

## FOSTERING INFORMATION LITERACY PROGRAMMES IN ENGINEERING COLLEGE LIBRARIES: A STUDY OF MUMBAI REGION

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The present study aims at understanding the information literacy programmes and practices and problems in the Engineering College libraries in Mumbai region, India. The Survey method was adopted and a questionnaire tool to collect the data from the Librarians of Engineering College Libraries. A total of 35 questionnaires were distributed across the Mumbai region out of which only 29 duly filled in questionnaires were received back with a response rate of 82.85%. The analysis revealed that 86.21% libraries are providing the information literacy programmes. The major findings of the study shows that the majority of the libraries i.e. 18 (72.00 %) indicated that lack of an understanding of the importance of IL for student learning outcome as one of the main problems in delivery of Information Literacy Programmes (ILP). This is followed by 14 (56.00%) respondents said that lack of skillful /trained manpower, lack of curriculum for IL programme, and low learning motivation of students are the other major hindrances for effective delivery of IL Programme. The outcome of this study helps in overcoming the problems faced by the engineering college libraries and assists in delivering information literacy programmes successfully in their respective libraries.

**Keywords:** Information Literacy, Information Literacy problems, Information Literacy Programmes - Mumbai Region, India, Engineering College Libraries.

### INTRODUCTION

An enormous and continuing growth in scientific knowledge both in pure and applied branches that have resulted in the flooding of recorded knowledge. Increase in the absolute quantity of information and the intricacy of information systems have come about largely because of advancement in Information and Communication Technology. Individuals are faced with diverse, abundant information choices in their studies, in the workplace, and in their personal lives (ACRL 2000). Increasingly, information is coming unfiltered and this raises questions about authenticity, validity and reliability. The uncertain quality and expanding

quantity of information also pose large challenges for society. This situation has not only increased the amount of information available to users but also made difficult for users to get the required information when it is needed. It has also created complex environment for libraries in terms of finding, accessing, selecting, evaluating and handling information effectively (Kaur et al., 2009).

Because of the escalating complexity of this situation, the users must possess adequate information literacy skills and knowledge to search and process and evaluate information to study and to make decisions and solve problems. Information literacy is considered as a very essential and survival skill for the new century. Information literacy is a set of skills and knowledge that not only allows us to find, evaluate, and use the information we need, but perhaps more importantly, allows us to filter out information we don't need. Information skills are the necessary tools that help us successfully navigate the present and future landscape of information (Eisenberg, 2008).

The engineering students need to be independent learners who can deal with the vast amount of information and also able to locate, retrieve, evaluate, and use relevant resources to address information need. To be able to do this, the students must have the appropriate information literacy skills. 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 and Goodwin, 2006).

## **REVIEW OF PREVIOUS STUDIES**

The review of literature plays a very vital role in the research process. To carry out any research, it is important to know what has already been done on the area of study. The review of the related literature presents the descriptive account of similar studies undertaken by other authors and forms the basis for the further study. A very few empirical studies on information literacy in higher education institutes with special focus on problems / challenges in effective implementations have been undertaken by researchers. Lwehabura and Stilwell (2008) conducted a study to investigate the status and practice of information literacy to determine the best ways of improving IL programmes in four Tanzanian universities. The findings showed that there is a lack of adequate resources, lack of an IL policy, lack of proactive solutions among librarians coupled with the need for adequate library staffing and training, and collaboration between librarians and teaching staff in IL activities were all identified as challenges facing IL effectiveness. In a similarly study by Anyaoku et al. (2015) found the challenges faced by Nigerian Universities, which include lack of institutional information literacy policy and support to drive information literacy, among others and also urged to plan and lobby for effective implementation of IL standalone credit bearing course in universities.

Arya (2014) examined the various aspects of information literacy such as, organization of IL programmes, instructional materials for IL

programmes, problems in effective delivery of IL training etc. A survey by Ayyanar and Thirunavukkarasu (2019) found that the engineering students in AlagappaChettiar College need proper training in the use of internet and information search tools in achieving effective and efficient utilization of e-resources. In an attempt by Ramamurthy et al. (2015) study shows that the students have lack knowledge on information literacy skills, showed high deficiency in identifying diverse information sources and lacked hands-on sessions.

An assessment of the IL competencies of 1205 UG students at the University of Ilorin by Issa et al. (2015) establish that information needs and ability to satisfy such needs, exposure to IL programmes, strategies employed and the challenges faced by libraries and insisted to consider the teaching of IL as a course to fresh students with credits attached. In an analogous study, Muema(2003) examines challengesfaced by the professionals and information literacy efforts in Kenya and suggests that although there have been efforts to ensure IL among university students, there is a need to build on theseefforts through collaborative efforts between librariansand faculty members particularly through joint curriculum design and implementation.

### **OBJECTIVES OF THE STUDY**

The present study aims at understanding the information literacy programmes and practices and problems faced by the professionals of engineering college libraries in Mumbai region, India.The specific objectives of the study are;

1. To studythe information literacy programmesconducted in Engineering College Libraries of Mumbai region;
2. To know the frequency of Information Literacy Programmes in Engineering College Libraries of Mumbai region;
3. To understandhow information literacy programmes are planned and delivered to the users community; and
4. To ascertain the problems faced by the libraries in effective deliveringInformation Literacy programmes;

### **METHODOLOGY**

The Survey method was employed and the questionnaire tool to collect the data. Wherever required, informal interviews were also held with librarians to glean the more data. The data collected were analysed and inferences were made based on the standard statistical methods.Out of 64 engineering colleges affiliated tothe University of Mumbai only 35 colleges were considered for this study, which are located in Mumbai region. A total of 35 questionnaires were distributed to the librarians of engineering colleges, out of which 29 duly filled in questionnaires were received back with a response rate of 82.85%. The data was then fed into the MS-Excel for simple frequency calculation and to use statistical formulae.

### **SCOPE AND LIMITATION OF THE STUDY**

Engineering college libraries located in Mumbai region, India constitute the sample and universe of this study. The scope of this study is

limited to assessing the information literacy programme in general and understand the problems faced in delivering the IL programme in particular in the engineering college libraries. The present study is confined to the Engineering college libraries of Mumbai region only. Here, Mumbai means Mumbai, Mumbai suburban and Navi Mumbai areas.

## SIGNIFICANCE OF THE STUDY

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 centres to idea centres. Librarians must ensure that the students receive guidance and assistance at the time of need, in a collaborative learning and problem solving environment. Information literacy is one of the critical digital-age literacy areas of higher education. The students need to be trained to be information competent in this ever changing information environment. The studies on Information Literacy help the users by providing intellectual and physical access to materials in all formats. It also provides instructions to foster competence and stimulate interest in reading, viewing and using information and ideas. A study like this may also help libraries while working with other educators to design learning strategies to meet the needs of individual students.

## ANALYSIS AND INTERPRETATION OF DATA

This study has been undertaken with the help of structured questionnaire designed to gather the

data from the librarians of engineering college libraries.

## Distribution of Institutions: Establishment wise and category wise

It can be inferred from the Table 1 that most of the colleges, i.e. 21 (72.41 %) were established during 1981 – 2000, followed by 6 (20.69%) libraries were established during 2001-2010. It is clear from the table 2 that the highest number of engineering institutions in Mumbai i.e. 26 (89.66 %) belongs to the category of private / unaided run by the private management / board/ trusts. Only one (3.45 %) institution run by the Govt. (Aided), 01 (3.45 %) by Semi Govt. (University managed) and 01 (3.45 %) is an autonomous (Unaided) institution. The fast growth in the private sector is on account of the

**Table 1: Establishment of Institutions -Year wise**

Year	No. of Institutions	Percentage (%)
1961 - 1980	01	03.45 %
1981 - 1990	10	34.48 %
1991 - 2000	11	37.93 %
2001 - 2010	06	20.69 %
2011 - 2013	01	03.45 %
<b>Total</b>	<b>29</b>	<b>100.00 %</b>

**Table 2: Distribution of Institutions-Category wise**

Category	No. of Institutions	Percentage (%)
Government (Aided)	01	03.45 %
Semi Govt. (University Managed)	01	03.45 %
Autonomous (Unaided)	01	03.45 %
Private	26	89.65 %
<b>Total</b>	<b>29</b>	<b>100.00 %</b>

fact that during the Sixth Five Year Plan (1980-85), when the central and state governments were finding it difficult to expand technical education, the Govt. of India took a decision to permit private registered societies and trusts to establish and run technical institutions on a self-financing basis.

### Strength of Library Staff

In order to ascertain the position of human resources in the libraries, details of the professional and non-professional staff working in different engineering college libraries in Mumbai are collected. The Table 3 presents the

clear picture of the number of staff working in the Engineering College libraries of Mumbai region. Out of 29 colleges responded, 28 (96.55 %) colleges have a full-time librarian, whereas, 13 (44.83 %) libraries have single and 8 (27.59 %) libraries have two Asst. Librarians. They have been assisted by a good number of Library Assistants and supported by the non professional staff. It is found that very few libraries have a shortage of staff. It is evident from the Table 3 that each library has a librarian ( $\bar{x} = 0.97$ ), Asst. Librarian (=1), 2 Library Assistants (= 1.69) and 3 other supporting staff (=2.83).

**Table 3: Strength of Library Staff in Engineering Colleges**

No. of Staff	Librarian	Asst. Librarian	Library Asst.	Other Supporting Staff
One	28 (96.55)	13 (44.83)	12 (41.38)	04 (13.79)
Two	--	08 (27.59)	03 (10.34)	12 (41.38)
Three	--	--	05 (17.24)	05 (17.24)
Four	--	--	02 (06.90)	--
Five	--	--	--	04 (13.79)
Six	--	--	--	02 (06.90)
Seven	--	--	--	01 (03.45)
Eight	--	--	01 (03.45)	--
Nil	01 (03.45)	08 (27.59)	06 (20.69)	01 (03.45)
Total	29 (100.00)	29 (100.00)	29 (100.00)	29 (100.00)
Mean	0.97	1.00	1.69	2.83
S.D.	0.19	0.76	1.71	1.75
C.V.	19.23	75.59	101.41	62.03

*Figures in parenthesis indicate percentage*

Note: Mean - Arithmetic Mean S.D. -Standard Deviation C.V. - Co-efficient of Variation

### Total Number of Library Users

The users are the key components of the Libraries and Information Centers. The librarians were asked to provide detailed information related to

users. From the Table 4, it is observed that 09 (31.03 %) libraries have more number of users in the range of 1501 to 2000, followed by 08 (27.59 %) libraries in the range of 1001 to 1500

and the same number of libraries have more than 2001 users. Only 04 (13.79 %) libraries have in the range of 501 to 1000 users.

**Table 4: Total Number of Library Users in Engineering Colleges**

Library Users	No. of Libraries
Below 500	00 (00.00)
501 -1000	04 (13.79)
1001 - 1500	08 (27.59)
1501 - 2000	09 (31.03)
Above 2001	08 (27.59)
Total	29 (100.00)

*Figures in parenthesis indicate percentage*

### Need for Information Literacy programmes

The development of Information Technology has created an information environment that is complex and fluid, connective and interactive and diverse and unpredictable and where the professional provision of information is no longer constrained by time and place. It is becoming increasingly clear that information technology and the development and management of digital collections are challenging and this has

major implications for the information literacy initiatives.

The Table 5 reveals the librarians' opinion on *Advances in ICT increase in electronic information resources which have created a necessity to design, and develop Information literacy programmes*. The majority of the librarians, i.e. 15 (51.72 %) and 13 (44.83%) have shown positive attitude towards the design, develop and integrate I L programmes, whereas, only 1 (3.45%) respondent has given his opinion as *uncertain*. The collected responses from the librarians reveals that their opinion on the above statement is agreeable ( $\bar{x}=1.59$ ). The librarians' opinion on the statement (C.V.=35.19) seems more stable. The calculated mean value for the statement is nearer to 2 (=1.59) which indicates that advances in ICT and increase in electronic information resources has created a necessity to design, develop and integrate IL programmes. Further, it can be observed that variation in the opinion, in terms of quartile deviation (Q.D) is less and Co-efficient of Quartile deviation is equal to 0.33 (C.Q.D=0.33)

**Table 5: Need for of IL programmes**

Statement	Advances in ICT and increase in electronic information resources which have created a necessity to design and develop IL programmes.						
Opinion	Strongly agree	Agree	Uncertain			Disagree	Strongly Disagree
No. of Responses	13 (44.83)	15 (51.72)	01 (3.45)			--	--
Mean	S.D.	C.V	Q1	Q2	Q3	Q.D	C.Q.D
1.59	0.56	35.19	1.0	2.0	2.0	0.5	0.33

*Figures in parenthesis indicate percentage*

Note: Mean - Arithmetic Mean S.D. - Standard Deviation C.V. - Co-efficient of Variation  
Q.D. - Quartile Deviation C.Q.D - Co-efficient of Quartile deviation



which is low. Only 0.33% of the respondents deviated from the opinion *strongly agree to agree*.

### Conduct of Information Literacy Programmes

Out of 29 surveyed libraries, 25 libraries conduct information literacy programmes for the purpose of proper utilization of library resources and services. The Table 6 presents the data with regard to the conducting of Information Literacy Programmes in different engineering college libraries. A majority of the libraries i.e. 25 (86.21%) have indicated that they provide Information Literacy Programmes for their users. There are only 4 (13.79%) libraries which do not conduct I L programmes.

**Table 6: Conduct of Information Literacy Programmes**

IL Programmes	No. of Libraries	Percentage (%)
Yes	25	86.21 %
No	04	13.79 %
Total	29	100.00 %

### Frequency of Information Literacy Programmes

The Table 7 elucidates that 24 (96.00 %) libraries conduct information literacy programmes *every year, at the beginning* for the new comers / users of the library, followed by 6 (24.00 %) libraries which conduct *many times, as and when needed*. Out of 06 (24.00 %) libraries, 5 libraries conduct every year, at the beginning as well as many times, as and when needed. Most of the users of engineering college libraries are undergraduates

**Table 7: Frequency of Information Literacy Programmes**

Frequency of ILP	No. of Libraries
Every year, at the beginning	24 (96.00 %)
Twice in a year (Every Semester)	00.00
Many times, as & when needed	06 (24.00 %)

### Duration of the Information Literacy Programme

The Table 8 provides data about the duration of information literacy programmes in different engineering college libraries. It is observed that a maximum number of libraries i.e. 19 (76.00%) take *half an hour duration* to deliver Information Literacy Programmes, followed by *one hour duration* by 05 (20.00 %) libraries. Only one library takes *two hours duration* to provide the I L programme.

**Table 8: Duration of the Information Literacy Programme**

Duration of ILP		No. of Libraries	
Half an Hour		19 (76.00)	
One Hour		05 (20.00)	
Two Hours		01 (04.00)	
More than two Hours		--	
Mean	S.D.	C.V.	
1.28	0.54	42.31	

*Figures in parenthesis indicate percentage*

Note: Mean - Arithmetic Mean S.D. - Standard Deviation  
C.V. - Co-efficient of Variation

### Conduct of Information Literacy Programmes

The technological, pedagogical and cultural changes occurring within the higher education are demanding that now librarians need to be active

educators. This complex role demands more than sound pedagogical knowledge, advanced teaching skills and an ability to develop and deliver effective learning experiences. It also requires that the teaching librarian functions as an educational professional, that is as one who can engage in educational debate and decision-making processes, influence policy, forge strategic alliance and demonstrate diplomatic sensitivity. From the Table 9, It is found that in most of the libraries, i.e. 15 (60.00%), where, *Librarian* is responsible for the conduct and delivery of Information Literacy Programmes. In some of the libraries i.e. 09 (36.00 %), it is observed that *both the Librarian & Faculty* are taking responsibility for delivering Information Literacy programmes. In only one (04.00%) library the *other Library staff* conducts the programme.

**Table 9: Conduct of IL Programmes**

Responsible for conduct of ILP	No. of Response
Librarian	15 (60.00)
Faculty	00 (00.00)
Other Library staff	01 (04.00)
Both Librarian & Faculty	09 (36.00)

#### **No. of libraries faced problems in effective delivery of ILP**

The Information Literacy programmes have become very important and one among many regular activities to all the libraries as these help the users to access the required information as and when they need without much assistance of the library staff every time. In order to ascertain the problems faced by the libraries in delivery of

Information literacy programmes in various engineering college libraries a question was raised to the librarians and collected responses are presented in Table 10. It reveals that most of the libraries i.e. 22 (88.00%) are facing problems in effective delivery of IL programmes. Whereas, only 3 (12.00%) librarians said, they did not face any problems.

**Table 10: No. of libraries faced problems in effective delivery of ILP**

Problems Faced	Yes	No	Total
No. of Libraries	22	03	25
Percentage	88.00	12.00	100.00

*Figures in parenthesis indicate percentage*

#### **Problems faced by Librarians in effective delivery of IL programmes**

Further, the librarians were asked in detail about the problems they faced while delivering the IL programme. The Table 11 explicates that the highest number of libraries i.e. 18 (72.00 %) indicated that *Lack of an understanding of the importance of IL for student learning outcome* as one of the main problems in delivery of ILP, followed by 14 (56.00%) libraries facing the problems of *Lack of skillful /trained manpower*, *lack of curriculum for IL programme*, and *Low learning motivation of students* are the major hindrances for effective delivery of IL Programmes. 13 (52.00 %) libraries faced the problem of *In-adequate Library staff* and *Limited funds & facilities*. Whereas, 10 (40.00 %) libraries pointed out that *Lack of faculty support in encouraging students* and 06



**Table 11: Problems faced by Librarians in effective delivery of I L programmes**

S. No	Problems	No. of Libraries
1	Lack of an understanding of the importance of IL for student learning outcome	18 (72.00)
2	Lack of skillful /trained manpower	14 (56.00)
3	Low learning motivation of students	14 (56.00)
4	Lack of prescribed curriculum for I L P	14 (56.00)
5	In-adequate Library staff	13 (52.00)
6	Limited funds & facilities	13 (52.00)
7	Lack of faculty support in encouraging students	10 (40.00)
8	Lacking consensus among the Library staff	06 (24.00)
9	Lack of support from the Institutional authority	02 (08.00)

(24.00 %) libraries said that *Lacking consensus among the Library staff*, whereas, only 02 (08.00 %) libraries said that there was *lack of support from the Institutional authority*.

## SUGGESTIONS AND CONCLUSION

The study has made a modest attempt to examine the status of Information Literacy programmes adopted and problems faced in effective delivery of IL programmes in the Engineering College Libraries in Mumbai region. The major findings of the study are identified on the basis of data received and the opinion of the working librarians. The study indicates that there is a lack of understanding of the importance of IL for the student learning outcome. Hence, it is suggested to the library staff to make the programmes compulsory for the beginners. Then the students would treat it seriously and therefore, be prepared to face the ever-growing range of information sources positively and with minimal assistance from the library professionals. The libraries must make a special effort to motivate

users and create more awareness among the users' community about the importance of I L programmes across the institute in becoming the information literates and lifelong learners. This can be done by constantly evaluating the programs by taking feedbacks from the students as well as faculty to understand what appeals to them. Systematic course for effective IL programmes also need to be designed which is the need of the hour. The library staff needs more training and support in acquiring the latest ICT skills.

Since most of the users of engineering college libraries are undergraduates, hence it is suggested to the library staff to make necessary changes in information literacy programmes. And it should be conducted as frequently as possible with extended time and making it a continuous process by designing skill specific and course specific literacy programmes for greater acceptance. It is also suggested to the authorities to incorporate I L programme into their course with subject titles such as I L programme or

information skills programme. The delivery of such courses should be in collaboration with computer experts, communication experts and language teacher. They can even consider engaging outside library domain experts and database/content providers to be part of information literacy programmes at the library. Above all, the success of such programs can only be possible with the total support (flexibility, time and budget) from the college authorities, support from the faculties, and of course, the students' willingness and commitment to learn.

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