Users Based Studies of NBA Accredited Engineering College Libraries of Warangal District in Telangana, India: A Study

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Abstract: *User studies are to be recognized as an important part of the information packages. Information providers like the library and information centers need to be aware of their users' information requirements as well as their information seeking and information retrieving methods in order that they might be able to provide better services. The study describes the user satisfaction of NBA accredited Engineering libraries of Warangal. A well structured questionnaire was designed to elicit the opinions of the Engineering college students. The response was gathered from 345 students. This study examines several aspects of library use, including frequency of visiting the library, user satisfaction from library services and library collection. The result of the study provided information about the satisfaction of users with library collection like text books, reference books, periodicals, online resources, thesis and dissertation, newspaper etc. and services. The author also has tried to found the reason of not satisfaction of the users. On the basis of finding, some suggestion have been put forth for maximizing satisfaction of engineering colleges students in libraries.*

Key words: *Engineering College, Engineering education, User satisfaction, College Libraries, Library Services, user studies*

I.   Introduction

An Engineering college provides technical education and its important role expected in growth and development of the country, so library of engineering institute must be good collection of books and information resources. The main role of an engineering college library is to satisfy the needs of its users. Libraries assist-in research process by collecting, preserving, and making available an array of information resources relevant to their research community. Present era is a information era and students are not interested in visiting the library physically nowadays and they are more comfortable in retrieving information electronically. Use and the user survey study to find out the existing print and non print resources, services and facilities.

Engineering Education in India

Engineering education started in India during the British regime and the first college was established in Roorke in 1847. After independence, engineering education in India grown to meet the requirements of the society. The government of India established a body to look after the development of engineering education known as All India Council for Technical Education (AICTE). At present, the engineering education offered in India particularly in Andhra Pradesh & Telangana to train graduates to develop the manpower required in industries and related areas to meet the challenges nationally and globally. Subsequently, a number of National Institutions like Indian Institutes of Technology, Indian Institute of Science and private engineering colleges have come up.

All India Council for Technical Education (AICTE)

AICTE was setup in 1945 to prescribe standards, quality assurance, accreditation, etc., in engineering colleges. To take care of all these things, AICTE constituted a body know as National Board of Accreditation (NBA). The AICTE is responsible to accord permission to establish institutions in the field of engineering, technology, architecture, town planning, management, pharmacy, applied arts and crafts, hotel management and catering technology, etc.

National Board of Accreditation (NBA)

The National Board of Accreditation is a wing of AICTE came in with the following objectives:

* To assist all the stakeholders in technical education (like parents, students, teachers, educational institutions, professional societies, potential employers, government agencies) in identifying those institutions and their specific programmes which meet the norms, standards and other quality indicators specified from time to time.

- To provide guidelines to the technical institutions for the desirable up gradation of existing programmes and for the development of new programmes.
- To encourage the maintenance of a standard of excellence and to stimulate the process of continual improvements in technical education in the country. NBA aims to recognize and acknowledge the value addition in transforming the admitted raw student into a capable engineer having sound knowledge of fundamentals and acceptable level of professional and personal competence for ready employability in responsible engineering assignments. The NBA is contributing greatly for the development of libraries attached to engineering colleges.

Engineering College Libraries:
A library plays a pivotal role in ensuring the success of higher degree of Engineering and Technology. The important activities of engineering college libraries include the Collection Development, Reference Service, Circulation, Document Delivery, User Education, Access to Electronic Resources, etc. Engineering college libraries are expected to provide cost effective and reliable access to information using the state-of-the art information technology tools. The basic objective of the Engineering college library is to be a dynamic instrument for explaining the expanding horizons of knowledge. The library endeavors to make the legitimate needs and demands of the patrons, from the senior academics engaged in advance research to the fresh entrant stimulate and encourage students to develop the lifelong habits of good reading, study and research and to be the centre of Engineering college for educational and scholarly pursuit.

Nowadays Library is like Knowledge centre and is the heart of any institute. The user's satisfaction is main motto of library services and it is key success of any library. The services of librarian are also make good customer satisfaction among users. Librarian should regular examine customer satisfaction with the library's collection, services and information preferences to ensure that the information needs of users are satisfactorily fulfill within time

Statement of the Problems
Library has a vital role in the engineering education. Without libraries we cannot suppose any engineering or technical institution. In the present era the role of library and Librarian are increasing. Every technical Institute has invests very big money every year in this library for purchasing books, process and storage of information resources to serve the user. But changing information environment, application of information and Communication Technology in library and availability of information resources both in online and offline has made both Library professionals and user confused to locate appropriate information as and when required. So this study on Library has been carried out of Libraries of NBA accredited engineering colleges at Warangal district to know the user satisfaction which will help to design new Library services in the present era.

II.   Review of Literature:
The study of related research implies locating, reading and evaluating research reports. The survey of the literature is a crucial aspect for planning of the body of research. The investigator reviewed only those studies which are related to the present study.

It was revealed that majority of the users are aware about the availability of online journals. And majority of respondent indicated that they make use of online journals for their research work. It was also found that users faced problems while using online journals. A need was also felt by some research scholars regarding inclusion of some more e- journals in UGC-Infonet Consortium (Zaidi and Bharati, 2008).

The 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. (Gupta and Rawtani, 2008)

There is a need of conducting regular orientation/training programme for the UGC Infonet programme; more number of e-journals to be included in the UG Infonet consortium (Veenapani, Singh and Devi, 2008).

Objective Of The Study
The study has the following objectives
1. To know the purpose of visit to the library
2. To know the user satisfaction in engineering college libraries.
3. To find out the awareness and use of e-resources by the students.
4. To find out the level of satisfaction of students with regards to the print and electronics resources, services, facilities provided by the engineering college libraries.
5. To know the purpose of seeking information and establish the problems that the students encounter in information seeking

Limitation of the Study

Limitation of the study at Warangal, there are total no of 30 engineering colleges; 30 engineering college have providing engineering education in various branches. Investigator has selected only 4 colleges for this particular study. The study is limited to NBA Accredited engineering college Libraries only and not Including Universities Engineering Colleges in this study.

III. Methodology

A questionnaire based survey method which was less time consuming was used for this study. A structured questionnaire was circulated among UG and PG students in the NBA Accredited engineering college Libraries of Warangal with a view to know the use of e-resources and services. Accordingly 400 paper based questionnaires were personally distrusted among students belonging in different branches UG and PG level. The majority of respondents 345 (86.25%) handed over the filled questionnaires to Librarian. The collected data were analyzed, classified and presented in the form of tables.

The following engineering colleges have been taken up for the study:

Sl.no.	Name of College	No. of Volumes	Automated Library Software	Digital Library No of Systems	E-Resources	Internet Facility
1	Kakatiya Institute of Technology and Science	63,200	Home Made Package	60	AICTE-INDEST, IEEE	Wifi Campus with 10mbps
2	S.R Engineering College	51,340	E-Zed Library	40	IEEE DEL-Net	Wifi Campus with 10mbps
3	Jayamukhi College of Engineering	44,121	New-Gen Lib	45	DEL-Net IEEE	Wifi Campus with 10mbps
4	Vagadevi College of Engineering	58,121	New-Gen Lib	38	IEEE DEL-Net	Wifi Campus with 10mbps

Data Analysis

The respondents were categorized on the basis of their gender (Table 11.1)

Table 11.1 Gender-wise distribution of respondents

Sl. No.	Gender	Users	Percentage
1	Male	244	70.72
2	Female	101	29.28
Total:		**345**	**100**

Table 11.1 shows that out of 345 respondents 244 (70.72%) were male, 101 (29.28%) female, **in this table majority of the respondents are male**

Table 11.2 Purpose of visit to the library

Sl. No.	Purpose	Users	Percentage
1	Borrowing books	162	46.95
2	Use reference services	37	10.72
3	Know the latest arrivals	24	6.95
4	Read the Magazines & Newspapers	43	12.46
5	Browse E Resources	79	22.92
	Total:	345	100

Table 11.2 shows that 46.95 percent of respondents were making use of library for borrowing books, 22.92 percent of respondent were using e-resources for better communication and project work, 12.46 percent of users were use of library for read the magazines, Journals and News Papers and 10.72 percent of user were making use of library for use of references remaining 6.95 percent of users were making use of library for know the latest arrivals purpose, **in this table majority of the respondents using were making use of library for Borrowing books**

Table 11.3 Use of Library resources and services

Sl. No.	Reasons for use resources & services	Users	Percentage
1	Issues and Returns	156	45.21
2	Reference services	81	23.47
3	Digital Library services	72	20.86
4	Xerox and printing and scanning etc	25	7.24
5	others	11	3.22
	Total:	345	100

Table 11.3 shows that 45.21 percent of users prefer to use library for Books issues and returns, 23.47 percent of users prefer to use library for to refer books in reference section, 20.86 percent of users use prefer to use library for Digital library services for e-resources to more useful, 7.24percent of user to prefer to library for Xerox and printing and scanning and remaining 3.22 percent of user to use to library for others like question papers etc , **in this table majority of the users to using library for books issues and returns purpose only.**

Table 11.4 Purpose of seeking Information

Sl. No.	Purpose of seeking Information	Users	Percentage
1	To keep update subject information	125	36.23
2	For communication / Project work	108	31.30
3	Upgrade General Knowledge	18	5.21
4	Career development	81	23.47
5	Others	13	3.79
	Total:	345	100

Table 11.4 shows that 36.23 percent of users were making use of Library for subject information, 31.30 percent of users were using Library for better communication and project work, 23.47 percent of users were using Library for career development, 5.21 percent of user were using library for up grading general knowledge and remaining 3.79 percent of users were using Library for others purpose, **in this table majority of the respondents using e-resources for subject information**

Table 11.5 Awareness of E- Resources in the library

Sl. No.	Awareness of E- Resources	Users	Percentage
1	Yes	298	86.37
2	No	47	13.63
	Total:	345	100

Table 11.5 shows that 86.37 percent of users were awareness use of e-resources and remaining 13.63 percent of users were no awareness using e-resources. **In this table majority of the users awareness using of e-resources.**

Table 11.6 Method of learning e-resources

Sl. No.	Learning of e-resources	Users	percentage
1	Guide lines from the library staff	189	54.78
2	Friends	93	26.95
3	Self-study	63	18.27
	Total:	**345**	**100**

Table 11.6 shows that 54.78 percent of users learn e-resources skills through guidelines from the library staff, another 26.95 percent of user learn e-resources from their friends, remaining 18.27 percent of user learned through self-study method. **In this table majority of the users learns e-resources skills through guideline from the library staff**

Table 11.7 Place of accessing e-resources

Sl. No.	Location	Users	percentage
1	At Library	129	37.39
2	Dept. Labs	101	29.27
3	At friends home	33	9.56
4	at Home	45	13.04
5	Internet centers / Cyber café	37	10.74
	Total:	**345**	**100**

Table 11.7 shows that 37.39 percent users were using e-resources at their library,,29.27 percent of respondents were using e-resources at their departments,9.56 percent of respondents responded that they are using e-resources at their friends home, 13.04 percent of respondents responded that they are using e-resources at their homes and remaining 10.74 percent are using e-resources at internet centers. **It could be observed from table 37.39 that majority of the users use e-resources facilities in the library**

Table 11.8 Frequency of using e-resources

Sl. No.	Use of frequency	Users	Percentage
1	Daily	198	57.39
2	2-4 Times in a Week	73	21.15
3	Once in a week	36	10.43
4	2-3 Times in Month	25	7.24
5	Occasionally / Rarely	13	3.79
	Total:	345	100

Table 11.8 shows that 57.39 percent of the users were using e-resources/internet daily, 21.15 percent of users were using 2-4 times in a week, 10.43 percent of users were using once in a week, and 7.24 percent of users were using 2-3 times in monthly remaining 3.79 percent of users using internet occasionally/rarely, in this table majority of the respondents used e-resources/internet facilities daily.

Table 11.9 Use of various Types of e-resources

Sl. No.	Types of e-resources	Users	Percentage
1	e-Journals	133	38.55
2	e-books	31	8.98
3	e-Magazines	30	8.69
4	e-Theses	33	9.56
5	e-data archives	26	7.53
6	e-Newspapers	21	6.08
7	e-mails	39	11.30
8	e-Bibliographic database	9	2.65
10	www	23	6.66
	Total:	345	100

Table 11.9 shows that 38.55 percent of the users prefer to use the e-journals,8.98 percent of the users prefer to use the e-books, 8.69 percent of the users prefer to use the e-magazines,9.56 percent of users prefer to use the e-thesis, 7.53 percent of users prefer to use e-data archives, 6.08 percent of users prefer to use the e-newspapers, 11.30 percent of the users prefer to use the e-mails, and 2.60percent of users prefer to use the e-Bibliographic databases remaining 6.66 percent of user prefer to use the www, **in this table majority of students prefer to use the e-journals.**

Table 11.10 Reasons for using e-resources

Sl. No.	Reasons for using e-resources	Users	Percentage
1	Time Saving	178	51.59
2	Essay to Use	77	22.31
3	More Useful	35	10.14
4	More Informative	41	11.88
5	Difficult to Use	14	4.08
	Total:	345	100

Table 11.10 shows that 51.59 percent of users prefer to use e-resources in comparison traditional resources because of them feel that e-resources are time saving, 22.31 percent of users followed by easy to use, 10.14 percent of users use to e-resources to more useful, 11.88 percent of user to prefer to more informative remaining 4.08 percent of user to use to e-resources to difficult to use, **in this table majority of the users to using e-resources to time saving**

Table 11.11 Problems faced by the students while seeking e-resources and services

Sl. No.	Problems	Users	Percentage
1	Limited access to computers	121	35.07
2	Band width Collections	39	11.30
3	Internet problem	44	12.75
4	Lack of Training	42	11.88
5	Lack of Time	23	6.66
6	Lack of IT Problems	19	5.50
7	Finding out right document	28	8.11
8	Lack of reprographic service and others	29	8.40
	Total:	**345**	**100**

Table 11.11 shows that 35.07 percent of users faced problem of limited access to computers,11.30 percent of user faced by troubled bandwidth collection problem,12.75 percent of user faced by troubled by internet problem, 11.88 percent of users faced by lack of training, 6.66 percent of user faced by lack of time consumed, 8.11 percent users faced by find out right documents it means too much information retrieved problem, 5.50

percent users faced by lack of IT problems remaining 8.40 percent of user faced by lack of reprographic and other problems, **In this tables shows majority of the users faced problem of limited access to computers.**

Table 11.12 Level of satisfaction with the services available in the library

Sl. No.	User response	Users	percentage
1	Excellent	63	18.26
2	Very Good	143	41.44
3	Good	88	25.50
4	No satisfaction	51	14.80
	Total:	**345**	**100**

Tab 11.12 shows that status of users satisfaction 18.26 percent of users were excellent satisfied with the use of e-resources, 41.44 percent of users were very good satisfied with the use of e-resources, 21.87 percent of users were good satisfied remaining 14.80 percent of users were not satisfied using e-resources, **in this table finally majority of the users were very good satisfied with the use of e-resources**

IV.   Suggestions

Based on analysis of the user study the following suggestion are be made to improve the use of e-resources and services to NBA accredited Engineering colleges libraries at Warangal district in Telangana state.

1. Librarian should display library rules and regulations in general and provide information about latest arrivals in the library.
2. Faculty should take the lead in initiating library use to their students
3. Faculty should encourage the students to consult the library books and e-journals for prepare projects, If the students prepare the projects by browsing books in the library, they will be attracted to the library easily.
4. E-Journals and e-books are commonly perceived as offering great potential for learner support but also as struggling to compete with print due to limited range of titles offered. Since most of the new library members are not familiar with the library collections and services, there should be using online database. The facilities available in the libraries should be notified to the users
5   More computers with the latest specifications and should be installed so that user can utilize e-resources effectively.
6   Some orientation training and Information literacy programmes   should be organized by the college at regular intervals, so that more users can improve their proficiency in e-resources use for academic purpose.
7   The internet connectivity, bandwidth and speed should be increased.
8   Library staff who have acquired a good deal of efficiency in collection, organization and retrieval of information, technical skills should feel duty-mind to see that the users are able to obtain right information at the right time.
9   The INDEST-AICTE consortium r-resources such as E-books, E-Journals, E-Articles, etc should be procured by the library which are most useful to the all the users without any downloading problems.
10 The Inverter (UPS) facility should be provided to avoid the frequently power off.
11 Many e-Journals/e-books are not easily obtained. So, there is need to provide ICT skilled library professional to help the users.

V.   Conclusion

The central role of the library profession remains the same, but methods and tools for information storage and retrieval continue to grow and change dramatically. Libraries must understand information-seeking behavior of users to re-engineer their services and provide information efficiently. The results of this study reveal users who are more or less satisfied with library collections and services, but who want training in the use of online information. Although reference service is being provided on demand, the users pointed out that it would be worthwhile if the library could provide them with indexing, abstracting, and interlibrary loan service as well. User education about Library Using is must and should be carrying out as a seminar or workshop training.

E-resources have introduced the new environment for both users and libraries. The new environment brings about challenge and opportunities. Users become more and more relying on the use of e-resources for information discovery. The way that they seek, search, select and use information has changed drastically. The library itself has to understand the user's demands and needs, and try its best to respond to and to meet those demands and needs.

The successful operation of any library depends to a large extent on the choice of library collections. The choice of collection should meet the need and requirements of the end users. Consequently, librarians must be aware of how the users seek information. It is also observed that users are not satisfied in display board service; inter library loan service and reference services. The professionals are great help for users in searching

their relevant information. Maximum number of users used electronic journals for course work and to get latest information resources.

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