



USAGE AND SEARCH PATTERNS IN DIGITAL RESOURCES BY THE USERS OF STATE UNIVERSITIES IN CHITTOOR DISTRICT: A STUDY

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Abstract: *The factors that influenced Usage and Search Patterns in Digital Libraries by the Users of State Universities in Chittoor District: A Study. Questionnaire based survey method were used to collect data from 1490 users (students and Faculty) of state university Digital Libraries. Digital Resources to enhance library services and increase academic productivity. Most of the users such as students and faculty are reliable on digital resources. The findings suggest that some factors such most of the users are aware and using of digital resources, 63.58 % of the respondents are searching title based accessing for digital resources, 49.26% of the respondents are accessing digital resources through Google search engine.*

Keywords: Search pattern, Search Engines, Digital resources, Universities and Library services, Students, Faculty Members, Chittoor District.

1. Introduction

The competent library professionals are to be recruited in university libraries. The libraries are to be equipped with carefully chosen reading materials, printed books and electronic information resources and audio-visual aids for learning, teaching and research. The faculty should be informed of the modern developments in the university related subjects concerned, and the library is the prime mover of the university libraries.

Libraries prefer digital collections for many reasons. Digital resources can be linked from and to indexing and abstracting databases. The library can get usage statistics which are not available for print collections. Digital collections save space and are relatively easy to maintain. When the total processing and space costs are taken into account, electronic collections may also result in some overall reductions in library costs. The electronic information can be accessed by any number of users at any time from any place

irrespective of the distance. The digital information environment has copiously changed the way in accessing information by the students. The present survey focuses on the use of the digital resources by the users of university libraries in Chittoor district of Andhra Pradesh.

2. Digital Resources

Digital resources usually comprise e-books, online journals, online databases, institutional repositories, OPAC and Web OPAC, websites, e-images, e-news, e-theses and e-dissertations, CD-ROMs, DVDs etc. Therefore, the resources which are available online in digital formats are called digital resources. The digital resources can be used by users through online access.

The main objective of an University library is to assist professionals in enhancing and updating their knowledge and skills, and to provide them information regarding new innovation, theories, University education and research. The primary role of university library is to collect and organize recorded information in related and allied subjects to meet the needs of users.

3. REVIEW OF LITERATURE

There are many numbers of studies are available regarding the use of electronic information resources by the researchers of various institutions. The related studies discuss the some of these issues. This study is conducted in the light of the earlier studies.

Singh, and Meenu (2021). stated that e-resources mainly open access resources were the only source for gather information during the Covid-19 pandemic lockdown period in the year 2020 and 2021. The study is based on the Ph.D students of the G.B. Pant University of Agriculture and Technology, Pant Nagar. The study noted that majority 87.22% students were aware about the availability of e-resources and they used for various purposes. The study reveals that use of institutional repositories, consortium-based e-resources and open access resources grow day by day.

Sahu and Tiwari (2021). Conducted a study is based on the selected colleges of Indira Gandhi Agricultural University, Raipur, to examine the use pattern of electronic resources among undergraduate students as provided by the library of all selected colleges of the University using survey method. The present study demonstrated the various aspects of the usage of electronic resources, preferable usage of e-resources, reason of preferring, problem faced while using e-resources and know to satisfaction level of the students.

Mrutyunjaya and Mallikarjun (2022). explained about the importance of digital resources and its services to the generation students of the degree colleges where they born with technology in their hands. They also framed ojectives like awareness of digital resources, its utilization and its services in the Government First Grde Colleges. To collect the data Google form with well-structured questions were distributed among 9 colleges which covers 505 samples with the analysis of the distributed questionnaire with inferences. Finally,

it ended with computer literacy skills among the respondents is mediocre 293 (58%) of the respondents are learning the digital resources use through their friends.

Miriam and Cristina (2022). investigated the digital resources that have been applied in higher education institutions, paying special attention to the type and frequency of use of resources. A literature review was carried out on a total of 44 articles. The main results showed that the primary resources applied in higher education institutions were videoconferencing tools, educational video's and virtual platforms. Most higher education institutions made use of free and open access resources. The authors concluded that the use of digital resources for teaching in an emergency context has not enabled reflection on their use. Such reflection would equip institutions for the optimization of these resources toward their efficient pedagogical application in teaching –learning processes.

Pettersson., et.as., (2024). aimed to identify which resources students used, their preferences, the purpose of using them, and barriers to adopting tool for self-study of anatomy. A mixed-methods approach combining qualitative and quantitative data was used to collect and analyse data. Two consecutive cohorts of first semester medical students (n-278) were invited to complete an anonymized survey. The survey consisted of itemized questions, free-text space for comments, and one open-ended questions. Descriptive statistics were used for demographics and itemized answers. Comments and free-text answers were analysed qualitatively using additive inferences. Most students used digital resources to prepare for examinations, when they encountered difficulties and after going through a section. Students reported they would use digital resources to a greater extent if they were offered an introduction, if resources to a greater extent if they were offered an introduction, if resources were more accessible, and if they could interact with a tutor. The free-text responses revealed that digital resources helped students understand anatomy, allowed them to make active choices, provided tools for repetition and memorization, accelerated and simplified the learning process, and complemented other learning resources. The authors concluded that the Digital resources may support the understanding of anatomy by offering alternative modes of learning and providing a valuable complement to other learning resources.

4. Objectives

The following are the specific objectives of the study:

- ❖ To know the awareness and use of Digital Resources in the selected state University Libraries.
- ❖ To know the purpose of using digital resources.
- ❖ To assess the search patterns used by users in accessing digital resources.
- ❖ To examine the problems faced by the users in utilizing the digital resources.
- ❖ To know the satisfaction of users regarding Digital library resources and facilities.

5. Methodology

For the present study, the data has been collected by using simple random sampling technique through questionnaires from the respondents of the selected University Libraries of Sri Venkateswar University

Tirupati, Sri Padmavathi Mahila Visvavidyalayam Tirupati, Dravidian University Kuppam, Chittoor District, Andhra Pradesh.

The investigator contacted the students and faculty members of the state universities in Chittoor district. Of the total 1500 students and faculty members 300, questionnaires distributed to the respondents of the universities under study, 1250 students and 240 faculty members had filled in the questionnaire and returned to the investigator. The sample comprised of respondents belonging to both gender, time spent, purpose of accessing, levels of satisfaction and problems facing using of digital resources. The study is based on random sampling through all the departments were covered in the study.

5. Data Analysis and Interpretation

5.1. Gender-wise distribution of Faculty and Students

As regards the gender of the respondents consisting of faculty and students, their distribution is shown in Table-1 below.

Table: 1 Gender-wise distribution

S.No.	Gender	Students	Faculty	Total
1.	Male	730 (58.4%)	148 (61.66%)	878 (58.92%)
2.	Female	520 (47.6%)	92 (38.34%)	612 (41.07%)
Total		n=1250 (100%)	n=240 (100%)	N=1490 (100%)

It is obvious from Table-1, that Out of the total 1490 respondents, 878(58.92%) are male respondents and the remaining 612 (41.07%) are female. The proportion of the male respondents was much higher than that of the female.

5.2. Provision of digital library

The provision of digital library in the selected Universities is shown in the Table below.

Table-2 Provision of digital library

Provision of digital library	Students	Faculty	Total
Yes	n=1250 (83.89%)	n=240 (16.11%)	N=1490 (100%)
No	-	-	-
Total	n=1250 (83.89%)	n=240 (16.11%)	N=1490 (100%)

Table-2 shows cent percent respondents (students and faculty members) stating that their universities have digital libraries.

5.3. Frequency of visit to the Digital Library

The respondent's frequency of visit to the digital library is shown in Table-3.

Table-3 Frequency of visit to Digital Library

Frequency of visit to Digital Library	Students	Faculty	Total
Daily	646 (43.35%)	42 (2.82%)	688 (46.17%)
2-3 times a week	312 (20.93%)	22 (1.47%)	334 (22.41%)
2-3 times a month	234 (15.7%)	126 (8.45%)	360 (24.16%)
Once in a month	58 (3.89%)	50 (3.35%)	108 (7.11%)
Total	n=1250 (83.89%)	n=240 (16.11%)	N=1490 (100%)

It is clear from the table that majority of the respondents 688 (46.17%) stated that they visited the digital library daily, followed by 360(24.16%) respondents visit the digital library 2-3 times a month, 334(22.41%) respondents visiting 2-3 times a week. and the remaining 108(7.11%) respondents visit the library once in a month. Hence, it can be concluded that majority of the respondents visit the digital library every day.

5.4. Time spent in the Digital resources

The time spent by the respondents in the digital libraries of the selected University Libraries is presented in Table-4.

Table-4 Time spent in the Digital resources

Time spent in Digital resources	Students	Faculty	Total
Less than 1 hour	217 (14.56%)	42 (2.82%)	259 (17.38%)
2 hours	537 (36.04%)	56 (3.75%)	593 (39.79%)
3 hours	310 (20.81%)	78 (5.23%)	388 (26.04%)
More than 3 hours	186 (12.48%)	64 (4.29%)	250 (16.77%)
Total	n=1250 (83.89%)	n=240 (16.11%)	N=1490 (100%)

It is clear from Table-4 that majority of the respondents 593(39.79%) spent time 2 hours for day in the digital library, followed by 388(26.04%) respondents spending 2 hours. 259(17.38%) respondents spent time less than 1 hour and the remaining 250(16.77%) respondents spent more than 3 hours in digital library. Hence, it can be concluded that most of the respondents spent 2 hours a day in the digital library.

5.5. Use of search engines for accessing Digital resources

The search engines used by the respondents for accessing Digital resources is presented in table-5

Table-5 Use of search engines for accessing Digital resources

Search engines	Students	Faculty	Total
Google	636 (39.89%)	98 (15.84%)	734 (49.26%)
Yahoo	326 (16.55%)	56 (2.84%)	382 (25.63%)
AltaVista	125 (6.34%)	48 (2.94%)	173 (11.61%)
Bing	163 (10.81%)	38 (4.77%)	201 (13.48%)
Total	n=1250 (83.89%)	n=240 (16.11%)	N=1490 (100%)

Table-5 clearly indicates that majority of the respondents 734(49.26%) are accessing Digital resources through Google search engine, followed by 382(25.63%) respondents accessing through Yahoo search engine, 201(13.48%) respondents through Bing and the remaining 173(11.61%) respondents accessing through AltaVista search engine. Hence, it can be concluded that most of the respondents accessed the Digital resources through Google.

5.6. Access point for searching Digital resources

The access points used by respondents for searching Digital resources are shown in table-6

Table: 6 Access point for searching Digital resources

Access point for searching Digital resources	Students	Faculty	Total
Title	786 (52.75%)	136 (9.37%)	922 (63.58%)
Keyword	334 (23.03%)	64 (4.41%)	398 (27.45%)
Author	130 (8.96%)	40 (3.35%)	170 (11.72%)
Total	n=1250 (83.89%)	n=240 (16.11%)	N=1490 (100%)

It is evident from Table-6 majority of the respondents 922(63.58%) are searching title-based accessing for Digital resources, followed by 398(27.45%) respondents having Keyword as access point for searching e-resources and the remaining 170(11.72%) respondents making author-based search for Digital resources. Hence, it may be concluded that majority of the respondents are searching Digital resources with title as the access point.

5.7. Purpose of accessing Digital resources

The purposes for which the respondents are accessing Digital resources are presented in table-7.

Table: 7 Purpose of accessing Digital resources

Purpose of accessing Digital resources	Students	Faculty	Total
Current & Up-to date information	326 (22.48%)	24 (1.65%)	350 (19.59%)
For preparing notes/study/teaching	198 (13.65%)	68 (4.68%)	266 (18.34%)
For academic research work	212 (14.62%)	42 (2.89%)	254 (17.51%)
Communication	186 (12.82%)	28 (1.93%)	214 (14.75%)
For seminars/conferences	174 (12.00%)	35 (2.41%)	209 (14.41%)
For writing essay	154 (10.62%)	43 (2.96%)	197 (13.58%)
Total	n=1250 (83.89%)	n=240(16.11%)	N=1490 (100%)

It is evident from the table-7 that majority of the respondents 350(19.59%) are accessing Digital resources for Current & Up-to date information, followed by 266(18.43%) for preparing notes/study/teaching purpose, 254 (17.51%) doing so for academic research work. 214(14.75%) are using Digital resources for communication, while 209(14.41%) respondents are accessing Digital resources for writing books/articles for seminars and conferences. Digital resources are being accessed by 197(13.58%) respondents for writing essay writing purpose. Hence, it can be concluded that most of the respondents are accessing Digital resources for Current & Up-to date information

5.8. Difficulties in using Digital resources

The distribution of respondents in terms of the difficulties faced while using Digital resources in the selected University libraries is given in Table-8.

Table: 8. Difficulties in using Digital resources

Difficulties in using Digital resources	Students	Faculty	Total
Yes	572 (38.38%)	54 (3.62%)	626 (42.02%)
No	678 (45.50%)	186 (12.82%)	864 (57.98%)
Total	n=1250(83.89%)	n=240 (16.11%)	N=1490(100%)

It is evident from Table-8 that majority of the 864(57.98%) respondents are not facing any difficulties in using Digital resources and the remaining respondents 626(42.02%) are facing difficulties in using Digital resources.

5.9. General problems faced while using Digital resources

The general problems faced by respondents while using Digital resources in the selected University libraries is given in Table-9.

Table: 9 General problems faced while using Digital resources

General problems	Students	Faculty	Total
Insufficient time slot	243 (16.31%)	31 (2.08%)	274 (18.38%)
Lack of basic operating skills	198 (13.28%)	16 (1.07%)	214 (14.36%)
Lack of awareness on search techniques	186 (12.48%)	12 (0.81%)	198 (13.28%)
Slow server	121 (8.12%)	60 (4.02%)	181 (12.14%)
Uncomfortable furniture	139 (9.32%)	32 (2.14%)	171 (11.47%)
Less number of terminals	146 (9.79%)	22 (1.47%)	168 (11.27%)
In consistent power supply	129 (8.65%)	23 (1.54%)	152 (10.20%)
Frequent break down of the system	88 (5.91%)	44 (2.95%)	132 (8.86%)
Total	n=1250 (83.89%)	n=240 (16.11%)	N=1490 (100%)

It is evident from Table-9 that majority of the respondents 274(18.38%) faced problems related to insufficient time slot, followed by 214(14.36%) respondents faced problems due to Lack of basic operating skills, 295(14.97%) respondents faced slow server, while 198(13.28%) respondents faced Lack of awareness on search techniques. Among others, 181(12.14%) respondents are facing the problem of Slow server, 171(11.47%) respondents are facing the problem of Uncomfortable furniture, 168(11.27%) respondents are facing Less number of terminals, 152(10.20%) respondents are facing In consistent power supply and the remaining 132(8.86%) respondents are facing Frequent break down of the system.

5.10. Technical Problems faced while using Digital resources

The technical problems faced by respondents while using Digital resources in the selected University libraries is given in Table-10.

Table: 10. Technical Problems faced while using Digital resources

Problems	Students	Faculty	Total
Network problems	360 (24.16%)	46 (3.08%)	406 (27.25%)
Download/Saving	267 (17.92%)	48 (3.22%)	315 (21.14%)
Speed of internet	247 (16.57%)	63 (4.22%)	310 (20.81%)
Limited access permissions	204	37	241

	(13.69%)	(2.48%)	(16.17%)
Lack of Printing facility	172 (11.54%)	46 (3.08%)	218 (14.63%)
Total	n=1250 (83.89%)	n=240 (16.11%)	N=1490 (100%)

It is evident from Table-10 that majority of the respondents 406(27.25%) are facing network problems, followed by 315(21.14%) respondents facing problem in speed of Download/Saving, 310(20.81%) respondents are facing Speed of internet, 241(16.17%) are facing limited access permissions problem and the remaining 218(14.63%) respondents are facing Lack of Printing facility problem while using e-resources. Hence, it can be concluded that majority of the respondents are facing network problems.

5.11. Level of Satisfaction with infrastructural facilities of Digital resources

The level of satisfaction with infrastructural facilities related to Digital resources among respondents is given in Table-11.

Table: 11. Level of Satisfaction with infrastructural facilities of Digital resources

Levels of satisfaction	Students	Faculty	Total
Fully satisfied	192 (12.88%)	46 (3.08%)	228 (15.97%)
Partially satisfied	986 (66.17%)	158 (10.61%)	1144 (76.78%)
Not satisfied	72 (4.83%)	36 (2.41%)	108 (7.24%)
Total	n=1250 (83.89%)	n=240 (16.11%)	N=1490 (100%)

It is evident from Table-11 that majority of the respondents 1144(76.78%) are partially satisfied with the availability of Digital resources, followed by 228(15.97%) respondents who are fully satisfied and the remaining 108(7.24%) respondents who are not satisfied with the e-resources provided in the digital libraries.

Findings

- ❖ Majority of the users are aware and using of Digital Resources.
- ❖ Majority of the respondents are using Digital resources for academic purpose.
- ❖ Majority of the respondents are accessing Digital resources through Google Search Engine.
- ❖ Majority of the respondents are searching title-based accessing for Digital resources.
- ❖ Most of the users facing problems by slow Internet connection.
- ❖ Majority of the respondents satisfied with infrastructure facilities.

Suggestions

Based on the findings of the study, the following suggestions are made to improve the use of digital resources among the students and faculty members.

- ❖ The speed of Internet needs to be increased for quick access of the available digital resources.

- ❖ Suggested that number of digital resources available through consortia should be increased to access more digital resources in their respective fields.
- ❖ The library should conduct regular evaluations and assessments to determine the effectiveness of the digital resources in meeting information needs of the students and Faculty Members.

Conclusion

Digital resources have played a vital role in the field of human life. Digital resources are creating a revolution in University Libraries. These have rapidly changed the way of seeking and disseminating information. It is clear from the study the speed of availability and accessibility of information make the students and faculty members to using digital resources frequently. The University libraries can take initiatives to organize awareness programmes in this area. This study helps the librarian to know the importance of digital resources in academic environment. However, all libraries have reasonable resource facilities at their end. Future studies may be conducted in other colleges and Universities on awareness of digital resources in Indian context.

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