

Impact of Electronic Information Seeking Behaviour of Users of Selected Engineering Colleges Affiliated to Anna University in Thiruvallur District: A Case Study

M.Saravanan¹ and S. Mohammed Esmail²

¹Ph.D., Research Scholar, Bharathiar University, Coimbatore., Tamil Nadu, India

²Associate Professor, Dept. of Library & Information Science, Annamalai University, Tamil Nadu, India
E-mail: rmdlibrary@yahoo.in, mesmailau@yahoo.in

Abstract - The rapidly change on information and communication technology in the field of library and information science. The library is switching over to traditional sources into adopted electronics sources via latest technology since past 10 years. Now a day's e-resources are significance role in engineering and technology for provide information for academic and research, at the same time some road block to access of e-resources. The study is required to developing and improving the resource usage for maximum level without the any barrier. This paper discusses the impact of electronics information seeking habits of user of selected engineering colleges in Thiruvallur district. This Study found that (98.55%) respondents accessing e-resources, (99.05%) respondents satisfying the services of e-resources.(97.17%) respondents are aware about e-resources. and also found that e-resources were very dominate role to provide information to users community.

Keyword: *Electronic Resources; Types of Electronic resources; Electronic resources subscription policy; frequency of accessing*

I. INTRODUCTION

Electronic resources represent an increasingly important component of the collection building activities of libraries. "Electronic resources" refer to those materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device. Tablet, laptop, Book kindle, etc they may either be accessed remotely via the Internet or locally.

Some of the most frequently encountered types are:

- i) E-journals
- ii) E-books
- iii) Full-text (aggregated) databases
- iv) Indexing and abstracting databases
- v) Reference databases (biographies, dictionaries, directories, encyclopedias, etc.)
- vi) Numeric and statistical databases
- vii) E-images
- viii) E-audio/visual resources

Electronic resources whether acquired via purchase or license, free from the web, born digital or multiple format materials (e.g., CD-ROM combined with a book). Electronic resources present a number of challenges not

encountered with the selection and acquisition of traditional analog materials and it is advisable for the academic library to develop clear policies and processes for the selection and management of such resources. This will provide clarity to staff and ensure that electronic resources within the library are developed with due consideration of cost, technical feasibility, licensing, access and preservation requirements, and constraints. The purpose of this paper is to help develop an awareness of the key issues that every library will need to consider and address in developing an e-portfolio. This paper is not intended to be exhaustive, but is written to provide a reasonable and informed introduction to the wide range of issues presented by electronic resources. such as frequency of accessing of e-resources, importance of e-resources, level of benefit to users, challenges to access full swing, etc.

The following aspects/policy to be followed to implement e-resources services to the library

Technical feasibility - including, but not limited to:

- a) Availability, e.g., remote access, stand-alone access.
- b) Authentication, e.g., IP [Internet Protocol] filtering or login password.
- c) Hardware and software compatibility and capability.
- d) Storage and maintenance, e.g., remote hosting v. local hosting.
- e) Platforms which facilitate access to e-resources.

Functionality and reliability – including but not limited to:

- a) Search and retrieval functionality, e.g., truncation, browsing, search history, Transliteration.
- b) Exporting and downloading, e.g., printing, e-mail, downloading to a machine, and downloading to an electronic device.
- c) Sorting and ranking abilities for database results. For example: author, title, date, relevancy, facets, etc.
- d) Interface, e.g., system intuitiveness, navigation, help and tutorials.
- e) Integration.
- f) Reliability and availability, e.g., response times, 24/7 access.

Vendor support – including but not limited to:

- a) User training and support.
- b) Trials and product demonstrations.
- c) Technical support and system notification process.
- d) Statistical reporting.
- e) Customization, e.g., branding.
- f) Provision of bibliographic data, e.g., MARC records.
- g) Data security and archiving policies.

Supply – including but not limited to:

- a) Purchase model, e.g., purchase, subscribe, pay per view, rental.
- b) Pricing models, e.g., selective v. big deal.
- c) Access options, i.e. single user, multiple users.
- d) Archiving and post termination rights.
- e) Maintenance fees.
- f) Cancellation rights.

Licensing – including but not limited to:

- a) Model
- b) Governing laws.
- c) Liability for unauthorized use.
- d) Definition of authorized users.
- e) Definition of authorized sites.
- f) Fair use provision.
- g) Termination.
- h) Refunds.
- i) Period of agreement.
- j) Compliance with the governing laws of the library's or consortium's legal jurisdiction (province, state, country).

The policy should also provide guidance to assist selectors on format preference when faced with the choice of content available in both print and electronic formats.

II. LITRATURE REVIEW

Sivaraj and Esmail(2007)¹ demonstrated and elaborated the various aspect and use of internet use such as frequency of internet use, method used for accessing, purpose of access, problem faced by student and faculty.

Jaspal kaur patia (2011)² discussed that use of electronics sources in colleges in Chandigarh. The result revealed that students and teacher know the impact of e-resources.

Boumarafi, Behdja,(2010)³ made an attempt to determine present status of Electronic Resources at the University of Sharjah Medical Library: An Investigation of Students' Information-Seeking Behavior.The highlighted the importance of e-resources and usage level.

Chiao-Chen Chang, et al, (2009)⁴ conducted survey to examine and predict users' information-seeking intention regarding academic digital library services, using the theory of reasoned action (TRA) and the theory of planned behavior, Data are collected from 224 Taiwanese undergraduate and graduate students to assess the influence of attitude, This study find nature of the user experience in

the digital environment appears to be quite different from the experience of looking through archival boxes or folders, research on the use of academic digital library services is scarce.

CKadli Jayadev and Kumbar, B. D.(2011)⁵ in their study made an attempt to know the focuses on the differences in print media and electronic media, and discusses research findings which show that only a small percentage of the general public prefer to learn by reading. It also states that a survey was used by the authors to gather data and conduct research.

Nicholas,David, et al,(2009)⁶ Conducted survey of Online use and information seeking behavior institutional and subject comparisons of UK researchers. Research intensive universities were characterized by high volume use and short session times, light sessions, and sessions which utilized few of the search functions available and Google search engine is very popular means of accessing journal.

III. SCOPE AND LIMITATION

There are nearly 30 engineering colleges in Thiruvallur District Affiliated to Anna university. The present Research is based on a random sample of users (faculty members and students) from 12 engineering colleges. The present study is confined only to the Thiruvallur district engineering college students and faculty members.

IV.OBJECTIVE OF THE STUDY

1. To find out respondent's year of experience and their time spend with e-resource in the selected engineering college libraries affiliated to Anna University in Thiruvallur District.
2. To study respondent's preferable access point for e-resources and their mode of learning of e-resource skills.
3. To determine respondent's use of search engine and browser in sample.
4. To know respondent's adopted search mechanism for retrieval of information and their preferred file format to download articles form e-resource.
5. To find out respondent's frequently used e-resources and their purpose of using these e- resources.
6. To study respondent's difficulties experienced and their level of satisfaction while using e-resources.

V. HYPOTHESES OF THE STUDY

1. There are no differences among the respondent's year of experience and their time spend with e-resource with regard to their institution, academic status and gender.
2. There are no differences among the respondent's preferable access point for e- resource and their mode of learning of e-resource skills with regard to their institution, academic status and gender.

3. There are no differences among the respondent's use of search engine and browser with regard to their institution, academic status and gender.
4. There are no differences among the respondent's frequently used e-resources and their purpose of using these e- resources with regard to their institution, academic status and gender.
5. There are no differences among the respondent's difficulties experienced and their level of satisfaction while using e-resources with regard to their institution, academic status and gender

VI. METHODOLOGY

The present study was conducted using questionnaire-based survey method; The questionnaire was pre-tested on users

which included the two groups; the faculty and students. A total number of **600** questionnaires (randomly) were administered among the users of selected engineering colleges in Thiruvallur District Under this study. Out of which 516(86%) questionnaires were received back duly filled in. The sample respondents chosen for the study consists of 207(40.20%) faculties, and 309(59.80%) students. The data collected were tabulated and analyzed. Statistical techniques of percentage of respondents have been mainly used to analyze the collective data. Data Collection Sources: To study user awareness and perception of e-resources the following sources is used to collect the data which questionnaire filled in by the faculty and students.

VII. DATA ANALYSIS AND INTERPRETATION

TABLE I DISTRIBUTED TO RESPONDENTS PROFILE DATA

Gender	No of Respondent	Percentage%
Male	296	57.36
Female	220	42.64
Total	516	100%
Age		
18-21	309	59.88
22-30	104	20.15
31-35	57	11.04
Above 35	46	08.91
Qualification		
UG	309	59.88
PG	177	34.30
Ph.D	30	05.81
Academic Status		
Asst.Professor	149	28.87
Asso. Professor	28	5.42
Professor	30	5.81
Teaching Experience		
1-5 years	134	25.96
6-10 years	35	6.78
11-15 years	28	5.42
Above 15	10	1.93

Table I Show that male (57.36%) respondent actively participated, 309 (59.88%) respondent age group of 18-21 is participated major role of in this study. More Asst professor (28.57%) level of faculty are participated, respectively more teaching faculty (25.96%) opined that they have teaching experience in 1-5 years.

Table II & figure 1 shows that frequency of web accessing per day. It is revealed that (28.68%) respondent access frequently, respectively some times (39.72%) and (31.58%) occasionally. It shows that majority of respondent access sometimes electronic resources in per day.

TABLE II FREQUENCY OF WEB BROWSER PER DAY

Frequency	No of Respondent	Percentage
Frequently	148	28.68
Some times	205	39.72
Occasionally	163	31.58
Never	-	-

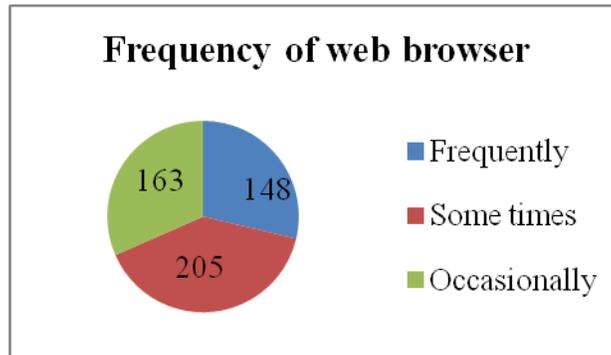


Fig.1 Frequency of web browser

TABLE III ACCESS POINT OF E-RESOURCES

E-resources Access Point	No of Respondent	Percentage
College Library	439	85.07
Home /Hostel	32	6.20
Cyber Cafe	17	3.29
Other Library	28	5.42

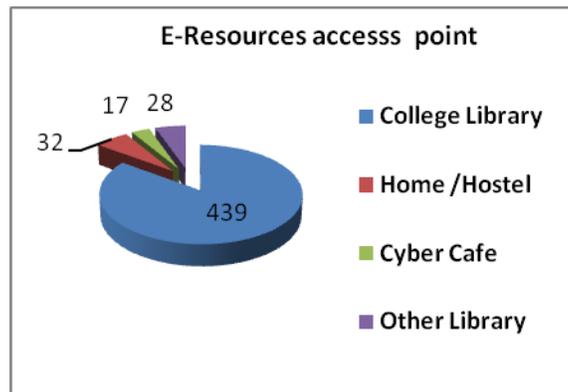


Fig.2 E-Resource Access Point

Table III Explain that Access point of E-resources. It is show that majority of respondent (85.07%) access from college library. The few respondents are access from home, cyber café and other Library. It is clearly show that Library is convenient access point and knowledge dissemination center of respondent.

TABLE IV TIME SPEND TO USE OF E-RESOURCES

Hours spent	No of Respondent	Percentage
1 hours to 2 hours	254	49.22
3 hours to 5 hours	175	33.91
6 hours to 10 hours	87	16.86

Table IV Show that respondent have spent time with e-resources. It is clearly explained that more respondent (49.22%) access e-resources at duration of minimum 1 hour and maximum 2 hours. Followed by (33.91%) respondents

use e-resources 3 hours to 5 hours and (16.86%) respondents' access e-resources at 6 hours to 10 hours. It is found that majority of respondents have accessed e-resources at 1 to 5 hours daily.

TABLE V SEARCHING TECHNIQUE OF E-RESOURCES

Search method	No of Respondent	Percentage
Keyword	172	33.33
Author	133	25.77
Title	128	24.80
Subject	65	12.59
publisher	18	3.48

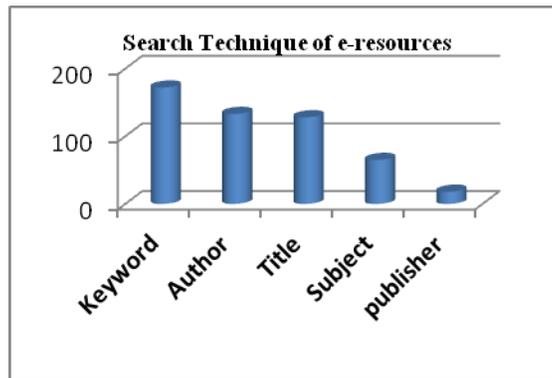


Fig.3 Search Technique of E-Resources

Table V explained that frequency of different searching technique of e-resources access. The following searching method is commonly used by respondent. Our study is found measure that various frequency of searching method such as Keyword search (33.33%), Author search (25.77%),

Title search (24.80%), Subject search (12.59%) and Publisher wise search (3.48%). The keyword search is most used commonly for access e-resources; the keyword search is very familiar for access. Our study is also reflected the same.

TABLE VI PURPOSE OF USING E-RESOURCES

Purpose	No of Respondent	Percentage
For study and Career development	53	10.27
For project work	47	9.10
For Seminar presentation	33	6.39
For Publishing journal articles for Research	145	28.10
For Teaching purpose	97	18.79
For my subject specialization	75	14.53
For Updating General knowledge	38	7.36
For study and Career development	28	5.42

Table VI shows that respondent purpose of accessing E-resource. The electronics resources are important role to provide information for engineering and technology educational systems. The users are accessing for various purposes in which most of the respondents (28.10%) access

for publishing journals articles for research, the followed by Teaching purpose (18.79%), Subject updating (14.53%) and (5.42%) for study and career development. This study show that more respondent access electronics resources for their research purpose and paper publish.

TABLE VII DISTRIBUTED TO ACCESS FROM DIFFERENCE E-PUBLISHERS

E-Publishrs	No of Respondent	Percentage
EEE	228	44.19
ASME	21	4.06
ASCE	23	4.45
ELSEVIER	75	14.53
SPRINGER	29	5.62
MCGRAW HILL	15	2.90
J-GATE	25	4.84
EBSCO	28	5.42
ASTM DIGITAL LIBRARY	11	2.13
NPTEL	56	10.85
EMERALD	05	0.96

Table VII highlighted that frequency of access electronics resources from different publishers.228(44.19%) more respondent are access IEEE online journals, followed by

ELESEVIER, NPTEL video lecture, Springer, EBSCO, etc. It is show that IEEE online journals are most required for research and academy purpose.

TABLE VIII DISTRIBUTED TO INFORMATION ACCESSING FROM DIFFERENT MEDIA

Media	No of Respondent	Percentage
Electronic Media	281	54.45
Print media	136	26.35
Both(Electronic and print)	99	19.18

Table VIII says that more respondent (54.45%) using electronic format information, the followed by print media (26.35%) and (19.18%) electronic and print media

information It is observed that maximum respondent are accessing electronic media.

TABLE IX STATISTICS OF OPINION ABOUT FRIENDLINESS OF E-RESOURCES.

User Friendliness of e-resources	No of Respondent	Percentage
Time savings	211	40.89
New arrival on time	94	18.21
Easy accessibility	115	22.28
Get Easy Back issue	96	18.60

Table IX highlighted that respondent opinion about user friendly while access electronic resources. 40.89% more respondents are opined that electronics resources accessing is time savings, 22.28% respondents are opined that e-resources is easy accessibility, followed by 18.60% of respondents' answered that get easy back volumes of electronics resources and 18.21% of respondents are answered that new arrival or current issue are available on time.

Table X says that respondent faced problem while accessing the electronics resources. 22.09% of respondents said that lack of printing facility in the library, 18.21% of respondent answered that they have not suitable library time, 14.53% of respondent opined that they need training and orientation for e-resources accessing, 12.59% of respondent said they faced power problem while accessing, 10.46% of respondent said that they faced network and speed problem while access, 8.33% of respondent opined that they don't have awareness about e-resources. 8.13 of respondent felt

that they need multi accesses facility, 5.42% respondent said that they don't have knowledge about e-resources access mechanism (file transfer, download, mail access,etc). It is found that e-resources are vital part of education

system, at the same more problem are occur while accessing e-resources. This is very seriously note that the problem will be eliminated at proper time.

TABLE X CONSTRAINED FACED BY WHILE ACCESSING THE E-RESOURCES

Constrained	No of Respondent	Percentage
Limited working hour	94	18.21
Power Failure	65	12.59
Network and speed	54	10.46
Unaware e-resources	43	8.33
Unaware of access mechanism	28	5.42
Lack of Access Point	42	8.13
Lack of Training	75	14.53
Lack of Printing facility	114	22.09

TABLE XI LEVEL OF SATISFACTION WITH E-RESOURCES

E-resources	Very satisfied	Satisfied	Somewhat satisfied	Dissatisfied
Online databases	196 (37.98%)	141 (27.32%)	154 (29.84%)	25 (4.84%)
Electronic journals	166 (32.17%)	201 (38.95%)	134 (25.96%)	15 (2.90%)
Electronic books	194 (37.59%)	199 (38.56%)	101 (19.57%)	22 (4.26%)
Online catalog	154 (29.84%)	201 (38.95%)	145 (28.10%)	16 (3.10%)
Online reference works	134 (25.96%)	201 (38.95%)	166 (32.17%)	15 (2.90%)
Internet/ websites	154 (29.84%)	196 (37.98%)	141 (27.32%)	25 (4.84%)
E-mails	173 (33.52%)	194 (37.59%)	134 (25.96%)	15 (2.90%)
NPTEL	204 (39.53%)	129 (25.00%)	150 (29.06%)	33 (6.39%)

Table XI highlighted that respondent's data distribution about level of satisfaction with electronics resources access which is available in library. More respondent opined that they have satisfied electronics resources provided by library and some respondent have not satisfied with electronics resources. This study is recommended that the barrier of access electronics resources will be solved as on time.

VIII .FINDINGS AND CONCLUSION

The electronics information resources are the vital sources of getting current, up to date, accuracy and timely information. The Exponential growth of e-resources had important impact on the way of Engineering and technology community use, stores and preserve information. E-resources are the significance role in the all library which is drawn attention of huge budget and collection management.

The engineering students and faculty's attitude seems to be very positive towards electronics information for their academic and research purpose and the role of librarian as transformer of electronics information to different user community at maximum level of satisfaction with user friendly manner. The study shows that e-resources have radical impact on the changing higher education environment. It is interesting that impact of electronics information seeking behavior of user (students and Faculty) of selected engineering college affiliated to Anna University in Thiruvallur district, Tamilnadu. This study aim to find out usage level, barrier to access; to give valuable suggestion to remove road block for accessing e-resources at meet the user need.

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