

RESEARCH ARTICLE

USE OF SCHOLARLY ELECTRONIC INFORMATION RESOURCES BY FACULTY MEMBERS OF NBA ACCREDITED ENGINEERING COLLEGE LIBRARIES: A SURVEY

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ABSTRACT

The rapid advances in information processing, storage and communication technologies have revolutionized the role of worldwide libraries in disseminating information services to the users. The role of ICT based services are rapidly increasing due to the changing approaches of users in the libraries. Engineering College Libraries attempt to meet the need of a diverse and complex group of user, who have wide-ranging interest and complex sets of demands. Historically, the fundamental aim of engineering intellectual freedom, and to provide access to a finite amount of print information. Over course of the last decade, very valuable on the Internet and through other electronic databases and libraries are currently playing role very different from before. At present, the technical libraries providing e-resources also e-services to its user community with the help of ICT which is dominating at the global level, and not neglected also. The electronic resources had the great impact on the user community in the present digital environment. The present paper highlights the findings of the survey about the Access and Effective Usage of Consortia Based Scholarly Electronic Information Resources by the faculty members of NBA Accredited Engineering College Libraries at Warangal district. The survey shows that the majority 72% respondents are using e-journals 86% were using e-books and 76% were using other e-resources to obtain subject knowledge also to fulfill their needs.

Key Words: Library Consortia, E-Resources, E- Journals, E-Books.

INTRODUCTION

Information Communication Technology (ICT) has brought revolutionary changes in the functioning of libraries and for a variety of applications in libraries. It helps libraries in creating database of their collections and making them available for easy access to users inside and outside the libraries through networks. Because of this feature, information technology is enabling the libraries to provide the most efficient and specialized information services on information pertaining to literature. Information Technology, establishes an efficient information support and an effective communication system in organization of libraries. Most of the operations within library are interrelated and inter dependent; and mutually supportive for the overall mission of libraries (Williams, Brian K; and Sawyer, Stacey C: 2003). The Electronic Information in the new era is changing the duties and services in all fields of library. The electronic information or digital information which available via computer on the web is called as internet resource. An electronic resource is defined as any resource which requires computer access. Any electronic product that delivers a collection of data, be it text referring to full text bases, electronic journals, image collections, other multimedia products and numerical, graphical or time based, as a commercially available title that has been published with an aim to being marketed.

Electronic Information

Electronic information may be defined as “The information stored in a medium, which requires an electronic device to read/access its contents”. Information stored in different electronic media such as Floppies, Magnetic tapes, CD-ROMs/DVDs, flash/Pen Drives, Hard Disk, OPAC, Online documents including online Journals, etc. constitute Electronic Information. In recent years, e-information has gradually become a major resource in every college library. A statistical analysis of the use of the e-resources has become a hot issue in the filed of library study.

Definition on Electronic Resources

Electronic Resources are defined as being “any publicly available resources, which can be accessed via a personal computer. These include commercially produced resources such as bibliographic databases (accessed online or via CD-ROM), electronic journals and electronic books, as well as resources that have been made freely available via internet, whether specifically to higher educational institutions or to the public in general”. Electronic Resources are becoming very important these days as they are more up-to date, and can be accessed anywhere, crossing all geographical boundaries. With falling library budgets, their is need to maximize the use of available electronic resources to justify he financial investment involved in the maintenance of these systems in technical libraries.

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Meaning of Consortium: A Consortium could be described as a group of organizations who come together to fulfill a combined objective that usefully requires co-operation and sharing of resources.

And need to have a clear mutual goal in order to ensure their success. A library Consortium formation can be local, regional, state, national and inter institutional level.

Consortia Term: Consortium is the term, which has many meaning. In the beginning libraries work in the field of collection development and resource sharing in the widest sense of word. Later on cooperative cataloguing system were as consortia. As purchasing association in the network environment the term "Consortia" is now widely used.

Library Consortium: The successful operation of library consortium clearly depends upon a number of things such as good working relationship among the members and consortium headquarter clear policies and priorities, attempts to address the issue and concern etc. However, the consortia initiatives in India are not popular and the trends are slowly catching up among the professional community. Now libraries recognized that they can accomplish more by working together than they can individually (Bavakutty and Azeez, 2006).

Definitions

1. According to Webster's 3rd new International Dictionary, Library consortia is "an agreement, combination, or group formed to undertake and enterprise beyond the resources of anyone member" (Merriam Webster online dictionary. 2008)

2. Online Dictionary for Library and Information Science (ODLIS) defines Library Consortia as "an association of independent Libraries and/or Library systems established by formal agreement, usually for the purpose of sharing". Membership may be restricted to a specific geographical region, type of Library (Public, Academic, and Special) or subject specialization". (ODLIS-Online Dictionary for Library and Information Science)

Need of Consortia

Electronic Information Resources (EIR) such as E-journals and E-databases bring new challenges before the library and information professionals to give full text access to scholarly publications both in print and electronic version to its end users. Further subscribing to printed journals by individual libraries is beyond human comprehension. Ever-increasing prices of journals accompanied with the shrinking budget of libraries, management/parent bodies are forced to resort to the best alternatives like consortia. In this respect the contributions and the benefits of E-journals and E-databases provided by UGC-Info-Net are numerous.

Brief Note on INDEST-AICTE Consortium

After the launch of the Indian National Digital Library in Engineering Sciences and Technology (INDEST) Consortium in 2003 by MHRD, the UGC-INFONET Digital Library Consortium also started in 2004, availability and accessibility of e-resources increased phenomenally in centrally-funded technical institutions (IITs, IISc, IIMs, IIITs, etc.) and universities, ushering in a new culture of electronic access and browsing in educational institutions. In addition to the INDEST-AICTE Consortium and UGC-INFONET Digital Library Consortium, a number of other library consortia have emerged in the past five to six years, including CSIR E-journals

Consortium, DAE Consortium, MCIT Library Consortium, FORSA Consortium, IIM Consortium, CeRA (Consortium of e-Resources in Agriculture), RGUHS-Helinet Consortium, DeLCON, ERMED Consortium and DRDO Consortium. The INDEST-AICTE Consortium is the most ambitious initiative taken so far in the country. The benefit of consortia-based subscription to electronic resources is not confined to 38 major technological institutions in the country but is also extended to all AICTE-accredited and UGC-affiliated institutions. (60) Engineering colleges and institutions have already joined the consortium on their own. Recently (1245) engineering colleges and institutions joined under self support- new scheme. The INDEST-AICTE consortium subscribes to the following resources for various categories of institutions. All electronic resources subscribed are available from the publisher's Web site. Local hosting of resources has not been considered at this stage.

Review of Literature: The study of related research implies locating, reading and evaluating research reports. The survey of the literature is a crucial aspect for planning of the body of research. The investigators reviewed only those studies which are related to the present study.

- Mandal and Panda have jointly conducted a study on e-resources supplied through INDEST consortium and its impact on 21st century environment. The study successfully unfolds some reasons for low usage and suggests some remedial steps to improve the use of e-resources and services.
- Kaur and Verma have made a survey about the use of electronic resources at TIET library, Patiala. This paper also examines the interest of the users about internet, CD-ROM databases and other services provided by the library.
- Lohar and Roopashree have analyzed the collected data to cover the use of electronic resources and how the electronic resources have improved the academic career of the faculty and also the problems that are faced in using the electronic resources. They conclude that the main intention of the use of the electronic resources has been the academic interest of the users.
- It was revealed that majority of the users are aware about the availability of online journals. And majority of respondent indicated that they make use of online journals for their research work. It was also found that users faced problems while using online journals. A need was also felt by some research scholars regarding inclusion of some more e-journals in UGC-Infonet Consortium (Zaidi and Bharati, 2008).
- The users faced problem while accessing e-consortium and lack of awareness of e-resources available. It was suggested that a training programme should be conducted regularly to improve the usage of e-journal consortium. (Gupta and Rawtani, 2008)
- There is a need of conducting regular orientation/training programme for the UGC Infonet programme; more number of e-journals to be included in the UGC Infonet consortium (Veenapani, Singh and Devi, 2008).

Significance of the Study

In the present era of information explosion-more and more publications are becoming Web-concerned. Most of the science and technology libraries have changed the contemporary

outlook towards functions and services. The environment is rapidly changing to an electronic one. The investigators decided to conduct this study for measuring the Effective Usage of e-resources by Faculty Members of NBA Accredited Engineering College Libraries in Warangal District, Telangana State.

Objectives: For the present article, the specific objectives were made:

- To know the origin and development of AICTE-INDEST Consortium.
- To know the significance of e-resources in NBA Accredited College libraries in Warangal District.
- To measure the frequency of access to the consortium.
- To know the most use of e-resources by faculty members
- To explain the faculty preference to use the e-journals
- To know the problems faced by teachers of NBA Accredited engineering college libraries in accessing the e- resources.
- To draw the conclusions and suggestions from the users towards improving the accessibility of the e-resources through the INDEST consortium.

Scope and Limitation of the Study: The scope of the present study is limited to

- AICTE-INDEST Consortium
- Faculty Members-Professors, Associate Professors and Asst. Professors
- **3 NBA Accredited Engineering College Libraries** in Warangal District. They are: (1) Kakathiya Institute of Science and Technology (KITS), Hanamkonda (2) Ramappa Engineering College, Hunter Road, Warangal (3) Jayamuki Science and Technology Engineering College, Narsampet, Warangal.

MATERIALS AND METHODS

To conduct the study, survey method and questionnaire tool for data collection were used. A well structured questionnaire was designed scientifically keeping in view of the objectives. The questionnaires were distributed to the Faculty Members of three NBA accredited Engineering College Libraries in Warangal District to a sample for 250. However, 175 (70.00%) valid questionnaires of them responded and the same used for analysis.

Statistical Techniques used: The collected data from the respondents presented in a simple tabular form with percentages.

Data Analysis and Discussion: Analysis of data is the ultimate step in research process. It is the link between raw data and significant results leading to conclusions. This process of analysis has to be result oriented. The structured administered questionnaires were distributed to the respective departments and shown in the below Table no.1.

The above Table no.1 reveals that a total of 250 questionnaires were distributed to the department-wise equally (i.e.50 each department) and correctively filled in and returned questionnaires were 175, which amounts to **70.00** per cent of response rate. This per centage is more than half of the half per centage.

Among all the five departments, the Department of Computer Science Engineering (CSE) responded very high percentage i.e. 17.60, followed by the Department of Electronic & Electrical Engineering (EEE) (15.20%), Electronic & Communication Engineering (ECE) (14.8%), the Department of Mechanical Engineering (ME) (12.00%) and less percentage is (10.4%) from the Department of Civil Engineering (CE) respectively.

Faculty-Wise Distribution of Questionnaires

The questionnaires were distributed among faculty members and collected filled in questionnaires from them and presented details in following Table No.2 Table No.2 depicts that a total of 250 questionnaires were distributed to the respondents belongs to faculty members (Professors, Associate Professors and Asst. Professors) and 175 faculty members were responded, which amounts to **70.00** per cent of response rate.

Gender-wise Distribution of Respondents: A question has been put to the respondents to know the status of gender. The replies are analyzed and presented in the given Table 3. It can be observed from Table 3 shows that the Gender-Wise distribution of respondents. Out of 175 respondents, 105(60.00%) respondents are male and70 (40.00%) are female. It is clearly shows that the male respondents are higher than the female respondents. It indicates that still Indian Society is dominated by male.

Table 1. Department-wise Distribution of Questionnaires

Sl. no.	Nature of Department	No. of Questionnaires Distributed	No. of Questionnaires Received
1	Civil Engineering (CE)	50	26 (10.4%)
2	Mechanical Engineering(ME)	50	30 (12.00%)
3	Electronic & Electrical Engineering (EEE)	50	38 (15.20%)
4	Computer Science Engineering(CSE) & IT	50	44 (17.60%)
5	Electronic & Communication Engineering(ECE)	50	37 (14.8%)
6	Total	250	175 (70.00%)

Table 2. Faculty-Wise Distribution of Respondents

Academic Status of the Respondents	No. of Questionnaires Distributed	No. of Questionnaires Received
Professors	35	20 (08.00%)
Associate Professors	65	57 (22.8%)
Asst. Professors	150	98 (39.20%)
Total	250	175 (70.00%)

Table 3. Gender –Wise Distribution of Respondents

Status of the Respondents	Male	%	Female	%	Total	%
Professors	15	8.57	5	2.85	20	11.42
Associate Professors	45	25.71	12	6.85	57	32.57
Asst. Professors	73	41.71	25	14.28	98	56.00
Total	105	60.00	70	40.00	175	100

Table 4. Age-wise Distribution of Respondents

Age-wise Respondents	Professors	Associate Professors	Asst.Professors	Total	%
21-25 years	--	02	32	34	19.42
26-30years	2	10	43	55	31.42
31-35 years	3	07	15	25	14.28
36-40	2	18	02	22	12.57
41-45	5	10	04	19	10.85
46 & above years	8	10	02	20	11.42
Total	20	57	98	175	100.00

Age-wise Distribution of Respondents: The respondents were asked regarding to their age particulars and presented in the following Table no.4 Data presented in the above (Table No.4) belongs to the age-wise respondents.

It is found that a majority 55 (31.42%) of the respondents were in the age group between 26-30 years, followed by 34 (19.42%) between 21-25 years, 25 (14.28%) between 31-35 years, 19(10.85%) between 41-45 years, 22 (12.57%) between 36-40 years and 46 above years 20(11.42%). The age between 26-30 years respondents were higher than the other ages.

Table 5. Frequency of the Library Visiting

Frequency	No. of Respondents	Percentage
Daily	78	44.57
Once in a Week	44	25.14
Fortnightly	38	21.71
Monthly	15	08.57
Total	175	100.00

The above Table 5 explains about the frequency of visiting the university library. Out of 105, A majority 39 (37.14%) respondents are visiting the university library daily, followed by 35 (33.33%) respondents visit the library once in a week, 17 (16.19%) respondents were visiting library fortnightly and 14 (13.33 %) respondents monthly visits the library.

It is pertinent to note that a large majority of the respondents *i.e.* faculty, research scholars and students are visiting the university library once in a week to use the library resources and e-resources for their academic use, which is very essential to complete their academic programmes within the course duration.

Table 6. Location of Internet Browsing for e-resources

Place of Internet Browsing	No. of Respondents	Percentage
Library	56	32.00
Department	33	18.85
Computer Center in Campus	22	12.57
Cyber Café	23	13.14
Home	41	23.42
Total	175	100.00

The above Table (6) depicts that the location of the internet browsing.

Out of 175, Majority 56 (32.00%) respondents browsing internet from university library for getting needed e-resources, followed by 33 (18.85%) respondents browsing the internet from Department, 23 (23.42%) were from the Cyber Café, 22(12.57%) from university computer center and 41(5.71%) respondents were browsing the internet from their home.

Table 7. Purpose of Use of E-Resources

Purpose of Internet Browsing	No. of Respondents	Percentage
Teaching & Research	156	89.14
Writing Articles/Books	144	82.28
Downloading Material	76	43.42
Guiding/Supervising	165	94.28
Applying Higher Level Positions	33	18.85
E-mails/Chatting/Social Sites/Entertainment	129	73.71

(Note: Multiple Answers asked)

The above Table (7) explains the purpose of using the internet. Majority 165 (94.28%) of the respondents using the internet for followed by 92 (87.61%) respondents for downloading the reading material for guiding/supervising for his research scholars, 81 (77.14%) respondents for applying jobs, filling the online admission applications forms, 156 (89.14%) and 144 (82.28%) respondents using the internet for teaching, research and writing articles respectively, 129(73.71%) sending e-mails, chatting and visiting the social sites for sharing the views/information. 76 (43.42%) respondents were using the Internet for downloading material for their need, 33 (18.85%) respondents were applying higher level positions and so on. On the whole, all types of the faculty members were using the Internet academic purpose. It is a good sign for study and research. The above table also explains that majority of the faculty members browsing internet for teaching, research and writing articles as well as books.

Weekly Time Spent on Internet: Attempts were made to analysis data by weekly time spent on Internet which is presented in Table No.8

It can be observed from table No.8 that; a majority of respondents 82 (46.85%) spent 2 to 3 hours in a day on internet searching, while 57 (32.57%) respondents spent 4 to 5 hours a day. Only 20.57 % respondents spent 4 and above hours a day on Internet searching for their needy.

Table No 8. Time Spent on Internet

Time Spent	No. of Respondents	%
> below 2 Hours	36	20.57
2 to 3 Hours	82	46.85
4 & above Hours	57	32.57
Total	175	100.00

Table 9. Access and Use of E-Resources (N=175)

Access & Use of Resources	No. of Respondents	%
E-Journals/ E-Books	111	63.42
E-databases	86	49.14
E-Articles	136	77.71
E-Conference Proceedings	154	88.00
E-Technical Reports	165	94.28
Wikipedia	167	95.42
Open Access Recourses	98	38.85
Institutional Repositories	44	25.14
E-Theses/ETD	76	43.42
Search Engines	169	96.57
UGC-Infonet E-Journals	92	52.57
INDEST-AICTE Consortium	155	88.57
N-LIST Programme	118	67.42

(Note: Multiple Answers were asked).

The above table (No.9) explains regarding to accessing and using the e-resources by the faculty members. A Majority 167 (95.42%) of the respondents access and use Wikipedia for obtaining the e-resources from Internet, Majority 165(94.28%) respondents using E-Technical Reports for getting the needed information, 155(88.57%) for INDEST-AICTE Consortium , 98(38.85%) for Open Access Resources, 154 (88.00%) e-conference proceedings, 57(54.28%) for e-Journals and e-books,136(77.71%) for e-articles using the internet by respondents. Majority faculty members 111 (63.42%) were using the internet for e-journals/e-books for their teaching and research, 118 (67.42%) respondents were accessing the N-LIST Programme. It shows that the importance of internet as well as e-materials.

Table 10. Ways of E-Resources Browsing (N=175)

Ways of Internet Browsing	No. of Respondents	%
Web Sites	147	84.00
Subject Gateways	133	76.00
Search Engines	168	96.00
USD (Subscribed Journals Database)	171	97.71

(Note: Multiple Answers asked)

Table 11. Most Use of Full Text E-Journals of INDEST- AICTE Consortium

S. no.	Full Text Journals	No. of respondents	%
1	American Institute of Physics	66	37.71
2	American Physical Society	79	45.14
3	Cambridge University press	123	70.28
4	Institute of Physics	63	36.00
5	Indian Journals	166	94.85
6	Royal Society of Chemistry	78	44.57

(Note: Multiple answers were asked)

The above table (No.10) indicates that out of 175 respondents, a majority of respondents 168 (96.00%) browsing the internet by using search engines for getting the e-resources, 76.00% of the respondents through subject gateways, 84.00 % of the respondents type the web addressed directly and 97.71% of the respondents used subscription databases (USD) for accessing the required information on the internet.

It shows that all the respondents were using the search engines for access the e-information. Data presented in the above table (No.11) regarding to most use of full text e-journals of INDEST- AICTE Consortium by the faculty members of NBA accredited engineering college libraries in Warangal district. Out of 175 respondents, majority (94.85%) faculty members are using more Indian Journals for their need, followed by Cambridge University Press (70.28%) e-Journals, American Physical Society (45.14%) e-journals, Royal Society of Chemistry (44.57%) e-Journals and American Institute of Physics (37.71%) e-Journals. It is clearly shows that the Indian Journals are using more comparatively foreign e-Journals by the faculty members.

Table 12. Most Use of E-Books of INDEST- AICTE Consortium

S. no.	Most Use of E-Books	No. of Respondents	%
1	EBESCO Host - Net Library	51	29.14
2	Springer E-Books	47	26.85
3	Taylor Francis E-Books	22	12.57
4	My Library-TMH	11	6.28
5	Cambridge Books Online	44	25.14
6	Total	175	100.00

The Table (no.12) indicates that the most use of e-books of INDEST- AICTE Consortium. A total of 175 respondents, a majority 51 (29.14%) faculty members using more EBESCO Host - Net Library E-Books, 47 (26.85%) respondents are using the Springer E-Books, 44 (25.14%) respondents use more Cambridge Books Online e-books and 22 (12.57%) faculty use the Taylor Francis E-Books and 11 (6.28%) respondents use less My Library-TMH e-books comparatively other e-books. On the whole, a majority of the faculty members using various kinds of e-books in their study and research and also preparing articles to present in the Seminars. It is good health in the present digital age. Hence, the majority of student community will be benefited more by earning a rich knowledge from their teachers which is more essential for them to competent with others in the present competition world to get a highly satisfied emplacement.

Table 13. Frequently Use of E-Resources by the Faculty Members (N=175)

Nature of E-Resources	Regularly	Occasionally	Rarely
NPTEL	08	05	02
IEEE/IEE	15	11	04
ASME/ASCE	09	13	01
Science Direct/Science finder	13	15	01
INDEST - AICTE	13	07	05
Annual Reviews/HW Wilson	07	22	02
Web of science	10	09	03
Total	75	82	18

The above table (no.13) depicts about the most use e-resources by the respondents. Out of 175 faculty members, majority i.e. 75 faculty were use the e-resources regularly, followed by Occasionally 82 respondents and rarely 18 respondents are using the e-resources. It is clearly shows that very academic interest community only uses e-resources in their study and research. It is a good sign to understand the quality of work. Data presented in the above table no.14 showed that the Priority of Searching of e-resources by the respondents. A majority of the respondents are giving first priority for Elsevier's Science Direct, followed by the Web of Science, Springer Verlag's Link, Emerald, MathSciNet and Proquest Science.

Table 14. Priority of Searching (N=175)

S. no.	Subject Directories/Portals/Gateways	1st Priority	2 nd Priority	3 rd Priority
1	Elsevier's Science Direct	87	55	33
2	Springer Verlag's Link	76	63	16
3	Proquest Science	28	67	80
4	Math Sci Net	40	73	62
5	Web of Science	73	62	40
6	Emerald	41	70	44

Table 15. Problems Faced by the Respondents

Problems Faced by the Respondents	No. of Respondents	% of the Respondents
Lack of knowledge in browsing-Resources	44	25.14
Slow of Internet Access Speed	154	88.00
Limited Full-Text Journals Articles	75	42.85
Frequently Power Off	118	67.42
Limited Computer Terminals	157	89.71
Lack of ICT Skilled Library Staff	167	95.42
Facing the Downloading Problems	172	98.28
Difficulties in Finding relevant Information	73	41.71
Incomplete Information Materials	98	56.00

The second priority given by the respondents for e-resources that Math Sci Net, Emerald, Proquest Science and son and the 3rd Priority given by the majority respondents (80) for Proquest Science, Math Sci Net, Emerald and very low priority for Springer Verlag's Link. It shows that the faculty members are giving the most priority for world renowned databases.

(25.14%) respondents having lack of knowledge in browsing e-resources, and 73 (41.71%) respondents were said that not finding relevant information for their study and research. On the whole, the faculty is utilizing the electronic resources. It is a good sign for development in S&T at national level.

Table 16. Satisfaction On AICTE-INDEST Consortium

Level of Satisfaction	No. of Respondents	Percentage
Satisfied	92	52.57
Highly Satisfied	18	10.28
Partially Satisfied	60	34.28
Not Satisfied	15	8.57

Table 17. Ranking of e-Journals of AICTE-INDEST Consortium

Sl.no.	E- Journals / Bibliographic Data Bases	Ranking
1	American Institute of Physics	1
2	American Physical Society	2
3	American Chemical Society	3
4	Elsevier	4
5	Emerald	5
6	Institute of physics	6
7	Springer	7
8	JSTOR	8
9	JCCC	9
10	Royal Society of Chemistry	10
11	Taylor & Francis,	11
12	Cambridge University Press	12
13	Blackwell & Wiley	13
14	Oxford University Press	14
15	Math.Sci.Net	18

The above Table (15) reveals that the problems faced by the majority respondents while using the internet browsing for e-resources. A large majority 172 (98.28%) of the respondents are facing downloading problems in university library, followed by, 167 (95.42%) respondents opined that lack of ICT skilled library staff, 154 (88.00%) respondents were said that the internet slow access speed, 118 (67.42%) respondents said that frequently power off, 157 (89.71%) respondents were said that the limited computer terminals available in the library, 44

Users Satisfaction on Internet Resources

The user satisfaction is most important factor for any library. It all depends on identification of user needs and fulfillment then with at most care. In this regard; the users were requested to indicate their level of Satisfaction towards the Internet Resources. A question has been put to the respondents to know the satisfaction of users on the availability of Internet Resources in the library. The replies are analyzed and presented in the given Table 16. The above table (16) shows that the majority 92 (52.57%) of the respondents felt satisfied with the availability of e-resources with the AICTE-INDEST Consortium and 60 (34.28%) the respondents also partially satisfied with the existing resources, followed by, 18(10.28%) respondents highly satisfied with the e-resources and 15 (8.57%) respondents were not satisfied with the existing e-resources of the consortium. It is clear shows that the e- resources are very useful, needful to faculty members to deliver quality of education to the engineering student community as said by Parameshwar, S & D.B Patil (2010). They found in their study that use of e-journals' resources play a pivotal role in higher technical education.

Ranking of AICTE-INDEST Consortium

After accessing and using the AICTE-INDEST Consortium e-journals by the faculty members were given the ranking. According to their opinion, the first rank was given to the American Institute of Physics, followed by American Physical Society as second rank, 3 is for American Chemical Society, 4 for Elsevier and 5 is Emerald and other journals' databases rank also mentioned in the following ranked AICTE-INDEST Consortium. As per the respondents' opinion on usage of AICTE-INDEST Consortium e-Journals, the American Institute of Physics database is given First Rank, followed by American Physical Society, American Chemical Society, Emerald and Elsevier as second, third, fourth and fifth rank respectively.

Major Finding

- A Majority 105(60.00%) of the respondents belongs to male and 70 (40.00%) are female.
- Majority 55(31.42%) of the respondents were in the age group between 26-30 years, followed by 34 (19.42%) between 21-25 years
- Out of 175 respondents, a majority 78(44.17%) respondents are visiting the university library daily, followed by 44 (25.14%) respondents visit the library once in a week.
- Out of 175, majority 56(32%) respondents were browsing the internet from college library, followed by 33(18.85%) respondents browsing the internet from Department and from home 41(23.42%).
- A majority 165 (94.28%) respondents are using the e-resources for guiding to research scholars, for teaching 156(89.14%) respondents.
- A majority respondents 82 (46.85%) were spent time in the library between 2-3hours, 57 (32.57%) respondents are spent time in the library between 4-5 hours for accessing the e-resources.
- A Majority 169 (96.57%) respondents accessing and use of e-resources through search engines, 155(88.57%) respondents use INDEST Consortium,167(94.28%) respondents use Wikipedia, 165 (94.28%) respondents access and use e-technical reports, 111(63.42%) respondents use e-Journals and e-books.
- A Large Majority 171(94.85%) of the respondents mostly using Full Text Indian Journals, followed by 123(70.28%) respondents use web sites through ways of browsing.
- A Large Majority 166(97.71%) of the respondents using full text Indian e-journals, 123 (70.28%) Cambridge University Press database, 79 (45.14%) American Physical Society databases used by the respondents.
- A majority 51 (29.14%) respondents mostly using e-books, followed by Springer 47 (26.85%) and Cambridge University Press database were using.
- A majority of respondents equally (13+13) using science direct/science finder and INDEST Consortium e-resources regularly, followed by annual reviews/H. W. Wilson (22 respondents) using resources occasionally, and 18 respondents used e-resources rarely.
- A majority of respondents (62+70) giving first priority for searching Elsevier's science directory, Springer directory followed by second priority for Web of Science and Emerald, the third priority for searching information (80 respondents) Proquest Science.
- A majority of respondents 172 were facing downloading problems of e-resources, 166 respondents opined that the Library staff not having sufficient ICT Skills.
- A majority percentage of respondents 52.57 satisfied, 10.28% of respondents highly satisfied, 34.28% were partially satisfied and 8.57% of the respondents were not satisfied with the availability of INDEST-AICTE consortium e-resources.

Conclusion

The ability of ICT such as high resolution capture devices, dramatic increase of digital storage media, explosive growth of Internet, world wide web (WWW), sophisticated search engines, fast processing power and reducing cost of computer, high bandwidth networks and ever proliferating web based resources have revolutionized and became a major impetus for

society by alerting more and more information to common people, professionals, academicians and scholars in divergent new ways.

Engineering College Libraries attempt to meet the need of a diverse and complex group of user, who has wide-ranging interest and complex sets of demands. Historically, the fundamental aim of engineering intellectual freedom, and to provide access to a finite amount of print information. Over course of the last decade, very valuable on the Internet and through other electronic databases and libraries are currently playing role very different from before. At present, the technical libraries providing e-resources also e-services to its user community with the help of ICT which is dominating at the global level, and not neglected also.

Suggestions

After careful observations from the present study, the following constructive suggestions were made:

- There is urgent need to provide e-resources to faculty to enrich knowledge which is need to development.
- The INDEST-AICTE consortium e-resources such as E-books, E-Journals and E-articles, e-technical reports should be procured by the library which are most useful to the all the faculty members without any downloading problems.
- Current and Openable Full-Text databases should be provided to the faculty.
- The Inverter (UPS) facility should be provided to avoid the frequently power off.
- The digital libraries should be stretched by proving more computer terminals to overcome the crowed.
- The bandwidth also increased for Internet speeding to download relevant e-information for their use.
- Many e-Journals/e-books are not easily obtained. So, there is need to provide ICT skilled library professional to help the respondents.
- Current e-resources should be procured by the libraries which are more useful to all types of user community.

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