Usage of consortia and electronic information resources by the students and faculty members in engineering college libraries

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ABSTRACT

The present study dealt with the consortia and electronic information resources used by the students and faculty members in engineering college libraries of Chittoor District, Andhra Pradesh. A total number of 1900 questionnaires were distributed and 1216 filled-in questionnaires were received. The study found that the majority of the respondents (85.8%) are aware of AICTE-INDEST Consortia. The study found that the majority of (76.1%) are frequently using AICTE-INDEST Consortia electronic information resources. The study also found that the majority (79.2%) of are accessing e-journals from AICTE-INDEST IEEE/IET Online (IEL) Database.

1. INTRODUCTION
The Central Libraries of the engineering colleges are equipped with large number of volumes of books in various engineering disciplines and is continuously being strengthened by adding new technical literature in the print as well as in an electronic form.

The libraries have to provide services such as on-line Journals/magazines, open course ware, open access Journals, Subject and magazine compact discs and Internet facility. It provides e-books, e-databases, previous question papers and Project Reports. The Libraries subscribes e-journals through INDEST-AICTE Consortium, DELNET, UGC-INFONET and N-List Programme.

1.1 Consortia
A consortium is an association of two or more individuals, organizations, companies, governments, Institutions, etc., with the objective of participating in a common activity or pooling their resources for achieving a common goal.

1.2 AICTE – INDEST consortia
The MHRD has established INDEST Consortia in the year 2003. In December 2005, the Consortium has been re-designated as AICTE-INDEST Consortium with the AICTE playing a vital role in enrolling its approved engineering colleges and institutions as members of the Consortium for selected e-resources at much lower rates of subscription with favourable terms and conditions. The AICTE- INDEST is the biggest Consortium in terms of number of member institutions in Asia subscribing to over 15,000+ electronic journals from a number of publishers and aggregators.

1.3 UGC-INFONET digital library consortium
UGC-INFONET is an e-journal consortium. The funds were provided by the UGC for the programme which will be free of cost for the universities. Based on the recommendations of the National Negotiating Committee set up the UGC, the INFLIBNET Centre, an IUC of UGC, will subscribe resources. The universities were funded for connectivity under UGC-INFONET and will have network connectivity. The universities will have unique IP address through which access is given by the publisher for which subscription is made. However, the entire programme will be monitored, ministered, and maintained by the INFLIBNET centre.

1.4 DELNET
In 1988, the Developing Library Network (DELNET) was established at the India International Centre Library and was registered as a society in 1992. DELNET was established with the objective of promoting resource sharing among the libraries through the development of a network of libraries. The aims of DELNET are to collect, store, and disseminate information besides offering computerised services to users, to co-ordinate efforts for suitable collection development and also to reduce unnecessary duplication wherever possible.

1.5 N-LIST programme
National Library and Information Services Infrastructure for Scholarly Content (N-List Programme) is initiated by the MHRD, Government of India. This programme was funded by UGC, as college component under e-ShodhSindhu Consortium. It extending access to e-resources more than 6000 e-journals and 1, 35,000 e-books to colleges in India.

1.6 E-ShodhSindhu

In 2005, based on the recommendations of an expert committee, the E-ShodhSindhu was formed by the MHRD, Government of India. e-ShodhSindhu merging three consortia initiatives, viz., UGC-INFONET Digital Library Consortium, NLIST and INDEST-AICTE Consortium. The e-ShodhSindhu will provide access to more than 15,000+ core and peer-reviewed journals and number of bibliographic, citation and factual databases.

1.7 Selected engineering colleges in Chittoor district

In Chittoor District, there are 35 engineering colleges were set up. Out of this, the investigator selected 10 engineering colleges i.e. Sri Venkateswara University College of Engineering, Tirupati, Sri Vidyaniketan Engineering College, Rangampet, Sri Kalahastiswara Institute of Technology, Srikalahsti. The Madanapalli Institute of Technology and Science, Madanapalli, Srinivasa Institute of Technology and Management Studies, Chittoor. The Kuppam Engineering College, Kuppam, the Chadalawada Ramanamma Engineering College, Tirupati. Sir Vishveshwaraiah Institute of Science and Technology, Madanapalli, Sri Padmavathi Mahila University School of Engineering and Technology, Tirupati and the Annamacharya Institute of Technology and Sciences, Tirupati.

2. REVIEW OF LITERATURE

There are number of studies related to the use of consortia electronic information resources by the investigators of various institutions. The present study is conducted in the light of the related studies.

Sohail, Md. and Imran Ahamad, Md. (2011) in their article entitled *Use of E-Resources and UGC-INFONET Consortium by the Teachers and Research Scholars in the Aligarh Muslim University*. The study revealed that only 55% of the respondents are aware of UGC-INFONET consortium. 86.67% of the respondents suggested that they need training and orientation programmes for effective use of e-resources of the consortium. 91.67% of the respondents mentioned that print journals are more important along with e-journals and 100% of the respondents concluded that more e-journals must be added to the consortium.

Tyagi (2011) conducted a survey on Use *and Awareness of Electronic Information Sources* at *IIT Roorkee* to study the Usage of Electronic Information Resources and Services by users. The study emphasized that all faculty members and research scholars (100%) are fully aware of INDEST consortium e-resources and make use of these resources for writing research papers for publications and they are more comfortable in accessing information in digital environment. The INDEST consortium e-resources are more used undergraduate students are less when compared to the research scholars and faculty members. The majority of the respondents are preferred to use the e-resources for their research work and subject/specific information. It is found that the majority of 78.38% of the respondents opined that the electronic information resources as the better substitute for printed resources.

Mukherjee, Bhaskar and Prashant Kumar (2010), in their study on *Use of UGC- INFONET E-Journals by Research Scholars of the Banaras Hindu University, Varanasi: A Case Study* found that the majority of 35.64% of the respondents preferred to access the e-resources by using search engines, the majority of 41.87% of the respondents preferred to access e-journals in Central Library. The majority of 54.02% of the respondents are preferred hardcopies of e-journals. The findings of the study reveal that the majority of 67.67% of the respondents are satisfied with the e-journals available.

Kaur, Baljinder and Verma, Rama (2009) conducted a study on the *Use of Electronic Information Resources amongst the Users of Thapar University*. The study analyzed the use of electronic information resources among the users is substantial as the number of users using e- resources in different ways. The study emphasized that majority of faculty members, Post-Graduate students, research scholars are aware of electronic resources and services provided by the Library of Thapar University. The majority of 95.24% of the faculty members mentioned that they are aware and making use of UGC-INFONET consortium. The findings further revealed that Under-Graduate students, Post-Graduate students and Research Scholars are accessing the e-resources from the hostels and the faculty members are accessing the e-resources from their respective departments.

3. OBJECTIVES

At present, the following objectives have been initiated:
(a) To know the awareness of Consortia and electronic information resources by the respondents;
(b) To know the frequency of usage of Consortia and electronic information resources accessed by the users;
(c) To know the frequently used databases of the AICTE-INDEST Consortium;
(d) To know the frequently accessed journals.

4. METHODOLOGY

For this study, the data was collected through questionnaires from the respondents of the selected Engineering Colleges. A total number of 1900 questionnaires have been distributed by using simple random sampling technique and 1216 filled-in questionnaires were received. The response rate is 64%.

5. DATA ANALYSIS

The data collected was examined and interpreted. The results have been discussed in the following tables.

5.1 Awareness of Consortia and Electronic Information Resources available in the library

The distribution of respondents according to the awareness of Consortia and electronic information resources available in the library is shown table 1.

Table 1: Distribution of respondents regarding Awareness of Consortia available in the Library

Consortia (AICTE-INDEST/DELNET/UGC-INFONET/N-LIST)	Nature of Respondents			Total (N=1216)
	Faculty Members (n=196)	PG Students (n=336)	UG Students (n=684)	
Yes	196 (100)	336 (100)	511 (74.7)	1043 (85.8)
No	0 (0.0)	0 (0.0)	173 (39.9)	173 (14.2)
Total	196 (100)	336 (100)	684 (100)	1216 (100)

Note: Numbers in parentheses denote percentages

Between Variables	Chi-square Value	Degrees of freedom	Table value	Level of Significance
Faculty-PG students	0	1	3.842	Not significant at 0.05 level
Faculty- UG students	61.7	1	3.842	Significant at 0.05 level
PG Students- UG students	102.3	1	3.842	Significant at 0.05 level

Table 1 shows that a majority of the respondents (85.8%) said that the awareness of Consortia available in their college libraries and remaining (14.2%) said that no aware of Consortia available in the library.

From the Chi-square output for the above table, it is clear that significant level of 0.05 has not been achieved among the faculty members and the PG students regarding awareness of Consortia available in library with 1 degree of freedom.

From the Chi-square output for the above table, it is found that significant level of 0.05 levels has been achieved among the faculty members and the PG students as well as PG and UG students. It implies that Chi-square value indicates that systematic association between the above two variables at 99% level of confidence. Hence, it is concluded that Chi-square value for the above table indicate that statistically significant at 1 degree of freedom.

It is concluded that majority of the respondents are aware of the Consortia available in their libraries.

5.2 Frequency of usage of Consortia and other Electronic Information Resources by the Respondents
The distribution of respondents according to the frequency of usage of Consortia and other electronic information resources is shown in table 2.

Table 2: Distribution of Respondents regarding the Frequency of usage of Consortia and other Electronic Information Resources

Consortia/EIRs	Nature of Respondents			Total (N=1216)
	Faculty Members (n=196)	PG Students (n=336)	UG Students (n=684)	
AICTE- INDEST	115 (58.7)	303 (90.2)	507 (74.1)	925 (76.1)
DELNET	41 (21.0)	124 (36.9)	486 (71.1)	651 (53.5)
UGC-INFONET	102 (52.0)	155 (46.1)	380 (55.6)	637 (52.4)
N-List Programme	78 (39.8)	147 (43.8)	423 (61.8)	648 (53.3)

Note: Numbers in parentheses denote percentages (Respondents were permitted to give multiple answers)

Between Variables	Chi-square Value	Degrees of freedom	Table value	Level of Significance
Faculty-PG students	15.482	3	7.815	Significant at 0.05 level
Faculty – UG students	39.375	3	7.815	Significant at 0.05 level
PG Students – UG students	53.061	3	7.815	Significant at 0.05 level

Table 2 illustrates that majority of the respondents (76.1%) opined AICTE-INDEST electronic information resources are frequently used by them, followed by 53.5% states that DELNET, 53.3% states that N-List Programme and 52.4% opined that that UGC-INFONET resources.

From the Chi-square output for the above table it is found that significant level of 0.05 has been achieved among the faculty members and the PG students with 3 degrees of freedom regarding usage of Consortia and other electronic information resources in their libraries. It implies that Chi-square value indicates that systematic association between the above two variables at 99% level of confidence.

It is evident that there is significant difference between the faculty members and the UG students with regard to the usage of Consortia and other electronic information resources in their libraries as indicated by Chi-square test, which is found to be statistically significant at 0.05 levels with 1 degree of freedom.

It is obvious that there is significant difference between the PG students and the UG students with regard to the usage of Consortia and other electronic information resources in their libraries as indicated by Chi-square test, which is found to be statistically significant at 0.05 levels with 1 degree of freedom.

It is noticed that high percentage of all the respondents namely, faculty members (58.7%), PG students (90.2%) and UG students (74.1%) states that AICTE-INDEST Consortia electronic information resources are frequently used by them.
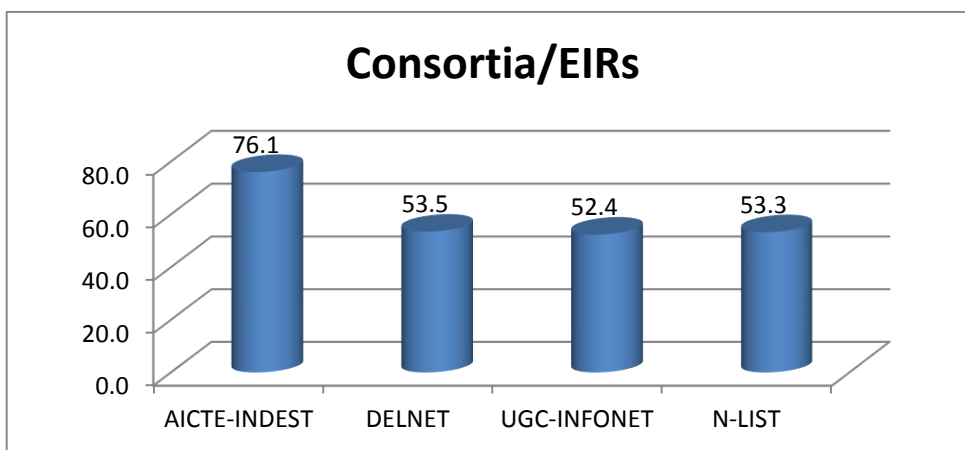

Fig. 1: Distribution of Frequency of usage of Consortia

5.3 Frequently used Databases from AICTE-INDEST Consortia by the Respondents
The distribution of respondents according to the frequently used databases from the AICTE-INDEST Consortia by the respondents is presented in table 3.

Table 3: Distribution of Respondents regarding frequently used Databases from AICTE-INDEST Consortia

Databases	Nature of Respondents			Total (N=1216)	Rank
	Faculty Members (n=196)	PG Students (n=336)	UG Students (n=684)		
IEEE/IET Online (IEL)	174 (88.8)	239 (71.1)	550 (80.4)	963 (79.2)	1
ACM Digital Library	110 (56.1)	158 (47.0)	376 (55.0)	644 (53.0)	7
ASCE Journals	133 (67.9)	261 (77.7)	516 (75.4)	910 (74.8)	4
ASME Journals (+A M R)	95 (48.5)	191 (56.8)	430 (62.9)	716 (58.9)	5
ASTM Standards and Digital Library Standards	66 (33.7)	156 (46.4)	345 (50.4)	567 (46.6)	12
Emerald Management Xtra	52 (26.5)	117 (34.8)	248 (36.3)	417 (34.3)	14
EBSCO's Business Sources Premier	52 (26.5)	120 (35.7)	230 (33.6)	402 (33.1)	15
Elsevier's Science Direct	95 (48.5)	169 (50.3)	319 (46.6)	583 (47.9)	11
Springer Link	81 (41.3)	181 (53.9)	357 (52.2)	619 (50.9)	9
Capitaline	139 (70.9)	274 (81.5)	538 (78.7)	951 (78.2)	2
CRIS INFAC Ind. Information	152 (77.6)	235 (69.9)	529 (77.3)	916 (75.3)	3
Euro-monitor (GMID)	128 (65.3)	136 (40.5)	382 (55.8)	646(53.1)	6
INSIGHT	89 (45.4)	125 (37.2)	266 (38.9)	480 (39.5)	13
MathSciNet	113 (57.7)	148 (44.0)	327 (47.8)	588 (48.4)	10
ProQuest/ABI / Inform Complete	99 (50.5)	173 (51.5)	348 (50.9)	620 (50.9)	8

Note: Numbers in parentheses denote percentages (Respondents were permitted to give multiple answers)

Table No. 3 shows that a majority of the respondents (79.2%) use IEEE/IET Online (IEL) database frequently and it is occupies 1st rank, followed by 78.2% Capitaline and it is occupies 2nd place and only 33.1% use EBSCO's Business Sources Premier. Majority of faculty members (88.8%) tried to use IEEE/IET Online (IEL), followed by 77.6% of them use CRIS INFAC Ind. Information and least percent of them follow 26.5% EBSCO's Business Sources Premier and Emerald Management Xtra. Majority of the PG students (81.5%) use Capitaline, followed by 77.7% tried to use ASCE journals, 71.1% uses IEEE/IET Online (IEL) and only 34.8% use Emerald Management Xtra. Majority of the UG students (80.4%) use IEEE/IET Online (IEL), followed by 78.7% Capitaline, and only 33.6% use EBSCO's Business Sources Premier.

Hence, it is concluded that majority of the respondents use IEEE/IET Online (IEL) database frequently.

5.4 Retrieving e-Journals from the IEEE/IET Online (IEL) Database
The distribution of respondents according to the retrieval of e-Journals from the IEEE/IET Online (IEL) Database by the respondents is presented in table 4.

Table 4: Distribution of Respondents regarding retrieving e-Journals from IEEE/IET Online (IEL) Database

IEEE/IET Online (IEL) e-Journals	Nature of Respondents			Total (N=1216)
	Faculty Members (n=196)	PG Students (n=336)	UG Students (n=684)	
Transactions on Mobile computing	164 (83.7)	242 (72.0)	529 (77.3)	935 (76.9)
Transactions on Image Processing	85 (43.4)	179 (53.3)	468 (68.4)	732 (60.2)
Transactions on Wireless Communications	87 (44.4)	191 (56.8)	438 (64.0)	716 (58.9)

Transactions on Antenna and Propagation	149 (76.0)	154 (45.8)	326 (47.7)	629 (51.7)
Speech and Audio Processing	119 (60.7)	199 (59.2)	273 (40.0)	591(48.6)
Robotics and Automation Engineering	84 (42.9)	145 (43.2)	359 (52.5)	588 (48.4)
Transactions on Power systems	97 (49.5)	162 (48.8)	246 (36.0)	505 (41.5)
Transactions on electronic devices and circuits	159 (81.1)	139 (41.4)	173 (25.3)	471 (38.7)
Circuit Devices and systems	49 (25.0)	127 (37.8)	212 (31.0)	388 (31.9)
Transactions on Computers	47 (23.5)	112 (33.3)	226 (33.0)	385 (31.7)
Computer Science and Engineering	38 (19.4)	94 (28.0)	176 (25.7)	308 (25.3)
Circuits and Systems	45 (23.0)	89 (26.5)	114 (16.7)	248 (20.4)
Transactions on Circuit Theory	23 (11.7)	61 (18.2)	98 (14.3)	182 (15.0)
Transactions on signals and systems	29 (14.8)	46 (13.7)	71 (10.4)	146 (12.0)
Transactions on Software Engineering	75 (59.5)	34 (68.0)	14 (70.0)	123 (10.1)

Note: Numbers in parentheses denote percentages (Respondents were permitted to give multiple answers)

Table No. 4 indicates that a majority of respondents (76.9%) retrieve 'Transactions on Mobile computing' e-journal from IEEE/IET Online (IEL) Database, followed by 60.2% retrieve 'Transactions on Image Processing' e-journal, 58.9% retrieve 'Transactions on Wireless Communications', 51.7% retrieve 'Transactions on Antenna and Propagation', 48.6% retrieves 'Speech and Audio Processing', 48.4% retrieve 'Robotics and Automation Engineering', 41.5% retrieve 'Transactions on Power systems' 38.7% retrieve 'Transactions on electronic devices and circuits', 31.9% retrieve 'Circuit Devices and systems', 31.7% 'Transactions on Computers' 25.3% retrieve 'Computer Science and Engineering', 20.4% retrieve 'Circuits and Systems', 15% retrieve 'Transactions on Circuit Theory', 12% retrieve Transactions on signals and systems and 10.1% retrieve 'Transactions on Software Engineering' e-journal from INDEST Consortia.

It is concluded that 'Transactions on Mobile computing' e-journal occupies the 1st rank to retrieve the information from IEEE/IET Online (IEL) Database, followed by 'Transactions on Image Processing' occupy the 2nd rank, Transactions on Wireless Communications occupy the 3rd rank, Transactions on Antenna and Propagation occupy the 4th rank and Speech and Audio Processing occupy the 5th rank.

6. CONCLUSION
The students and faculty members of the Engineering Colleges and mainly using Consortia based electronic information resources. The study revealed most of respondents are accessing electronic information resources from the AICTE-INDEST Consortia.

Hence, it concludes that the Engineering College Libraries shall be strengthening with more electronic information resources, which are most useful to the users.

7. REFERENCES
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