

Awareness and Use of e-resources among the Users of University Engineering College Libraries in Andhra Pradesh

Karnati Srikanth

Research Scholar
Bharathiar University
Coimbatore-641046 Tamil Nadu
e-mail: karnatisrikanth@yahoo.com

Dr. K.Surendra Babu

University Librarian I/c
Sri Venkateswara University
irupati-517502 Andhra Pradesh
e-mail: surendrasvul@gmail.com

***Abstract** - E-Resources, available in different file formats and in multi-variety forms. This phenomenon is due to the rapid advancement of information technologies, including the Internet and digitizing techniques. The extent of e-resources (including e-journals, e-books, etc.) is spiraling, although no exact number is available. These changes significantly enlarge the size of the electronic resources pool. Electronic resources have become one of the most important aspects of a digital library. The study reveals that most of respondents (58.87%) are males and also majority of the users (65.44%) are visiting the library daily. The study shows that (82.96%) respondents replied that they learnt the use of e-resources available in their libraries through self-learning and Over a fourth of the respondents (29.66%) replied that they have satisfied with e-books*

Keywords: E-resources, Search Engines, Search Strategy, Awareness of e-resources, Learning Modes

Introduction

Information and Communication Technologies have changed the world of scholarship at large. ICT is an electronic means of capturing, processing, storing and communicating information. The traditional libraries consists of information resources in printed form and its task is to collect, process, store and disseminate information for the purpose of reading, teaching and consultation. The information, largely the parental format is the widely accepted for providing information at library to satisfy the needs of library users. Today, this is being replaced by electronic or digital resources that meet the needs of the users. Electronic access to the resources in Engineering Educational Institutions is rapidly increasing. E-resources are now-a-day's a tool for study, learning and research. Electronic resources can provide many advantages over traditional print-based resources. Now a day's information has gone through radical changes in the way it is gathered, stored, organized, accessed, retrieved and consumed. A engineering college users must know how to find, select and use electronic resources in a wide range of information. As per AICTE norms, a number of electronic resources have been installed in Colleges for training and increased use of electronic resources in a number of engineering institutions.

Engineering College Libraries

The library is admired as the 'nerve centre of knowledge', the centre of bookish life, the affection and body of the bookish institution. This agency that discoveries and developments are absolutely fabricated in the library and after activated in the laboratory. It occupies an important abode in the avant-garde apprenticeship arrangement and maintains the big-ticket educational assets of the bookish institutions. It is the albatross of the agents of engineering and abstruse libraries to accommodate appropriate advice at the appropriate time to appropriate user to save the time of the user. The libraries are primarily amenable for the alternative and accumulating of actual acceptable for libraries, canning and alignment of the accumulating and broadcasting of the actual or the information, which it contains. Libraries are arena an important role in comestible and acceptable the advice requirements of ancestor institutions. For the efficient, able and accurate development of advice assets and services, the libraries charge to be advised and developed systematically. University Engineering college libraries like any other college libraries are affiliated to the institutions that contribute primarily to the teaching and learning process by providing various kinds of information and learning resources to the clientele for their successful persuasion of the course programs offered by the institution.

Resources in Engineering College Libraries

The resources in any engineering college library can be broadly grouped into two i.e. print and electronic formats. The following are the some of the examples of Print Form-Books, Hardcopies of Periodicals, Back Volumes of Periodicals, Question Papers, Reports, Directories, Project Reports, Newspapers, Newsletters, etc.,

For various reasons, the engineering college libraries are acquiring and subscribing electronic resources besides print versions, due to the availability of information and communication technology. The electronic resources have a variety of advantages which provoked the library professionals to incorporate them in library collections. The following are the some of the resources in electronic format; E-Databases, E-Journals, E-Magazines, E-Books, E-Lectures, E-Audios, E-Music, E-News, E-Images, E-Subject Guides, E-Newsletter, E-Conference Proceedings, E-Reports, E-Studies, E-Interesting Development and E-Directories.

Types of e-resources

Any information source available in electronic format which can be used to meet the information requirements of users is termed as e-resource. There are many types of e-resources, E-Resources and Digital services e-journals or electronic journals which are electronic equivalents of print journals/serials. e-books or electronic books which are nothing but monographs available for electronic access like e-journals but in many cases backed by a digital rights management system. E-databases which are full text, bibliographic, numeric etc. databases holding a wide variety of information in one product/platform. Libraries do have variations of these products before the advent of web but the web access of these resources further improved the functionality of each of these products in a variety of ways to make it more appealing to the information clientele of today.

Evaluation of e-resources

Evaluation of resources assumes a greater importance due to the large e-resources such as journals, database, e-text, etc. available on the net. Authority currency, intended audience,

ease of use accuracy etc., are some responsible criteria for evaluation of resources. Moreover, extensiveness of the content, accessibility, quality of technical support, cost, conditions of licensing agreement are also other responsible factors which should take into account.

Role of e-resources in dissemination of knowledge

The role of e-resources is disseminating knowledge with a certain aim. They excel in furnishing information of current value and interest to the user community. Today resources are considered as the most important components in information communication process. A strong e-book/ e-journal base satisfies the requirements of maximum number of users. Efficiency in the management of the e-resources unit is of paramount importance without which utmost levels of benefits cannot be achieved. It is thus, desirable that the e-resources unit should be streamlined and managed more efficiently to improve the levels of benefits accruing from journals and research papers.

Review of Literature:

Rogers (1995) declared that the electronic journals additionally accepted ASE-journals accept adapted the way bookish advice is broadcast throughout the world, abnormally in the fields of “hard sciences” where, on average, abounding scientists could be declared as aboriginal adopters of innovation.

Surendra Babu and others (2009) The Internet is paving way for a great leap in the field of higher education and research. This paper is an attempt to investigate the use of Internet resources by the academic community of the Sri Venkateswara University (SVU), Tirupati. For this purpose a survey was carried out using questionnaire tool. The results show that users from all branches of science are making use of Internet resources better than social sciences and humanities. Providing training to its users at the beginning of each semester will improve its use and reduce the problems faced by the library users. The paper highlighted the various problems and issues involved in handling digital library and has given suggestions to improve the library services to meet the demands of the users.

Anil Kumar and Pulla Reddy (2014) The e-journals available in University libraries of Andhra Pradesh are UGC-INFONET journals, open access journals and the journals subscribed by the libraries on their own. The present study is aimed to study the use of e-journals by the research scholars in the libraries of Sri Venkateswara University (SVU), Andhra University (AU) and University of Hyderabad (UH). It is intended to assess the type of e-journals used, purpose for which they are used, amount of time spent in using them, problems in accessing e-journals, search methods used in accessing them, satisfaction with print and e-journals, adequacy of e-journals and training obtained in accessing them.

Singh and Khan (2015) have state that Information Communication Technologies (ICT) have tossed forward new difficulties before the library experts. The innovation greatly affects the administrations of the libraries. It has been watched that students in all the three establishments use sites, interpersonal interaction locales more than email, while the post graduates incline toward library sites and current e-diaries over online journals, social destinations and email.

Objectives of the Study:

The following are the objectives of the study

- To identify what types of electronic resources are provided in the libraries of the university engineering college libraries in Andhra Pradesh?
- To identify the electronic services provided to users of electronic resources in the university engineering college libraries in Andhra Pradesh.
- To determine if information seekers are aware of the existence of 'electronic resources in the university' libraries.
- To determine the extent of use of these resources by patrons of the university engineering college libraries in Andhra Pradesh.

Scope and Methodology

The main objective of this study and investigate the Awareness and Use of e-resources among the Users of University Engineering College Libraries in Andhra Pradesh. The study was undertaken to know the levels of awareness and use of e-resources by the Engineering students and Research scholars, among the Nine Government Engineering colleges which is affiliated to JNTU, Anantapuramu and JNTU, Kakinada. (ANU College of Engineering & Technology – Guntur, AU College of Engineering – Visakhapatnam, JNTU College of Engineering – Anantapuramu, JNTU College of Engineering – Kakinada, JNTU College of Engineering – Pulivendula, JNTU College of Engineering – Vizianagaram, SKU College of Engineering & Technology – Anantapur, Sri PadmavatiMahilaVisvavidyalayam School of Engg & Tech – Tirupati, and SVU College of Engineering – Tirupati.). Questionnaires were distributed to the users personally to engineering college students in university libraries for collecting data required for the study. In total, seven hundred questionnaires were distributed to the respondents in seven universities. Finally, the researcher has received out of 654 usable questionnaires from the respondents collected from them by giving sufficient time to fill up the questionnaire.

Data Analysis:

Gender-wise

The distribution of respondents according to their gender, it is evident from table-1 that more than half of the respondents are male 385 (58.87%) and remaining are female 269 (41.13%).

Table-1: Distribution of respondents according to their Gender

Gender	Number	Percentage
Male	385	58.87
Female	269	41.13
Total	654	100

Category of users:

Table-2 indicates that the majority of the respondents 498 (87.61%) are B.Tech. students, followed by M.Tech. students 75(11.47%); Faculty members 69 (10.55%) and very few research scholars with 12 (1.83%).

Table-2 Distribution of respondents according to their category

Category of users	Number	Percentage
Faculty	69	10.55
Research Scholars	12	1.83
B.Tech Students	498	76.15
M.Tech Students	75	11.47
Total	654	100

Library Visit

A question has been posed to the users to know their frequency of library visit. The replies given by them are shown in Table-3

Table-3 Distribution of users according to their frequency of library visit

Frequency	Number	Percentage
Daily	428	65.44
Once in a week	96	14.68
Twice in a month	29	4.43
Once in a month	22	3.36
Occasionally	79	12.08
Total	654	100

It is evident from Table-3 that majority of the users (65.44%) visit the library daily, 14.68% of them once in a week, 12.08% of them occasionally, 4.43% of them twice in a month, and the remaining of them (3.36%) once in a month. It concluded that majority of the users (65.44%) are visiting the library daily.

Purpose of visit to library

The users were asked to the users to know their purpose of visit to library. The replies given by them are shown in Tabl-4.

Tabl-4. Distribution of users according to the purpose of library visit

Purpose	Number	Percentage
Study purpose	497	75.99
Research	216	33.03
Preparing lectures	149	22.78
Preparing assignments	105	16.06
To update knowledge.	124	18.96
Preparing for seminars, symposia, and conferences etc.	98	6.42
Preparing for competitive examinations	96	14.68
Entertainment	21	3.21

(Note: Users are permitted to tick more than one answer)

It is evident from Table-4 that majority of the users (75.99%) are visiting their respective libraries for study purpose, 33.03% of them for research, 22.78% of them for preparing lectures, 18.96% of them to update knowledge, 16.06% of them for preparing assignments, 14.68% of them for preparing competitive examinations, 6.42% of them for preparing for seminars, synopsis, and conferences etc., and the remaining of them (3.21%) for

entertainment purpose. It can be concluded that majority of the users (75.99%) are visiting their respective libraries for study purpose.

Purpose of using internet

A question has been put to the users to know the purpose for which they use Internet. The replies given by them are shown in Table-5

Table-5 Distribution of users according to their purpose of using Internet

Purpose	Number	Percentage
General information	162	24.77
E-mail	465	71.10
Access to e-resources	105	16.06
Research	96	14.68
Access E-learning materials	195	29.82
Social networking sites	123	18.81

(Note: Users are permitted to tick more than one answer)

It is evident from Table-5 that majority of the users (71.10%) are using Internet for E-mail purpose, 29.82% of them for accessing e-learning materials, 24.77% of them for general information, 18.81% of them for social networking sites, 16.06% of them for accessing to e-resources, and the remaining of them 14.68% of them for research. It can be concluded that majority of the users (71.10%) are using internet for e-mail purpose.

Awareness of e-resources

E-resources are short term for Electronic Resources or electronic information resources. These are collections of information in electronic or digital format that are accessed on an electronic device, such as a mobile phone, computer, etc. These are published resources in electronic versions/format such as encyclopaedias, pamphlets, books, journals, databases, etc. A question has been put to the users to know the awareness of e-resources available in their libraries. The replies given by them are shown in Table-6

Table-6 Distribution of users according to their awareness on e-resources

Reply	Faculty	Research Scholars	B.Tech. Students	M.Tech Students	Grand Total
Yes	56 (81.16 %)	9 (75.00 %)	460(92.93%)	62(79.49%)	587(89.76%)
No	13 (18.84 %)	3 (25.00 %)	35(7.07%)	16(20.51%)	67(10.24%)
Total	69	12	495	78	654

It is evident from Table-6 that most of the users (89.76%) replied that they are aware of the awareness of e-resources available in their libraries, and the remaining of them (10.24%) replied negatively.

Ways of learning the use of e-resources

The users, who are aware of e-resources, were again asked to know the ways from which they learnt the use of e-resources. The replies given by them are shown in Table-7

Table-7 Ways of learning the use of e-resources

Ways	Number	Percentage
Through Self learning	487	82.96
Through Colleagues or friends	376	64.05
Through Teachers	179	30.49
Through Formal Courses	67	11.41
Through Library Training	198	33.73
Through Library Staff	51	8.69

(Note: Users are permitted to tick more than one answer)

It is evident from Table-7 that majority of the users(82.96%) replied that they learnt the use of e-resources available in their libraries through self-learning, followed by colleagues or friends (64.05%), library training (33.73%), teachers (30.49%), formal courses (11.41%) and the remaining of them (8.69%) through library staff. It can be concluded that most of the users have learnt the use e-resources in their libraries.

Availability of e-resources

A question has been put to the users to know the availability of e-resources of their respective libraries. The replies given by them are shown in Table-8

Table-8 Availability of e-resources of their libraries

E-resources	Number	Percentage
E-Books	378	57.8
E-Journals	564	86.24
NPTEL Material	345	52.75
MIT Open Courseware	45	6.88
Databases	367	56.12
Theses/Dissertations	298	45.57

(Note: Users are permitted to tick more than one answer)

It is clear from the Table-8 that most of the users(86.25%)replied that the e-journals are available in the library followed by books (57.80%), databases (56.12 %), NPTEL materials (52.75%), theses and dissertations (45.57%) and MIT open courseware (6.88%).

Level of skills in using e-resources / level of awareness of e-resources

Five ICT tools were identified and analysed on a five point scale such as “Don’t know”, “Beginner”, “Fair Knowledge”, “Expert” and “Very Good”.

A question has been put to the users to know the level of awareness of e-resources. The replies given by them are shown in Table-9

Table-9 Distribution of users according to the level of awareness of various categories of e-resources

Level of Awareness	E-books	E-journals	Online databases	CD-ROM databases	E-theses and dissertations
Don't Know	42(6.42)	31(4.74)	125(19.11)	234(35.78)	134(20.49)
Beginner	136(20.80)	153(23.39)	192(29.36)	190(29.05)	236(36.09)
Fair Knowledge	123(18.81)	234(35.78)	175(26.76)	123(18.81)	105(16.06)
Expert	195(29.82)	101(15.44)	115(17.58)	72(11.01)	81(12.39)
Very Good	158(24.16)	135(20.64)	47(7.19)	35(5.35)	98(14.98)
Total	654(100)	654(100)	654(100)	654(100)	654(100)

It is found from Table-9 that nearly one fourth (24.16%) of respondents are very good in using E-books, followed by e-journals (20.64%), e-theses and dissertations (14.98%), online databases (7.19%) and CD-ROM databases (5.35%). 29.82% of respondents are expert in E-books. It is followed by online databases(17.58%), E-journals (15.44%), E-theses and dissertations (12.39%) and CD-ROM databases (11.01%). 35.78% of respondents have fair knowledge in E-journals. It is followed by online databases (26.76%), E-books and CD-ROM databases (18.81%)and E-theses and dissertations (12.39%). 36.09% of respondents are beginner in E-theses and dissertations,. It is followed by online databases (29.36%), CD-ROM databases (29.05%), E-journals (23.39%) and E-books (20.80). 35.78% of respondents don't know in CD-ROM databases. It is followed by E-theses and dissertations (20.49%),online databases(19.11%), E-books(6.42%) and E-journals(4.72).

Purpose of using of e-resources

Users were asked to know the purpose of e-resources. The replies given by them are shown in Table-10

Table-10 Distribution of users according to the purpose using e-resources

Purpose	Number	Percentage
Education purpose	354	54.13
To collect information for research work	42	6.42
To prepare research articles	246	37.61
To prepare and present papers in conferences	186	28.44
Project work	123	18.81

(Note: Users are permitted to tick more than one answer)

It is evident from Table-10 over a half of users (54.13%)are using e-resources foreducation purpose, 37.61% of them to for preparing research articles,28.44% of them for preparing and presenting papers in conferences, 18.81% of them for the project work and the remaining of them (6.42%) for collecting information for research work.

Satisfaction with e-resources

A question has been posed to know the satisfaction on level on types of e-resources. The replies given by them are shows in Table-11 Over a fourth of the respondents (29.66%) replied that satisfied on e-books followed by highly satisfied (25.69%),neither satisfied nor dissatisfied (22.32%), dissatisfied (16.06%) and highly dissatisfied (6.27%). Over a third of

the respondents (37.46%) replied that satisfaction on e-journals followed by highly satisfied (30.28%),neither satisfied nor dissatisfied (17.58%), dissatisfied (10.86%) and highly dissatisfied (3.82%).Over a third of the respondents (37.46%) are dissatisfied with online databases followed by neither satisfied nor dissatisfied (26.76%), satisfaction (18.81%), highly dissatisfied (8.26%), and highly satisfied (6.88%). Over a third of the respondents (33.33%) replied that satisfaction on e-learning resources followed by dissatisfied (25.54%), highly satisfied (20.49%),highly dissatisfied (12.69%) and neither satisfied nor dissatisfied (7.95%). Over a third of the respondents (37.61%) replied that satisfaction on e-theses and dissertations followed by dissatisfied (24.16%),neither satisfied nor dissatisfied (16.06%)highly dissatisfied (13.91%)and highly satisfied (8.26%).

Table-11 Distribution of users according to their satisfaction with e-resources

Level	E-books	E-journals	Online databases	E-learning Resources	E-theses and dissertations
Highly satisfied	168(25.69)	198(30.28)	45(6.88)	134(20.49)	54(8.26)
Satisfied	194(29.66)	245(37.46)	123(18.81)	218(33.33)	246(37.61)
Neither Satisfied Nor Dissatisfied	146(22.32)	115(17.58)	175(26.76)	52(7.95)	105(16.06)
Dissatisfied	105(16.06)	71(10.86)	257(39.30)	167(25.54)	158(24.16)
Highly Dissatisfied	41(6.27)	25(3.82)	54(8.26)	83(12.69)	91(13.91)
Total	654(100)	654(100)	654(100)	654(100)	654(100)

Satisfaction level with infrastructural facilities for accessing e-resources

A question has been posed to know the satisfaction on level on e-resources facilities. The replies given by them are shows in Table-12

Table-12. Distribution of users according to their satisfaction with infrastructural facilities for accessing e-resources

Level	E-learning	Percentage
Highly satisfied	98	17.25
Satisfied	236	41.55
Neither Satisfied Nor Dissatisfied	165	29.05
Dissatisfied	51	8.98
Highly Dissatisfied	18	3.17
Total	568	100.00

It is clear from Table-12 a high percentage of the respondents (41.55%) replied that they are satisfied with infrastructural facilities for accessing e-resources followed by 29.05% of them are neither satisfied nor dissatisfied, 17.25% of they are highly satisfied, 8.98% of them are dissatisfied and the remaining 3.17% them are highly dissatisfied.

Findings and Conclusions

- Majority of the users (65.44%) visit the library daily followed by once in a week (14.68%) and occasionally (12.08%).

- Over a third of the users (38.38%) are spending 1-3 hours per week in the library, followed by 7 hours per week (17.43%) and less than one hour per week (16.06%).
- Majority of the users (75.99%) are visiting their respective libraries for study purpose.
- Majority of the users (75.69%) are browsing Internet. Among them high percentage of the user are browsing the internet for the purpose of email.
- Most of the users (89.76%) replied that they are aware of e-resources available in their libraries and the remaining of them (10.24%) replied negatively.
- There are no significant differences with regard to the awareness of e-resources available in their libraries among the various categories of users namely of Faculty and Research scholars, Faculty and M. Tech students, R.S. and B. Tech students and R.S. and M. Tech students.
- Majority of the users (82.96%) replied that they learnt the use of e-resources available in their libraries through self-learning followed by colleagues or friends (64.05%), library training (33.73%) and teachers (30.49%).
- Most of the users (86.25%) replied that the e-journals available in their libraries. followed by e-books (57.80%), databases (56.12 %), NPTEL materials (52.75%), theses and dissertations (45.57%) and MIT open courseware (6.88%).
- Over a half of the users (54.13%) are using e-resources for education purpose followed by 37.61% of them for preparing research articles.
- Over a fourth of the respondents (29.66%) replied that they have satisfied with e-books followed by highly satisfied (25.69%), neither satisfied nor dissatisfied (22.32%), dissatisfied (16.06%) and highly dissatisfied (6.27%).

The study is restricted to know the “a survey on the awareness and use of e-resources among the users of university engineering college libraries in Andhra Pradesh”. Further research can also be explored in all engineering colleges including private and public in the national level. This type of research is very much use full to know to the availability and use of e-resources in engineering colleges and their impact on engineering education. Hence the researcher has under taken such study given conclusions and recommendations, which will be very useful to implement and provide good library services to the user community

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