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**Use of UGC-INFONET Digital Library Consortium in University Libraries of Haryana, Punjab & Himachal Pradesh**

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**Abstract**

The traditional functions of libraries had undergone various changes in present digital environment and e-resources have been used by the users at large and Information Communication Technology playing a pivotal role in every field, especially in academic libraries. The present paper is an attempt to study the use of UGC-INFONET Digital Library Consortium in University libraries of Haryana, Punjab & Himachal Pradesh. 1800 questionnaires were distributed to the users and 1380 questionnaires were received back for an analysis of the data. The study reveals that the Research Scholars are more aware about the Consortium in the place of PG students. It is observed that the University Central Libraries and the Departmental computer labs are the most frequent places for accessing the UGC-INFONET Digital Library Consortium. Majority of respondents are partially satisfied with the coverage of journals in the UGC INFONET Digital Library Consortium.

**Keywords:** UGC, Digital library consortium, Infonet, University libraries, Haryana, Panjab, Himachal Pradesh

**1 Introduction**

Today we are living in information explosion period. With the help of electronic resources users can access online and offline with vast amount of information with speed and accuracy. The scenarios of the world have been changed by the advancement in information technology and networking. Technology has changed the outlook of the library collection and its services. Earlier the library collections were only in the traditional bound volumes. But now the library collection has changed their format. In the past the library collections were only in the traditional bound volumes and the Library acted as a store house of books but now the library collection has changed from print to digital. In today's world, the libraries acquire both print as well as electronic



resources to provide easy and timely access to its users. These enable the library to perform quality services to its users. The flow of information is infinite and limitless and library renamed as “Library without wall” (Chanchinmawia and Verma, 2016). With the emergence of the internet, particularly the World Wide Web has become a new medium of information storage and delivery in the 21st century. In the age of information explosion, the most challenging tasks for the information professionals and information centers all around the world is to supervise the huge information that is being produced and developed in the world (**Islam and Islam 2008**). Library cooperation amongst institutions for sharing their library resources is best practiced for decades. Traditionally, the primary purpose of establishing a library consortium is to share the resources including books and periodicals. The mode of cooperation has the transformation of new information technology from print based environment to digital environment. The UGC launched two ambitious programmes for the Academic community in universities. The first initiative, namely “UGC- INFONET Connectivity Programme” provides for Networking of University Campuses. The second initiative called the “UGC-Infonet Digital Library Consortium” provides access to selected scholarly electronic journals and databases in different disciplines (<https://www.researchgate.net/publication/321997019>).

## 2 Objectives of study

1. To study the awareness of users for UGC-INFONET Digital Library Consortium.
2. To find out the use pattern of UGC-INFONET Digital Library Consortium.
3. To find out the purpose of using UGC-INFONET Digital Library Consortium.
4. To find out the frequency of access to the consortium.
5. To find out the satisfaction level of the users regarding coverage of journals in the UGC-INFONET Digital Library Consortium.
6. To find out the problems faced by the users while accessing UGC-INFONET Digital Library Consortium.
7. To suggest the ways and means for effective use of the UGC-INFONET Digital Library Consortium.

## 3 Review of literature

Karthiban and Anjaiah (2018) conducted a study on knowledge, access and effective use of UGC-INFONET E-Journals by faculty members and research scholars of University of Kerala, Kerala: A case study in which it revealed that the majority of 89.4% respondents were aware about UGC-Infonet E-Journals Digital Consortium, 52.8% used UGC-Infonet E-Journals every day. 48% of respondents used Infonet E-Journals for research purpose and 36.6% of respondents used to update for their subject knowledge and study also showed that 69.9% of respondents were fully satisfied



with the existing availability of E-journals. Kishore Kumar and Anjaiah (2016) conducted a study on Utilisation and Satisfaction on UGC-Infonet e-Journals by Faculty Members and Research Scholars: A Case Study of University of Hyderabad, Hyderabad. The study found that 38.51% respondents visited library once in two days and 27.40% respondents visited library every day. 35.55% respondents accessed UGC-Infonet e-journals from University Library. The study also showed that 63.70% respondents evaluate the e-journals as excellent and good.

Angadi (2017) carried out a study on Use Pattern of UGC-Infonet Consortium by research scholars of UPE universities of Karnataka state and found that majority of the respondents aware of UGC-INFONET consortium, Majority of respondents used UGC-INFONET Library Consortium twice a week. Most of the respondents use the UGC-INFONET Library Consortium for research work. This study suggested that more e-resources should be included and to take some steps immediately to avoid downloading problems. Loksha and Bhandi (2017) conducted a study on Utilization of UGC-INFONET learning resource centre services of Mangalore University: A Case Study in which it revealed that the majority of the respondents were aware about the UGC-INFONET learning resource centre. 40.70% of the users were from the Science and Technology 35.50% from Social Science. 86% used it for research purpose. The study also found that 28.50% respondents felt highly satisfied with the information requirements in their field and 32% were moderately satisfied. Kishore Kumar and Anjaiah (2016) conducted a study on use of UGC-INFONET e-journals by Faculty Members and Research Scholars of Kakatiya University: A case study. The study found that 66.11% of the respondents were aware about UGC-INFONET e-journals. Majority of respondents 82.89% were using e-resources from 0-5 years, 15.70% faculty members were using e-resources from 7 and above years. Most of the respondents i.e. 42.97% used UGC-INFONET e-journals for research purpose. The study also found that the most common problem faced by the respondents was slow access and inconvenient timing. Rajbanshi and Sonkar (2016) conducted a study on Awareness and use of UGC-INFONET Digital Library Consortium by Research Scholars of Thapar University, Patiala: A study. The study found that 63.70 % Research Scholars were aware about UGC-INFONET Digital Library Consortium. 44.30% Research Scholars used it for research purpose. The study also showed that department was the most preferred place for usage of consortium. Majority of research scholars i.e. 78.08% were in need of regular training programme to make an effective use of UGC-INFONET Digital Library Consortium.

#### **4 Scope of the study**

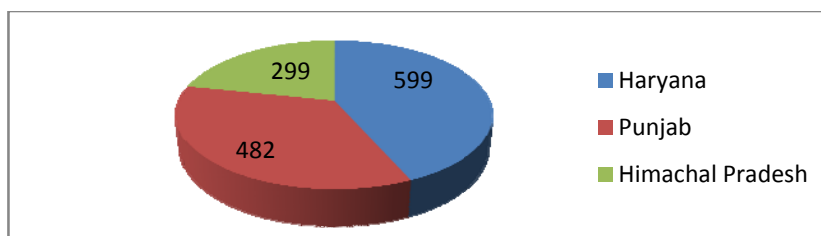
The scope of the present study was limited to the nine selected universities of Haryana, Punjab and Himachal Pradesh. Haryana state has four Universities, Punjab has three universities and Himachal

Pradesh has two Universities. The universities which fall under the study are:

State	Universities
Haryana	<ul style="list-style-type: none"> <li>• Kurukshetra University, Kurukshetra</li> <li>• Maharshi Dayanand University, Rohtak</li> <li>• Chaudhary Devi Lal University, Sirsa</li> <li>• Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan, Sonapat</li> </ul>
Punjab	<ul style="list-style-type: none"> <li>• Panjab University, Chandigarh</li> <li>• Punjabi University, Patiala</li> <li>• Guru Nanak Dev University, Amritsar</li> </ul>
Himachal Pradesh	<ul style="list-style-type: none"> <li>• Himachal Pradesh University, Shimla</li> <li>• Central University of Himachal Pradesh, Dharamashala</li> </ul>

### 5 Methodology

There are various methods to determine the sample. In the present work, the investigator has used stratified sampling method. The population was divided into two groups/strata i.e. Research Scholars and PG students. Further the samples were taken from each group on random basis. A sample of 200 (50 Research Scholars and 150 PG students) were taken from each University. Thus a total of 1800 questionnaires were distributed among the Research Scholars and PG students of nine Universities, out of which 1587 questionnaires were returned and only 1380 questionnaires were found valid for the analysis.



### 6 Data analysis and interpretation

Data collected through questionnaire was carefully analysed and processed. Analysis of data has been tabulated.

Table 1  
Awareness about UGC-INFONET digital library consortium

Respondent	Yes	No	Total
PG students	502 (48.13%)	541 (51.87%)	1043 (100%)
Research Scholars	284 (84.27%)	53 (15.73%)	337 (100%)



Total	786 (56.96%)	594 (43.04%)	1380 (100%)
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Table 1 shows that the majority of the users 786 (56.96%) i.e. 284 (84.27%) Research Scholars and 502 (48.13%) PG Students were aware and 594 (43.04%) i.e. 541 (51.87%) PG Students and 53 (15.73%) Research Scholars were not aware about UGC-INFONET Digital Library Consortium.

Table 2

State wise awareness about UGC-INFONET digital library consortium

States	Yes	No	Total
Haryana	287 47.91%	312 52.09%	599 100%
Punjab	334 69.29%	148 30.71%	482 100%
Himachal Pradesh	165 55.18%	134 44.82%	299 100%
Total	786 56.96%	594 43.04%	1380 100%

Table 2 depicts the number of respondents according to States. Overall, 786 respondents were aware about UGC-INFONET Digital Library Consortium from Universities of Haryana, Punjab and Himachal Pradesh. Highest number of the aware respondents were from Universities of Punjab i.e. 69.29% followed by 55.18% respondents from Universities of Himachal Pradesh and 47.91% respondents from Universities of Haryana.

Table 3

Experience of using UGC-INFONET digital library consortium

Experience of use	Haryana		Punjab		Himachal Pradesh		Total
	PG Students	Research Scholars	PG Students	Research Scholars	PG Students	Research Scholars	
Less than 6 months	50 28.90%	10 8.77%	92 41.44%	5 4.46%	32 29.91%	2 3.45%	191 24.30%
6 Months - 1 year	107 61.85%	23 20.18%	117 52.70%	11 9.82%	70 65.42%	3 5.17%	331 42.11%
1-2 years	15 8.67%	48 42.11%	13 5.86%	53 47.32%	4 3.74%	27 46.55%	160 20.36%
2-4 years	1 0.58%	30 26.32%	0	41 36.61%	1 0.93%	26 48.83%	99 12.59%
More than 4 years	0	3 2.63%	0	2 1.79%	0	0	5 0.64%
Total	173 100%	114 100%	222 100%	112 100%	107 100%	58 100%	786 100%

Table 3 shows the experience of use of UGC-INFONET Digital Library Consortium by the respondents from the Universities of Haryana, Punjab and Himachal Pradesh. Table depicts that 65.42% PG Students from Himachal Pradesh have 6 months – 1 year experience of using UGC-INFONET Digital Library Consortium followed by 61.85% PG Students from Haryana and 52.70% PG Students from Punjab respectively. 20.18% Research Scholars from Haryana have 6 months – 1 year experience of using UGC-INFONET Digital Library Consortium followed by 9.82% Research Scholars from Punjab and 5.17% Research Scholars from Himachal Pradesh. The table shows that 41.44% PG Students from Punjab have less than 6 months experience of using UGC-INFONET Digital Library Consortium followed by 29.91% PG Students from Himachal Pradesh and 28.90% PG Students from Haryana. The table further implies that 8.77% Research Scholars from Haryana have less than 6 months experience of using UGC-INFONET Digital Library Consortium followed by 4.46% Research Scholars from Punjab and 3.45% Research Scholars from Himachal Pradesh.

Table 3 shows that 8.67% PG Students from Haryana followed by 5.86 % PG Students from Punjab and 3.74% PG Students from Himachal Pradesh have 1-2 years experience of using UGC-INFONET Digital Library Consortium whereas 47.32% Research Scholars from Punjab followed by 46.55% Research Scholars from Himachal Pradesh and 42.11% Research Scholars from Haryana have 1-2 years experience of using UGC-INFONET Digital Library Consortium.

It is noticed that there has been a difference among respondents with regard to experience of using UGC-INFONET Digital Library Consortium. Majority of PG Students from all the states have less than 1 year experience and Research Scholars have experience between 1 to 4 years.

Table 4  
 Frequency of using UGC-INFONET digital library consortium

Frequency	Haryana		Punjab		Himachal Pradesh		Total
	PG Student	Research Scholar	PG Student	Research Scholar	PG Student	Research Scholar	
Daily	5 2.89%	9 7.89%	4 1.80%	17 15.18%	1 0.93%	4 6.90%	40 5.09%
2-3 times a week	65 37.57%	51 44.74%	72 32.43%	62 55.36%	19 17.76%	17 29.31%	286 36.39%
2-3 times a month	72 41.62%	45 39.47%	90 40.54%	25 22.32%	52 48.60%	35 60.34%	319 40.59%
Once in a month	31 17.92%	9 7.89%	56 25.23%	8 7.14%	35 32.71%	2 3.45%	141 17.94%



Total	173 100%	114 100%	222 100%	112 100%	107 100%	58 100%	786 100%
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Table 4 shows the frequency of using UGC-INFONET Digital Library Consortium by the respondents from the Universities of Haryana, Punjab and Himachal Pradesh. It is clear from the table that 48.60% PG Students from Himachal Pradesh used UGC-INFONET Digital Library Consortium 2-3 times in a month followed by 41.62% PG Students from Haryana and 40.54% PG Students from Punjab respectively. 60.34% Research Scholars from Himachal Pradesh used UGC-INFONET Digital Library Consortium 2-3 times in a month followed by 39.47% Research Scholars from Haryana and 22.32% Research Scholars from Punjab. The table shows that 37.57% PG Students from Haryana used UGC-INFONET Digital Library Consortium 2-3 times in a week followed by 32.43% PG Students from Punjab and 17.76% from Himachal Pradesh. The table further implies that 55.36% Research Scholars from Punjab used UGC-INFONET Digital Library Consortium 2-3 times in a week followed by 44.74% Research Scholars from Himachal Pradesh and 29.31% Research Scholars from Punjab. Table shows that 32.71% PG Students from Himachal Pradesh followed by 25.23% PG Students from Punjab and 17.72% PG Students from Haryana used UGC-INFONET Digital Library Consortium once in a month whereas 7.89% Research Scholars from Haryana followed by 7.14% Research Scholars from Punjab and 3.45% Research Scholars from Himachal Pradesh used UGC-INFONET Digital Library Consortium once in a month. Table also shows that only 2.89% PG Students from Haryana followed by 1.80% PG Students from Punjab and 0.93% PG Students from Himachal Pradesh used UGC-INFONET Digital Library Consortium daily whereas 15.18% Research Scholars from Punjab followed by 7.89% Research Scholars from Haryana and 6.90% Research Scholars from Himachal Pradesh used UGC-INFONET Digital Library Consortium.

Table 5

Time spend on using UGC-INFONET digital library consortium

Time spend	Haryana		Punjab		Himachal Pradesh		Total
	PG Students	Research Scholars	PG Students	Research Scholar	PG Students	Research Scholars	
Less than 1 hr a week	66 38.15%	15 13.16%	78 35.14%	10 8.93%	40 37.38%	2 3.45%	211 26.84%
2-3 hrs a week	94 54.34%	74 64.91%	136 61.26%	63 56.25%	65 60.75%	38 65.52%	470 59.80%
5-6 hrs a week	12 6.94%	22 19.30%	5 2.25%	36 32.14%	2 1.87%	18 31.03%	95 12.09%



7-9 hrs a week	0	1 0.88%	1 0.45%	1 0.89%	0	0	3 0.38%
10-20 hrs a week	1 0.58%	2 1.75%	2 0.90%	2 1.79%	0	0	7 0.89%
Over 20 hrs a week	0	0	0	0	0	0	0
Total	173 100%	114 100%	222 100%	112 100%	107 100%	58 100%	786 100%

Table 5 shows the time spend on UGC-INFONET Digital Library Consortium by the respondents from the Universities of Haryana, Punjab and Himachal Pradesh. It is clear from the table that 61.26% PG Students from Punjab spent 2-3 hours in a week on UGC-INFONET Digital Library Consortium followed by 60.75% from Himachal Pradesh and 54.34% from Haryana respectively. 65.52% Research Scholars from Himachal Pradesh spent 2-3 hours in a week on UGC-INFONET Digital Library Consortium followed by 64.91% Research Scholars from Haryana and 56.25% Research Scholars from Punjab. The table shows that 38.15% PG Students from Haryana spent less than 1 hour in a week on UGC-INFONET Digital Library Consortium followed by 37.38% PG Students from Himachal Pradesh and 35.14% PG Students from Punjab. Table further implies that 13.16% Research Scholars from Haryana spent less than 1 hour in a week on UGC-INFONET Digital Library Consortium followed by 8.93% Research Scholars from Punjab and 3.45% Research Scholars from Himachal Pradesh.

Table 5 shows that 6.94% PG Students from Haryana 2.25% PG Students from Punjab and 1.87% PG Students from Himachal Pradesh spent 5-6 hours in a week on UGC-INFONET Digital Library Consortium whereas 32.14% Research Scholars from Punjab 31.03% Research Scholars from Himachal Pradesh and 19.30% Research Scholars from Haryana spent 5-6 hours in a week on UGC-INFONET Digital Library Consortium. Table shows that 0.45% PG Students from Punjab and none PG Students from Haryana and Himachal Pradesh spent 7-9 hours in a week on UGC-INFONET Digital Library Consortium whereas 0.89% Research Scholars from Punjab 0.88% Research Scholars from Haryana and none Research Scholar from Himachal Pradesh spent 7-9 hours in a week on UGC-INFONET Digital Library Consortium. The table also shows that 0.90% PG Students from Punjab followed by 0.58% PG Students from Haryana and none PG Student from Himachal Pradesh spent 10-20 hours in a week on UGC-INFONET Digital Library Consortium whereas 1.79% Research Scholars from Punjab followed by 1.75% Research Scholars from Haryana and None Research Scholar from Himachal Pradesh spent 10- 20 hours in a week on





## UGC-INFONET Digital Library Consortium.

Table 6  
Place of accessing UGC-INFONET digital library consortium

Location	Haryana		Punjab		Himachal Pradesh		Total
	PG Students	Research Scholars	PG Students	Research Scholars	PG Students	Research Scholars	
University Library	130 75.14%	91 79.82%	121 54.50%	92 82.14%	81 75.70%	53 91.38%	568 72.26%
Department Computer Lab	23 13.29%	14 12.28%	44 19.82%	15 13.39%	12 11.21%	2 3.45%	110 13.99%
Hostel	20 11.56%	9 7.89%	57 25.68%	5 4.64%	14 13.08%	3 5.17%	108 13.74%
Total	173 100%	114 100%	222 100%	112 100%	107 100%	58 100%	786 100%

Table 6 shows the places from where the information was accessed through UGC-INFONET Digital Library Consortium by the respondents from the Universities of Haryana, Punjab and Himachal Pradesh. Table shows that the majority of the respondents 75.70% PG Students from Himachal Pradesh accessed information through UGC-INFONET Digital Library Consortium from University library followed by 75.14% PG Students from Haryana and 54.50% PG Students from Punjab. 91.38% Research Scholars from Himachal Pradesh accessed information through UGC-INFONET Digital Library Consortium from University library followed by 82.14% Research Scholars from Punjab and 79.82% Research Scholars from Haryana. Table indicates that 25.68% PG Students from Punjab followed by 13.08% PG Students from Himachal Pradesh and 11.56% PG Students from Haryana accessed information through UGC-INFONET Digital Library Consortium from hostels. Table also shows that 19.82% PG Students from Punjab accessed information through UGC-INFONET Digital Library Consortium from departmental labs followed by 13.29% PG Students from Haryana and 11.21% PG Students from Himachal Pradesh. Table further implies that 13.39% Research Scholars from Punjab accessed information through UGC-INFONET Digital Library Consortium from departmental labs followed by 12.28% Research Scholars from Haryana and 3.45% Research Scholars from Himachal Pradesh.

Table 7  
Purpose of using UGC-INFONET digital library consortium

Purpose	Haryana		Punjab		Himachal Pradesh	
	PG	Research	PG	Research	PG	Research



	Students N= 173		Scholars N= 114		Students N= 222		Scholars N= 112		Students N=107		Scholars N= 58	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
For research purpose	166 95.95%	7 4.05%	10 8.77%	104 91.23%	203 91.44%	19 8.56%	24 21.43%	88 78.57%	104 97.20%	3 2.80%	11 18.97%	47 81.03%
For UGC-NET exam	98 56.65%	75 43.35%	108 94.74%	6 5.26%	124 55.86%	98 44.14%	109 97.32%	3 2.68%	55 51.40%	52 48.60%	56 96.55%	2 3.45%
For publishing Articles/Books	168 97.11%	5 2.89%	71 62.28%	43 37.72%	211 95.05%	11 4.95%	67 59.82%	45 40.18%	102 95.33%	5 4.67%	44 75.86%	14 24.14%
For keeping up-to-date subject information	130 75.14%	43 24.86%	109 95.61%	5 4.39%	170 76.58%	52 23.42%	97 86.61%	15 13.39%	74 69.16%	33 30.84%	47 81.03%	11 18.97%
For finding relevant information	129 74.57%	44 25.43%	80 70.18%	34 29.82%	147 66.22%	75 33.78%	65 58.04%	47 41.96%	72 67.29%	35 32.71%	29 50.00%	29 50.00%
For completion of assignments & seminars	82 47.40%	91 52.60%	112 98.25%	2 1.75%	107 48.20%	115 51.80%	109 97.32%	3 2.68%	42 39.25%	65 60.75%	57 98.28%	1 1.72%

The respondents used UGC-INFONET Digital Library Consortium for different academic purposes and many used it for more than one purpose which is shown in the Table 7. It is clear from the table that 60.75% PG Students from Himachal Pradesh used UGC-INFONET Digital Library Consortium for completion of assignments and seminars followed by 52.60% PG Students from Haryana and 51.80% PG Students from Punjab. 2.68% Research Scholars from Punjab used UGC-INFONET Digital Library Consortium for completion of assignments and seminars followed by 1.75% Research Scholars from Haryana and 1.72% Research Scholars from Himachal Pradesh.

Table 7 shows that 48.60% PG Students from Himachal Pradesh followed by 44.14% PG Students from Punjab and 43.35% PG Students from Haryana used UGC-INFONET Digital Library Consortium for the preparation of UGC-NET exam. 5.26% Research Scholars from Haryana followed by 3.45% Research Scholars from Himachal Pradesh and 2.68% Research Scholars from Punjab used UGC-INFONET Digital Library Consortium for the preparation of UGC-NET exam.

Table 7 indicates that 33.78% PG Students from Punjab used UGC-INFONET Digital Library Consortium for finding relevant information followed by 32.71% PG Students from Himachal Pradesh and 25.43% PG Students from Haryana. 50% Research Scholars from Himachal Pradesh used UGC-INFONET Digital Library Consortium for finding relevant information followed by 41.96% Research Scholars from Punjab and 29.82% Research Scholars from Haryana.

Table 7 depicts that 30.84% PG Students from Himachal Pradesh followed by 24.86% PG Students from Haryana and 23.42% PG Students from Punjab used UGC-INFONET Digital Library Consortium for keeping up-to-date their subject information. 18.97% Research Scholars from Himachal Pradesh followed by 13.39% Research Scholars from Punjab and 4.39% Research Scholars from Haryana used UGC-INFONET Digital Library Consortium for keeping up-to-date their subject information.

Table 7 shows that 8.56% PG Students from Punjab followed by 4.05% PG Students from Haryana and 2.80% PG Students from Himachal Pradesh used UGC-INFONET Digital Library Consortium for research purpose. This Table further implies that 91.23% Research Scholars from Haryana followed by 81.03% Research Scholars from Himachal Pradesh and 78.57% Research Scholars from Punjab used UGC-INFONET Digital Library Consortium for research purpose.

Table 7 also shows that 4.95% PG Students from Punjab used UGC-INFONET Digital Library Consortium for publishing articles and books followed by 4.67% PG Students from Himachal Pradesh and 2.89% PG Students from Haryana whereas 40.18% Research Scholars from Punjab used UGC-INFONET Digital Library Consortium for publishing articles and books followed by 37.72% Research Scholars from Punjab and 24.14% Research Scholars from Himachal Pradesh.

Table 8  
Problems faced by the users

Problems	Haryana				Punjab				Himachal Pradesh			
	PG Students N= 173		Research Scholars N= 114		PG Students N= 222		Research Scholars N= 112		PG Students N=107		Research Scholars N= 58	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Slow access speed	84 48.55%	89 51.45%	62 54.39%	52 45.61%	139 62.61%	83 37.39%	66 58.93%	46 41.07%	71 66.36%	36 33.64%	32 55.17%	26 44.83%
Difficulty in finding relevant information	160 92.49%	13 7.51%	100 87.72%	14 12.28%	165 74.32%	57 25.68%	84 75.00%	28 25.00%	85 79.44%	22 20.56%	46 79.31%	12 20.69%
Lack of knowledge to use	150 86.71%	23 13.29%	105 92.11%	9 7.89%	200 90.09%	22 9.91%	107 95.54%	5 4.46%	98 91.59%	9 8.41%	53 91.38%	5 8.62%
Technical problems	153 88.44%	20 11.56%	102 89.47%	12 10.53%	182 81.98%	40 18.02%	96 85.71%	16 14.29%	86 80.37%	21 19.63%	53 91.38%	5 8.62%
Frequent power cut	167 96.53%	6 3.47%	109 95.61%	5 4.39%	213 95.95%	9 4.05%	111 99.11%	1 0.89%	103 96.26%	4 3.74%	56 96.55%	2 3.45%
Lack of assistance by library staff	165 95.38%	8 4.62%	109 95.61%	5 4.39%	215 96.85%	7 3.15%	103 91.96%	9 8.04%	103 96.26%	4 3.74%	53 91.38%	5 8.62%

Table 8 shows the problems faced while accessing the information from UGC-INFONET Digital Library Consortium by the respondents from the Universities of Haryana, Punjab and Himachal

Pradesh. It is clear from the table 51.45% PG Students from Haryana followed by 37.39% PG Students from Punjab and 33.64% PG Students from Himachal Pradesh considered that slow access speed of internet was the problem they faced in using UGC-INFONET Digital Library Consortium. 45.61% Research Scholars from Haryana followed by 44.83% Research Scholars from Himachal Pradesh and 41.07% Research Scholars from Punjab considered that slow access speed of internet was the problem they faced in using UGC-INFONET Digital Library Consortium. Table shows that 25.68% PG Students from Punjab followed by 20.56% PG Students from Himachal Pradesh and 7.51% PG Students from Haryana agreed that they faced difficulty in finding relevant information. 25% Research Scholars from Punjab followed by 20.69% Research Scholars from Himachal Pradesh and 12.28% Research Scholars from Haryana agreed that they faced difficulty in finding relevant information.

Table 8 indicates that 19.63% PG Students from Himachal Pradesh followed by 18.02% PG Students from Punjab and 11.56% PG Students from Haryana said that they faced technical problems like server down while accessing information through UGC-INFONET Digital Library Consortium. 14.29% Research Scholars from Punjab followed by 10.53% Research Scholars from Haryana and 8.62% Research Scholars from Himachal Pradesh said that they faced technical problems like server down while accessing information through UGC-INFONET Digital Library Consortium.

Table 8 depicts that 13.29% PG Students from Haryana agreed that they lacked knowledge to use UGC-INFONET Digital Library Consortium followed by 9.91% PG Students from Punjab and 8.41% PG Students from Himachal Pradesh. 8.62% Research Scholars from Himachal Pradesh agreed that they lacked knowledge to use UGC-INFONET Digital Library Consortium followed by 7.89% Research Scholars from Haryana and 4.46% Research Scholars from Punjab.

This Table shows that 4.05% PG Students from Punjab followed by 3.74% PG Students from Himachal Pradesh and 3.47% PG Students from Haryana considered that frequent power cut was the problem faced in using UGC-INFONET Digital Library Consortium. Table implies that 4.39% Research Scholars from Haryana 3.45% Research Scholars from Himachal Pradesh and 0.89% Research Scholars from Punjab considered that frequent power cut was the problem faced in using UGC-INFONET Digital Library Consortium.

Table 8 also shows that 4.62% PG Students from Haryana followed by 3.74% PG Students from Himachal Pradesh and 3.15% PG Students from Punjab mentioned that the lack of assistance by library staff was the problem they faced in accessing the required information through UGC-

INFONET Digital Library Consortium whereas 8.62% Research Scholars from Himachal Pradesh followed by 8.04% Research Scholars from Punjab and 4.39% Research Scholars from Haryana mentioned that the lack of assistance by library staff was the problem they faced in accessing the required information through UGC-INFONET Digital Library Consortium.

Table 9  
Satisfaction level of users with coverage of journals

Satisfaction Level	Haryana		Punjab		Himachal Pradesh		Total
	PG Students	Research Scholars	PG Students	Research Scholars	PG Students	Research Scholars	
Fully Satisfied	31 17.92%	17 14.91%	40 18.02%	14 12.50%	38 35.51%	14 24.14%	154 19.59%
Partially Satisfied	114 65.90%	88 77.19%	157 70.72%	85 75.89%	57 53.27%	32 55.17%	533 67.81%
Least satisfied	21 12.14%	9 7.89%	22 9.91%	12 10.71%	8 7.48%	8 13.79%	80 10.18%
Not Satisfied	7 4.05%	0	3 1.35%	1 0.89%	4 3.74%	4 6.90%	19 2.42%
Total	173 100%	114 100%	222 100%	112 100%	107 100%	58 100%	786 100%

Table 9 shows the satisfaction level with the coverage of journals under the UGC-INFONET Digital Library Consortium by the respondents from the Universities of Haryana, Punjab and Himachal Pradesh. Table shows that 70.72% PG Students from Punjab were partially satisfied with the coverage of journals under UGC-INFONET Digital Library Consortium followed by 65.90% PG Students from Haryana and 53.27% PG Students from Himachal Pradesh 77.19% Research Scholars from Haryana were partially satisfied with the coverage of journals under UGC-INFONET Digital Library Consortium followed by 75.89% Research Scholars from Punjab and 55.17% Research Scholars from Himachal Pradesh.

This Table 9 shows that 35.51% PG Students followed by 18.02% PG Students from Punjab and 17.92% PG Students from Haryana were fully satisfied with the coverage of journals under UGC-INFONET Digital Library Consortium. Table implies that 24.14% Research Scholars from Himachal Pradesh followed by 14.91% Research Scholars from Haryana and 12.50% Research Scholars from Punjab were fully satisfied with the coverage of journals under UGC-INFONET Digital Library Consortium.



The Table 9 depicts that 12.14% PG Students from Haryana were least satisfied with the coverage of journals under UGC-INFONET Digital Library Consortium followed by 9.91% PG Students from Punjab and 7.48% PG Students from Himachal Pradesh. 13.79% Research Scholars from Himachal Pradesh were least satisfied with the coverage of journals under UGC-INFONET Digital Library Consortium followed by 10.71% Research Scholars from Punjab and 7.89% Research Scholars from Haryana.

Table 9 also shows that 4.05% PG Students from Haryana followed by 3.74% PG Students from Himachal Pradesh and 1.35% PG Students from Punjab were not satisfied with the coverage of journals under UGC-INFONET Digital Library Consortium whereas 6.90% Research Scholars from Himachal Pradesh followed by 0.89% Research Scholars from Punjab and none Research Scholars from Haryana were not satisfied with the coverage of journals under UGC-INFONET Digital Library Consortium.

## 7 Conclusion

This study conducted in nine major university libraries of Haryana, Punjab and Himachal Pradesh clearly reflects that the academic community needs to accept and adapt new technology and electronic information skills in order to effectively utilize the wide variety of e-resources available to them. It is observed that the University Central Libraries and the Departmental computer labs are the most frequent places for accessing the UGC-INFONET Digital Library Consortium. It has also been observed that the universities do not have proper facilities in their hostels to make an access to e-resources available through UGC-INFONET Digital Library Consortium and even the computer or internet centers are not equipped with direct print out facilities for the users.

Majority of the users feel that the UGC-INFONET Digital Library Consortium is the best way to gain information easily and without much expense. It also helps them to save their time and money. Majority of the respondents therefore desire that the UGC-INFONET Digital Library Consortium should subscribe more e-resources in addition to the currently available for the benefit of the users. There is a need to make users aware of the e-resources subscribed by the UGC-INFONET so that they can reap maximum benefits from the use of scholarly content. It is recommended that the user awareness programme should be held from time to time to increase the utilization of UGC-INFONET Consortia.

## References

- Angadi, Manjunath (2017). "Use Pattern of UGC-Infonet Consortium by research scholars of UPE universities of Karnataka state: A study." *International Journal of Library and Information Studies*, 7(3), 44-52.



Chanchinmawia, F. & Verma, Manoj Kumar (2016). "Use of UGC-INFONET Digital Library Consortium by Faculty Members and Research Scholars in School of Physical Sciences, Mizoram University: A Study". *Journal of Advances in Library and Information Science*, 5(3), 215-222.

<https://www.researchgate.net/publication/321997019>

Islam, M. A. & Islam, M. M (2008). "Concept, issues and importance of library consortium: Problems and prospects of University library consortium in Bangladesh". UNAK08 Information: Diversity Awareness, Izmir, Turkey (2008). ([https://static.aminer.org/pdf/PDF/000/264/832/developing\\_a\\_digital\\_resources\\_consortium\\_for\\_university\\_libraries\\_in\\_bangladesh.pdf](https://static.aminer.org/pdf/PDF/000/264/832/developing_a_digital_resources_consortium_for_university_libraries_in_bangladesh.pdf))

Karthiban, H. & Anjaiah, M. (2018). "Knowledge, access and effective use of UGC-INFONET E-Journals by faculty members and research scholars of University of Kerala, Kerala: A case study." *International Journal of Advance Research, Ideas and Innovations in Technology*, 4(5), 188-193.

Kishore Kumar, M. & Anjaiah, M. (2018). "Utilisation and Satisfaction on UGC-INFONET e-Journals by Faculty Members and Research Scholars: A Case Study of University of Hyderabad, Hyderabad." *International Journal of Library and Information Studies*, 8(1), 28-34.

Kishore Kumar, M. and Anjaiah, M. (2016). "Use of UGC-INFONET E-Journals by Faculty members and Research Scholars of Kakatiya University: A case study." *International Journal of Digital Library Services*, 6(3), 95-104.

Lokesha, M. & Bhandi, M. K. (2017). "Utilization of UGC-INFONET learning resource centre services of Mangalore University: A Case Study." *International Journal of Digital Library Services*, 7(3), 62-69.

Rajbanshi, Vishwas Jeet & Sonkar, Sharad Kumar (2016). "Awareness and Use of UGC-INFONET Digital Library Consortium by Research Scholars of Thapar University, Patiala: A study." *International Journal of Library and Information Studies*, 6(3), 141-150.