Awareness, Access and Use of Electronic Information Resources By the Students' Community: A Case Study of   JNTUH College of Engineering, Kukatpally, Hyderabad, Telangana State

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Abstract - *(Information Communication Technology (ICT) has brought innovatory changes in the performance of libraries and for a diversity of applications in libraries. ICT helps libraries in creating database of their collections and creation them obtainable for simple access to users within and external the libraries through networks. The study mainly focused on* awareness, access and use of *e-resources by the professional student community from JNTUH, Hyderabad. Out of 200 questionnaires 160 (80%) questionnaires were received. Among them, 100 (83%) were UG students and 60 (63%) were PG students. This study shows that the under-graduates were high. A large majority 78% of students expressed that they are using e-resources for their study and in preparing their Project report 39% students are using e-resources. A Majority of the students 85% preferred E-Journals as their primary e-resources, 78 respondents (49%) using of e-resources by weekly and 76% students using Internet, 64% students using E-Books).*

Key Words: ICT, AICTE-Indest Consortium, E-resources, E-Books, E-Journals

Introduction:

Electronic Information resources or e-resources have become a vital part of human life in 21st century. Information technology has changed the world and acts as the important tool for retrieving information. Libraries have become electronic information centre with the collection of e-resources accessible *via* internet, World Wide Web (WWW). Most of the educational and special libraries are now paying concentration to supply information services using most recent information technology tools like CD, DVDs and other automated online databases through e-networks, Internet etc. Electronic services have made tremendous impact on the academic activities of the faculty, researchers and students. With the introduction of electronic services, significant transition could be seen in their approach and the way in which they seek information and the methods they employ for research and learning activities.

JNTU College of Engineering, Kukatpally-A Profile:

The College was established as Nagarjuna Sagar Engineering College in 1965 by the Government of Andra Pradesh. When the college was under the administrative control of the

Department of Technical Education, with the formation of Jawaharlal Nehru Technological University on 2nd October 1972, it became a constituent college of the University and was later renamed as JNTU College of Engineering. The Library caters to the needs of about 5000 users comprising Under-Graduate, Post-Graduate students (Regular and Part-time) Doctoral students, teaching and non-teaching staff. The library has a rich collection of 31,500 books with 7,140 Titles, back volumes, pamphlets, standards, CD-ROM. The library subscribed to around 58 National & International Print Journals. The Digital Library has campus LAN connectivity through Computer Center. The library subscribed the data base such as AICTE-INDEST IEEE, ACM, ASCE, ASME & EBSCO, McGraw Hill -General Engg. & Reference, Gale Cengage Learning -Environmental Engineering and Elsevier databases.

Review of literature:

Venkateswarlu and Chandrasekhara Rao (2016) said that E-resources are playing a vital role in disseminating information to remote users scattered across the globe. These web-based resources can be accessed and used with interruption via high bandwidth Internet connectivity and other infrastructural facilities. **Anjaiah and Nageshwara Rao (2015)** found in their study that 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. **Oyedapo and Abiodun (2013)** carried out a survey on "The Use of Electronic Resources in Hezekiah Oluwasanmi Library, Obafemi Awolowo University, Ile-Ife, Nigeria", examined issues like how libraries and information centers are gradually shifting from print to electronic resources particularly in tertiary institutions around the globe. **Jaspal Kaur (2012).** examined the use of electronic resources by teachers of degree colleges in Chandigarh. It indicated that the teachers of the colleges use search engines as a major source to access e-resources, the study recommends awareness programmes and training on web searching and information retrieval skills. **Okorie and Agboola (2012)** investigated the advantages of e-resources as a means of easily and rapidly accessing of books, journals, magazines, thesis and images of various types that are now widely recognized. An important advantage of e-resources to academics is the increased accessibility to information sources that are current and relevant to research, learning and studying. **Thanuskodi and Ravi (2011)** made an attempt to examine the usage of digital resources by 140 faculty and research scholars at M S University, Tirunelveli, It was revealed that majority of the faculty members were learning the required skills to use digital resources through self-study. **Kumar and Kumar (2010)** examined in their study the 'User perception of Library and Information services in Agricultural science Universities in South India' which explored the results of the study that the respondents are aware of e-resources and also the internet. **Gupta and Rawatani (2008)** 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.

Objectives:
For the present study, the following objectives are made:
- To know the Awareness, Access and Use of the Electronic Resources
- To study the purpose and utilization of electronic resources
- To find out effective usage of e-resources in JNTUH College of Engineering.
- To find out the problems faced by the users while accessing and using E-resources.

- To know the satisfaction level of the users.
- To provide constructive suggestions for the development the of e-resources.

Hypotheses:

- Professional student community use e-resources in their study.
- PG students were used e-resources than the under-graduate students.
- INDEST consortium provides e-resources full text data bases as per the students need.
- Electronic resources were used more by the students in JNTUH, Hyderabad.

Methodology:

For the present study, the survey method is adopted. A total of 200 Questionnaire were distributed to under-graduate and post-graduate students of the JNTUH College of Engineering, Kukatpally and 160 filled in questionnaires were received. The response rate is 80%.

Statistical Tools Used For:
The collected data were analyzed in the form of tables and graphs.

Table 1: **The Distribution of Questionnaires**

Category-Wise	Questionnaires Distributed	Questionnaires Received	%
UG	120	100	83%
PG	80	60	63%
Total	200	160	80%

Catagory - wise Distribution
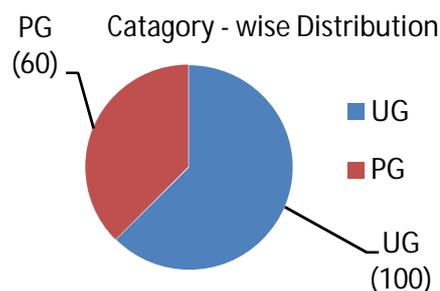
The above Table1 represents the distribution of questionnaires and response rate. A total number of 200 questionnaires were distributed among the 120 Under-Graduates and 80 Post-Graduates. Out of 200, 160 (80%) questionnaires were received. Among them, 100 (83%) were UG students and 60 (63%) were PG students. It shows that the under-graduates were high.

Table 2: Awareness about E-Resources

Opinion	Users	%
Yes	125	78%
No	35	22%
Total	160	100%

Table 2 shows that the majority of respondents 125 (78%) are using electronic resources and only 35 (22%) are not using them. The above analysis indicates that the users who are not using the e-resources either may not be aware of them or not interested in using them.

Table 3: Frequency of Using E- resources

Options	Users	%
Daily	72	45%
Weekly	78	49%
Monthly	8	5%
Rarely	2	1%
Total	160	100%

Data in table 3 reveals that 78 respondents (49%) using of e-resources by weekly, followed by 72 (45%) respondents using daily, 8(5%) respondents using monthly and 2 (1%) respondents using of e-resources rarely. It is a good sign. It shows that the e-resources very essential in academic field.

Table 4: Purposes of using e-resources

Opinion	Users	%
For Subject knowledge	29	18%
For Examination	27	17%
For Project-work	62	39%
For Communication	13	8%
Self Improvement	29	18%
Total	160	100%

Data in table-4 shows that a majority of the respondents 62 (39%) opinions that they are using e-resources for Project-work, followed by 29 (18%) respondents Said that they are using for Self Improvement, 29 (18%) respondents Said that they are using for subject knowledge, 27 (17%) respondents Said they are using for Examination and 13 (8%) Said that they are using e-resources for Communication.

Table 5: Access and use of E-resources.

E-Resources	Users	%
E-journals	136	85%
E-books	103	64%
E-theses	56	35%
E-magazines	32	20%
E-news papers	83	52%
OPAC	64	40%
Internet	122	76%

Data in table.5 reveals that a majority of the respondents 136 (85%) preferred E-journals as their primary e-resources, followed by 122 (76%) respondents preferred Internet, 103(64%) respondents preferred e-books, 83 (52%) respondents preferred e-news papers, 64 (40%) respondents preferred OPAC, 56 (35%) respondents preferred e-theses, 32 (20%) respondents preferred e-magazines.

Table 6: Use of full text e-resources / data bases.

E-Resources	Users	%
ASCE journals	29	18%
ASME journals	35	22%
Elsevier's Science Direct	55	34%

J-Gate Consortia	88	55%
IEEE/IEE library online	147	92%
ACCESS Engineering	138	86%
Springer Links	56	35%

The above table 6 and graph shows that a large majority of the respondents 147 (92%) Frequently using IEEE/IEE database, followed by 138 (86%) respondents preferred Access Engineering, 88 (55%) respondents using J-Gate Consortia, 56 (35%) respondents using Springer Links, 55 (34%) respondents using Elsevier's Science Direct, 35 (22%) respondents using ASME journals and 29 (18%) respondents using ASCE journals.

Table 7: Criteria of using e-resources.

Options	Users	%
Speed of Access	51	32%
More Information	32	20%
Easy Access	24	15%
Reliability	16	10%
Time Saving	37	23%

The above table-7 shows that a majority of the respondents 51 (32%) opinion that speed of access is the primary criteria to access the e-resources, followed 37 (23%) respondents opined that time saving is the criteria to prefer e-resources, 32 (20%) respondents feels that more information is the cause to access e-resources, 32 (20%) respondents Said that easy access is the criteria and 16 (10%) respondents Said reliability is the criteria of using e-resources.

Table 8: Problems encountered in accessing the E-Resources

Problems	Users	%
Poor infrastructure facilities	21	13%
Limited time to access	22	14%
Frequently power failure	13	8%
Low band width internet	40	25%
Downloading Problems	56	35%
others	8	5%
Total	160	100%

The above table and graph shows that majority of the respondents 56 (35%) feels that download problem is major issue in accessing e-resources, followed by 40(25%) of respondents Said that low band width internet is the issue in the using the e-resources, 22(14%) feel limited time to access, 21(13%) feel lack of infrastructure is the barrier to access the resources respectively.

Table 9: Level of Satisfaction on E-Resources.

User response	Respondents	%
Highly Satisfied	18	11%
Satisfied	112	70%
Not satisfied	30	19%
Total	160	100%

The above table shows that a large majority of the respondents 112 (70%) were satisfied with the availability of e-resources in library, followed by 30 (19%) respondents were not satisfied and 18(11%) respondents were highly satisfied. This table shows that the importance of e-resources and its need of student community for their academic purpose. It is also most useful for quality of technical education which is very essential the development of a Nation.

Findings

From the above analysis, the following findings were found:

1. It is observed from the study that a majority of the respondents 125 (78%) are using electronic resources and only 35 (22%) are not using them. It indicates that the users who are not using the e-resources either may not be aware of them or not interested in using them.

2. This study shows that 78 respondents (49%) using e-resources weekl, followed by 72 (45%) respondents using daily, 8 (5%) respondents using monthly and 2 (1%) respondents using of e-resources rarely.

3. A majority of the respondents 136 (85%) preferred e-journals as their primary e-resources, followed by 122 (76%) respondents preferred Internet, 103(64%) respondents preferred e-books, 83 (52%) respondents preferred e-news papers, 64 (40%) respondents preferred OPAC, 56 (35%) respondents preferred e-theses, 32 (20%) respondents preferred e-magazines.

4. The study also found that a majority of the respondents 147 (92%) frequently using IEEE/IEE database, followed by 138 (86%) respondents preferred Access Engineering, 88 (55%) respondents using J-Gate Consortia, 56 (35%) respondents using Springer Links, 55 (34%) respondents using Elsevier's Science Direct, 35 (22%) respondents using ASME journals and 29 (18%) respondents using ASCE journals.

5. A majority of the respondents 62 (39%) opinions that they are access e-resources for project-report, followed by 29 (18%) respondents said that they are using for self improvement, 29 (18%) respondents said that they are using for subject knowledge, 27 (17%) respondents said they are using for examination purpose and 13 respondents (8%) are using e-resources for communication

6. It is observed that 56 respondents (35%) feels that download problem is a major issue in accessing e-resources, followed by 40(25%) of respondents said that low band width internet is the issue in the using the e-resources, 22(14%) feel limited time to access, 21(13%) feel lack of infrastructure is the barrier to access the resources respectively.

7. It is shows that a majority of respondents 112 (70%) were satisfied on e-resources available in their library, followed by 30 (19%) respondents were not satisfied with the available e-resources, 18(11%) respondents were highly satisfied on e-resources available in their library.

Conclusion

This study showed that E-Resources like online databases, e-journals, e-books, etc., are playing a very important role in disseminating information to remote users scattered across the world. The usage of e-resources in engineering college libraries is very common and it's so important to know latest developments and innovations in the field of engineering and technology. It also exposed that majority of respondents are needy on e-journals to get needed and relevant information for their course work. The e-journals are helping them very much in their working environment. The engineering college libraries need to be equipped

with proper infrastructural facilities and also providing training workshops for effective use of e-resources by library users of engineering colleges.

Suggestions

Based on the present study, the following suggestions were made to improve the e-resources in the engineering college libraries.

1. There is urgent need to conduct the orientation programmes for the student community to create awareness about e-resources.
2. There is also urgent need to improve ICT Infrastructure in the library to provide better library services to students.
3. The Open Access Resources should be provide to the students
4. To avoid downloading problems, the needed mechanism should be arranged.
5. The NPTEL lectures also provide to easily understand the subject.
6. All the problems raised by the students should be solved as early as possible.

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