Use Patterns of E-Resources by the Faculty, Research Scholars and Professional Students of University College of Engineering, Osmania University, Hyderabad Telangana State–A Case Study

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Abstract - *Information Communication Technology (ICT) has changed the face of library functions in academic libraries in general and engineering colleges in particular. Information Communication Technology helps libraries in creating database of their collections and creation them accessible for easy access to users within and outside the libraries through networks. The study mainly focused on use Pattern of e-resources by the faculty, researcg scholars and professional students of University College of Engineering, Osmania University, Hyderabad. Out of 200 questionnaires 165 (82.50%) filled questionnaires were received, in this 35 (70.00%) were faculty members, 42 (84.00%) were research scholars and 88 (88.00%) were post-graduates(M.Tech.) students. It shows that the post-graduates(M.Tech.) students were higher. A large majority 90.90% of users expressed that they are using e-resource and preparing their project reports 39.40% users are using e-resources. A Majority of the users 78.18% preferred e-journals.*

Key-words: E-resources, ICT, E-journals, E-books

INTRODUCTION:

Engineering education in India has witnessed a major change over the past few years. Substantial increase in the demand for high-quality education has led to the adoption of Information and Communication Technologies for extending the outreach of education.
Today libraries are functioning continuously changing environment and face a combination of multifaceted challenges like IT revolution, information explosion, network evolution, shrinking library budgets, escalating prices of documents, high level of user expectations, and information resources available in various media and so on. It provides a wide range of opportunities, which could tender solutions to these major challenges. Rapid advances in modern technologies have considerably enhanced the capabilities of storage, processing, communicating, sharing, retrieval, repackaging and managing the volatile growth of information effectively and economically in libraries.

ENGINEERING EDUCATION IN INDIA

Engineering education in India contributes a major share to the overall education system and plays a vital role in the social and economic development of our nation. In India, technical

education is imparted at various levels such as: craftsmanship, diploma, degree, post-graduate and research in specialized fields, catering to various aspects of technological development and economic progress.

In an expanding system of education, Institutions should grow to its maximum and be capable of adjusting to the anticipated changes and be prepared to meet the challenges of new situations. This is true with Engineering Education also. In the pre-independent era, facilities for advanced studies and research in Engineering were hardly provided, remained stagnant over a long time.

Engineering education contributes to the national economy and paces way for the improvement of the life of people, thus leading to self reliance. The policy of state lays stress on securing for the people, the benefits from acquisition of scientific knowledge and practical application of research. The policy is aimed at encouraging individual initiative for dissemination of knowledge and foster progaramme for scientific training and personnel.

Osmania University, Hyderabad- A Profile: Osmania University was established in 1918, is the seventh oldest in India, the third oldest in south India and the first to be established in the erstwhile princely state of Hyderabad. Through out its existence of over eight decades, it has shown remarkable progress and sustained an integrated development of all faculties. It has significantly contributed to the academic and economic development of not only the region but also of the Country.

University College of Engineering (UCE) - A Profile: The Osmania University College of Engineering (UCE) has the distinction of being the oldest and the biggest among the Engineering College of the State of Telangana. Established in the year 1929, eleven years after the formation of Osmania University, it was the sixth Engineering college to be established in the whole of British India.

University College of Engineering Library-A Profile: The Library is housed in a spacious double storied building with a plinth area of about 2,420 square meters, built on the occasion of the Diamond Jubilee of the College of Engineering in 1992. It caters to the needs of about 5000 users comprising Under-Graduate, Post-Graduate students, Doctoral candidates, teaching and non-teaching staff. It has a rich collection of 88,757 books with 34,000 Titles, back volumes, pamphlets, standards, CD-ROM. The library subscribed to around 205 National & International Print Journals. The Digital Library has campus LAN connectivity through Computer Center. The library has access to AICTE-INDEST -IEEE, ACM, ASCE, ASME, and NPTEL and so on.

Review of literature:

Anjaiah,M and Nageshwara Rao,P (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, e-articles, and e-technical reports should be procured by the library which are most useful to the all the users.

Asifa Jan (2017) in his article revealed that the most of the users are aware of e-journals and they are not only using them for building and updating their knowledge but also for collecting relevant material for their study and research purpose it is a good sign.

Puttaswamy, R.M. and Krishnamurthy, M. (2014) emphasized that e-resources are useful for engineering college teachers and scholars for their academic and research activities.

Dhanavandan S. and Tamizhchelvan M. (2015) identified that in Engineering colleges most number of libraries subscribes to e-journals and e-books and few libraries have online database and CD ROM database collection. Most of the libraries have internet facility in their premises. Majority of the institution libraries have OPAC. Contrastingly they are in the process of developing WEBOPAC, subject gateways and websites.

Aravind S. (2017) the findings showed that majority of respondents use the libraries for study propose and majority of respondents access the electronic resources regularly and once in a day

Rosy Malarvizhi S. and Sarangapani R. (2016) evaluated the usage of electronic information resources by the faculty members of Karunya University, Coimbatore. It described the problems faced by faculty while using the electronic resources and find out the level of satisfaction about the electronic information sources and services.

Objectives:

For the present study, the following objectives are made:
1. To know the awareness electronic resources by Faculty members, Research Scholars and Students of Osmania University College of Engineering
2. To know the use pattern of e-resources by Faculty members, Research Scholars and Students of Osmania University College of Engineering
3. To find out effective usage of e-resources in Osmania University College of Engineering.
4. To find out the problems faced by the users while accessing and using E-resources.
5. To know the satisfaction level of the users.

Methodology:

For the present study, the survey method is adopted. A total of 200 Questionnaire were distributed to Faculty members, Research scholars and Post-Graduate(M.Tech.) students of the Osmania University College of Engineering, Hyderabad and 165 filled in questionnaires were received. The response rate is 82.50%.

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

Table 1: **The Distribution of Questionnaires**

Sl. No	Category-Wise	Questionnaires Distributed	Questionnaires Received	Percentage
1.	Faculty Members	50	35	70.00%
2.	Research Scholars	50	42	84.00%
3.	Students	100	88	88.00%
3.	Total	200	165	82.50%

The above Table-1 elicit the distribution of questionnaires and response rate. A total number of 200 questionnaires were distributed among to the 50 faculty members, 50 research scholars and 100 post-graduates (M.Tech.). Out of 200, 165 (82.50%) questionnaires were received. Among them, 35 (70.00%) were faculty members, 42 (84.00%) were research scholars and 88 (88.00%) were post-graduates (M.Tech.) students. It shows that the post-graduates were high.

Table 2: Awareness about E-Resources

Sl. No	Awareness	Faculty Members	Research Scholars	Students	Total
1.	Yes	35(100.00%)	39(92.85%)	76(86.36%)	150(90.90%)
2.	No	0(00.00%)	03(7.15%)	12(13.63%)	15(9.10%)
3.	Total	35(100.00%)	42(100.00%)	88(100.00%)	165(100.00%)

Table 2 shows that the majority of respondents 150 (90.90%) are using electronic resources and only 15 (9.10%) 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 visiting the library

Sl. No	Frequency	Faculty Members	Research Scholars	Students	Total
1.	Daily	3(8.57%)	30(71.44%)	33(37.50%)	66(40.00%)
2.	Weekly	24(68.57%)	10(23.80%)	40(45.45%)	74(44.84%)
3.	Monthly	6(17.14%)	1(2.38%)	8(9.10%)	15(9.10%)
4.	Rarely	2(5.71%)	1(2.38%)	7(7.95%)	10(6.06%)
5.	Total	35(100.00%)	42(100.00%)	88(100.00%)	165(100.00%)

Data in table 3 reveals that 74 respondents (44.84%) using of e-resources by weekly, followed by 66 (40.00%) respondents using daily, 15(9.10%) respondents using monthly and 10(6.06%) 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.

Sl. No	Purpose	Faculty Members	Research Scholars	Students	Total
1.	For Subject Knowledge	3(8.58%)	4(9.52%)	7(7.95%)	14(8.48%)
2.	For Examination	0(00.00%)	5(11.90%)	19(21.59%)	24(14.54%)
3.	For Project-work	4(11.42%)	8(19.06%)	53(60.22%)	65(39.40%)
4.	Research purpose	28(80.00%)	25(59.52%)	9(10.22%)	62(37.58%)
5.	Total	35(100.00%)	42(100.00%)	88(100.00%)	165(100.00%)

 Data in table-4 shows that a majority of the respondents 65 (39.40%) opinions that they are using e-resources for Project-work, followed by 62(37.58%) respondents Said that they are using e-resources for Research purpose, 24(14.54%) respondents said that they are using for examination, 14 (8.48%) respondents said they are using e-resources for subject knowledge.

Table 5: Access and use pattern of E-resources.

Sl. No	E-Resources	Faculty Members	Research Scholars	Students	Total
1.	E-Books	16(45.71%)	20(47.61%)	20(22.72%)	56(33.93%)
2.	E-Journals	31(88.57%)	38(90.47%)	60(68.18%)	129(78.18%)
3.	E-theses	12(34.28%)	22(52.38%)	12(13.63%)	46(27.87%)
4.	E-magazines	10(28.57%)	13(30.95%)	26(29.54%)	49(29.69%)
5.	E-news papers	5(14.28%)	16(38.09%)	18(20.45%)	39(23.63%)

The above table-5 shows that a majority of the respondents 129 (78.18%) preferred e-journals as their primary e-resources, followed by 56(33.93%) respondents preferred e-books, 49(29.69%) respondents preferred e-magazines, 46(27.87%) respondents preferred e-theses, 39(23.63%) respondents preferred e-news papers.

Table 6: Criteria of using e-resources.

Sl. No	Criteria	Faculty Members	Research Scholars	Students	Total
1.	Speed of Access	11(31.42%)	14(33.33%)	27(30.70%)	52(31.52%)
2.	More Information	7(20.00%)	9(21.42%)	24(27.27%)	40(24.24%)
3.	Easy Access	5(14.28%)	7(16.66%)	12(13.63%)	24(14.54%)
4.	Reliability	4(11.42%)	3(7.14%)	7(7.95%)	14(8.48%)
5.	Time Saving	(22.85%)	9(21.45%)	18(20.45%)	35(21.22%)
6.	Total	35(100.00%)	42(100.00%)	88(100.00%)	165(100.00%)

The above table-6 shows that a majority of the respondents 52(31.52%) opinioned that the speed of access is the primary criteria to access the e-resources, followed 40(24.24%) respondents opined that more information is the criteria to prefer e-resources, 35(21.22%) respondents feels that time saving is the cause to access e-resources, 24(14.54%) respondents said that easy access is the criteria and 14(8.48%) respondents said reliability is the criteria of using e-resources.

Table 7: Problems encountered while accessing the E-Resources.

Sl. No	Problems	Faculty Members	Research Scholars	Students	Total
1.	Lack of Infrastructure Facilities	10(28.57%)	15(35.71%)	22(25.00%)	47(28.48%)
2.	Limited time to access	4(11.42%)	12(28.57%)	40(45.45%)	56(33.93%)
3.	Frequently Power off	5(14.28%)	15(35.71%)	35(39.77%)	55(33.33%)
4.	Low bandwidth Internet	10(28.57%)	12(28.57%)	46(252.27%)	68(41.21%)
5.	Downloading Problems	21(60.00%)	0(47.61%)	60(68.18%)	101(61.21%)
6.	If any….	5(14.28%)	10(23.80%)	5(5.68%)	20(12.12%)

The above table-7 shows that majority of the respondents 101(61.21%) feels that download problem is major issue in accessing e-resources, followed by 68(41.21%) of respondents said that low bandwidth Internet is the issue in the using the e-resources, 56(33.93%) feel limited time to access, 55(33.33%) Frequently Power off is the barrier to access the resources respectively.

Table 8: Level of Satisfaction on E-Resources.

Sl. No	Satisfaction	Faculty Members	Research Scholars	Students	Total
1.	Highly Satisfied	6(17.14%)	8(19.04%)	10(11.36%)	24(14.54%)
2.	Satisfied	25(71.42%)	22(52.38%)	53(60.22%)	100(60.60%)
3.	Not satisfied	4(11.42%)	12(28.57%)	25(28.40%)	41(24.84%)
4.	Total	35(100.00%)	42(100.00%)	88(100.00%)	165(100.00%)

The above table-8 shows that a large majority of the respondents 100(60.60%) were satisfied with the availability of e-resources in library, followed by 41(24.84%) respondents were not satisfied and 24(14.54%) respondents were highly satisfied. This table shows that the importance of e-resources and its need of users for their academic purpose.

Findings:

From the above analysis, the following findings were found:

1. It is observed from the study that a majority of the respondents 150 (90.90%) are using electronic resources and only 15 (9.10%) were 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 74 respondents (44.84%) using of e-resources by weekly, followed by 66 (40.00%) respondents using daily, 15(9.10%) respondents using monthly and 10(6.06%) respondents using of e-resources rarely. It is a good sign. It shows that the e-resources very essential in academic field.

3. A majority of the respondents 65 (39.40%) opinions that they are using e-resources for Project-work, followed by 62(37.58%) respondents Said that they are using e-resources for Research purpose, 24(14.54%) respondents said that they are using for examination, 14 (8.48%) respondents said they are using e-resources for subject knowledge.

4. A majority of the respondents 129 (78.18%) preferred e-journals as their primary e-resources, followed by 56(33.93%) respondents preferred e-books, 49(29.69%) respondents preferred e-magazines, 46(27.87%) respondents preferred e-theses, 39(23.63%) respondents preferred e-news papers.

5. A majority of the respondents 52(31.52%) opinioned that the speed of access is the primary criteria to access the e-resources, followed 40(24.24%) respondents opined that more information is the criteria to prefer e-resources, 35(21.22%) respondents feels that time saving is the cause to access e-resources, 24(14.54%) respondents said that easy access is the criteria and 14(8.48%) respondents said reliability is the criteria of using e-resources.

6. It is observed from the study that a majority of the respondents 101(61.21%) feels that download problem is major issue in accessing e-resources, followed by 68(41.21%) of respondents said that low bandwidth Internet is the issue in the using the e-resources, 56(33.93%) feel limited time to access, 55(33.33%) Frequently Power off is the barrier to access the resources respectively.

7. This study shows that a large majority of the respondents 100(60.60%) were satisfied with the availability of e-resources in library, followed by 41(24.84%) respondents were not satisfied and 24(14.54%) respondents were highly satisfied. This table shows that the importance of e-resources and its need of users for their academic purpose

Conclusion:

From the study EIR such as e-journals, e-books 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 usual and it's so essential to know latest developments and innovations in the field of engineering and technology. It also found 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 provide 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 top-priority to conduct the orientation programmes for the user community to create awareness about e-resources.
2. There is also urgent need to improve Information Communication Technology Infrastructure in the library to provide better library services to students.
3. To avoid downloading problems, the needed mechanism should be arranged.
4. All the problems raised by the users should be solved as early as possible.

References:

1. Anjaiah, M. and Nageshwara Rao, P. (2015) Use of scholarly electronic information resources by faculty members of NBA accredited engineering college libraries: a survey, *International Journal of Innovation Sciences and Research,* Vol.4(11), 524-31.
2. Aravind S. (2017), Use of Electronic Resources in Engineering College Libraries: User Study, *Journal of Advances in Library and Information Science*, Vol.6(1), 85-89.
3. Asifa Jan (2017) Use of E-Resources by users of Temperate College Fisheries (J&K): A case study, *International Journal of Library and Information Studies*, Vol.7(4),176-184.
4. Dhanavandan S. and Tamizhchelvan M. (2015), An Evaluation of E-Resources in Academic Libraries in Tamil Nadu, *Journal of Emerging Trends in Computing and Information Sciences,* Vol.3(3), No, 421-426.
5. Puttaswamy, R.M. and Krishnamurthy, M. (2014), Exploring the Usefulness of e-Resources for Engineering College Teachers and Scholars for their Academic and Research Activities - A Study, *Journal of Information Science Theory and Practice*, vol.2(1), 62-70.
6. Rosy Malarvizhi S. and Sarangapani R. (2016), Usage of Electronic Information Resources in Research and Engineering Environment: A Case Study, *Asian Journal of Information Science and Technology*, Vol.6(2), 32-36
7. http://www.Osmania.ac.in/ /library/resources.html. accessed on 10/07/2018.

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