportant for the library’s quality management system.

Arabagoda (2011) the study on “*Implementation of TQM in Academic Libraries*” points out that information centers and libraries are getting highly involved in the management practices because of the pressure from higher authorities urging them to justify their competence and service quality to the users. As more than fifty percent of the budget allocation to the libraries is spent on staff, hence it becomes necessary to think of optimum utilization of human resources in reference to libraries.

Mehra, et.al (2011) “*What is the Value of LIS Education? A Qualitative Study of the Perspectives of Tennessee’s Rural Librarians*” is a qualitative study conducted

by Mehra et.al on the value of LIS education of 44 rural librarians in Tennessee were important library education and its impact on them was evaluated. Researchers found that library professionals working on information technology competencies, public services, technical services and managerial/public administration etc. had inadequate education of library skills. The study emphasized need for library education.

Kulkarni (2010) the study on “*Survey of State Administrative Training Institutes (ATI) Libraries in India with special reference to library service quality expectations*” reveals that five aspects of the library viz. Environment, Services, Resources, Staff, and Guidance are the basic concerns of the library which needs to be taken care of with the help of TQM application.

Vazirpour, Tafreshi and Yousefu (2009) the study conducted on “*Total Quality Management (TQM) in Shahid Beheshti University Libraries: Offering a model*” by Vazirpour, Tafreshi and Yousefu deals with application of TQM in Shahid Beheshti University. It aimed to offer the most effective model of TQM applicable to the infrastructures of libraries. It was found that with reference to eight principles of ISO 9000 of TQM, score of aforesaid libraries was below 50%. The ‘Process Approach’ had the highest score of 46.7% while ‘Involvement of People’ had the lowest score of 27.2%.

Moghaddam and Moballeghi (2008) the study on “*Total Quality Management in Library and Information Sectors*” conducted by Moghaddam and Mohalleghi aims to present an overview of the utilization of TQM in the information and library sectors. It sheds light on the implementation of TQM in various sectors while reviewing experiences of the libraries which adopted TQM. The barriers to implementation of TQM in libraries have also been covered in this study.

Wang (2006) the study entitled “*From “user” to “customer”: TQM in academic libraries?*” provides a contemplative overview of TQM in context of library service. The study elaborates that experimental implementation as well as theoretical principles make evident that the introduction of TQM in academic libraries is of immense value. The implementation of TQM in libraries involves a cultural transformation in organizational operations and a conceptual change in library professionals. It leads to development of a healthy work culture.

McGregor (2004) The study entitled “*Excellent Libraries: A Quality Assurance Perspective*” deals with the applicability and potential benefits, challenges and obstacles, of adopting one version of TQM in a library setting are examined. This discussion of the application of quality management in libraries is based on the experience of the University of Wollongong Library (UWL) in selecting and adopting the Australian Business Excellence Framework (ABEF), administered by Standards Australia International.

Alemna, (2001) the study conducted by Alemna entitled “*The need for marketing and total quality Management strategies in libraries in Ghana*” focuses on the evaluation of marketing and application of TQM strategies in the libraries of Ghana. It pointed out that the survival and sustenance of libraries in Ghana was in jeopardy. It indicates that conditions for incorporation of TQM and marketing strategies are similar to those existing in Ghana and other developed countries. The study stresses on application of TQM and Marketing strategies in libraries.

Ketheeswaren and Arulanantham (2000) the study “*Total Quality Management (TQM) and University of Jaffna Library: An approach to the acquisition process*” conducted by Ketheeswaren and Arulanantham takes into account the

various stages and evolution of TQM application in University libraries. It deals with core elements of TQM and its implementation in the library of Jaffna University.

Mistry and Usherwood (2000) the study titled “*Total Quality Management, British Standard accreditation, Investors in People and academic libraries*” present a snap-shot overview of the prevalent status of libraries. It focuses on the identification of academic LIS having QMS- new, traditional, large or small. It tries to identify whether initiatives are university-wide and concerned with future trends. The study accumulates from three systems, i.e. ISO 9000, TQM and Investors in People (IIP).

Viljoen and Underwood (1997) study on “*Total quality management in libraries: Fad or fact?*” investigated the application of TQM in college libraries of South Africa to carry out enhanced demands and expectations of the users because of the rapid growth and impact of information communication technology (ICT). It points out the core concept of TQM, problems encountered by libraries in South Africa and the effect of rapid development of information technology on libraries.

Pmtchard (1996) The study entitled “*Determining Quality in Academic Libraries*” attempts to define and measure quality and effectiveness in academic libraries, from traditional evaluative studies to Total Quality Management (TQM) and new research on user defined criteria in this article. The concluding sections suggested several areas for future research and for collaboration among library managers, educational administrators, scholars, and measurement theorists.

Rowley (1996) the study conducted by Rowley entitled “*Implementing TQM for library services: the issues*” defines TQM as a mode of conduct through which an organization can excel in delivering its products and services in most proficient and effective way which are of utmost importance to the customers. Fulfillment of

customer requirements and expectations are the basic parameters to calibrate excellence of a TQM organization.

Binkley (1994) The study on “*Total Quality Management (TQM) and its impact on higher education with emphasis on academic libraries*” conducted by Binkley offers an outline of application and utility of TQM at libraries of higher education institutions. It also points out the implementation of TQM at colleges, academic universities and universities.

Butterwick (1993) “*Total Quality Management in the University Library*” is a study conducted by Butterwick. It deals with the operation and incorporation of ‘Quality Improvement Programme based on the principles of TQM at the library of Queen’s University situated in Belfast. This study focuses on the management infrastructure which was operative prior to starting the programme, the changes in organizational culture brought about by the TQM process, and also provided few examples of the benefits in terms of outputs which can improve services.

2.4 TQM IN HIGHER EDUCATION

Alzhrani, Alotibie and Abdulaziz (2016) the study entitled “*Total Quality Management in Saudi Higher Education*” concluded that TQM has been adopted in most of Saudi universities, but only some of them show excellence in the adoption and implementation process. The study aimed to highlight some Saudi universities that successfully adopting the TQM concept and gain a competitive advantage over their local as well as global competitors.

Suleman and Gul (2015) in their study entitled “*Challenges to Successful Total Quality Management Implementation in Public Secondary Schools: A Case Study of Kohat District, Pakistan*” found that public secondary schools face a number of challenges in implementing TQM. The results indicated that ineffective leadership;

lack of funding and resources; insubordination of workforce; lack of management commitment; poor and ineffective planning; political interference; and poor teachers' status and morale were the main challenges faced by public secondary schools in implementing TQM.

Parekh (2013) the study conducted on "*Total Quality Management in Education in Secondary and Higher Secondary Education Institutions*" deals with the status of utilization of contemporary quality management in higher and secondary education institutions. It was inferred from the analysis that even after the implementation of quality in the institutions of Mumbai there persist lots of gaps in the system.

Sreeja (2013) the descriptive study conducted by Sreeja on "*Total Quality Management in Higher Secondary School Education in Kerala*" explores three important tenets of TQM: Teamwork, Customer Satisfaction, and Continuous Improvement. Based on feedback provided by teacher, parents and students of the public and private schools under the jurisdiction of Directorate of Higher Secondary Education, Kerala, it evaluates the state of implementation of three core tenets in such schools.

Singh (2010) the study entitled "*Total Quality Management Practices: A Study of Management Institutes in Punjab*" arrives at a conclusion that *quality* is an intrinsic organic component for the success of any academic institution. Several International organizations have come up with guidelines for quality services, maintenance and products. Intermingling of students from different parts of the world, globalization of education, and migration are causes of concern to the academic institutions.

Najafabadi, Sadeghi and Habibzadeh (2008) the study on “*Total Quality Management in Higher Education Case Study: Quality in Practice at University College of Boras*” conducted by Najafabadi et.al administers a comprehensive documentation in reference to Quality and TQM for improvement in quality of education at universities and colleges.

Killedar (2007) “*Model for ‘Total Quality’ of the Open and Distance Education System*” is a study conducted by Killedar which deals with implementation of TQM, JIT (Just in Time), web based systems, and Procedures to Open and Distance Education Systems (ODES) of India. It reviews TQM application for the improvement of engineering graduate degree programmes. All the parameters of TQM model are listed along with a summarized review of the ways by which programme design aims to block the errors.

Viswanathan (2007) the study conducted on “*Total Quality Management in higher education in Kerala*” by Viswanathan concludes that in spite of adequate growth in higher education, quality aspects, throughout India, still remain in pathetic conditions. It also came to notice that TQM is only plausible solution to get rid of impediments of effective higher education in Kerala as well as other parts of India.

Ahire (1997) the study entitled “*Management Science: Total Quality Management Interfaces: An Integrative Framework*” accesses TQM from the perspective of process-improvement and implementation. It aims to locate link among significant techniques of Management Science (MS) like as decision analysis, forecasting, mathematical programming, simulation etc. and core elements of TQM. The linkage is illustrated by application of two important tools: linear programming and simulation to the service operations of high customer-contact organizations. The study emphatically propounds the systematic integration of MS techniques into TQM

programs which will result in efficient planning and implementation of TQM endeavors.

Ray (1996) the study conducted by Ray on “*Total Quality Management in Economic Education: Defining the Market*” points out a substitute structure of the market for academic purposes where the application of principles of TQM are applied in the proposed framework. This perspective is distinct from other TQM applications in the definition of product, customer and producer of economic education. The student is considered a producer whereas the instructor is considered both as a proxy and an input for customers in this structure.

Coate (1993) “*The Introduction of Total Quality Management at Oregon State University*” is a study by Coate who elaborated upon the strategy of implementation utilized by Oregon State University and presented the results in his work. The study focuses on the barriers to the application of TQM in a university setting over the next four years as TQM will be implemented at various administrative areas like teaching improvement, research, student affairs and faculty administration. TQM is applied in various departments like curriculum development, teaching improvement, and research proposal development. Oregon State University has been awarded several times for its efforts in TQM over the years and about 85 process improvement teams exist in the university who are working in both academic and administrative areas.

Cowles and Gelbreath (1993) The study titled “*Total Quality Management at Virginia Commonwealth University: An Urban University Struggles with the Realities of TQM*” focuses on evaluating the process and techniques employed by core faculty involved in applying TQM while teaching, conducting research and providing services to business community of the state and local government agencies. The

findings of the aforesaid study provide additional impetus for the administrators to continue a study in TQM. This provides an insight to the process of implementing TQM at other centers of higher education.

2.5 QUALITY ASSURANCE AND IMPROVEMENT

Liew (2011) the study entitled "*Metadata quality and interoperability of GLAM digital images*" deals with the process of application of metadata in GLAM institutes (galleries, libraries, archives and museums) located in New Zealand. The study analyzes the total quality of interoperability specifically related to metadata element. It was pointed out in the study that emphasis on variety of metadata and metadata functions for digital images vary in aforesaid four types of institutions.

Provost (2011) Provost conducted a study on "*Analytical studies: a framework for quality improvement design and analysis*". It works with a premise that for improvement, learning is a core element and prime objective of conducting a study is to offer a basis for action on subject of interest. Based on intended target for action, the study has been divided into two modes: *enumerative* study, and *analytical* study. Enumerative Study deals with action taken on the universe of study while Analytical Study focuses on action taken on cause system for improvement of future performance of the subject of interest. The analytical study aims at *prediction* whereas enumerative study focuses on *estimation*. The theory and methods for analytical studies are a critical component of the science of improvement because of the temporal nature of improvement.

Osinulu and Amusa (2010) "*Information Technology, Quality Assurance, and University library Management*" is a study conducted by Osinulu and Amusa which reveals that by incorporation of Quality Assurance in academic libraries standards evolve for the functions and services. It leads to effective and rapid

dissemination of information to the users and ensures that information needs of the clients are adequately provided for. It helps to develop parameters for calibrating performance of academic libraries.

Külcü (2009) The study entitled "*Quality documentation and records management: a survey of Turkish universities*" elaborates that out of incompetent and erroneous application, insufficient legal regulations, lack of quality-based administrative structure, ineffective record management systems, and unqualified staff the institutional processes in Turkish public universities failed to carry out the legal and administrative requirements in reference to records.

Miller (2008) the study on "*Service Quality in Academic Libraries: An analysis of Libqual+™ scores and institutional characteristics*" was conducted by Miller. It takes up comprehensive analysis of service qualities in academic libraries. The questionnaire aimed to investigate whether LibQUAL+™ instrument's service quality scores were in conjunction with characteristics like institutional type, enrollment level, or the level of investment made in libraries of a College or a University. Negative correlations were noticed among LibQUAL+™ scores and total library expenditures. It was noticed that there were higher expectations among library users but users referring to research libraries have slightly lower LibQUAL+™ scores.

Stein et al. (2008) Stein conducted a study entitled "*Using Continuous Quality Improvement Methods to Evaluate Library Service Points*" elaborates the multiple-methods approach utilized at a major university library to inspect and enhance the quality of walk-in service points. Some of the approaches include surveys, activity mapping, benchmarking, focus groups, secret shoppers and transaction analysis. The study points out several useful enhancements such as consolidation of service desks.

Thompson, Kyrillidou, and Cook (2008) “*Library Users’ Service Desires: A LibQUAL Study*” is a study conducted to explore the service quality levels of library users on twenty-two core LibQUAL items. It compares the similarities and distinctions in library service quality levels among *various user groups* like undergraduate students, graduate students, and faculty; or *geographic locations* like institutions using the American English version of the protocol, as against institutions using the British English language version; or *time span* i.e. years 2004–2006, during which the protocol was not altered.

Martensen and Gronholdt (2003) The study entitled “Improving Library Users’ Perceived Quality, Satisfaction and Loyalty: An Integrated Measurement and Management System” focuses on the development and application of a structural equation model which empowers the librarians to assess user satisfaction, quality and loyalty towards a library and evaluate specific contributory elements like services, collections, environment etc. The study focuses on Copenhagen Business School Library along with 5 other Danish libraries to report the results of a survey conducted.

Nayebpour and Koehn (2003) The study on “*The Ethics of Quality: Problems and Preconditions*” by Nayebpour and Koehn points out various means by which quality initiatives can foster sound ethics. It also focuses on locating ways through which TQM pre supposes ethical behavior without engendering it along with identification of ethical blind spots in quality initiatives and TQM application. It proposed that if TQM is applied by sensitive persons capable of initiating measures to rectify its ethical blind spots, and aware of the importance of ethical underpinning, TQM ethics will be mutually reinforcing.

Thompson, Cook and Heath (2003) The study on “*Two Short Forms of the LibQUAL+ Survey: Assessing Users' Perceptions of Library Service Quality*” by Thompson et al. collected data from 20,416 randomly selected users from forty-three academic libraries during spring 2001 Lib- QUAL+ run. It explains the development of two methods of thirteen-item Lib- QUAL+ short forms which yield scores with sufficient reliability ($\alpha = .95$, $\kappa^2 = .90$) and comparability (rho, g Form with Sho Form #1 = .923, rho, g Form with Short Form #2 = .981) to long-form scores that either short form may be useful in expeditiously assessing user perceptions. Thereafter, these scores can be consulted as part of service improvement endeavors.

Coyle-Shapiro (2002) the study conducted on “*Changing Employee Attitudes: The independent effects of TQM and profit sharing on continuous improvement orientation*” evaluates impact of independent effects of two change interventions on attitudes of the employees. Impact of TQM intervention is evaluated in first part of the study while the second part of the study explains the effect of profit sharing on a core outcome of TQM: continuous improvement orientation at the individual level

Kim (2002) the study entitled “*Restructuring library organizations for the twenty-first century: the future of user oriented services in Korean academic libraries*” was conducted by Kim attempts to organize and identify probable solutions to few identical problems faced by these libraries. Conclusions were derived from a case study on Sejong University Library that Korean academic libraries. It aims to be user-centered professionals.

Hsieh, Chang and Lu (2000) the study titled “*Quality Management Approaches in Libraries and Information Services*” deals with quality management tools and techniques developed over the last five decades, and thereafter categorized it into three broad approaches. It developed a framework of quality management

approaches and techniques and implemented it to assess and improve the service quality of libraries and information services.

Quinn (1997) the study on “*Adapting Service Quality Concepts to Academic Libraries*” conducted by Quinn deals with limitations and scopes of implementation of quality model in the academic libraries. Initially developed in a commercial environment, there was a need of some adaptation to noncommercial environment of the university library. It suggests various options by which model might be adapted.

Nitecki (1996) “*Changing the Concept and Measure of Service Quality in Academic Libraries*” is a study conducted by Nitecki which deals with new techniques to evaluate requirement of libraries. It explores implications for management and future explorations of a tool applicable to academic libraries. The SERVQUAL is a diagnostic tool to measure service quality-defined as the difference between customer perceptions and expectations of service.

Flynn, Schroeder and Sakakibara (1995) the exploratory study on “*The Impact of Quality Management Practices on Performance and Competitive Advantage*” investigates relationship between specific quality management practices and performance in competitive advantage. It deals with impact of infrastructure supportive to developing a conducive environment or efficient usage. The results were evaluative with reference to Hill’s concept of order winners and order qualifiers. It also refers to Garvin's eight dimensions of quality. It highlights the point that core quality management practices arrive at various facets of quality which function differently as order winners and order qualifiers.

Dean Jr. and Bowen (1994) the study conducted on “*Management Theory and Total Quality: Improving Research and Practice through Theory Development*” deals with theory-development forum through comparison between global and topic-

specific levels of total quality and management theory. This points out that by incorporating insights of total quality into management theory, management research could be augmented. It concludes that effective management practice can be evolved out of insights from management theory into total quality efforts. It is pertinent to note that concept of total quality already incorporates such insights.

D'Elia and Walsh (1992) the study conducted by D'Elia and Walsh entitled "*User Satisfaction with Library Service: A Measure of Public Library Performance?*" points out the results of a survey on 623 patrons of a public library. It refers to three constructs, namely, usefulness of construct for the evaluation of services in a library; it should not be used to compare presumed levels of performance for libraries serving various communities, as it is based on demographic characteristics of the users; not related to the user's degree of library use.

2.6 TQM IN PUBLIC SECTOR

Fatemi, Wei and Moayerifard (2016) the study entitled "*CSFs for Total Quality Management (TQM) in Service Organizations: Review*" was to found and determined the most critical factors for TQM implementation among service organization. Based on comprehensive analysis and previous research about critical successful factors for TQM implementation in different organization, the study proposed the five critical factors for TQM implementation among service organization.

Jin et al. (2016) conducted the study entitled "*Operational process improvement in medical TQM: a case study of human error in using devices*". The purpose of this article was to construct a method for preventing human error in medical device use from the perspective of Total Quality Management (TQM). Drawing on cases of errors made when using medical devices, error mechanisms were

identified. Considering aspects of humans, medical devices, and interactions between these, author investigated error behaviors, as well as their inducing factors and situations. The methods of eliminating those factors causing medical error behaviors were proposed based on the behavioral mechanism of the error. The findings indicated that TQM is an effective way to reduce medical errors.

Shahin and Dabestani (2011) the study conducted on “*User Satisfaction with Library Service: A Measure of Public Library Performance?*” examines the feasibility of implementation of TQM based on soft factors which can augment it. The soft factors include committed leadership, closer customer relationship, benchmarking, process improvement etc. The only factor unrelated to soft factors is training. Leadership is of core importance among soft factors.

Venkateshwarlu, Agarwal and Kulshreshtha (2010) the study titled “*Implications of TQM and its Critical Success Factors into Business*” provides a comprehensive review of TQM. Critical success factors (CSF) of TQM are identified for the benefit of Indian manufacturing/service organizations. The findings of this study points out that these are critical for quality improvement and competitiveness. It elaborates on *what is TQM? How TQM is different from other quality terms?* It presents a set of definitions of TQM collected from various sources which clarifies concept of TQM and its effectiveness in various organizations.

Moballeghi (2007) the case study was conducted on “*Total Quality Management (TQM) Implementation in Automotive Industry: A Case Study of Selected Firms in India*”. It concludes that the companies under preview are actively involved in application of TQM through a variety of training and educational programs. It deals with few quality programs like Statistical Process Control (SPC),

Quality Audit (QA), Total Productive Maintenance (TPM) and Failure Mode and Effect Analysis (FMEA) are included by most companies striving to implement TQM.

Al-Saket (2003) the study conducted by Al-Saket on “*A case study of total quality management in a manufacturing and construction firm*” elaborates that an enterprise can be well managed if treated as a *set of processes*. Processes can be controlled in identical systematic way as that of implementing PDCA cycle. Few tools effective for this dissertation to control processes are Statistical Process Control (SPC), Root Cause Analysis (RCA) and the Feedback Loop. Some areas for improvement in the quality arena of this firm are identified based on the results of quality management gained from literature. A case study of a steel manufacturing and construction firm is presented in this study out of gleaning through exhaustive literature on quality control.

Boyne and Walker (2002) The study conducted by Boyne and Walker on “*Total Quality Management and Performance: An Evaluation of the Evidence and Lessons for Research on Public Organizations*” examines the models of TQM and performance adopted; methods used; and the percentage of statistical tests that support the hypothesis that TQM adoption results in higher organizational performance. The prime objective of this study was to evaluate the impact of TQM on performance and thereby, draw conclusions for further research on this issue. It establishes a base line on TQM in private organizations, drawing lessons on the value of TQM research for public organizations, learning from the “mistakes” of private sector research, and clearing the ground for further empirical studies.

Douglas and Judge Jr. (2001) the study on “*Total Quality Management Implementation and Competitive Advantage: The Role of Structural Control and*

Exploration” makes a comparative analysis of degree of implementation of TQM practices in an organization and related competitive advantages gained. It has strong support for this inter-relationship. The data supports for moderate influence of organizational structure on TQM implementation effectiveness. Two dimensions of organizational structure- “*control*” and “*exploration*”- are found to offer in independent and interdependent influences on the financial performance of firms implementing TQM programs.

Carayon, Coujard and Sainfort (2000) the study on “*Total Quality Management in the Public Sector: A Comparison between the USA and France*” deals with state of TQM in public sector. It makes a comparative study of the development and TQM application in public sectors of USA and France. It also discusses the issues faced during the process of implementation of TQM in public sectors. The two cases- one located in the State of Wisconsin, USA, and the other one in the Eastern region of France- provide data on actual implementations of TQM in public sector.

Hoonakker, et al. (2000) the study conducted on “*Total Quality Management and Teamwork in the Public Sector: The Wisconsin Department of Revenue Study*” collected data from 1278 employees working in Wisconsin Department of Revenue. The data reflected employees’ perception and the analysis of it depicts the teamwork in the context of TQM and its positive impact on several jobs, organizational characteristics and job satisfaction while negative impact of work pressure and job strain is also dealt with.

Manley (2000) the study conducted by Manley on “*Negotiating Quality: Total Quality Management and the Complexities of Transforming Professional Organizations*” makes use of ethnographic and interview data. This case study examines the process of incorporating TQM in a professional organization like a

hospital and depicts as to how successful implementation of an innovative management system requires complex negotiation of pre-existing formal and informal power relationships. It points out that administrators used TQM as rhetoric and justification for increased bureaucratic control. These are the goals which are distinctively at odds with the ideological objectives of TQM.

Yusof and Aspinwall (2000) the study entitled “*TQM implementation issues: review and case study*” discusses the problems faced by small business centers making an effort to implement TQM. Initially it reviews various issues being confronted by small business houses who have undertaken quality initiatives like ISO 9000 and TQM. It also examines the characteristics of such businesses. As secondary analyses it presents a case study in a small manufacturing concern.

Bowman and Hellein (1998) the study on “*Total Quality Management in Florida: Implementation in State Agencies*” reviews implementation of TQM in state agencies of Florida. It evaluates quality initiatives, discusses the state’s approach, analyses implementation of core quality element, and concludes with factors for success or failure of departmental efforts. At state level, inadequate attention has been paid to research on TQM application.

Taveira, et al. (1998) The study entitled “*Impact of Total Quality Management on Work Environment Dimensions: An Empirical Study in the Public Sector*” was conducted to examine the effect of four work environment variables of various TQM elements as defined by Malcolm Baldrige Award. The four work environment variables are- *Supervisor Support, Task Clarity, Task Orientation, and Innovation*. TQM elements significantly predict the four work environment dimensions as per the study. It also discusses specific relationships between core elements of TQM and work environment dimensions.

Allen and Brady (1997) the study on “*Total Quality Management, Organizational Commitment, Perceived Organizational Support, and Intra-organizational Communication*” deals with important issues like comparison between employee responses from organizations which are implementing TQM and from those who are not doing so. The organizations implementing TQM had higher level of organizational commitment and perceived organizational support. Organizations implementing TQM also have higher level of communication relationship among employee-top management and coworker.

Choi and Behling (1997) The study entitled “*Top Managers and TQM Success: One More Look after All These Years*” discusses the failure of few authors who attempt to point out that recent applications of TQM management pays little attention to the attitude of top management which effects quality of such programs. Top management pays a crucial role in successful implementation of TQM. It points out that hidden orientations of the top management towards time market and customers reflects the nature of TQM programs of the organization.

Franklin, et.al (1997) Franklin’s study on “*Corrections and TQM—Do They Mix?*” provides an overview of TQM application and the feasibility in corrective adaptations as it serves as a stimulant.

Hendricks and Singhal (1997) the study entitled “*Does Implementing an Effective TQM Program Actually Improve Operating Performance? Empirical Evidence from Firms That Have Won Quality Awards*” explores the hypotheses that application of TQM programs enhances the operative performance of the organizations. It was found that there was weak evidence to support the fact that firms in test sample are more successful in controlling costs compared to the firms in the control sample. The results also indicate that firms in the test sample increased their

capital expenditures more than the control sample over the time period prior to winning quality awards. Compared with the control sample, the test sample shows higher growth in both employment and total assets.

Zeitz, Johannesson, and Ritchie Jr., (1997) the study conducted on “*An Employee Survey Measuring Total Quality Management Practices and Culture: Development and Validation*” analyses and presents a survey instrument capable to measure TQM and its supporting organizational culture. This study propounds 13 a priori dimensions of TQM and 10 a priori dimensions of organizational culture. Climate was operationalized in a 113-item survey designed to measure the level of culture and TQM as experienced by individual members. It consists of suggestions for usage of instrument and revised index scores significantly related to stage of formal TQM program supporting scale validity.

Berman, Milakovich and West (1996) The study on “*Implementing TQM in State Public Health Agencies*” reports the results of a national survey to examine the applications of TQM in state level public health agencies. It analyses data collected from a national survey of directors and commissioners of health care service agencies and suggests necessity of quality movement in health care and also comments on applications of TQM in health care settings and in the public sector.

Poister and Harris (1996) the study entitled “*Service Delivery Impacts of TQM: A Preliminary Investigation*” investigates service delivery impacts of TQM based on examination of data collected from extensive public works agency namely Pennsylvania Department of Transportation implementing TQM strategies for short span of time.

Reed, Lemak and Montgomery (1996) the study on “*Beyond Process: TQM Content and Firm Performance*” evaluates the interrelation between TQM contents

and firm orientation/performance; identifies market advantages, product design efficiency, process efficiency, and product reliability etc. Performance expectations of TQM like increased revenues, reduced costs, their time lags etc. are addressed in the context of unpredictable environment.

Rosenhoover and Kuhn (1996) The study entitled “*Total Quality Management and the Public Sector*” offers basic premises of the authors’ related to the maturity of Total Quality Management (TQM) in the public sector. It defines public sector as all primary employers of Master of Public Administration (MPA) graduates inclusive of non-profit/quasi-public organizations, agencies, and governmental units.

Berman and West (1995) The study “*Municipal Commitment to Total Quality Management: A Survey of Recent Progress*” conducted by Berman and West on findings of a national survey of city managers and chief administrative officers in all cities over 25,000 elicits that broad range of strategies are used by local governments and an important role is played by the city managers. It also indicates that currently 11 percent of cities have a "substantial" commitment to TQM.

Berman, and West (1995) the study titled “*TQM in American Cities: Hypotheses regarding Commitment and Impact*” makes use of data collected from a national survey on total quality management in municipalities in order to evaluate a range of hypotheses. It hints as to how significant TQM determinants are in executive culture and top management leadership while requirements of external stakeholders such as council members and citizens are not. The study concludes that council-manager government forms are a poor predictor as commitment to TQM and its impact is insignificant in cities with such government forms.

Mani (1995) the study entitled “*Old Wine in New Bottles Tastes Better: A Case Study of TQM Implementation in the IRS*” having empirical data enumerates influence of TQM in Internal Revenue Service (IRS). It hints at its implications for other public agencies. Analysis of selected input and output indicators depicts that statistically there is no significant change before and after TQM implementation. As per IRS reports, because of quality improvement process teams and other TQM initiatives millions of dollars have been saved

Bowman (1994) the study conducted by Bowman entitled “*At Last, an Alternative to Performance Appraisal: Total Quality Management*” deals with future of quality management in various contexts like public/private, or product/service sectors etc. and barriers to performance appraisal posed by TQM.

Wilson and Durant (1994) The study entitled “*Evaluating TQM: The Case for a Theory Driven Approach*” elaborates that evaluation of the results in public agencies is a highly critical task for those involved in promoting, applying, undergoing, or studying TQM interventions. It points out that TQM interventions and assessments should be based on theory as well as contingency in order to enhance our understanding of the approach's applicability, potential and pitfalls in the public sector. It offers three theoretically driven evaluative frameworks and identifies conditions favorable to both TQM interventions and fixture scholarly research on this topic.

West, Berman and Milakovich (1993) the study titled “*Implementing TQM in Local Government: The Leadership Challenge*” discusses the outcome of a national survey of TQM application in local government of city managers and chief administrative officers (CAOs). This has important significant lessons for

administrators of other organizations. It also is of interest to academicians who are concerned with testing theories about improvement in organizations.

Gilbert (1992) the study conducted by Gilbert on “*Quality Improvement in a Federal Defense Organization*” deals with an organization's experiment with implementing quality management. It is a case study based on firsthand information of the author had as a consultant to the agency for over three and one-half years. It has specific significance as the organization involved in a study was accepted as a demonstration project and thereby extensively evaluated under the auspices of the U.S. Office of Personnel Management. The host organization implemented it and won one of the Federal Quality Improvement Prototype awards given in the year 1991.

Swiss (1992) The study entitled “*Adapting Total Quality Management (TQM) to Government*” points out that for variety of reasons, traditional form of TQM expounded by W. Edwards Deming and others will not be effective in government agencies because of its limitations for public sector agencies as it emphasizes on products rather than services; limiting itself to well-defined consumer groups, inputs and processes rather than results; with a single-minded preoccupation with quality on an organization culture. It suggests reformative measures to be incorporated in the TQM in order to adopt itself to the present context and suggests inclusion of client feedback, performance monitoring, continuous improvement, as well as worker participation.

2.7 ANALYSIS OF LITERATURE REVIEW

Deriving from various sources like books, research papers, review articles, reports etc., review of literature related to this research was carried out. In total 110 literatures have been reviewed so far. It covers different aspects related to the concept

and nature of research problem. Analysis of the review is presented in table number 2.1 as follows:

TQM Literature in various areas	No. of Review	Percentage (%)
Concept of TQM	17	15.45
TQM in University Library	32	29.09
TQM in Higher Education	12	10.91
Quality assurance and Improvement	18	16.36
TQM in Public Sectors	31	28.18
Total	110	100.00

Table 2.1: Analysis of Literature Review

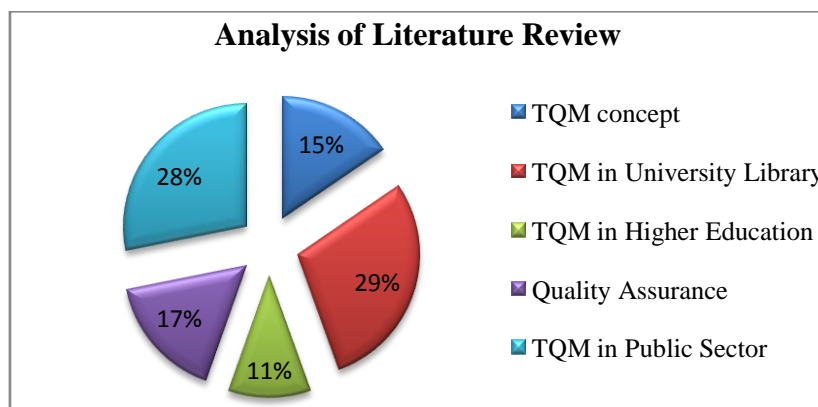


Fig. 2.1 Analysis of Literature Review

Table 2.1 refers to literature review related to present study. It depicts interrelation of the TQM with different areas. Out of 110 literatures reviewed, most of the reviews (29.09%) focus on status, application, and requirement of TQM in university libraries. It also deals with different models, designs and work flow criteria related to implementation of TQM.

Aforesaid pie-chart represents relative state of literature review. 16.36% literature covered quality assurance and improvement in library services which is the main function of TQM in libraries. It deals with measurement of quality, assurance of quality, and persistent improvement with minimal cost. Specifically, perspectives of

users need in vibrant concepts of advancement are also explored. In addition to these, it also provides the measurement tools and models for quality assurance and constant improvement.

Literature related to TQM in higher education covers 10.91% of total literature review. Qualitative performance of any higher learning center like a university depends on efficient management of its information resource center or library. It is most pertinent to access quality level in higher education system in India.

Dissemination of flawless service in any organization is not possible without paying due concern to quality and management. Application of TQM in public sector covers 28.18% of the total reviewed literature which reflects awareness of its significance in public and academic sectors. It deals with importance of TQM in organizations, companies, industries related to public sectors.

Only 15.45% of the reviewed literature deals with core concepts of Total Quality Management. It elaborates on meaning, various sections, models, and designs of TQM with ISO 9000 standard series.

2.8 CONCLUSION

As per aforesaid Literature Review it can be concluded that TQM is a holistic management system which strives to inculcate quality in dissemination of services at the minimal cost incurred. It aims to develop a system and work having constant improvement as well as beneficial to the organization. Its implementation in university libraries is essential for providing quality in library services to their users.

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CHAPTER- 3

Womens' University Libraries in India: A Profile

CHAPTER 3

WOMENS' UNIVERSITY LIBRARIES IN INDIA: A PROFILE

3.1 UNIVERSITIES IN INDIA

University is a platform conducting various degree level courses and programs in its campus. It offers UG (Under Graduate), PG (Post Graduate), M. Phil. (Master of Philosophy), Ph.D. (Doctor of Philosophy), D.Litt. (Doctor of Letters) and PDF (Post Doctoral Fellowship) etc. Along with aforesaid programs, it also provides training programs for improvement in knowledge and job skills of the faculty and staff. Since Independence, Higher Education sector in India has witnessed a remarkable increase in number of Universities, Deemed Universities, Institution and Colleges. Number of universities has gone up from 20 to 677 since 1950. This sector boasts of 45 Central Universities out of which 40 are within the purview of Ministry of Human Resource Development (MHRD), rest of the 318 State Universities, inclusive of 10 Womens' Universities, 185 Private Universities, and 129 Deemed Universities are regulated by state authorities (Overview MHRD, 2015). Womens' Universities have marginal presence in arena of large number of universities existing in our country. Present status of universities existing in India is depicted in table no. 3.1.

Universities	Total No.
Central Universities	45
State Universities	308
Deemed to be Universities	129
Private Universities	185
Womens' Universities	10
Total	677

Table 3.1: Total no. of Universities in India

3.2 WOMEN'S UNIVERSITY

Womens' Universities aim for women's empowerment by means of educating them. These are the centers catering to finer sensibilities related to women's and improve their knowledge and sensibility to face the challenges imposed upon by the society and their struggle of existence. Only females are enrolled in these universities. They offer courses in all the streams prevalent in other universities. Gender bias in society has greatly been diminished by education as now they have started claiming for equality of rights in every sector of life. They have become dignified equal partners in every pursuit of life.

3.2.1 Vision of the Womens' Universities

Womens' Universities persistently respond to the vibrant dynamic social realities through innovative application of knowledge. Such engagements aim to develop a society that recognizes and safeguards the dignity, equality, social justice and human rights of everyone, specifically empowerment of women's.

3.2.2 Mission of the Womens' Universities

Mission of Womens' Universities is to empower women's by allowing access to education through relevant formal and informal courses in various streams. Furthermore universities are committed to offer a wide range of professional and vocational courses catering to fulfill socio-economic needs which continually remain in state of flux with values and meaningful social responsibilities thereby achieving excellence with Quality in every activity.

3.2.3 Objectives of the Womens' Universities

Core objective of Womens' Universities is to provide access to social, economic, political, environmental and cultural contexts with a commitment to

redefine the roles of women's addressing the gender issues and disempowering strategies. Finally it aims to highlight equal participation of women's in every sphere of life primarily in nation building. UGC guidelines indicate that focusing on women's issues offer one of the richest territories for challenging theories existing in various disciplines, ranging from science and technology, humanities, trade and commerce, social sciences and human behavior.

There are only 1.47 percent Womens' Universities out of 677 existing universities of India. Aforesaid universities are governed under UGC act. These womens' Universities are located in different states of India. Status of the Womens' Universities is presented in table no. 3.2:

MAHARASHTRA			
1.	Shreemati Nathibai Damodar Thackersey Women's University (SNDT)	1916	State University
KARNATAKA			
2.	Karnataka State Women's University (KSWU)	2003	State University
ANDHRA PRADESH			
3.	Sri Padmavati Mahila Visvavidyalayam (SPMV)	1983	State University
TAMIL NADU			
4.	Mother Teresa Women's University (MTWU)	1984	State University
5.	Avinashilingam University (AU)	1987	Deemed University
RAJASTHAN			
6.	Banasthali University (BU)	1935	Deemed University
7.	Mody University of Science and Technology (MUST)	1998	Private University
8.	Jyoti Vidyapeeth Women's University (JVWU)	2008	Private University
HARYANA			
9.	Bhagat Phool Singh Mahila Vishwavidyalaya (BPSMV)	2006	State University
NEW DELHI			
10.	Indira Gandhi Delhi Technological University for Women's (IGDTUW)	1998	State University

Table no. 3.2: State wise Womens' Universities

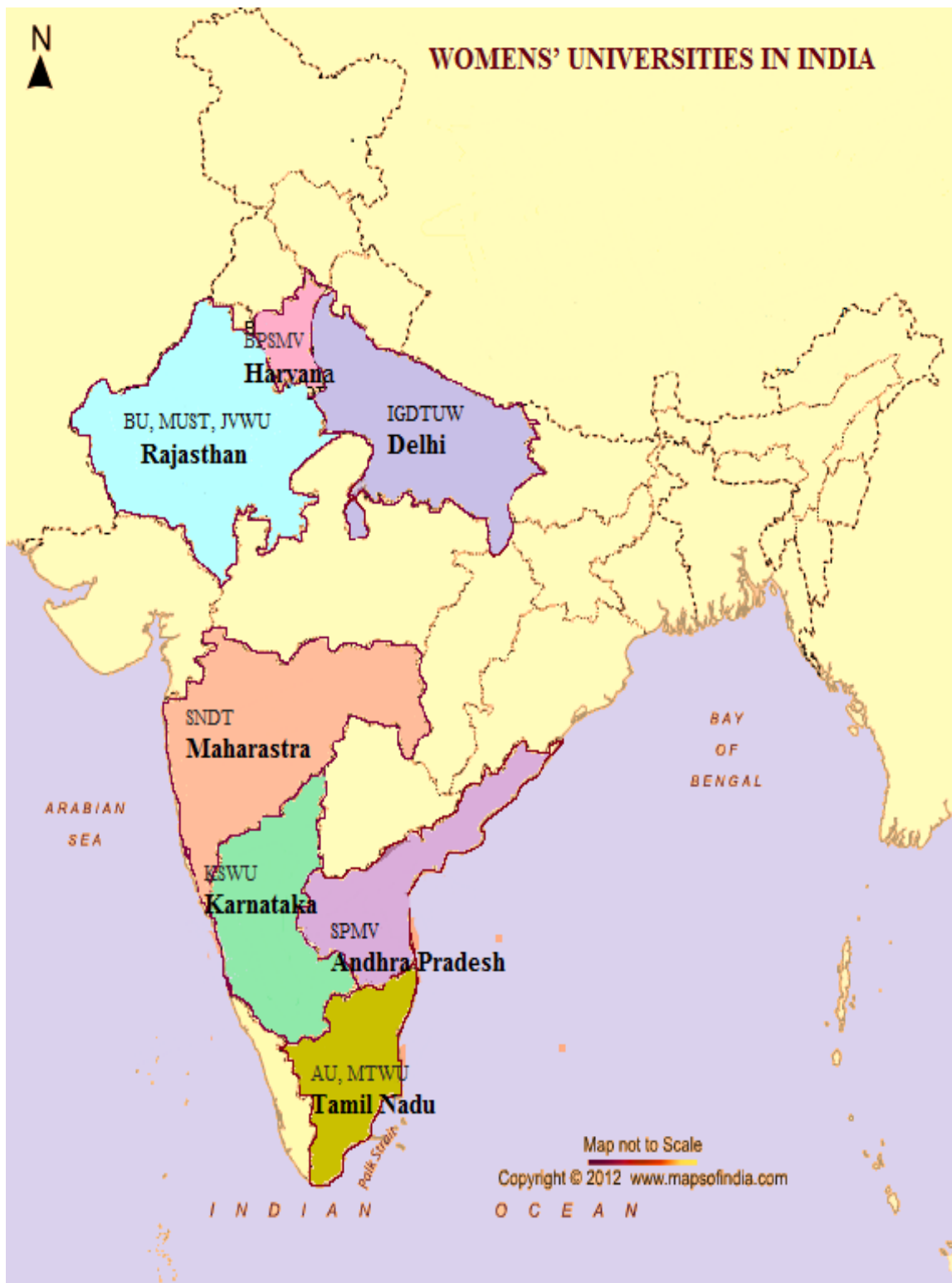


Fig 3.1 Womens' Universities in India

The data has been provided by 9 Womens' Universities out of 10 Womens' Universities whereas one university did not provide it. A brief introduction of these along with extensive information of their central library is as following:

3.3 SHREEMATI NATHIBAI DAMODAR THACKERSEY WOMENS' UNIVERSITY, MUMBAI, MAHARASHTRA



The motto of the university is “*An Enlightened Woman is a Source of Infinite Strength*”.

Shreemati Nathibai Damodar Thackersey Womens' University (SNDT) is located at Mumbai, Maharashtra, India. Established in 1916, this is the first Women's University of India. University headquarter is situated at Church gate, South Mumbai while the main campus is at Santacruz–Juhu, Mumbai. It imparts education from primary level to higher education and Ph.D. programs.

LIBRARY

Vision: Vision of The library is ‘...to facilitate seamless access to quality knowledge and information resources in all formats. To execute this vision, the library will create congenial atmosphere that will allow interface of library resources for integrative scholarship.’

Mission: The SNDT Women's University Library is ‘...committed to empowerment of women's by providing resources & services with ICTs that are essential to teaching, learning, research and creation of knowledge systems. To realize this mission, the library is committed to create hospitable physical and virtual environment for study, teaching and research.’

SERVICES

- Reading & Lending Services.
- Reading room facilities for 9-10 hours daily.
- Open on Sundays and specific holidays.
- Special workstations for the users.
- Audio-visual materials, CD-ROMs and internet.
- Extensive lending facilities.
- Inter-library loan facilities.
- Photocopying.

Reference Services

- List of additions in libraries at Church gate, Juhu and Pune campuses.
- Preparation of bibliographies and reading lists.
- Fact-finding and literature search.
- Guidance in bibliographic and information use.
- User awareness programs to enhance skills in library usages and motivating students to make use of the available resources.
- Value added workshops for post-graduate, research scholars, and faculty members.

Electronic Services: SNTD Women's University Library provides access to the following online resources & databases:

- SULLOC, the online catalogue, is a key to the resource of the entire library system.
- CD-ROMs of reference materials, learning resources, bibliographic sources and full text journals make information browsing a quick and easy task.

- Internet facility with professional help opens a gateway to global resources.
- A growing number of downloaded internet resources, in-house papers etc. are organized as an Electronic Library.
- A database of web sites helps to locate useful and relevant resources on the internet.
- An in-house online index to language and literature 'Sahitya Suchi'.
- Access to databases like 'Proquest', 'EBSCO', Indiastats.
- Access to databases offered by inflibnet like JSTOR, Emerald (Library Science), JCC (JSTOR Custom Content for consortium), Cambridge journals etc.
- Access to IEL online, IEEE and other databases are provided by INDEST consortia.



Image 3.1 Web OPAC service in SNDT Library (Source: University Website)

Available Databases Subscribed by the Library:

- Business Commerce & Management- BUSINESS SOURCE PREMIER (EBSCOhost) Link:
<http://www.ebscohost.com/academic/business-source-premier>
- Economics- ECONLIT with full text
Link: <http://www.ebscohost.com/academic/econlit-with-full-text>
- Education- ERIC Link <http://www.accesseric.org>
- Humanities & Social Sciences- ProQuest Dissertation & Thesis Full Text
Link: <http://search.proquest.com/pqdtthss?accountid=130896>
- Library & Information Science- LISA Full text
Link: <http://search.proquest.com/pqdtthss?accountid=130896>
- LISTA with Full text (EBSCOhost)-
Link: <http://www.ebscohost.com/academic/library-information-science-technology-abstracts-with-full-text>
- Nursing, Medicine, Pharmacy, Home Science etc.- CINAHL Plus with Full Text Link: <http://www.ebscohost.com/biomedical-libraries/cinahl-plus-with-full-text>
- ProQuest MEDICAL LIBRARY
Link: <http://search.proquest.com/pqdtthss?accountid=130896>
- Psychology- PSYCARTICLES
Link: <http://search.proquest.com/pqdtthss?accountid=130896>

E-journals Subscribed & Available in the Library

Subject	E- journals
Commerce	<ul style="list-style-type: none">• Journal of Emerging Market Finance http://online.sagepub.com• Journal of Entrepreneurship http://online.sagepub.com• Marketing Theory http://online.sagepub.com
Economics	International Labor Review http://online.sagepub.com
General Interest	Down to Earth www.downtoearth.org.in
History	<ul style="list-style-type: none">• Indian Economic & Social History Review http://online.sagepub.com• Studies in History http://online.sagepub.com
Library & Information Science	<ul style="list-style-type: none">• ASLIB Proceedings www.aslib.org• Journal of Documentation www.aslib.org• Managing Information & Emerald Management First www.aslib.org• World Digital Libraries : an international journal http://bookstore.teriin.org/journal_inside.php?material_id=47
Nursing & Health	Journal of Health Management http://online.sagepub.com
Psychology	Psychology & Developing Societies http://online.sagepub.com
Social Sciences	<ul style="list-style-type: none">• Economic & Political Weekly www.epw.org• Social Change http://online.sagepub.com
Sociology	<ul style="list-style-type: none">• Contributions to Indian Sociology http://online.sagepub.com• Journal of Developing Societies http://online.sagepub.com

JGM Smarak Trust Children's Library & Materials Research Centre:

This unique facility at Juhu campus Library is set up to serve as a Laboratory for students of Child Development and Special Education. It aims to popularize habit of reading among children and evaluate the role of books on development of the child. Resources include children books, picture collection, cassettes and charts. Current reading, lending, reference and storytelling services are provided. Annual summer activities are held to develop creative enquiry skills among children are organized.

3.4 BANASTHALI UNIVERSITY, RAJASTHAN



The motto of this university is “*University for Women: University with a difference*”.

Banasthali Vidyapith famous as **Banasthali University**, exclusively for women’s is located at **Banasthali**, district Tonk, Rajasthan, India. Founded in 1935, it is a Deemed University. It offers programs to women’s from school to doctorate level. It is the largest global residential Women’s University of the World recognized as pride of India and a true nation builder.

LIBRARY

The Banasthali University library came into existence in 1935; within four years it procured 1700 books and developed a reading room for the students. A quarterly journal *Veebala* was also published by the students to improve their creative skills. The library collection grew up to 5000 in 1945 which swelled to 12,000 books by the 1955. Since then there is consistent growth in collection of the library which boasts of rich and valuable collection developed over seven decades. It has rare reference materials and several prominent journals. Presently, collection of Central Library exceeds more than 198000 records inclusive of books, reports, thesis, dissertations, journals, manuscripts, albums, pamphlets, maps, charts, audio-video cassettes, gramophone records, CDs/DVDs, atlas, slides and many more. The library currently subscribes to almost 400 national and international journals. About 8000+ titles are accessible online vide UGC-INFONET Consortia. The library offers Reference Services, Referral Service, Users’ Orientation Service, Circulation Service,

Current awareness Service, Bibliographic Service etc. The library makes use of LIBSYS, an Integrated Library Management Software Package having the modules for the library housekeeping operations.

INFLIBNET Document Delivery Centre under JCCC Service:

The INFLIBNET Centre of UGC has recognized Banasthali University as one of the Document Delivery Centre for J-gate Custom Content for Consortia (JCCC). It has inter-library loan (ILL) service amongst university libraries of India. As ILL, the Central library has complied with 1403 queries of other Universities. In reference to document delivery services, our students, researchers and faculty members received 916 articles from other universities. Under UGC-INFONET Consortia over 8000 online journals of various disciplines can be accessed. The Online journals cover biotechnology, computer science, chemistry, and other branches of science, social science, humanities and management etc.

Digitization of Rare books: Under *Rajasthan Heritage Project* sponsored by Ministry of Communication and Information Technology, digitization of rare books of the central library was carried out by scanning 20,000 books and uploaded on the university website.



Image 3.2 Digital library of BU Library (Source: University Website)

New Vistas:

The Central Library of Banasthali University is planning to develop an Institutional Repository (IR) to collect, preserve, and share information resources like research materials, conference papers, images, peer-reviewed scholarly articles, preprints, reports, thesis, working papers etc. These can be accessed online.

Institutional Online Services

S. No.	Product	URL
1.	LNCS: Lecture Notes in Computer (8322 Volumes from 1973- 2014)	http://link.springer.com/bookseries/558
2.	DELNET	http://164.100.247.17/index.html User Name: rjbut, Password: but4756
3.	TURNITIN - Anti Plagiarism Web Tool	http://turnitin.com
4.	IEEE Xplore	http://ieeexplore.ieee.org/Xplore/home.jsp

Sage Publications:

A	Contribution to Indian Sociology	http://cis.sagepub.com/
B	Indian Economic & Social History Review	http://ier.sagepub.com/
C	India Quarterly	http://iqq.sagepub.com
D	Indian Historical Review	http://ihr.sagepub.com
E	Indian Journal of Gender Studies	http://ijg.sagepub.com/
F	International Political Science Review	http://ips.sagepub.com/
G	International Studies	http://isq.sagepub.com/
H	Journal of Commonwealth Literature	http://jcl.sagepub.com/
I	Journal of Entrepreneurship	http://joe.sagepub.com/
J	Margin: Journal of Applied Economic Research	http://mar.sagepub.com/
K	Medieval History Journal	http://mhj.sagepub.com/
L	Personality & Social Psychology Bulletin	http://psp.sagepub.com/
M	Psychology & Developing Societies	http://pds.sagepub.com/
N	South Asian Survey	http://sas.sagepub.com/
O	Studies in History	http://sih.sagepub.com/
P	Textile Research Journal	http://trj.sagepub.com/
Q	International journal of music education	http://ijm.sagepub.com/
R	Journal of Research in Music Education	http://jrm.sagepub.com/

S	Music Educators Journal	http://mej.sagepub.com/
T	Music & Medicine	http://mmd.sagepub.com/
U	Psychology of Music	http://pom.sagepub.com/
V	Research Studies in Music Education	http://rsm.sagepub.com/

Under UGC-INFONET Consortia

American Chemical Society	http://www.pubs.acs.org/
American Institute of Physics	http://www.aip.org/
American Physical Society	http://www.aps.org/
Annual Reviews	http://www.annualreviews.org/
Wiley-Blackwell	http://www3.interscience.wiley.com/
Cambridge University Press	http://journals.cambridge.org/
Emerald	http://emeraldinsight.com
Economic & Political Weekly	http://epw.in/
Institute of Physics	http://www.iop.org/EJ
ISID	http://isid.org.in/
JCCC	http://jgateplus.com/search/
JSTOR	http://www.jstor.org/
Oxford University Press	http://www.oxfordjournals.org/
Project Muse	http://muse.jhu.edu/journals/
Royal Society of Chemistry	http://www.rsc.org/
Springer Link	http://www.springerlink.com/
Taylor and Francis	http://www.informaworld.com/
Web of Science	http://apps.isiknowledge.com/

3.5 SRI PADMAVATI MAHILA VISVAVIDYALYAM, TIRUPATI, ANDHRA PRADESH



Sri Padmavati Mahila Visvavidyalayam, a Women's University which is situated at Tirupati, Andhra Pradesh, India. It was established as a state university by the Andhra Pradesh legislature in 1983. It aimed to train women as nation builders

and to inculcate their leadership skills pertaining to various aspects of life. It offers 59 undergraduate and post-graduate level courses along with research programs.

LIBRARY

The University Library is centrally located and easily accessible to various departments within the campus. Over the years, it has accumulated 75,782 documents. The library subscribes to about 214 current journals of National Importance by spending Rs. 2.5 lakh per year.

The library is open to the readers from 8:00 AM to 6:00 PM on working days with the transaction period from 10:00 AM to 5:00 PM at the circulation counter except Sundays and Holidays. Working hours on Sundays and Holidays is from 10:00 AM to 4:00 PM for study and consultation purposes only. Books are placed on two floors of the Stack Area of the library building in order to provide better service to the library users. Under UGC-Infonet program the university library can access more than 3000 e-journals from different publishers. Along with this, university has access to e-resources through jccc@ugc-infonet gateway under UGC-INFONET Digital library consortium, DELNET and sage. Library provides internet services to research scholars and faculty through 15 systems. Digital section of the library has approximately 500 CDs on books and 300 floppies on Indexing and Abstracting journals.

Computer Centre: Computer Centre works in two shifts between 8:00 A.M. to 6:00 P.M. As per requirement, working hours can be extended. It offers internet facility to the users. Research scholars can access e-journals available on the UGC INFLIBNET. The Computer Centre also facilitates workshops and seminars organized by various departments of the university. During vacation the centre

conducts awareness and training programs on various topics as per the requirements of students, scholars, faculty, and university staff.

Campus Networking: The University has 24×7 hours OFC & Wi-Fi Internet Connectivity of 1GBPS speed throughout the Campus inclusive of hostels. E-classes are conducted through NKN (National Knowledge Networking) in virtual classes. NKN services are available within the university.

3.6 MOTHER TERESA WOMEN'S UNIVERSITY, KODAIKANAL, TAMIL NADU



The motto of this university is “*Empowerment of women’s through Education*”.

Mother Teresa Women’s University is a public university located at Kodaikanal, Tamil Nadu, India. It was established in 1984 by the enactment of Tamil Nadu Act 15. It monitors and offers consultancy services and research in Women’s Studies. It offers UG, PG course and M. Phil. /Ph.D. programs in the faculty of Arts, Science, Social Science and Information Technology etc.

LIBRARY

Mother Teresa Women’s University Library came into existence in 1984. The university library is a virtual *Mecca* for research scholars related to women’s studies. Rare collection of books, reports, and journals on women’s studies established the library as a centre of excellence. The university library maintains a comprehensive collection of 60,000 volumes and 4500 volumes of complementary books from various other resources.

Membership is open to students, scholars, faculty, and registered part time scholars. The library is equipped with INFLIBNET and INTERNET for wide reference and information. Library has started the automation work under INFLIBNET program whereas theses and dissertations of the university have been computerized. The library has the UGC INFONET connectivity in the library. E-journals are used by the staff and students of university. The library has been modernized with the help of INFLIBNET, Ahmadabad.

SERVICES

The library caters to the needs of students, M. Phil. and Ph.D. Scholars, faculty and staff of the university. The library offers long and short range references to the users such as Current Awareness Service, Selective Dissemination of Information Service, Subject bibliography etc. Library also imparts its facilities to students and faculty of affiliated colleges in addition to the students of other universities. Internet connectivity too is available. Most of the Library operations are computerized especially circulation and OPAC. Library has bar-code system for document collection. To the fresher, library offers CD writing and awareness programs for effective utilization of available information resources and services. It is a member of UGE- INFLIBNET- INFONET E- Journal Consortium.

S.N	Resource Name	Resource URL	No of Journals
1	Economic & Political Weekly	http://epw.in	1
2	ISID	http://isid.org.in	Database
3	Institute of Physics	http://iopscience.iop.org/journals	46
4	JCCC	http://www.jccc-ugcinfonet.in	Database
5	Springer Link	http://www.springerlink.com	1389

3.7 AVINASHILINGAM UNIVERSITY, COIMBATORE, TAMIL NADU



The motto of this university is “*seek and you shall find*”.

Avinashilingam Institute for Home Science and Higher Education for Women's sometimes referred to as **Avinashilingam University**. It is located at Coimbatore, Tamil Nadu, India. In June 1987, it segregated from University of Madras. It is premier institution of the country imparting home science education. It offers under graduate and post graduate degree courses with a motto ‘*seek and you shall find.*’

LIBRARY

Library is the power house and back bone of the university. Library, incorporating modern technologies, is centrally located within the campus to promptly disseminate the information to its members. It simultaneously developed along with the evolution of the institution.

Objectives of the library

- To augment the university to achieve its objectives namely accumulation, preservation, and information dissemination through teaching, publication, and extension programs.
- Compliance to current and future information needs of the users and to evolve an efficient system for information storage and retrieval.
- To help faculty members and students to excel in their academic distinction pursuits.

Publications: The library brings out following publications to benefit its members.

- Abstracts of Ph.D. Theses
- Catalogue of current periodicals
- New additions to the library
- Library Manual

Library Automation:

With INFLIBNET assistance and guidelines provided by the UGC to the university in 1996, automation work was precisely and accurately catalyzed. In 1997-98, the university was marked by the UGC for library automation and networking under INFLIBNET program. Library is a part of the fiber optic based campus LAN. The library has its own sub LAN consisting of 27 terminals, two servers to support library software, OPAC services and other in-house computerization activities with the computers having access to library resources and Internet.

Library has procured SOUL software developed by INFLIBNET. It has been actively participating with INFLIBNET by sharing data with their databases. Databases were created for books, journals and thesis. Development of the database for serial holdings is under progress. Web Based OPAC has been created for more than 1.35 lakh available documents of the library. The Library Catalogues can be searched and accessed from various departments through Intranet.

Circulation activities are regulated by computerized statistics of the issue and return of books and queries related to issues and retrieval of books. Introduction of barcode technology helped to achieve maximum efficiency in providing accuracy, speed and reliability in issue and return procedure.

UGC-INFONET E-JOURNAL CONSORTIUM: <http://www.adu.edu>

The library provides access to more than 4,500 electronic journals and 6 Electronic Databases from 16 well-known publishers under this program. In order to know the existence of e-journal service and to ensure the proper utilization of e-resources by the users, adequate training is frequently provided. Access to each department is provided through campus network.

CYGNUS KNOWLEDGE PORTAL (<http://www.cygnusindia.com/>)

Cygnus Knowledge Portal (CKP) - Platinum is a comprehensive Online knowledge database encompassing Economies, Industries and Companies. CKP provides dynamic updates on global developments as well as analysis of a range of manufacturing and services industries across functions. Besides, CKP is a repertoire of a wealth of dynamic information on 2500 listed Indian Companies. In nutshell, CKP is an indispensable information tool to prepare MBA students '*Industry – Ready*'. The Cygnus Knowledge Portal has been subscribed by this library. It is made available through campus network.

Library Resources

Library acquires books on diverse fields of knowledge like Home Science, Science, Humanities, Management and Education. Besides catering to the academic requirements of the students and faculty of the university, the library has a profound collection of reference resources such as encyclopedia, dictionaries, yearbooks, census reports, bibliographies etc. The existing collection exceeds 1, 70,350 volumes which includes textbooks, reference books, pamphlets, theses and back volumes of journals. It subscribes to 210 periodicals and also receives 300 periodicals as gifts or exchange basis. It also includes learning materials on wide variety of electronic formats.

Library Services

Current Awareness Service: The fresh book arrivals are displayed on the display racks. The wrappers or jackets of the latest additions are displayed on the Notice Board.

- Selective Dissemination of Information
- Reference Service
- Newspaper Clipping Service
- Photocopying Service

Display Services: Special displays are arranged on important events in the main reading hall.



Image 3.3 Display Services in AU Library (Source: University Website)

Orientation Services and Students Service Centre: This centre facilitates the development of effective academic learning and performance skills in students. It also helps the students to develop research skills, languages skills and assists them to become successful and independent leaders.

Online Service

OPAC (Online Public Access Catalogue): The complete database of the library documents is available electronically. It permits the users to search by author, title, subject, keywords and access number.

Electronic Gate Register: Library identity cards of the members are scanned at the entry and exit points. It enables to get the exact number of readers using the library at a particular time. It also provides additional security.

Multimedia Center: With components such as graphics, animation and sound, this newly formed center enhances the learning process through visualization. This center is equipped with the Multi-media system, Microfilm reader, LG CTV (29”), Digital Video Disc player with huge collection of Compact Discs, Microfiche, Video Cassettes, and Audio Cassettes.

- E-Reference Desk System
- E-News
- Alert Service
- Announcements

3.8 INDIRA GANDHI DELHI TECHNICAL UNIVERSITY FOR WOMEN'S, DELHI



Indira Gandhi Delhi Technical University for Women's (IGDTUW) is the pioneer engineering university for women's at Delhi, India. Vide Delhi State Legislature Act 9, 2012, Indira Gandhi Institute of Technology which came into

existence in 1998, was upgraded to Indira Gandhi Delhi Technical University for Women's (IGDTUW) in May 2013 as a non-affiliating teaching and research university located at Delhi. It facilitates study, research, technology, innovation, incubation and extension work in emerging fields of professional education among women's. It focuses on engineering, technology, applied sciences, management and allied domains. The objective of this college is to promote technical education among the female students of the country.

LIBRARY (Learning Resource Centre)



Image 3.4 Learning Resource Centre in IGDTUW Library (Source: University Website)

The library of IGDTUW is known as *Learning Resource Centre (LRC)*. It serves as the premier source of academic information for the IGDTU community through its collections, educational and consulting services. The LRC has a highly selective collection of print, electronic, and audio-visual materials in the areas of science, engineering, technology and management etc. to support the learning and

research activities of students and faculty. A number of e- journals are being subscribed through consortia mode subscription. All these journals are available online to the member of the LRC in campus LAN. The Digital Library sections have e-materials like CDs, DVDs and digital theses of final year students and are available through an Open Source Institution Repository Software within the campus premises.

Library Issue/ Return Timing: From Monday to Friday during 9:15 AM to 5:00 PM except 1.45 to 2.20 as Lunch Break, and for Weekend Students 10:00 AM to 4:00 PM (Saturday and Sunday) is the Library Issue/ Return Timing. Library remains closed on University Holidays.

Library Services: The LRC staff assists students/faculty with critical and evaluative use of information both through personal consultation and formal curriculum-related instructions. The LRC engages in continuous assessment of the quality and value of its services to its members. The LRC incorporates technological innovations to make use of the best resources accessible to the students and faculty.

Open Access: Open Access system is followed in the LRC. Books are classified and arranged according to DDC 21. For the user convenience printed spine labels are pasted on each and every book.

Online Public Access Catalogue: OPAC (Online Public Access Catalogue) is available at <http://172.16.5.218:8080/newgenlibtxt/>. User may use OPAC to ascertain availability of material needed by them. Users may log on to OPAC to verify their circulation data, to reserve documents, and to suggest procurement of a new document etc.

Digital Library: Full text Project Reports of B. Tech. Final Year Students and Publication of IGDTUW Faculty available at <http://172.16.60.1:1026/gsdL>.

Campus Access: ACM Digital Library, IEEE Xplore Digital Library.

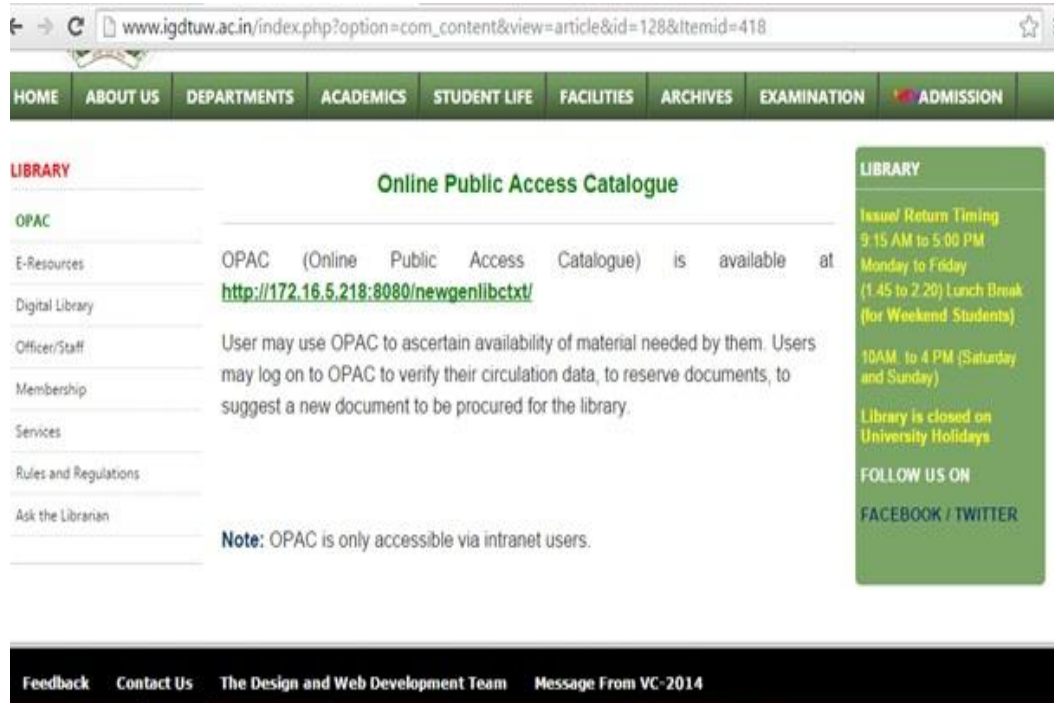


Image 3.5 OPAC in IGDTUW Library (Source: University Website)

Open Access: Gateway/ Directory

- Scirus: for scientific information only
- Open Access Journals Search Engine (OAJSE)
- OAIster : Union catalog of millions of records representing open access resources
- Google Scholar
- WorldWideScience.org is a global science gateway
- DOAR: Directory of Open Access Repository
- DOAJ: Directory of Open Access Journal

- DOAB: Directory of Open Access Books
- Open J Gate: Open Access Journal Gateway

ETD (Electronic thesis and dissertations)

- Networked Digital Library of Thesis and Dissertations (NDLTD), a single point access to ETDs of major participating institutions worldwide.
- Alldissertations.com: Collection of dissertations and thesis from the universities all over the world.
- EThOS: 'single point of access' to ALL thesis produced by UK Higher Education.
- DART-Europe E-thesis Portal: open access research thesis from 407 Universities sourced from 20 European countries
- Vidyanidhi – Digital Library and E-Scholarship Portal Indian ETD Collection
- Shodhganga@INFLIBNET Centre: Ph.D. thesis of Indian Universities
- DiVA Academic Archive On-line: 30 Universities and colleges of higher education

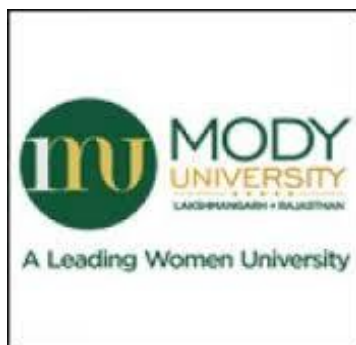
Digital Books/ Libraries

- arXiv : Physics, Mathematics, Computer Science, Quantitative Biology, Quantitative Finance and Statistics
- CiteSeerX : Computer Science
- InTechOpen: free E-books and Journals in science and technology
- Digital library of India
- Digital Book Index : Millions of e-books across the world

Major Open Access Journals

- Indian Academy of Science (11 journals)
- CSIR (India) Journals (17 Journals)
- PLOS Journals (7 Journals)

3.9 MODY UNIVERSITY OF SCIENCE AND TECHNOLOGY, RAJASTHAN



Shri R. P. Mody, a true visionary, established **Mody University of Science and Technology** in 1998 at Lakshmangarh, Rajasthan with a motto of *“a world of innovative learning in a secured environment”*. It is exclusively for women's. His philanthropic attributes were materialized in terms of social and psychological uplift of the women's. He aimed to transform his vision by developing an infrastructure for betterment of women's. This is boon for moving toward 21st century global perspective.

LIBRARY

Every faculty has a departmental library. Apart from having profound collection of text and reference books they subscribe to fairly a large number of E-Journals and Database, abstract of research papers. Most frequently visited databases by faculty and scholars are SCOPUS, IEEE, EBSCO BSE, DELNET, CMIE Poweress, India stat, J-stor, Manupatra etc.

Well equipped library spread in 1538.38 m² having a collection of 56633 books related to subjects like Commerce, Management, Physics, Chemistry, Mathematics, Botany, Zoology, Biotechnology, Microbiology, Bio-chemistry, English Literature, Vedic Literature, Sanskrit, Political Science, Psychology, Sociology, History, Indian Philosophy, Economics, Foreign Languages, Computer Science and Information Technology.

Services: The library also subscribes to 218 National Journals/Magazines, 13 International Journals/ Magazines and 5220 electronic databases like JSTOR and Indiatat. It also has a rich collection of audio-video cassettes and CDs on various subjects like Science and Foreign Languages. Library provides round-the-clock nonstop service to its users to access the information resources. Photocopying service is also available to the users.

Computer/Communication facilities: well equipped information communication tools are pressed in service to the users. The University has membership of DELNET which provides unlimited E-contents. The University has WI-FI connectivity up to 45 Mbps Internet speed.

3.10 KARNATAKA STATE WOMEN'S UNIVERSITY, BIJAPUR, KARNATAKA



Karnataka State Women's University was established in 2003 at Bijapur, Karnataka. It is exclusively dedicated to women's education. It is recognized under 2(f) and 12(B) of the UGC Act. The University offers various UG, PG, and Ph.D.

programs conducted by faculties of Arts, Commerce, Management, Social Sciences, Science and Technology and Education.

LIBRARY

Central library of the university is located at the center of the campus which facilitates the students of various departments in visiting it. The library is well furnished and contains enormous collection of books, journals, back volumes of periodicals and magazines etc. It also subscribes to study materials for competitive examinations and career developments. Within a short span of twelve years, the university has developed contacts and collaboration with other premier institutions of the country and efforts have been initiated to collaborate with global institutions.

The Library has e-resources on CDs and also subscribe to few e-journals and databases under UGCs INFONET programs. Anti Plagiarism software has been installed within the library to check authenticity of the research work.

Library Services: The library offers lending, reference and referral, document delivery and inter library loan services. It also provides reprographic service to the users at Rs. 0.50 per page. Reprographic services of the library are subject to fair use and strictly follow Copy Right Act. Automation of the library data have been carried out by means of library software package LIBSYS. The library subscribes to e-journals and provides internet facility. It also provides OPAC (Online Public Access Catalogue) facility to its users. An inventory of the books is prepared in the library and displayed to various departments. It also conducts user education programs through orientation lectures, guided tours etc. at the onset of the academic year. It aims to inform students to know about various rules, regulations, information services and knowledge resources. Anyone can access open source resources for academic and

research purposes. However, general Open Source Resources, like Social Media is also encouraged.

A digital library is established in the university campus. UGC-Infonet and A-VIEW are used as to access online databases and facilities.

3.11 BHAGAT PHOOL SINGH MAHILA VISHWAVIDYALAYA, SONIPAT, HARYANA



The motto of this university is ***“Empowering Women’s with Education”***.

Bhagat Phool Singh Mahila Vishwavidyalaya is the first women’s State university of Northern India. It was established by Government of Haryana in August, 2006. It is located at Village Khanpur Kalan, District Sonipat, Haryana. The University is mandated to provide affordable qualitative higher education to women’s belonging to rural areas. It provides education from Nursery to Ph.D. level.

LIBRARY

The University has a central library in addition to departmental libraries. Central Library is housed in area of 9150 ft² and has a stock of approximately 5905 books. It subscribes to 79 national and international journals, magazines and periodicals and 14 newspapers. The library provides round the clock Internet facility. Besides central library, there are departmental libraries too which take care of the users.

Access to Books: With few exceptions, University Libraries have an *Open Access System*. The Members have the privilege to freely access the stack areas however there are few areas to which free access is denied. The areas to which access is denied or restricted are collections comprising of thesis, rare books/out-of-print books, softcopies and other categories decided by the university librarian from time to time. It depends on the discretion of the librarian to list the access blocked areas.

Digital Library



Image 3.6 Digital Library of BPSMV Library (Source: University Website)

Digital Library provides access to: JSTOR, Springer Link, Manupatra, Westlaw India, Wiley Online Library, Informaworld, IEEE Xplore, Sage (09 Journals), ASTM Digital Library, Elsevier, BENTHAM, Indian Journals.com, Oxford University Press, HeinOnline.

Knimbus access has been successfully installed at institutes under **UGC-INFONET Consortium** as a complimentary annual subscription. Every scholar of the BPS Women's University is enabled to share information in an innovative way. Knimbus presents a single search window to the content from multiple sources, ensuring optimum usage of total subscribed resources. The researchers may browse

through the user guide, sign up and create personal email access so that all the features are available to them. The Knimbus implementation at BPS Women's University is being carried out in two phases. In the first phase, 28 data sources have been activated, and rest of the 14 data sources will be activated in the second phase.

Those who intend to use the library facilities are asked to get enrolled by filling up the prescribed application form duly recommended by the respective Head of the Department/Director/Principal. Non-transferable Library Identity Card having bar code is issued to each member. Mostly such cards are *validated for one academic year*. Books will not be issued against invalid Library Identity Card.

Library Rules:

Library Fee and Security Deposit: Library fee and security deposit as prescribed in the university prospectus is realized from all the students while issuing library membership. Library security deposit is refundable. It is refunded at the end of academic session.

Permission to Outsiders to use Library Facilities: Scholars from other universities having recommendations of the head of concerned department/discipline are also allowed to use the university library.

Loan Privileges: The University Library has an ID card and Reader's Tickets as per the entitlement of authentic membership. The entitlement of the Membership are as under: teachers/counterpart in library and sports- 08, officers – 06, other employees- 02, research scholars- 06, postgraduate students- 05, undergraduate/diploma/certificate course students- 04, special members- 02.

Categories of Learning Resources not to be issued: Learning resources in the following categories are never issued.

- Reference Books
- Journals
- Thesis
- Rare Books
- Reference Text Books
- Course Catalogues and Question Papers

Recall and Re-issue of Books: Books reserved by some other library user can not be re-issued. If required, books can be recalled from any borrower. Non-compliance to timely return of the books entails overdue charges from the date of recall.

Reservation of Books: A book on loan can be reserved for a member on his/her formal request. Intimation shall be sent to the member who had requested for reservation immediately after the return of the book. The member shall collect the book within four days from the intimation date, failing which the book shall go back in usual circulation.

Conditions of Loan: Borrowers must satisfy themselves about the physical condition of the books before borrowing. They shall be held responsible for any damage or mutilation noticed at the time of book return. Books on loan need to be returned on or before the due date mentioned on the Due-Date-Slip with in the book. As per rules, overdue charges are realized from the defaulters. Repeated violation to the rule by the members may lead to suspension or cancellation of the library membership.

Overdue: Overdue, as laid-down hereunder, shall be charged from the members, if they fail to return the books on or before the due date as indicated on the Due-Date-Slip in the book:

Remission of Overdue Charges: On justifiable grounds, the librarian may remit full overdue charge or part thereof.

Loss of books (General, Text, Reference, Multivolume & Out-of-Print Books and Journals):

- In case, a book is lost by a member, he/she shall be asked to replace the book subject to satisfaction of the librarian or cost of the book + binding charges + 10 % of the book price as processing charge.
- If the book borrowed and lost by a member is out-of-print, double the cost of book + binding charges will be charged.
- If the lost book is a foreign publication, prevalent foreign exchange rates are realized.
- If a volume of multi-volume publication is lost, the member may be allowed to replace the lost volume(s) of the same edition. In case the volume is not available in the market, the member shall be charged the current price of the full set. If the latest edition is available in the market, the entire set of new edition may be accepted as replacement or the cost thereof may be charged.
- In case an issue of a journal is lost, the member will have to replace the same, failing which the cost of complete volume will be charged.

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CHAPTER-4

Total Quality Management

CHAPTER 4

TOTAL QUALITY MANAGEMENT

4.1 INTRODUCTION

Similar to concept of evolution in living organism, continuous improvement is related to any organization or institution. TQM is a philosophy which lay down set of guiding principles to achieve it. TQM consist of three interrelated terms representing three core elements of this philosophy i.e. Total, Quality, and Management. In nut shell we can say that it stands for management of quality in a holistic way. Quality is central while Management and Total have peripheral value.

Broadly organizations can be divided in two categories- manufacturers or service providers. Quality of both service as well as product comes within preview of TQM. All facets contributing to the quality are taken into account. It primarily focuses on quality of products, services and its dissemination, staff management etc.

TQM has been defined and interpreted in different ways such as quest for excellence, right attitude, minimize deficiencies, optimize customer satisfaction, enhance efficiency etc. According to Mohanty and Lakhe (1998), “TQM is a long term pragmatic system initiated and implemented by top management to bring total cultural change and interlink and integrate various elements of an organization through cross functional involvement and participation to meet out vibrant customer needs”. Pfau (1989) states that “TQM is an approach for continuous improvement in quality of goods and services delivered through balanced integration of all the processes active within an organization”. Customer and employee satisfaction, product quality, continuous improvement, innovations are prime ingredients of total quality whereas quality management deals with efficient utilization of capabilities of employees and

continuous improvement for user satisfaction and survival in competitive world. Top management along with others within the organization persistently attempts to improve product quality, and work culture etc. with the application of TQM.

4.1.1 History of Total Quality Management (TQM)

TQM has evolved over past six decades by incorporating and synthesizing ideas from multiple sources. Though the Japanese companies were the first to introduce and use the concept of TQM but basic ideas underlying it were incorporated by W. Edwards Deming and Joseph M. Juran of United States. They developed a comprehensive quality management programs in Japan and later on in United States.

W. Edwards Deming emphasized the need of a total quality system to bring quality in the products rather than projecting it as quality products. Joseph M. Juran argued that poor quality is because of poor management, and insisted that quality products are result of a healthy management approach.

American Society for Quality Control later on known as American Society for Quality (ASQ) was established in 1946. Role of efficient management in getting quality product was emphasized to Japanese by Joseph M. Juran. Concept of Quality Circle evolved in 1960 and Japanese workers started practicing it. By late 1970s, US companies too started seriously taking up TQM and sent their managers to Japan to learn ways to implement TQM. Statistical Process Control evolved in early 1990s, and major automotive industries recognized utility of these techniques as essential ingredient for quality products. Almost at the same time Genichi Taguchi popularized experiments for optimizing the process parameters and quality products. In mid 1990s, ISO 9000 standards were globally popularized and accepted as means to achieve quality.

4.1.2 Elements of TQM

With technological advancement, expectation level of the users has also gone up thereby necessitating the libraries to face the responsibility by effectively adopting Total Quality Management. Service quality of the libraries gets improved by applying few elements which are as following:

- Staff management
- Technology management
- Infrastructure management
- Quality Control

4.1.3 Tools of Quality Management

Quality of products, processes, and services are evaluated and verified by following management tools:

- Flow Charts
- Pareto Charts
- Cause and effect Diagram
- Histogram
- Control Charts
- Run Charts
- Scattered Diagram

4.1.3.1 Flow Charts: The flow chart is a graphical representation of sequence of activities and decisions. It includes boxes for symbol of events or activities and diamonds for key decision and ovals for initial and final points.

It serves as a device of planning and control and a valuable tool for efficiency enhancement, cost reduction and prudent waste management. These factors are helpful in maintaining *total quality* in management.

4.1.3.2 Pareto Diagram: It is a bar or column chart of problems arising out of different causes arranged in descending order of their magnitude. Most significant problems or *vital few* are represented by highest Pareto bars which are indicative of maximizing improvement efforts. As an indispensable diagram Pareto diagram is the first step in quality improvement helpful in identifying the targets where intense improvement efforts need to be focused.

4.1.3.3 Cause- and- effect Diagram: Simple, easy to learn, practice, and identifying the problems asking for prompt attention, it helps in unification and organization of the team work (Meera).

4.1.3.4 Histogram: It shows whether repeated measurement of a given quality characteristic conforms to standard bell-shaped curve. Deviation from the standard signal needs for corrective action. Abnormality in the grade distributions in histogram can be implemented (Borse, 2002).

4.1.3.5 Control Charts: A control chart is a graphic comparison of process performance data with control limit on the chart. This was proposed by Dr. Welter A. Shewhart for the first time in 1924. It has three lines- *center line* is target value on average level of the quality characteristic, other two lines are *lower control limit* and *upper control limit*. The quality characteristic is periodically measured and plotted on the chart which reflects *control status*, assessed to ascertain whether the process is under control or not so that action can be taken to control the process (Shukla, 2006).

4.1.3.6 Run Chart/ Time Plot/ Trends Chart: Run chart emerged out of control charts, originally planned by Weller Shewhart which focuses more on time patterns while control chart focuses more on acceptable charts limits of the process.

4.1.3.7 Scatter Diagram: Possible relationship between two variables is studied by it though these diagrams cannot prove whether one variable causes the other. They are indicative of existence as well as strength of that relationship. Scatter diagram is composed of a horizontal axis having the measured values of one of the variables and vertical axis represents the measurement of the other variables (Bhatt, 2000).

4.1.4 Principles of TQM

TQM is simply an application of number of activities in perfect synergy. The fundamentals of TQM are as following:

4.1.4.1 Customer-driven quality: Customer satisfaction is prime objective of any organization applying TQM. Sensitivity to customer expectations and prompt response to them is central characteristics of such organizations. The concept of necessities incorporates not only product and services attributes but also having a competitive edge over other service providers. Various activities of the organization, both as customer as well as supplier, are carried out with total quality at its core.

4.1.4.2 Top management leadership and commitment: TQM is mostly initiated and led by top management and fails wherever it is not committed or involved and delegates to subordinates and pays peripheral efforts. Top management should deploy clear quality values and goals consistent with the objectives of the organization, set up definite systems, methods and performance measures for achieving the goals. These serve as guidelines for quality activities and encourage employee's participation.

4.1.4.3 Continuous Improvement: TQM takes product quality as result of process quality. As growth is one of the symptoms of any healthy living organism likewise continuous improvement is indicative of overall positive, vibrant and dynamic state of any organization for which TQM is one of basic tool to get at that. Innovation in quality of products and services is basic requirement of customer satisfaction and possible only through continuous improvement in the organizational processes. Any organization should keep going ahead in positive direction in order to survive in cut throat competitive age.

4.1.4.4 Fast response: Prompt service delivery and quick action to customer grievances, should be kept at centre to any organization implementing TQM, which can only be achieved through customer-driven and process-oriented product improvement. Simplicity of the processes or activities taking place within an organization is the means to achieve.

4.1.4.5 Actions based on facts: Relevant facts, correct data analysis, and authentic decisions based on that are integral part of TQM. Planning, review, performance appraisal, operations improvement etc. should be based on factual analysis. TQM is based on prudential use of objective data and provides detached rather than an emotional approach to decision-making.

4.1.4.6 Employee participation: Motivated, dedicated and well-trained employees are core strength for successful TQM implementation. Ongoing education and training of the employees is supportive to the drive for quality. Employees are encouraged to take up responsibility, freely communicate, and act creatively.

4.1.4.7 TQM culture: Healthy, conducive, and cooperative work culture needs to be evolved by management. Employees should have a feeling that they are an integral part of the process to achieve quality and customer satisfaction.

4.1.5 Steps to Total Quality Management:

Based on association with Japanese managers, Deming and Walton, 1986 outlined 14 steps for implementing total quality management programs:

4.1.5.1 Create Constancy of profuse for improvement of product and service:

Constancy of profuse requires innovation, investment in research and education, continuous improvement of product and service, maintenance of equipments, furniture and fixtures, and new aids to production.

4.1.5.2 Adopt the new Philosophy: Management must undergo transformation and start relying on quality products and service.

4.1.5.3 Cease dependence on mass inspection: thorough inspection of products and services as means to improve the process.

4.1.5.4 End the practice of awarding business on price tag alone: Evaluating quality of a product on the basis of price tag is a false notion. Low priced goods are always not the best quality goods or vice-versa. Select a supplier based on its record of improvement and long term commitment.

4.1.5.5 Improve constantly and forever the System of Product: Improvement is not one-time effort, continuous improvement in quality and productivity is responsibility of the management.

4.1.5.6 Institute Training and Retraining: Workers need to be trained to perform well, for this they have to constantly improve their skills.

4.1.5.7 Institute leadership: Management is responsible to lead, identify the blocks preventing the staff to meet the targets and suitability of the remuneration made to them.

4.1.5.8 Drive out fear: Fear of reprisal if they *make waves* at work should be eliminated from the psyche of employees. An environment should be developed where workers can freely express their concerns in confidence.

4.1.5.9 Break down barriers between staff areas: Managers should promote teamwork by placing staff in different departments. This will help in harmonious integration of various departments. It encourages high quality decision making.

4.1.5.10 Eliminate slogans, exhortations and targets for the workplace: Using slogans alone, without an investigation into the process of the workplace, can be offensive to workers because it implies that a better performance is possible. Managers need to train themselves in motivating their staff.

4.1.5.11 Eliminate numerical quotas: Quotas impede working condition quality more than anything else. It leaves no room for Improvement. Workers need flexibility in delivering quality service to customers.

4.1.5.12 Remove barriers to the pride of workmanship: Healthy job appraisal with due respect to self respect is needed to provide valuable feedback to the employee. It will help in eliminating the barriers and would not hurt pride of workmanship.

4.1.5.13 Institute vigorous education and retraining program: With continuous improvement job description will change with time. As a result employees need to be educated and retrained so that they can efficiently execute changed job responsibilities.

4.1.5.14 Take action to accomplish the transformation: Management should incorporate aforesaid steps to establish team spirit within the organization.

4.2 QUALITY CONCEPT

Parameter to evaluate *quality* is user need. In other word *Quality is fitness for purpose*. British Standard (4778, 1987), ISO (8402, 1986) defines it as ‘quality is features and characteristics of a product or service capable to satisfy explicit or implicit needs.’ (Sharma, 2005)

Satisfaction of the customers with product or service is quality. Customers of a university library are those who are an integral part and its users. University Grants Commission has set up NAAC (National Assessment & Accreditation council) which evaluates quality of service of educational institution and its library. Grants are linked to the assessment. University libraries are compelled to come up with strategies for quality management. (Begum, 2003)

International Organization for Standardization (ISO): 8402, 1994 defines quality as “Total features and characteristics of a product or service having ability to satisfy user needs.” (Dutta, 1995)

Quality is free of conformance to requirement. It is a state of mind, difficult to grasp without elaborate discussion. It is harmonious mental state between what you like and what you do.

TQM means culture of the organization. It is defined in terms of constant attainment of satisfaction vide an integrated system of tools, techniques and training. It involves continuous improvement in processes which results in high quality products and services. (Bhatt, 2000)

Concept of Quality evolved as concept of Total Quality Management which is responsibility of everyone within the organization. They are expected to collaborate in overall productivity improvement. Success of TQM depends on training, implementation, and executive involvement. (Tripathi, 2002)

4.2.1 Quality Assurance

Carley and Waldron (1984) define quality assurance as deliberate and planned activities instigated and carried out with intent of maintaining and improving the learning quality of participants. Quality assurance as expressed in the literature of higher education reveals that quality assurance is ever growing active and integrative process to maintain and improve quality rather than simply a system of evaluation and fault finding. (Saroja and Sujatha 2002)

4.2.2 Quality Standards

With the quality management variety of quality management standards, valuation forms and schemes for self-appraisal etc. has come up. These are practice oriented tools aiming to sustain confidence in customer-supplier relationship and provide a systematic approach to quality management. The ISO 9000 series of standards is widely used as the most recent international standards for quality management. In LIS sector, the common communication format (CCF) evolved as bibliographic format. (Saroja, and Sujatha 2002)

4.2.3 ISO 9000 Series of TQM in University library

International Organization for Standardization (ISO) is a group of standards and guidelines for quality of service in organization or industry. ISO 9000 defines criteria of measurement. ISO 9001 deals with design and development, ISO 9002 is involved with production, installation and service, and ISO 9003 covers final testing and examination. ISO 9000 certification does not guarantee product quality. It ensures that the processes developing the product are recognized and performed in calibrated quality steps. ISO 9000 standards are international standards that have quickly become the norm. These are series of quality standards defined by the International Organization for Standardization. ISO 9000 certification means that the firm has a

quality management system which ensures consistency of product quality. (Sivankalai, 2012)

4.2.4 Quality in University library

University library consists of library building, collection of books, periodicals, magazines, print documents, collection of e- resources, databases, library professionals, staff, users etc. Total quality deals with aforesaid aspects of a library. In university library user satisfaction refer to fulfillment of their expectations. Librarian has to find out means to achieve it by implementation of quality system.

4.2.5 Factors of Quality in University library

The implication of quality in university library implies incorporation of few basic factors essential to ascertain and offer quality service by the library. These are as following:

- User orientation
- Reliability as Core aspect of quality
- User satisfaction
- Staff management
- Services management
- Variety according to users need
- Sustainability
- Incorporation of latest technologies
- Quality services at all levels
- Prompt service
- Continuous progress

Aforesaid factors influence image of the library or an organization.

4.3 TQM in Library

Libraries are source of production as well as service and since its inception dedicated itself to provide a high quality of service to its users. Dissemination of information to the user at right time is prime concern of a library which is possible only by having plenty of information resources, well organized infrastructure, increase in book collection, innovation and incorporating new technologies etc. All these contribute to service qualities of the system. It needs a comprehensive approach based on user need and satisfaction. This can only be achieved by implementation of Total Quality Management which aims to provide quality services at reasonable cost, develop team spirit, and continuous improvement.

4.3.1 TQM in University Library

Basic criterion of quality is customer satisfaction through product or service. Academic community of a university library consists of students, researchers and faculty.

In response to it University Grants Commission formed National Accreditation and Assessment Council (NAAC) which conducts audit and inspection of service qualities of the educational institutions specifically of library services. Grant allocations are linked to these assessments. Libraries are expected to come up with appropriate system, philosophies, and strategies to manage quality.

Core objective of a university library is to augment academic programs and goal of its parent organization. University library is a service driven organization directly delivering products to the customers.

In manufacturing concerns customer is at distance while in some service organization like university library, producers and consumers have face to face interaction. The

complexity of managing service organizations is increased manifold because of multiple interfaces.

4.3.2 Application of TQM in University library

TQM is applicable to all types of libraries like public, academic or special library. It has successful global application wherever user is at the end of the chain. However quality issues related to performance and services differ in some respects.

Function	Services
Performance	Time to Serve
Reliability and consistency	Timeliness of the service
Conformity of specification	Completeness of service
Durability	Consistency
Serviceability	Courtesy
Features	Responsiveness
Aesthetics	Accuracy – first time right
Perceived quality	Convenience – easy to obtain

Table 4.1 Quality versus Services

1.3.3 Relation between Library Services and TQM

Quality with regard to university library or in reference to processing of information services in the library depends on:

- The collection of documents and their technical processing by applying certain techniques and methods
- Staff skills
- Equipments and processing
- Time involved in rendering the service
- Attributes of services offered

Aforesaid facts indicate that quality in industries refers to ultimate goal of catering to user satisfaction which can also be applied to university libraries. Quality in library services is most effective in user-oriented services. Talukder and Ghosh (2004) compared TQM and library services with respect to various attributes. In tabular form, this can be summarized as following:

Attribute	TQM	Library services
Definition	Customer oriented	User oriented
Priorities	First among equal of cost and service	User and service
Decision	Long term	Long term
Emphasis	Prevention	Prevention like anticipation of demand
Errors	System	System/ techniques
Responsibility	Everyone	Library personnel
Problem solving	Teams	Professional team
Procurement	Life cycle costs, partnership	User centric (cost implicit)
Manager role	Delegate, coach, facilitate	Delegate Assistance Facilitate and Mentor

Table 4.2 Library Services and TQM

4.3.4 Quality Component of Library Services

Library committee consisting of the Vice Chancellor as the Chairman, Rector as the Vice-Chairman, and Directors/Dean of faculties as members along with Librarian as Convener quarterly meets in a year to review the progress and problems of the library. Based on the recommendations of the Committee the library conducted surveys on the usage of books, journals and documentation reports by the counselors, learners etc. at Study Centre Libraries. Study revealed few important points for consideration which are-

- Lack of sufficient infrastructure for maintaining libraries at the Study Centers

- Irregularities in the receipt of journals at the 12 PG Study Centers
- Good use of books/journals and documentation reports by the counselors and the learners

Taking an account of the problems library committee recommended infrastructural improvement at study centers and withholding subscription of books, journals etc. These steps are helpful in implementation of goals of Total Quality Management and motto of the University.

4.3.5 TQM Framework for Libraries

Systematic implementation of quality management in LIS requires a concise and exhaustive framework. Following steps are helpful to arrive at a systematic framework for quality assurance in LIS.

- Define the services you are attempting to improve. What are the motives of offering those services?
- Define what you mean by *Quality* in terms satisfaction of user and staff or pre-fixed norms and standards for that service.
- Define quality criterion for the service.
- Feedback from the users of the service is important for improving the quality.
- Decide upon the measures to achieve quality.
- Decide on usefulness of involvement of staff at different levels.
- Review the resources for implementing measures for quality improvement.
- Ensure commitment and support of top management at various levels of quality implementation. (Saroja and Sujatha 2002).



Fig. 4.1 Framework for improving service quality
(Source: Mohanty and Lakhe (2002))

4.3.6 Benefits of TQM for University Libraries

- TQM eliminates bureaucracy, empowers staff, and creates a team base culture which is tailored to replace mechanistic, hierarchical, organizational structures like those prevalent at university libraries. Role of the librarian becomes supportive and a coach.
- TQM helps in proactive evaluation of user needs and expectations and equips Librarian to provide efficient and effective services with available resources which results in loyalty and user satisfaction.
- TQM is an evolutionary process and can easily be incorporated in already existing library management systems.
- Brainstorming exercise helps to ascertain the functions necessary for efficient operation of a library and those who should perform it. This results in increased employee involvement and dedication.

- Reduction in user complaint and gain a competitive edge over other information service providers.
- TQM helps in reducing cross-sectional impediments or barriers in a library and promises cooperation and team work instead of competition.
- Quality is a high profile management tool in TQM. Its implementation in libraries improves image of the library staff and help in public relations and marketing.
- TQM ensures consistent qualitative library and information services to the users and defines user satisfaction issues.
- TQM ensures a non-threatening environment for open discussion to solve the problems and clearly frames responsibility and accountability of individual employee which is helpful in H.R.D.
- Staff Empowerment develops self determination, meaning and competence. Its impact becomes more effective, innovative and transforms motivation and characteristics. (Mahapatra, 1998)

4.3.7 Barriers to TQM Implementation

Complacency is the most common block in implementation of TQM. It represents a mental state in which we are satisfied with what we have and not willing to strive for continuous improvement. Following are the common obstacles experienced in TQM implementation-

- Insufficient knowledge of TQM
- Costly and long term process
- Insufficient budget
- Lack of consistent top management support
- Lack of qualified quality consultant

- Inadequate planning
- Lack of constant training and education
- Lack of workers skill
- Incompatible organizational structure and isolation of individuals and departments
- Insufficient resources
- Ineffective measurement techniques and lack of access to data and results.
- Inappropriate conditions for implementation of TQM
- Inadequate empowerment and team spirit
- Poor measurement metrics and data analysis
- Improper attention to the voice of the customers. (Masters, Desine G.)

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CHAPTER 5

Data Analysis and Interpretation

CHAPTER 5

DATA ANALYSIS AND INTERPRETATION

5.1 INTRODUCTION

This chapter presents the data analysis and interpretation. The data which was collected through questionnaires, observation and informal communication between researcher and respondents has analyzed by followed the basic principles of TQM.

These are:

- Quality oriented management
- Satisfy the customer
- Employee involvement
- Continuous improvement

5.2 LIBRARY INFRASTRUCTURE MANAGEMENT

This part of the data analysis introduces the background of the womens' universities in India, which have supported and respond to completion of this study. It also presents the physical infrastructure management, Technology management, staff strength of professional and non- professional and management in all womens' university libraries, budget of all libraries and its growth, total collection of printed and non- printed and development also.

5.2.1 Background of the Womens' Universities in India

S. No.	Name of University	Status	Year of Establishment	Place
1	SNDT	State University	1916	Mumbai, Maharastra
2	BU	Deemed University	1935	Tonk District, Rajasthan
3	SPMVV	State University	1983	Tirupati, Andhra Pradesh
4	MTWU	State University	1984	Kodaikanal, Tamil Nadu
5	AU	Deemed University	1987	Coimbatore, Tamil Nadu
6	IGDTUW	State University	1998	Delhi
7	KSWU	State University	2003	Bijapur, Karnataka
8	BPSMV	State University	2006	Sonipat, Haryana
9	MUST	Private University	1998	Lakshmangarh, Rajasthan
10	JVWU	Private University	2008	Jaipur, Rajasthan

Table 5.1

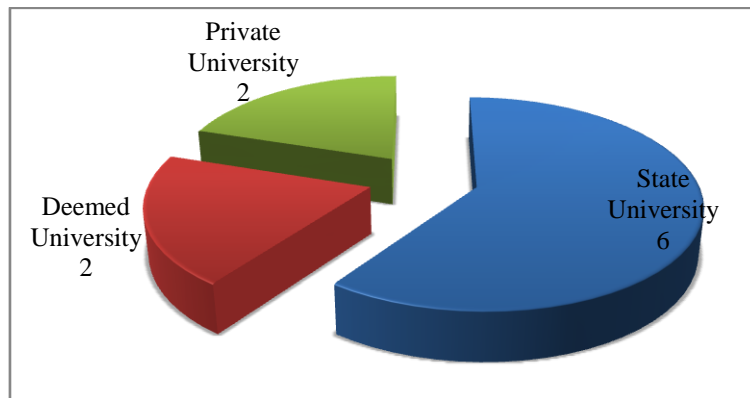


Fig. 5.1 Status of Womens' Universities

Table 5.1 gives brief introduction of womens' universities in India at present time as shown in the scope of the study. There are 10 universities have found which are exclusively for women's in India. Shreemati Nathibai Damodar Thackersey (SNDT) was established in 1916 which is a state university situated in Maharashtra state of India. This is the oldest women's university in India. Banasthali University (BU) is the second oldest women's university of India which was established in 1935 in Rajasthan state. It is a deemed university. Sri Padmavati Mahila Visvavidyalayam

(SPMV) was established in 1983 which is also a state university situated in Andhra Pradesh state in India. Mother Teresa Women’s University (MTWU) was established in 1984 in Kodaikanal place which is a hill station of Tamil Nadu state in India. It is also a state university. Avinashilingam University (AU) was established in 1987 as a deemed university. It is also situated in Tamil Nadu state of India. Indira Gandhi Delhi Technical University for Women’s (IGDTUW) is a state university which has established in 1998 at Delhi in India. Karnataka State Women’s University (KSWU) is also a state university which has established in 2003 in Karnataka State of India. Bhagat Phool Singh Mahila Vishvavidyalaya (BPSMV) established in 2006. It is a state university which situated in Haryana state of India. Mody University of Science and Technology (MUST) has established in 1998 in Rajasthan state of India. It is a private university and Jyoti Vidyapeeth Women’s University (JVWU) has established in 2008 as a private university in Rajasthan state in India.

5.2.2 Physical Infrastructure of Libraries in Womens’ Universities

The tables given below present the information based on filled questionnaires by the librarians of womens’ university libraries. There are 09 universities has mentioned in below tables out of 10 universities which have delivered data through the questionnaires and the oral communication between librarian and researcher.

S.N.	University	Area of Library Sq. ft	Stack room Sq. ft.	Capacity to hold document	Study room Sq. ft	Seating Capacity	Periodical Room Sq. ft	Capacity of periodicals
1	SNDT	21699	-	1,00,000	-	116	-	200
2	BU	33829	-	-	-	400	-	400
3	SPMV	38486	-	3,00,000	-	600	-	250
4	MTWU	3800	-	-	-	30	-	-
5	AU	17500	-	1,50,000	-	-	-	-
6	IGDTUW	-	-	-	-	-	-	-
7	KSWU	1400	-	-	-	150	-	-
8	BPSMV	928	-	-	-	100	-	100
9	MUST	1538.38	-	-	-	-	-	-

Table 5.2

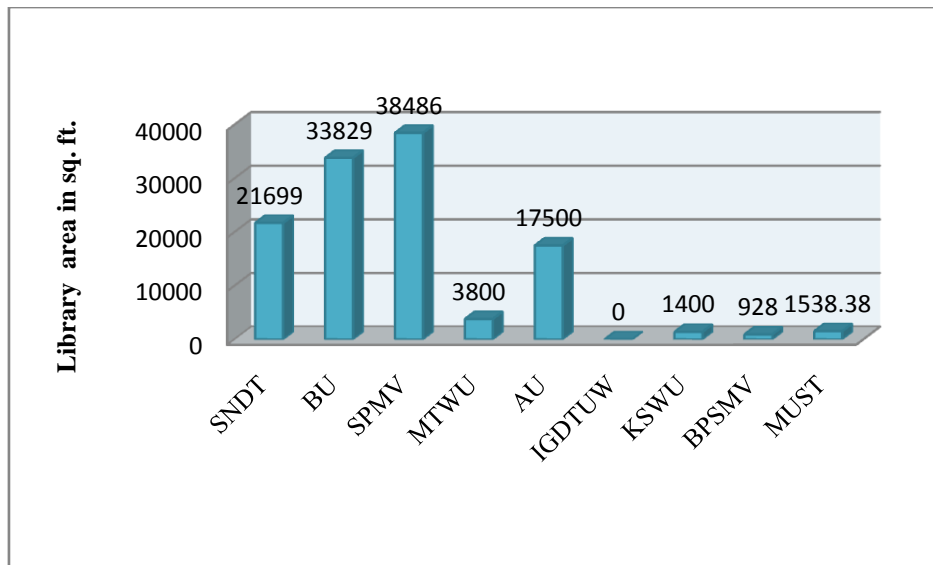


Fig.5.2 Area of Library Building (sq. ft.)

Table 5.2 shows the data about physical infrastructure of library in womens' universities in India. SNDT has 21699 sq. ft areas for library with 116 seating capacity in study room of library. Its library has 100000 documents capacity to hold in stack room and 200 periodicals capacity to hold in periodical room but it has not respond about area of stack room, study room and periodical room. BU has a wide area for library which is in 33829 sq. ft. It has 400 seating capacity in study room. It can hold 400 periodicals in periodical room in library. BU has not respond about the areas of stack room, study room and periodical room and not given information about the capacity to hold documents in stack room. SPMV has the largest area for library according to other womens' universities which covers 38486 sq. ft. It could hold 300000 documents in stack room and 250 periodicals in periodical room. It has 600 seating capacity in study room at one time. MTWU has 3800 sq. ft. area for library with 30 seating capacity in study room. It has not given information about other areas of library. AU has 17500 sq. ft. areas for library with the capacity of 150000 documents to hold in the stack room in library. IGDTUW has not given any information about any part physical infrastructure of library. KSWU has 1400 sq. ft.

area for library building with 150 seating capacity in study room. It is in under process so it has not provided the exact data about library infrastructure. BPSMV has only 928 sq.ft area for library with 100 seating capacity in study room and 100 periodicals could be hold in periodical room at one time. MUST has 1538.38 sq.ft area for library building but it has not given the data about any aspect of physical infrastructure of library.

5.2.3 IT Infrastructure in Libraries of womens' Universities

S. No.	University	Automated Library	Computers for library work	PCs to users for Internet/ OPAC browsing	Library server	Connected Terminals	Library Software
1	SNDT	YES	12	14	YES	-	SLIM
2	BU	YES	20	56	YES	-	Libsys
3	SPMV	YES	10	20	YES	10	SOUL
4	MTWU	YES	10	05	YES	07	SOUL
5	AU	YES	35	27	YES	35	KOHA
6	IGDTUW	YES	10	Wi-Fi	YES	-	NEW GENLIB
7	KSWU	YES	25	10	YES	-	Libsys
8	BPSMV	YES	06	10	YES	06	Libsys
9	MUST	YES	-	Wi-Fi	YES	-	-

Table 5.3

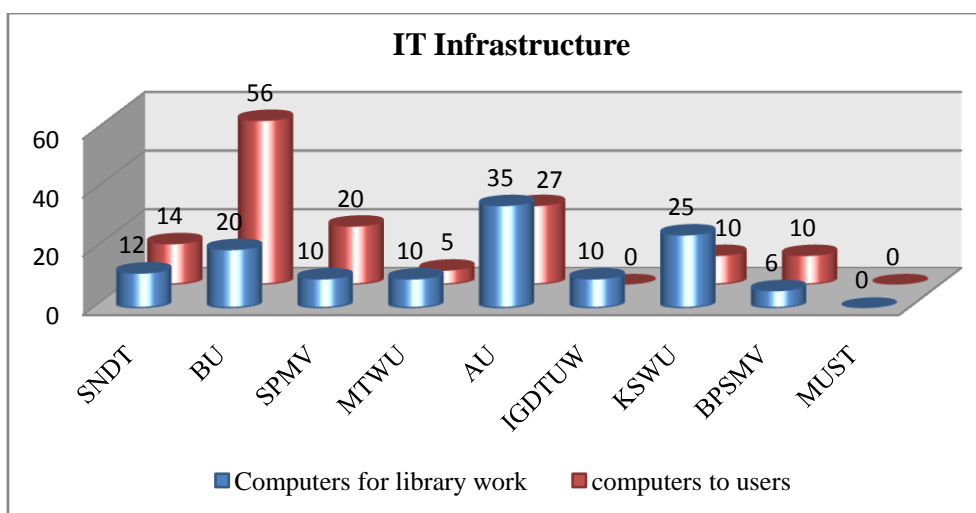


Fig. 5.3 IT Infrastructure of Libraries

Table 5.3 presents the picture of IT Infrastructure in library of womens' universities in India at present. This table includes the status of automation library, no. of computers, internet facilities to users, library server and library automation software which are using in libraries. SNDT has automated library and 12 computers works for library work. It has 14 PCs to users for brows internet. Library server has connected with all terminals. Library is using SLIM library software. BU has automated library. It has 20 computers to library work and 56 PCs to users for use internet and OPAC. It has library server which connected to all terminals in campus, LIBSYS automation software is being used in BU library. SPMV library is also automated. It has 10 computers to library work and 20 PCs to users. Library server is connected with 10 terminals. It is using SOUL library automation software. MTWU has automated library with 10 computers for library work and 05 PCs to users for internet browsing. Library server is connected with 07 terminals and it is using SOUL library automation software also. AU library has also automated library with 35 computers for library work. It has 27 PCs to users and its server connected with 35 terminals. This library is using KOHA automation software. IGDTUW has automated library with 10 computers to library works. Library provides Wi-Fi facility to users and it is used NEWGENLIB automation software. KSWU has automated library. The library has 25 computers for library work and 10 PCs to users for browsing internet. It uses LIBSYS automation software, library server is connected with all the terminals. Library is under process. BPSMV has automated library with 06 computers to library work and 10 PCs to library users. Library uses LIBSYS automation software and its server connected with 06 terminals. MUST has automated library also. It provides Wi-Fi facility to library staff and users. It has not given the information about Library automation software used.

5.2.4 Digital Library and membership of WAN

S. No.	University	Digital Library	Digital Library Software used	Membership of WAN	Name of WAN
1	SNDT	NO	NO	NO	NO
2	BU	YES	-	YES	J-GATE PLUS
3	SPMV	NO	-	NO	-
4	MTWU	YES	-	-	-
5	AU	YES	-	YES	UGC INFONET, DELNET
6	IGDTUW	YES	GSDL	NO	-
7	KSWU	YES	-	YES	INFLIBNET
8	BPSMV	YES	-	YES	DELNET, INFLIBNET
9	MUST	YES	-	YES	DELNET

Table 5.4

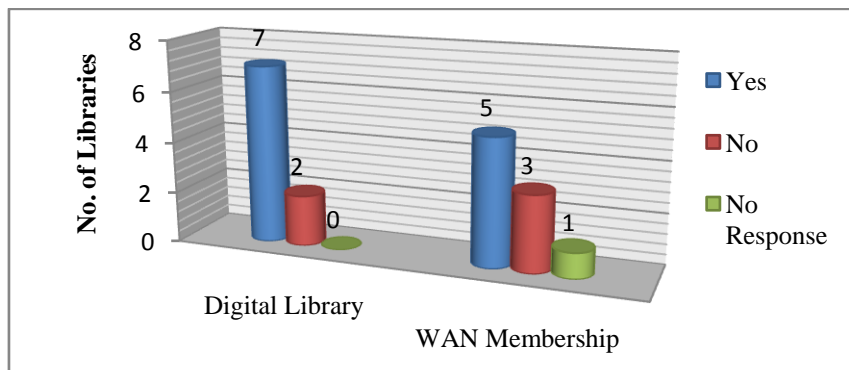


Fig. 5.4 Digital Library and membership of WAN

Table 5.4 presents the status of digital library in the womens' university libraries in India at present. This table includes the digital library software, membership of WAN and network name of each womens' university libraries. The SNDT library is not digitized but it is under process to digitization. BU library has digital library and member of WAN. It is connected with J-Gate PLUS. SPMV library is not digitized, and has not membership of WAN. MTWU library has a separate digital library but it has not provided information about digital library software used and the membership of WAN. AU library is digitized library and member of UGC-

Infonet and DELNET networks. IGDTUW is a digital library, it is using Green Stone Digital Library (GSDL) software but it is not a member of any wide area network. KSWU also has digital library and it is member of INFLIBNET network. BPSMV library has also digitized and member of DELNET and INFLIBNET. MUST library is also a member of DELNET network.

5.2.5 Spread of Campus LAN

S. No	Library	Computer Centre	Computer centre + Library	Connection in Deptt/Centers/ Labs/Units	Connection in all campus	Reach out to the hostels and residence
1	SNDT	-	-	-	-	-
2	BU	-	-	-	YES	YES
3	SPMV	-	-	YES	YES	-
4	MTWU	-	-	-	-	-
5	AU	-	-	-	YES	-
6	IGDTUW	-	-	-	YES	YES
7	KSWU	YES	-	-	-	-
8	BPSMV	-	-	YES	YES	-
9	MUST	-	-	-	YES	-

Table 5.5

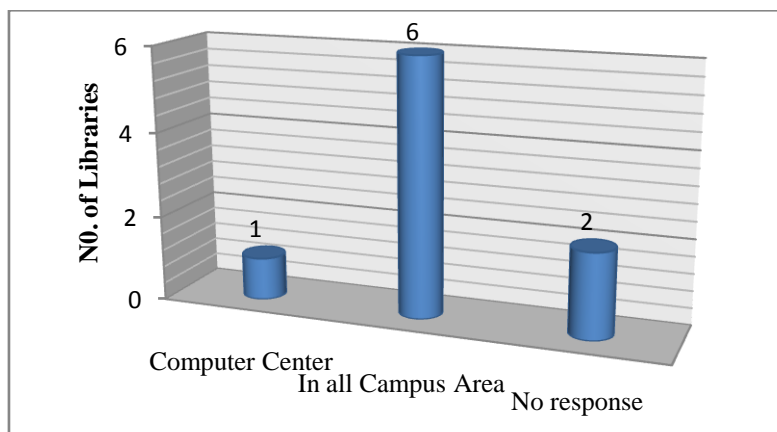


Fig. 5.5 Spread of Campus LAN

Table 5.5 shows the condition of spread of campus LAN that is the BU library has LAN connectivity in all over campus area and reaches out to the hostels also. SPMV library has LAN connectivity in whole campus area including departments, computer centre, labs etc. AU library has LAN connectivity in all campus area.

IGDTUW also has LAN in campus and reaches out to the hostels. KSWU library has LAN connectivity within computer centers only. BPSMV and MUST libraries also have LAN connectivity and spreads to whole area of campus. SNTD and MTWU libraries have not respond about LAN facility.

5.2.6 Impact of IT on Image of Library

S. No.	Library	Improved	No Change	Decreased
1	SNTD	YES	-	-
2	BU	YES	-	-
3	SPMV	YES	-	-
4	MTWU	YES	-	-
5	AU	YES	-	-
6	IGDTUW	YES	-	-
7	KSWU	YES	-	-
8	BPSMV	YES	-	-
9	MUST	YES	-	-

Table 5.6

Table 5.6 shows the librarians’ view on impact of IT on image of the libraries in womens’ universities. According to the table all womens’ university libraries have felt that the library image has been increased after adaptation of IT in library application.

5.2.7 Hands- on- training to the users regarding E- resources

S. No.	Library	Yes	No
1	SNTD	YES	-
2	BU	YES	-
3	SPMV	YES	-
4	MTWU	YES	-
5	AU	-	-
6	IGDTUW	YES	-
7	KSWU	YES	-
8	BPSMV	YES	-
9	MUST	YES	-

Table 5.7

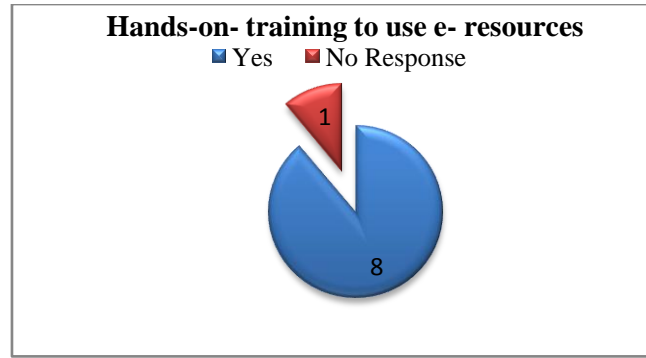


Fig. 5.6 Hands-on- training to use e- resources

Table 5.7 shows the availability of hands - on- training to the users regarding to e- resources. According to table all the womens’ university libraries provide hands-on- training to their users about the uses of e- resources except AU library. AU library has not respond on this.

5.2.8 Strength of Professional Staff

S. No.	Library	Librarian	Dy. Librarian	Assistant Librarian	Professional Assistant	Semi Professional Assistant	Total
1	SNDT	-	01	01	04	-	06
2	BU	-	01	04	07	-	12
3	SPMV	-	01	-	03	02	06
4	MTWU	01	01	-	01	02	05
5	AU	-	-	04	-	-	04
6	IGDTUW	01	-	-	01	-	02
7	KSWU	01	-	-	02	05	08
8	BPSMV	-	-	02	-	-	02
9	MUST	-	-	11	-	-	11

Table 5.8

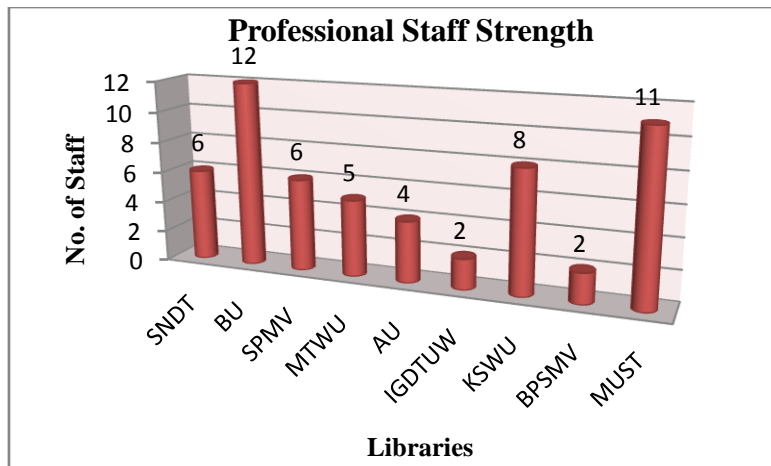


Fig. 5.7 Professional Staff Strength

Table 5.8 shows the data about total strength of professional staff in womens' university libraries. According to the table SNDT library has 06 professional staff including 01 is Deputy Librarian, 01 is Assistant Librarian and 04 Professional Assistants. BU library has 12 professional staff including 01 is Deputy Librarian, 04 Assistant Librarians and 07 Professional Assistants. SPMV library shown total 06 Professional staff including 01 is Deputy Librarian, 03 Professional assistants and 02 Semi Professional Assistants. MTWU library has total 05 professional staff including 01 Librarian, 01 Deputy Librarian, 01 Professional Assistants and 02 Semi-Professional Assistants. AU library has only 04 professional staff on the designation of Assistant Librarian. IGDTUW library has only 02 professional staff; there is 01 Librarian and 01 Professional Assistant. KSWU library has 08 professional staff including 01 Librarian, 02 Professional Assistants and 05 Semi Professional Assistants. BPSMV has 02 Assistant Librarians as professional staff in library. MUST has total 11 professional staff on the designation of Assistant Librarian in library.

5.2.9 Strength of Non- professional Staff

S. No.	Library	Accountant	Assistant	Library Attendant	Peons	Total
1	SNDT	-	-	01	01	02
2	BU	-	01	13	07	21
3	SPMV	-	-	02	04	06
4	MTWU	-	-	01	-	01
5	AU	-	-	15	-	15
6	IGDTUW	-	-	02	01	03
7	KSWU	04	02	02	04	12
8	BPSMV	-	02	07	01	10
9	MUST	-	-	04	-	04

Table 5.9

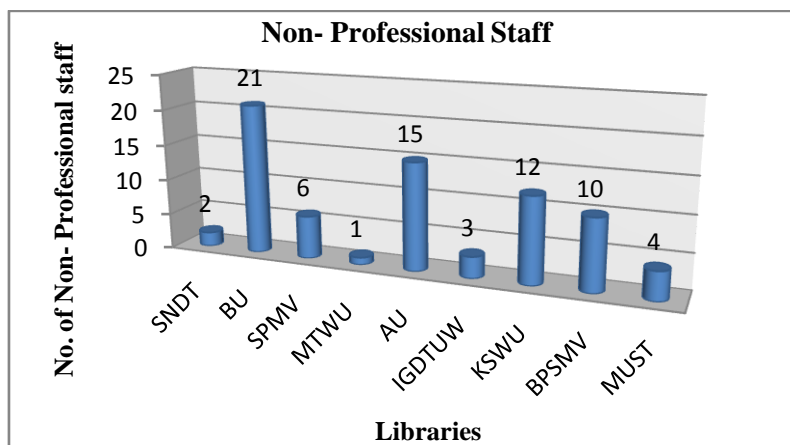


Fig. 5.8 Strength of Non- professional staff

Table 5.9 presents the strength of non- professional staff in womens' university libraries. According to the table SNDT library has 01 library attendant and 01 peon only. BU library has 01 assistant, 13 library attendants and 07 peons as non-professional staff. SPMV library has 02 library attendants and 04 peons. MTWU library has only 01 library attendant as non- professional staff. AU library has 15 library attendants. IGDTUW library has 02 library attendants and 1 peon. KSWU has 04 accountants, 02 assistants, 02 library attendants and 04 peons as non- professional staff in library. BPSMV library has 02 assistant, 07 library attendants and 01 peons and MUST library has only 04 library attendants as non- professional staff.

5.2.10 Opinion of Librarian on adequate staff and promotion policy for Staff

S. No.	Library	Adequate staff	Promotion policy for staff
1	SNDT	NO	YES
2	BU	YES	YES
3	SPMV	NO	YES
4	MTWU	NO	YES
5	AU	NO	YES
6	IGDTUW	NO	YES
7	KSWU	NO	YES
8	BPSMV	NO	YES
9	MUST	-	YES

Table 5.10

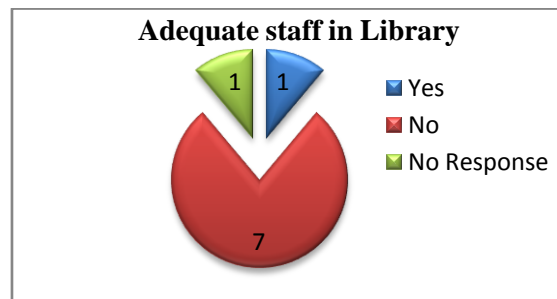


Fig. 5.9 Adequate staff in Library

Table 5.10 shows the opinions of librarians or library in-charge on adequate staff in library and availability of promotion policy for staff. According to table only BU library has adequate staff while rests of universities have admitted that there is not have adequate staff for library. These opinions of librarians’ raise a major problem of lack of manpower in womens’ university libraries. MUST library has not respond on adequacy of library staff. All libraries have promotion policy for staff promotion.

5.2.11 Criteria of promotion for Staff

S. No.	Library	Seniority	Merit	Assessment	Seniority and Assessment	Time bound
1	SNDT	-	-	-	YES	-
2	BU	YES	YES	YES	YES	-
3	SPMV	-	-	-	YES	-
4	MTWU	-	YES	YES	YES	-
5	AU	-	-	YES	-	YES
6	IGDTUW	-	-	YES	-	-
7	KSWU	-	-	-	-	-
8	BPSMV	-	-	-	YES	-
9	MUST	-	-	-	-	-

Table 5.11

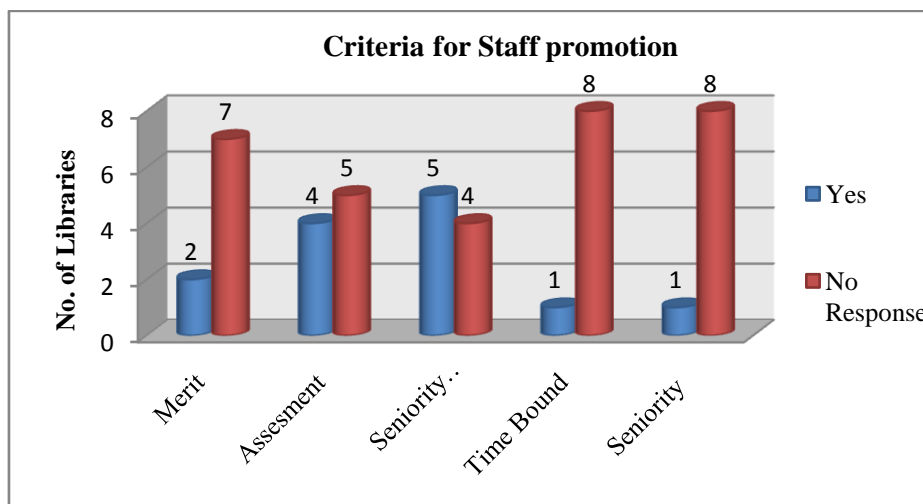


Fig. 5.10 Criteria for Staff promotion

Table 5.11 shows the different criteria of promotion for staff which followed by the libraries in womens' university. SNDT promotes the library staff on the basis of seniority and assessment. BU follows the multi criteria to promote the library staff i.e. seniority, merit, seniority and assessment. SPMV and BPSMV universities promote the library staff on the basis of seniority and assessment. MTWU promotes the library staff based on merit, assessment and seniority. AU library promotes its staff on the basis of assessment and time bound. IGDTUW follows the assessment criteria to promote the library staff. KSWU and MUST have not respond on any criteria for promotion of library staff.

5.2.12 Budget of SNTD Library

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
Books	253000	353000	1177000	2000000	1267000
Periodicals	375000	550000	1980000	1155000	1646000
Computers/Library Automation and Networking (including Internet/ Other)	-	-	-	-	-
CD/ DVD	2000	5000	-	-	-
Staff salary	-	-	-	-	-
Maintenance	-	-	-	-	-
Others	-	-	-	-	-
Total	630000	908000	3157000	3155000	2913000

Table 5.12

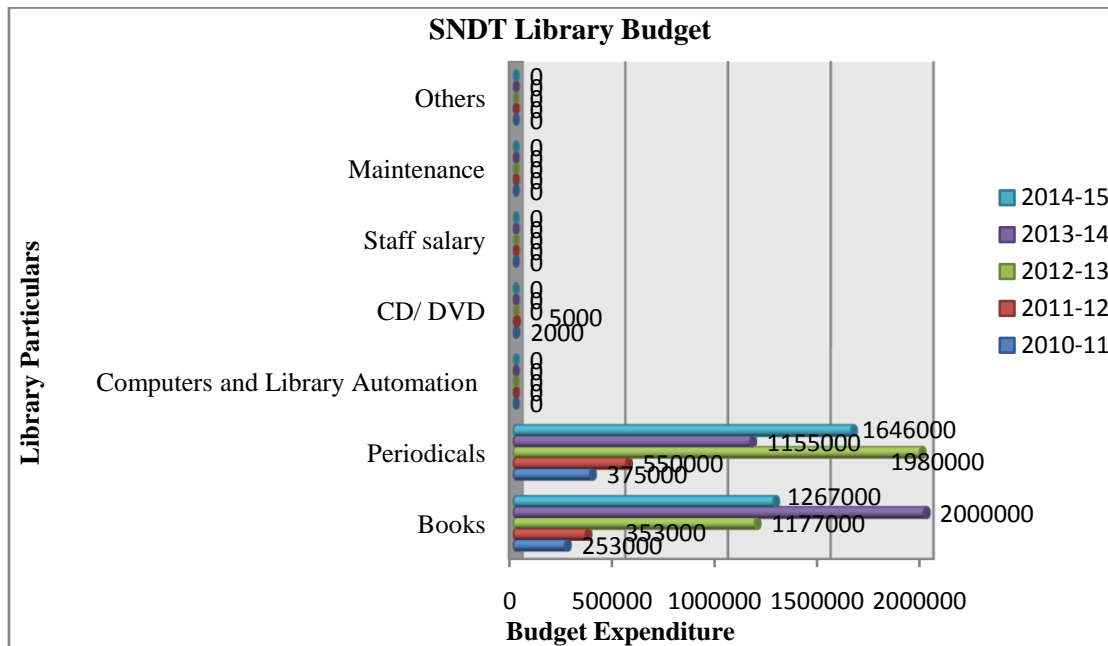


Fig. 5.11 SNTD Library Budget

Table 5.12 shows the budget of SNTD library since five years and its expenditure on different particulars in library. The library provides the budget expended on books, journals and CD/DVD only. It expended 2.53 lakh on purchasing new books, 3.75 lakh on subscribing periodicals and 2000 for CD/DVD in 2010-11, it expended 3.53 lakh to purchase books, 5.50 lakh to subscribe periodicals and 5000 for CD/DVD in 2011-12, It expended 11.77 lakh for books, 11.55 lakh for periodicals in 2012-13, library expended 20 lakh for books and 11.55 lakh for periodicals in 2013-

14 and it expended 12.67 lakh for books and 16.46 lakh for periodicals in 2014-15. Library has not provided the data of expenditure on other particulars i.e. computers, library automation, networking, equipments, staff salary, maintenance and others. The library expenditure was increasing from 2010-11 to 2012-13 and it is decreasing since 2013-14.

5.2.13 Budget of BU Library

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
Books	2964000	4348000	5965000	-	2738000
Periodicals	2419000	3047000	3470000	3338000	3636000
Computers/Library Automation and Networking (including Internet/ Other)	-	-	-	-	-
CD/ DVD	-	-	-	-	-
Staff salary	-	-	-	-	-
Maintenance	-	-	-	-	-
Others	5867000	893000	-	-	4665000
Total	11250000	8288000	9435000	3338000	11039000

Table 5.13

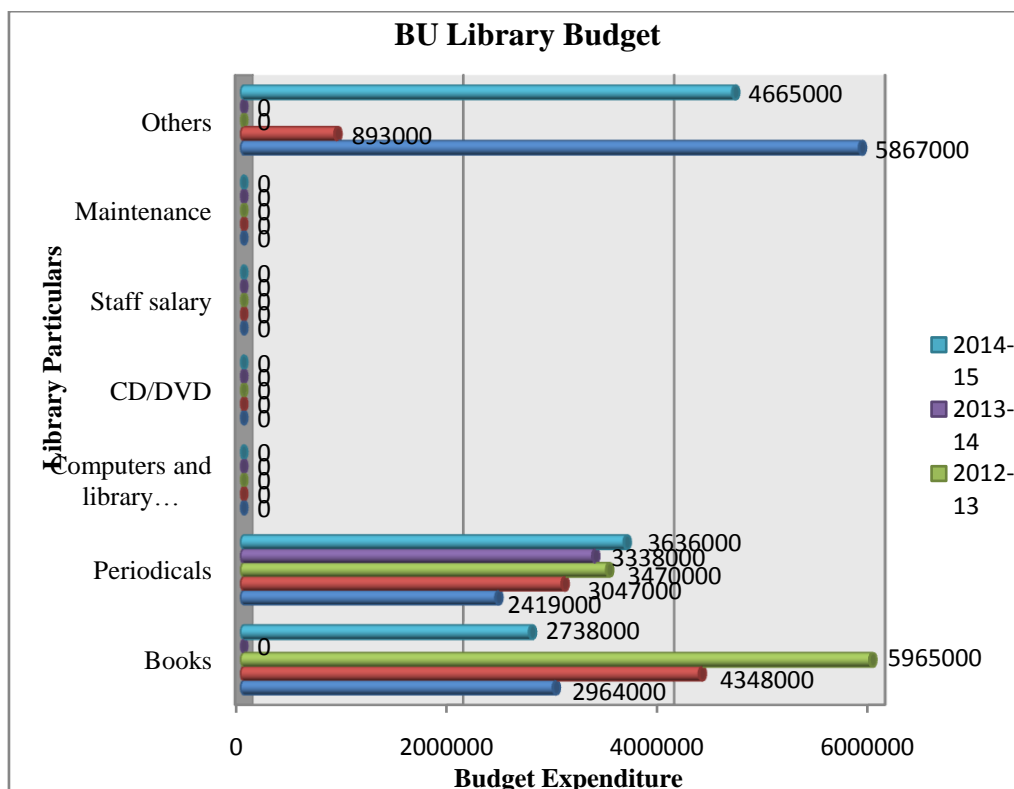


Fig. 5.12 BU Library Budget

Table 5.13 presents the annual budget of BU library and expenditure on different particulars of library since five years. Table shows that the library expended 29.64 lakh for books purchasing, 24.19 lakh for periodicals and 58.67 lakh for other expenditures in 2010-11; it expended 43.48 lakh for books, 30.47 lakh for periodicals, 8.93 lakh for others expenditure in 2011-12; library expended 59.65 lakh for books and 34.70 lakh to subscribe periodicals in 2012-13; It expended 33.38 lakh to subscribe periodicals only in 2013-14 and it has expended 27.38 lakh to books purchasing, 36.36 lakh to periodicals and 46.65 for other expenditures in 2014-15. It could be seen that the expenditure on books was increasing till 2012-13 and it is getting down in 2014-15. Library has not spent budget on purchasing books in 2013-14. The expenditure on periodicals is increasing continuously since five years. The library has not provided the expenditure on other particulars i.e. computer lab and equipments, library automation, CD/DVD, staff salary, maintenance etc.

5.2.14 Budget of SPMV Library

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
Books	1300000	-	1200000	-	900000
Periodicals	400000	400000	400000	-	400000
Computers/Library Automation and Networking (including Internet/ Other)	1000000	-	-	-	-
CD/ DVD	-	-	-	-	-
Staff salary	3200000	3800000	4400000	5200000	6000000
Maintenance	-	-	-	-	-
Others	2000	2000	2000	2000	2000
Total	5902000	4202000	6002000	5202000	7302000

Table 5.14

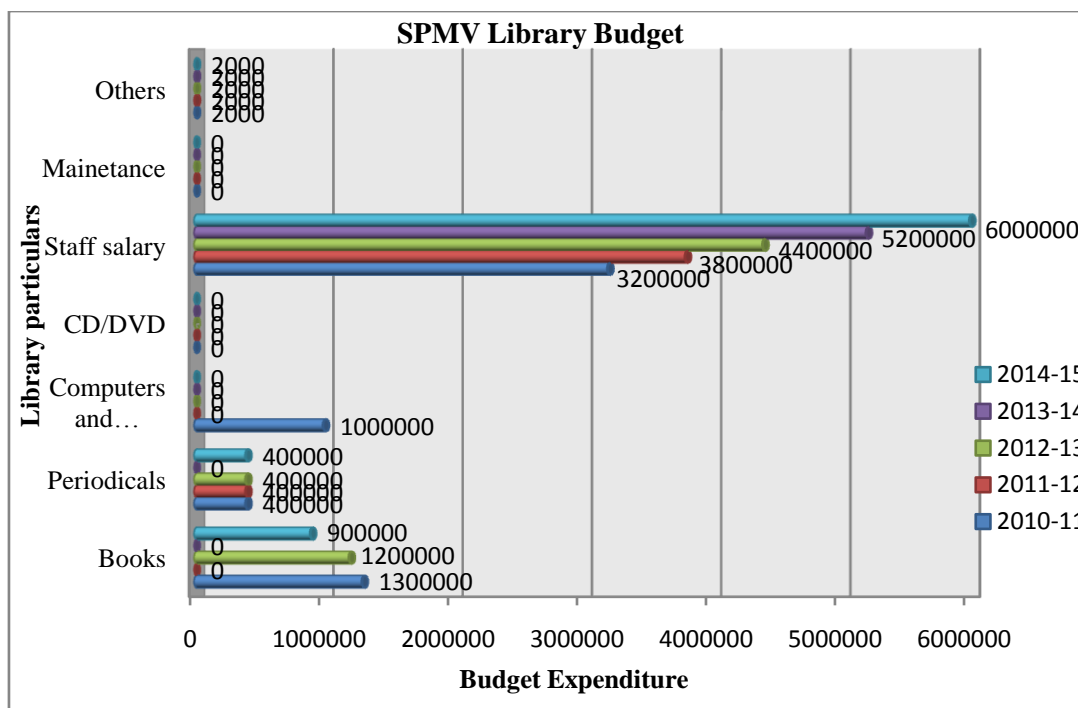


Fig. 5.13 SPMV Library Budget

Table 5.14 presents the budget of SPMV library and expenditure on library particulars since five years. According to the table library expended 13 lakh in 2010-11, 12 lakh in 2012-13 and 9 lakh in 2014-15 to purchasing new books. It is expending 4 lakh to subscribe periodical in every years. Library expended 10 lakh on IT infrastructure i.e. computers, library automation, networking and equipments in 2010-11. It also provide the expenditure on staff salary which is 32 lakh in 2010-11, 38 lakh in 2011-12, 44 lakh in 2012-13, 52 lakh in 2013-14 and 60 lakh in 2014-15. Library also spends 2000 for contingency in every year. The table shows that the expenditure of books is decreasing, periodical expenditure is constant and staff salary is increasing in every year.

5.2.15 Budget of AU Library

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
Books	950000	975000	1000000	1000000	1100000
Periodicals	2500000	2700000	3000000	3200000	3700000
Computers/Library Automation and Networking (including Internet/ Other)	200000	200000	1300000	1400000	1500000
CD/ DVD	10000	11000	11500	12000	12500
Staff salary	-	-	-	-	-
Maintenance	50000	55000	60000	65000	95000
Others	1000000	1250000	1500000	1550000	1575000
Total	4710000	5191000	6871500	7227000	7982500

Table 5.15

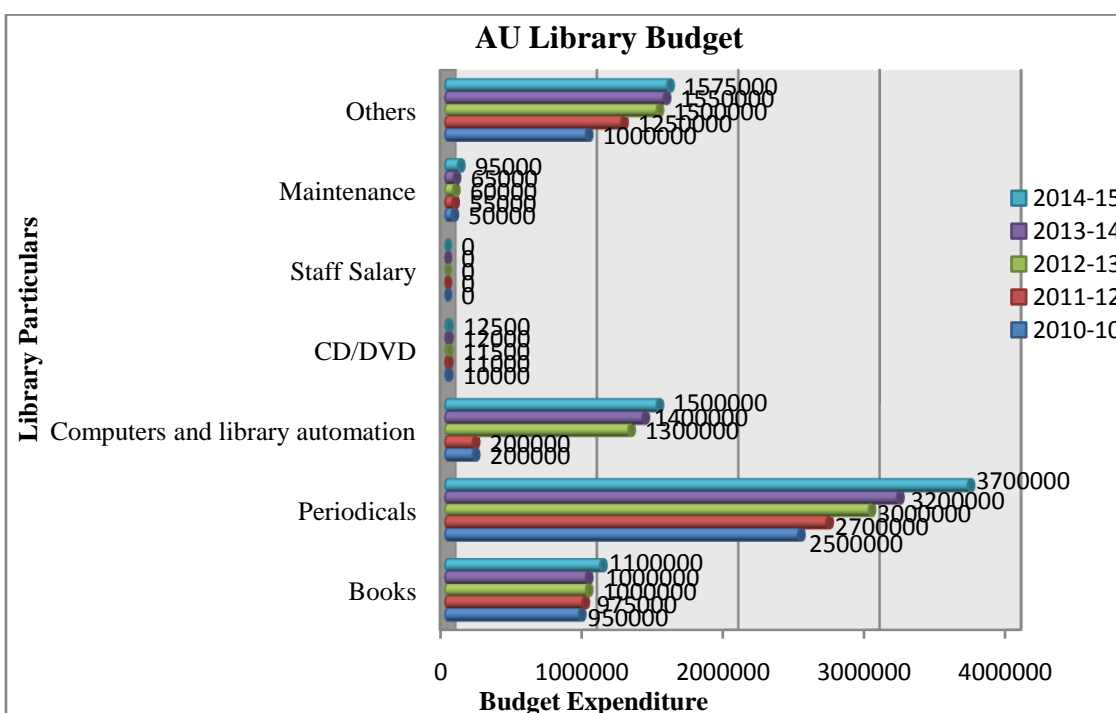


Fig. 5.14 AU Library Budget

Table 5.15 presents the budget of AU library and expenditure on different parts of library. The library expended 9.5 lakh in 2010-11, 9.75 lakh in 2011-12, 10 lakh in 2012-13, 10 lakh in 2013-14 and 11 lakh in 2014-15 to purchasing books. The data shows that the expenditure on books is increasing and library collection is growing in every year. Library expended 25 lakh in 2010-11, 27 lakh in 2011-12, 30 lakh in 2012-13, 32 lakh in 2013-14 and 37 lakh in 2014-15 for subscribe periodicals.

It seems that library budget is increasing to subscribe periodical that means more than more periodicals are subscribing in every year. This library expends on IT infrastructure and its maintenance in every year which as 2 lakh in 2010-11, 2 lakh in 2011-12, 13 lakh in 2012-13, 14 lakh in 2013-14 and 15 lakh in 2014-15. The data shows that the library focuses on maintenance of computers, library automation, equipments, and networking etc. continuously in every year. According to the table the expenditure on CD/DVD, library maintenance and others is increasing in every year. It could be seen that this library is growing continuously with all the particulars of library.

5.2.16 Budget of IGDTUW Library

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
Books	1000000	1200000	1300000	1600000	1800000
Periodicals	3000000	3000000	4200000	6000000	6200000
Computers/Library Automation and Networking (including Internet/ Other)	-	-	-	-	-
CD/ DVD	-	-	-	-	-
Staff salary	-	-	-	-	-
Maintenance	-	-	-	-	-
Others	-	-	-	-	-
Total	4000000	4200000	5500000	7600000	8000000

Table 5.16

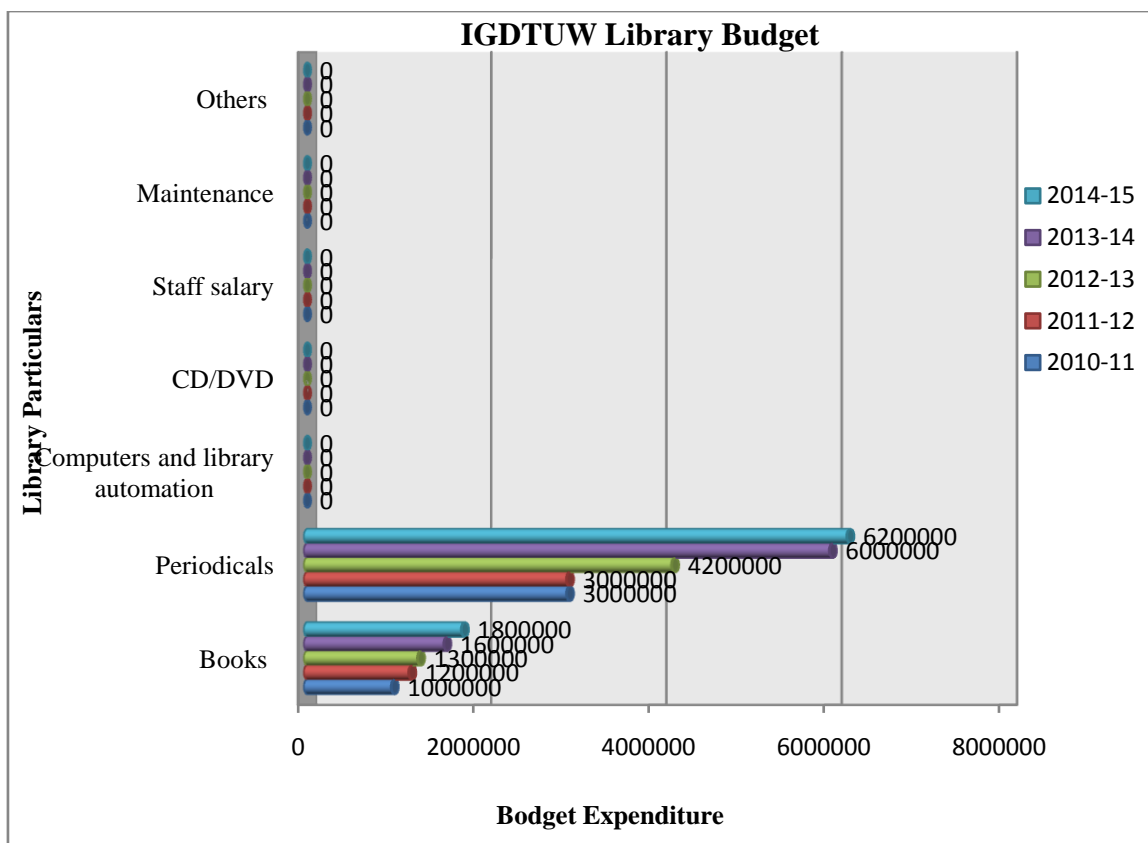


Fig. 5.15 IGDTUW Library Budget

Table 5.16 shows the budget of IGDTUW library. It has provided the data of expenditure on books and periodicals only. The library expended 10 lakh in 2010-11, 12 lakh in 2011-12, 13 lakh in 2012-13, 16 lakh in 2013-14 and 18 lakh in 2014-15 to purchasing books. It expended 30 lakh in 2010-11, again 30 lakh in 2011-12, 42 lakh in 2012-13, 60 lakh in 2013-14 and 62 lakh in 2014-15 for subscribing periodicals. It seems that library budget is increasing continuously. Library has not provided the other expenditures i.e. computers, networking, equipments, staff salary, maintenance and others.

.2.17 Budget of KSWU Library

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
Books	759964	2458468	1510619.50	1615717	-
Periodicals	70821	80519	88341	64748	-
Computers/Library Automation and Networking (including Internet/ Other)	-	-	-	-	-
CD/ DVD	-	-	-	-	-
Staff salary	-	-	-	-	-
Maintenance	-	-	-	-	-
Others	-	-	-	-	-
Total	830785	2538987	1598960.50	1680465	-

Table 5.17

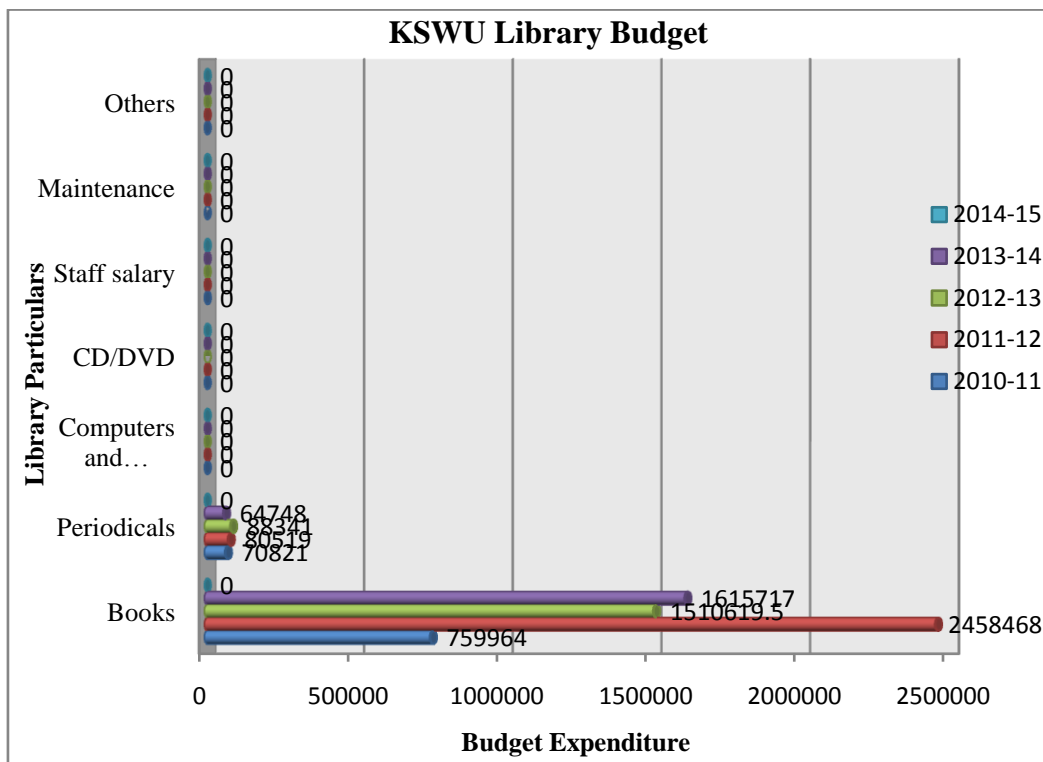


Fig. 5.16 KSWU Library Budget

Table 5.17 presents the budget of KSWU library. This library has provided four years budget and expenditure on books, periodicals since 2010-11 to 2013-14. It expended 759964 for books and 70821 for periodicals in 2010-2011, 2458468 for books and 80519 for periodicals in 2011-12, 1510619.50 for books and 88341 for

periodicals in 2012-13, 1615717 for books and 64748 for periodicals in 2013-14. It seems that the library budget is increasing in every year.

5.2.18 Budget of BPSMW Library

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
Books	-	-	7800000	8835895	1000000
Periodicals	-	50000	900000	1700000	-
Computers/Library Automation and Networking (including Internet/ Other)	-	-	50000	150000	100000
CD/ DVD	-	-	-	-	-
Staff salary	-	-	-	-	-
Maintenance	-	200000	200000	300000	300000
Others	-	-	-	-	-
Total	-	250000	8950000	10985895	1400000

Table 5.18

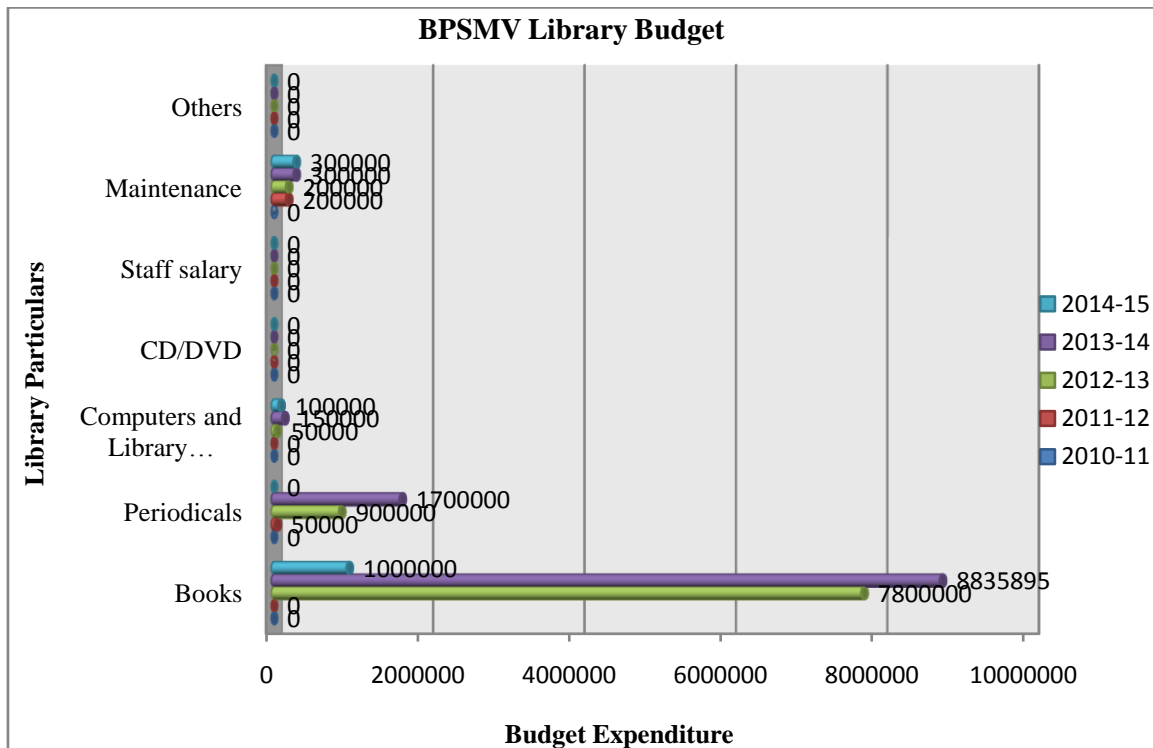


Fig. 5.17 BPSMV Library Budget

Table 5.18 is to present the library budget of BPSMV. The Library provided the data about expenditures on books, periodicals, computers, networking and

maintenance of library since four years. It expended 50 thousand on subscribing periodicals, 2 lakh on library maintenance in 2011-12; it expended 78 lakh for books, 9 lakh for periodicals, 50 thousand for computers and networking, 2 lakh on library maintenance in 2012-13; library expended 8835895 lakh on books, 17 lakh for periodicals, 1.5 lakh for computers and networking and 03 lakh on library maintenance in 2013-14 which is the highest amount of budget expended ever in this library. Library has expended 10 lakh for books, 01 lakh expenditure for computers and networking and 3 lakh expended for library maintenance in 2014-15.

5.2.19 Library budgets of all womens' universities (in lakh)

S. No	Library	2010-11	2011-12	2012-13	2013-14	2014-15
1	SNDT	6,30,000	9,08,000	31,57,000	31,55,000	29,13,000
2	BU	1,12,50,000	82,88,000	94,35,000	33,38,000	1,10,39,000
3	SPMV	59,02,000	42,02,000	60,02,000	52,02,000	73,02,000
4	MTWU	-	-	-	-	-
5	AU	47,10,000	51,91,000	68,71,500	72,27,000	79,82,500
6	IGDTUW	40,00,000	42,00,000	55,00,000	76,00,000	80,00,000
7	KSWU	8,30,785	25,38,987	15,98,960.50	16,80,465	—
8	BPSMV	—	2,50,000	89,50,000	1,09,85,895	14,00,000
9	MUST	-	-	-	-	-

Table 5.19

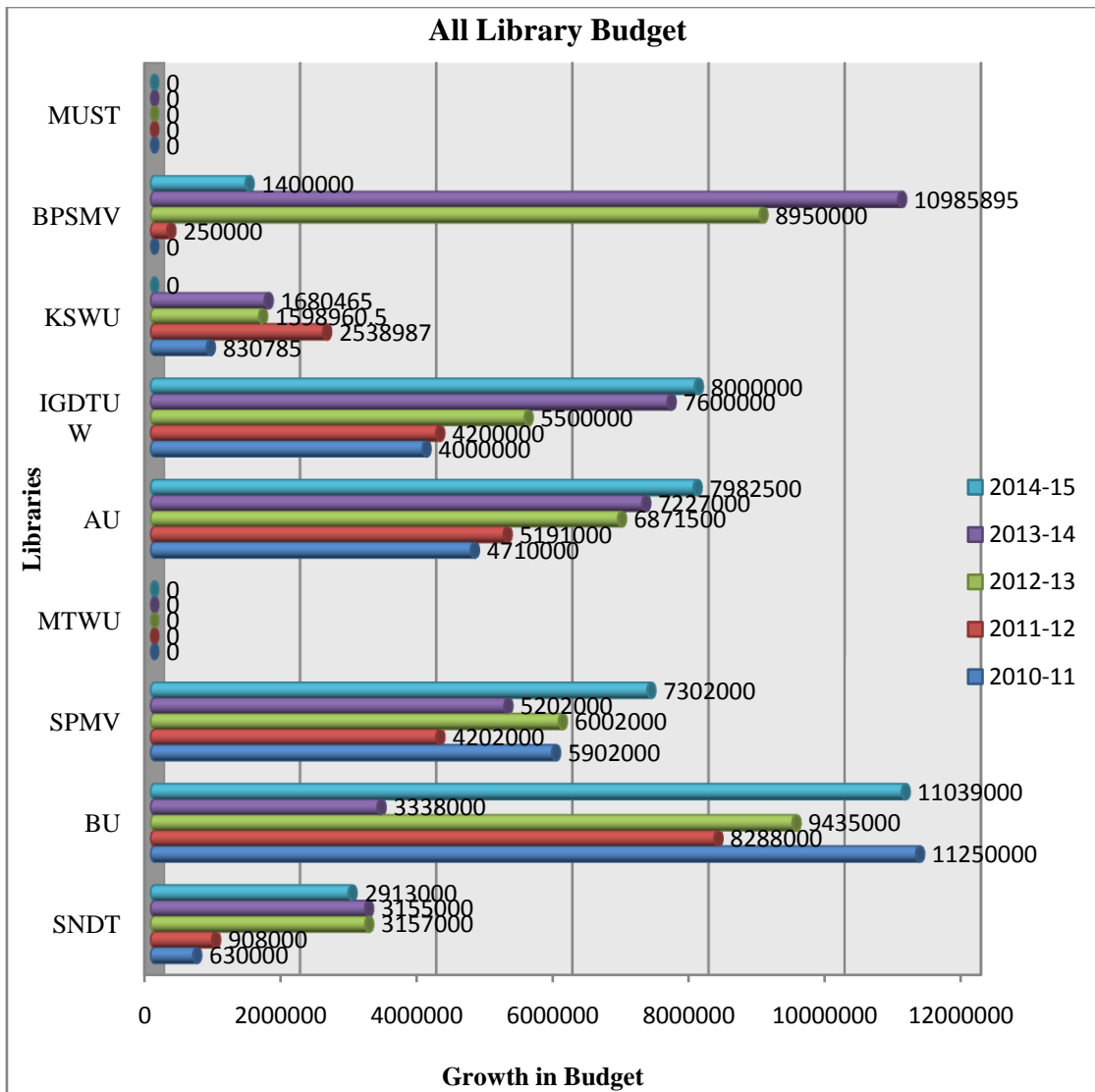


Fig. 5.18 Growth in all Library Budget

Table 5.19 presents the data about library budgets of all womens’ universities since five years in a comparative way. 07 libraries have provided the data of annual budget while 02 libraries including MTWU and MUST have not provided the budget data. This table shows the budget amounts from 2010-11 to 2014-15 which expended on libraries in womens’ university. According to figures of amount SNDT library budget was increasing since 2010-11 2012-13 but since 2013-14 it seems in decreasing position. BU library shows ups and downs in the figures of budget amount but it seem highly amount of allocated budget for library according to the others libraries. SPMV shows its library budget in zig zag position since five years. The

library budget was decreasing from 2010-11 to 2011-12 then it was increased in 2012-13 then it was decreased again in 2013-14 and again increased in 2014-15. AU and IGDTUW library budgets are increasing continuously since five years according to the figures shown in table. KSWU library budget seems lowest amount figure comparatively to other libraries. It was increasing in 2010-11 to 2011-12 but it was decreased in 2012-13 to 2013-14. Library has not provided the budget of 2014-15. BPSMV library has provided the budget of 2011-12 with 250000 lakh figure which seems very least amount of allocated budget. The library budget increased 250000 to 8950000 in 2012-13 and to 10985895 in 2013-14. In 2014-15 the library budget has decreased.

5.2.20 Library collection of Printed Documents

S. N.	Particular	SNDT	BU	SPMV	MTWU	AU	IGDTUW	KSWU	BPSMV	MUST
1	Books	70103	186276	80000	70000	135330	23059	85405	100000	56633
2	Journals subscribed	120	325	250	30	250	-	375	60	231
3	Back volumes	-	17112	10000	500	13293	-	-	30000	-
4	Magazines	-	19		20	40	25	-	160	-
5	Theses/ dissertation	2652	3157	1200	2600	8996	500	1356	-	-
6	News papers	05	12	13	07	20	11	22	22	-
7	Reports	265	5703	800	200	10643	-	-	-	-
8	Patents/ standards	-	-		100	-	-	-	-	-
9	Manuscripts	-	05	-	200	-	-	-	-	-
10	Other	-	-	-	100	350	-	-	-	-
	Total	73145	212609	92263	73757	168922	23595	87158	130242	56864
$\chi^2 = 115777.101$, DF = 72 and p-value = 0.000 (≤ 0.05 significant)										

Table 5.20

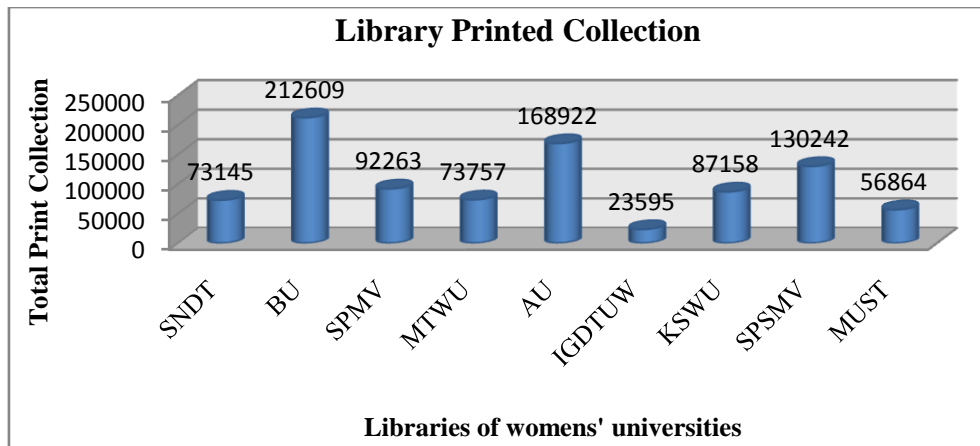


Fig. 5.19 Library Printed Collection

Table 5.20 presents the strength of library collection of printed documents including Books, Journals, Back volumes, Magazines, Thesis/Dissertations, Newspapers, Reports, Patents/Standards, and Manuscripts etc. in womens' university libraries. According to the data provided by the librarians, SNDT library has 70103 books, 120 journals subscribed, 2652 theses and dissertations, 05 news papers and 265 reports. The Total print collection is 73145 which are available in library. BU library has total 212609 print collections which is the highest collection compare to other libraries as shown in above table. It has 186276 books collection, 325 of journals, 17112 of back volumes, 19 magazines, 3157 these and dissertations, 12 news papers, 5703 reports and 05 manuscripts. SPMV library has total 92263 printed collection including 80000 of books, 250 journals, 10000 back volumes, 1200 theses and dissertations, 13 news papers and 800 reports. MTWU library has 73757 total printed collection including 70000 of books, 30 journals, 500 back volumes, 20 magazines, 2600 theses and dissertations, 07 newspapers, 200 reports, 100 patents, 200 manuscripts and 100 other collection. Only this library has patent collection compare to other libraries of womens' university. AU library has total 168922 printed collections which is the second highest collect of womens' university libraries. It has

135330 books, 250 journals, 13293 back volumes, 40 magazines, 8996 theses and dissertations, 20 newspapers, 10643 reports and 350 other collection. IGDTUW library is a digital library so it has the least collection of printed collection compare to other libraries. It has 23059 books, 25 magazines, 500 theses and dissertation and 11 newspapers only. KSWU library has total 87158 printed collection including 85405 of books, 375 journals, 1356 theses and dissertations and 22 newspapers. BPSMV library has 130242 printed collection including 100000 books, 60 journals, 30000 back volumes, 160 magazines and 22 newspapers. MUST library has 56633 books and 231 journals collection only. It has not provided data on other collection.

Null Hypothesis H₀: There is no significant difference in the view of library collection with regards to printed documents in different universities.

Alternative Hypothesis H₁: There is a significant difference in the view of library collection with regards to printed documents in different universities.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 115777.101$ and $p = 0.000$ (≤ 0.05 significant), There is a significant difference in the view of library collection with regards to printed documents in different Universities.

5.2.21 Collection of Non- printed Documents and Special Collection

S. N.	Particular	SNDT	BU	SPMV	MTWU	AU	IGD TUW	KSWU	BPSMV	MUST
1	CDs/DVDs/Databases	2499	1716	300	100	2050	-	-	407	-
2	Video films	-	28	-	-	-	-	-	-	-
3	Audio films	-	269	-	-	-	-	-	-	-
4	E- Documents	-	-	-	200	-	1100	-	-	5220
5	Special collection	YES	NO	NO	NO	YES	-	-	YES	-
	Total	2499	2013	300	300	2050	1100	-	407	5220
$\chi^2 = 15168.021$, DF = 21 and p-value = 0.000 (≤ 0.05 significant)										

Table 5.21

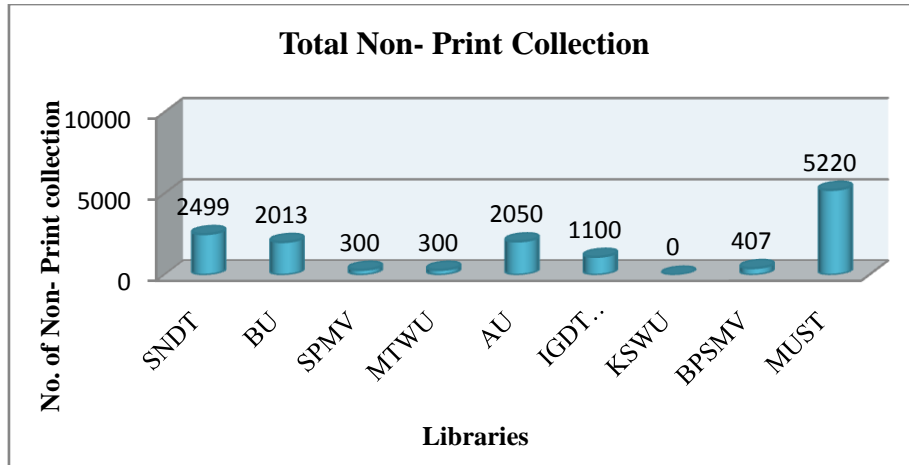


Fig. 2.20 Total Non- Print Collection

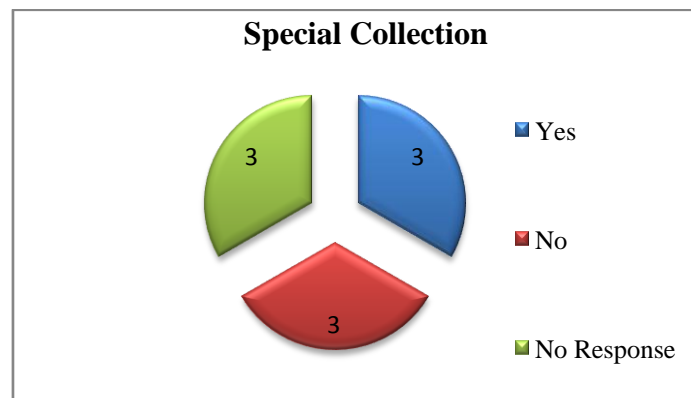


Fig 2.21 Special Collection

Table 5.21 presents the data about non-printed documents i.e. CDs/DVDs databases, Video films, Audio films, e- documents and any special collection (if any) in womens' university libraries. According to the table SNDT library has 2499 total collection of CDs and DVDs and it has special collection of Ghandhian and Malshe collection. BU library has 2013 total collection of non- prints including 1716 of CDs/DVDs, 28 videos and 269 audios. SPMV and MTWU have only 300 non-print collections respectively. AU library has 2050 CDs/DVDs and also has special collection of UN collection. IGDTUW has 1100 e- documents in its digital library. BPSMV has only 407 of CDs/DVDs and also has a special collection of 1000 donated books. MUST library has 5220 e- documents.

Null Hypothesis H₀: There is no significant difference in the view of library collection with regards to non- printed documents and special collection in different Universities.

Alternative Hypothesis H₁: There is a significant difference in the view of library collection with regards to non- printed documents and special collection in different Universities.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 15168.021$ and $p=0.000 (\leq 0.05 \text{ significant})$, There is a significant difference in the view of library collection with regards to non- printed documents and special collection in different Universities.

5.2.22 Measurement to promote the use of e- resources within University

S. No.	Library	Provide links from home page	Oriental programme for users	E- mail/ Internet mailing link
1	SNDT	YES	YES	YES
2	BU	YES	YES	YES
3	SPMV	NO	NO	NO
4	MTWU	YES	YES	-
5	AU	YES	YES	YES
6	IGDTUW	YES	YES	-
7	KSWU	YES	-	-
8	BPSMV	YES	YES	-
9	MUST	-	-	-

Table 5.22

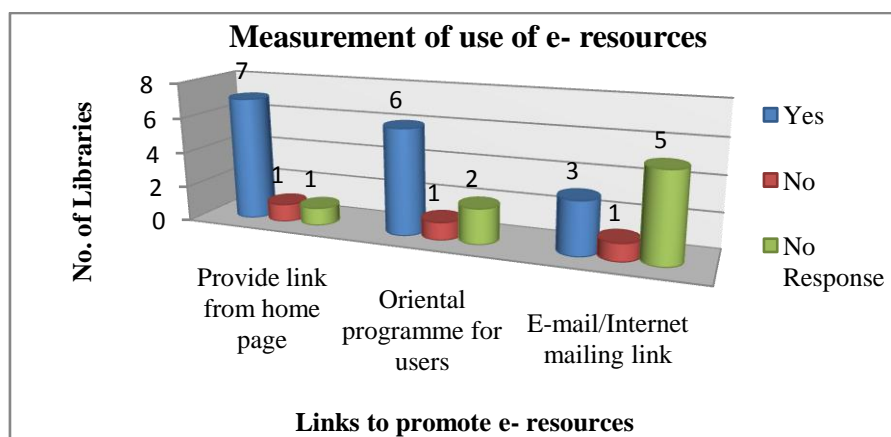


Fig. 5.22 Measurement of use of e- resources

Table 5.22 shows the opinions of librarians on measurement to promote the use of e- resources within university. SNDT, BU and AU libraries provide links from home page of library websites, conduct oriental programmes for users and provide e-mail/ internet mailing links to users to promote the use of e-resources within university. MTWU, IGDTUW and BPSMV libraries provide links from home page of library websites and conduct oriental programmes for users while KSWU provides links from home page only. SPMV has given negative response on it and MUST has not respond.

5.2.23 Books added in Library collection every year

S. No.	Library	2009-10	2010-11	2011-12	2012-13	2013-14	Total
1	SNDT	825	857	1309	2120	2713	7824
2	BU	9346	4399	4662	5247	4179	27833
3	SPMV	1900	-	2000	-	-	3900
4	MTWU	-	-	-	-	-	-
5	AU	-	-	-	-	-	-
6	IGDTUW	1000	1300	3000	3200	3500	12000
7	KSWU	-	1485	2446	2651	3595	10177
8	BPSMV	5987	1660	7245	2756	3000	20137
9	MUST	-	-	-	-	-	-

$\chi^2 = 16594.306$, DF = 20 and p-value = 0.000 ($\leq .05$ significant)

Table 5.23

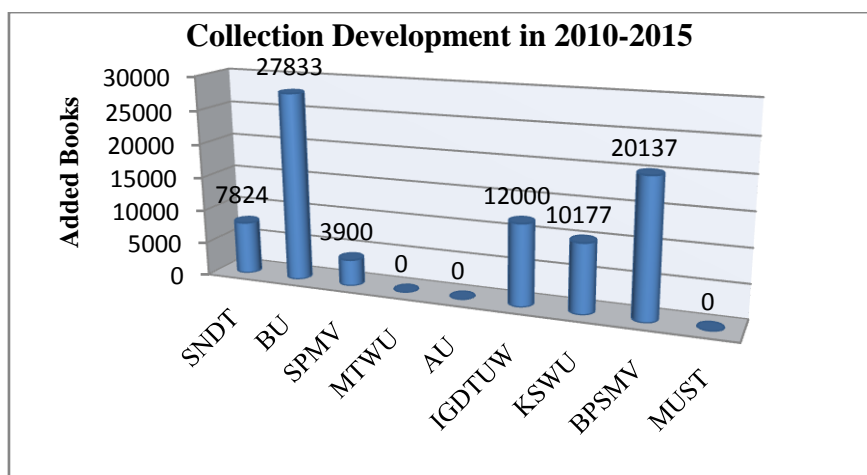


Fig. 5.23 Collection Development in 2010-2015

Table 5.23 presents the data about books added in library collection in every year since 2009-10 to 2013-14. SNTD has added 7824 books in library since last five year which seems that it is continuously increasing their library collection. BU library has added 27833 books in library collection which is the largest figure of added books compare to other libraries but in table it seems the decreasing order of added books in every year. SPMV added 3900 books according to the table which is representing irregularity in development of library collection. IGDTUW added 12000 books since last five years and increase the library collection continuously. KSWU added 10177 books and BPSMV added 20137 new books in last five year. MTWU, AU, MUST did not respond.

Null Hypothesis H₀: There is no significant difference in the view of library collection in every year with regards to addition of books per year in different universities.

Alternative Hypothesis H₁: There is a significant difference in the view of library collection in every year with regards to addition of books per year in different universities.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 16594.306$ $p=0.000$ (≤ 0.05 significant), There is a significant difference in the view of library collection in every year with regards to addition of books per year in different university.

5.3 LIBRARY SERVICES MANAGEMENT

This part of data analysis is to presents the strength of students in womens' universities; the conventional (Traditional) services and non- conventional (online) services which are providing in womens' university libraries. It also presents the other activities of library which is to support the library services.

5.3.1 Strength of Students in Womens' Universities

S. No.	University	PG students	M.Phil/ Ph.D	Faculty	Other Staff	Guest Visitors	Others	Total
1	SNDT	1894	19	184	-	122	05	2224
2	BU	-	-	-	-	-	-	9000
3	SPMV	2500	200	250	430	50	-	3430
4	MTWU	673	30	15	30	20	40	808
5	AU	1638	885	600	430	109	-	3662
6	IGDTUW	-	-	-	-	-	-	2000
7	KSWU	1200	115	49	113	12	30	1519
8	BPSMV	-	-	-	-	-	-	7000
9	MUST	-	-	-	-	-	-	2243
$\chi^2 = 2471.986$, DF = 20 and p-value = 0.000 ($\leq .05$ significant)								

Table 5.24

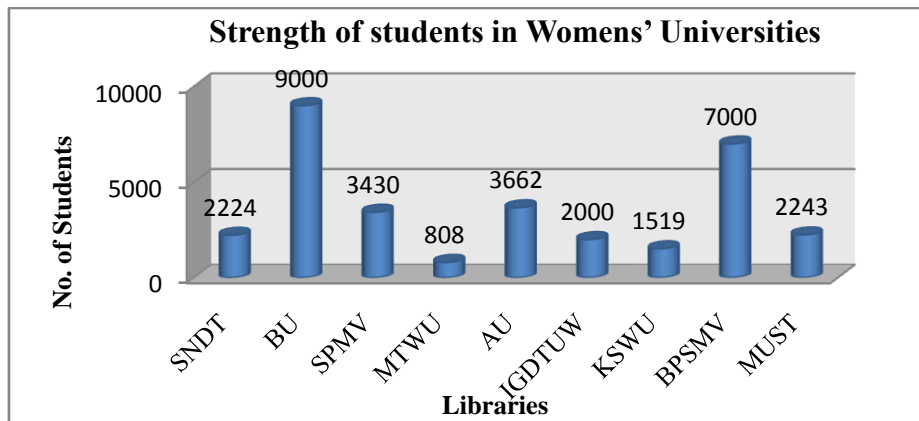


Fig. 5.24 Strength of students in Womens' Universities

Table 5.24 presents the total strength of registered students in womens' universities including PG students, M.Phil and Ph.D Research scholars, Faculty, Non faculty, Guest Visitors and others. According to the table SNDT library has 2224 registered users, BU library has 9000 users, SPMV library has 3430, MTWU has only 808 users, AU library has 3662 users, IGDTUW library has 2000, KSWU has 1519 users BPSMV library has 7000 users and MUST library has 2243 registered users.

Null Hypothesis H_0 : There is no significant difference in strength of students in different womens' universities.

Alternative Hypothesis H₁: There is a significant difference in strength of students in different womens' universities.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 2471.986$ $p = 0.000$ (≤ 0.05 significant), There is a significant difference in strength of students in different womens' universities.

5.3.2 Conventional Services providing by these Libraries

S. No	Services	SNDT	BU	SPMV	MTWU	AU	IGD TUW	KSW U	BPSM V	MUST
1	CAS/SDI	YES	YES	YES	YES	YES	-	-	YES	YES
2	Indexing/ Abstracting	YES	NO	YES	YES	YES	-	-	YES	-
3	Bibliographic	YES	YES	YES	YES	YES	-	YES	YES	YES
4	Reprographic	YES	YES	NO	YES	YES	-	YES	YES	YES
5	News paper clipping	YES	YES	YES	YES	YES	-	YES	YES	YES
6	Inter library loan	YES	YES	NO	YES	YES	-	YES	YES	YES
7	Generate reminder for overdue books	YES	YES	YES	YES	YES	YES	YES	YES	YES
8	Provide recent additions list	YES	YES	YES	YES	YES	YES	YES	YES	YES
9	Provide individual alert services	YES	NO	YES	YES	YES	-	YES	-	YES
10	Status of issue/return date provided to users	YES	YES	YES	YES	YES	-	YES	YES	YES

Table 5.25

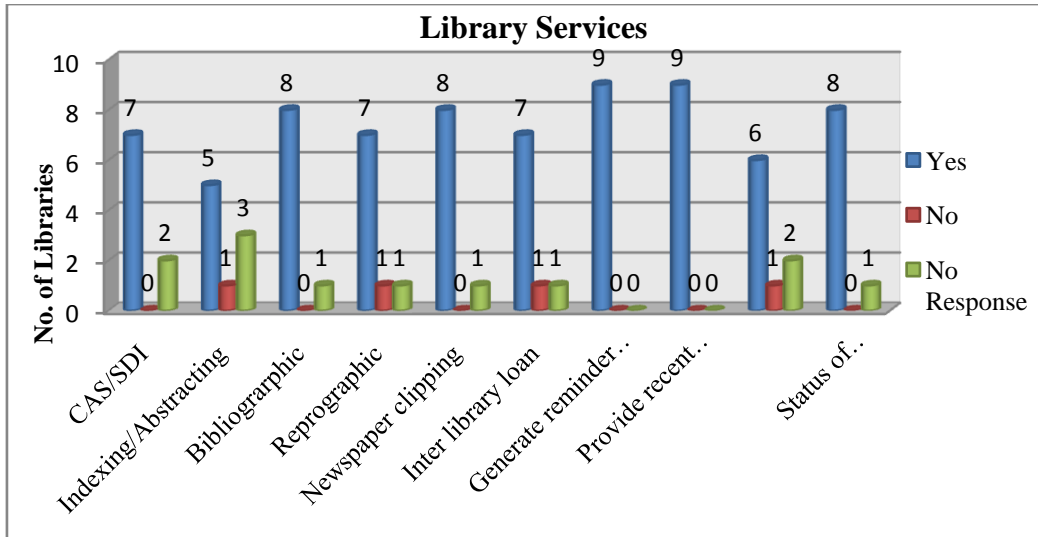


Fig. 5.25 Library Services

Table 5.25 shows status of library services in womens' university libraries. According to the table SNDT, MTWU and AU libraries provide all the library services to users i.e. CAS/SDI, Indexing/ Abstracting, Bibliographic, Reprographic, News paper clipping, Inter library loan, Generate reminder for overdue books, Provide recent additional list, provide individual alert services, status of issue/ return date provided to users. BU library provides almost all library services to users but it is not provide indexing and abstracting service and individual alert services. SPMV library provides all other library services except reprographic and inter library loan services to users. IGDTUW library is a digital library so it generates reminder for overdue books and provides recent additions list to users, on the rest of services mentioned above it has not respond. KSWU library also provides all other services except CAS/SDI and indexing/abstracting services. BPSMV library provides all the library services to users except the individual alert service. MUST library also provides all the other services but it is not provide Indexing/Abstracting service.

5.3.3 Non - conventional Services providing by these Libraries

S. No	Services	SNDT	BU	SPMV	MTWU	AU	IGDTU W	KS WU	BPS MV	MUS T
1	OPAC	YES	YES	YES	YES	YES	YES	-	YES	YES
2	CD-ROM Database	YES	YES	YES	YES	YES	-	-	-	YES
3	Content pages	YES	YES	YES	YES	-	-	-	-	YES
4	E-reference	YES	YES	NO	YES	YES	-	YES	YES	YES
5	Online access to databases	YES	YES	NO	YES	YES	-	-	YES	YES
6	Access to internet in library	YES	YES	YES	YES	YES	YES	YES	YES	YES
7	Access to other library database	YES	NO	NO	YES	YES	YES	-	YES	YES
8	Access to e- journals	YES	YES	YES	YES	YES	YES	YES	YES	YES
9	Access to internet resources through library portal	YES	YES	NO	YES	YES	-	YES	YES	YES

Table 5.26

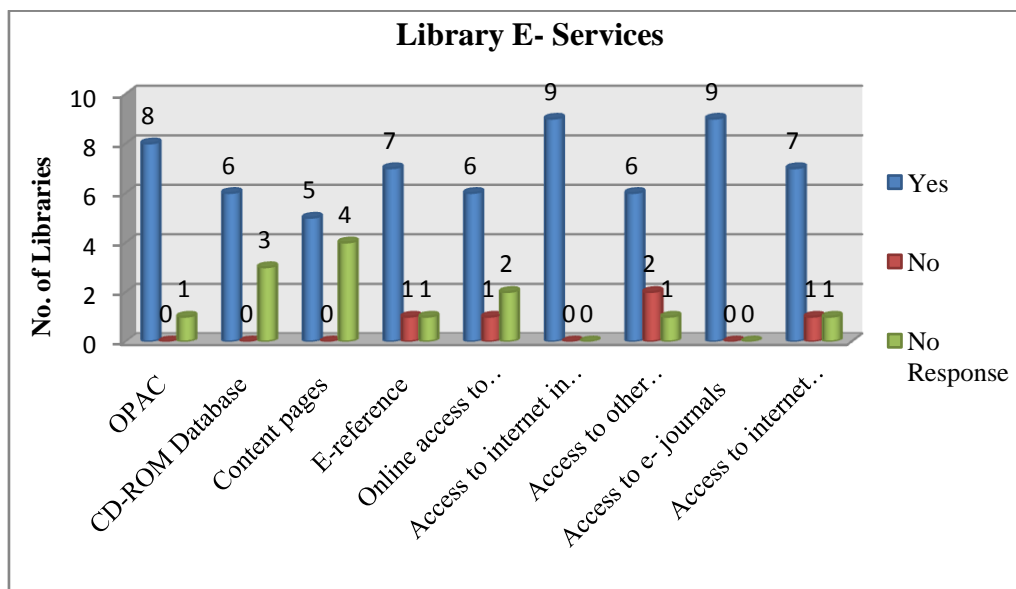


Fig. 5.26 Library E- Services

Table 5.26 shows the non-conventional services providing by womens' university libraries. According to the table SNDT, MTWU, AU and MUST libraries are providing all the non- conventional services including OPAC, CD-ROM database, content pages, E-reference, Online access to database, Access to internet in library, Access to other library database, Access to e- journals and Access to internet resources through library portal. BU library provides all the other online services

except of access to other library databases. SPMV library provides OPAC, CD-ROM database, Content pages, Access Internet in library and Access to e- journals but rest of the services are not providing by this library. IGDTUW library provides OPAC, Internet, access to other library databases and e- journals but for other services it has not respond. KSWU library provides e- reference, access to internet in library, access to e- journals and access to e- resources through library portal only but for rest of the services it has not given the response. BPSMV library provides all the other e- services except CD-ROM database and Content pages services to users.

5.3.4 User Education provided by Libraries

S. No.	Library	To use catalogue	To find document from the shelves	To use OPAC	To use e-resources	To access Internet
1	SNDT	YES	YES	YES	YES	YES
2	BU	YES	YES	YES	YES	YES
3	SPMV	YES	YES	YES	NO	YES
4	MTWU	YES	YES	YES	YES	YES
5	AU	YES	YES	YES	YES	YES
6	IGDTUW	YES	YES	YES	YES	YES
7	KSWU	YES	YES	NO	YES	YES
8	BPSMV	YES	YES	YES	YES	YES
9	MUST	YES	YES	YES	YES	YES

Table 5.27

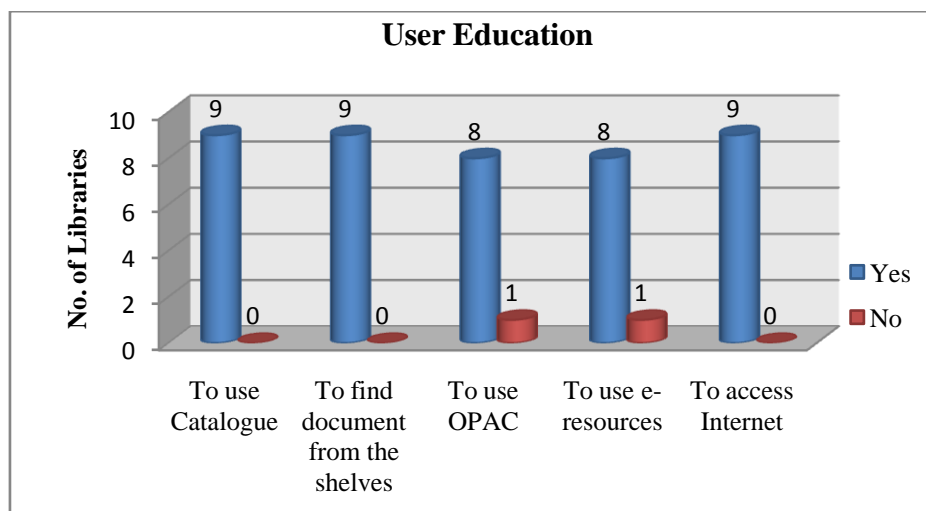


Fig. 5.27 User Education

Table 5.27 is about the user education providing by the womens' university libraries. This table presents different aspects for users in library where user education is necessity to provide by the library i.e. to use catalogue, to find document from the shelves, to use OPAC, to use e- resources and to access Internet. Based on the data all the libraries of womens' universities are providing user education for use of library services and sources while SPMV is not providing user education to use e- resources and KSWU is not providing user education to use OPAC only.

5.3.5 Other activities conducted by Libraries

S. No.	Library	Training to staff	Conferences/ seminars	Book exhibition
1	SNDT	YES	YES	YES
2	BU	YES	NO	YES
3	SPMV	YES	NO	YES
4	MTWU	YES	YES	YES
5	AU	YES	YES	YES
6	IGDTUW	YES	NO	YES
7	KSWU	YES	YES	YES
8	BPSMV	YES	YES	YES
9	MUST	YES	-	YES

Table 5.28

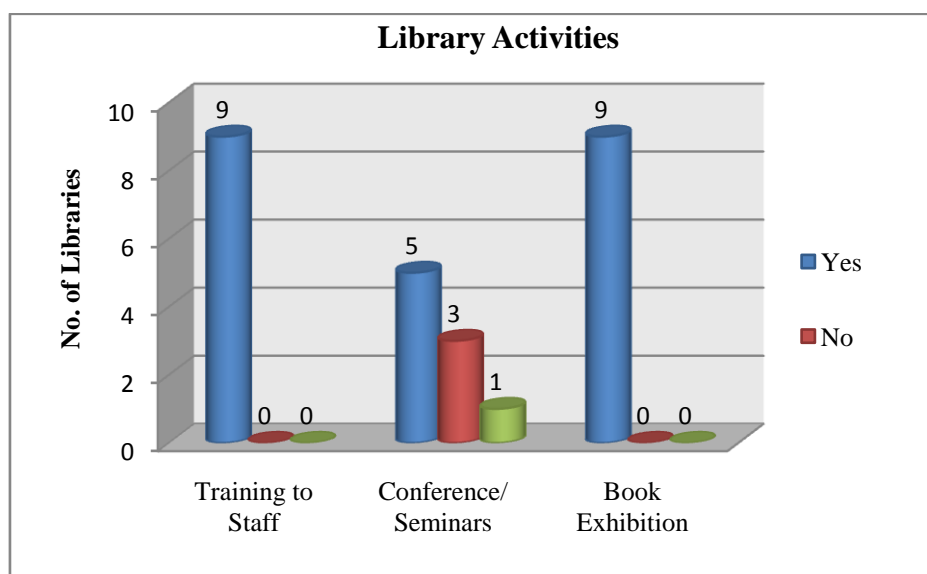


Table 5.28 Library Activities

Table 5.28 shows about the activities and programmes conducted by the libraries. According to this table all womens’ university libraries conduct training to their staff and book exhibition to library users but regarding to conferences and seminars 5 libraries including SNTD, MTWU, AU, KSWU and BPSMV conduct conferences or seminars while BU, SPMV and IGDTUW libraries are not conducting activities as conferences or seminars. MUST library did not respond on this.

5.3.6 Quality of Library Services

S. No.	Library	Library is based on user focus	Regular process improvement	Satisfied with utilization of resources
1	SNTD	YES	YES	NO
2	BU	YES	YES	YES
3	SPMV	YES	YES	YES
4	MTWU	YES	YES	YES
5	AU	YES	YES	NO
6	IGDTUW	YES	YES	YES
7	KSWU	YES	YES	YES
8	BPSMV	YES	YES	YES
9	MUST	YES	YES	YES

Table 2.29

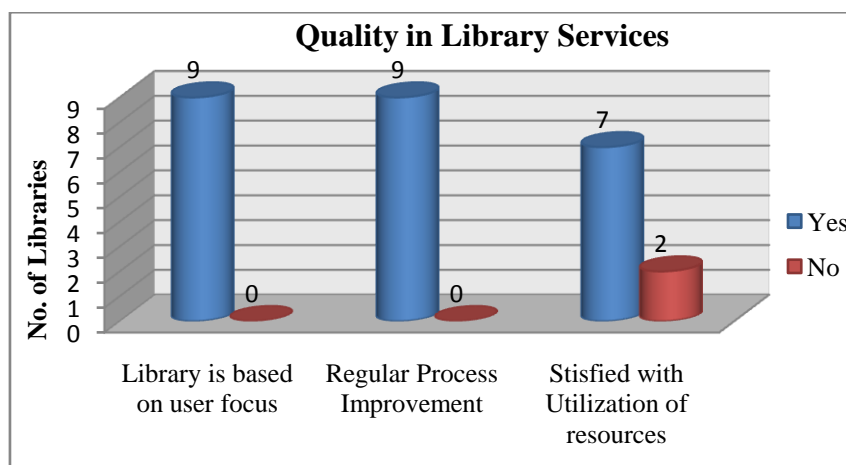


Fig. 5.29 Quality in Library Services

Table 5.29 is about the quality in library services in womens’ university libraries by the opinion of librarians. It shows that all the librarians admit that their

libraries are based on user focus with regular process of improvement in library services. Regarding to satisfaction with utilization of resources all other libraries are satisfied with utilization of library resources except of SNDT and AU libraries. Both of libraries feel that all resources of library are not utilized properly as these should be.

5.4 TOP MANAGEMENT SUPPORT

This part of data analysis is to present the top management support in management of library. It covers all the jobs of library management and committees to manage the library services. It also presents the status of total quality management in libraries of womens' universities.

5.4.1 Type of Administration in Library

S. No.	Library	Centralized	Decentralized
1	SNDT	-	YES
2	BU	-	YES
3	SPMV	-	YES
4	MTWU	-	-
5	AU	YES	-
6	IGDTUW	-	-
7	KSWU	-	-
8	BPSMV	YES	-
9	MUST	-	-

Table 5.30

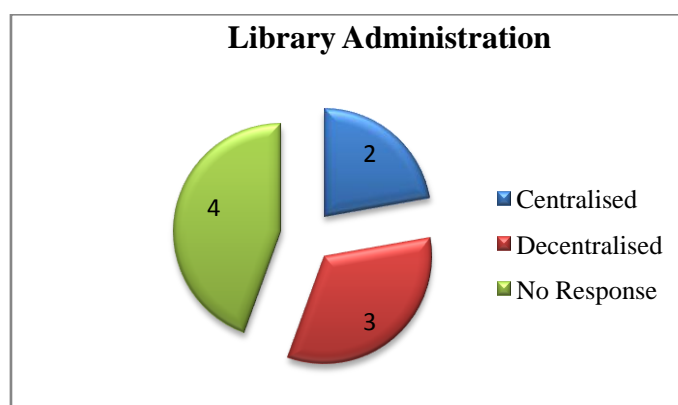


Fig. 5.30 Library Administration

Table 5.30 gives the information about the management of library which is centralized administrative or decentralized. SNDT, BU and SPMV libraries are decentralized administered and AU, and BPSMV are centralized administered while MTWV, IGDTUW, KSWU and MUST have not given any response on this.

5.4.2 Library Committee

S. No.	Library	Library committee	No. of members in library committee
1	SNDT	YES	10
2	BU	YES	08
3	SPMV	YES	05
4	MTWU	YES	05
5	AU	YES	10
6	IGDTUW	YES	-
7	KSWU	YES	-
8	BPSMV	YES	21
9	MUST	YES	-

Table 5.31

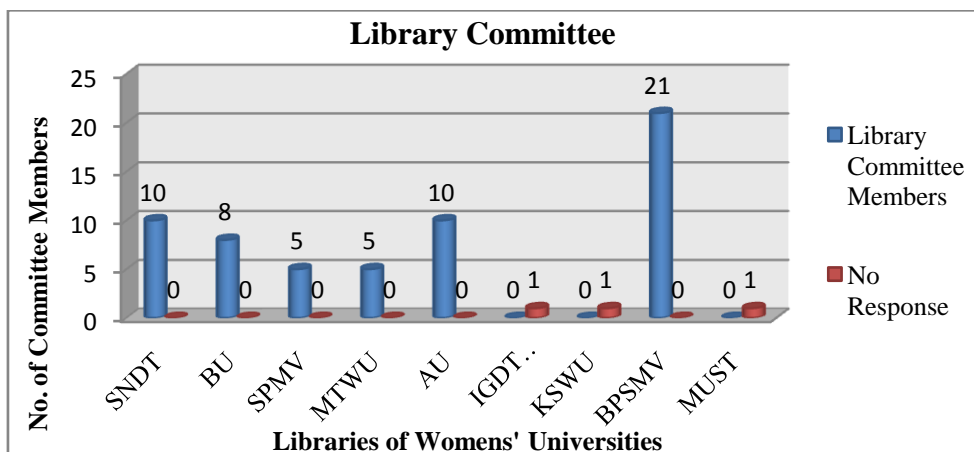


Fig. 5.31 Library Committee

Table 5.31 is about the library committee and total members of library committee in all these libraries. It shows that all the libraries of womens' university have a library committee. Regarding to the no. of members in library committee, SNDT library has 10 in library committee, BU library has 08 members, SPMV library

has 05 members only and MTWU library also has 05 members, AU library has 10 members in library committee and BPSMV library has 21 members in their library committee while other libraries have not given any response on their library members.

5.4.3 Frequency of committee meeting

S. No.	Library	Once in a month	Once in two months	Once in three months	Half yearly	Once in a year
1	SNDT	-	-	-	YES	-
2	BU	-	-	-	-	YES
3	SPMV	-	-	YES	-	-
4	MTWU	-	-	YES	-	-
5	AU	-	-	-	-	YES
6	IGDTUW	-	YES	-	-	-
7	KSWU	-	-	-	YES	-
8	BPSMV	-	-	-	YES	-
9	MUST	-	-	-	-	-

Table 5.32

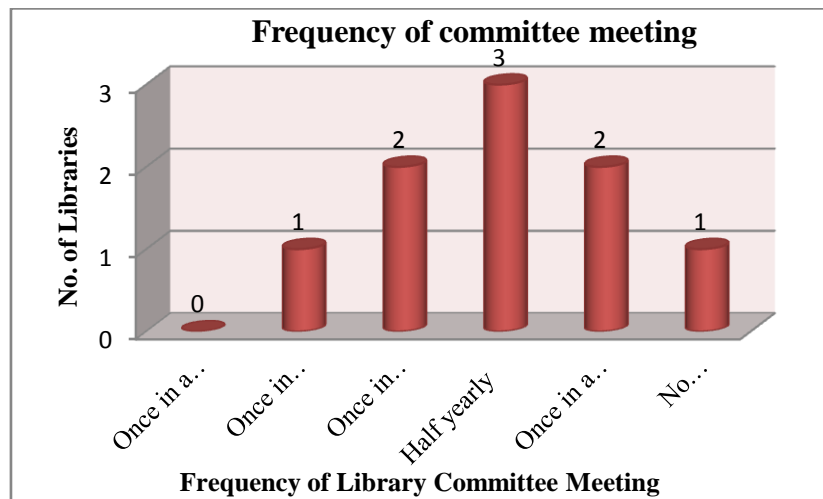


Fig. 5.32 Frequency of committee meeting

Table 5.32 is about frequency of library committee meeting in libraries of Womens' University. SNDT, KSWU and BPSMV libraries conduct half yearly meeting with library committee, BU library and AU library conduct meeting in once in a year with library committee, SPMV and MTWU libraries conduct the library

committee in once in three months while only IGDTUW do meeting with library committee in once in two months. MUST did not given any response on it.

5.4.4 Library considers users' opinion before purchase of documents

S. No.	Library	User's opinion for purchase of books	Asking user to recommend books	Through users' meetings	Through book suggestion slips
1	SNDT	YES	YES	YES	YES
2	BU	YES	-	-	-
3	SPMV	YES	-	-	YES
4	MTWU	YES	YES	-	-
5	AU	YES	YES	-	YES
6	IGDTUW	YES	-	-	YES
7	KSWU	YES	YES	YES	YES
8	BPSMV	YES	YES	YES	YES
9	MUST	YES	-	-	-

Table 5.33

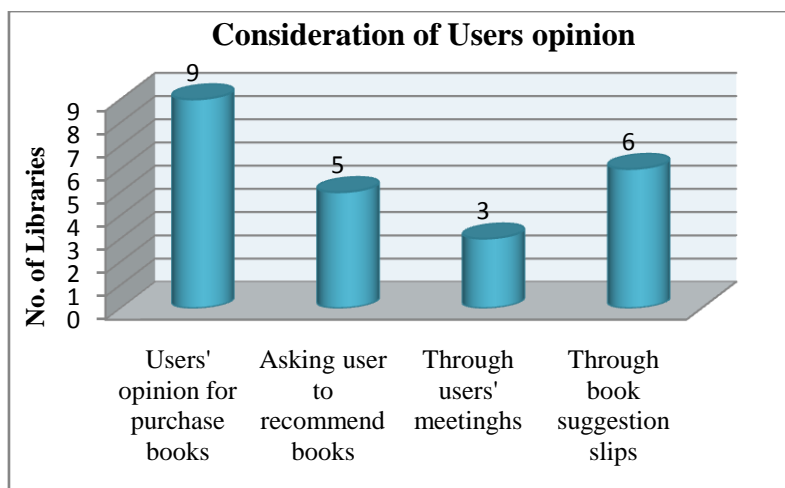


Fig. 5.33 Consideration of Users opinion

Table 5.33 shows about the consideration of users' opinions before purchase of documents in library. According to the table the different criteria is seems for consideration of users' opinion on purchasing documents like asking user to recommend books, through users' meetings, through book suggestion library, the responses are as all the womens' university libraries are consider of users' opinion, SNDT, KSWU and BPSMV follow all the criteria for get users' opinion, SPMV and

IGDTUW get users' opinion through book suggestion slips, MTWU asks to users for purchase books, AU considers users' opinion through asks to users and through book suggestion slip also.

5.4.5 Judgment of User's Information needs by Library

S. No.	Library	Through Informal dialogue	By attending faculty and other meetings	By observing their demands at issue counter
1	SNDT	YES	YES	YES
2	BU	-	-	-
3	SPMV	-	-	YES
4	MTWU	-	-	YES
5	AU	YES	-	YES
6	IGDTUW	-	-	-
7	KSWU	YES	YES	YES
8	BPSMV	YES	YES	YES
9	MUST	-	-	-

Table 5.34

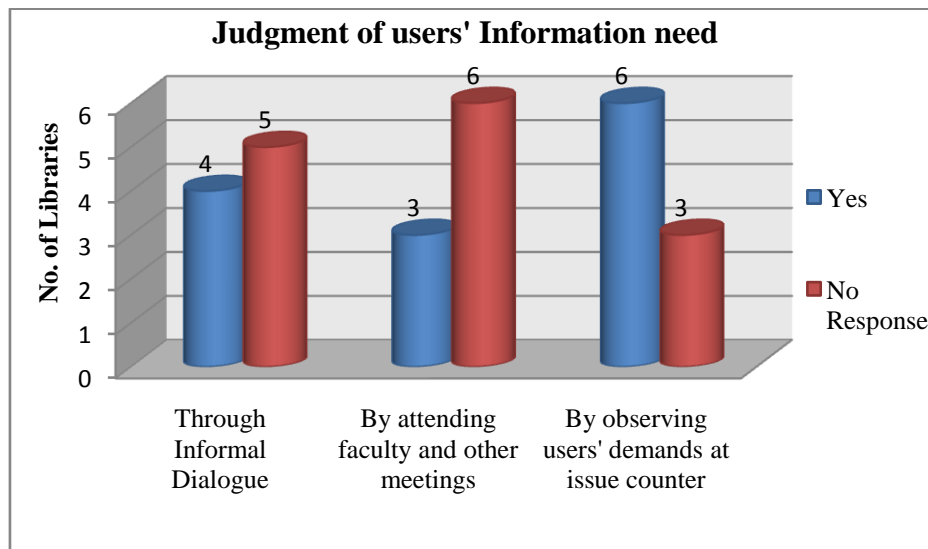


Fig. 5.34 Judgment of users' Information need

Table 5.34 is about the Judgment of user's Information needs by library as SNDT, KSWU and BPSMV libraries gives judgment of the users' Information need through Informal dialogue, by attending faculty and others meeting and By observing their demands at issue counter also, SPMV and MTWU libraries observe users

demands at issue counter, AU library gives judgment of the users' Information need through Informal dialogue and by observing their demands at issue counter. BU, IGDTUW and MUST libraries have not given any response on it.

5.4.6 Library Management Documents

S. No.	Library	Library policy	Library manual	Library committee circular etc	Library rules
1	SNDT	-	YES	YES	YES
2	BU	-	YES	-	YES
3	SPMV	-	-	YES	YES
4	MTWU	-	-	-	YES
5	AU	YES	YES	YES	YES
6	IGDTUW	-	-	-	YES
7	KSWU	YES	YES	YES	YES
8	BPSMV	YES	-	YES	YES
9	MUST	-	-	-	YES

Table 5.35

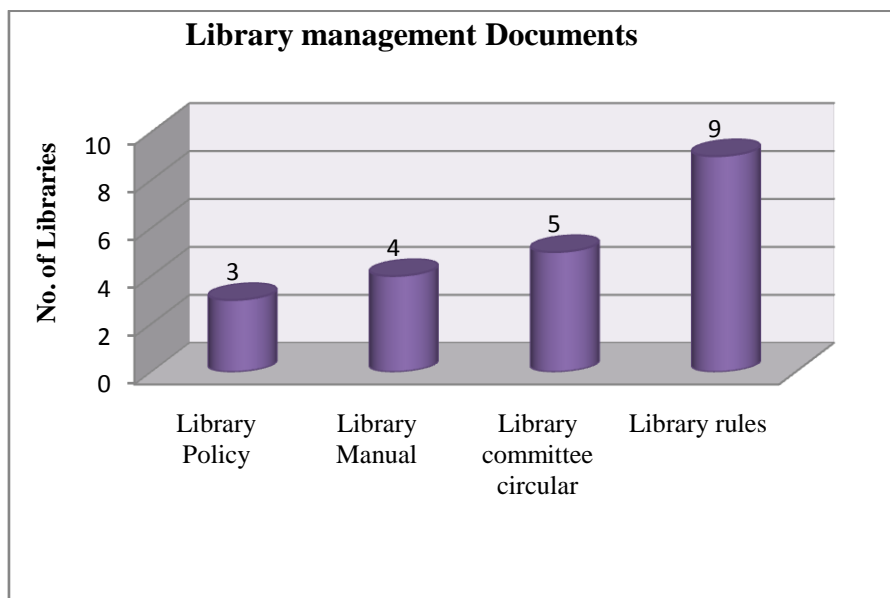


Fig. 5.35 Library Management Documents

Table 5.35 gives the Information about availability of library management documents like library policy, library manual, library committee circulation and library rules. According to the table AU and KSWU libraries have all the library

management documents including library policy, library manual, library committee circulation and library rules. SNTD library has library manual, library committee circulation and library rules, BU library has library manual and library rules, SPMV library has library committee circulation and library rules and BPSMV library has library policy, library committee circulation and library rules. MTWU, IGDTUW and MUST libraries have not any response on availability of library management documents.

5.4.7 Library working hours and days

S. No.	Library	Library working time	Open library (days in a week)
1	SNTD	8:30 am- 6:00 pm	06
2	BU	8:00 am- 9:00 pm	07
3	SPMV	8:00 am- 6:00 pm	07
4	MTWU	9:45 am- 5:45 pm	06
5	AU	9:00 am- 8:00 pm	07
6	IGDTUW	9:00 am- 5:30 pm	07
7	KSWU	8:00 am- 7:00 pm	06
8	BPSMV	8:30 am- 7:00 pm	07
9	MUST	-	-

Table 5.36

Table 5.36 is about the library working time and days in a week. Table shows that SNTD library opens at 8:30 am – 6:00 pm in 6 days of a week. BU library opens at 8:00 am – 9:00 pm in 7 days of week. SPMV library opens at 8:00 am – 6:00 pm in 7 days of week. MTWU library opens at 9:45 am – 5:45 pm in 6 days of a week. AU library opens 9:00 am- 8:00 pm in 7 days of week. IGDTUW library opens at 9:00 am - 5:30 pm in 7 days of week. KSWU library opens at 8:00 am- 7:00 pm in 6 days of week. BPSMV library opens at 8:30 am – 7:00 pm in 7 days of week. MUST library has not respond on working timing and working days. Only BU library opens for 13 hours in a day but mostly libraries open on Sunday also.

5.4.8 Implementation of Total Quality Management in Library

S. No.	Library	Implementation of Total Quality Management	
		YES	NO
1	SNDT	-	NO
2	BU	YES	-
3	SPMV	-	NO
4	MTWU	-	NO
5	AU	-	NO
6	IGDTUW	YES	-
7	KSWU	-	NO
8	BPSMV	-	NO
9	MUST	-	-

Table 5.37

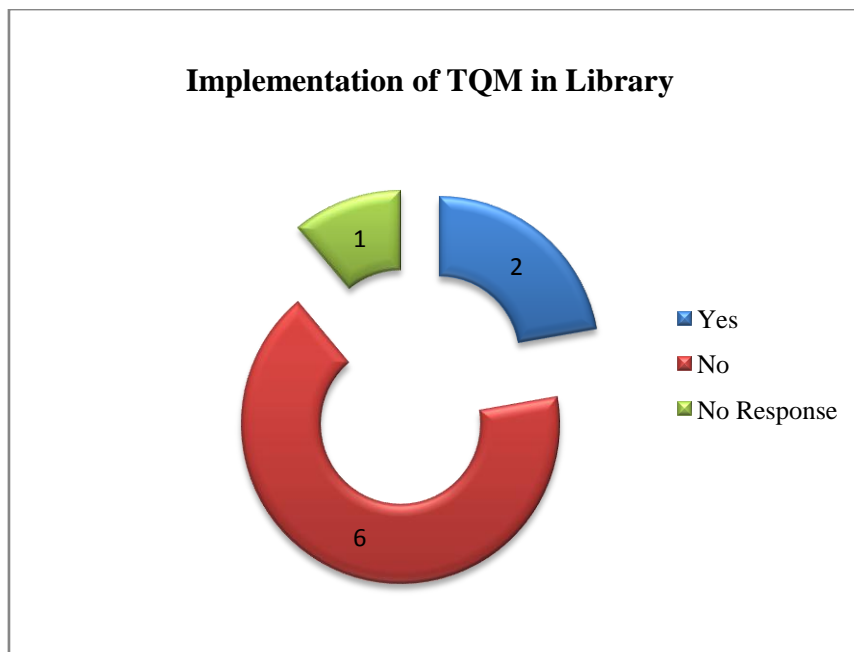


Fig. 5.36 Implementation of TQM in Library

Table 5.37 shows the status of implementation of Total Quality Management in womens' university libraries that is the BU and IGDTUW have implemented Total Quality Management in libraries while rest of the womens' university libraries don't have implemented total quality management but MUST has not respond on it.

5.4.9 Reasons for non Implementation of Total Quality Management in Library

S. No	Reasons	SNDT	BU	SPMV	MTWU	AU	IGD TUV	KSWU	BPSM V	MUST
1	Inadequate knowledge about TQM	YES	-	-	-	YES	-	YES	YES	-
2	Costly and long term process	YES	-	-	-	YES	-	-	YES	-
3	Insufficient budget	YES	-	YES	YES	-	-	-	YES	-
4	Lack of govt. commitment	-	-	-	-	-	-	-	-	-
5	Lack of consistent top management support	-	-	YES	-	-	-	-	-	-
6	Lack of qualified quality consultant	-	-	-	-	YES	-	-	-	-
7	Inadequate planning	-	-	YES	-	-	-	-	-	-
8	Lack of training	-	-	-	-	YES	-	-	-	-
9	Lack of skill of workers	-	-	YES	-	-	-	-	YES	-

Table 5.38

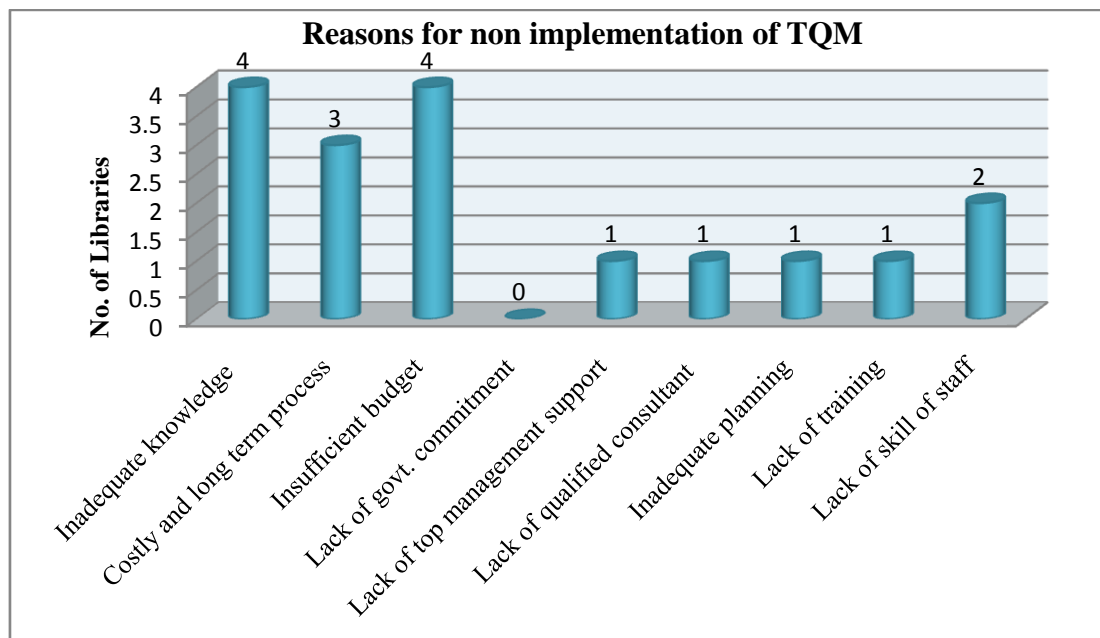


Fig.5.37 Reasons for non implementation of TQM

Table 5.38 presents the reasons of non implementation of TQM in womens’ university libraries. According to the table almost all womens’ university libraries have not implemented TQM. Libraries have given more than one reasons to do not implementation of TQM that is SNDT library mentioned the reasons as inadequate

knowledge about TQM, costly and long term process and insufficient budget. SPMV library has not TQM implemented because it has insufficient budget, lack of consistent top management support, inadequate planning and lack of skill of workers. MTWU has not TQM implemented because of insufficient budget. AU library has given more than one reasons for TQM not implementation these are the inadequate knowledge about TQM, costly and long term process, lack of qualified quality consultant and lack of training. KSWU mentioned the reason inadequate knowledge about TQM only. BPSMV library also given the more than one reasons as inadequate knowledge about TQM, costly and long term process, insufficient budget and lack of skill of worker. BU and IGDTUW libraries have not given response on it because these libraries are TQM implemented. MUST library has not given any response on reason of non implementation of TQM.

5.4.10 Library certified with ISO 9000

S. No.	Library	ISO 9001 Certified	ISO 9002 Certified	ISO 9003 Certified	ISO 9004 Certified	QS 9000 Certified
1	SNDT	-	-	-	-	-
2	BU	-	-	-	-	-
3	SPMV	-	-	-	-	-
4	MTWU	-	-	-	-	-
5	AU	-	-	-	-	-
6	IGDTUW	-	-	-	-	-
7	KSWU	-	-	-	-	-
8	BPSMV	-	-	-	-	-
9	MUST	-	-	-	-	-

Table 5.39

Table 5.39 shows regarding to Library certified with ISO 9000 series. According to the table no one library has given the response on this query.

5.4.11 Quality award received by Library

S. No.	Library	Quality award	Name of award
1	SNDT	-	-
2	BU	-	-
3	SPMV	-	-
4	MTWU	-	-
5	AU	-	-
6	IGDTUW	-	-
7	KSWU	-	-
8	BPSMV	-	-
9	MUST	-	-

Table 5.40

Table 5.40 shows regarding to quality award received by library. According to the table no one library has given the response on the quality award received.

5.4.12 Quality tools used by Library

S. No.	Library	Seven QC Tools	Flow chart	Control Charts	Planned Action	Seven new management tools
1	SNDT	-	-	-	-	-
2	BU	-	-	-	-	-
3	SPMV	-	-	-	YES	-
4	MTWU	-	-	-	-	-
5	AU	-	-	-	-	-
6	IGDTUW	-	-	-	-	-
7	KSWU	-	-	-	-	-
8	BPSMV	-	-	-	-	-
9	MUST	-	-	-	-	-

Table 5.41

Table 5.41 shows regarding to quality tools used by library. According to the table only SPMV library has given the response on quality tools used. It used the planned action to manage their library services as a quality tool while other libraries have not given any response on this.

5.4.13 Status of TQM Implementation in Library

S. No.	Library	Fully implemented	Partially implemented	Not implemented	Plan to implement in future
1	SNDT	-	-	-	-
2	BU	-	YES	-	-
3	SPMV	-	-	-	YES
4	MTWU	-	-	-	-
5	AU	-	-	-	YES
6	IGDTUW	-	YES	-	YES
7	KSWU	-	-	YES	-
8	BPSMV	-	-	-	YES
9	MUST	-	-	-	-

Table 5.42

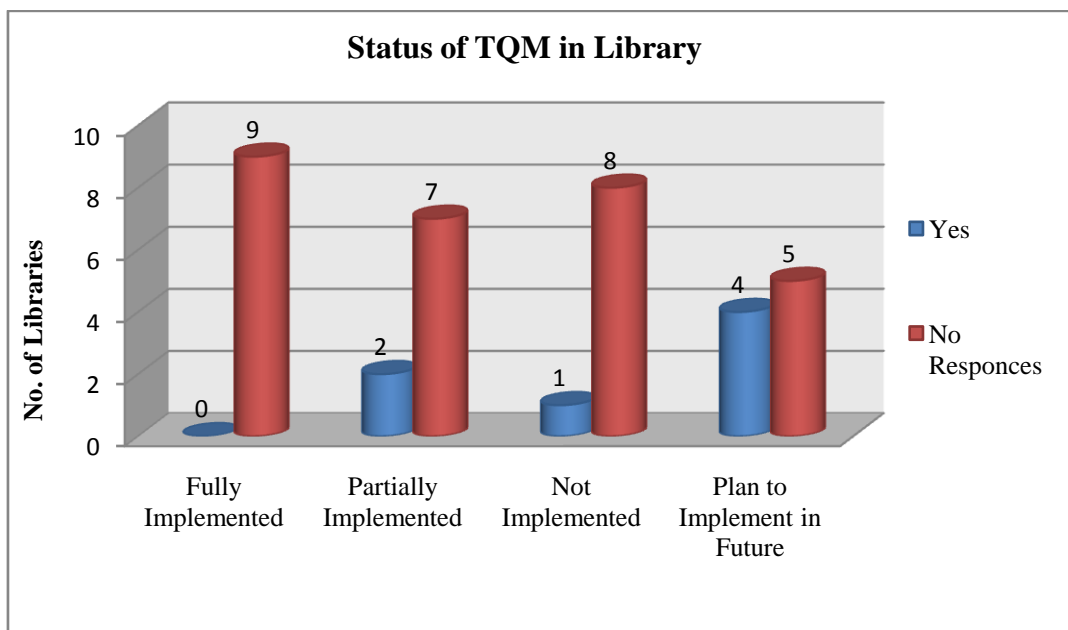


Fig. 5.38

Table 5.39 shows the status of TQM implemented in womens' university libraries as fully implemented, partially implemented, and not implemented and plan to implementation in future. According to the table the status as BU and IGDTUW libraries are partially TQM implemented, SPMV, AU and BPSMV libraries are planning to implement TQM in future, KSWU is not TQM implemented but SNDT, MTWU and MUST libraries have not given any response on it.

Table 5.4.14 Goals for TQM Implementation in Library

S N	Library	Continuous improvement	To improve quality	To achieve quality culture	Satisfied users	Satisfied staff	To achieve lower cost	Service excellence	To receive quality award
1	SNDT	-	-	-	-	-	-	-	-
2	BU	YES	YES	YES	YES	YES	YES	YES	-
3	SPMV	YES	YES	YES	YES	YES	YES	YES	YES
4	MTWU	-	-	-	-	-	-	-	-
5	AU	-	-	-	-	-	-	-	-
6	IGDTUW	YES	YES	YES	YES	YES	YES	YES	YES
7	KSWU	-	-	-	-	-	-	-	-
8	BPSMV	-	-	-	-	-	-	-	-
9	MUST	-	-	-	-	-	-	-	-

Table 5.43

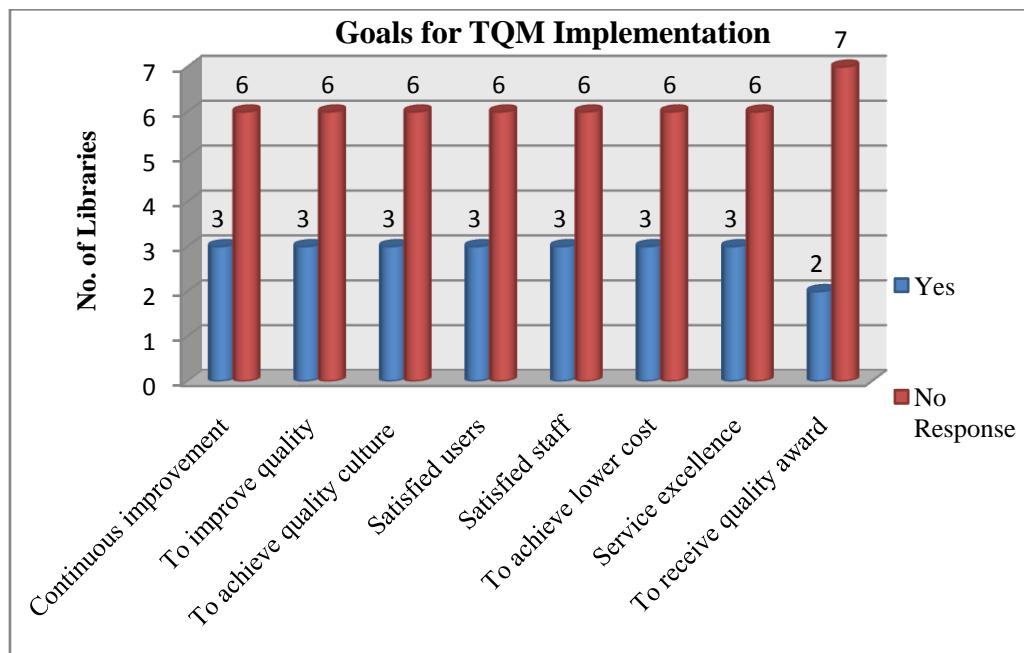


Fig. 5.39 Goals for TQM Implementation

Table 5.40 shows the response regarding to multiple goals for TQM Implementation in library from the womens’ university libraries. BU, SPMV and IGTDUW libraries had respond on TQM implementation to achieve all these goals mentioned in table like continuous improvement, to improve quality, to achieve

quality culture, to satisfied users, to satisfied staff, to achieve lower cost, to excellence and to achieve quality awards also. Rest of the libraries has not respond on this query.

5.4.15 Improvement achieved (Benefits) after Implementation of TQM

S N	Library	Increase the user satisfaction	On time delivery	Increase the work satisfaction	Achieving team work	Quality improvement	Improve continuously	Decrease in cost	Decrease in work delay
1	SNDT	-	-	-	-	-	-	-	-
2	BU	YES	YES	YES	YES	YES	YES	-	YES
3	SPMV	-	-	-	-	-	-	-	-
4	MTWU	-	-	-	-	-	-	-	-
5	AU	-	-	-	-	-	-	-	-
6	IGDTUW	YES	YES	YES	YES	YES	YES	YES	YES
7	KSWU	-	-	-	-	-	-	-	-
8	BPSMV	-	-	-	-	-	-	-	-
9	MUST	-	-	-	-	-	-	-	-

Table 5.44

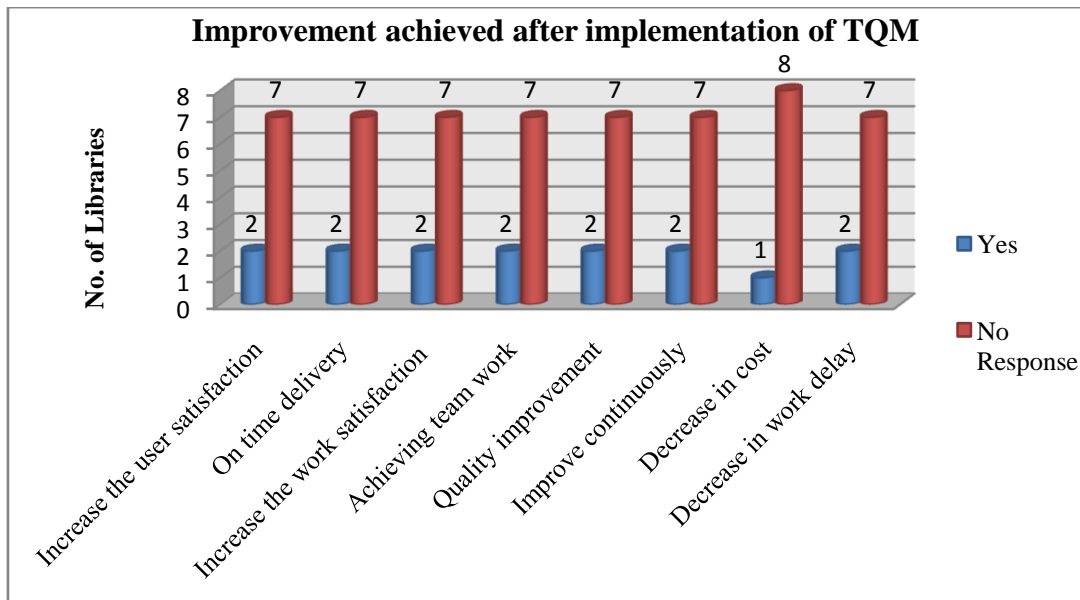


Fig. 5.40 Improvement achieved after Implementation of TQM

Table 5.41 presents regarding to Improvement (Benefits) achieved after implementation of TQM in those libraries which are TQM implemented. Table shows that BU and IGDTUW libraries had achieved the following improvements or benefits after implementation of TQM, these are the increase users satisfaction with library

services, on time delivery of services and sources, Increase the work satisfaction, achieving team work between library staff, quality improvement in services and getting improvement continuously, and also decrease in cost and decreasing work delay in library. Rest of the libraries is silent on this because these libraries have not TQM implemented.

5.5 STAFF SATISFACTION

This part of data analysis is to find the quality and job satisfaction among library staff. This part contains the status of respondents from library staff, opinions of library staff on job quality, opinions on job satisfaction, opinions on appropriate facilities for staff, opinions on job management, human development opportunities, staff attitude towards computerized library, training facilities for staff and barriers in application of computerized library among library staff.

The opinions of respondents have measured through 5 point scale which includes 5 to 1 no's scale these are 5- strongly agree, 4- agree, 3- neither agree nor disagree, 2- disagree, 1- strongly disagree. Each table has contained many statements related to the main theme or title of the particular table.

5.5.1 Status of response from Library Staff

S. No.	Library	Questionnaires distributed	Questionnaires received	Response in percentage
1	SNDT	08	05	5.88
2	BU	26	20	23.52
3	SPMV	11	09	10.59
4	MTWU	06	04	04.71
5	AU	15	10	11.76
6	IGDTUW	05	04	04.71
7	KSWU	19	12	14.12
8	BPSMV	10	09	10.59
9	MUST	15	12	14.12
	Total	115	85	100.00

Table 5.45

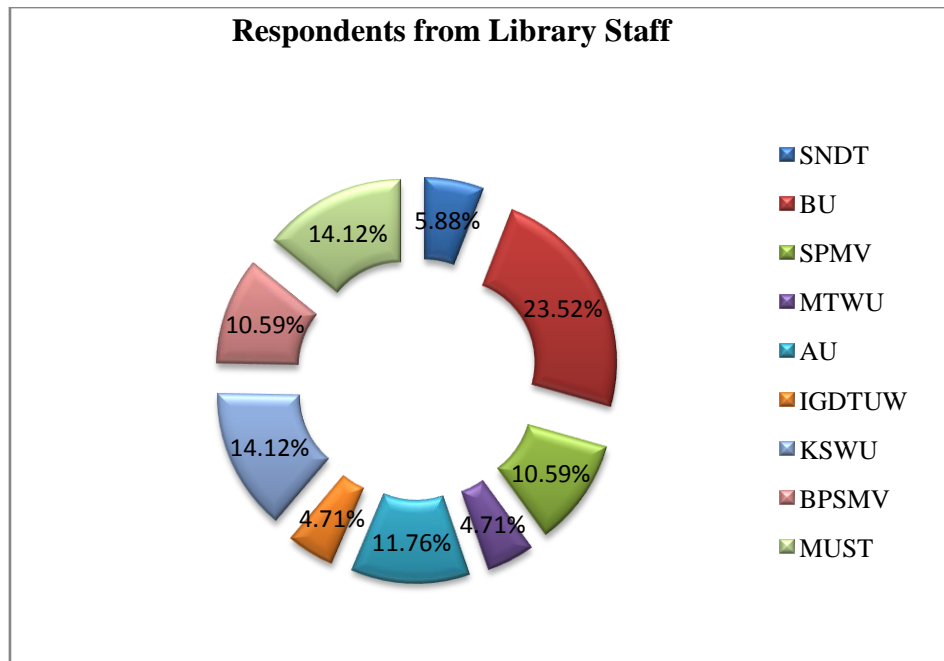


Fig. 5.41 Respondents from Library Staff

Table 5.42 presents the status of response from library staff of womens' university libraries. All the library staff members had included in the study and questionnaires distributed to them. Total 115 questionnaires had been distributed and 85 filled questionnaires had received. The percentage of respondents is based on data received through complete filled questionnaires. The total respondents are 85 from the library staff including 05.88% from SNTD library, 23.52% from BU library, 10.59% from SPMV library, 04.71% from MTWU library, 11.76% from AU library, 04.71% from IGDTUW library, 14.12% from KSWU library, 10.59% from BPSMV library and 14.12% from MUST library. The highest respondents found from the BU library staff for the study.

5.5.2 Opinion of Library Staff on Quality in Job

Assess the following statement using 5 point scale; these are **5- Strongly Agree, 4- Agree, 3- Neither agree nor Disagree, 2- Disagree, 1- Strongly Disagree**

S. No.	Statements	5	4	3	2	1
1	I feel the delivery of services in my library is the quality based services	49 (57.65%)	31 (36.47%)	05 (5.88%)	-	-
2	I feel the library is based on user focus	43 (50.59%)	39 (45.88%)	-	03 (3.53%)	-
3	There is regular process of improvement in library	38 (44.71%)	35 (41.18%)	07 (8.23%)	05 (5.88%)	-
4	The library has staff management	28 (32.94%)	43 (50.59%)	09 (10.59%)	-	05 (5.88%)
5	I am satisfied with utilization of resources	26 (30.59%)	44 (51.76%)	12 (14.12%)	-	03 (3.53%)
6	I feel quality planning for every task	32 (37.65%)	40 (47.06%)	03 (3.53%)	10 (11.76%)	-
7	I find quality supervision	38 (44.71%)	29 (34.12%)	05 (5.88%)	07 (8.23%)	06 (7.06%)
8	I am agree for continuous improvements in job	39 (45.88%)	40 (47.06%)	04 (4.70%)	02 (2.35%)	-
9	I find the quality process for every task	23 (27.06%)	44 (51.76%)	13 (15.29%)	-	05 (5.88%)
10	I agree with adequacy of resources and equipment for staff	23 (27.06%)	43 (50.59%)	11 (12.94%)	03 (3.53%)	03 (3.53%)
	Total Average value of quality in job	33.9 (39.88%)	38.8 (45.64%)	6.9 (8.11%)	3.0 (3.52%)	2.2 (2.58%)
$\chi^2 = 111.774$, DF = 36 and p-value = 0.000 (≤ 0.05 significant)						

Table 5.46

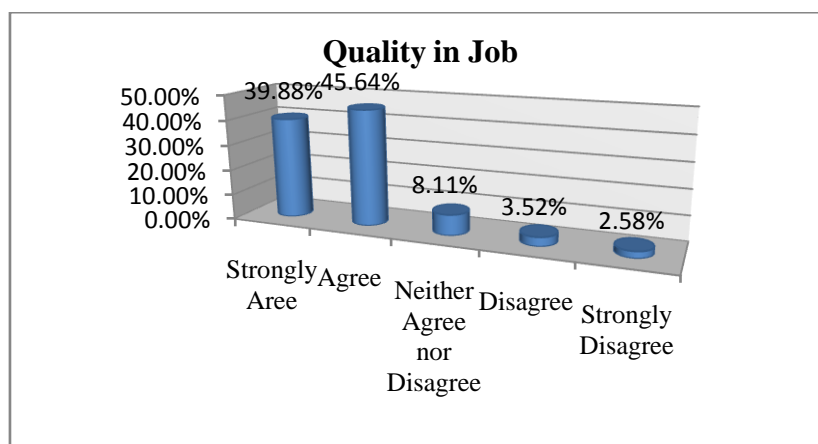


Fig. 5.42 Quality in Job

Table 5.43 shows the opinions of library staff on quality in job in womens' university libraries. According to the table 57.65% respondents are strongly agree, 36.47% are agree and feel that the quality based services delivered by libraries; 50.59% respondents are strongly agree, 45.88% are agree and feel that the womens' university libraries are based on user focus; 44.71% respondents are strongly agree, 41.18% are agree and satisfied on regular process of improvement in libraries; 50.59% respondents are agree, 32.94% are strongly agree and satisfied on staff management in libraries; 51.76% respondents are agree , 30.59% are strongly agree and satisfied with utilization of resources; 47.06% respondents are agree, 37.65% are strongly agree on quality planning for every task in library; 44.71% respondents are strongly agree and 34.12% are agree on quality supervision; 47.06% respondents are agree and 45.88% are strongly agree to get continuous improvement in job; 51.76% respondents are agree and 27.06% are strongly agree on the quality process for every task; 50.59% respondents are agree and 27.06% are strongly agree with adequacy of resources and equipments for staff.

On an average value of total response is that 39.88% library staff are strongly satisfied, 45.64% are satisfied. 3.52% neither agree nor disagree, 3.52% disappointed and 2.58% are strongly disappointed with quality in job in all womens' university libraries.

Null Hypothesis H₀: There is no significant difference in opinions of library staff with regards to quality of job in different libraries of universities.

Alternative Hypothesis H₁: There is a significant difference in opinions of library staff with regards to quality of job in different libraries of universities.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 111.774$ $p = 0.000$ (≤ 0.05 significant), There is a significant

difference in opinions of library staff with regards to quality of job in different libraries of universities.

5.5.3 Opinion of library staff on Job Satisfaction

Statement: I get leave easily when I need

S. No.	Leave for library staff	5	4	3	2	1
1	Casual leave	45 (52.94%)	33 (38.82%)	05 (5.88%)	-	02 (2.35%)
2	Maternity leave	24 (28.23%)	24 (28.23%)	07 (8.23%)	06 (7.05%)	24 (28.23%)
3	Childcare leave	12 (14.12%)	23 (27.06%)	12 (14.12%)	11 (12.94%)	27 (31.76%)
4	Medical leave	27 (31.76%)	25 (29.41%)	05 (5.88%)	07 (8.23%)	21 (24.70%)
5	Higher education leave	08 (9.41%)	22 (25.88%)	21 (24.70%)	12 (14.12%)	22 (25.88%)
	Total average value of job satisfaction	23.2 (27.29%)	25.4 (29.88%)	10 (11.76%)	7.2 (8.47%)	19.2 (22.58%)
$\chi^2 = 90.905$, DF = 16 and p-value = 0.000 (≤ 0.05 significant)						

Table 5.47

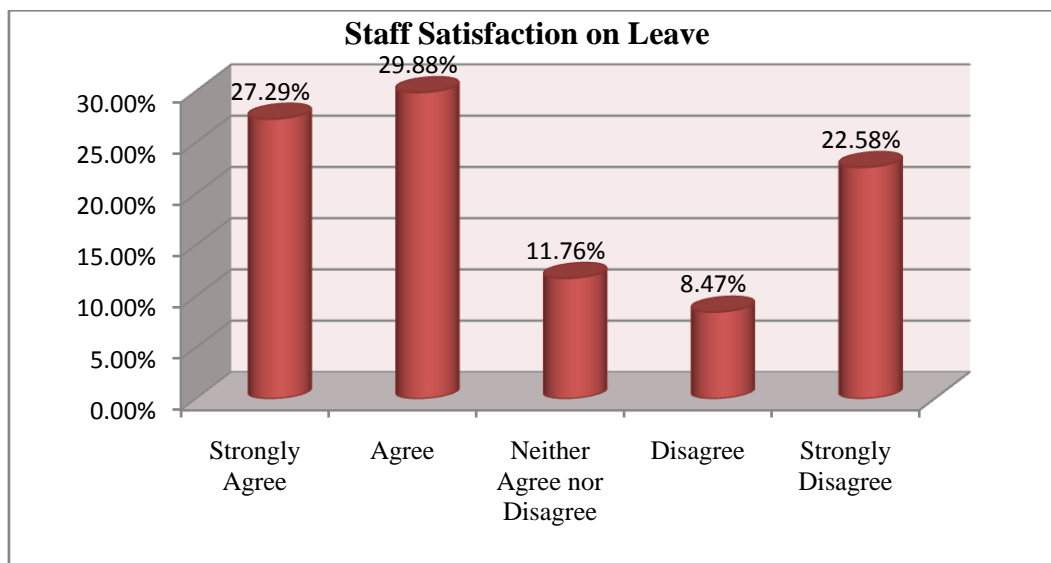


Fig. 5.43 Staff Satisfaction on Leave

Table 5.44 shows the opinions of library staff on job satisfaction. This table focuses on leave for staff when need them, they gat easily. The responses are as

52.94% respondents are strongly agree, 38.82% are agree to get casual leave easily when need them; there are 28.23% respondents are strongly agree, 28.23% are agree but the same response as 28.23% are strongly disagree on getting maternity leave easily; 27.06% respondents are agree while 31.76% are strongly disagree on getting childcare leave; 31.76% respondents are strongly agree, 29.41% are agree but 24.7% respondents are strongly disagree on the issue of getting medical leave; on the issue of getting leave for higher education it found different response like 25.88% respondents are agree, 24.7% are neither agree nor disagree but 25.88% respondents are strongly disagree.

The total average value of response is as 27.29% respondents are strongly satisfied, 29.88% are agree and satisfied, 11.76% are neither agree nor disagree, 8.47% are disagree and 22.58% staff are strongly disappointed with their job in womens' university libraries.

Null Hypothesis H₀: There is no significant difference in opinions of library staff with regards to job satisfaction for the casual leave, maternity leave, childcare leave, medical leave and higher education leave in different universities.

Alternative Hypothesis H₁: There is a significant difference in opinions of library staff with regards to job satisfaction for the casual leave, maternity leave, childcare leave, medical leave and higher education leave in different universities.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 90.905$ $p = 0.000$ (≤ 0.05 significant), There is a significant difference in opinions of library staff with regards to job satisfaction for the casual leave, maternity leave, childcare leave, medical leave and higher education leave in different universities.

5.5.4 Opinion of library staff on appropriate facilities

Statement: There are appropriate facilities for Library Staff

S. No.	Facilities for Library Staff	5	4	3	2	1
1	Health centre	34 (40%)	16(18.82%)	09(10.58%)	05(5.88%)	21(24.70%)
2	Child care centre	05 (5.88%)	10 (11.76%)	15 (17.64%)	15 (17.64%)	40 (47.05%)
3	Common room for womens'	19 (22.35%)	16 (18.82%)	06 (7.05%)	09 (10.58%)	35 (41.17%)
	Total average value of appropriate facilities for staff	19.33 (22.74%)	14 (16.47%)	10 (11.76%)	9.67 (11.37%)	32 (37.64%)
$\chi^2 = 38.977$, DF = 08 and p-value = 0.0000049 (≤ 0.05 significant)						

Table 5.48



Fig. 5.44 Staff satisfaction on Facilities

Table 5.45 is about the opinions on appropriate facilities for staff in library. It contains health care center, child care center and common room for female staff. According to the table 40% respondents are strongly agree and 24.7% are strongly disagree on health care centre facility; 47.05% respondents are strongly disagree on childcare centre facility, this is the most highest negative response on facilities for staff. 22.35% respondents are strongly agree but 41.17% are strongly disagree with satisfaction on common room facility.

The average value of total response is 22.74% staff are strongly satisfied, 16.47% staff are satisfied, 11.76% are neither agree nor disagree, 11.37% staff are dissatisfied and 37.64% staff are strongly disappointed with appropriate facilities for staff in womens' university libraries.

Null Hypothesis H₀: There is no significant difference in opinions of library staff with regards to on appropriate facilities for staff in libraries of universities.

Alternative Hypothesis H₁: There is a significant difference in opinions of library staff with regards to on appropriate facilities for staff in libraries of universities.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2=38.977$ $p=0.000$ (≤ 0.05 significant), There is a significant difference in opinions of library staff with regards to on appropriate facilities for staff in libraries of universities.

5.5.5 Opinions of library staff on Job Management

S. No.	Statements	5	4	3	2	1
1	I have never feel harassment situation in my job	30 (35.29%)	26 (30.58%)	18 (21.17%)	03 (3.53%)	08 (9.41%)
2	I am satisfied with my job nature	36 (42.35%)	34 (40%)	08 (9.41%)	04 (4.70%)	03 (3.53%)
3	I am satisfied with my job timing	32 (37.64%)	34 (40%)	05 (5.88%)	12 (14.11%)	02 (2.35%)
4	I am satisfied with my job position according to my qualification	30 (35.29%)	37 (43.52%)	04 (4.70%)	05 (5.88%)	09 (10.58%)
5	I am satisfied with my salary and periodical increments	27 (31.76%)	38 (44.70%)	06 (7.05%)	06 (7.05%)	08 (9.41%)
6	I am satisfied with my work place environment	35 (41.17%)	32 (37.64%)	07 (8.23%)	07 (8.23%)	04 (4.70%)
7	I find commitment of the staff	36 (42.35%)	36 (42.35%)	08 (9.41%)	03 (3.53%)	02 (2.35%)

8	I have faith in the library management	33 (38.82%)	34 (40%)	08 (9.41%)	10 (11.76%)	-
9	I am satisfied with work culture in the library	28 (32.94%)	37 (43.52%)	15 (17.64%)	05 (5.88%)	-
	Total average value job management	31.89 (37.52%)	34.22 (40.25%)	8.78 (10.33%)	6.11 (7.19%)	4.00 (4.71%)
$\chi^2 = 62.789$, DF = 32 and p-value = 0.00092 (≤ 0.05 significant)						

Table 5.49

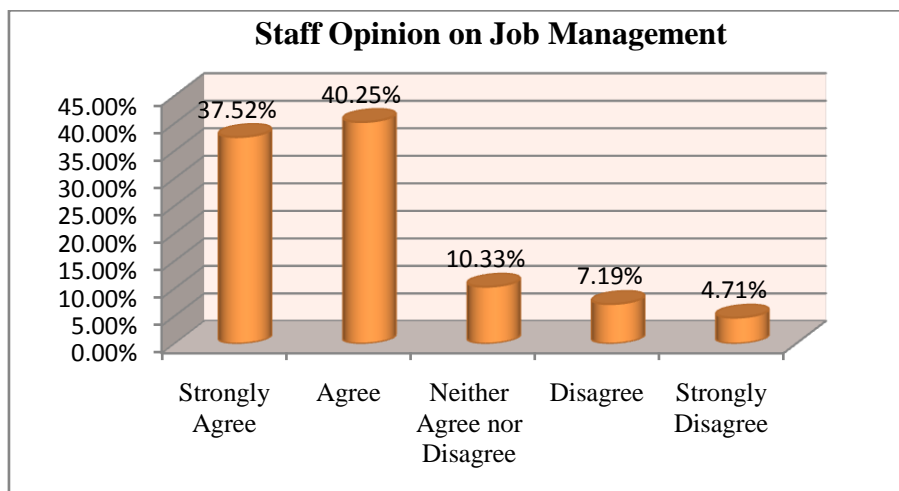


Fig. 5.45 Staff Opinion on Job Management

Table 5.46 shows the opinions of library staff on job management. According to the table 35.29% respondents are strongly agree and 30.58% are agree on that they never feel harassment situation in their job duration; 42.35% respondents are strongly agree with 40% are agreed and satisfied with their job nature; 37.64% respondents are strongly agree and 40% are agree and satisfied with job timing; 35.29% respondents are strongly agree and 43.52% are agree with job position according to qualification; 31.76% respondents are strongly agree and 44.7% are agreed and satisfied with their salary and periodical increments; 41.17% respondents are strongly agree and 37.64% are agreed and satisfied with work place environment; 42.35% are strongly agree with 42.35% respondents are agreed on commitment of the staff; 38.82% respondents are strongly agree and 40% are agree on faith in the library management; 43.52% respondents are agree and 32.94% are strongly agree and satisfied with work culture in the library.

The average value of total response is as 37.52% library staff is strongly satisfied, 40.25% are satisfied, 10.33% staff is neither agree nor disagree, 7.19 staff is disappointed and 4.71% staff is strongly disappointed with job management in womens' university libraries.

Null Hypothesis H₀: There is no significant difference in opinions of library staff with regards to job management in libraries of universities.

Alternative Hypothesis H₁: There is a significant difference in opinions of library staff with regards to job management in libraries of universities.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 62.789$, $p=0.000$ (≤ 0.05 significant), There is a significant difference in opinions of library staff with regards to job management in libraries of universities.

5.5.6 Human development opportunities

S. No.	Statements	5	4	3	2	1
1	I have opportunity in my job for using independent ideas and action	26 (30.58%)	34 (40%)	14 (16.47%)	04 (4.70%)	07 (8.23%)
2	I learn new skills while I am on job	34 (40%)	39 (45.88%)	09 (10.58%)	-	03(3.52%)
3	I am consulted before any decision is taken in the library	25 (29.41%)	40 (47.05%)	12 (14.11%)	03 (3.52%)	05 (5.88%)
4	My library encourages me to participate in management of library	24 (28.23%)	36 (42.35%)	10 (11.76%)	10 (11.76%)	05 (5.88%)
5	I am encouraged to participate in seminars/workshops/conferences	30 (35.29%)	42 (49.41)	06 (7.05%)	-	07 (8.23%)
	Total average value human development opportunity	27.8 (32.71%)	38.2 (44.94%)	10.2 (12%)	3.4 (04%)	5.4 (6.35%)
$\chi^2 = 28.99$, DF = 16 and p-value = 0.02400 (≤ 0.05 significant)						

Table 5.50

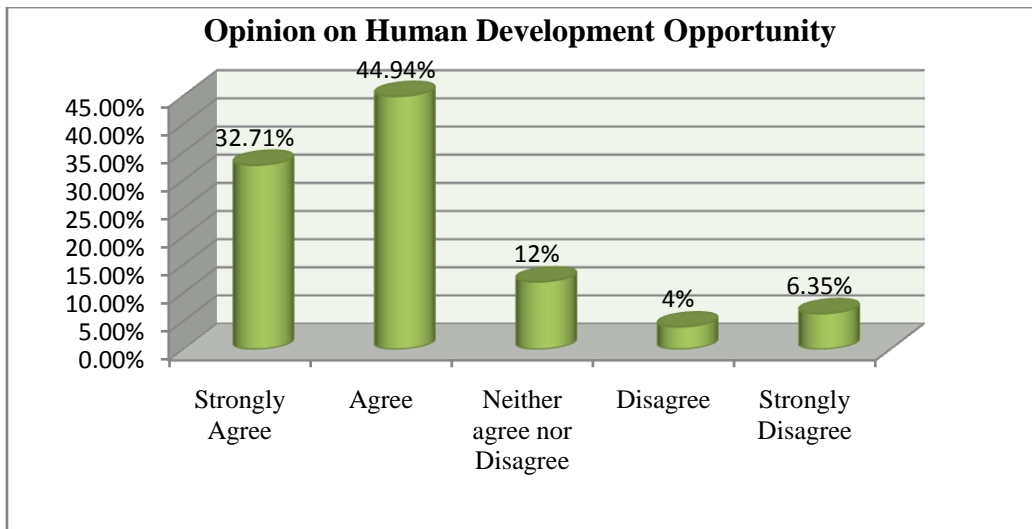


Fig. 5.46 Opinion on Human Development Opportunity

Table 5.47 shows the human development opportunities for library staff during the job. The opinions of library staff are that 30.58% respondents are strongly agree and 40% are agreed with getting opportunities for using independent ideas and take action in their job; 40% respondents are strongly agree and 45.88% are agreed that staff learns new skills within the job; 29.41% respondents are strongly agree and 47.05% are agreed on the statement as the staff is consulted before taking any decision in library; 28.23% respondents are strongly agree and 42.35% are agreed to be encouraged to participate in management of library; 35.29% respondents are strongly agree and 49.41% are agreed to be encouraged to participate in seminars/ workshops/ conferences etc.

The average value of total response says that 32.71% staff are strongly satisfied, 44.94% staff are satisfied, 12% is neither agree nor disagree, 04% staff is dissatisfied and 6.35% staff is strongly disappointed with human development opportunities for library staff during the job.

Null Hypothesis H₀: There is no significant difference in statements of library staff with regards to human development opportunities for library staff during the job in libraries of different universities.

Alternative Hypothesis H₁: There is a significant difference in statements of library staff with regards to human development opportunities for library staff during the job in libraries of different universities.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 28.99$, $p=0.000$ (≤ 0.05 significant), There is a significant difference in statements of library staff with regards to human development opportunities for library staff during the job in libraries of different universities.

5.5.7 Staff attitude towards Computerized Library

S. No.	Statements	5	4	3	2	1
1	I derive work satisfaction in IT environment	31 (36.47%)	36 (42.35%)	08 (9.41%)	07 (8.23%)	03 (3.52%)
2	Computer applications can provide better library service	45 (52.94%)	30 (35.29%)	02 (2.35%)	08 (9.41%)	-
3	I will take help from the experts when problems occur in software and Hardware	43 (50.58%)	38 (44.70%)	-	03 (3.52%)	01 (1.17%)
4	Computerization of library activities improve the overall organizational Effectiveness	33 (38.82%)	41 (48.23%)	08 (9.41%)	-	03 (3.52%)
5	I have skills to tackle the problems often occurred the computer handling	19 (22.35%)	43 (50.58%)	10 (11.74%)	08 (9.41%)	05 (5.88%)
	Total average value	34.2 (40.24%)	37.6 (44.24%)	5.6 (6.59%)	5.2 (6.11%)	2.4 (2.82%)
$\chi^2 = 44.995$, DF = 16 and p-value = 0.00013 (≤ 0.05 significant)						

Table 5.51

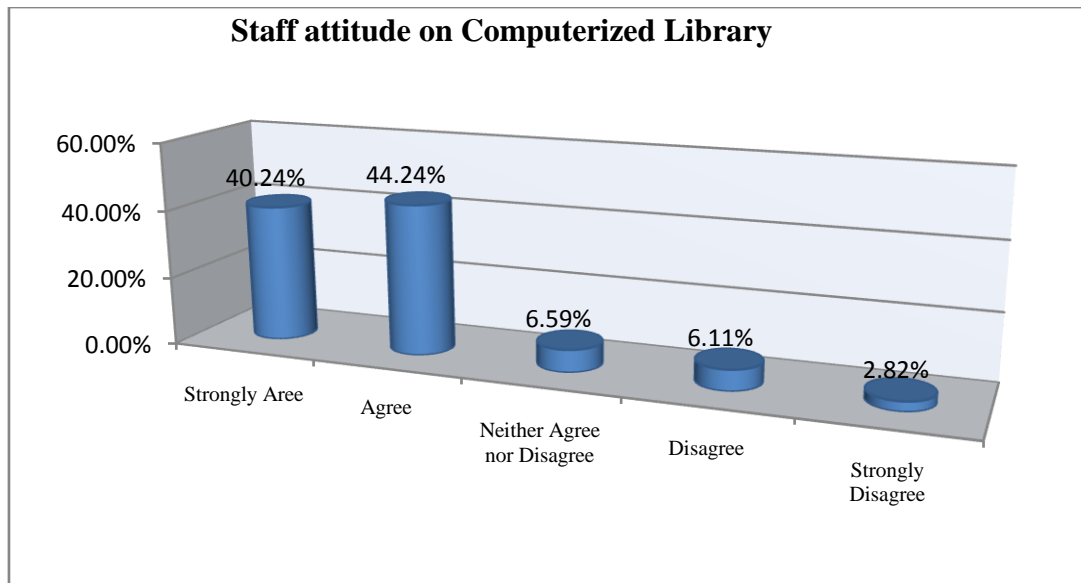


Fig. 5.47 Staff attitude on Computerized Library

Table 5.48 shows about attitude of library staff towards computerized library. According to the data 42.35% respondents are agree and 36.47% are strongly agreed to drive work satisfaction in IT environment; 52.94% respondents are strongly agree and 35.29% are agreed on that the computer application can provide better library services; 50.58% respondents are strongly agree and 44.7% are agreed to be helped from the experts when problems occur in software and hardware; 48.23% respondents are agree and 38.82% are strongly agreed on the statement as the computerization of library activities improve the overall organizational effectiveness; 50.58% respondents are agreed and 22.35% are strongly agreed on that they have skills to tackle the problems often occurred the computer handling.

The average value of response shows that 40.24% staff are strongly agree, 44.24% are agree, 6.59% staff neither agree nor disagree, 6.11% staff are disagree and 2.82% are strongly disagree with computerized library in womens' universities.

Null Hypothesis H₀: There is no significant difference in statements of library staff with regards to attitude of library staff towards computerized library in different universities.

Alternative Hypothesis H₁: There is a significant difference in statements of library staff with regards to attitude of library staff towards computerized library in different universities.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 44.995$, $p=0.000$ (≤ 0.05 significant), There is a significant difference in statements of library staff with regards to attitude of library staff towards computerized library in different universities.

5.5.8 Training facilities available in Library

S. No.	Statements	5	4	3	2	1
1	Computer training is necessary for every professional staff in the library	42 (49.41%)	37 (43.52%)	01 (1.17%)	02 (2.35%)	03 (3.52%)
2	The library provide necessary training for staff	25 (29.41%)	35 (41.17%)	11 (12.94%)	11 (12.94%)	03 (3.52%)
3	I receive training whenever necessary	18 (21.17%)	50 (58.82%)	07 (8.23%)	04 (4.70%)	06 (7.05%)
4	I participate in every seminar/conference related to my library software	16 (18.82%)	35 (41.17%)	20 (23.52%)	08 (9.41%)	06 (7.05%)
5	The training facilities in the university library system are adequate	20(23.52%)	40 (47.05%)	14 (16.47%)	04 (4.70%)	07 (8.23%)
6	The training programme shell be linked to promotion and development in the profession	29 (34.11%)	36 (42.35%)	06 (7.05%)	08 (9.41%)	06 (7.05%)
	Total average value	25 (29.42%)	38.83 (45.68%)	9.83 (11.56%)	6.17 (7.26%)	5.17 (6.08%)
$\chi^2 = 57.444$, DF = 20 and p-value = 0.0000175 (≤ 0.05 significant)						

Table 5.52

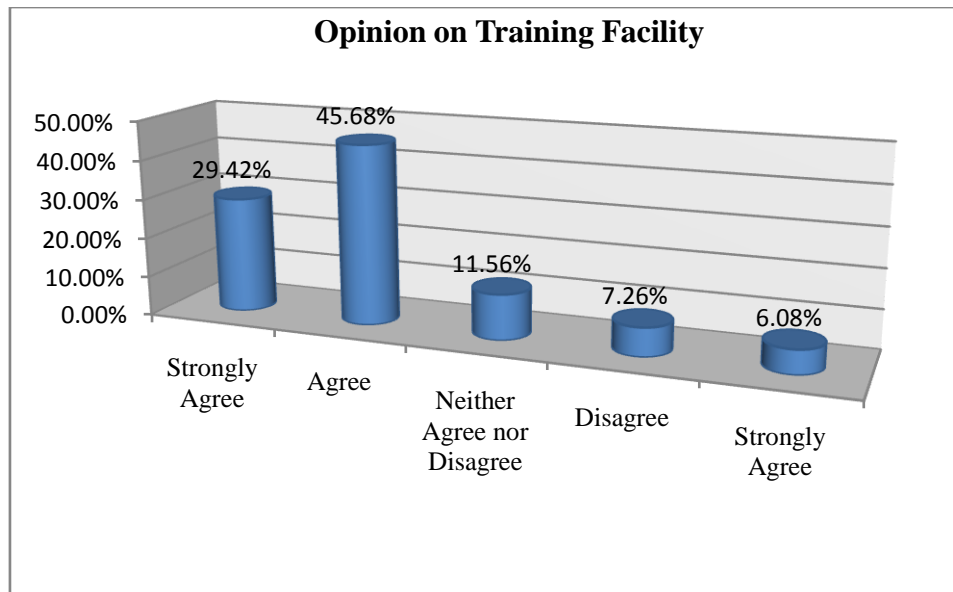


Fig. 5.48 Opinion on Training Facility

Table 5.49 is about training facilities providing to library staff. The table shows that 49.41% respondents are strongly agree and 43.52% are agreed on necessity of computer training for every professional staff in the library; 41.17% respondents are agree and 29.41% are strongly agreed on necessary training facility to staff providing by the libraries; 58.82% respondents are agree and 21.17% are strongly agree on getting training whenever necessary; 41.17% respondents are agree, 18.82% are strongly agree but 23.52% respondents are neither agree nor disagree on that the staff participate in every seminar/conferences related to the library software. 47.05% respondents are agreed and 23.52% are strongly agreed with adequate training facility in university library system; 42.35% respondents are agree and 34.11% are strongly agree on that the training programmes shall be linked to promotion and development in the profession.

The total average value of response says that 29.42% staff are strongly satisfied, 45.68% staff are satisfied, 11.56% staff are neither agree nor disagree, 7.26% staff are disagree and 6.08% are strongly disagree on availability of training facilities in libraries to staff.

Null Hypothesis H₀: There is no significant difference in availability of training facilities of libraries in different universities.

Alternative Hypothesis H₁: There is a significant difference in availability of training facilities of libraries in different universities.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 57.444$, $p=0.000$ (≤ 0.05 significant), There is a significant difference in availability of training facilities of libraries in different universities.

5.5.9 Barriers in application of computerized library

S. No.	Statements	5	4	3	2	1
1	Lack of computer skills is a barrier in computerized library	30 (35.29%)	40 (47.05%)	08 (9.41%)	03 (3.52%)	04 (4.70%)
2	Lack of knowledge to operate computerized library	22 (25.88%)	32 (37.64%)	15 (17.64%)	12 (14.11%)	04 (4.70%)
3	I feel uncomfortable to do work with computer	16 (18.82%)	20 (23.52%)	12 (14.11%)	12 (14.11%)	25 (29.41%)
4	Lack of proper technical environment	12 (14.11%)	33 (38.82%)	06 (7.05%)	18 (21.17%)	16 (18.82%)
5	Computerization is detrimental to personal relations in the library	18 (21.17%)	21 (24.70%)	08 (9.41%)	24 (28.23%)	14 (16.47%)
6	Computerization is not possible unless new qualified staff is appointed	10 (11.76%)	30 (35.29%)	09 (10.58%)	16 (18.82%)	20 (23.52%)
	Total average value	18 (21.18%)	29.33 (34.51%)	9.67 (11.37%)	14.17 (16.67%)	13.83 (16.27%)
$\chi^2 = 73.765$, DF = 20 and p-value = 0.000 (≤ 0.05 significant)						

Table 5.53

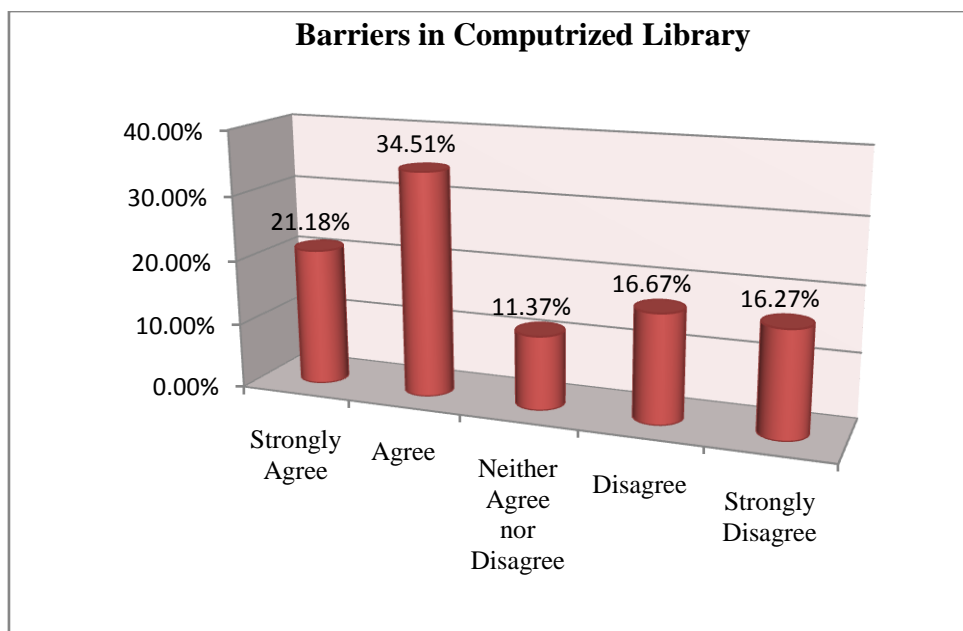


Fig. 5.49 Barriers in Computerized Library

Table 5.50 is regarding to barriers or difficulties in application of computerized library among staff. The table shows that 47.05% respondents are agree and 35.29% respondents are strongly agree on the statement i.e. the lack of computer skills is a barrier in computerized library; 37.64% respondents are agree and 25.88% are strongly agree on the statement i.e. the lack of knowledge to operate computerized library is also a barrier; 23.52% respondents are agree, 18.82% respondents are strongly agree but 29.41% respondents are strongly disagree on feeling comfortable to do work with computer; 38.82% respondents are agree with lack of proper technical environment but 21.17% are disagree and 18.82% are strongly disagree on this statement; 28.23% respondents are disagree and 24.7% are agree on that the computerization is detrimental to personal relation in the library; 35.29% respondents are agree but 18.82% are disagree and 23.52% respondents are strongly disagree on the statement as the computerization is not possible unless new qualified staff is appointed.

The average value shows the overall response as 21.18% staff are strongly agree, 34.51% are agree, 11.37% staff neither agree nor disagree, 16.67% staff are disagree and 16.27% are strongly disagree on barriers in application of computerized library in womens' universities.

Null Hypothesis H₀: There is no significant difference in statements of library staff with regards to difficulties in application of computerized library among staff in different universities.

Alternative Hypothesis H₁: There is a significant difference in statements of library staff with regards to difficulties in application of computerized library among staff in different universities.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 73.765$, $p=0.000$ (≤ 0.05 significant), There is a significant difference in statements of library staff with regards to difficulties in application of computerized library among staff in different universities.

5.6 USER SATISFACTION

This part of data analysis focuses on users' perception only. It is to find the quality in library services and users' satisfaction on library services. It presents the status of user respondents from libraries, purpose of use of library. It also contains the different requirements of users from the library and the users' opinion on different particulars i.e. physical facilities in library, library collection, staff attitude, library services, delivery pattern of library services and difficulties in internet services in library. The users' opinions have measured through 5 point scale as 5- strongly agree, 4- agree, 3- neither agree nor disagree, 2- disagree, 1- strongly disagree. Each table has contained many statements related to the main theme of tables which relates to users' requirements from the libraries.

5.6.1 Status of response from Library Users

S. No.	Library	Questionnaires distributed	Questionnaires received	Response in percentage
1	SNDT	100	93	11.15
2	BU	100	100	11.99
3	SPMV	100	100	11.99
4	MTWU	100	96	11.51
5	AU	100	98	11.75
6	IGDTUW	100	88	10.56
7	KSWU	100	92	11.03
8	BPSMV	100	91	10.91
9	MUST	100	76	09.11
	Total	900	834	100.00

Table 5.54

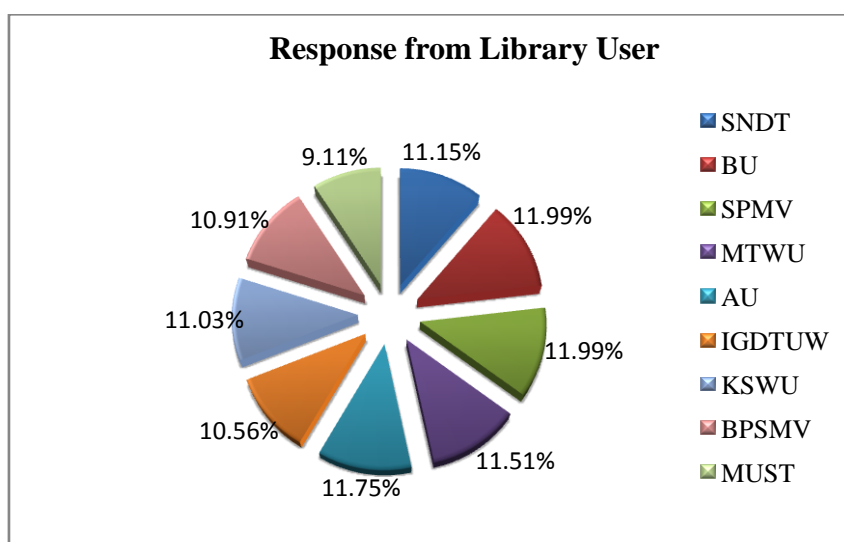


Fig. 5.50 Response from Library User

Table 5.51 presents the status of response from library users in womens' university libraries. 100 questionnaires had been distributed to library users in each womens' university libraries. Thus total 900 questionnaires had been distributed to users and 834 filled questionnaires had received from library users. According to the table the user respondents from the particular libraries are as 11.15% respondents from SNDT library, 11.99% respondents from BU library, 11.99% respondents from SPMV library, 11.51% respondents from MTWU, 11.75% respondents from AU

library, 10.56% respondents from IGDTUW library, 11.03% respondents from KSWU library, 10.91% respondents from BPSMV and 09.11% respondents from MUST library.

5.6.2 Frequency of visiting the Library by Users

S. No.	Library	Daily	Weekly	Monthly	Quarterly	Never
1	SNDT	15 (16.12%)	63 (67.74%)	06 (6.45%)	09 (9.67%)	-
2	BU	29 (29%)	43 (43%)	19 (19%)	09 (09%)	-
3	SPMV	50 (50%)	43 (43%)	07 (07%)	-	-
4	MTWU	32 (33.33%)	58 (60.41%)	04 (4.16%)	02 (2.08%)	-
5	AU	52 (53.06%)	36 (36.73%)	08 (8.16%)	02 (2.04%)	-
6	IGDTUW	24 (27.27%)	28 (31.81%)	36 (40.9%)	-	-
7	KSWU	43 (46.73%)	42 (45.65%)	03 (3.26%)	04 (4.34%)	-
8	BPSMV	49 (53.84%)	32 (35.16%)	07 (7.69%)	03 (3.29%)	-
9	MUST	32 (42.1%)	44 (57.89%)	-	-	-
	Total	326(39.09%)	389 (46.64%)	90 (10.8%)	29 (3.47%)	-
$\chi^2 = 188.985$, DF = 24 and p-value = 0.000 (≤ 0.05 significant)						

Table 5.55

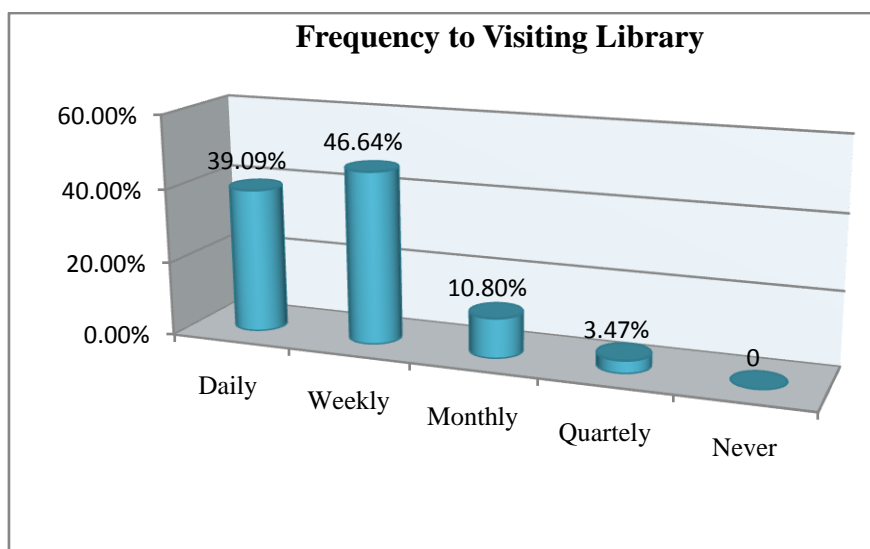


Fig. 4.51 Frequency to Visiting Library

Table 5.52 shows the frequency of visiting the library by users. The responses are as 67.74% users visit library weekly and only 16.12% user visit library daily in

SNDT university; 43% users visit weekly and 29% users visit daily to library in BU university; 50% user visit library daily and 43% users' response to visit library weekly in SPMV university; 60.41% users visit library weekly and 33.33% users visit library daily in MTWU university; 53.06% respondents visit library daily and 36.73% users use library weekly in AU university; 27.27% respondents use library daily, 31.81% respondents use weekly and 40.9% users visit library in monthly in IGDTUW university; 46.73% respondents visit library daily, 45.65% are visit library weekly in KSWU university; 53.84% users visit library daily, 35.16% users visit library weekly in BPSMV university and 42.1% respondents visit library daily and 57.89% users visit library weekly.

The overall response from all the womens' university libraries is that 39.09% users use library daily, 46.64% users visit weekly, 10.8% users visit library monthly and only 3.47% users visit library quarterly.

Null Hypothesis H₀: There is no significant difference in frequency of visit the library by users in libraries of different universities.

Alternative Hypothesis H₁: There is a significant difference in frequency of visit the library by users in libraries of different universities.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 188.985$, $p=0.000$ (≤ 0.05 significant), There is a significant difference in frequency of visit the library by users in libraries of different universities.

5.6.3 Time spend in the Library

S. No.	Library	Less than 1 hour	1-2 hours	2-3 hours	More than 3 hours
1	SNDT	14 (15.05%)	35 (37.63%)	23 (24.73%)	21 (22.58%)
2	BU	36 (36%)	44 (44%)	13 (13%)	07 (07%)
3	SPMV	27 (27%)	56 (56%)	14 (14%)	03 (03%)
4	MTWU	34 (35.41%)	55 (57.29%)	05 (5.2%)	02 (2.08%)
5	AU	22 (22.44%)	68 (69.38%)	02 (2.04%)	06 (6.12%)
6	IGDTUW	16 (18.18%)	64 (72.72%)	08 (9.09%)	-
7	KSWU	34 (36.95%)	52 (56.52%)	04 (4.34%)	02 (2.17%)
8	BPSMV	22 (24.17%)	38 (41.75%)	17 (18.68%)	14 (15.38%)
9	MUST	16 (21.05%)	16 (21.05%)	40 (52.63%)	04 (5.26%)
	Total	221 (26.5%)	428 (51.32%)	126 (15.11%)	59 (7.07%)
$\chi^2 = 214.113$, DF = 24 and p-value = 0.000 (≤ 0.05 significant)					

Table 5.56

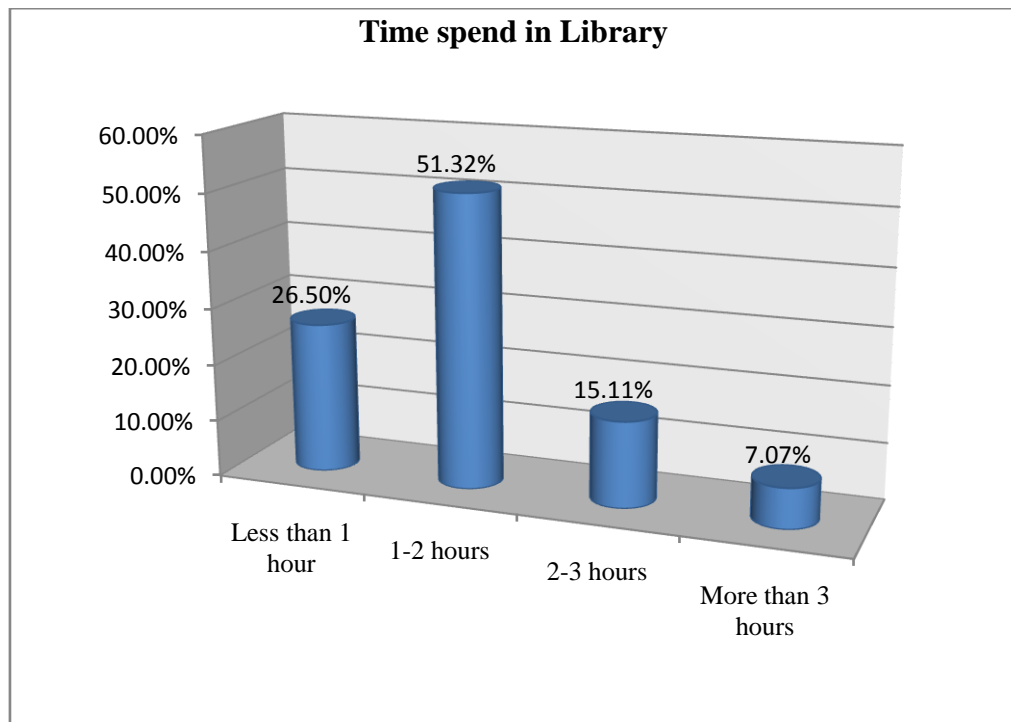


Fig. 5.52 Time spend in Library

Table 5.53 is regarding to time spend in library. The table shows that 37.63% spend 1-2 hours, 24.73% users for 2-3 hours and 22.58% users spend more than 3 hours in library of SNDT; 36% users spend less than 1 hours, 44% users spend 1-2 hours and 13% users spend 2-3 hours in library of BU university; 27% users spend

less than 1 hour, 56% users spend 1-2 hours and 14% users spend 2-3hours in library of SPMV university; 35.41% users spend less than 1 hour, 57.29% spend 1-2 hours in library of MTWU university; 22.44% users spend less than 1 hours while 69.38% users spend 1-2 hours in library of AU university; 18.18% users spend less than 1 hours and 72.72% users spend 1-2 hours in library of IGDTUW university; 36.95% users spend less than 1 hours and 56.52% users spend 1-2 hours in library of KSWU university; 24.17% users use library for less than 1 hour, 41.75% users spend 1-2 hours, 18.68% spend for 2-3 hours and 15.38% users spend 3-4 hours in library of BPSMV university; 21.05% users spend less than I hour and same response as 21.05% users spend 1-2 hours but 52.63% users spend 2-3 hours in library of MUST university.

The overall response from all womens' universities shows that 26.5% users use library for less than I hour, 51.32% users use library foe 1-2 hours, 15.11% users spend 2-3 hours while only 7.07 % users spend more than 3 hours in library.

Null Hypothesis H_0 : There is no significant difference regarding to time spend by users in libraries.

Alternative Hypothesis H_1 : There is a significant difference regarding to time spend by users in libraries.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 214.113$, $p = 0.000$ (≤ 0.05 significant), There is a significant difference regarding to time spend by users in libraries.

5.6.4 Purpose to use Library

S. No	Purpose	Getting book issue /return	Consulting hardcopy of journals	Consulting Online journals	Photocopy of documents	To search new arrivals	Course materials	Reading newspaper	Searching database	Consulting other resources
1	SNDT	54 (58.06%)	18 (19.35%)	09 (9.67%)	03 (3.22%)	27 (29.03%)	36 (38.7%)	24 (25.8%)	24 (25.8%)	06 (6.45%)
2	BU	70 (70%)	29 (29%)	29 (29%)	28 (28%)	14 (14%)	37 (37%)	25 (25%)	10 (10%)	12 (12%)
3	SPMV	66 (66%)	07 (07%)	06 (06%)	03 (03%)	17 (17%)	56 (56%)	76 (76%)	07 (07%)	07 (07%)
4	MTWU	70 (72.91%)	20 (20.83%)	17 (17.7%)	11 (11.45%)	21 (21.87%)	40 (41.66%)	32 (33.33%)	14 (14.58%)	08 (8.33%)
5	AU	69 (70.4%)	18 (18.36%)	19 (19.38%)	25 (25.51%)	29 (29.59%)	51 (52.04%)	46 (46.93%)	11 (11.22%)	11 (11.22%)
6	IGDTUW	80 (90.9%)	08 (9.09%)	-	04 (4.54%)	04 (4.54%)	36 (40.9%)	12 (13.63%)	-	08 (9.09%)
7	KSWU	81 (88.04%)	17 (18.47%)	06 (6.52%)	18 (19.56%)	26 (28.26%)	40 (43.47%)	35 (38.04%)	12 (13.04%)	16 (17.39%)
8	BPSMV	33 (36.26%)	04 (4.39%)	16 (17.58%)	01 (1.09%)	13 (14.28%)	26 (28.57%)	39 (42.85%)	16 (17.58%)	10 (10.98%)
9	MUST	72 (94.73%)	04 (5.26%)	-	20 (26.31%)	20 (26.31%)	44 (57.89%)	36 (47.36%)	04 (5.26%)	08 (10.52%)
	Total	595 (71.34%)	125 (13.89%)	102 (12.23%)	113 (13.55%)	171 (20.5%)	366 (43.88%)	325 (38.96%)	98 (11.75%)	86 (10.31%)

$\chi^2 = 233.650$, DF = 48 and p-value = 0.000 ($\leq .05$ significant)

Table 5.57

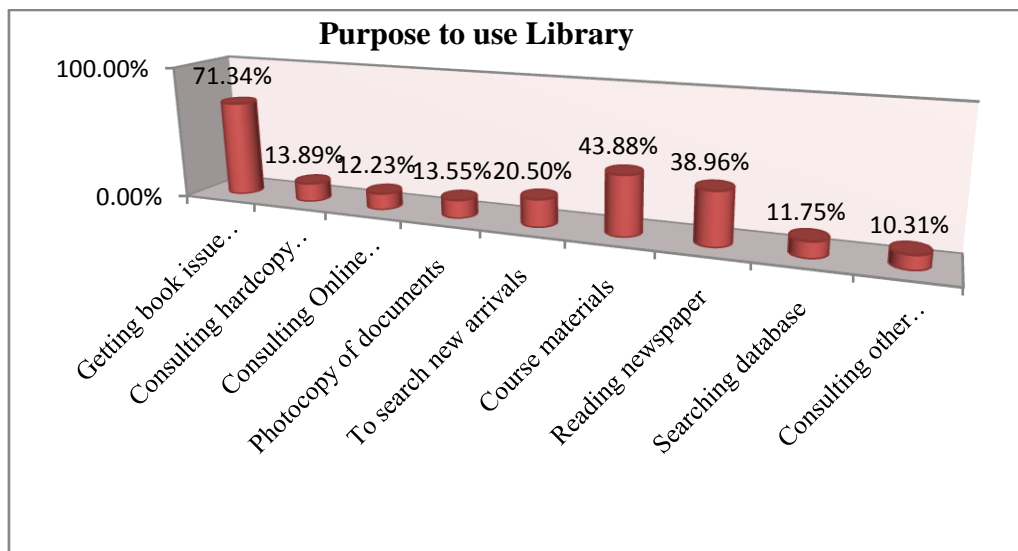


Fig. 5.53 Purpose to use Library

Table 5.54 explores many purposes to use the library and users' responses on need to use the library. The table contains the following purposes for users i.e. book issue/ return by users, consulting hard copy of journals in library, consulting online journals in internet lab of library, to photocopy of documents, to search new arrivals of books and journals, for course materials, to read news papers, searching database and consulting other resources.

The total response on purpose to use of library is that 71.34% users go to library to getting issue /return of books, 13.89% users use library to consult hard copy of journals, 12.23% users consult online journals in library, 13.55% users go to library for photocopying of documents, 20.5% users to search new arrivals in library, 43.88% users go to library to prepare course material, 38.96% users read news paper in library, 11.75% users search database and 10.31% users use library to consulting other resources in library also. The major responses have found on these purposes to use the library which are getting book issue/return, course materials and reading newspaper from all womens' universities.

Null Hypothesis H_0 : There is no significant difference in responses of user regarding to purpose to use of library.

Alternative Hypothesis H_1 : There is a significant difference in responses of user regarding to purpose to use of library.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 233.650$, $p = 0.000$ (≤ 0.05 significant), There is a significant difference in responses of user regarding to purpose to use of library.

5.6.5 Users' opinion on Library Infrastructure and facilities

Assess the following statement using 5 point scale; these are **5- Strongly Agree, 4- Agree, 3- Neither agree nor Disagree, 2- Disagree, 1- Strongly Disagree**

Statement: I am satisfied with the following facilities provided in the library

S. No.	Physical Facilities in Libraries	5	4	3	2	1
1	Reading room	337 (40.4%)	335 (40.16%)	92 (11.03%)	32 (3.83%)	38 (4.55%)
2	Internet lab	176 (21.1%)	266 (31.89%)	170 (20.38%)	116 (13.9%)	106 (12.7%)
3	Study environment	322 (38.6%)	294 (35.25%)	122 (14.62%)	64 (7.67%)	32 (3.83%)
4	Adequate equipment	186 (22.3%)	302 (36.21%)	194 (23.26%)	110 (13.18%)	42 (5.03%)
5	Library time	356 (42.68%)	266 (31.89%)	112 (13.42%)	62 (7.43%)	38 (4.55%)
6	Seating arrangement	354 (42.44%)	255 (30.57%)	134 (16.06%)	46 (5.51%)	45 (5.39%)
7	Lighting	414 (49.64%)	265 (31.77%)	78 (9.35%)	36 (4.31%)	41 (4.91%)
8	Fans	382 (45.8%)	235 (28.17%)	114 (13.66%)	54 (6.47%)	49 (5.87%)
9	Cleanliness	385 (46.16%)	270 (32.37%)	110 (13.18%)	48 (5.75%)	21 (2.51%)
10	Drinking water	254 (30.45%)	225 (26.97%)	122 (14.62%)	137 (16.42%)	96 (11.51%)
	Total average value	316.6 (37.96%)	271.3 (32.53%)	124.8 (14.96%)	70.5 (8.45%)	50.8 (6.09%)
$\chi^2 = 682.239$, DF = 36 and p-value = 0.000 (≤ 0.05 significant)						

Table 5.58

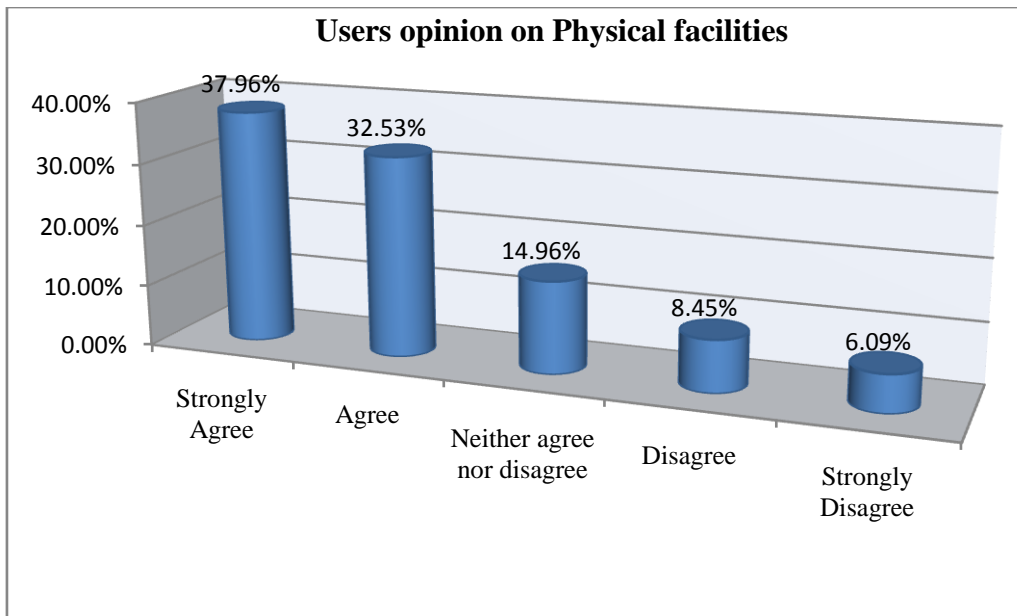


Fig. 5.54 Users opinion on Physical facilities

Table 5.55 shows the users’ opinions on satisfaction with the physical facilities available in library of womens’ universities to users. The table contains all facilities which should be available in libraries to users i.e. reading room, internet lab, and study environment, adequate equipments for users, library timing, seating arrangement, proper lighting, fans, drinking water facility and cleanliness. According to the table the average value of total response seems that 37.96% users are strongly agree and satisfied, 32.53% users are agreed and satisfied, 14.96% users are neither agree nor disagree, 8.45% users are disagreed and 6.09% users are strongly disagree and disappointed with physical facilities providing to users in womens’ university libraries.

Null Hypothesis H_0 : There is no significant difference in user’s opinions on satisfaction with the physical facilities available in library of womens’ universities to users.

Alternative Hypothesis H₁: There is a significant difference in user’s opinions on satisfaction with the physical facilities available in library of womens’ universities to users.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 682.239$, $p=0.000$ (≤ 0.05 significant), There is a significant difference in user’s opinions on satisfaction with the physical facilities available in library of womens’ universities to users.

5.6.6 Users’ opinion on Printed collection in Library

Statement: I am satisfied with the adequacy of following printed document collection in library

S. No.	Printed document collection	5	4	3	2	1
1	Books	342 (41%)	278 (33.33%)	161 (19.3%)	30 (3.59%)	23 (2.75%)
2	Current periodical	199 (23.86%)	316 (37.88%)	200 (23.98%)	73 (8.75%)	46 (5.51%)
3	back volumes	169 (20.26%)	291 (34.89%)	218 (26.13%)	95 (11.39%)	61 (7.31%)
4	Manuscripts reprint	178 (21.34%)	325 (38.96%)	179 (21.46%)	95 (11.39%)	57 (6.83%)
5	News papers	374 (44.84%)	242 (29.01%)	124 (14.86%)	55 (6.59%)	39 (4.67%)
6	M.Phil/Ph.D Theses	183 (21.94%)	272 (32.61%)	201 (24.1%)	97 (11.63%)	81 (9.71%)
7	Reports	202 (24.22%)	260 (31.17%)	224 (26.85%)	76 (9.11%)	72 (8.63%)
8	Pamphlets	183 (21.94%)	250 (29.97%)	222 (26.61%)	94 (11.27%)	85 (10.19%)
	Total average value	228.75 (27.43%)	279.25 (33.48%)	191.13 (22.92%)	76.87 (9.22%)	58 (6.95%)
$\chi^2 = 363.140$, DF = 28 and p-value = 0.000 (≤ 0.05 significant)						

Table 5.59

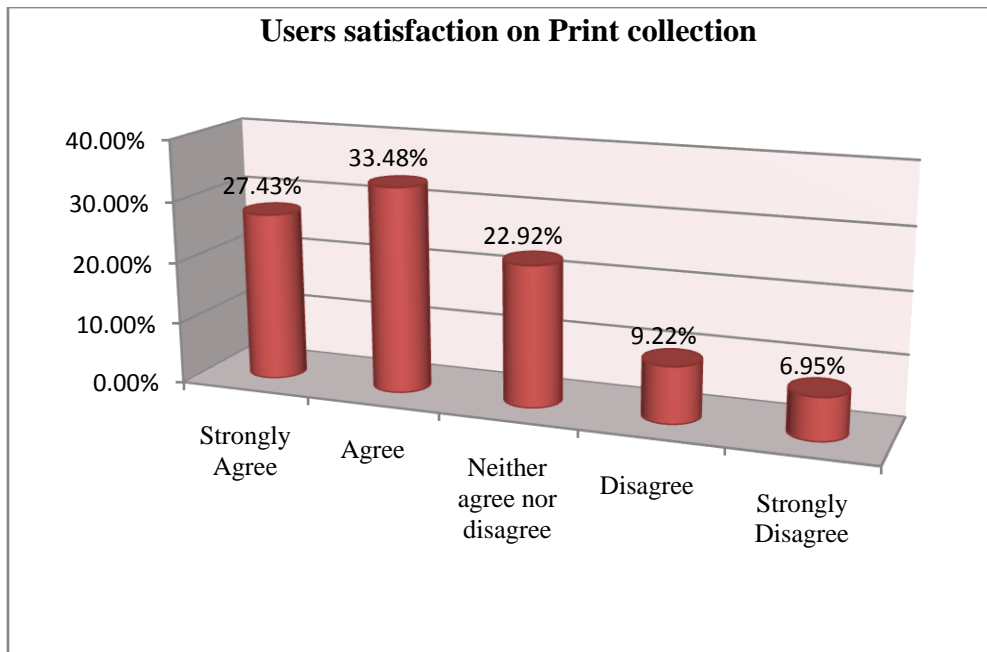


Fig. 5.55 Users satisfaction on Print collection

Table 5.56 is about the users’ opinion on adequacy of print collection of womens’ university libraries. It includes the books, current periodical, back volumes, manuscripts reprint, news papers, M.Phil/PhD theses, reports, pamphlets etc. According to table the average value of total response shows that 27.43% users are strongly agree and 33.48% users are agree and satisfied with adequate collection of printed documents in library, 22.92% users are neither agree nor disagree, 9.22% users disagree and 6.95% users are strongly disagree and disappointed with printed collection of libraries in womens’ universities.

Null Hypothesis H₀: There is no significant difference in users’ opinions on printed collection including books, current periodical, back volumes, manuscripts reprint, news papers, M.Phil/PhD theses, reports, pamphlets.

Alternative Hypothesis H₁: There is a significant difference in users’ opinions on printed collection including books, current periodical, back volumes, manuscripts reprint, news papers, M.Phil/PhD theses, reports, pamphlets.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 363.140$, $p=0.000$ (≤ 0.05 significant), There is a significant difference in users' opinions on printed collection including books, current periodical, back volumes, manuscripts reprint, news papers, M.Phil/PhD theses, reports, pamphlets collection.

5.6.7 Users' opinion on Non-printed collection in Library

Statement: I am satisfied with the adequacy of following non-print collection in library

S. No.	Non-print collection	5	4	3	2	1
1	OPAC	164 (19.66%)	239 (28.65%)	207 (24.82%)	101 (12.11%)	123 (14.74%)
2	E- journals	244 (29.25%)	248 (29.73%)	168 (20.14%)	86 (10.31%)	88 (10.55%)
3	E- books	234 (28.05%)	235 (28.17%)	174 (20.86%)	108 (12.94%)	85 (10.19%)
4	CD-ROM/ DVD	165 (19.78%)	224 (26.85%)	201 (24.1%)	118 (14.14%)	126 (15.1%)
5	Databases	162 (19.42%)	232 (27.81%)	213 (25.53%)	111 (13.3%)	116 (13.9%)
6	Audio	150 (17.98%)	214 (25.65%)	185 (22.18%)	143 (17.14%)	142 (17.02%)
7	Video tapes	146 (17.5%)	200 (23.98%)	204 (24.46%)	134 (16.06%)	150 (17.98%)
8	Full text data files	194 (23.26%)	204 (24.46%)	196 (23.5%)	119 (14.26%)	121 (14.5%)
9	Microform collection	167 (20.02%)	205 (24.58%)	190 (22.78%)	131 (15.7%)	141 (16.9%)
	Total average value	180.67 (21.66%)	222.33 (26.66%)	192.89 (23.13%)	116.78 (14%)	121.33 (14.55%)
$\chi^2 = 135.315$, DF = 32 and p-value = 0.000 (≤ 0.05 significant)						

Table 5.60

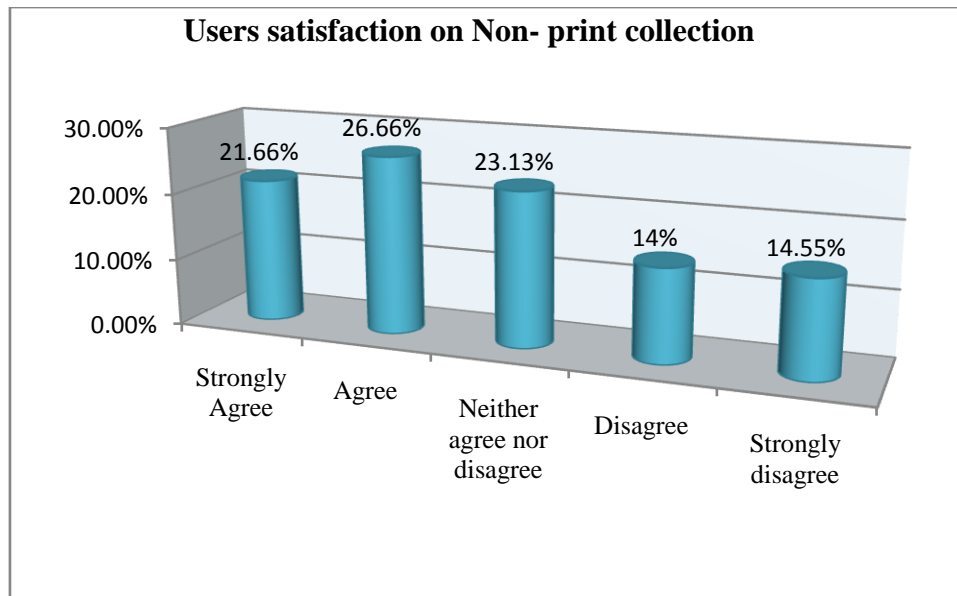


Fig. 5.56 Users satisfaction on Non- print collection

Table 5.57 shows the users’ satisfaction with adequacy of non-print collection in libraries. The table presents the users’ opinions on non- printed collection including OPAC, e-journals, e-books, CD ROM/DVD, databases, audios, video tapes, full text data files, and microform collections. According to the total response the average value shoes that 21.66% users are strongly agree, 26.66% users are agree and satisfied with adequate collection of non-printed documents available in library, 23.13% users are neither agree nor disagree, 14% users are disagree and 14.55% users are strongly disagree and dissatisfied with non-printed collection available in libraries of womens’ universities.

Null Hypothesis H₀: There is no significant difference in users’ opinions on non- printed collection including OPAC, e-journals, e-books, CD ROM/DVD, databases, audios, video tapes, full text data files, and microform collection.

Alternative Hypothesis H₁: There is a significant difference in users’ opinions on non- printed collection including OPAC, e-journals, e-books, CD ROM/DVD, databases, audios, video tapes, full text data files, and microform collection.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 135.315$, $p=0.000$ (≤ 0.05 significant), There is a significant difference in users' opinions on non- printed collection including OPAC, e-journals, e-books, CD ROM/DVD, databases, audios, video tapes, full text data files, and microform collection.

5.6.8 Users' opinion on Staff attitude

S. No.	Statements	5	4	3	2	1
1	I am helped by library staff in getting relevant information for study	307 (36.81%)	280 (33.57%)	151 (18.1%)	51 (6.11%)	45 (5.39%)
2	The behavior of library staff is supportive, polite and friendly to users	278 (33.33%)	294 (35.25%)	148 (17.74%)	84 (10.07%)	30 (3.59%)
3	The communication is possible between staff and user without any interruptions	264 (31.65%)	305 (36.57%)	164 (19.66%)	74 (8.87%)	27 (3.23%)
4	There is assurance about staff availability in any time library working hours	304 (36.45%)	298 (35.73%)	152 (18.22%)	66 (7.91%)	14 (1.67%)
5	There is assurance about staff knowledge, skill and attitude	200 (23.98%)	338 (40.52%)	186 (22.3%)	76 (9.11%)	34 (4.07%)
6	The personalized and individualized service provide by staff to users	201 (24.1%)	342 (41%)	160 (19.18%)	102 (12.23%)	29 (3.47%)
7	Library staff is moderate and well aware about Information Technology	224 (26.85%)	304 (36.45%)	186 (22.3%)	84 (10.07%)	36 (4.31%)
8	Library staff provides quality in services to users	256 (30.69%)	263 (31.53%)	175 (20.98%)	108 (12.94%)	32 (3.83%)
	Total average value	254.25 (30.49%)	303 (36.33%)	165.25 (19.81%)	80.62 (9.67%)	30.87 (3.70%)
$\chi^2 = 153.363$, DF = 28 and p-value = 0.000 (≤ 0.05 significant)						

Table 5.61

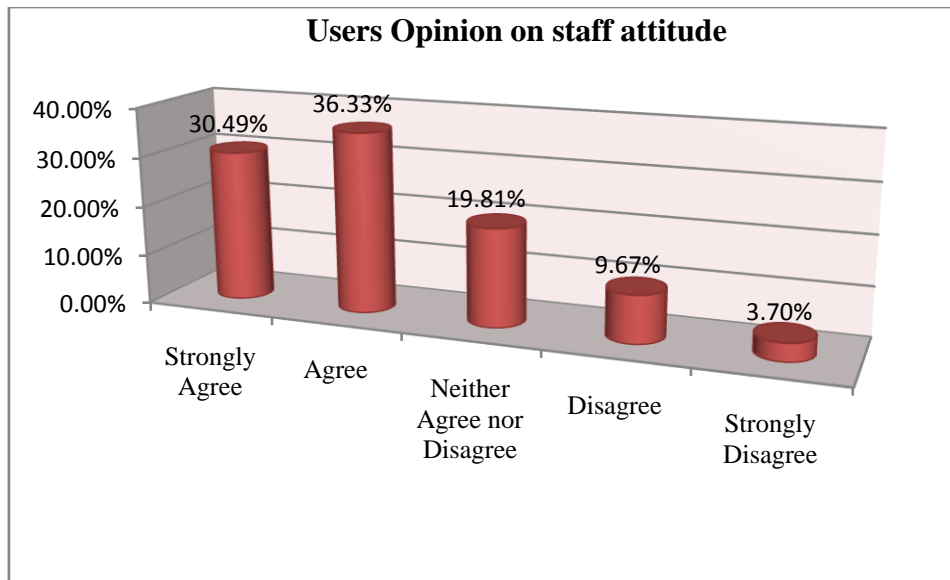


Fig. 5.57 Users Opinion on staff attitude

Table 5.58 shows the users’ opinion on staff attitude when they need assistance from library staff. In this table 36.81% users are strongly agree and 33.57% users are agree and satisfied with the help from library staff in getting relevant information for study; 33.33% users are strongly agree and 35.25% are agree with the supportive, polite and user friendly behavior of library staff; 36.57% users are agree and 31.65% users are strongly agree and satisfied with communication between staff and users is possible without any interruption; 36.45% users are strongly agree and 35.73% are agree on the assurance about staff availability in any time of library working hours; 23.98% users are strongly agree and 40.52% users are agree and assured about staff knowledge, skill and attitude; 26.85% users are strongly agree and 36.45% are agreed on the statement as library staff is moderate and well aware about information technology; 24.1% users are strongly agree and 41% users are agree satisfied on personalized and individualized services provided by staff; 30.69% users are strongly agree and 31.53% users are agreed on the statement as library staff provides qualitative services to users.

The average value of overall response shows that 30.49% users are strongly satisfied, 36.33% users are satisfied, 19.81% users are neither agree nor disagree, 9.67% users are disagree and only 3.7% users are strongly disagree on library staff attitude to users in womens' universities.

Null Hypothesis H₀: There is no significant difference in users' opinions on staff attitude when they need assistance from library staff.

Alternative Hypothesis H₁: There is a significant difference in users' opinions on staff attitude when they need assistance from library staff.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 153.363$, $p = 0.000$ (≤ 0.05 significant), There is a significant difference in users' opinions on staff attitude when they need assistance from library staff.

5.6.9 Users' opinion on Library Services

Statement: I am satisfied with the following services provided by library

S. No.	Library services	5	4	3	2	1
1	CAS/SDI	194 (23.26%)	240 (28.77%)	178 (21.34%)	122 (14.62%)	100 (11.99%)
2	Indexing/ Abstracting services	186 (22.3%)	242 (29.01%)	210 (25.17%)	104 (12.47%)	92 (11.03%)
3	Quick reference service	205 (24.58%)	265 (31.77%)	172 (20.62%)	107 (12.82%)	85 (10.19%)
4	Photocopying service	190 (22.78%)	224 (26.85%)	184 (22.06%)	120 (14.38%)	116 (13.9%)
5	Binding service	175 (20.98%)	250 (29.97%)	170 (20.38%)	116 (13.9%)	123 (14.74%)
6	Internet access	206 (24.7%)	254 (30.45%)	176 (21.1%)	104 (12.47%)	94 (11.27%)
7	Online SDI services	174 (20.86%)	216 (25.89%)	192 (23.02%)	128 (15.34%)	124 (14.86%)

8	OPAC service	200 (23.98%)	217 (26.01%)	191 (22.9%)	107 (12.82%)	119 (14.26%)
9	Online database	210 (25.17%)	230 (27.57%)	174 (20.86%)	108 (12.94%)	112 (13.42%)
10	Translation service	183 (21.94%)	194 (23.26%)	206 (24.7%)	123 (14.74%)	128 (15.34%)
	Total average value	192.3 (23.05%)	233.2 (27.96%)	185.3 (22.21%)	113.9 (13.65%)	109.3 (13.10%)
$\chi^2 = 60.346$, DF = 36 and p-value = 0.00670 ($\leq .05$ significant)						

Table 5.62

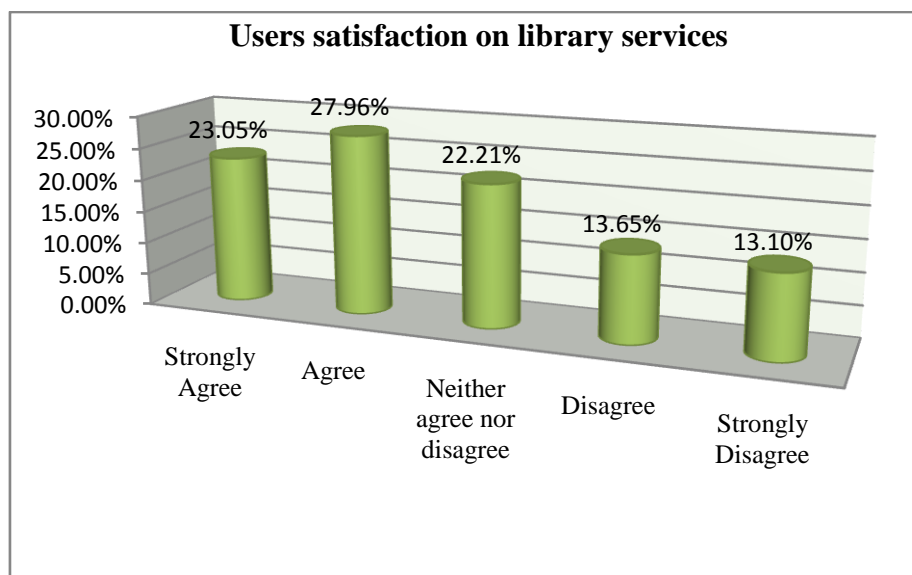


Fig. 5.58 Users satisfaction on Library Services

Table 5.59 is regarding to user satisfaction on library services. The table shows the users' opinion about satisfaction with library services i.e. CAS/SDI, Indexing /Abstracting service, Quick reference service, Photocopy service, Binding service, Internet access, online SDI service, OPAC service, Online database, Extension service and Translation service. The average value of total response shows that 23.05% users are strongly agree and satisfied, 27.96% users are agree and satisfied, 22.21% users are neither agree nor disagree, 13.65% users are disagree and 13.10% users are strongly disagree and dissatisfied on services providing by womens' university libraries.

Null Hypothesis H₀: There is no significant difference in users' opinion about satisfaction with library services.

Alternative Hypothesis H₁: There is a significant difference in users' opinion about satisfaction with library services.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2 = 60.346$, $p=0.00670$ (≤ 0.05 significant), There is a significant difference in users' opinion about satisfaction with library services.

5.6.10 Users' opinion on satisfaction with delivery of Library Services

S. No.	Statements	5	4	3	2	1
1	There is reliability in delivery of promised library services accurately	216 (25.89%)	276 (33.09%)	206 (24.7%)	84 (10.07%)	52 (6.23%)
2	I am satisfied with responsiveness and rapidity in providing library services	214 (25.89%)	284 (34.05%)	188 (22.54%)	98 (11.75%)	50 (5.99%)
	Total average value	215 (25.78%)	280 (33.57%)	197 (23.62%)	91 (10.91%)	51 (6.12%)
$\chi^2 = 2.0621$, DF = 4 and p-value = 0.724345 (≤ 0.05 non-significant)						

Table 5.63

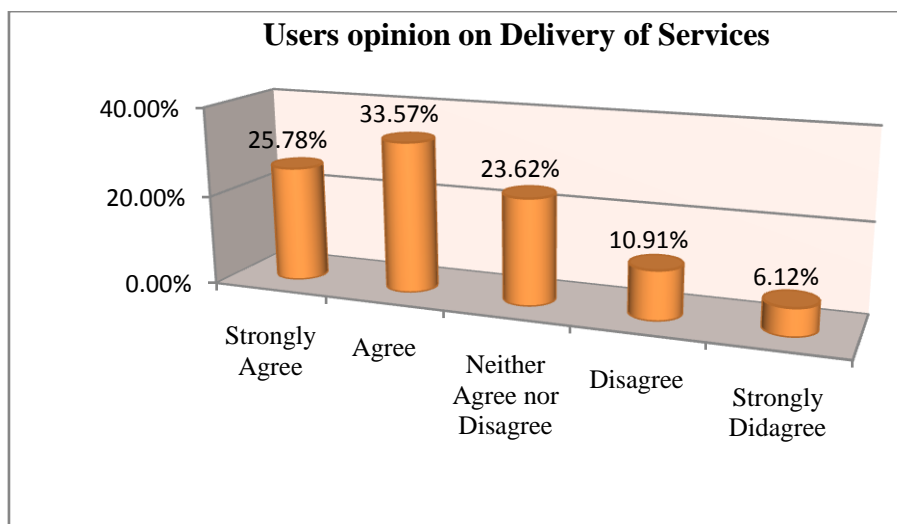


Fig. 5.59 Users opinion on Delivery of Services

Table 5.60 is regarding to users' opinion and satisfaction with delivery of services. the table shows that 25.89% users are strongly agree, 33.09% users are agree on the statement as there is reliability in delivery of promised library services accurately, but 24.7% users are neither agree nor disagree on the above statement; 25.89% users are strongly agree, 34.05% users are agree and 22.54% users are neither agree nor disagree on satisfaction with responsiveness and rapidity in services providing by library.

The average value of total response shows that 25.78% users are strongly satisfied, 33.57% users are satisfied, 23.62% users are neither agree nor disagree, 10.91% users are dissatisfied and 6.12% users are strongly dissatisfied with delivery of library services in womens' universities.

Null Hypothesis H₀: There is no significant difference in users' opinion and satisfaction with delivery of services.

Alternative Hypothesis H₁: There is a significant difference in users' opinion and satisfaction with delivery of services.

The above data was analyzed using Chi-Square test. The null hypothesis was accepted $\chi^2 = 2.0621$, $p=0.724345$ ($\geq .05$ non-significant), There is a non-significant difference in users' opinion and satisfaction with delivery of services.

5.6.11 Users' opinion on difficulties in Internet Services

Statement: I feel the following difficulties (barriers) in use of Internet services

S. No.	Difficulties in Internet services	5	4	3	2	1
1	Inadequate equipments	156 (18.7%)	206 (24.7%)	184 (22.06%)	140 (16.78%)	148 (17.74%)
2	Lack of time	156 (18.7%)	188 (22.54%)	230 (27.57%)	144 (17.26%)	116 (13.9%)
3	Lack of knowledge for using internet	172 (20.62%)	178 (21.34%)	168 (20.14%)	152 (18.22%)	164 (19.66%)
4	Uncomfortable environment	128 (15.34%)	190 (22.78%)	158 (18.94%)	184 (22.06%)	174 (20.86%)
5	Access speed is slow	150 (17.98%)	198 (23.74%)	168 (20.14%)	162 (19.42%)	156 (18.7%)
6	Lack of maintenance	126 (15.1%)	202 (24.22%)	180 (21.58%)	170 (20.38%)	156 (18.7%)
7	Not easy to use	115 (13.78%)	164 (19.66%)	195 (23.38%)	174 (20.86%)	186 (22.3%)
8	Difficult to read from screen	126 (15.1%)	144 (17.26%)	182 (21.82%)	178 (21.34%)	204 (24.46%)
	Total average value	141.13 (16.93%)	183.75 (22.03%)	183.13 (21.96%)	163 (19.54%)	163 (19.54%)
$\chi^2 = 96.529$, DF = 28 and p=0.000 ($\leq .05$ significant)						

Table 5.64

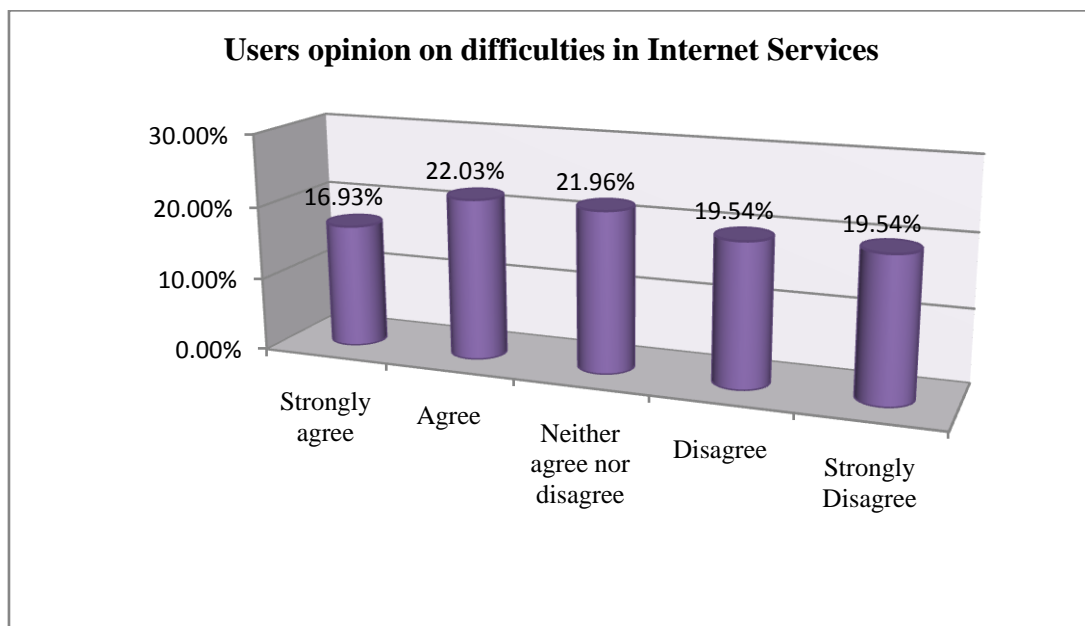


Fig. 5.60 Users opinion on difficulties in Internet Services

Table 5.61 presents the users' opinion on difficulties in use of Internet services in libraries. The table includes the various reasons of difficulties in internet services among users i.e. inadequate equipments, lack of time, lack of knowledge for using internet, uncomfortable environment, access speed is slow, lack of maintenance , not easy to use and difficulties to read from screen. The average value of total response shows that 16.93% users are strongly agree, 22.03% users are agree with above difficulties in use of internet services, 21.96% users are neither agree nor disagree, 19.54% users are disagree and 19.54% users are strongly disagree on above difficulties in use of internet services in womens' university libraries.

Null Hypothesis H₀: There is no significant difference in users' opinion on difficulties in use of Internet services in libraries.

Alternative Hypothesis H₁: There is a significant difference in users' opinion on difficulties in use of Internet services in libraries.

The above data was analyzed using Chi-Square test. The alternate hypothesis was accepted $\chi^2=96.529$, $p=0.000$ (≤ 0.05 significant), There is a significant difference in users' opinion on difficulties in use of Internet services in libraries.

CHAPTER 6

Findings, Conclusion and Suggestions

CHAPTER- 6

FINDINGS, CONCLUSION AND SUGGESTIONS

6.1 INTRODUCTION

The study was conducted to find the status of total quality management in womens' university libraries in India. This chapter concludes the result of the data analysis and observations of the research. It presents the major findings of the study with reference to the objectives of the study with testing of hypotheses and attempting some suggestions also. The following findings are purely based on data which collected through questionnaire from the University librarian, library staff and users.

6.2 FINDINGS

From University Librarian:

The study has covered the total number of universities exclusively for womens' in India at present. The study found that the first womens' university in India had established in 1916 however only 10 womens' universities has established out of 677 universities in India till now. The status of 10 universities exclusively for womens' including 6 state universities, 2 deemed universities and 2 private universities in India. 5 womens' universities found in south India which covered Maharashtra, Karnataka, Andhra Pradesh and Tamil Nadu states whereas 5 womens' universities found in north India which covered Delhi, Haryana and Rajasthan states. The 10 womens' universities out of 677 universities in all over India looks very least number of universities, therefore the study suggested to established more universities for womens' in future. At least one womens' university should be established in each state of India. It is necessary in respect of population and womens' education in India.

The study found that all womens' universities have separate building for central library. SPMV library building is the largest building founded compared to other libraries, which has 38486 sq.ft. area with 600 seating capacity in study room and 300000 documents storing capacity in stack room. BU library is the second largest building which covers 33829 sq. ft. area and 400 seating capacity, while BPSMV library has found the smallest building of library which covered only 928 sq. ft. area in university.

The study found that only three womens' universities have librarian in their libraries, four libraries have deputy librarian, majority of libraries have assistant librarian and professional assistants as professional staff in womens' universities. All the libraries have library attendants. Majority of library have peons but three libraries have library assistants and only one library has accountant as non- professional staff.

Regarding to library staff strength, BU library has the highest no. of professional staff and non- professional staff. In other universities the lack of staff has found in libraries. BU library accepted that it has adequate staff but other libraries are suffering with the problem of inadequate staff.

The study found that all the libraries of womens' universities have adequate collection. BU library has the largest collection of printed documents and AU library has the second highest collection, while IGDTUW library has the least collection in printed documents. For the non-printed collection MUST library has the largest collection of e-resources. SPMV and MTWU libraries have the least collection of e-resources. Only three libraries have special collection rather than other libraries. Most of libraries don't have audios and video films in e- collection. On the progress of collection development the study has found the enlargement of new books which have

added in the libraries since five years. BU library has added the largest collection of books and SPMV library added the least collection of new books. Most of libraries are increasing their collection yearly.

The study found that all the libraries are automated in womens' universities. These are using the library automation software as SLIM, LIBSYS, SOUL, KOHA and NEWGENLIB. All the libraries have computer lab for users and facilitate the Internet access. Only two libraries provide Wi-Fi facility to users. Majority of library have digital library also. These are the members of WAN i.e. J-GATE PLUS, UGC-INFONET, DELNET and INFLIBNET. All the libraries provide hand- on- training to users regarding to use of e- resources.

Majority of library provide link from home page of library websites to promoting the use of e- resources and also conducts orientation programs for users. All the libraries are improving their services with the use of IT applications.

Approximately all libraries of womens' universities provide various library services to their users with more additional services i.e. generate reminder for overdue books, recent addition list, access to internet in library and access to e- journals in library. All the libraries provide user education to use library services i.e. to use catalogue, to find documents from the selves, to user OPAC, to use e-resources, to access Internet etc. All the libraries provide training to staff and organize book exhibition. All the libraries are based on user focus and achieving improvement in regular process. Majority of library are satisfied with utilization of library resources.

The study shows the library budgets since five years to ensure the progress of library collection, services and maintenance. Seven libraries have presented their budget out of nine libraries. The study found that two libraries are increasing their

budget allocation continuously since 2010-11 to 2014-15 and other libraries are getting ups and downs in their budget. The largest amount of budget allocation has found for BU library and the smallest budget found for KSWU library. Majority of library expends the budget to purchase new books and to subscribe periodicals every year. The expenditure on books and periodicals is increasing. It means the libraries are growing in their collection of books and periodicals continuously. Three libraries are expanding their budget on all the particulars as books, periodicals, IT Infrastructure, staff salary and maintenance of library yearly.

All the libraries have library committee. Libraries conduct the committee meeting to manage their services properly according to their own committee circulation. All the libraries have their library rule book and majority of library have committee circulation. Majority of library do not have library policy and library manual in library management documents. Majority of library open at 8 O' clock or 8:30 am but closing time is different, BU library opens for 13 hours in a day. Majority of library provide services for all 7 days of a week.

The study found that only two libraries are following TQM principles partially while rest of the libraries given more than one reasons for not implementing TQM as inadequate knowledge about TQM; costly and long term process and insufficient budget. Both the libraries achieved following benefits i.e. the users satisfaction has increased, services delivered on time, work satisfaction has increased, achieving team work, quality of services improving continuously, decreased the cost and work delay after follow TQM. These libraries are admitted that the library image has increased after adopting TQM.

None of the libraries is certified with ISO 9000 series in womens' universities in India and none of these has received any quality award. Only one library uses

planned action in quality tools while other libraries are not using any quality tools. Four libraries are planning to implement TQM application in future to achieve many goals i.e. to continuous improvement in library services, to improve quality, to achieve quality culture, to satisfied users, to satisfied staff, to achieve excellence in services at low cost.

From Library Staff:

The study found that majority of staff is satisfied with quality in job according to response as 45.64% is agreed and 39.88% is strongly agreed. Majority of staff is satisfied and admit that they get leave when need them while 22.58% staff is strongly disagreed on this issue. Majority of staff is strongly disappointed with facilities in library according to response as 37.64% disagree. The two major issues were founded about dissatisfaction of library staff, one is for leave and second one is facilities for staff. The study suggested that it is essentially required to take attention on these issues.

Majority of library staff is strongly satisfied with job management according to response as 40.25% is agreed and 37.52% is strongly agreed. Majority of library staff is agreed with 44.94% response to achieving opportunities for human development during the job. Majority of library staff is strongly satisfied with the response of 45.68% is agree and 29.42% is strongly agree on training facilities to staff provided by womens' university libraries. The study found that 40.24% staff is strongly agreed and 44.24% staff is agreed and comfortable to work with computerized library in womens' universities. The lack of computer skill has found as the major barrier to work in computerized library according to the response as 34.51% staff is strongly agree and 21.18% staff is agree. Lack of proper technical

environment and lack of technical qualified staff are also found as the big barriers in computerized library.

From Library Users:

Majority of user use library for getting book issue and return according to response of 71.34%, it is the main purpose has found to use library. Some other purposes have found according to responses as 43.88% for searching course materials and 38.96% to read newspapers. It is found that 37.96% user strongly satisfied and 32.53% user is satisfied with all the physical facilities available in womens' university libraries. Majority of user are fully satisfied with some of physical facilities as reading room, lighting, study environment, library timing, seating arrangement, fans and cleanliness while users are dissatisfied also on these facilities as computer lab, equipments and drinking water facilities in womens' universities.

The study found that majority of user are satisfied with the adequate collection of printed documents according to response as 33.48% satisfied and 27.43% are strongly satisfied. For non- printed collection 26.66% users satisfied and 21.66% users strongly satisfied with e-resources in library. 22.92% users for printed collection and 23.13% for e- collection are neither agree nor disagree which response could not be avoided. These responses indicate that users are not completely aware about various forms of total collection that are available in their libraries.

The study found that 23.05% user is strongly satisfied, 27.96% user is satisfied while 22.21% user is neither agree nor disagree on library services which are providing in womens' universities. According to the users' opinion 33.57% user is satisfied, 25.78% user is strongly satisfied while 23.62% users is neither agree nor disagree on right time delivery of library services to the users. The response on

neither agree nor disagree indicates that the users are not aware about all the services of library and they do not use the library services completely.

30.49% user is strongly satisfied and 36.33% user is satisfied with good behavior and helping attitude of library staff. Users feel free to communicate with staff regarding to their need and they get help instantly by the library staff.

The major difficulties have found in Internet services as inadequate equipments, lack of knowledge for using Internet, uncomfortable environment, slow speed of Internet and lack of maintenance. The responses are as 22.03% users is agree, 16.93% users is strongly agree and 21.96% users is neither agree nor disagree on the above difficulties in internet services provided by libraries.

6.3 TESTING OF HYPOTHESES

The hypotheses were formulated according to the objectives of the research to answer the research problem. They were tested using Chi-Square test with the help of quantpsy tool for statistics.

H₁: Most of library of womens' universities have adequate collection of print and non- print documents.

The hypotheses were tested using chi-square test. Table 5.20 shows that there is a significant difference in the view of library collection with regards to printed documents of different universities at level of significance $\chi^2 = 115777.101$ and $p = 0.000$ ($\leq .05$ significant). Table 5.21 shows that there is a significant difference in the view of library collection with regards to non- printed documents of different universities at level of significance $\chi^2 = 15168.021$ and $p = 0.000$ ($\leq .05$ significant). Table 5.23 shows that there is a significant difference in the view of library collection

in every year with regards to addition of new books per year in different universities at level of significance $\chi^2 = 16594.306$ and $p = 0.000$ ($\leq .05$ significant). Table 5.59 shows that there is a significant difference in users' opinions on printed collection at level of significance $\chi^2 = 363.140$ and $p = 0.000$ ($\leq .05$ significant). Table 5.60 shows that there is a significant difference in users' opinions on non- printed collection at level of significance $\chi^2 = 135.315$ and $p = 0.000$ ($\leq .05$ significant).

The result revealed that the alternative hypothesis was accepted.

H₂: Most of libraries provide qualitative services to users.

Table 5.25 and table 5.26 shows that all the womens' universities provide almost all the traditional and IT services in library. Table 5.27 shows that all the libraries provide user education to use library services. Table 5.28 shows other activities provided by libraries as training to staff, conferences/ seminars and book exhibition. Table 5.29 shows that all the libraries provide services based on user focus and they are in regular process improvement. Table 5.36 shows that majority of libraries open 7 days in week even Sunday also and provides their services. Table 5.47 shows that there is a significant difference in opinions of library staff with regards to job satisfaction in different universities at level of significance $\chi^2 = 90.905$ and $p = 0.000$ ($\leq .05$ significant). Table 5.62 shows that there is a significant difference in users' opinions about satisfaction with library services at level of significance $\chi^2 = 60.346$ and $p = 0.00670$ ($\leq .05$ significant). Table 5.63 shows that there is a non- significant difference in users' opinions about satisfaction with delivery of library services at level of significance $\chi^2 = 2.0621$ and $p = 0.724345$ ($\geq .05$ non- significant).

The result revealed that the alternative hypothesis was accepted.

H₃: Level of management of library services in womens' universities is good.

According to tables 5.31, 5.32, 5.33, 5.34 and table 5.35 all the libraries have library committee. All the library committees consider users' opinions before purchase of documents in different way as through users' meetings, through book suggestion slip and ask to recommend books. Almost all the libraries have management documents as library rules, committee circulation, library policy etc. Table 5.46 shows that there is a significant difference in opinions of library staff with regards to satisfaction with quality in job in different libraries of womens' universities at level of significance $\chi^2 = 111.774$ and $p = 0.000$ ($\leq .05$ significant). Table 5.49 shows that there is a significant difference in opinions of library staff with regards to satisfaction with job management in different libraries of womens' universities at level of significance $\chi^2 = 62.789$ and $p = 0.00092$ ($\leq .05$ significant).

The result revealed that the alternative hypothesis was accepted.

H₄: Most of library staff needs training to adopt new technology in library services.

Table 5.51 shows that there is a significant difference in opinions of library staff with regards to statements on attitude towards computerized library in different womens' universities at level of significance $\chi^2 = 44.995$ and $p = 0.000$ ($\leq .05$ significant). Table 5.52 shows that there is a significant difference in availability of training facilities of libraries different womens' universities at level of significance $\chi^2 = 57.444$ and $p = 0.000$ ($\leq .05$ significant). Table 5.53 shows that there is a significant difference in opinions of library staff with regards to statements on difficulties in application of computerized library among staff different womens' universities at level of significance $\chi^2 = 73.765$ and $p = 0.000$ ($\leq .05$ significant). Table 5.64 shows that there is a significant difference in users' opinions on difficulties in use of internet

services in libraries in different womens' universities at level of significance $\chi^2 = 96.529$ and $p= 0.000 (\leq .05 \text{ significant})$.

The result revealed that the alternative hypothesis was accepted.

H₅: Most of libraries of Womens' University have efficient infrastructure facilities.

According to table 5.2, 5.3, 5.4, 5.5 all the libraries have separate buildings with stack room, study room, periodical room etc. all the libraries have automated with library server. They provide computerized services, internet, LAN, Wi-Fi facilities to their users. Almost libraries have digitized and they access from WAN. Table 5.48 shows that there is a significant difference in opinions of library staff with regards on appropriate facilities in libraries of womens' universities at level of significance $\chi^2 = 38.977$ and $p= 0.000 (\leq .05 \text{ significant})$. Table 5.58 shows that there is a significant difference in users' opinions on satisfaction with the physical facilities available in libraries to users at level of significance $\chi^2 = 682.239$ and $p= 0.000 (\leq .05 \text{ significant})$.

The result revealed that the alternative hypothesis was accepted.

6.4 CONCLUSION

TQM is an organization wide activity that has to reach every individual within an organization. In university library TQM covers library management system to manage the library services; library products i.e. books and other documents; library services to continuous improvement; library staff to participate as a team work and library users to customer satisfaction dimension.

TQM unites theories, tools and organizational models developed over the time in Japan, European and US industries. In simple terms it refers to a system of continuous improvement centered on customer's need. TQM is not completely new

technique for libraries, because libraries are already user centered and effort for continuous improvement. However, TQM offers a much proper and systematic approach for focusing on continuous improvement.

The study was conducted to know the status of TQM in the central libraries of womens' universities in India at present. The study concludes that a very least number of womens' university was found in all over India. All womens' universities have libraries but some of these are not in well maintained condition. Banasthali University library has rated as the best library through the survey. Banasthali University has well maintained building; it has the largest collection, maximum library staff, highest score in user's satisfaction and it is improving continuously compare to other libraries of womens' universities.

In other womens' universities the central libraries are not in well maintained situation, these are suffering with the problem of lack of manpower. All the libraries are providing various services to users but users are not completely satisfied with library services. Students use library only for books issue or return but they do not utilize other services of library appropriately. Libraries have adequate collection but users are unable to find and use all its' collection. All the libraries are adopting new technologies rapidly and providing computerized and digitized library but users are not completely satisfied with that.

Total Quality Management (TQM) is one of such technique which is followed for the continuous improvement and maintenance of the libraries. Therefore, it is essential for library professionals to understand core concepts, methods and techniques used in TQM. Library activities cover acquisition, processing and dissemination of information but user satisfaction is vital to its activities. Therefore,

the implementation of ISO 9000 in library could be fairly helpful for providing quality services to its users. The ISO 9000 series of standard must apply in libraries for quality management. In libraries it defines the criteria for measurement with standard series as ISO 9001 deals with design and development, ISO 9002 involved production, installation and library services and ISO 9003 is to examine the quality.

Womens' university libraries are in managed form according to librarian but from users' dimension these are not in updated condition. User's satisfaction is the main objective of any library. The study found at the user's satisfaction level, that is all the libraries need to be managed and updated their services and collections regularly. All the libraries need to implement TQM application for betterment in services and continuous improvement with users' satisfaction.

The initial step of TQM in the direction of excellence is the major decision to present leadership for quality. Total commitment of the top management is considered as the key factor in implementing TQM so top management must lead to the TQM efforts. Library should identify all its users and recognize what they want. Like other industries or organization, libraries with TQM performance provide quality product and services with low cost to the user. Libraries should manage their services to fulfill the increasing demand of variety of users. Thus TQM helps the libraries to transform managerial culture, proper planning, improve organizational structure, continuous training and education, effectual dimension techniques, good customer concern, and continues improvement of service quality.

Majority of library staff in womens' universities are satisfied with their job quality and nature of work place environment. In the entire of TQM, total employees' commitment can only be achieved after fear has been determined from the workplace, when empowerment has occurred, and management has provided the proper

environment. High performance work systems integrate continuous improvement efforts with common operations. Self-managed work teams are one form of empowerment. Continuous improvement in all aspects of the organization is the key to retain the initial success achieved by TQM practices. The success of any organization is always attributed to the involvement of the employees and the management who has instilled the quality consciousness into the employees.

6.5 SUGGESTIONS

- The study suggests that the library buildings should be well maintained with basic facilities to users. Computer lab should be well maintained with adequate equipments and should facilitate to users conveniently.
- Users should be well aware about complete collection of library. It is very important to use all the resources of collection.
- Users should be well aware about e-resource collection; it is essentially requirement to study in ICT era.
- Recorded CDs of special lectures should be contained in library collection and provide to users.
- The study suggests that the technical environment should be maintained for staff and users. Library should conduct the training programmes for old staff regarding to work with computerized library.
- Approximately all libraries are suffering with the problem of inadequate staff, therefore the new staff should be appointed on vacant position. Adequate staff is most important component to run the qualitative services promptly in libraries.
- User education should be provided properly to the users for using internet.

- The study suggests that online services should be improved i.e. online database access, full text e- resources access etc.
- Library should follow the quality principles to provide the qualitative services.
- The user's satisfaction is a main objective of any library therefore the library management should be active continuously for betterment of library services.
- Library staff and users should be aware about TQM applications and its benefits.
- TQM applications should be adopted and implemented in all the libraries to serve the qualitative services at low cost. TQM implementation is essential to serve better and fast services with quality and user's satisfaction.

6.6 SUGGESTION FOR FURTHER FUTURE STUDY

This study was performed to explore the present condition of libraries in womens' universities in India. In future the research could be extended in depth of the particular section of TQM application in libraries of womens' universities, which may be follows as:

- Implementation of Total Quality Management in womens' university libraries in India.
- Impact of TQM applications in womens' university libraries in India.
- A comparative study between TQM Implemented and non- TQM Implemented Libraries.

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APPENDICES

APPENDICES

QUESTIONNAIRE FOR LIBRARIAN

This questionnaire is to collect the data from the university library for a research study entitled “**TOTAL QUALITY MANAGEMENT IN WOMENS’ UNIVERSITY LIBRARIES IN INDIA: A STUDY**”. Please put tick mark [] in the appropriate box or give answer to the question in the space provided.

PART – A

1. Name of the University with status:

2. Complete Address:

- Year of Establishment: _____
- Telephone: _____
- E-mail: _____
- Fax: _____
- Web Sites: _____

3. Librarian’s Name with Education/Professional Qualification:

4. Total area of library _____ sq. ft. / sq. meter

5. Stack room _____ sq. ft.

6. Capacity (maximum) to hold document _____

7. Reading/ study room _____ sq. ft.

8. Seating capacity _____ seats

9. Periodical room _____ sq. ft.

10. Capacity of periodicals/ journals _____

11. Is your library automated? Yes/ No

If yes, please state the following:

- No. of computers in the library for library work _____
- No. of PCs available to users for Internet/ OPAC browsing _____

12. Does library has dedicated server? Yes/ No

- If yes, how many terminals are connected to it? _____
13. Which library software you are using? (State the name) _____
14. Does library provide e- resources through digital library? Yes/ No
 If yes, which digital library software you are using _____
15. If yes spread of Campus LAN: How spread out your Campus LAN is?
- Restricted to Computer Centre []
 - Restricted to Computer Centre + Library []
 - Number of Connection in Dept./Centers/Labs/Units. []
 - All in Depts/Centers/Labs./Units are well connected []
 - Besides Institute, the LAN reaches out to the hostels and Residence also []
16. Is your Library a member of a Wide Area Network? Yes/ No
 If yes, Please mention the name: _____
17. With the introduction of IT in the library, the Image of the Library ha
 Improved [] No. Change [] Decreased []
18. Are you providing hands-on-training to the users at your library regarding E-
 resources? Yes/ No
19. Strength of Professional staff

Designation	No. of Person	Qualification
Librarian		
Dy. Librarian		
Asst. Librarian		
Professional Asst.		
Semi professional Asst.		

Other, please specify _____

20. Strength of Non-Professional staff

Designation	No. of person	Qualification
Accountant		
Assistant		
Library Attendant		
Peons		

Any other, please specify _____

21. Do you feel that the library has adequate staff? Yes/ No

22. Does the library have a promotion policy for staff? Yes/ No

If yes, please indicate the criteria of promotion:

- Seniority [] []
- Merit [] []
- Assessment [] []
- Seniority and assessment [] []
- Time bound [] []

Any other (please specify) _____

23. Library Budget

Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
Books					
Periodicals					
Computers/Library Automation and Networking (including Internet/ Other Equipment and Photocopying)					
CD/ DVD					
Staff salary					
Maintenance					
Others					
Total					

24. Collection (Printed Documents)

Particular	Number
Books	
Number of journals subscribed	
Back volumes of journals	
Periodicals/ Magazines	
Theses/ Dissertations	
News paper received	

Reports	
Patents/ standards	
Manuscripts	
Others	

25. Non- Print Documents

Particular	Numbers
CDs/DVDs/ Databases	
Video films	
Audio films	
E- Documents	
Others	

26. Please name the e-resources available in your library?

27. What Measures have been taken to promote the use of the e-resources within organization?

- Provide links from home page Yes/No
- Conduct orientation Programme for users Yes/No
- E-mail/Internet mailing link Yes/No

Any other _____

28. How many books are added to your library every year?

(Give approximate figure for the last five year)

Book added	2010-11	2011-12	2012-13	2013-14	2014-15
	_____	_____	_____	_____	_____

29. Does your library have any special collections? Yes/ No

If yes, please specify _____

PART- B

30. What is the strength of users in library

- PG students _____
- M.Phil/ Ph.D Research scholars _____
- Faculty _____
- Admin. Staff _____
- Supporting Staff _____
- Guest visitors _____
- Other (if any) _____

31. Does your library provide following conventional services?

- CAS/ SDI []
- Indexing/ Abstracting services []
- Bibliographic services []
- Reprographic services []
- Newspaper clipping []
- Inter library loan service []
- Generate reminders for overdue books []
- Provide recent additions list []
- Provide individual alert services []
- User can know their status of issue/return date etc. []

Any other services (Please Specify)

32. Does your library provide following non conventional services?

- Provide access to library OPAC []
- CD-ROM database services []
- Contents pages services []
- Electronic Reference service []
- Online Access to databases []
- Access to internet in the library []
- Access to other library database []
- Access to electronic journals service []
- Access to internet resources through library portals []

Any other (please specify) _____

33. Does your library provide user education?

- To use catalogue []
- To find document from the shelves []
- To use OPAC []
- To use e- resources []
- To access Internet []

Any other (please specify) _____

34. Does your library provide training to staff? Yes/No

35. Does your library conduct conferences/ seminars? Yes/No

36. Does your library organize book exhibition? Yes/No

37. Do you value the delivery of your library services is based on quality of services?
Yes/No

38. Do you feel the library is based on user focus? Yes/No

39. Is there regular process improvement? Yes/No

40. Are you satisfied with utilization of resources? Yes/No

PART- C

41. Type of Administration the library follows:

- Centralized or Decentralized _____
- Mention please the organizational chart _____

42. Does library have a library committee? Yes/ No

43. How many members are there in the committee _____

44. How frequent does the committee meets?

- Once in month []
- Once in two month []
- Once in three month []
- Half yearly []
- Once in a year []

45. Does library consider users' opinion before purchase of documents for your library?
Yes/ No

46. If yes, how users' opinion is sought?

- Asking user to recommend books received on approval []

- Through users' meetings []
- Through book suggestion slips []

Any other method, please specify _____

47. How does library judge users' information needs?

- Through informal dialogue []
- By attending faculty and other meetings []
- By observing their demands at issue counter []

Any other method, please specify _____

48. Does any of the following documents about library are available?

(Enclose a copy of each document if possible)

- Library Policy []
- Library Manual []
- Library committee circular etc []
- Library rules []

49. Mention the working hours and days of your library

- Time: _____
- Days: _____

50. Does your library Total Quality Management implemented? Yes/ No

51. If No, what are the reason (barrier) factors for not implementation of Total Quality Management?

- Inadequate knowledge about TQM []
- Cost and long-term process []
- Insufficient budget []
- Lack of government commitment []
- Lack of consistent top management support []
- Lack of qualified quality consultant []
- Inadequate planning []
- Lack of training []
- Lack of skill of workers []

Any other, please specify _____

52. If yes, is your library ISO 9000 Certified?

- ISO 9001 Certified []
- ISO 9002 Certified []

- ISO 9003 Certified []
- ISO 9004 Certified []
- QS 9000 Certified []

Any others, please specify _____

53. If your organization is ISO 9000 certified, when did it be firstly certified?

54. Did you receive any quality award? Yes/ No

If yes, please indicate _____

55. Which quality tools do you use?

- Seven QC tools []
- Flow chart []
- Control charts []
- Planned Action []
- Seven New Management Tools []

Others, please specify _____

56. What is the status of TQM in your library?

- Fully Implemented []
- Partially Implemented []
- Not Implemented []
- We plan to implement TQM in the future []

57. Who introduced TQM in your library?

- Top Management []
- External Consultants []

Any others, please mention _____

58. What is the goal of TQM Implementation in your library?

- Continuous improvement []
- To improve quality []
- To achieve quality culture in the long term []
- Satisfied users []
- Satisfied staff []

- To achieve lower cost []
- Service excellence []
- To receive quality award []

Any other, please specify _____

59. What about the improvement achieved (benefits) after implementation of TQM in your library?

- Increase the user satisfaction []
- On- time delivery []
- Increase the work satisfaction []
- Achieving team work []
- Quality improvement []
- Improve continuously []
- Decrease in cost []
- Decrease in work delay []

Any other, please specify _____

60. What is the impact of TQM implementation on services in your library?

Increase [] Decrease [] No change []
]

61. Any other relevant information you feel relevant about your library:

Thanks for giving your precious time in completing this questionnaire.

Date:

Signature

(With Seal)

QUESTIONNAIRE FOR LIBRARY STAFF

As part of the research programme at Babasaheb Bhimrao Ambedkar University, Lucknow, I Mamta Rani, Research Scholar in the Dept. of Library and Information Science, have undertaken a survey entitled “**TOTAL QUALITY MANAGEMENT IN WOMENS’ UNIVERSITY LIBRARIES IN INDIA: A STUDY**”. For this purpose, I need your co-operation. I request you to kindly spare your precious time to fill the questionnaire. The information you give will be kept strictly confidential and will be used purely for research purpose only.

PROFILE

1. Name: _____
2. Designation: _____
3. Job timing: _____
4. Name of library with address: _____
5. Contact No. _____
6. E-mail ID: _____
7. Qualifications: _____
8. Professional Experience (in years): _____

QUALITY OF JOB

Assess the following statements using 5 point scale.

5- Strongly Agree, 4- Agree, 3- Neither Agree nor Disagree, 2- Disagree, 1- Strongly disagree

- | | |
|--|-----------|
| 9. I feel the delivery of services in my library is the quality based services | 5 4 3 2 1 |
| 10. I feel the library is based on user focus | 5 4 3 2 1 |
| 11. There is regular process of improvement | 5 4 3 2 1 |
| 12. The library has staff management | 5 4 3 2 1 |
| 13. I am satisfied with utilization of resources | 5 4 3 2 1 |
| 14. I feel quality planning for every task | 5 4 3 2 1 |
| 15. I find quality supervision | 5 4 3 2 1 |
| 16. I am agree for continuous improvements | 5 4 3 2 1 |
| 17. I find the quality process for every task | 5 4 3 2 1 |
| 18. I agree with adequacy of resources and equipment for staff | 5 4 3 2 1 |

Any other, (please specify) _____

JOB SATISFACTION

19. I get leave easily when I need

- Casual leave 5 4 3 2 1
- Maternity leave 5 4 3 2 1
- Childcare leave 5 4 3 2 1
- Medical leave 5 4 3 2 1
- Higher education leave 5 4 3 2 1

Any other _____

20. There is appropriate facilities for

- Health centre 5 4 3 2 1
- Child care centre 5 4 3 2 1
- Common room for women's 5 4 3 2 1

Any other _____

21. I have never feel harassment situation in my job 5 4 3 2 1

22. I am satisfied with my job nature 5 4 3 2 1

23. I am satisfied with my job timing 5 4 3 2 1

24. I am satisfied with my job position according to my qualification 5 4 3 2 1

25. I am satisfied with my salary and periodical increments 5 4 3 2 1

26. I am satisfied with my work place environment 5 4 3 2 1

27. I find commitment of the staff 5 4 3 2 1

28. I have faith in the library management 5 4 3 2 1

29. I am satisfied with work culture in the library 5 4 3 2 1

Any other, (please specify) _____

HUMAN DEVELOPMENT OPPORTUNITIES

30. I have opportunity in my job for using independent ideas and action 5 4 3 2 1

31. I learn new skills while I am on job 5 4 3 2 1

32. I am consulted before any decision is taken in the library 5 4 3 2 1

33. My library encourages me to participate in management of library 5 4 3 2 1

34. I am encouraged to participate in seminars/workshops/conferences 5 4 3 2 1

Any other, (please specify) _____

ATTITUDE TOWARDS COMPUTERIZED LIBRARY

- | | |
|---|-----------|
| 35. I derive work satisfaction in IT environment | 5 4 3 2 1 |
| 36. Computer applications can provide better library service | 5 4 3 2 1 |
| 37. I will take help from the experts when problems occur in software and
Hardware | 5 4 3 2 1 |
| 38. Computerization of library activities improve the overall organizational
Effectiveness | 5 4 3 2 1 |
| 39. I have skills to tackle the problems often occurred the computer handling | 5 4 3 2 1 |
| Any other, (please specify) _____ | |

TRAINING FACILITIES AVAILABLE

- | | |
|--|-----------|
| 40. Computer training is necessary for every professional staff in the library | 5 4 3 2 1 |
| 41. The library provide necessary training for staff | 5 4 3 2 1 |
| 42. I receive training whenever necessary | 5 4 3 2 1 |
| 43. I participate in every seminar/conference related to my library software | 5 4 3 2 1 |
| 44. The training facilities in the university library system are adequate | 5 4 3 2 1 |
| 45. The training programme shell be linked to promotion and development
in the profession | 5 4 3 2 1 |
| Any other, (please specify) _____ | |

BARRIER IN APPLICATION OF COMPUTERIZED LIBRARY

- | | |
|---|-----------|
| 46. Lack of computer skills is a barrier in computerized library | 5 4 3 2 1 |
| 47. Lack of knowledge to operate computerized library | 5 4 3 2 1 |
| 48. I feel uncomfortable to do work with computer | 5 4 3 2 1 |
| 49. Lack of proper technical environment | 5 4 3 2 1 |
| 50. Computerization is detrimental to personal relations in the library | 5 4 3 2 1 |
| 51. Computerization is not possible unless new qualified staff is appointed | 5 4 3 2 1 |
| Any other (please specify) _____ | |

Other expectations from the library, if any

You are free to give any suggestion or additional information

Date:

Signature

QUESTIONNAIRE FOR USERS

The Questionnaire (For Research Work) for library users on “**TOTAL QUALITY MANAGEMENT IN WOMENS’ UNIVERSITY LIBRARIES IN INDIA: A STUDY**”. This questionnaire is to find out feedback on quality of library services provided by library. Your Feedback will be of great value. Please tick (√) and fill up (as needed) the following information. The following information obtained will be kept confidential and will be used for research purpose only.

DEMOGRAPHICS

1. Name:
2. Department:
3. University:
4. Status of user:
 - UG/ PG Students []
 - M.Phil/PhD Research scholars []
 - Teaching Faculty []
 - Non- Teaching Staff []

Any other, please Specify

USE OF LIBRARY SERVICES

5. Do you use your University library? Yes/ No

If no, please give the reason for not using the library

6. How often you visit the library?
 - Daily []
 - Weekly []
 - Monthly []
 - Quarterly []
 - Never []
7. How much time you spend in the library?
 - Less than 1 hour []

- 1-2 hours []
- 2-3 hours []
- More than 3 hours []

8. For what purpose you use library?

- Getting book issue /return []
- Consulting hardcopy of Journals []
- Consulting Online Journals []
- For getting Photo copy of documents []
- To search new arrivals []
- Preparation of course materials []
- Reading newspaper []
- Searching database []
- Consulting other resources []

Any other, please specify.....

Assess the following statements using 5 point scale.

5-Strongly Agree, 4-Agree, 3-Neither Agree nor Disagree, 2-Disagree, 1-Strongly disagree

9. I am satisfied with the following facilities provided in the library:

- | | |
|------------------------|-----------|
| • Reading room | 5 4 3 2 1 |
| • Internet Lab | 5 4 3 2 1 |
| • Study Environment | 5 4 3 2 1 |
| • Adequate Equipments | 5 4 3 2 1 |
| • Library time | 5 4 3 2 1 |
| • Seating arrangements | 5 4 3 2 1 |
| • Lighting | 5 4 3 2 1 |
| • Fans | 5 4 3 2 1 |
| • Cleanliness | 5 4 3 2 1 |
| • Drinking water | 5 4 3 2 1 |

LIBRARY COLLECTION

Printed documents

10. I am satisfied with the adequacy of following printed document collection in library for my study:

- Books 5 4 3 2 1
- Current periodicals 5 4 3 2 1
- Back volumes of periodicals 5 4 3 2 1
- Manuscripts reprints 5 4 3 2 1
- News papers 5 4 3 2 1
- M. Phil/ Ph.D dissertations 5 4 3 2 1
- Technical reports 5 4 3 2 1
- Pamphlets 5 4 3 2 1

Any other, please specify.....

Electronic resources

11. I am satisfied with the adequacy of following e- resources collection in library

- OPAC 5 4 3 2 1
- E- Journals 5 4 3 2 1
- E- Books 5 4 3 2 1
- CD-ROM/ DVD 5 4 3 2 1
- Databases 5 4 3 2 1
- Audio 5 4 3 2 1
- Video tapes 5 4 3 2 1
- Full text data files 5 4 3 2 1
- Microform collection 5 4 3 2 1

Any other, please specify.....

STAFF ATTITUDE

12. I am helped by library staff in getting relevant information for

my study. 5 4 3 2 1

- | | |
|---|-----------|
| 13. The behavior of library staff is supportive, polite and friendly to users. | 5 4 3 2 1 |
| 14. The communication is possible between staff and user without any interruptions. | 5 4 3 2 1 |
| 15. There is assurance about staff availability in any time library working hours. | 5 4 3 2 1 |
| 16. There is assurance about staff knowledge, skills and attitude. | 5 4 3 2 1 |
| 17. The personalized and individualized service provide by staff to users. | 5 4 3 2 1 |
| 18. Library staff is moderate and well aware about Information Technology. | 5 4 3 2 1 |
| 19. Library staff provides quality in services to users. | 5 4 3 2 1 |

LIBRARY SERVICES

- | | |
|--|-----------|
| 20. I am satisfied with the following services provided by library | |
| • CAS/SDI | 5 4 3 2 1 |
| • Indexing/ Abstracting services | 5 4 3 2 1 |
| • Quick reference service | 5 4 3 2 1 |
| • Photocopying service | 5 4 3 2 1 |
| • Binding service | 5 4 3 2 1 |
| • Internet access | 5 4 3 2 1 |
| • Online SDI Services | 5 4 3 2 1 |
| • OPAC Services | 5 4 3 2 1 |
| • Online database | 5 4 3 2 1 |
| • Translation service | 5 4 3 2 1 |

Any other, please specify

- | | |
|---|-----------|
| 21. There is reliability in delivery of promised library services accurately. | 5 4 3 2 1 |
|---|-----------|

22. I am satisfied with responsiveness and rapidity in providing library services. 5 4 3 2 1

BARRIER IN INTERNET SERVICES

23. I feel the following barriers in use of Internet Services
- Inadequate equipments 5 4 3 2 1
 - Lack of time 5 4 3 2 1
 - Lack of Knowledge for using Internet 5 4 3 2 1
 - Uncomfortable environment 5 4 3 2 1
 - Access speed is slow 5 4 3 2 1
 - Lack of maintenance 5 4 3 2 1
 - Not easy to use 5 4 3 2 1
 - Difficult to read from screen 5 4 3 2 1

Any other, please specify

You are free to give suggestion/additional comments:

Thanks for giving your precious time in completing this Questionnaire

Date:

Signature