User Utilisation and Satisfaction of Automated and Digital Library Services in the Affiliated Government Colleges of Rajiv Gandhi University (RGU), Arunachal Pradesh

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Abstract

Higher learning institutions are shifting towards automated and digital services in their academic libraries to improve access to information and efficiency in its services. This paper focuses on utilisation and satisfaction of automated and digital library services in government colleges under Rajiv Gandhi University (RGU), Arunachal Pradesh. The descriptive survey was adopted and followed by a structured questionnaire which was distributed among students and faculty members, who were selected using a random sampling. 1176 valid responses were analysed and frequencies and percentages were used to analyse. The results have shown that the college libraries are still very much print based with a low level of awareness and use of digital services like OPAC, e-resources, digital repositories and remote access tools. Although its users were moderately pleased with the traditional services, electronic resources and internet-based services were relatively poorly rated. Some of the identified problems are poor infrastructures, slow internet connections and absence of orientation programmes. The research highlights the importance of capacity building, better infrastructure, and user-friendly service design in enhancing digital library services at RGU affiliated government colleges.

Keywords: Digital library services, Library automation, User satisfaction, Rajiv Gandhi University, Arunachal Pradesh

1. Introduction

Academic libraries are going through a paradigm shift whereby the traditional print-based settings are being replaced by hybrid and entirely digital service models. Automated and digital library services have been integrated as a necessity to support teaching, learning, and research in higher education institutions. Automation systems like Integrated Library Management Systems (ILMS) and online resources like e-journals, e-books, Institutional Repositories, and online reference services have greatly provided access to scholarly information. Government colleges, which are affiliated to a university, are highly significant in the provision of equitable access to higher education in India particularly in geographically isolated areas such as Arunachal Pradesh. The

main state central university, Rajeev Gandhi University (RGU), has various government colleges that serve a wide variety of academic populations. Although efforts have been made by INFLIBNET and other agencies to increase digital infrastructure, user awareness, utilization behaviour and satisfaction levels determine whether the digital library services will be effectively used. The perception and interaction of users with automated and digital library services is crucial in enhancing services quality and maximizing the utility of technology investments. This research work aims at assessing these dimensions in the context of government colleges affiliated to RGU.

2. Previous Studies

The usage of library automation and digitisation has been studied by various researchers. The literature on the subject is vast and both print and non-print literature are available. The review of some of the earlier studies concerning library automation, e-resources, and the user application of digitisation are briefly covered below.

Abhinandan and Tyagi (2025) found that ICT-based library services were highly recognized among all the user groups. Circulation services had the highest level of satisfaction with an average satisfaction rating of 77.2%, reference and book reservation services came second. Nevertheless, more sophisticated research-oriented services like Current Awareness Services (CAS), Selective Dissemination of Information (SDI), and bibliographic tools showed relatively lower levels of adoption and satisfaction that were institution-specific. The results also revealed that the performance of the private medical colleges generally was higher in the provision of basic library services and government institutions demonstrated higher efficacy in specialized academic and research oriented services. Fumilayo and Audu (2025) highlighted that automation of libraries has become internationally renowned as efficiency and access to better information by students, teachers and researchers. But the results showed the rate of dissatisfaction was high both by lecturers and students, which was mainly due to poor service delivery and the lack or ineffective use of automation facilities in most institutions. The authors came up with the following infrastructural, technological and organizational needs to ensure effective implementation of automated library services. Saravanan and Sivakumar (2025) determined the level of user awareness, usability, satisfaction and the difficulties faced by users during the use of automated services. The results indicated that despite the high efficiency in library services that have been brought about by library automation, there have been some barriers leading to the continued failure in the maximum use of automated library services; these barriers were found to be poor digital literacy, poor training of the users and the outdated technological infrastructure. Manjunatha G. and Kumar (2024) examined library automation awareness and utilization and digital library software and reference management tools awareness and use among LIS postgraduate students at South Indian universities through a structured questionnaire that was sent to 493 students. Analysis of data was done with the SPSS version 26. The research established that Koha was the most popular library automation software, DSpace was the most popular digital library platform, and Mendeley and Zotero were the most common

desired reference management tools. The authors have highlighted that the existing infrastructure-related problems should be solved to support the successful application of automation, digitisation, and citation management tools in LIS education. Roy and Barooah (2019) studied the role and use of e-resources in university libraries of the North Eastern region of India where they outlined the usefulness of this digital medium of information communication. The results showed that e-resources usage had steadily grown in all the university libraries in the region with almost all of the libraries having subscribed to a large number of e-resources especially in conducting research. It was discovered that postgraduates extensively used e-resources to do assignments and to prepare seminars. Although the staff of some libraries was weak, good services were provided using electronic resources that were available on the Internet. Tamrakar and Garg (2016) measured the level of use of e-resources, awareness, reasons why it was being used, effectiveness of information alert service, attitude of staff members and perception of quality of electronic services in general. The survey was done on a sample of 394 postgraduate students, research scholars and faculty members. The results indicated that e-journals were very popular among the users compared to print journals, which is an indication of a digital age scholarly communication. The majority of the users showed a great awareness on the existence of subject-specific e-journals and databases and could successfully access and use the e-resources that met their study and research requirements. Borang and Sarma (2008) conducted a survey of libraries in Rajiv Gandhi University, Arunachal Pradesh and NERIST in an attempt to determine the level of ICT adoption in Arunachal Pradesh. The result of the finding showed that both institutions had already started to establish automation and digital services but the progress remained limited due to poor funding, poor infrastructure and poorly trained personnel. The authors stressed that successful implementation of ICT integration in academic libraries is a slow process requiring continued investment and institutional resources. Based on literature review, it can be noted that no previous research has particularly focused on the awareness and utilization of library automation and digitisation by patrons of the associated Government Colleges of Rajiv Gandhi University (RGU), Arunachal Pradesh.

3. Research Objectives

The principal objectives of the study are to:

a) To examine the utilisation level and trend of library services.
b) To find out the advantages of using automated/computerized library services.
c) To determine the satisfaction of users with automated and online library services.
d) To determine the obstacles that influence the proper utilization of digital library services.
e) To recommendations on how to enhance awareness, utilisation, and satisfaction.

4. **Significance of the Study**

The present paper is very important because it shows empirical data on the degree of usage, and satisfaction of automated and digital library services among the government colleges based in Rajiv Gandhi University (RGU), Arunachal Pradesh one of the regions that has never been adequately represented in the literature on library and information science studies. The study can be used to determine the gap between the supply and demand of digital library services by analysing the perceptions and behaviour of the users.

5. Scope and Limitation of the Study

The paper will be focusing on user awareness, utilisation and satisfaction with automated and digital library services of selected government colleges under Rajiv Gandhi University (RGU), Arunachal Pradesh. It includes students in undergraduate and postgraduate courses and faculty that are involved in teaching, and it discusses important services like OPAC and e-resources and institutional repositories and services relating to digital references using descriptive survey method. The research is limited to the affiliated colleges of government within RGU and the data is collected via self-reported questionnaires, which could have some bias of response. Among the 21 Government colleges/institutes, 12 of them were included in the study. The other 9 Government colleges/institutes were excluded because of the lack of willingness to participate, administrative permission, limitations associated with the data collection period, and inaccessibility because of geographical location. The omitted colleges were Government College, Seppa (East Kameng); Government College, Daporijo (Upper Subansiri); Government Model College, Basar (Lepa Rada); Government Model Degree College, Geku (Upper Siang); Joram Gamlin Government College, Jote (Papum Pare); Dorjee Khandu Government College, Tawang; Government College, Palin (Kra Daadi); Arunachal State Nursing College, Naharlagun (Papum Pare); and Indira Gandhi Govt. College, Tezu, (Lohit). It is not limited to technical, financial, and licensing analysis of digital systems, and its results could be limited in their generalisability because of time, connectivity, and a small geographic coverage.

6. Research Methodology

The present research had a descriptive survey research design that aimed at investigating user utilisation and satisfaction of automated and digital library services in the RGU affiliated government colleges in Arunachal Pradesh. Students and faculty members constituted the population, on which a random sampling method was applied to select the respondents to have the right proportion of the various colleges and types of user. The data collection was done using a structured questionnaire with both closed ended and limited open ended questions focusing on demographic information, frequency of use, satisfaction with the library services and perceived barriers to effective utilisation. One thousand and seventy-six valid

responses were obtained. The data collected were subjected to the descriptive statistics tools like frequency and percentage, and the findings were discussed into meaningful conclusions in regard to the purpose of the research.

7. Data Analysis and Interpretation

Depending on the responses obtained, data were tabulated and analysed manually and the findings were displayed as tables and percentage in the Excel (2013) in the following sections.

7.1 Distribution of Respondents from Participating Government Colleges and Institutes

The table shows the distribution of the respondents who were in the Government colleges and institutes that took part in the current study. Among 21 Government colleges and institutes located within the confines of the Rajiv Gandhi University discovered, 12 of these institutions volunteered and gave 1176 respondents in total to the research.

Table 1: Institution-wise Distribution of Respondents

Sl No.	College Name	Total No of Participants in the study.
1	Jawaharlal Nehru Govt. College, Pasighat, East Siang	175
2	Dera Natung Govt. College, Itanagar, Papum Pare	198
3	Doni Polo Govt College,Kakmki	89
4	Government College, Bomdila, West Kameng	59
5	Rang Fra Govt. College, Changlang	61
6	Wangcha Govt College, Tirap	69
7	Neelam Taram Govt, Yachuli	79
8	Govt College Doimukh	98
9	Binniyanga Women College, Lekhi	84
10	Jomin Tayeng Govt Model, Roing	100
11	Tomo Riba Institute of Health & Medical Sciences, Naharlagun, Papum Pare	79
12	Government Nursing College, Pasighat	85
	Total	1176

7.2 Gender-wise Distribution of Respondents

Among the overall 1176 respondents, 726 respondents (61.73%) were female, 367 respondents (31.20%) were male, and 83 respondents (7.05%) were of other gender.

Table 2: Gender-wise Distribution of Respondents

Gender	Number of Respondents	Percentage
Female	726	61.73%
Male	367	31.20%
Others	83	7.05%
Total	1176	100

7.3 Age-wise Distribution of Respondents

A huge proportion of respondents 1116 (94.89%) are within the age group of 16-25 years. Only 13 respondents (1.10%) in the 26-35 years category and 9 respondents (0.76%) in the 36-45 years category. The number of respondents over 45 years was very low.

Table 3: Age-wise Distribution of Respondents

Age Group (Years)	Frequency	Percentage
16–25	1116	94.89
26–35	13	1.10
36–45	9	0.76
46–55	1	0.08
Above 55	1	0.08

7.4 Use of Computerized Library Services

Among the respondents, only 80 respondents (6.80%), said that they used computerized library services whereas 429 respondents (36.47%), said that they did not use computerized library services.

Table 4: Use of Computerized Library Services by Respondents

Use of Computerized Services	Frequency (N)	Percentage (%)
Yes	80	6.80
No	429	36.47

7.5 Purpose of Using Computerized Library Services

Student research and assignments was the most common among the listed reasons and it has the highest number of respondents, with 81 respondents (6.88%), circulation activities (issue/return of books) reported by 76 respondents (6.46%), and used digital scholarly materials 58 having access to e-resources like e-books, e-journals and databases (4.93%). On the same note, 56 respondents (4.76%), browsed the internet in search of academic and research material, only 51 respondents (4.33%) stated that they used OPAC to search through library collections. The least utilisation was recorded in printing and scanning services, which had 29 respondents (2.46%).

Table 5: Purpose of Using Computerized Library Services

Purpose	Number of Respondents	%
Student Research and Assignments	81	6.88%
Circulation (Issue/Return of Books)	76	6.46%
Access to E-Resources (E-books, E-journals, Databases)	58	4.93%
Internet Browsing for Academic/Research Purposes	56	4.76%
OPAC (Online Public Access Catalogue)	51	4.33%
Printing and Scanning Services	29	2.46%

7.6 Reasons for Non-Use of Computerized Library Services

Slow internet or connectivity problems were the most often mentioned reason and 230 respondent stated about them (19.55%), 168 (14.28%) of respondent indicated their preference to traditional or manual methods, and 148 respondents who stated lack of awareness of available services (12.58%), indicating lack of any adequate promotion and communication of computerized library facilities. 115 respondents (9.77%), indicating a lack of user training and insufficient supply of hardware facilities. The number of services that were perceived to be irrelevant to the needs of users was 85 respondents (7.22%). Sixty-two respondents (5.27%), mentioned technical limitations like system errors, and 47 respondents (3.99) mentioned inconvenient user interface or software design, which showed that the library software has usability problems.

Table 6: Reasons for Non-Use of Computerized Library Services

Reasons	Number of Respondents	%
Slow Internet/Connectivity Issues	230	19.55%
Preference for Traditional/Manual Methods	168	14.28%
Lack of Awareness about Services	148	12.58%
Insufficient Training or Guidance	115	9.77%
Limited Access to Computers	115	9.77%

Services Not Relevant to User Needs	85	7.22%
Technical Issues or System Errors	62	5.27%
Inconvenient User Interface/Software Design	47	3.99%

7.7 Level of Satisfaction with Automated/Computerized Library Services

With respect to OPAC/library database search, 69 respondents (5.86%) claimed that they were completely satisfied whereas 125 respondents (10.62%) indicated that they were satisfied partially. Nevertheless, 88 respondents (7.48%) indicated that they were not satisfied, which means that the services of OPAC are not properly implemented or easy to use. Full satisfaction was recorded in 125 respondents (10.62%) and some level satisfaction was recorded in 130 respondents (11.10%) and dissatisfaction was registered in 63 respondents (5.35%) in the case of circulation services (issue/return of books. When it comes to institutional repository services, 72 out of the respondents (6.12%) had a satisfaction level of complete satisfaction and 120 respondents (10.20%) had a level of satisfaction of some degree. Meanwhile, 81 respondents (6.88%) were not satisfied and stated that availability was low, their awareness was weak, or the content was not fully covered. The level of satisfaction with the information retrieval service including CAS, SDI and new arrivals alerts is low with 65 respondents (5.52%) being totally satisfied, 122 respondents (10.37%) being partially satisfied, and 93 respondents (7.90%) being unsatisfied. This implies haphazard service delivery and little personalization. In the aspect of QR code facilities, 61 respondents (5.18%), were fully satisfied and 97 respondents(8.24%) were satisfied in some way although a comparatively higher number of 120 respondents(10.20%) were not satisfied with this facility meaning that it was not implemented and not well aware of this facility. The biggest number of dissatisfied respondents was found in AI-based services where 141 respondents (11.98%) mentioned dissatisfaction. Only 59 respondents (5.01%) provided full satisfaction and 77 respondents (6.54%) a partial one, which confirms that AI-driven services do not exist or are poorly incorporated in the majority of college libraries.

Table 7: Level of Satisfaction with Automated/Computerized Library Services

Automated Services	**Fully Satisfied**		**Satisfied up to Some Extent**		**Dissatisfied**	
	N	**%**	**N**	**%**	**N**	**%**
Circulation (Issue/ Return)	125	10.62	130	1.10	63	5.35
Institutional Repository	72	6.12	120	10.20	81	6.88
OPAC/Library Database Search	69	5.86	125	10.62	88	7.48
Information Retrieval Services (CAS/SDI/ New Arrivals)	65	5.52	122	10.37	93	7.90
QR Code Facilities	61	5.18	97	8.24	120	10.20

AI-Based Services	59	5.01	77	6.54	141	11.98

7.8 Advantages of Using Automated/Computerized Library System

The simplest access to the necessary information is the most recognized benefit, as 216 respondents (18.36%), and only 84 respondents (7.14%), disagreed. In the same way, 206 respondents (17.51%), in favor of easy issue and easy return of documents, proved that automation is effective in streamlining all the library transactions. One more significant advantage was time-saving, and 192 respondents (16.32%) agreed with this statement, and 82 respondents (6.97%) did not. Books and journals were easily identified (191 respondents 16.24%), which is an indication that automated systems are useful in locating library materials faster. A large percentage of the respondents, 182 (15.81%), concurred that automation lowers reliance on library staffs and as a result, increases the number of users to be independent. Moreover, 165 participants (14.03%) believed that automated systems enhance the quality of academic work because it gives access to the information resources on time and in an efficient manner. But lesser agreement was found on SMS/ alert services, with only 123 respondents (10.45%) agreeing that this feature was one of the advantages, 132 respondents (11.22%) did not find it as one of the advantages.

Table 8: Advantages of Using Automated / Computerized Library System

Advantages	**Yes**		**No**	
	N	**%**	**N**	**%**
Easy access to required information	216	18.36	84	7.14
Easy issue / return of documents	206	17.51	82	6.97
Time-saving	192	16.32	82	6.97
Easy identification of books and journals	191	16.24	93	7.90
No dependency on library staff	182	15.81	96	8.16
Improves quality of academic work	165	14.03	95	8.07
SMS / Alert services	123	10.45	132	11.22

7.9 Problems Faced by Users in Using Automated Library System

The most commonly reported issue is the absence of computers as 156 respondents (13.26%) reported that they usually lacked a computer, 87 respondents (7.39%) reported that they did not rarely, and 61 respondents (5.18) that they rarely lacked a computer. Internet connectivity is another significant issue and 109 respondents (9.26%) indicated that they face it as common and 105 respondents (8.92%) said that they experienced it occasionally. 101 respondents (8.58%) mentioned the absence of user orientation programmes. This is also added by the fact that the software is not user friendly which is often reported among the 88

respondents who reported that (7.48%) which is matched by equally many respondents who reported that the software is sometimes not user friendly as well as by the fact that the software is not always user friendly. The 59 respondents (5.01%) and 155 respondents (13.18%) stated that power cuts were a frequent and sometimes occurrence respectively that indicated un-reliable supply of power interferes with the automated services. Also, 110 respondents (9.35%), reported lack of library staff sometimes, which could have an influence on the timely provision of assistance to the users.

Table 9: Problems Faced by Users in Using Automated Library System

Problems	Frequently		Sometimes		Rarely	
	N	%	N	%	N	%
Lack of Computers	156	13.26	87	7.39	61	5.18
Power Cut	59	5.01	155	13.18	55	4.67
Slow Internet / Connectivity	109	9.26	105	8.92	53	4.50
Lack of User Orientation Programme	101	8.58	87	7.39	62	5.27
Lack of Library Staff	58	4.93	110	9.35	83	7.05
Software Not User-Friendly	88	7.48	88	7.48	68	5.78

7.10 Availability of Digitized Library Resources

A limited number of respondents (83) indicated (7.05%) that digitised resources are accessible in their libraries. A somewhat elevated number of respondents, 102 (8.67%), indicated that digitized materials are not available, which demonstrates the lack of infrastructure and resources in most colleges. Remarkably, 135 (11.47%) respondents chose the answer can’t say, implying that they were not sure or did not know whether digitized resources exist.

Table10: Availability of Digitized Library Resources

Availability of Digitized Resources	Frequency (N)	%
Yes	83	7.05
No	102	8.67
Can’t Say	135	11.47

7.11 Types of Digital Resources Available in the Library

E-books are the most widespread of the diverse digital resources as 138 respondents (11.73%), it means that the digitisation process is concentrated on the simplest electronic reading sources. The third most accessible category, which was reported by 95 respondents (8.07%), is the Open Educational Resources (OER),

which implies an increasing though rather minimal focus on freely available learning resources. On the other hand, e-journal availability is relatively low with only 47 respondents (3.99) citing their availability, a factor that indicates limited access to academic journals in electronic formats. Digital resources of advanced academics demonstrate weak presence. Only 33 respondents reported that the databases were available (2.80%), and only 22 respondents were able to find digitized theses and dissertations (1.87%), which means that there is not much support to research-oriented digital material. The use of multimedia resources (audio/video) was mentioned by 30 respondents (2.55%) and this implies a minimal use of non-textual learning resources. The insignificant reaction to other digital resources (1 respondent; 0.08%) also proves the limited scope of digital collections.

Table 11: Types of Digital Resources Available in the Library

Types of Digital Resources	Frequency (N)	%
E-Books	138	11.73
Open Educational Resources (OER)	95	8.07
E-Journals	47	3.99
Databases	33	2.80
Multimedia (Audio / Video)	30	2.55
Digitized Theses / Dissertations	22	1.87
Any Other Digital Resources (if any)	1	0.08

7.12 Frequency of Use of Digital Library Resources

A significant user population of 150 stated that they did not use digital library resources at all, which implies low awareness, access, or provision of relevant infrastructure in colleges libraries. The other 156 respondents (13.26%) reported using digital resources infrequently or occasionally, indicating that they utilize them only on occasion and because it is necessary, but not regularly. Conversely, few, 26 respondents (2.21%), used digital resources often but an even smaller number, 19 respondents (1.61%), used them very often.

Table 12: Frequency of Use of Digital Library Resources

Frequency of Use	Frequency (N)	%
Rarely Sometimes	156	13.26
Never	150	1.27
Often	26	2.21
Very Often	19	1.61

7.13 Digital Resources Most Frequently Used by Respondents

The most commonly used digital materials are e-books and e-textbooks, which were recorded by 114 respondents (9.69%), indicating the preference to easily accessible and curriculum-oriented material. Online academic journals and articles are less commonly used with the percentage of regular use reported by only 43 of the respondents (3.65%). Likewise, 35 respondents (2.97%), indicate that they use research databases and institutional repositories implying that they do not spent much time on advanced research-oriented digital resources. Only 38 respondents (3.23%), use online library catalogue (OPAC) and hence there is low usage of automated search tools in the process of identifying library materials. Digital theses and dissertations are actually being used very minimally, with a dismal 10 respondents (0.85%), which demonstrates a lack of awareness or access to institutional research products in digital version. Interestingly, the number of people who do not use digital resources by any means is quite high and makes up a significant portion of respondents 168 (14.28%), which is evidence of a strong disparity in digital literacy, digital access, or digital awareness levels.

Table 13: Digital Resources Most Frequently Used by Respondents

Digital Resources	Frequency (N)	%
E-Books/E-Textbooks	114	9.69
Online Academic Journals/Articles	43	3.65
Research Databases/Institutional Repository	35	2.97
Digital Theses/Dissertations	10	0.85
Online Library Catalogue (OPAC)	38	3.23
Do Not Use Digital Resources	168	14.28

7.14 Mode of Access to Digital Library Resources

The largest group of respondents, 160 (13.60%), have access to digital resources via personal devices e.g. laptops and mobile phones and as such, convenience and flexibility are important factors that determine access. The respondents who accessed it using library computers were 107 (9.09%), which indicates that access is not readily available or that the college libraries do not have enough computer terminals. Remote (off-campus) access, with only 47 respondents (3.99%), is the least preferred mode, indicating the non-availability of the remote access facilities or the lack of awareness among the users.

Table 14: Mode of Access to Digital Library Resources

Mode of Access	Frequency (N)	%
Personal Devices (Laptop/Mobile)	160	13.60
Library Computers	107	9.09

Remote Access (Off-Campus)	47	3.99

7.15 Level of Satisfaction with Library Automation and Digitization Services

Only 24 respondents (2.04%) reported being very satisfied, while 108 respondents (9.18%) expressed satisfaction with the existing automated and digitized services. A notable number of respondents, 121 (10.28%), expressed a neutral opinion. On the other hand, 58 respondents (4.93%) reported being dissatisfied, and 31 respondents (2.63%) were very dissatisfied.

Table 15: Level of Satisfaction with Library Automation and Digitization Services

Level of Satisfaction	Frequency (N)	%
Satisfied	108	9.18
Neutral	121	10.28
Dissatisfied	58	4.93
Very Dissatisfied	31	2.63
Very Satisfied	24	2.04

7.16 Workshops on Automated and Digital Services

As little as 123 respondents (10.45%) indicated that training programmes or workshops. Conversely, 490 (41.66%), that is a significant majority of the respondents, said that there were no training or workshops.

Table 16: Training/Workshops Conducted by the Library on Automated and Digital Services

Response	Frequency (N)	%
Yes	123	10.45
No	490	41.66

7.17 Users' Perception on the Need for Further Training

Majority of the respondents, 550 (46.76%), reported that they need additional training to become effective consumers of the automated and digital library services. By contrast, just 70 respondents (5.95%), felt that they did not need extra training, which is a fairly small percentage of the confident or experienced users.

Table 17: Users' Perception on the Need for Further Training

Response	Frequency (N)	%
Yes	550	46.76
No	70	5.95

7.18 Preferred Type of Training and Support

The user manuals and guides are the most preferred with 276 respondents (23.46%). The number of respondents who preferred workshops was 151 (12.84). The one-on-one assistance (8.75% out of 103 respondents) reflected an individual approach as 103 respondents need personal assistance. Online tutorials on the other hand were the least popular, they were chosen by 81 respondents (6.88%), perhaps because of low internet connectivity or lack of knowledge in online learning facilities.

Table 18: Preferred Type of Training and Support

Type of Support Preferred	Frequency (N)	%
User Manuals / Guides	276	23.46
Workshops	151	12.84
One-on-One Assistance	103	8.75
Online Tutorials	81	6.88

8. Major Findings of the Study

The findings rely on the analytical study of data gathered among library users and indicate the current situation, usage trends, and attitudes to the efficiency of library automation and digital programs in the chosen colleges.

The key findings of the research are as follows.

a) Among the total 1176 respondents, 947 (80.52) were undergraduate students with the female users being 726 (61.73), which means that the undergraduate female students are the most frequent users of college libraries.
b) The use of computerized services is extremely poor. The number of respondents who used computerized services to conduct research and assignments was only 81 (6.88%), and only 51 (4.33%) utilized OPAC.
c) Slow internet connectivity (230; 19.55%), preference towards manual methods (168; 14.28%), and lack of awareness (148; 12.58%), were the major non-use reasons.
d) Most people admitted having the benefits of easy access to information (216; 18.36%), time saving (192; 16.32%), and easy issue/return (206; 17.51), which shows that despite the low utilization, people perceived it positively.
e) The majority of users found library software to be average (141; 11.98) or poor (95; 8.07) with only 12 of them (1.02) rating it as excellent.
f) Only 146 respondents (12.41) saw library automation as effective, and 150 (12.75) could not say as they were not sure and were not very exposed.
g) Only 83 respondents (7.05%), and 135 respondents (11.47%), respectively, could confirm that digitized resources were available to them.

h) The most common digital resource was the e-books (138; 11.73%), with the digital theses (22; 1.87) and databases (33; 2.80) being the least available.
i) There was a large proportion of respondents who never used digital resources (150) or not often (156; 13.26%), which indicates the lack of proper integration of digital services.
j) Online materials were accessed primarily through personal devices (160; 13.60%), whereas the amount of remote access was only 47 respondents (3.99%).
k) They were moderately to slightly displease with their overall satisfaction with 24 respondents (2.04) being very satisfied and 89 respondents (7.56) dissatisfied or very dissatisfied.
l) The percentage of respondents who were strong on the need to receive more training on automated and digital library services was very high; 550 (46.76%).
m) The user manuals/guides (276; 23.46) were the most preferred support mechanism, then workshops (151; 12.84) and individual assistance (103; 8.75).

9. Conclusion, Suggestions and Recommendations

The research finds out that automated and online library services in government colleges of Arunachal Pradesh, which are affiliates of RGU are in their infancy. Although some attempts have been made to automate and digitise libraries, they are predominately print based and user awareness and use of OPAC, e-resources, and other digital technologies is very low. Poor infrastructure, low internet speeds and absence of systematic user training impact on user satisfaction greatly. The research finds out that digital library services are effective when there is increased infrastructure, digital literacy and institutional support. The research recommends enhanced user awareness by use of frequent orientation programmes, creation of user manuals and user guides, updating library software and emphasis on curriculum-based digital resources. The user should be encouraged to provide continuous feedback to enhance delivery of services and ease of use. The study suggests the full-scale automation of a library with standard ILMS, sufficient funding and policy ensuring the availability of good internet and computer facility and periodic training programme of the users and library staff. To achieve sustainable growth of automated and digital library services in government colleges affiliated to RGU, it is necessary to expand e-resources, institutional repositories, and access facilities (remotely), as well as to continuously engage librarians in professional development.

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