Use Patterns of E-Resources by the Professional Students of University College of Engineering, Osmania University, Hyderabad: A Case Study

Arun Kumar M.
Research Scholar
Dept. of Library & Information Science
JNTUK, Kakinada, Andhra Pradesh
E-mail: marunlib@gmail.com

Dr. Anjaiah M.
Assistant Professor
Dept. of Library and Information Science
Dravidian University, Kuppam, Andhra Pradesh
E-mail: anjaiahlib@gmail.com

Dr. B. R. Doraswamy Naick
Associate professor
Department of LIS
Jawaharlal Nehru Technological University
Kakinada, Andra Pradesh, India
Email:drnaickdora1970@gmail.com

Abstract - *Information Communication Technology has brought rapid changes in the performance of libraries and its services. 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 professional students of University College of Engineering, Osmania University, Hyderabad. Out of 200 questionnaires 165 (82.50%) filled questionnaires were received, in this 100 (83.33%) were under-graduates (B.Tech.) students and 65 (81.25%) were post-graduates (M.Tech.) students. It shows that the under-graduates (B.Tech.) were higher than the post-graduate (M.Tech.) students. A large majority 79.39% of students expressed that they are using e-resources for their study and in preparing their project reports 38.18% students are using e-resources. A Majority of the students 83.03% preferred e-journals.*

Key-words: University College of Engineering, Osmania University, Information and communication technology, e-resources, AICTE-INDEST, usage of e-resources.

Introduction:

Now a day's Information and Communication Technology (ICT) is generally consider as the most important to every human being, people has become knowledgeable since the industrial revolution and the development of changeable type printing techniques. The overall development of nation depends on the extent use of speed of access, and skilled application of ICT systems. Electronic Resources are widely available resources, It can be accessed via a computer. These include commercially produced resources such as bibliographic databases (accessed online or via CD-ROM), e- books, e-journals and e-databases as well as resources that have been made freely available via internet, whether specifically to higher educational institutions or to the public in general.

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. 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. **Venkateswarlu,P and Chandrasekhara Rao,V (2016)** said that E-resources are playing a important role in transferring information to remote users. These web-based resources can be accessed and used with interruption via high bandwidth Internet connectivity and other infrastructural facilities. **Sundareswari,S (2013**) said that library responsibility is identification of information, selection of information, organizing of information, storage, retrieval and distribution to right users at the right time at right place. The aim of any academic libraries is to meet the teaching, research and other information needs of the user. **Tyagi, Sunil (2012),** found in his study that the engineering faculty depend heavily on library subscribed databases and they still pay attention to the journal name when reading articles. **Bhatt, Sunil and Rana, Madan Singh (2011),** said that Engineering college's academic staffs were using many types of e-resources for their teaching and research purpose, and also using the latest sources of information like e-groups, virtual conferences. **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. **Mulla, KR (2011)** examined how user community use electronic resources at the college. It indicate barriers to accessing e-resources by user, the impact of electronic resources on the use of traditional resources, and recommendations for developing electronic resource services for user community.

Objectives:

For the present study, the following objectives are made:
1. To know the awareness, access and use of the electronic resources
2. To know the use pattern of e-resources by the students community.
3. To study the purpose and utilization of electronic resources
4. To find out effective usage of e-resources in Osmania University College of Engineering.
5. To find out the problems faced by the users while accessing and using E-resources.
6. To know the satisfaction level of the users.
7. To provide constructive suggestions.

Methodology:

For the present study, the survey method is adopted. A total of 200 Questionnaire were distributed to under-graduate (B.Tech.) 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 82.5%.

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.	UG	120	100	83.33%
2.	PG	80	65	81.25%
3.	Total	200	165	82.5%

 The above table-1 elicit the distribution of questionnaires and response rate. A total number of 200 questionnaires were distributed among to the 120 under-graduates (B.Tech.) and 80 post-graduates (M.Tech.). Out of 200, 165 (82.5%) questionnaires were received. Among them, 100 (83.33%) were under-graduates (B.Tech.) students and 65 (81.25%) were post-graduates (M.Tech.) students. It shows that the under-graduates were high.

Table 2: Awareness about E-Resources

Sl. No	Awareness	Under-Graduates (B.Tech.)	Post-Graduates (M.Tech.)	Total
1.	Yes	71(43.03)	60(36.36)	131(79.39)
2.	No	29(17.57)	05(03.04)	34(20.61)
3.	Total	100(60.60)	65(39.40)	165(100)

The above table-2 shows that the majority of respondents 131 (79.39%) are using electronic resources and only 34 (20.61%) 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	Under-Graduates (B.Tech.)	Post-Graduates (M.Tech.)	Total
1.	Daily	44(26.66)	29(17.57)	73(44.24)
2.	Weekly	47(28.48)	31(18.78)	78(47.27)
3.	Monthly	6(3.63)	4(2.42)	10(6.06)
4.	Rarely	3(1.81)	1(0.60)	4(2.42)
5.	Total	100(60.60)	65(39.40)	165(100)

Table-3 shows that 78 respondents (47.27%) using of e-resources by weekly, followed by 73 (44.24%) respondents using daily, 10(6.06%) respondents using monthly and 4(2.42%) 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	Under-Graduates (B.Tech.)	Post-Graduates (M.Tech.)	Total
1.	For Subject Knowledge	22(13.33)	12(7.27)	34(20.61)
2.	For Examination	40(24.24)	13(7.88)	53(32.12)
3.	For Project-work	30(18.18)	33(20.00)	63(38.18)
4.	Entertainment	8(4.84)	7(4.24)	15(9.09)
5.	Total	100(60.60)	65(39.40)	165(100)

 Data in table-4 reveals that a majority of the respondents 63 (38.18%) opinions that they are using e-resources for Project-work, followed by 53(32.12%) respondents Said that they are using e-resources for Examination, 34(20.61%) respondents said that they are using for subject knowledge, 15 (9.09%) respondents said they are using e-resources for Entertainment.

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

Sl. No	E-Resources	Under-Graduates (B.Tech.)	Post-Graduates (M.Tech.)	Total
1.	E-Books	63(38.18)	40(24.24)	103(62.42)
2.	E-Journals	83(50.30)	54(32.73)	137(83.03)
3.	E-theses	34(20.61)	22(13.33)	56(33.94)
4.	E-magazines	20(12.12)	13(7.88)	33(20)
5.	E-news papers	21(12.73)	21(12.73)	42(25.45)
6.	OPAC	39(23.64)	26(15.76)	65(39.39)

The above table-5 shows that a majority of the respondents 137 (83.03%) preferred e-journals as their primary e-resources, followed by 103(62.42%) respondents preferred e-books, 65(39.39%) respondents preferred OPAC, 56(33.94%) respondents preferred e-theses, 42(25.45%) respondents preferred e-news papers, 33(20%) respondents preferred e-magazines.

Table 6: Use of Full Text e-resources / data bases.

Sl. No	E-Resources	Under-Graduates (B.Tech.)	Post-Graduates (M.Tech.)	Total
1.	ASCE journals	18(10.91)	12(7.27)	30(18.18)
2.	ASME journals	22(13.33)	14(8.48)	36(21.82)
3.	Elsevier's Science Direct	34(20.61)	22(13.33)	56(33.94)

4.	J-Gate Consortia	53(32.12)	35(21.21)	88(53.33)
5.	IEEE/IEE library online	90(54.55)	58(35.15)	148(89.70)
6.	ACCESS Engineering	84(50.91)	54(32.73)	138(83.64)
7.	Springer Links	34(20.61)	22(13.33)	56(33.94)

Data in table 6 shows that a large majority of the respondents 148(89.70%) Frequently using IEEE/IEE database, followed by 138 (83.64%) respondents preferred Access Engineering, 88(53.33%) respondents using J-Gate Consortia, 56 (33.94%) respondents using Springer Links, 56(33.94%) respondents using Elsevier's Science Direct, 36(21.82%) respondents using ASME journals and 30 (18.18%) respondents using ASCE journals.

Table 7: Criteria of using e-resources.

Sl. No	Criteria	Under-Graduates (B.Tech.)	Post-Graduates (M.Tech.)	Total
1.	Speed of Access	32(19.39)	20(12.12)	52(31.52)
2.	More Information	20(12.12)	14(8.48)	34(20.61)
3.	Easy Access	15(9.09)	10(6.06)	25(15.15)
4.	Reliability	10(6.06)	6(3.64)	16(9.70)
5.	Time Saving	23(13.94)	15(9.09)	38(23.03)
6.	Total	100(60.60)	65(39.40)	165(100)

Table-7 reveals 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 38(23.03%) respondents opined that time saving is the criteria to prefer e-resources, 34(20.61%) respondents feels that more information is the cause to access e-resources, 25(15.15%) respondents said that easy access is the criteria and 16(9.70%) respondents said reliability is the criteria of using e-resources.

Table 8: Problems encountered while accessing the E-Resources.

Sl. No	Problems	Under-Graduates (B.Tech.)	Post-Graduates (M.Tech.)	Total
1.	Lack of Infrastructure Facilities	20(12.12)	12(7.27)	32(19.39)
2.	Limited time to access	34(20.61)	24(14.55)	58(35.15)
3.	Frequently Power off	22(13.33)	12(7.27)	34(20.61)
4.	Low bandwidth Internet	53(32.12)	45(27.27)	98(59.39)
5.	Downloading Problems	90(54.55)	60(36.36)	150(90.91)
6.	If any….	8(4.85)	4(2.42)	12(7.27)

The above table-8 shows that majority of the respondents 150(90.91%) feels that download problem is major issue in accessing e-resources, followed by 98(59.39%) of respondents said that low bandwidth Internet is the issue in the using the e-resources, 58(35.15%) feel limited time to access, 34(20.61%) Frequently Power off is the barrier to access the resources respectively.

Table 9: Level of Satisfaction on E-Resources.

Sl. No	Satisfaction	Under-Graduates (B.Tech.)	Post-Graduates (M.Tech.)	Total
1.	Highly Satisfied	12(7.27)	8(4.85)	20(12.12)
2.	Satisfied	69(41.82)	45(27.27)	114(69.09)
3.	Not satisfied	19(11.52)	12(7.27)	31(18.79)
4.	Total	100(60.60)	65(39.40)	165(100)

Table-9 shows that a large majority of the respondents 114(69.09%) were satisfied with the availability of e-resources in library, followed by 31(18.79%) respondents were not satisfied and 20(12.12%) respondents were highly satisfied. This table shows that the importance of e-resources and its need of student community 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 131 (79.39%) are using electronic resources and only 34 (20.61%) 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. A majority of the respondents 63 (47.27%) using of e-resources by weekly, followed by 73 (44.24%) respondents using daily, 10(6.06%) respondents using monthly and 4(2.42%) respondents using of e-resources rarely. It is a good sign. It shows that the e-resources very essential in academic field.
3. This study shows that 78 respondents (38.18%) opinions that they are using e-resources for Project-work, followed by 53(32.12%) respondents Said that they are using e-resources for Examination, 34(20.61%) respondents Said that they are using for subject knowledge, 15 (9.09%) respondents Said they are using e-resources for Entertainment.
4. A majority of the respondents 137 (83.03%) preferred e-journals as their primary e-resources, followed by 103(62.42%) respondents preferred e-books, 65(39.39%) respondents preferred OPAC, 56(33.94%) respondents preferred e-theses, 42(25.45%) respondents preferred e-news papers, 33(20%) respondents preferred e-magazines.
5. The study found that a majority of the respondents 148(89.70%) Frequently using IEEE/IEE database, followed by 138 (83.64%) respondents preferred Access Engineering, 88(53.33%) respondents using J-Gate Consortia, 56 (33.94%) respondents using Springer Links, 56(33.94%) respondents using Elsevier's Science Direct, 36(21.82%) respondents using ASME journals and 30 (18.18%) respondents using ASCE journals.
6. This study shows that 150(90.91%) feels that download problem is major issue in accessing e-resources, followed by 98(59.39%) of respondents said that low bandwidth Internet is the issue in the using the e-resources, 58(35.15%) feel limited time to access, 34(20.61%) Frequently Power off is the barrier to access the resources respectively.
7. It is observed that a large majority of the respondents 114(69.09%) were satisfied with the availability of e-resources in library, followed by 31(18.79%) respondents were not satisfied and 20(12.12%) respondents were highly satisfied on e-resources available in their library.

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 student 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. 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.

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. 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.

3. Bhatt, Sunil and Rana, Madan Singh (2011). E-Information Usage Among Engineering Academics in India with Special Reference to Rajasthan State, *Library Hi Tech*, Vol.29 (3), 496-511.

4. Mulla, KR (2011). Use of Electronic Resources by Faculty Members in HKBK College of Engineering: A Survey, *Library Philosophy & Practice, Bangalore, India*,50-56

5. Okorie, C.N. & I.O. Agboola (2012). Availability and use of electronic resources in Agricultural University Libraries, *Pacific Northwest Library Association* 76(4),19-25

6. Sundareswari,S(2013). Role of E- Resources in the Engineering College Libraries, *International Journal of Advanced Research in Computer Science and Software Engineering*, Vol.3 (2),415-419.

7. Thanuskodi, S. (2012). Electronic information sources and services in Anna University Libraries in Tamil Nadu: A study. *International Journal of Library Science* 1(3), 43-49.

8. Tyagi, Sunil (2012). Browsing of E-Journals by Engineering Faculty**,** *Science & Technology Librarianship, University of Florida, Marston Science Library, Florida*, Issue (61), 7-17.

9. Venkateswarlu.P and Chandrasekhara Rao. V (2016) Use of Electronic Resources in Engineering College Libraries in Hyderabad, National Conference on *Librarianship in the Contemporary World in the context of Emerging Technologies'*,132-34

10. http://www.Osmania.ac.in/ /library/resources.html. accessed on 10/12/2017.