Use of E-Journals by PG Students of Chemical Science Department of Kuvempu University: A Study

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Abstract:- The present study examined the use of e-journals by PG Students of Chemical Science students of Kuvempu University. A questionnaire was prepared to draw opinions from the users on e-journals. The responses were gathered from 100 users. The results of the survey provided information about the e-journals, usage, purpose of use, problems faced by the users while accessing e-journals, benefits of using e-journals, influence of e-journals on academic efficiency, and views regarding features of e-journals. Based on results of the survey, the following finding and suggestions have been put forth for optimum utilization of e-journals.

Keywords:- E-resources, E-journals usage, User study, Information Seeking, Chemical Science Department of Kuvempu University.

I. INTRODUCTION

Library contains different types of reading materials namely books, periodicals, maps, microforms, sound recordings, video recordings, electronic resources etc. These are procured to meet the information requirements of the user community. It is necessary to conduct user studies to examine the use of these reading materials to design a need-based acquisition policy, develop a balanced collection in the prevailing environment of diminishing budgetary provisions, and maximize the use of collection.

Thus Libraries are using technology to improve the management of scholarly information to strengthen and speed access to scholarly information not held locally. Over the last several years a significant transformation has been noticed in collection development policies and practices. Print medium is increasingly giving way to the electronic form of materials (Sharma, 2009). Ani (2008) quoting Tsakonas and Papatheodorou (2006), states that "the transition from print to electronic medium apart from resulting in a growth of electronic information, has provided users with new tools and applications for information seeking and retrieval. Electronic resources are invaluable research tools that complement the print-based resources in a traditional library setting.

The Kuvempu University has subscription to the UGC-Info net and many other publisher gateways with an aim to provide seamless access to e-journals to its patrons. This study aims to examine the dependency on e-journals among students of Chemical Science department of Kuvempu University.

II. REVIEW OF LITERATURE

Jeyapragash, B., Muthuraj, A., & Prabhu, R. (2022) The study aims to analyze the awareness and purpose of e-resources, frequency of using e-resources, Utilization and Satisfaction level of e-resourcesusing a total number sample of 277 Faculty Membersof Sri Ramakrishna Engineering College. It is found that the majority of faculty members are highly aware on IEEE 218 (86.17%), Springer Open 128 (50.59%) and O'reilly Open book and Free Engineering books 91 (35.97%) and further found that majority of 203 (80.24%) faculty members fully satisfied with about NPTEL resources.

Subaveerapandiyan, A. (2022) The study samples are Progressive Education Society's Modern Law College affiliated with SavitribaiPhule Pune University. BA LLB students are samples of the study. The study findings reveal that 95.1% of student respondents are aware of e-resources; 75.7% of respondents used college websites for accessing legal electronic resources. The most noticeable is that 95.1% of users prefer reading in Portable Document Format (PDF). Overall, more than 50% of respondents felt e-resources are easy to access, time-saving, and search tools. The findings of this study are helpful to library professionals to subscribe to more e-resources. The research suggests that library professionals have to guide the users to conduct orientation on accessing the e-resources more effectively.

Alasa, S. A., &Quadri, G. O. (2022) This study examined e-resources usage among polytechnic students in Southwest Nigeria. There were 9671 students from both polytechnics. A multi-stage sampling technique was employed with a sample fraction of 5% was drawn from the total number of students in each faculty amounting to 381. The study found that the students from both polytechnics are aware of the e-resources and that the e-resources were mainly used for research, class assignment and to update knowledge. The problem such as epileptic power supply, poor internet connection and so on was identified.

III. NEED OF THE STUDY

Universities are the higher intellectual hubs to transmit knowledge and understanding of ideas and values to students and research community through various intellectual means and library is an important agent in this process. University libraries are the heart of every university as it supports every teaching, learning, and research activity. Libraries are now moved from traditional resources to more dynamic and flexible e-resources. Library is ahead of many other libraries in this way as it have the access to huge and

valuable e-resources. Understanding the constructive impact and cost effectiveness of any new service is the intelligent strategy of every manager to know how well their initiations influenced the targeted group and purpose.

In recent years, the use of e-journals has become prominent in the drive for making information and data available to users, especially students and research scholars. Thus, this study is conducted to find opinion about the e-journals collection of the library and awareness of e-journals among the students of Chemical Science department. The study also focuses to find out the preference of access and to identify the areas in which the training is required for them in using the e-journals.

IV. OBJECTIVE OF THE STUDY

The objectives of the present study are as follows;
- To study the awareness and use of e-journals by the PG students of Chemical Science department.
- To know the influence of e-journals on the academic efficiency of the Students.
- To know the benefits of e-journals over the traditional ones.
- To know the problems encountered by the users while accessing and using e-journals
- To suggest ways and means for optimum utilization of e-journals.

V. STATEMENT OF THE PROBLEM

The statement of the problem is **"Use of E-Journals by PG Students of Chemical Science Department of Kuvempu University: A Study".**

A. Scope and limitations of the study
The study is restricted to know the use of e-journals by the PG students of Chemical Science department of Kuvempu University. A critical study has been made in respect of the dependence on e-journals available in Kuvempu university library by the PG students of Chemical Science department. The study confined to a total of 120 students studying in the PG department of chemical science.

VI. METHODOLOGY

Keeping above objectives in mind, a survey method has been adopted for the present study .For this structured questionnaire has been designed and used as a data collection tool. An attempt has also made been to interact with the respondents to know their grievances in exploring the library resources. Totally 120 questionnaires were distributed among the selected students. Among them 100(83.33%) questionnaires were received back. The data collected has been analyzed in the form of tables and graphs using SPSS (12.0).

VII. ANALYSIS AND INTERPRETATION

This study is based on the data collected from PG students of chemical science department. The results of the analysis of data received through responded questionnaires. The important part of the study is analysis and interpretation. here, researcher analyze the data with exact statistics and calculations. It is a careful study of research data that is analyzed using tabulation & descriptive methods.

In this study an attempt has been made to analyze and interpret the data collected by applying statistical techniques. A total 120 questionnaires were distributed to PG Students of Chemical Science department of Kuvempu University. The information thus collected is presented in appropriate table and analyze is made along with observation.

Sl.No	Gender	Respondents	Percentage
1	Male	37	30.8 %
2	Female	83	69.2 %
Total		120	100.0 %

Table 1: Gender wise distribution of respondents

Table 1 provides the details of respondent's gender. Among the 100 respondents, 30.8% were male respondents and the remaining 69.2% of respondents were female.

Sl. No	Computer Literacy Level	Respondents	Percentage
1	Expert	20	16.7 %
2	Above average	38	31.6 %
3	Average	52	43.3 %
4	Below average	8	6.7 %
5	Beginner	2	1.7 %
	Total	120	100.0 %

Table 2: Computer Literacy: Self Analysis

Table 2 provides the details related to the level of computer literacy among the respondents. It is found that out of 120 respondents, 16.7% respondents felt that they are expert in computer literacy whereas, 31.6 % respondents felt that they are above average, followed by 43.3% respondents felt average, 6.7% respondents felt themselves as below average, and 1.7% respondents felt they are beginners in computer literacy.

Sl. no	Response	Respondents	Percentage
1	Yes	115	95.8%
2	No	5	4.1%
Total		120	100.0%

Table 3: System Availability

Table 3 shows that out of the 120 respondents 95.8% of respondents have their own laptop or computers, and 4.1% of respondents don't have their own laptop or computers.

Sl. No	Response	Respondents	Percentage
1	Yes	120	100%
	Total	120	100.0%

Table 4: E-Journals Awareness

Table 4 shows the awareness of e-journals among the respondents, one of the important and positive observation was that all the respondents were aware of e-journals.

Sl. No	Response	Respondents	Percentage
1	Yes	120	100%
	Total	120	100%

Table 5: E-Journals Usage

Table 5 shows the data related to e-journal usage. It is clear that 100% of respondents used e-journals at least once.

Sl. No	Skills	Respondents	Percentage
1	Expert	9	7.5%
2	Trouble shooter	5	4.2%
3	Technically good	25	20.8%
4	Beginner	60	50%
5	Can't say	21	17.5%
	Total	120	100.0%

Table 6: E-Journals Accessing skills

Table 6 shows the data related to the e-journals accessing skills. More than half of the respondentsi.e.50% respondents were beginner, followed by 20.8% of respondents were technically good, 7.5% respondents were experts, 4.2% respondents were at trouble shooter level, and 17.5% respondents were unable to judge their own skills in accessing e-journals.
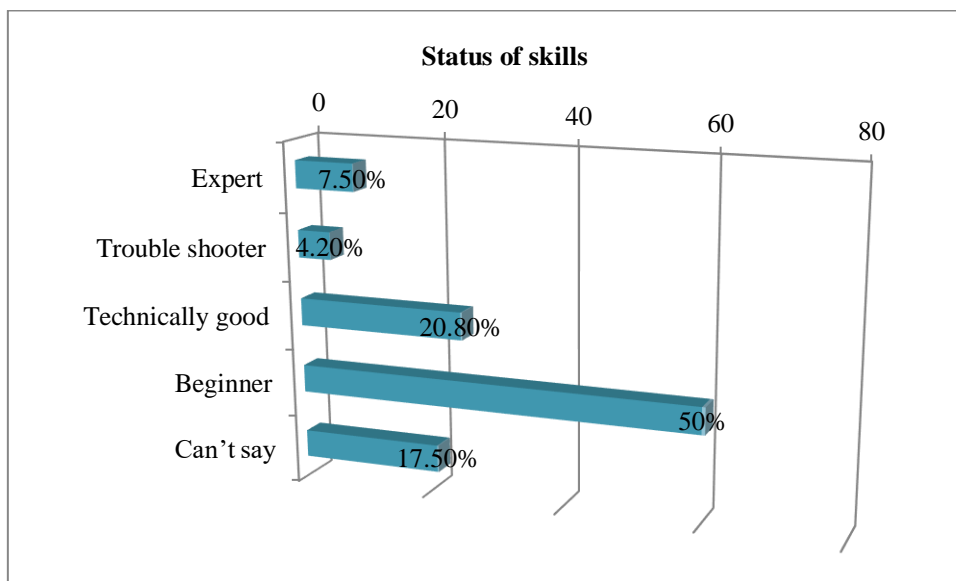
Fig. 1: E-Journals accessing skills

Sl. No	Frequency	Respondents	Percentage
1	Daily	5	4.2%
2	Weekly	16	13.3%
3	Monthly	17	14.2%
4	Occasionally	82	68.1%
Total		120	100.0%

Table 7: E-Journals Usage Frequency

Table 7 indicates that more than half of the respondents i.e. 68.1% are using e-journals occasionally, followed by 4.2% respondents who use e-journals daily, 13.3% use once in a week, and 14.2% respondents are using e-journals around once in a month.
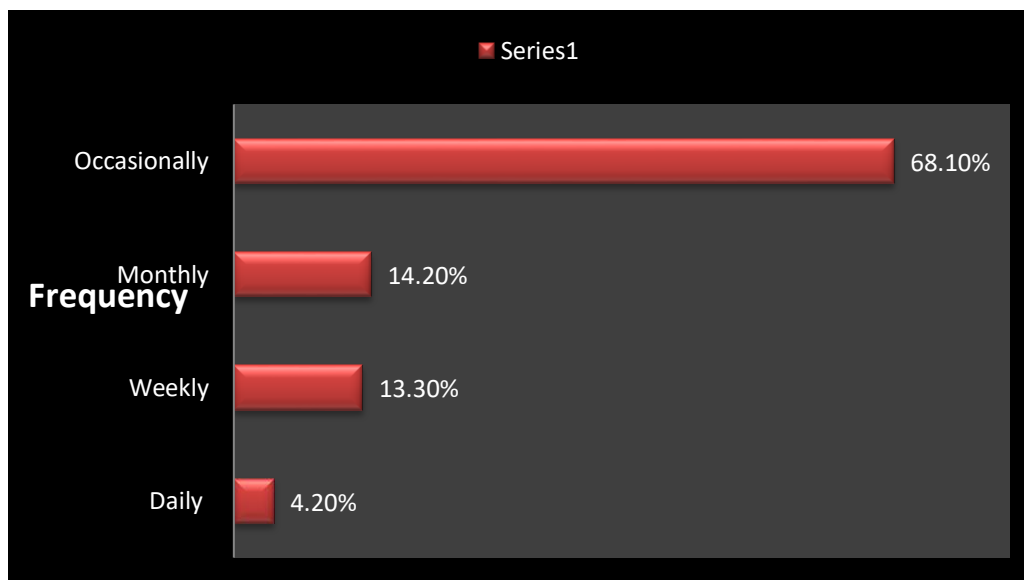

Fig. 2: E-Journals Usage Frequency

Sl. No	Location	Respondents		Total
		Yes	No	
1	University campus	39(39%)	61(61%)	100(100%)
2	Library	50 (50%)	50(50%)	100(100%)
3	Home	4(4%)	96(96%)	100(100%)
4	Dept computer Lab	30 (30%)	70(70%)	100(100%)

Table 8: E-Journals Accessing Points

Table-8 lists the locations from where the respondents access the e-journals of the 120 respondents, 39% of them are using e-journal in university campus, which includes the open environment of university apart from the department buildings and library. 50% of respondents are using library for accessing e-journals, whereas remaining 50% respondents do not prefer library for accessing e-journals. One of the important observations was that 70% of respondents are not using department computer lab for accessing e-journals. Around 4% of respondents are accessing the e-journals at their homes.
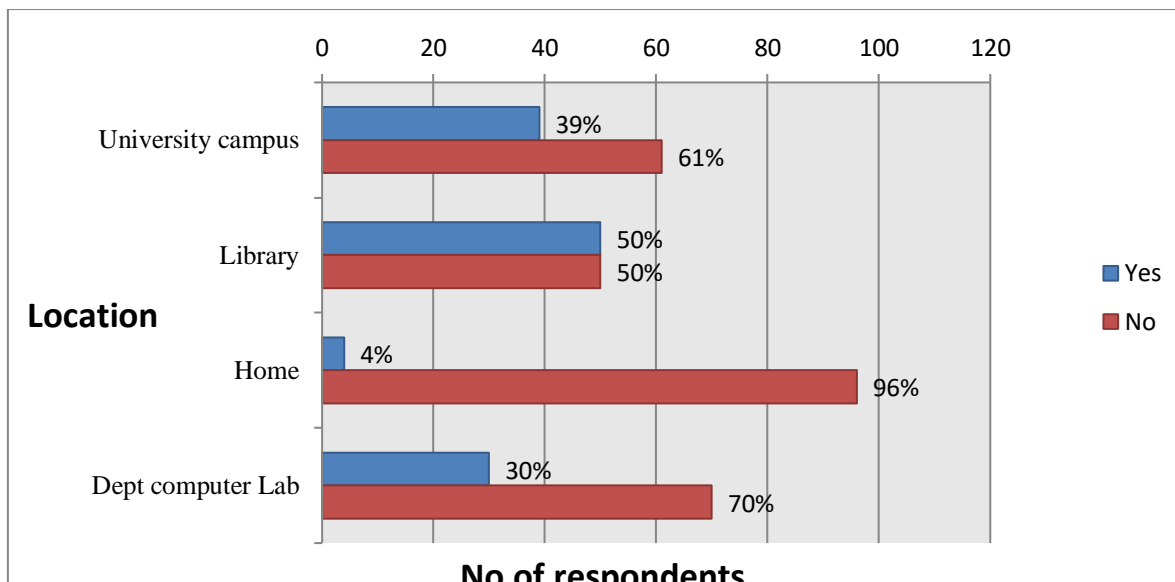

Fig. 3: E-Journals Accessing Points

Sl No	Purpose	Respondents		Total
		Yes	No	
1	Preparing notes	24(24%)	76(76%)	100(100%)
2	Writing articles	8(8%)	92(92%)	100(100%)
3	Project & dissertation	21(21%)	79(79%)	100(100%)
4	Research purpose	10 (10%)	90(90%)	100(100%)
5	General awareness	30(30%)	70(70%)	100(100%)
6	Preparing for competitive examination	15 (15%)	85(85%)	100(100%)

Table 9: Purpose of Accessing E-journals

Table-9 indicates the different reasons for which the users access the e-journals. It was observed that 24% respondents used e-journals for preparing notes and as low as 8% used it for writing articles. 21% of respondents used them for project and dissertation work and 10%respondents used it for research activities, 30% respondents used the e-journals for general awareness and only 15% respondents used e-journals for preparation for competitive examination.
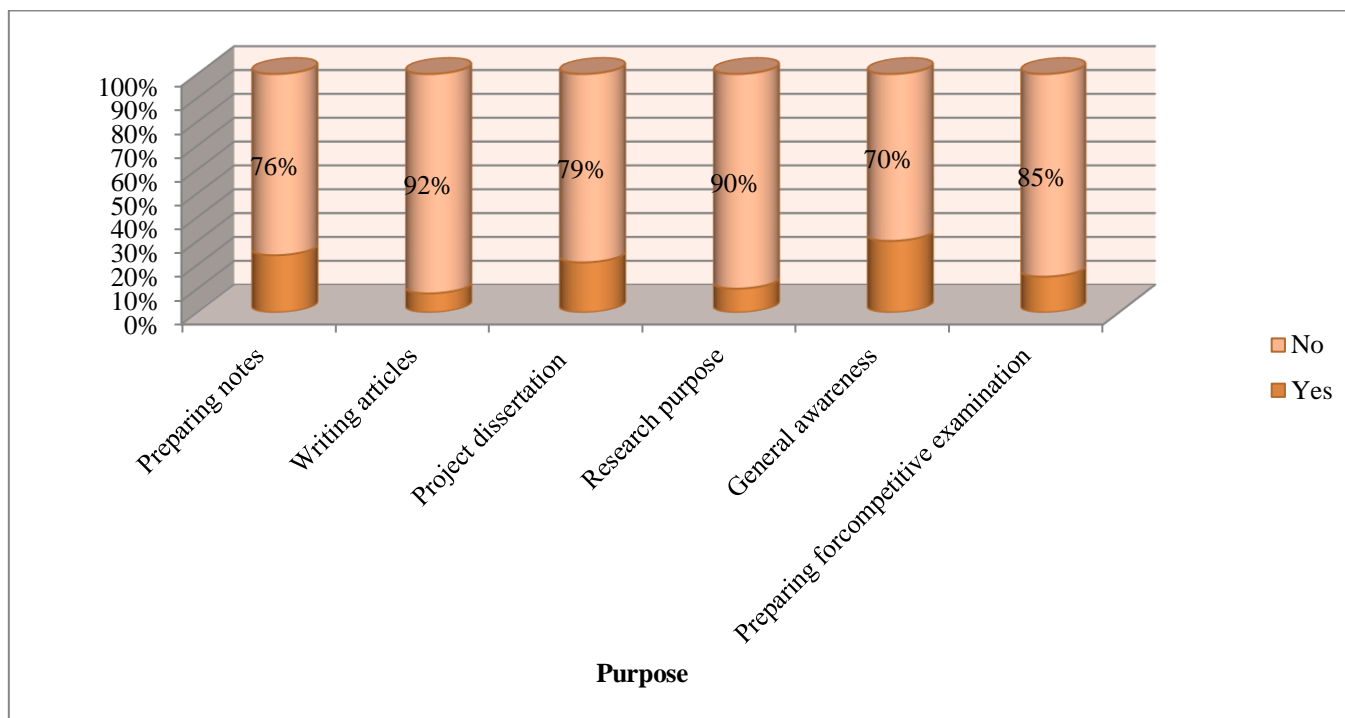
Fig. 4: Purpose of Accessing E-journals

Sl. No	Skills of Accessing E-Journals	Respondents		Total
		Yes	No	
1	Library orientation	41(41%)	59(59%)	100(100%)
2	Library staff	6(6%)	94(94%)	100(100%)
3	Self(Trial & Error)	25(25%)	75(75%)	100(100%)
4	Friends	18(18%)	82(82%)	100(100%)
5	Teachers	15(15%)	85(85%)	100(100%)

Table 10: E-Journals Accessing Skills (Source)

Table10 shows how the respondents gained the knowledge of accessing e-journals. According to the data, 41% respondents gained knowledge of e-journals accessing from library orientation followed by 6% of respondents who were trained by the library staff in real time while searching for e-journals. 25% respondents learnt through self-trial & error, 18% respondents learnt the skill from friends, and 15% respondents gained the knowledge of accessing e-journals trough their teachers.

Sl. no	Websites for Searching E-Journals	Respondents	Percentage
1	A general purpose search engine (Ex: Google, Yahoo etc)	84	84%
2	Specific journals website(Ex:www.nature.com)	13	13%
3	Another multi journals search website (Ex: Science Direct, DOAJ, INDONET etc.)	18	18%
4	Through library website	5	5%

Table 11: Websites for Searching E-Journals

From the Table-11, it is found that out of 120 respondents, 84% respondents, are using general purpose search engine (Ex: Google, Yahoo) for locating e-journals. 13% respondents were using specific journals website. 18% respondents were used the portals containing collection of e-journals and 5% respondents used the library websites.

Sl. No	Types of search	Respondents	Percentage
1	Author	20	16.6%
2	Title wise	52	43.33%
3	Subject	32	26.6%
4	Publisher wise	16	13.4%
	Total	120	100%

Table 12: Search Criteria

Table-12 indicates the types of search preferred by the respondents. Among 120 respondents, majority of the respondents prefer subject wise search i.e., 26.6%, followed by 43.33% respondents preferring title wise search, 16.6% respondents prefer author wise and 13.4% respondents prefers publisher wise search for accessing e-journals.

Sl. No	Reasons	Respondents		Total
		Yes	No	
1	Most latest information	52(52%)	48(48%)	100(100%)
2	Colorful and animated illustration	25(25%)	75(75%)	100(100%)
3	Statistical data	12(12%)	88(88%)	100(100%)
4	Audio and video content	15(15%)	85(85%)	100(100%)

Table 13: Reasons for Using E-Journals

Respondents were asked to identify the reasons for using e-journals. It was observed from Table 13 that majority of the respondents i.e. 52% have opined that the information available in e-journals is the latest and updated one, followed by 25% of the respondents felt that the e-journals have colorful and animated illustrations mean while, 12% of respondents access the e-journal due to statistical data, and 15% of respondents indicate the audio and video content of e-journal as the reason for using e-journal.

Sl. No	Importance of E-Journals	Respondents	Percentage
1	High importance	35	29.1%
2	Important	50	41.7%
3	Low importance	20	16.7%
4	Don't Know	15	12.5%
	Total	120	100%

Table 14: Rating to E-Journals

Table -14 shows that 41.7% of respondents felt thate-journal as important, followed by 29.1% felt they are highly importance while 16.7% rated the e-journals as less importance, and 12.5% who were not sure of its importance factor.

Sl. No	Response	Respondents	Percentage
1	Yes	50	41.7
2	No	70	58.3
	Total	120	100.0%

Table 15: Difficulty in accessing E-Journals

It is evident from the Table-15 that 41.7% of respondents found difficulty in accessing e-journals. While 58.3% of respondents are comfortable and have no difficulty in accessing e-journals.

Sl. No	Drawbacks	Respondents		Total
		Yes	No	
1	Limited connectivity	36(36%)	64(64%)	100(100%)
2	Frequent disconnectivity	3(3%)	97(97%)	100(100%)
3	Slow speed	37(37%)	63(63%)	100(100%)
4	URL not found	3(3%)	97(97%)	100(100%)
5	Server not found	14(14%)	86(86%)	100(100%)
6	Server busy	10(10%)	90(90%)	100(100%)
7	System problems	8(8%)	92(92%)	100(100%)

Table 16: Drawbacks in Accessing E-Journals

Table-16 presents the data related to the drawbacks in accessing e-journals. It is clear from the above table that 36% of respondents had the problem of limited connectivity. The frequent disconnectivity issue was faced by 3% of respondents. 37% of respondents feel the Internet speed was very slow. The URL not found and server not found issues were faced by 3% and 14% respondents respectively. 10% faced the problem of server being busy, followed by 8% respondents who faced the system problems while accessing e-journals.
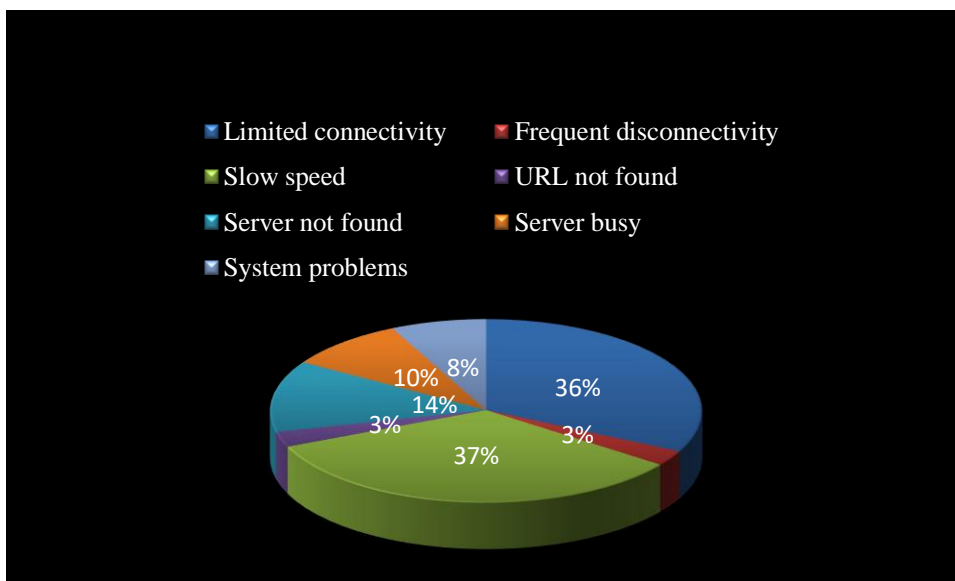
Fig. 5: Drawbacks in Accessing E-Journals

Sl No	Response	Respondents	Percentage
1	Yes	82	68.4%
2	No	38	31.6%
	Total	120	100.0%

Table 17: Need for Training in Accessing E-journals

It is found from Table 17 that 68.4% of respondents felt the need for a training session for using e-journals, while 31.6% were satisfied with their skills and did not felt the necessity for training sessions.

Sl. No	Training areas	Respondents		Total
		Yes	No	
1	Search journals titles	13 (13%)	87(87%)	100(100%)
2	Search journals articles	39(39%)	61(61%)	100(100%)
3	Accessing and downloading content	21(21%)	79(79%)	100(100%)
4	Searching e-journals consortia	7(7%)	93(93%)	100(100%)
5	Citing and managing references	6(6%)	94(94%)	100(100%)
6	Copyright	2(2%)	98(98%)	100(100%)

Table-18: Areas of Training in Accessing E-Journals

As indicated in table-18, 13% of the respondents felt the need of training in searching journals title. While 39% respondents felt the need for training in searching journal articles, followed by 21% needed training assistance in accessing and downloading contents. Whereas 7% respondents lacked the skill of searching e-journals consortia and felt for a training session. Further, 6% responded that training in citing and managing references and 2% respondents for training in copyright is required.
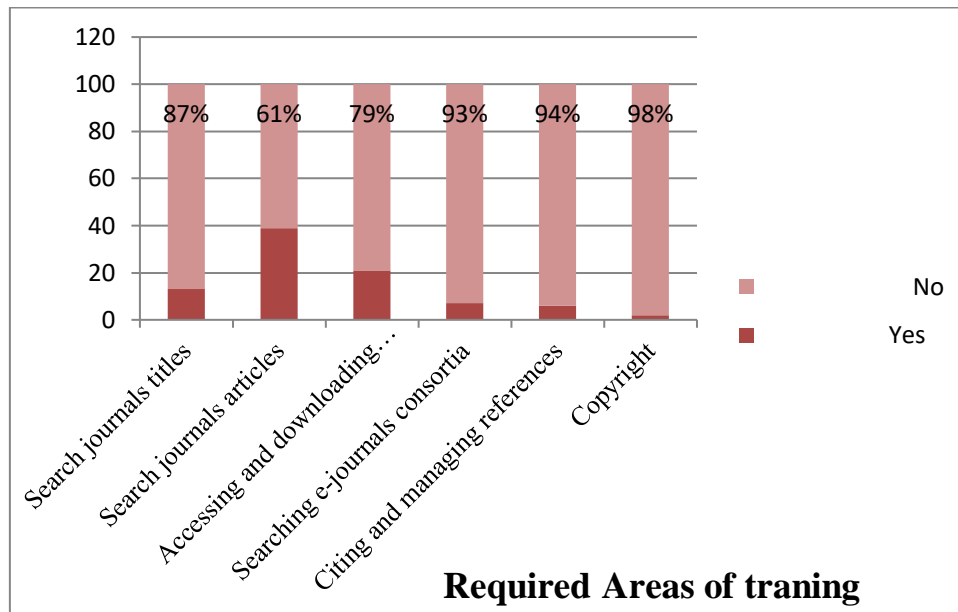
Fig. 6: Areas of Training in Accessing E-Journals

Sl. No	Benefits of Accessing E-Journals	Respondents		Total
		Yes	No	
1	Saves time	65(65%)	35(35%)	100(100%)
2	User friendly	19(19%)	81(81%)	100(100%)
3	No time limit for access	7(7%)	93(93%)	100(100%)
4	No fee	8(8%)	92(92%)	100(100%)
5	User independency	9(9%)	91(91%)	100(100%)
6	24*7 availability	5(5%)	95(95%)	100(100%)

Table 19: Benefits of Accessing E-Journals

A question was asked on the benefits of accessing e-journals and Table 19 showed that 65% of respondents think it saves time. It was followed by 19% of respondents who felt the e-journals were user friendly. 7% felt that there was no time limit for accessing e-journals. 8% respondents feel that the benefit of accessing e-journals was its free availability in university campus.9% felt the user independence. 5% respondents feel that the benefit of 24*7 availability was a major advantage.
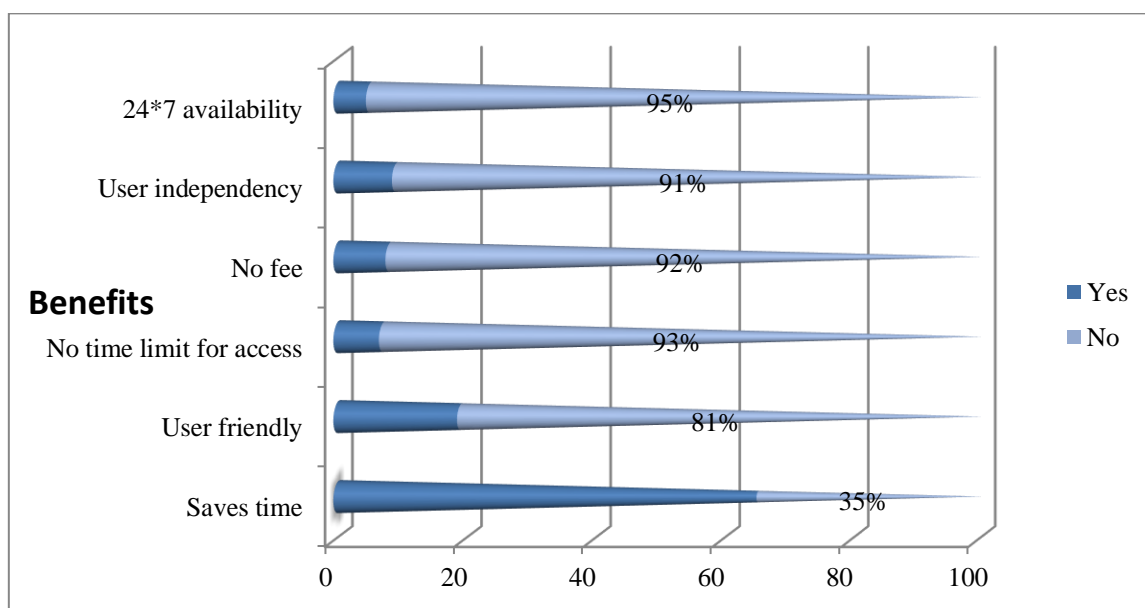

Fig. 7: Benefits of Accessing E-Journals

VIII. FINDINGS OF THE STUDY

With the help of above data analysis and discussion we can determine some important findings and the suggestion which are as follows:

- In order to use e-journals, respondents should be familiar with the computer operation skills. When asked to rate themselves on computer literacy, 63% of respondents rated themselves as average.
- The PDF format is found to be the most preferred online format for reading articles.
- More than 82% of users in the chemical science students using e-journals occasionally.
- More than 39% of the respondents were accessing the e-journals in university campus which excludes classroom, department, and library computer lab. Only 30 % of respondents are using department computer laboratory.
- 30% of respondents are using e-journals for increasing the general awareness, and 8% of respondents are using e-journals for writing articles.
- 41% of respondents gained the knowledge of accessing e-journals through library orientation. As less as 6% of respondents gained the knowledge of e-journals from library staff.
- General-purpose search engines such as Google and Yahoo are the initial point of search of majority of respondents. Only 5% of respondents used the specific journal website for searching the articles.
- The basic search approach to find the articles in e-journals is through subject.
- The study found that 52% of respondents opined that the latest and updated information can be found in e-journals. Meanwhile, 12% of respondents feel the information is communicated more effectively using the statistical data.
- 50% respondents realize that the e-journals are important for their studies.
- More than half of the respondents, that is 50% of them feel difficulty in accessing e-journals.
- The Internet connectivity and bandwidth were the major problem for accessing e-journals. Also 36% of respondents faced this problem which resulted in slow opening of webpages.
- 39% of respondents feel the need of training in searching journal articles. 6% of respondents felt the need for training in accessing e-journals Consortia.
- 65% of respondents were of opinion that e-journals saves time when compared to printed journals. and 5% accessed e-journal due to 24*7 availability.

IX. SUGGESTIONS FROM THE STUDY

Based on the findings, following action points have been put forth:

- Apart being an active subscriber of UGC -INFONET, the library should subscribe to more number of e-journals required by it users which are not covered under the consortia.
- Awareness should be created to use e-journals and online databases to fulfill information needs.
- More computer terminals should be installed in the library for the benefit of users.

- There is need to include more number of e-journals in various disciplines.
- It should build its own collection of e-journals from famous publishers and provide access to the collection using its integrated library management system.
- Lack of training is a major hindrance in effective utilization of e-journals. Frequent training session should be conducted to make the users capable of exploring the rich information present in the e-journals.
- The users should be updated of the rich resources of the library. More emphasis should be given to communicate information electronically as we talk of journals which are in electronic format.
- For providing effective services, the bandwidth of the Internet across the campus should be increased. Faster Internet helps in faster download of information and also increases the user's interest in searching more e-journals.
- Increased availability of computers which are in good working condition will encourage the students to access e-journals at the department computer laboratory.
- The library should evaluate the most and least used e-journals periodically. As the cost of subscription of e-journals is bit on the higher side, proper and timely decision should be taken to end the subscription of e-journals which are not being used by the users over duration of time.
- Proper training for the library staff is also very important as they are approached by the users in case of any issues related to the e-journal access.
- As many printed journals are now available in electronic format, the UGC-INFONET should try to get more e-journals under its belt.

X. CONCLUSION

The study clearly indicated that the e-journals are highly useful for the academic community in the present environment. The UGC plays a significant role to assist the academic community by providing the latest information in the form of e-journals through its e-journal consortia. To assist the academic community, the authorities of the University library must conduct the user awareness programs to make realize the users of rich benefits of e-journals.

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