KNOWLEDGE, ACCESS AND EFFECTIVE USE OF E-RESOURCES BY THE STUDENTS OF KAKATIYA INSTITUTE OF TECHNOLOGY AND SCIENCE (KITS), WARANGAL ,TELANGANA STATE–A CASE STUDY

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

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

Abstract

Electronic resources are playing a very important role in every field of knowledge. The LICs are also using more ICT knowledge in dissemination knowledge to the users. The study mainly focused on usage of e-resources by the students of KITS College Library, Warangal. A large majority 62% of students expressed that they are using e-resources for study and preparing Project reports, 40% students are using e-resources. A large majority of the students (86%) preferred e-journals as their primary e-resources, 76% students using Internet, 72% students using Electronic Databases and 63% students are using Electronic Books. A majority 92% students using IEEE Journals for their study.

Keywords: ICT, E- Resources, E- Journals, E-Books, E-Databases, Usage of E-Resources.

Introduction about ICT, E-Resources:
Information and Communication Technology (ICT) is widely considered as the most important revolution humankind has experienced since the industrial revolution and the development of movable type printing techniques. A country's development depends on the extent of use, speed of access, and skilled application of ICT systems. Electronic Resources are publicly available resources, which can be accessed via a 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.

Meaning: Material consisting of data or computer programs encoded for reading and manipulation by a computer by the use of peripheral device directly connected to the computer (or) remotely via a network such as the internet (AACR 2) the category

includes software applications, electronic texts, bibliographic databases, etc.

The arrival of the current information technology has facilitated in the electronic storage and transmission of recorded knowledge. Connecting of computers with tale communication has revolutionized the growth of information systems, commercial vendors of information and networks, new challenges and opportunities are rising due to information explosions, financial crisis, and price like of the national and international journal, fluctuations in currency rate, and integrations of new information technologies and ever increasing user's demand.

A Profile of Kakatiya Institute of Technology & Science (KITS), Warangal: The Kakatiya institute of Technology & Science (KITS) Sponsored by Ekasila Education Society. The Institute was established in 1980. It is approved by AICTE, New Delhi and affiliated to Kakatiya University, Warangal. The UGC, New Delhi and Kakatiya University Warangal have granted Autonomous status to KITS WARANGAL in 2014-15. It is rated now as one of the "AAA" Graded Engineering Colleges in India and placed among the top 50 private engineering colleges in India.

KITS Central Library A Profile: The Central Library supports to the teaching and learning program of the institute. It provides reading & lending facility to the users. It has a rich collection of 64,862 books with 13455 Titles, Back Volumes, Pamphlets, Standards, CD-ROM. The library subscribed 106 National & International Print Journals. The Digital Library has campus LAN facility. Computer Center is connected to web server. 30 systems are installed for browsing. The Library subscribed the data bases such as AICTE-INDEST- IEEE, ACE, ASCE, ASME, SPRINGER, ASTM(DL), J-GATE(E&T), and EBSCO. J-GATE (SMS), ELSEVIER around 6500 full text on line journals is available. The NPTEL Laboratory has procured a hard disk from IIT Madras contains 488 Web courses & 690 Video courses. The lab is furnished with a DLP projector and screen with 60 seating capacity to have a video class.

Availability of E-Recourses

Sl.No.	Name	Subject	E-Content
1	ACCESS ENGINEERING (McGraw-Hill)	Engineering	622Handbooks, Monographs, Text Books in 15 Major subject areas. Dictionary with 100000 entries
2	American Society of Civil Engineers (ASCE)	Civil Engineering	36 e-Journals (Back file access since 1983)
3	American Society of Civil Engineers (ASME)	Mechanical Engineering.	29 e-Journals (Back file access since 2000)
4	American Society for Testing Materials(DL) – ASTM	Engineering	8 e-Journals Over 1700 e-Books, 13000 Journal articles

5	ELSEVIER-Science Direct	Engineering & Sciences	275 Journals (Back file access from 2000 onwards)
6	Institute of Electrical and Electronics Engineers (IEEE)	Engineering	169 e-Journals (Back file access since 2005)
7	J-GATE (Engineering & Technology)	Engineering & Technology	4700 indexed 1700 Free full text
8	J-GATE (Social & Management Sciences)	Management	6700 indexed 2000 Free full text
9	SPRINGER LINKS	Electrical, Electronics	149 e-Journals (Back file access since 1997)
10	EBSCO	Management	2466 e-Journals & Magazines
11	NPTEL	Engineering & Sciences	488 Web Courses & 690 Video Courses

Source: Primary data collected by the researcher

Literature Review:

1. Anjaiah, M 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.

2. 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.

3. 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.

4. 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.

5. Ekwelem, Okafor and Ukwoma (2009) described information sources that are obtainable and can be accessed electronically through such computer networked facilities as online library catalogues, the internet, the World Wide Web and digital libraries. EIS have increasingly become an invaluable asset in education, research, teaching and learning. EIS have transformed the conduct of research and

teaching in universities by allowing faculty members a wide range of opportunity for accessing accurate and timely information on various subjects.

6. Aramide and Bello (2009) stated the three major migrations that have occurred in library academic services: from printed resources to online electronic data bases; from CD-ROM data bases to on line internet access to bibliographic and full- text or full image data base.

7. 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, some of the objectives are made:

1. To know the Knowledge and Awareness of students on e-resources.
2. To know the frequency of visiting the library by the users.
3. To know the use of different types of electronic resources.
4. To know the purpose of using of electronic resources.
5. To find out the usage of e-resources in KITS Warangal
6. To identify the problems faced by the users of e-resources
7. To suggest recommendations for the improvement of e-resources.

Methodology: For the present study, the survey method is adopted. A total of 150 Questionnaires were distributed to Final Year Under-Graduate (B.Tech.) and Post-Graduate Students (M.Tech.) of the Kakatiya Institute of Technology Science (KITS), Warangal, and received filled in questionnaires were 125. The response rate is 83.00 percent age.

Data Analysis: The data collected from the students' community are anylised and presented in the form of tables, pie-charts and graphs.

Table 1: Distribution of Questionnaires.

Category	Questionnaires Distributed	Questionnaires Received
UG	90	80 (88%)
PG	60	45 (75%)
Total	150	125 (83%)
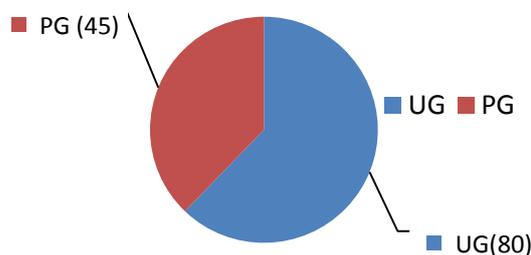
The above Table & graph shows that majority 80 (88%) of the respondents are UG (B.Tech.) students and 45 (75%) are PG (M.Tech.) students. This table also shows that the B-tech students were greater than M.Tech students.

Table 2: Gender-wise Distribution of Respondents.

Course	Questionnaires Received	Male	Female
UG (B.Tech.)	80	58(73%)	22(27%)
PG (M.Tech.)	45	29(65%)	16 (35%)

The above table shows that, In UG programme, out of 80 students, 58(73%) were male respondents and 22 (27%) are females. In PG programme, out of 45 students, 29(65 %) respondents` were male respondents and remaining 16(35%) were females students.

On the whole, the male students were majority.

Table 3: Frequency of Visiting of the Library

Visiting of the Library	Users	Percentage
Every Day	50	40%
Once in 2 days	26	21%
Once in 3 days	34	27%
Once in a week	15	12%
Total	125	100%
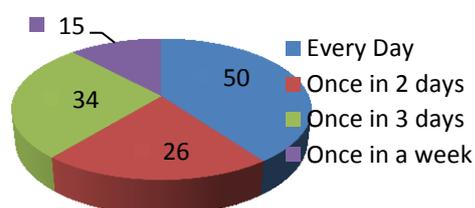
The above table shows that, the majority of respondents 50(40%) were visiting the library every day, following by 34(27%) respondents are visiting once in 3 days, 26(21%) respondents visiting once in 2 days and 15(12%) respondents visiting once in a week respectively. Using the library and visiting the library is a good sign. It shows that, the curiosity of the students to use the library resources.

**Table 4: Awareness of using E-Resources**

User response	Users	Percentage
Excellent	34	27%
Good	75	60%
Average	12	10%
Poor	4	3%
Total	125	100%
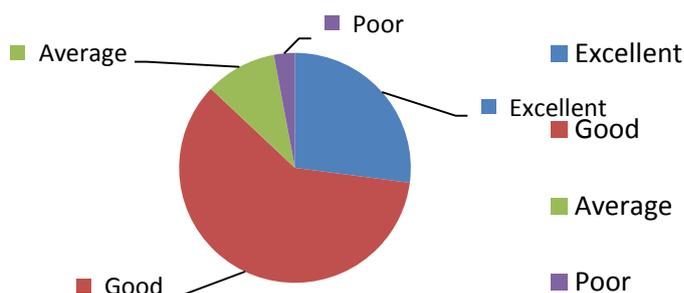
The above table and pie-chart shows that, a majority respondents 75 (60%) opinion that they had good knowledge on using e-resources, followed by 34 (27%) respondents says that they had excellent knowledge in using, 12 (10%) respondents feels that they had average knowledge and 4 (3%) respondents says they had poor knowledge in using e-resources.

Table 5: Purpose of using E-Resources

| Purpose for using E-Resources	Users	Percentage
For Subject Knowledge	20	16%
For Examination	19	15%
For Project-work	50	40%
For Knowing the Communication	12	10%
Self- Improvement	24	19%
Total	125	100%
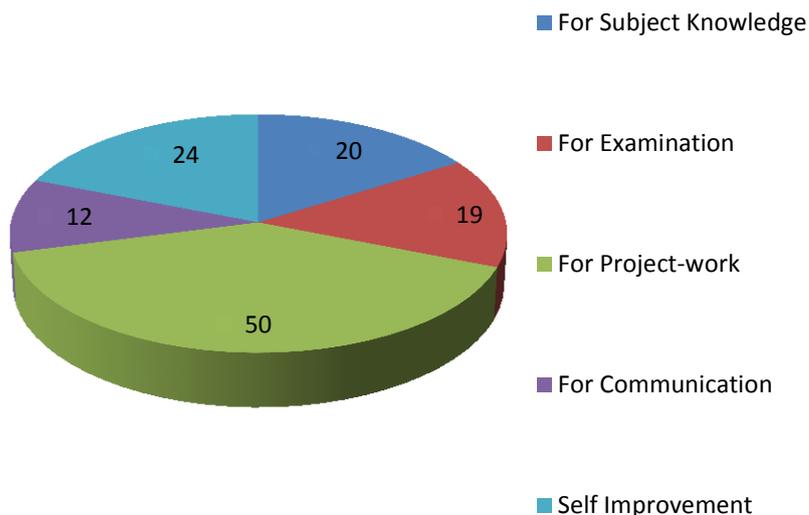
The above table shows that, a majority of the respondents 50 (40%) opinions that they are using e-resources for preparing the Project-works, followed by 24 (19%) respondents

says that they are using for Self- Improvement, 20 (16%) respondents says that they are using for subject knowledge, 19 (15%) respondents says, they are using for e-resources for examination purpose and 12 (10%) says that they are using e-resources for knowing the communication.

Table 6: How Often Do You Use E-Resources

Using E-Resources	Users	Percentage
Daily	48	39%
Weekly	63	51%
Monthly	12	10%
Rarely	2	2%
Total	125	100%
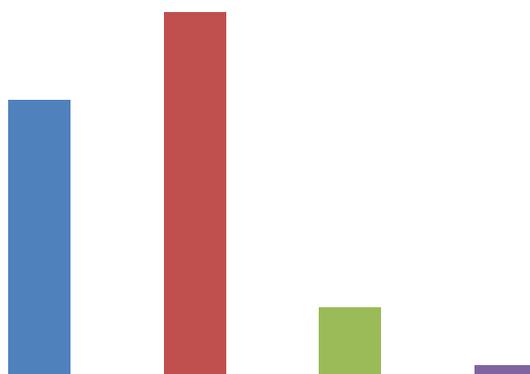
Data presented in the above table explains that, a majority of the respondents 63 (51%) using of e-resources for a week, followed by 48 (39%) respondents using daily, 12 (10%) respondents using monthly and a very negligible 2 (2%) respondents using of e-resources rarely.

Table 7**:** Use of E-Resources in the library:

Nature of E-Resources	Users	%
Electronic Journals	107	86%
Electronic Books	79	63%
CD-ROM/DVD's	51	41%
Electronic Databases	90	72%
Internet	95	76%
E-Technical Reports	62	50%
OPAC	50	40%
E-News Papers	64	51%

The above table and graph shows that majority of the respondents 107 (86%) preferred e-journals as their primary e-resources, followed by 95 (76%) respondents preferred Internet, 90 (72%) respondents preferred electronic databases, 79 (63%) respondents preferred e-books, 64 (51%) respondents proffered-News Papers, 62 (50%) respondents preferred E-Technical Reports, 51 (41%) respondents prefer CD-ROMs, 50 (40%) respondents preferred OPAC.

Table 8: Criteria for using E-Resources

Criteria for using E-Resources	Users	Percentage
Speed of Access	44	35%
More Information	21	17%
Easy Access	19	15%
Reliability	9	7%
Time Saving	32	26%
Total	125	100%

The above table shows that, a majority of the respondents 44 (35%) opined that speed of access is the primary criteria to access the e-resources, followed 32 (26%) respondents says that time saving is the criteria to prefer e-resources, 21 (17%) respondents feels that more information is the cause to access e-resources, 19 (15%) respondents says that easy access is the criteria and 9 (7%) respondents says reliability is the criteria of using e-resources.

Table 9: Frequently using e-resources

E-Resources	Users	Percentage
ASCE journals	22	18%
ASME journals	28	22%
Elsevier's Science Direct	42	34%
J-Gate Consortia	69	55%
IEEE/IEE library online	115	92%
ACCESS Engineering	108	86%
Springer Links	44	35%
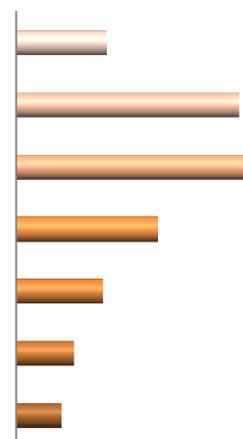
The above table and graph shows that a majority of the respondents 115 (92%) frequently use IEEE/IEE database, followed by 108 (86%) respondents preferred Access Engineering databases, 69 (55%) respondents using J-Gate Consortia, 44 (35%) respondents using Springer Links, 42 (34%) respondents using Elsevier's Science Direct database, 28 (22%) respondents using ASME journals` database and 22 (18%) respondents using ASCE journals.

Table 10: Problems faced while using E-Resources

Problems	Users	Percentage
Poor infrastructure facilities	16	13%
Limited time to access	17	14%
Frequently power failure	10	8%
Low band width internet	31	25%
Downloading Problems	44	35%
others	6	5%
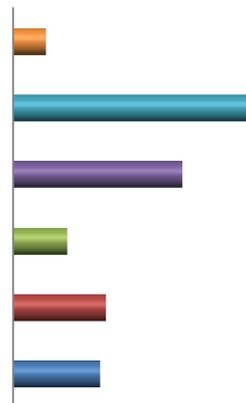
The above table and graph shows that, a majority of the respondents 44 (35%) felt that the downloading problem is a major issue for accessing e-resources, followed by 31(25%) of respondents says that low bandwidth of internet is the issue in the using the e-resources, 17(14%) feel limited time to access, 16(13%) feel lack of infrastructure is the barrier to access the resources respectively.

Table 11: Level of Satisfaction on E-Resources

User Response	Users	Percentage
Highly Satisfied	14	11%
Satisfied	67	54%
Somewhat satisfied	20	16%
Not satisfied	24	19%
Total	125	100%
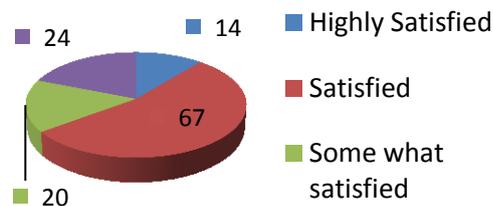
The above table no.11 and Pie-Chart shows that, a majority of respondents 67 (54%) respondents were satisfied on e-resources which are available in the library, followed by 24 (19%) respondents were not satisfied with the available e-resources, 20 (16%) respondents were somewhat satisfied, 14(11%) respondents were highly satisfied on e-resources available in the library.

Findings: From the above study, the following findings were found.

1. It is observed that majority of the respondents 63 (51%) using of e-resources by weekly, followed by 48 (39%) respondents using daily, 12 (10%) respondents using monthly and 2 (2%) respondents using of e-resources rarely.
2. A majority of the respondents 44 (35%) opinion that speed of access is the primary criteria to access the e-resources, followed 32 (26%) respondents says that time saving is the criteria to prefer e-resources, 21 (17%) respondents feels that more information is the cause to access e-resources,19 (15%) respondents says that easy access is the criteria and 9 (7%) respondents says reliability is the criteria of using e-resources.
3. A majority of the respondents 50 (40%) opinions that they are using e-resources for Project-work, followed by 24 (19%) respondents says that they are using for Self Improvement, 20 (16%) respondents says that they are using for subject knowledge, 19 (15%) respondents says they are using for Examination and 12 (10%) says that they are using e-resources for Communication.
4. A majority of the respondents 115 (92%) Frequently access the data base IEEE/IEE, followed by 108 (86%) respondents preferred Access Engineering, 69 (55%) respondents using J-Gate Consortia, 44 (35%) respondents using Springer Links, 42 (34%) respondents using Elsevier's Science Direct, 28 (22%) respondents using ASME journals and 22 (18%) respondents using ASCE journals.
5. The study shows that, majority of respondents 67 (54%) were satisfied with e-resources available in their library, followed by 24 (19%) respondents were not satisfied with the available e-resources, 20 (16%) respondents were somewhat satisfied and 14(11%) respondents were highly satisfied on e-resources available in their library.

Conclusion:

This study showed that 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 revealed that majority of respondents are dependent 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 also. It is revealed that practical uses of e-resources are more important in the engineering colleges for the research, so to satisfy the needs of users library professionals should subscribe more number of e-resources in engineering college libraries

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

1. There is urgent need to create awareness on e-resources to users.
2. There is need to conduct orientation /training and information literacy programmes by the college at regular intervals, so that more users can improve their proficiency in e-resources use for academic purpose.
3. There is need to avoid the downloading problems of articles from INDEST-AICTE Consortium.
4. Due to non-availability of e-resources from the consortium, the library personnel or HRM should be taken initiation to procure the e-resources.

5. There is urgent need to acquire more e-resources to the library to fulfill desires of the students of the College.
6. There is urgent need provide ICT Infrastructure to the library to better serve to students.
7. There is need to strengthen the library with full computer terminals/nodes to avoid the delay of the students.
8. There is also urgent need to fix UPS to escape from the frequent power off.
9. The library should procure more –e-books instead of e-Journals, because, students always depends upon Printed Books
10. Finally, the students must be trained with ICT knowledge to utilize more e-resources

References:

*   Adeleke, A.A. (2005). Use of Librar1y Resources by Academic Staff of Nigerian polytechnics, *Journal of Library Science* 12(5), pp.15-24.
*   Aramide, K. A., & Bello, T. (2009). Accessing Electronic Databases For Curriculum Delivery In Schools: Implications For School Library Media Specialists. Paper presented at the *24ᵗʰ Annual Conference of the Nigerian School Library Association*, held at the Multipurpose Hall, University of Ibadan.pp.145-55
*   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), pp.524-531.
*   Ekwelem, V. O., Okafor, V. N., & Ukwuoma, S. C. (2009). Students' Use Of Electronic Information Sources at the University of Nigeria, Nsukka. African Journal of Library, Archival, and Information Science.7 (1), pp.34-45.
*   Jaspal Kaur (2012). Use of electronic resources by teachers of degree colleges in Chandigarh. *Kelpro Bulletin*, Vol.3, No.1,pp.23-7
*   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.
*   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), 15-19.
*   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.
*   http://www.isical.ac.in/~serial/consortia/CBSOR-11.pdf accessed on 11/07/2017
*   http://www.kitsw.ac.in/Library/Resources.html accessed on 10/08/2017
*   www.wikipedia.org.