

## Barriers for Effective Implementation of Information Literacy Programmes at Engineering College Libraries: A Case Study

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### *Abstract*

*In this study, involving the information literacy programmes being provided at the engineering colleges in Navi Mumbai, India, authors have tried identify the barriers in implementing the information literacy programmes. This study aims at understanding the information literacy programmes at the libraries of engineering colleges in Navi Mumbai, India. Study revealed that the majority of libraries are providing the information literacy programmes and also the availability of electronic resources has increased the necessity of information literacy programmes among engineering colleges. These libraries are facing some major barriers in implementing the information literacy, notable among them are absence of properly designed curriculum on information literacy, lack of skilled manpower, and low learning motivation of the students.*

*The significance of this study is that it helps in eliminating the barriers for implementing information literacy programmes at these libraries. It is assumed that by designing an advanced curriculum for information literacy, by taking measures to increase the interest of students in information literacy programmes and undergoing advanced training for themselves in information literacy, the librarian will be able to overcome these barriers and implement the information literacy programmes successfully in their respective colleges.*

**Keywords:** Information Literacy, Information Literacy-Barriers, Information Literacy – Engineering Colleges-India

**Electronic Information Resources:** ZA4050-4480

## 1. INTRODUCTION

In this present internet age, one of the major concerns facing information professionals is how to make information accessible to the students, faculty and research scholars without much effort, confusion and in a user-friendly way. It is observed that the academic environment has witnessed a paradigm shift and has posed unexpected challenges to both users as well as facilitators of information access (Ramesha and Kumbar, 2004). There is a shift from teacher focused teaching learning process to the students focused learning process and the entire institution has to reorganize their resources and services to cope up with this shift. Accordingly, the role and function of library and information professionals in this electronic environment can be described as a facilitator of information use, navigate knowledge systems and information sources (Foster, 2006). Librarians must ensure that students receive guidance & assistance at the time of need, in a collaborative learning and problem solving environment.

Librarians play a vital role in the educational changes taking place in teaching, learning and research in higher education by providing an appropriate information environment and the most efficient and effective user access to all types of information resources (Hoffman, 2006). Librarians are building partnerships on campus for faculty development, distance education, information technology, student support and assessment of learning outcomes. They are making the library center for teaching, learning and research on campus by providing most inviting and accessible information environment. Above all, they ensure that students learn appropriate information skills and fluency so that after they graduate, they become productive members of the information society (Martin, 2003). Academic librarians are building partnerships with the teaching faculty to integrate information skills instruction throughout the undergraduate and graduate curricula.

It is observed that for the students and teachers community, the Internet has become a world unto itself - it is a rich landscape of resources. A random browse of the Internet will unearth web pages hosted by academic, commercial, public, official, governmental, charitable and academic sectors, as well as individuals, clubs and societies. In fact, nowadays one can almost do anything over the Internet. It is therefore an excellent place for students, teachers and all kinds of researchers, including professionals, to start finding out more about information needed by them.

New models of learning are radically changing the education scenario in India. Engineering education is no exception for this. Available literature suggests that India's first consortia among academic institutions was INDEST( Indian Digital Library for Science and Technology) which made available thousands of e-journals and several online databases accessible to majority of engineering colleges in India. Indian National Accreditation Boards which insists on access to e-journals as a prerequisite in library have also contributed to the growth of use of e-journals and online databases. This has enhanced educational reform by

enabling teachers and learners to move away from traditional approaches to teaching and learning.

There has been increased focus on the 'hybrid library', in which access to ICT-based resources is as important as access to traditional paper-based collection (Krishnamurthy and Chan 2005). Technical developments have enabled serious consideration of virtual learning environments through which students are given access to a range of e-resources, tools and interactive facilities.

Libraries are one of the most important components of the information age and librarians are dealing successfully with new technological advances. Libraries are becoming agile, learning-oriented information centers (Kanamadi and Vichare 2006). Librarians are working on helping society understand the value and contributions of libraries, particularly in the areas of organizing, preserving and providing access to information.

## **2. INFORMATION LITERACY PROGRAMMES**

Most college libraries are technologically in a better shape than other educational entities because during the past decade academic librarians have been in the forefront of technological developments and related changes on their campuses. For the student confronted by an ICT-rich learner-focused environment in which learning is expected to take place, the ability to make use of the tools and facilities that make up such an environment is crucial to success (Shenton, 2008). Present information age also needs confident and independent learners equipped with lifelong learning skills (Kurbanoglu, 2006). Hence the emphasis placed upon the acquisition of ICT and, information literacy skills.

According to National Forum on Information Literacy, "Information Literacy is defined as the ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand".

More specifically, Information Literacy can be defined as a set of abilities to:

- Determine the extent of information needed
- Locate and evaluate information
- Incorporate selected information into one's knowledge base
- Use information ethically, legally and with an understanding of economic and social issues.

Information Literacy is inextricably associated with information practices and critical thinking in the information and communication technology (ICT) environments. Information literacy refers to the process of recognizing information need, retrieving, evaluating, using and disseminating information to acquire or knowledge. This concept includes both the ICT and information (re)sources concept, and persons are considered as information systems that retrieve, evaluate, process, and disseminate information to make decisions to survive, for self-actualization and development.

### 3. Problem Statement

Study of barriers to implementation of Information literacy programs in engineering college libraries is required because of severity of issues related to the successful implementation of information literacy programmes in India. Librarians are faced several problems while trying to implement information literacy.

A literature search on Library and Information Science Abstract (LISA) and the comprehensive tracking of books, journal articles, and conference and workshop proceedings revealed that even though there are general studies on information literacy in India, there is a complete dearth of studies focusing on barriers to the implementation of information literacy programmes. Hence, need for this study.

The statement of the problem is "Barriers for Effective Implementation of Information Literacy Programmes at Engineering College Libraries: A Case Study"

### 4. LITERATURE REVIEW

The literature review plays a very important role in the research process. It is a source from where research ideas are drawn and developed into concepts and finally theories. It also provides the researcher a bird's eye view about the research done in that area so far. Depending on what is observed in the literature review, a researcher will understand where his research stands.

A number of empirical studies focusing on information literacy in higher education have been undertaken. Fox, L.M. (2005) did a study which tried to introduce question point method. Hrycaj, P L. (2005) attempted to determine the extent of the use of active learning in the online tutorials. Similarly, Lightman and Reingold (2005) report on the planning, execution and evaluation of information literacy programmes. Kanamadi and Vlchare (2006) explain how information literacy has become a tool for harnessing electronic resources.

*Abdullah, S. (2010)* argues that the genuine assessment of information literacy skills requires an examination of "actual performance", rather than individual perception of ability. The author discusses the early stages of a new project at Universiti Teknologi MARA in Malaysia, where researchers are adopting an evidence-based approach to assessment. *Bewick, L. and Corral, S. (2010)*, reports on a primarily survey-based study of academic librarians in the UK, focusing on various aspects of their teaching knowledge and responsibilities. The authors note, among other findings, that the surveyed librarians expressed confidence in their teaching abilities and displayed relevant knowledge of teaching. Studies by Megan Oakleaf, (2009), discusses about the assessment of information literacy

*Adeleke, A.A. and Olorunsola, R. (2010)* discusses information literacy instruction in the use of databases at Redeemer's University in Nigeria, where "time of need" instruction is

emphasized. The authors argue for the importance of developing positive relationships with students and faculty in order to promote information literacy. *ACRL (2010)* provides an overview of the *ACRL Psychology Information Literacy Standards*, including the full list of standards. The article describes the rationale for the development of the standards, emphasizing their potential role in the liaison work of psychology librarians. *Chetan, Singh and Sharma (2011)* highlight the importance of information literacy in enabling researchers to access literature effectively.

## 5. RESEARCH METHODOLOGY

Libraries of engineering colleges in Navi Mumbai, India constitute the sample and universe of this study. This study has been undertaken with the help of structured questionnaire designed for the purpose. Wherever necessary, interviews were also held with librarians to glean the data. Suitable statistical techniques are used to analyze data collected for the study. Out of 12 engineering college libraries, about 9 libraries responded to this survey, thus resulting into a response rate of 75%.

The scope of this study is limited to study the information literacy programmes in general and implementation barriers in particular at the engineering college libraries of Navi Mumbai, India only. There are 220 engineering colleges established in Maharashtra state of which 12 are in Navi Mumbai. This study concentrates only on 12 engineering colleges in Navi Mumbai area.

The limitation of this study is that it is limited by the geographic location of Navi Mumbai. It leaves out several important colleges, the inclusion of which would have made a more comprehensive research. This study about barriers to information literacy skills concentrates only on engineering education and leaves out many other professional educational institutes like management, fashion, health science, etc.

The primary objective of this study is to examine the Information Literacy programmes provided by Libraries at engineering colleges located in Navi Mumbai, India. Specific objectives of this study are to:

- Provision of information literacy programmes
- Study the availability of library staff to provide information literacy
- Barriers to the implementation of Information Literacy programmes

## 5. FINDINGS

### 5.1: Type of Engineering Colleges in Navi Mumbai

Navi Mumbai being satellite city of Maharashtra is listed among the cities having considerable number of colleges offering engineering education at different levels. Table.1 presents data on engineering colleges affiliated to university of Mumbai. There are a total 12 colleges which offer Bachelor of Engineering (B.E). All 12(100%) are private colleges being run by various trusts.

**Table.1. Type of engineering colleges in Navi Mumbai**

Type of engineering colleges	No. of colleges (%)
Govt.	0(0.00)
Semi-Govt.	0(0.00)
Private	12 (100.00)
Others	0(0.00)
Total	12 (100.00)

*Figures in parenthesis indicate percentage*

### 5.2 Number of Users

Users are the key components of the libraries and information centers. To know the strength of clientele in different engineering libraries, librarians were asked to provide information related to users. It is observed that maximum number of students studying Bachelor of Engineering at any of these institutions is 1500 and minimum strength being 950 in an academic year. Number of faculty members at these colleges varies from 50 to 70.

#### 5.3 Availability of Library Staff: Professional and Non Professional

In order to ascertain the position of human resources in libraries, details of professional and non-professional staff working in different engineering colleges is collected. From the Table 3, it is observed that considerable numbers of libraries 4 (44.44%) are having at least 3 professionals working for library. Some 5(55.55%) libraries are having only two professionals. Three (33.33%) premier colleges are having three or more than three professionals in the library.

**Table 3: Library Staff: Professional and non-professional**

Strength of Staff	Professionals	Non-Professionals
One	0 (00.00)	4 (44.44)
Two	5 (55.55)	2 (22.22)
Three and more	4 (44.44)	3 (33.33)
Total	9 (100.00)	9 (100.00)

*Figures in parenthesis indicate percentage*

About 4 (44.44%) libraries have just one non-professional and about 2 (22.22%) libraries are having two non-professionals. Majority of the libraries 3 (33.33%) are having three or more non-professional assisting librarian.

#### 5.4: Need for Information Literacy Programmes in the present internet age

Information Literacy Programmes are very important activities carried out at any library. The complex nature of different formats in which information is available makes it even

more necessary (Hurley, 2006). Information Literacy Programmes go a long way in promoting the usage of library resources and making users information literate as well as lifelong learners. A question on whether libraries believe that the availability of e- resources has created necessity to develop & deliver information literacy programmes was asked.

**Table 4: Need for Information Literacy Programmes in the present internet age**

Statement	Mean (X)
Availability of e-resources has created necessity to develop and deliver information literacy programmes	1

1. Strongly agree 2. Agree 3. Uncertain 4. Disagree 5. Strongly Disagree

The calculated Mean value for the statement is equal to 1 (X=1) which indicates that the availability of e-resources has created necessity to develop and deliver information literacy programmes.

**5.5 Provision of Information Literacy Programmes**

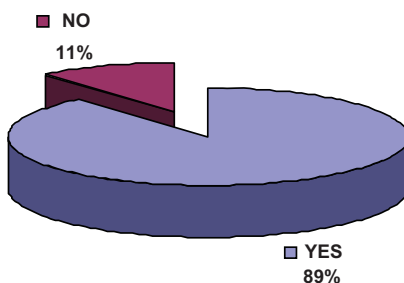
Table 5 presents data with regards to provision of Information Literacy Programmes at different engineering college libraries. Majority of the libraries 8 (88.88%) have indicated that they provide Information Literacy Programmes to their users. About 1 (11.11%) library do not provide I L programmes to their users

**Table.5: Provision of Information Literacy Programmes**

Library provides I L Programmes	No. of Libraries
YES	8 (88.88)
NO	1 (11.11)
Total	9 (100.00)

*Figures in parenthesis indicate percentage.*

**Figure 1: Provision of Information Literacy Programmes**



**5.6: Barriers for the effective implementation of Information Literacy Programmes**

Librarians were asked to what are the barriers they face while trying to implement the information literacy programmes at their respective libraries. Their responses are represented in Table 6.

**Table: 6 Implementation Barriers for ILP**

Barriers	No. of Libraries
Lack of Curriculum for I L program	5 (62.50)
Lack of skillful Manpower	6 (75.00)
Lacking consensus within the Library	1 (12.50)
Limited Library Collection	0 (00.00)
Little support from Institute authority	1 (12.50)
Shortage of funds & facilities	2 (25.00)
Low Learning motivation of students	5 (62.50)

*Figures in parenthesis indicate percentage*

It is observed that highest number of librarians have indicated lack of skilled manpower as the main barrier in implementing the information literacy programmes. This is followed by low learning motivation among students (62.50%) and lack of properly designed curriculum for information literacy (62.50%). Shortage of funds and facilities is indicated by 25% of libraries where as a single library (12.50%) indicated the barrier to be the lack of support from institute authorities and lacking consensus among library staff on the ways to provide information literacy programmes.

### 6: Discussions and Conclusion

The purpose of this study was to study the information literacy programmes in general and to identify the major barriers for implementing the information literacy programmes at the engineering college libraries in Navi Mumbai. Majority of engineering college libraries (88.88%) in Navi Mumbai are providing information literacy to their faculty and students. It indicates that the awareness among libraries about the significance of providing information literacy is high. However, instead of making information literacy a one in a year/semester, these libraries must make information literacy a continuous process by designing skill specific and course specific literacy programmes for greater acceptance. All the 12 libraries in Navi Mumbai are private self financed engineering colleges and none of the colleges are Government or semi government bodies. The student strength in these libraries ranges from 950 to 1500 and the faculty strength varies from 50 to 70 in various colleges.

The study has revealed some significant barriers experienced by engineering colleges in implementing the information literacy programmes at their colleges. Librarians themselves are inadequate in designing, developing and imparting information literacy. It is important to note that unless librarians take keen interest in designing programmes with proper curriculum and the convenient and interesting methods of delivery, the promotion of

information literacy is a foregone conclusion. Libraries must make special effort to raise the learning motivation of students (Hrycaj, 2005). This can be done by constantly evaluating the programs by taking feedbacks from the students to understand what appeals to them.

Study revealed that there is little difference among the library staff about the information literacy program. This indicates that the libraries can form a two-three member teams among themselves to work rigorously to promote information literacy. Institutions are supporting library staff. Libraries must utilize this and improve the quality of content, delivery method by investing in infrastructure and manpower needed to provide information literacy. They can even consider engaging outside library domain experts (like computer experts) and database/content providers to be part of information literacy programmes at the library.

By overcoming these barriers, libraries can have an active and continuing program of information literacy in accessing information, developed collaboratively and supported actively by faculty, librarians, academic deans, and other information providers.

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