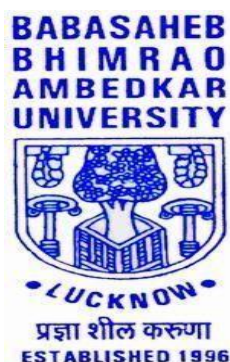


**REDESIGNING LIBRARY RESOURCES AND SERVICES  
FOR USERS IN CHANGING ENVIRONMENT OF STATE  
UNIVERSITY LIBRARIES IN RAJASTHAN: A STUDY**

**A Abstract Submitted to the  
Babasaheb Bhimrao Ambedkar University, Lucknow  
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in  
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## **ABSTRACT**

### **Background of the Study**

Libraries are vital repositories of information that are bastions of learning, cultural enrichment, and intellectual exploration throughout the world. These prestigious institutions are more than just stores of books; They are dynamic centers that provide a wealth of resources that promote literacy, education, and information acquisition. Libraries contain a range of media, including books, magazines, digital archives, multimedia collections, and specialized resources that meet a wide variety of interests and needs. In addition to the traditional role of lending books, modern libraries have evolved into versatile spaces that accommodate a wide variety of activities. They serve as community centers, providing access to technology, offering educational programs, hosting events, supporting research projects, and often being safe havens for community participation and engagement. With their egalitarian ethos, libraries ensure access to information for all, regardless of socioeconomic background, age, or educational level. It embodies the principle that information should be freely available to all. At their core, libraries symbolize intellectual freedom, fostering a lifelong love of learning, encouraging critical thinking, and nurturing individual curiosity. Their continued importance lies not only in the resources they possess, but also in their capacity to strengthen individuals, and communities and promote the development of society as a whole.

Certainly! Considered the cornerstone of education and enlightenment, libraries have a rich history dating back centuries. These institutions have evolved from ancient archives to modern information centers with social changes, the adoption of technological advancements, and changes in learning paradigms. Throughout history, libraries have been revered as symbols of the preservation and dissemination of knowledge. Established in ancient Egypt, the Great Library of Alexandria is known for its vast collection of scrolls and manuscripts, symbolizing science in the ancient world. Similarly, medieval monastic libraries protected valuable texts by carefully copying and preserving information during times of intellectual darkness. The Renaissance and Enlightenment were important periods for libraries, when education, scientific research, and the dissemination of ideas flourished. Public libraries were born, democratizing access to information and paving the way for education as a fundamental right for all. Today, libraries are embracing the digital age. In addition to physical collections, they also offer virtual resources that provide access to e-books, online databases, multimedia content, and digital archives. Libraries serve as technology centers that bridge the digital divide by providing

Internet access, computer literacy programs, and technology resources to their patrons. Additionally, libraries have expanded beyond their traditional roles to become community centers that host a variety of events and programs. They offer workshops, lectures, book clubs, children's stories, career sessions, and other activities that meet the interests and needs of their local communities. These initiatives foster a sense of belonging and create space for communication, collaboration, and cultural exchange. Libraries have also become supporters of literacy, information literacy, and lifelong learning. Librarians with experience in navigating the ocean of information play an important role in guiding people to find reliable sources, conduct research, and develop critical thinking. Essentially, libraries are still indispensable pillars of society, promoting education, intellectual development, and cultural enrichment. Their adaptability and commitment to serving diverse populations ensures that they remain relevant in an ever-changing world, continually inspiring generations and making significant contributions to improving knowledge and communities around the world.

### **Statement of the Problem**

The problem of the study entitled “**Redesigning Library Resources and Services for Users in Changing Environment of State University Libraries in Rajasthan: A Study**”, is a specific study on State University Libraries in Rajasthan. The study focuses on the current status of University Libraries. It aims to find out how libraries are changing due to the impact of the changing environment.

### **Objectives of the Study**

The objectives of the study are as follows:

1. To identify what extent and in which way library resources and services have been changed in the changing environment.
2. To explore the effects of the changing environment on collection and services in the university libraries.
3. To analyse the changes about library resources and services due to the impact of covid-19 of information technology.
4. To find out information-seeking patterns of Users towards library resources and services in the changing environment.
5. To know the satisfaction of users towards library resources and services in the changing environment.

6. To identify new changes in delivery mechanism to provide Library resources and services in the changing environment.
7. To find out new role and responsibilities of Librarian to fulfil user's information needs in the changing environment.

## **Hypotheses of the Study**

The hypotheses of the study are as following:

**Hypothesis 1:** Ask the Librarian services are the significant changes in state university libraries in Rajasthan.

**Hypothesis 2:** The majority of university Librarians are regularly update content on the library's website for their role and responsibilities as per the changing environment.

**Hypothesis 3:** Devices are more expensive are the significant effect of the changing environment.

**Hypothesis 4:** The majority of users are using digital resources and services.

**Hypothesis 5:** Users are satisfied with the e-resources and services in the changing environment.

## **Scope and Limitations of the Study**

The study is confined to the Librarians and users of state university libraries in Rajasthan. At present a total of 24 State Universities are there in Rajasthan according to the list of the University Grants Commission (Till now 17.05.2021), Four universities do not have a Library. The researcher has excluded the two Universities library because they had not responded.

**Table 1: List of Universities Name**

| <b>Sr.NO.</b> | <b>Name of state university</b>   | <b>Place</b> | <b>Established year</b> |
|---------------|-----------------------------------|--------------|-------------------------|
| <b>1.</b>     | Rajasthan University              | Jaipur       | <b>1947</b>             |
| <b>2.</b>     | Jai Narain Vyas University        | Jodhpur      | <b>1962</b>             |
| <b>3.</b>     | Mohan Lal Sukhadia University     | Udaipur      | <b>1962</b>             |
| <b>4.</b>     | Vardhman Mahaveer Open University | Kota         | <b>1987</b>             |

|            |  |           |             |
|------------|--|-----------|-------------|
|            |  |           |             |
| <b>5.</b>  | Maharishi Dayanand Saraswati University                        | Ajmer     | <b>1987</b> |
| <b>6.</b>  | Swami Keshwanand Rajasthan Agricultural University             | Bikaner   | <b>1987</b> |
| <b>7.</b>  | Jagadguru Ramanandacharya Rajasthan Sanskrit University        | Jaipur    | <b>1998</b> |
| <b>8.</b>  | Maharana Pratap University of Agriculture & Technology         | Udaipur   | <b>2000</b> |
| <b>9.</b>  | Maharaja Ganga Singh University                                | Bikaner   | <b>2003</b> |
| <b>10.</b> | University of Kota   | Kota      | <b>2003</b> |
| <b>11.</b> | National Law University  | Jodhpur   | <b>2004</b> |
| <b>12.</b> | Rajasthan Ayurveda University                                  | Jodhpur   | <b>2004</b> |
| <b>13.</b> | Rajasthan University of Health Sciences                        | Jaipur    | <b>2005</b> |
| <b>14.</b> | Rajasthan Technical University                                 | Kota      | <b>2006</b> |
| <b>15.</b> | Rajasthan University of Veterinary & Animal Sciences           | Bikaner   | <b>2010</b> |
| <b>16.</b> | Maharaja Surajmal Brij University                              | Bharatpur | <b>2012</b> |
| <b>17.</b> | Sardar Patel University of Police, Security & Criminal Justice | Jodhpur   | <b>2012</b> |
| <b>18.</b> | Govind Guru Tribal University                                  | Banswara  | <b>2012</b> |
| <b>19.</b> | Raj Rishi Bhartrihari Matsya University                        | Alwar     | <b>2012</b> |

|            |  |         |                   |
|------------|--|---------|-------------------|
|            |  |         |                   |
| <b>20.</b> | Pandit Deendayal Upadhyaya Shekhawati University                 | Siker   | <b>2012</b>       |
| <b>21.</b> | Rajasthan ILD Skills University (RISU)                           | Jaipur  | <b>30.03.2017</b> |
| <b>22.</b> | Bikaner Technical University                                     | Bikaner | <b>18.05.2017</b> |
| <b>23.</b> | Dr. Bhimrao Ambedkar Law University                              | Jaipur  | <b>26.02.2019</b> |
| <b>24.</b> | Haridev Joshi University of Journalism and Mass<br>Communication | Jaipur  | <b>02.03.2019</b> |

## **Methodology of Study**

Research methodology is the cornerstone of all systematic studies, which aim to comprehensively investigate selected problems and their possible solutions. As stated by **(Kothari, 2004)** it represents the methodological framework or techniques used by researchers to conduct research activities. In this study, data collection was done through a structured questionnaire and library and user surveys conducted in the targeted libraries. A carefully designed structured questionnaire was used to ensure accuracy and elicit the views of librarians. Additionally, discussions were initiated on various aspects of the library based on the survey responses. Notable insights and important information gained from the survey were painstakingly recorded in a notebook that served as a valuable resource for the thesis.

This study adopts a primary data collection approach utilizing user surveys and library surveys. Two separate structured questionnaires were developed to collect relevant data - one aimed at librarians and the other at users. Personal interviews were also conducted in addition to questionnaire-based data collection to correct the shortcomings of the questionnaire and resolve uncertainty factors among respondents. The collected data are then compiled into tables, analysed, and interpreted according to the objectives of the study. In addition to source data, a comprehensive review of the existing literature, including published documents and non-documentary sources, was conducted to ensure the breadth and depth of this study and previous research related to the focus. This comprehensive approach helps to contextualize current

research within the broader scientific landscape and draws on previous work to support this research.

## **Selection of Sample**

The sampling plan involves choosing a sample from the population to study. The random sample chosen for this study represents the entire population. The research and scope focus on specific state university libraries of Rajasthan. During the research work and construction of the sample, two levels were taken into account: first, the participation of Rajasthan State University, and second, the selection of library users to be included.

## **Population and Sampling of Library Users**

It was difficult to choose library users because the libraries have a wide range of services, including all parent organization employees. Since users use the library for particular purposes, obtaining comprehensive questionnaires from professors and staff was challenging due to their busy schedules. Gathering contact information like phone numbers and emails was also a challenge.

The researcher randomly distributed the questionnaires to library users belonging to a particular organization. These users were present during standard working hours (9:30 AM-5:30 PM) and were asked to complete the questionnaire the same day and to return it before leaving the library.

## **Calculate the Sample Size Using Raosoft Sample Size Calculator**

Raosoft sample size calculator is a popular online tool used to determine the necessary size of a sample needed for a study Memon et al. (2020) and McCrum-Gardner, E. (2010).

Margin of error: 5%

Confidence level: 95%

Population size: 29577

With 95% confidence level and a 5% margin of error, researcher can calculate the sample size using the

formula:

$$\text{Sample Size} = (Z^2 * p * q) / E^2$$

Where:

$Z = Z\text{-score for a 95\% confidence level} = 1.96$

$P = \text{proportion of population with a specific characteristic (p= 0.5 for maximum sample size)}$

$Q = 1-p$

$E = \text{margin of error} = 0.05$

For Students and Research Scholars population:

$\text{Sample Size} = (1.96^2 * 0.5 * 0.5) / (0.05^2)$

$\text{Sample Size} = 384.16 \approx 385$

Thus, the sample size for both students and research scholars' populations should be 385.

Minimum data was to be collected from 385 users but Researcher distributed 50 questionnaires in each university and 835 questionnaires were received.

## **Data Collection**

Adequate research requires gathering sufficient theoretical and empirical information. Theoretical knowledge was obtained from relevant literature, while empirical data was obtained through questionnaires, interviews, and observations.

### **A. Theoretical Data**

The restructuring literature, which included general and library-specific contexts, was compiled from print and electronic sources such as books and research articles. The main source of access to these materials was the Internet, which facilitated the search for books, articles, and doctoral theses. Electronic databases have played an important role in retrieving research articles, reports, and theses, while open-access journals have provided valuable theoretical knowledge. Keyword searches involved terms like 'reengineering,' 'redesigning,' 'restructuring,' 'reengineering in libraries,' 'impact of reengineering on libraries,' and 'redesigning and Information Technology.'

### **B. Empirical Data**

The empirical dataset used survey methods, including questionnaires, interviews, observations, and online sources like institutional library websites. Questionnaires were used

to collect primary data, discussions, conversations, and interviews with librarians, library staff, and personal observations in the libraries of the Indian Institutes of Technology. These methods were used to collect both descriptive and statistical data. In addition, secondary empirical data was obtained from institutional library websites.

## **Questionnaire Preparation**

Two separate questionnaires were designed for data collection: the first questionnaire was for librarians of State University of Rajasthan, while the second questionnaire was for library users. Throughout the study duration, conversations and discussions were conducted with librarians, individuals in charge, and relevant authorities.

## **Data Analysis**

Data analysis, as defined by the Federal government, is the systematic use of statistical and/or logical methods to describe, aggregate, illustrate, or evaluate data. In this study, the data was extracted from the State University of Rajasthan's library professionals and Library Users and analysed to produce results. The results were interpreted, conclusions were made, and the thesis was written. The data was encoded and entered into the computer using MS- Excel, and SPSS Software for processing in Chi-Square, and Ms-word. These programs were used to generate tables and figures. Different tables were created to represent different aspects of the qualitative segment and the quantitative segment.

## **Style of Bibliographic References**

The researcher follows the 7th edition citation style of the APA (American Psychological Association) for referencing and citations using the web-based citation tool: <http://www.mendeley.com> The APA citation style has been uniformly applied throughout the entire thesis. All literature review entries as well as bibliographic references are arranged in alphabetical order according to the authors' surnames in the bibliography section of the thesis. This careful organization ensures a well-structured and consistent presentation of the sources used throughout the research.

## Testing of Hypotheses

***Hypothesis 1: Ask the Librarian services are the significant changes in state university libraries in Rajasthan.***

**H0:** Ask the Librarian services are the significant changes in libraries  $\geq$  Ask the Librarian services are not the significant changes in libraries

**H1:** Ask the Librarian services are the significant changes in libraries  $<$  Ask the Librarian services are not the significant changes in libraries

### Testing of Hypothesis:

The above hypothesis is from the graphical and tabular presentation of the analysis on the basis of table 4.4, which discussed the services changed in the changing environment in their libraries. The Pearson Chi-Square test was conducted to check the relevancy of the statement on ask the librarian services are the significant changes in libraries.

| Chi-Square Tests            |                     |    |                       |
|-----------------------------|---------------------|----|-----------------------|
|                             | Value               | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square          | 54.000 <sup>a</sup> | 51 | .360                  |
| N of Valid Cases            | 18                  |    |                       |
| <b>*Significant at 0.05</b> |                     |    |                       |

### Results:

The above table of the chi square test shows the calculated value of chi square is 54.000<sup>a</sup>. The tabulated value of chi square is 28.869, which is lesser than the calculated value. **Hence, hypothesis 1 has been rejected and the dependent variable (H1) has been proved.** It was determined that ask the librarian services are not the significant changes in libraries.

***Hypothesis 2: The majority of university Librarians are regularly update content on the library's website for their role and responsibilities as per the changing environment.***

**H0:** Majority of university Librarians are regularly update content on the library’s website  $\geq$   
 Majority of university Librarians are rarely update content on the library’s website  
**H1:** Majority of university Librarians are regularly update content on the library’s website  $<$   
 Majority of university Librarians are rarely update content on the library’s website

**Testing of Hypothesis:**

The above hypothesis is from the graphical and tabular presentation of the analysis on the basis of table 4.13, which discussed the librarian’s new roles and responsibilities of the selected libraries. The Pearson Chi-Square test was conducted to check the relevancy of the statement on majority of university librarians are regularly update content on the library’s website.

| <b>Chi-Square Tests</b>     |                     |           |                              |
|-----------------------------|---------------------|-----------|------------------------------|
|                             | <b>Value</b>        | <b>df</b> | <b>Asymp. Sig. (2-sided)</b> |
| Pearson Chi-Square          | 18.000 <sup>a</sup> | 17        | .389                         |
| N of Valid Cases            | 18                  |           |                              |
| <b>*Significant at 0.05</b> |                     |           |                              |

**Results:**

The above table of the chi square test shows the calculated value of chi square is 18.000<sup>a</sup>. The tabulated value of chi square is 28.869, which is greater than the calculated value. **Hence, hypothesis 2 has been accepted and the dependent variable (H0) has been proved.** It was determined that majority of university librarians are regularly update content on the library’s website.

***Hypothesis 3: Devices are more expensive are the significant effect of the changing environment.***

**H0:** Devices are more expensive are the significant effect of the changing environment  $\geq$   
 Devices are more expensive are not the significant effect of the changing environment  
**H1:** Devices are more expensive are the significant effect of the changing environment  $<$   
 Devices are more expensive are not the significant effect of the changing environment

The above hypothesis is from the graphical and tabular presentation of the analysis on the basis of table 4.11, which discussed the effects of the changing environment on library collection. The Pearson Chi-Square test was conducted to check the relevancy of the statement of devices are more expensive are the significant effect of the changing environment.

| <b>Chi-Square Tests</b>     |                     |           |                              |
|-----------------------------|---------------------|-----------|------------------------------|
|                             | <b>Value</b>        | <b>df</b> | <b>Asymp. Sig. (2-sided)</b> |
| Pearson Chi-Square          | 54.000 <sup>a</sup> | 51        | .360                         |
| N of Valid Cases            | 18                  |           |                              |
| <b>*Significant at 0.05</b> |                     |           |                              |

**Results:**

The above table of the chi square test shows the calculated value of chi square is 54.000<sup>a</sup>. The tabulated value of chi square is 28.869, which is lesser than the calculated value. **Hence, hypothesis 3 has been rejected and the dependent variable (H1) has been proved.** It was determined that devices are more expensive are not the significant effect of the changing environment

**Hypothesis 4: The majority of users are using digital resources and services.**

**H0:** Majority of the users are using digital resources and services  $\geq$  Majority of the users are not using digital resources and services

**H1:** Majority of the users are using digital resources and services  $<$  Majority of the users are not using digital resources and services

**Testing of Hypothesis:**

The above hypothesis is from the graphical and tabular presentation of the analysis on the basis of table 4.2.5, which discussed the use of e-resources. The Pearson Chi-Square test was conducted to check the relevancy of the statement on the majority of the users are using digital resources and services.

| Chi-Square Tests            |                     |    |                       |
|-----------------------------|---------------------|----|-----------------------|
|                             | Value               | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square          | 53.768 <sup>a</sup> | 51 | .369                  |
| N of Valid Cases            | 834                 |    |                       |
| <b>*Significant at 0.05</b> |                     |    |                       |

**Results:**

The above table of the chi square test shows the calculated value of chi square is 53.768<sup>a</sup>. The tabulated value of chi square is 68.669, which is greater than the calculated value. **Hence, hypothesis 4 has been accepted and the dependent variable (H0) has been proved.** It was determined that majority of the users are using digital resources and services.

***Hypothesis 5: Users are satisfied with the e-resources and services in the changing environment.***

**H0:** Users are satisfied with the e-resources and services  $\geq$  Users are not satisfied with the e-resources and services

**H1:** Users are satisfied with the e-resources and services  $<$  Users are not satisfied with the e-resources and services

**Testing of Hypothesis:**

The above hypothesis is from the graphical and tabular presentation of the analysis on the basis of table 4.2.10, which discussed the satisfaction with non-print resources in the changing environment. The Pearson Chi-Square test was conducted to check the relevancy of the statement on users are satisfied with the e-resources and services in the changing environment.

| Chi-Square Tests            |                     |    |                       |
|-----------------------------|---------------------|----|-----------------------|
|                             | Value               | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square          | 66.846 <sup>a</sup> | 51 | .067                  |
| N of Valid Cases            | 834                 |    |                       |
| <b>*Significant at 0.05</b> |                     |    |                       |

### ***Results:***

The above table of the chi square test shows the calculated value of chi square is 66.846<sup>a</sup>. The tabulated value of chi square is 68.669, which is greater than the calculated value. **Hence, hypothesis 5 has been accepted and the dependent variable (H0) has been proved.** It was determined that users are satisfied with the e-resources and services.

### **Findings of the Study**

After the data was evaluated using information from a survey given to librarians and users at specific universities, the following findings, conclusions and recommendations were analyzed. This chapter define findings in two parts which are as follows:

### **Findings of Librarian of State University Libraries in Rajasthan**

#### **Types of documents in Libraries (Print Form)**

The study found that maximum 526,842 documents in hard form from Rajasthan University and the least 4,038 documents from Haridev Joshi University of Journalism and Mass Communication.

#### **Types of documents in Libraries (Non-Print Form)**

It was found that MLSU is the highest 51,634 documents, followed by NLU have 30,060 documents, JRRSU have 30,000 books, RTU have 22,324 documents, MGSU have 21,261 documents, RU have 10,712 documents, MPUAT have 8,651 documents, SKRAU have 5,812 documents, MDSU have 3,576 documents, RAJUVAS have 304 documents, DSRRAU have only 15 documents. JNVU, VMOU, UK, RUHS, SPUPSC, BTU, and HJUJMC have no non-print document.

#### **Shifting of Library collection from print to Non-Print**

The study findings revealed that magazines (11) were the most planning library collection, followed by books (5) were the most partially shifted collection from print to non-print, journals (5) were the most sufficiently shifted, Theses and dissertation (4) were the mostly shifted collection and also theses and dissertation and university newsletter (5) were the most fully shifted collection from print to non-print.

### **Services Changed in the changing environment**

The findings of the study indicate that translation service (15) were planning in the changing environment followed by ask the librarian service (3) were partially shifted from the changing environment, citation style guide, lending, library events & news and OPAC services (1) were sufficiently shifted, ask the librarian service (4) were mostly shifted; and bibliography, OPAC, reference/referral, self- check in/out and plagiarism checker service (9) were fully shifted service in the changing environment.

### **Availability of ICT infrastructure in State University Libraries**

The study found that computers have a maximum (416) ICT infrastructure available in library, followed by UPS has (370), CCTV has (170), Printer has 104, Web Camera has (103), LCD Projector has (35), Bar-code Reader has (30), Photocopy machine has (26), External Hard Disc has (25), Electronic Attendance Register has (13) and (6) RFID libraries available in state university in Rajasthan.

### **Availability of Library Website**

The findings of the study revealed that out of the eighteen selected universities, (61.11%) have a library website, and the rest of the universities, i.e., (38.88%) have no library website.

### **Status of Library Automation**

It was found that out of the eighteen state universities, (5.55%) library was initially automated, (55.55%) libraries were partially automated, (27.77%) libraries were fully automated, and (11.11%) libraries were not automated. The result indicate that maximum libraries were partially automated.

### **Use of Software for Automation**

The findings of the study revealed (16.66%) libraries were used KOHA library automation software, (50%) of libraries were used SOUL software, (11.11%) libraries were used Libsys software and (16.66%) libraries were used other software i.e. e-Granthalaya software. The result indicate that SOUL software is best for automation in libraries.

### **Section of Library has been Automated**

It was observed that most of the libraries (22.58%) has automated catalogue and circulation sections followed by (20.96%) libraries have automated administration section, (19.35%) libraries has automated acquisition section, and least (14.51%) libraries were automated serial & control section.

### **Innovative Delivery Mechanism provide by Library Resources and Services**

The findings of the study illustrate that the highest (20.37%) libraries were provided e-mail alert service and book reservation services, followed by (14.81%) libraries were provided self-checking and self-check out service, (12.96%) libraries were provided e-document delivery service and remote access service, (11.11%) libraries were provided regarding social media resource and service and (7.40%) libraries were provided library mobile apps services.

### **Effects of the Changing Environment on Library Collection**

It was found that e-resources depend on hardware and software and are more easily damaged and much larger volume of digital information, finding the right material for a specific task becomes increasingly difficult effect (2) were strongly disagree effect of the changing environment on library collection followed by also much larger volume of digital information, finding the right material for a specific task becomes increasingly difficult effect (7) were mildly disagree effect, devices are more expensive and also much larger volume of digital information, finding the right material for a specific task becomes increasingly difficult effect (1) were neutrally effect, to keep the stock up to date, the weeding out process has become simple effect (11) was the mildly agree effect and fast delivery of information resources effect of all libraries (18) was strongly agree effect from the changing environment on library collection.

### **Effects of the Changing Environment on Library Services**

The study found that complicated to operate (4) libraries were strongly disagree effect of the changing environment on library services followed by also complicated to operate (4) libraries were mildly disagree effect, band-width is decreasing (8) libraries were neutrally effect, speed up answering reference/referral queries (12) libraries were the mildly agree effect and increased library queries through social networking (e.g. Whats App, Facebook etc.) (17) libraries were strongly agree effect from the changing environment on library services.

### **Librarian's New Roles and Responsibilities**

It was observed that (1) library was mildly disagree to organize activities and promotional of librarian's new roles and responsibilities, followed by also (1) library was neutrally to organize activities and promotional events and manage library budgeting and billing for new equipment regarding new roles and responsibilities, (10) libraries were mildly agree manage library budgeting and billing for new equipment regarding librarian's new roles and responsibilities and (17) libraries were strongly agree to conduct regular checks and updates databases and to regularly update content on the library's website (e.g. book summaries, reviews, blog, etc.).

### **Challenges faced by Librarians while redesigning of library resources and services**

The result indicate that (10) libraries were strongly disagree faced peer pressure: short time to perform changes challenges by librarians while re-designing of library resources and services followed by (7) libraries were mildly disagree faced to previous negative experience with redesigning process difficulties, (8) libraries were neutrally faced failure to trained the users difficulties, (6) libraries were mildly agree faced insufficient infrastructure and ICT tools, lack of competency of library staff, lack of leadership and execution, shortage of resources, there is no standard technique or model available and uncertainty about the need of change challenges and the last (9) libraries were faced inadequate budget by the librarians while re-designing of library resources and services.

### **Status of Online Database subscription during pandemic**

It was found that out of the eighteen selected state university libraries, (77.77%) libraries were not subscribed any online database during pandemic and (22.22%) libraries were subscribed online database during COVID-19 pandemic. The result indicates that mostly libraries in Rajasthan state universities were suffered during pandemic.

### **Facilities to the Users during COVID-19 pandemic**

The study was discovered that (27.77%) libraries were hybrid mode and library shutdown facilities to the users during COVID-19 pandemic, and the remaining (22.22%) libraries were offline access and remote access facilities to the users during COVID-19 pandemic.

### **Programs organized for Promoting E-Resources**

According to the study, most of the libraries (12.24%) were not promoted any programs regarding e-resources followed by (18.18%) libraries were promoted webinar program on e-resources, (15.15%) libraries were promoted through social media program on e-resources,

(12.12%) libraries were promoted online workshop on e-resources, (9.09%) libraries were promoted virtual conference and tutorial videos on e-resources, (6.06%) libraries were promoted online series and conducted program through YouTube channel on e-resources.

## **Findings of Users of State University Libraries in Rajasthan**

### **Response Rate of Users**

Total 900 questionnaire was distributed among state university libraries in Rajasthan, and 834 responses were received back. This leading to a response rate of 92.66%.

### **Status of User**

The study found that out of 834 responses, UG responses were the highest (48.32%), and PG responses were (36.45%) and remaining (15.22%) were PhD responses.

### **Gender Responses**

The study discovered that the majority of the respondents (57.07%) were male and the remaining respondents (42.93%) were female. It states that male respondents were more in comparison to female respondents.

### **Frequency of Users Visit Library**

According to the study the majority of the respondents (71.34%) were daily visitors of the library, followed by (10.79%) of the respondents who twice a week visited the libraries, (8.1%) of the respondents were weekly visited the libraries, (4.3%) the respondents were fortnightly visited the libraries, (3.4%) of the respondents were monthly visited the libraries, and only (1.6%) of the respondents were as per requirement visited the library. The result indicate that maximum users were daily visit the library and it shows that users are using the library more effectively.

### **Purpose of Visiting Library**

It was found that the highest number of the respondents (49.28%) who visit library to borrow and return books, followed by (41.12%) users who visit the library to consult textbooks, (40.4%) users who visit the library to consult journals, (37%) users who visit the library to consult reference material, (35%) users who visit the library to read newspaper and magazines, (32%) users who visit the library to complete assignments, (12.4%) users who visit the library

to browse internet and the least respondents were (1.5%) users who visit the library to photocopy materials.

### **Preference of Print Media or Non-Print Media**

According to the findings, the majority of the respondents (74.3%) who preferred the library mostly for electronic resources and printed material equally, followed by (9.2%) of the respondents who preferred the library for electronic resources only, (8.2%) of the respondents who preferred the library for electronic resources most of the time, and (8.1%) of the respondents who preferred the library for printed material most of the time.

### **Use of E-Resources**

The result indicate that the majority of the respondents (61.27%) who used the library mostly for accessed e-books, followed by (22%) of the respondents who used the library for accessed e-journals, (14.9%) of the respondents who used the library for accessed e-magazines, and (1.6%) of the respondents who used the library for accessed bibliographic databases and no respondents used CD-ROM database resources.

### **Purpose of seeking E-Resources**

It was indicate that the highest number of the respondents (18.18%) who used the library for study and research, followed by (18%) of the respondents who used the library for improving knowledge, (17.93%) of the respondents who used the library for career development, (13.20%) of the respondents who used the library for finding quick information, (12.17%) of the respondents who used the library for keeping up-to-date in their subject area, (8.74%) of the respondents who used the library for getting relevant information, (8.59%) of the respondents who used the library for academic assignments and the lowest number of respondents (3.15%) who used the library for writing and publishing papers.

### **Problem faced by users while accessing E-Resources**

The study found that the majority of the respondents (29.01%) faced problems with too much information retrieved, followed by (26.62%) of the respondents who faced problems with slow internet speed, (17.10%) of the respondents were faced problems with lack of ICT knowledge, (9.76%) of the respondents were faced problems in finding relevant information, (9.34%) of the respondents were faced problems too long to view/download pages and (8.14%) of the respondents were faced problems with limited access to computer terminals.

### **Most likely to Preferred Service**

The study discovered that the majority of the respondents (74.1%) preferred web-based services in the libraries, followed by (14.7%) of the respondents preferred computerized services in the libraries, (10.5%) of the respondents preferred manual services in the libraries, and only (0.59%) of the respondents they don't know about services in the libraries.

### **Satisfaction with the Print Resources**

It was found that most of the respondents (68.1%) were somewhat satisfied with the print resources in the libraries, followed by (11.5%) of the respondents were highly satisfied with the print resources in the libraries, (8.9%) of the respondents were satisfied with the print resources in the libraries, (6.9%) of the respondents were neutrally satisfied with the print resources in the libraries, and (4.4%) of the respondents were not satisfied with print resources in the libraries.

### **Satisfaction with the Non-Print Resources**

It was shows that most of the respondents (49.6%) were somewhat satisfied with the non-print resources in the libraries, followed by (21.1%) of the respondents were satisfied with the non-print resources in the libraries, (20.6%) of the respondents were neutrally satisfied with the non-print resources in the libraries, and (8.6%) of the respondents were not satisfied with non-print resources in the libraries.

### **Satisfaction with the Manual Resources**

It was found that most of the respondents (50.7%) were somewhat satisfied with the manual resources in the libraries, followed by (22.06%) of the respondents were neutrally satisfied with the manual resources in the libraries, (16.06%) of the respondents were satisfied with the manual resources in the libraries, and (11.15%) of the respondents were not satisfied with manual resources in the libraries.

### **Satisfaction with the Web Services**

It was found that most of the respondents (32.6%) were somewhat satisfied with the web services in the libraries, followed by (26.37%) of the respondents were neutrally satisfied with the web services in the libraries, (20.7%) of the respondents were not satisfied with the web

services in the libraries, and the least (20.2%) of the respondents were satisfied with the web services in the libraries.

## **Conclusion of the Study**

The previous few decades have seen a tremendous expansion of knowledge and information that has brought us to the 21st century. More than ten million articles, including updates, editorials, and reading materials, are published in thousands of periodicals in both popular print and electronic media. These days, the two most dependable parts of current society are libraries and information centres, which serve as the main providers of knowledge and information. Libraries act as hubs for technology, helping to close the digital divide by giving its users access to the Internet, computer literacy courses, and technological resources. Furthermore, libraries have developed into community hubs that hold a range of activities and events, going beyond their original functions. In order to address the needs and interests of their local communities, they provide career sessions, children's stories, book clubs, talks, workshops, and other events. These programmes provide a platform for interaction, cooperation, and cross-cultural learning while also fostering a feeling of community. Additionally, libraries are now advocates for lifelong learning, information literacy, and literacy. Librarians in sifting through volumes of data, librarians are invaluable in helping patrons locate trustworthy sources, carry out investigations, and hone their critical thinking skills.

The methods and tactics of information delivery and access have undergone substantial changes due to the growth of networked information resources and services. Libraries now play the role of "information generation" rather than "information collection." In order to satisfy the constant requirements of their patrons, libraries are being created with a greater focus on user-friendliness, while also incorporating an abundance of services and resources. The evolving paradigms surrounding information sharing have also improved collaboration between professionals and all libraries.

Not only is computer use in libraries a modern convenience, but it is now required. The future of computers seems bright for the younger generation. In the current digital era, librarians' roles and positions are evolving. They acknowledge the difficulties posed by the World Wide Web, the Internet, and online access in the information age. It's hard to picture a library without information technology. ICT is being adopted by libraries to help with both user services and housekeeping tasks.

The collecting, organising, analysing, interpreting, and sharing of information among users are all made possible by the library. In order to maximise the use of library resources and services at Rajasthan state university during the lockdown and pandemic scenarios currently prevalent in the nation, this study has given participants the chance to learn about new technological breakthroughs. In order for libraries to be proactive in the current and post-pandemic scenarios, this talk will give an overview of preventive strategies and contemporary library trends. The libraries may ensure that all of its stakeholders have a wonderful reopening experience by implementing integrated pandemic prevention procedures. All parties involved, including library workers, must be broadly aware of the pandemic. Librarians are able to take the lead on all safety procedures and guidelines, staying up to speed on pandemic news and library disinfection techniques.

Although library automation and networking began to take shape twenty years ago, library renovation is still proceeding at a very modest pace. Libraries still have a long way to go and require ICT assistance to be updated. Researchers have identified some of the obstacles that arise while redesigning library services in this study and have also offered some solutions. However, in order for libraries to survive, we must work in a planned manner since they need to engage with information resource providers to implement a paradigm shift in the services and resources they offer. In times of challenges, the library might turn to development opportunities, which can lead to even greater innovation. It is advised that libraries revamp their services, resources, and operations, develop remote learning opportunities, and set up mechanisms to reimburse the impacted organizations and personnel' salaries.

One fundamental aspect of nature is change. Every aspect of life is changing quickly due to information technology, including libraries. The roles and responsibilities of librarians have completely changed as a result of the new information technology technologies. Librarians in the context of digital libraries must deal with a wide range of difficult issues brought on by the quick and revolutionary advancements in information and communication technologies. In order to adapt to changing demands, librarians must reinvent their roles. For librarians to meet the difficulties of the knowledge society in the future, they must enhance new procedures and technology, manage change, and boost productivity.

## **Suggestions from the Study**

- By utilising contemporary information and communication technology (ICT) in libraries, librarians may provide users with more advanced services.
- Due-to-space conundrum no library could possibly gather every document of published information. Thus, resource sharing is made simple with the aid of information and communication technology (ICT).
- Libraries can quickly assist users with data collecting through the use of barcodes and RFID-based services.
- Proactive training to equip librarians with 21st century skills so they can adjust to the rapidly evolving Web 2.0 facilities.
- Setting up instruction for library users on using and gaining access to online resources.
- Preserving culture in order to efficiently manage the web 2.0 resources that are available.
- In addition to actively participating in new innovations and the use of technology in libraries, also should put more effort into improving their resources and services so that they can more easily satisfy the needs of their users.
- Expanding technology-based infrastructure is a necessary step towards realizing the library's primary goal, which is user happiness.
- The libraries were able to significantly improve their technical services workflow, repurpose valuable workspace, and show all library employees that fostering a culture of continuous assessment and change can be beneficial by putting the concepts of project management, learning organizations, and appreciative inquiry into practice.
- Over a long period of time, the library kept a close eye on how user requirements and behaviour changed. This made it easier to see how current library services didn't match actual user needs.
- Libraries should to have a system in place to keep focused on the ever-changing demands of its patrons and be able to collaborate with other university departments to meet those needs and expectations.
- The main goals of such a library association would be to link all libraries and to provide extensive statistics on libraries.

- Creating library facilities with areas for both individuals and groups could be another goal. Rather than imposing more costs on students, policymakers and university administrators should consider alternative options to enhance the quality of libraries.
- To help the users learn about how other libraries create their spaces, the librarian also gave them books and articles from the library's collection.
- Excellent design concepts were received by libraries for the refurbishment of two distinct but important library spaces. If feasible project ideas are presented because of the substantial time commitment, other libraries could gain from performing senior capstone design projects that are similar to this one.

### **Areas for Further Research**

- Redesigning library resources and services for users in changing environment of central university libraries in India.
- A comparative study on redesigning library resources and services for users in changing environment of north and south academic libraries in India.
- Planning and designing library learning spaces of state university libraries in Uttar Pradesh: Expert perspectives of architects, librarians, and library consultants.
- Redesigning libraries technical services: Creating a climate for change in State libraries in north central universities in India.
- State of university libraries: Challenges and solutions for Rajasthan.