

AVAILABILITY AND UTILIZATION OF ICT FACILITIES AND SERVICES IN UNIVERSITY LIBRARIES OF TRIPURA

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ABSTRACT

This study examines the availability and utilization of ICT facilities and services in university libraries of Tripura. A descriptive survey method was adopted, and primary data were collected from 1050 respondents, including faculty members and research scholars, using a structured questionnaire. The sampling technique used was convenient sampling. The findings reveal that a majority of respondents are research scholars who frequently visit the library and utilize ICT facilities such as computers, internet, and digital services for academic and research purposes. Services like Current Awareness Service (CAS) and e-resources are widely used. However, the study also identifies several challenges, including frequent malfunctions in digital databases, slow internet connectivity, and inadequate digital resources, which hinder effective utilization. The study concludes that while ICT has significantly improved library services and user access to information, there is a need to strengthen infrastructure, provide user training, and ensure regular maintenance of ICT facilities to enhance their effective use in university libraries.

Keywords: Availability, Utilization, ICT Facilities, University Libraries, Research Scholars, Faculty Members

1 INTRODUCTION

Information and Communication Technology (ICT) has brought significant changes in the functioning of modern libraries. University libraries are increasingly adopting ICT tools to provide efficient access to information and to support academic and research activities. ICT facilities such as computers, internet connectivity, digital libraries, institutional repositories, and audio-visual resources enable users to access information quickly and effectively. Faculty members and research scholars depend heavily on ICT-based services for research work, academic communication, and accessing electronic resources such as e-books and e-journals. The integration of ICT in libraries improves the quality of information services and enhances user satisfaction. Despite the rapid development of ICT in university libraries, users still face several challenges such as slow internet connectivity, technical issues, and lack of adequate digital resources. Therefore, it is important to examine the availability and utilization of ICT facilities and identify the challenges faced by users. This study focuses on analyzing the availability and utilization of ICT facilities by faculty members and research scholars in university libraries of Tripura.

2 REVIEW OF LITERATURE

Several studies have examined the role and use of Information and Communication Technology (ICT) in academic libraries. **Ezecheta (2022)** examined the availability and use of ICT facilities by undergraduate students at Rhema University, Nigeria, using a descriptive survey of 200 students. The study found that while ICT tools like computers, internet, and online databases are widely available and beneficial for research, challenges such as poor power supply, weak internet, and outdated equipment limit their effective use. It recommends improved power sources, maintenance, and user training to enhance ICT utilization in academic research.

Mohanadevi and Vijayakumar (2019) assessed the "Usage of information and communication technology by faculty members of Arts and Science colleges in Sirkali taluk." The survey indicated that the majority of 108 (85.71%) respondents engaged in daily library visits. The survey concluded that the respondents were assistant professors, with a maximum of 58 (46.03%) indicating that library hours show faculty utilization of ICT for study and research purposes.

Thanuskodi (2012) examined the use of ICT among faculty members and research scholars in universities and found that ICT tools play a vital role in accessing electronic information sources such as e-journals, e-books, and online databases for academic work and research activities.]

3 OBJECTIVES OF THE STUDY

- i To examine the designation-wise distribution of respondents in university libraries of Tripura.
- ii To analyze the frequency of library visits and time spent by users in the library.
- iii To study the purpose of using ICT facilities and services among faculty members and research scholars.
- iv To assess the availability of ICT facilities in university libraries.
- v To evaluate the frequency and pattern of usage of ICT services provided by the library.
- vi To identify the challenges faced by users in utilizing ICT facilities and services.

4 METHODOLOGY

The study adopts a descriptive survey method to examine the availability and utilization of ICT facilities in university libraries of Tripura. The data were collected from 1050 respondents, including faculty members and research scholars, using a structured questionnaire. The sampling technique used was convenient sampling. The collected data were analyzed using statistical tools such as percentage, mean (M), standard deviation (SD), and ranking method.

5 DATA ANALYSIS AND INTERPRETATION

Table 5.1: Distribution of Respondents Designation-wise

S. No	Designation	No. of Respondents	Percentage (%)
1	Professor	61	5.8
2	Associate Professor	51	4.9
3	Assistant Professor	268	25.5
4	Research Scholar	670	63.8
Total		1050	100.0

(Source: Primary data)

Table 5.1 shows that the majority of respondents are Research Scholars (63.8%), followed by Assistant Professors (25.5%). A smaller proportion of respondents are Professors (5.8%) and Associate Professors (4.9%). This indicates that the study is largely represented by research scholars, with the highest percentage being 63.8%.

Table 5.2 Frequency of Library Visits

S. No	Frequency	No. of Respondents	Percentage
1	Daily	456	43.4
2	Several times a week	219	20.9
3	Once a week	171	16.3
4	Less than once a week	109	10.4
5	Rarely	95	9.0
Total		1050	100.0

(Source: Primary data)

Table 5.2 reveals that the majority of respondents visit the library daily (43.4%), followed by those who visit several times a week (20.9%) and once a week (16.3%). A smaller proportion visit less than once a week (10.4%) and rarely (9.0%). This indicates that most respondents are regular library users, with the highest percentage being 43.4%.

Table 5.3: Time Spent in the Library

S. No	Time spent	No. of Respondents	Total
1	Less than 1 hour	207	19.7
2	1-2 hours	257	24.5
3	2-3 hours	227	21.6
4	3-4 hours	170	16.2
5	More than 5 hours	189	18.0
Total		1050	100.0

(Source: Primary data)

Table 5.3 indicates that the largest proportion of respondents spend 1–2 hours in the library (24.5%), followed by those who spend 2–3 hours (21.6%). A considerable number of respondents spend less than 1 hour (19.7%), while 18.0% spend more than 5 hours. The smallest proportion of respondents spend 3–4 hours in the library (16.2%). It is found that most users tend to spend a moderate amount of time in the library, with the highest percentage being 24.5%.

Table 5.4: Purpose of Using ICT Facilities and Services in the Library

S. No	Purpose of Using ICT	Never	Rarely	Sometimes	Very Often	Always	Total	M	SD	R
1	Academic and Research work	176 (16.8)	130 (12.4)	251 (23.9)	217 (20.7)	276 (26.3)	1050 (100.0)	3.2733	1.40697	5
2	Skill Development & Learning	95 (9.0)	144 (13.7)	215 (20.5)	369 (35.1)	227 (21.6)	1050 (100.0)	3.4657	1.22465	1
3	Information Access Tools	112 (10.7)	190 (18.1)	151 (14.4)	326 (31.0)	271 (25.8)	1050 (100.0)	3.4324	1.32861	2
4	Communication via email and Networking	115 (11.0)	167 (15.9)	271 (25.8)	191 (18.2)	306 (29.1)	1050 (100.0)	3.3867	1.34051	4
5	Accessing e-books and e-journals	87 (8.3)	197 (18.8)	238 (22.7)	240 (22.9)	288 (27.4)	1050 (100.0)	3.4238	1.29102	3

(Source: Primary data)

Table 5.4 reveals that Skill Development & Learning is the primary purpose for using ICT facilities, ranking first with the highest mean score (M = 3.4657), followed by Information Access Tools (M = 3.4324) and Accessing e-books and e-journals (M = 3.4238). Communication via email and networking and academic and research work are also notable purposes but rank lower in comparison. Overall, the findings indicate that ICT facilities are mainly used for skill development and learning, with the highest combined frequent usage (Very Often and Always) being 56.7%.

Table 5.5: Availability of ICT Facilities in the Library

S. No	ICT Facilities	No. of Respondents	Percentage
1	Internet/Wi-Fi	141	13.4
2	Computers	187	17.8
3	Laptops	127	12.1
4	Printers	65	6.2
5	Scanners	44	4.2
6	Photocopiers	62	5.9
7	Institutional Repository	90	8.6
8	Digital Library/ E-resources	107	10.2
9	Audio-Visual Materials	128	12.2
10	Library Mobile App	99	9.4
Total		1050	100.0

(Source: Primary data)

Table 5.5 shows that computers are the most available ICT facility in the library (17.8%), followed by internet/Wi-Fi (13.4%), audio-visual materials (12.2%), and laptops (12.1%). Moderate availability is observed for digital library/e-resources (10.2%) and library mobile apps (9.4%), while institutional repositories (8.6%), printers (6.2%), and photocopiers (5.9%) are less available. The least available facility is scanners (4.2%). Overall, computers are the most commonly available ICT facility, with the highest percentage being 17.8%.

Table 5.6: Frequency of the Use of ICT Services Provided by the University Library

S. No	ICT Services	Never	Rarely	Sometimes	Very Often	Always	Total	M	SD	R
1	OPAC/Web OPAC	216 (20.6)	170 (16.2)	355 (33.8)	154 (14.7)	155 (14.8)	1050 (100.0)	2.8686	1.30624	8
2	Digital Library Service	128 (12.2)	144 (13.7)	195 (18.6)	330 (31.4)	253 (24.1)	1050 (100.0)	3.4152	1.31609	5
3	E-resources (Books & Journals)	129 (12.3)	122 (11.6)	221 (21.0)	232 (22.1)	346 (33.0)	1050 (100.0)	3.5181	1.37114	3
4	Institutional Repository Service	175 (16.7)	194 (18.5)	194 (18.5)	190 (18.1)	297 (28.3)	1050 (100.0)	3.2286	1.45381	7

5	Electronic Theses and Dissertations (ETDs)	123 (11.7)	122 (11.6)	253 (24.1)	195 (18.6)	357 (34.0)	1050 (100.0)	3.5152	1.3663	4
6	Electronic Document Delivery Service	103 9.8	95 9	303 28.9	250 23.8	299 28.5	1050 100	3.5210	1.261	2
7	Current Awareness Service (CAS)	80 (7.6)	52 (5.0)	223 (21.2)	351 (33.4)	344 (32.8)	1050 (100.0)	3.7876	1.17474	1
8	Selective Dissemination of Information (SDI)	109 (10.4)	412 (39.2)	292 (27.8)	101 (9.6)	136 (13.0)	1050 (100.0)	2.7552	1.1676	9
9	Online User Education / Training Service	170 (16.2)	171 (16.3)	191 (18.2)	198 (18.9)	320 (30.5)	1050 (100.0)	3.3114	1.4571	6
10	Reader's Advisory and Online Reference Service	147 (14.0)	140 (13.3)	298 (28.4)	195 (18.6)	270 (25.7)	1050 (100.0)	3.2867	1.35173	10

(Source: Primary data)

Table 5. 6 indicates that Current Awareness Service (CAS) is the most frequently used ICT service, ranking first with the highest mean score ($M = 3.7876$), followed by Electronic Document Delivery Service ($M = 3.5210$) and E-resources (Books & Journals) ($M = 3.5181$). Services such as Electronic Theses and Dissertations (ETDs) and Digital Library Services are also used frequently, while Selective Dissemination of Information (SDI) shows the lowest usage ($M = 2.7552$). Overall, the findings reveal that CAS is the most utilized service, with the highest combined frequent usage (Very Often and Always) being 66.2%.

Table 5.7: Challenges Faced in Using ICT Infrastructure and Services by Respondents

S. No	Challenges	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total	M	SD	R
1	I experienced slow internet connectivity when using the library computers	115 (11.0)	26 (2.5)	241 (23.0)	270 (25.7)	398 (37.9)	1050 (100.0)	3.7714	1.28166	2
2	I face frequent malfunctions in the library's digital databases and online resources	34 (3.2)	28 (2.7)	193 (18.4)	361 (34.4)	434 (41.3)	1050 (100.0)	4.079	0.99495	1
3	I find it difficult to navigate the library's online catalogue	155 (14.8)	173 (16.5)	193 (18.4)	308 (29.3)	221 (21.0)	1050 (100.0)	3.2543	1.35187	5
4	I find the library's digital resources difficult to use on	44 (4.2)	85 (8.1)	215 (20.5)	487 (46.4)	219 (20.9)	1050 (100.0)	3.7162	1.01721	3

	mobile devices									
5	I lack sufficient training in using the library's digital tools	168 (16.0)	189 (18.0)	300 (28.6)	150 (14.3)	243 (23.1)	1050 (100.0)	3.1057	1.37083	7
6	I feel that library staff do not provide adequate assistance with ICT-related issues	273 (26.0)	328 (31.2)	112 (10.7)	155 (14.8)	182 (17.3)	1050 (100.0)	2.6619	1.44257	9
7	I am concerned about the security of my personal data when using library computers	223 (21.2)	176 (16.8)	301 (28.7)	134 (12.8)	216 (20.6)	1050 (100.0)	2.9467	1.40237	8
8	I find the library's computer labs overcrowded when I need to use them	118 (11.2)	96 (9.1)	464 (44.2)	174 (16.6)	198 (18.9)	1050 (100.0)	3.2267	1.18782	6
9	I feel the library lacks sufficient digital resources to support my research needs	112 (10.7)	171 (16.3)	352 (33.5)	83 (7.9)	332 (31.6)	1050 (100.0)	3.3352	1.35007	4

(Source: Primary data)

Table 5.7 indicates that the most significant challenge faced by respondents is frequent malfunctions in digital databases and online resources, ranking first with the highest mean score ($M = 4.079$), followed by slow internet connectivity ($M = 3.7714$) and difficulty in using digital resources on mobile devices ($M = 3.7162$). Other challenges such as lack of sufficient digital resources, difficulty in navigating the online catalogue, and overcrowded computer labs are moderate concerns, while inadequate staff assistance and data security concerns are less significant. Overall, most respondents reported issues with digital database malfunctions, accounting for 75.7%.

6 FINDINGS

- i The majority of respondents are Research Scholars (63.8%), indicating a strong research-oriented user base.
- ii Most of the users visit the library daily (43.4%) and spend 1–2 hours (24.5%), showing regular usage.
- iii Computers (17.8%) and Internet/Wi-Fi (13.4%) are the most available ICT facilities.
- iv Current Awareness Service (CAS) is the most frequently used ICT service on academic institution.
- v The main purpose of ICT usage is Skill Development & Learning (56.7%).
- vi The major challenge faced is frequent malfunction of digital databases (75.7%), along with slow internet issues.

7 CONCLUSION

The study concludes that ICT facilities have become an integral part of university libraries in Tripura, significantly enhancing access to information and supporting academic and research activities. The findings reveal that a majority of users, particularly research scholars, actively utilize ICT-based resources such as computers, internet

services, and digital libraries for learning, research, and information retrieval. Services like Current Awareness Service (CAS) are widely used, indicating a strong dependence on ICT for academic purposes. However, the study also highlights key challenges, including frequent malfunctions in digital databases, slow internet connectivity, and limited digital resources, which affect the effective utilization of these facilities. Additionally, issues related to lack of training and technical support further hinder optimal usage. Therefore, there is a need to strengthen ICT infrastructure, improve internet speed, ensure regular maintenance of systems, and provide user training programs. Addressing these issues will enhance the efficiency, accessibility, and overall quality of ICT services in university libraries, thereby improving the facilities and services. To promote a more resource-efficient and research-oriented learning environment by adopting these strategies into practice in the university libraries of Tripura State.

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