CHAPTER – VIII
FINDINGS, SUGGESTIONS AND CONCLUSION

8.0 Summary of Findings

The study has made a modest attempt to examine the status of Information Literacy programmes and practices adopted in the Engineering College Libraries in Mumbai. The major findings of the study are identified on the basis of data received and the opinion of the working librarians. The same are presented below;

➤ In all, 35 questionnaires were distributed to the libraries of engineering colleges in Mumbai region, out of which 29 duly filled in questionnaires were received back, thus resulting into a response rate of 82.86 %. Out of 29, 4 (11.13 %) respondents have indicated that they don’t provide any information literacy programme or training to their library clientele.

➤ The Engineering College Libraries are dominated by the female librarians, about 12 (41.38 %) are male and 17 (58.62 %) are female librarians. Majority of the respondents i.e. 15 (51.72 %) belong to the age group of 31-40 yrs, followed by 11 (37.93 %) respondents between 41-50 yrs and only 2 (6.90 %) respondents are more than 51 yrs age.

➤ It is clear from the study that 26 (89.66 %) engineering institutions belong to the category of private being run by the private management / board/trusts and 2 ( 6.90 %) are being run by the Govt. / Semi Govt. and 01 (3.45 %) is Autonomous. The oldest engineering college was established in 1962 and the recent one is in 2011. Majority of the engineering colleges i.e. 21 (72.41 %) the colleges were established
during 1980 – 2000 because the Govt. of Maharashtra allowed private education trusts to run the technical colleges. 7 (24.14 %) colleges are ISO certified.

➤ The study reveals that 28 (96.55 %) colleges have full time librarians except one college. About 13 (44.83 %) libraries have single and 8 (27.59 %) libraries have two Asst. Librarians and assisted by good number of Library Assistants and supported by non professional staff. It is found that very few libraries have a shortage of staff.

➤ All the 29 (100.00 %) colleges are offering various courses at an under graduate (BE) level and in 9 (31.03 %) colleges are offering at the post graduate (ME) level. Very few colleges are conducting PhD programmes in the engineering stream. About 9 (31.03 %) colleges have got their courses accredited by NBA

➤ It is found that majority of the libraries have developed sizeable and need based print resources taking into consideration the subjects taught in the colleges. The collection is in the form of books, Journals, bound volume of periodicals, Project reports, and standards. Most of the libraries i.e.11 (37.93%) which have a collection between 30,001 -40,000 books, followed by some of the libraries 10 (34.48 %) have collection between 10, 000 – 20,000 and few a libraries (20.69 %) have collection between 20,001- 30,000.

➤ From the responses it is found that e-Journals and online databases are being subscribed by 28 (96.55%) respondents. Majority of the respondents i.e. 21 (72.41%) have the access to e-books.. apart from the print collection.. 25 (86.20%) of the respondents have non-print materials in the form of CD-ROMs and DVDs. 17 (58.62%) libraries have NPTEL video and web lectures in their collection Only 11
(37.93 %) institutions have developed their institutional repositories (Digital Library) which are accessible through Intranet.

- The study reveals that majority of the respondents have the latest and good information technology infrastructure facilities. All the colleges i.e 29 (100.00%) have Computers and printers, followed by 24 (58.62 %) colleges which have scanners and 26 (89.66 %) colleges have barcode reader/scanner. 21 (72.41 %) colleges have photocopy machines and dedicated server. Laptops and LCD projectors are also available in some of the colleges.

- The Study reveals that all 29 (100.00%) libraries are using the Windows operating system and 15 (51.72%) libraries are using both windows and Linux OS. Ms Office application software is used by all and both MS Office and Open Office are used by 7 (24.14 %) libraries.

- All the respondents are using the potential of Internet services in providing effective library services such as, e-Journals, Web OPAC and online information search service. 16 (55.17 %) libraries have established the LAN and Wi-Fi facility.

- It is observed that a maximum numbers of libraries i.e 27 (93.10 %) are computerized with suitable library software. 5 (17.24%) libraries used SOUL software. Followed by 04 (13.79 %) libraries which have used SLIM 21 (72.41%) and equal number of libraries are using Koha and LIBSUITE. A few are using e-Granthalaya, BookWorm etc.

- The study reveals that all 29 (100.00%) respondents provide library services such as Book lending, Reference service, e-resources and Internet access facility. Majority of the respondents provide Book Bank Facility 24 (82.76 %), Current Awareness
Service 21 (72.41 %), Web OPAC 25 (86.21%), Newspaper Clipping Service 21 (72.41 %), Multimedia Centre Facility, and Photocopying 24 (82.76) service.

- The study reveals that ICT has made a lot of impact on the library users and the Library services. On the library users, the majority of the respondents i.e. 16 (55.17 %) have given their opinion as high, followed by 7(24.14 %) respondents who have given their opinion as very high. On Library services, the majority of the respondents i.e. 11 (37.93 %) have given their opinion as high, followed by 11 (37.93 %) respondents who have given their opinion as very high.

- The respondents gave their opinion on knowledge and skills level of users in using e-resources. 8 (27.59 %) respondents gave their opinion as very good, followed by 16 (55.17%) respondents gave their opinion as good. There are 5 (17.24%) respondents who have given their opinion as average.

- The highest number of respondents i.e. 27 (93.10 %) said that the users need more training and guidance in access & use of relevant e-resources. Also 15 (51.72 %) respondents agreed that increase in both print and electronic information resources have created a necessity to develop and include IL programmes in curriculum.

- From the study the researcher has found that out of 29 surveyed libraries 25 (86.21%) libraries are providing information literacy programmes. Hence, these 4 libraries have been excluded and only 25 libraries have been considered for further study. Most of the libraries i.e. 24 (96.00%) of respondents conduct information literacy programmes every year, at the beginning for the new users of the library.

- In majority of the libraries 20 (80.00 %), the I L programmes are being planned, designed and developed in-house by Librarian with team of library professionals – as
part of a range of duties. In 05 (20.00%) libraries being designed by the mixed team of the library professionals, faculty and IT staff of the institution.

- It is found from the study that in many of the libraries i.e 15 (60.00%) the librarian is responsible for conducting and delivery of Information Literacy Programmes. In some of the libraries 09 (36.00), it is seen that both Librarian & Faculty are taking responsibility of delivering Information Literacy programmes.

- The study reveals that almost all the respondents 25 (100.00 %) are of the opinion that, they are giving a brief introduction of library in the beginning by using Library tour and orientation methods. Some of the libraries are using Individualized Instructions (Face to face), Small Group interactions, Search Exercise Lectures / Demonstration and Printed Training Manuals methods.

- The librarians were asked the question about the contents of IL Programme. It is observed from the data that all 25 (100.00%) have included general introduction about the library facilities and services, and also the equal number of libraries are providing Reference sources and their access and Methods & tools for print & online info. search & retrieval content in their Instructions. Some of the libraries i.e 24 (96.00 %) have integrated use of OPAC, e-Journals and Online Database as contents of the programme.

- Most of the respondents 11 (44.00 %) are of the opinion that there is a great deal of impact of ICT on Method of IL programme, whereas 11 (44.00 %) respondents opined that Impact of ICT on Contents of IL programme is quite a bit.
➢ Majority of the respondents 16 (64.00 %) are agree and 9 (36.00%) respondents strongly agree with the providing IL programmes adequately equip users with skills to independently identify, locate, and retrieve needed information.

➢ It is found that many libraries face problems during implementing IL programme to their users. Most of the librarians i.e 22 (88.00%) said that they were facing problems and 3 (12.00%) librarians said that they were facing none of the barriers.

➢ Further, the librarians were asked about the problems they face while conducting the IL programme. Majority of the libraries i.e 18 (72.00 %) are facing a problem of “Lack of an understanding of the importance of IL for student learning outcome”. Maximum percentage of 56.00% (14) librarians said that the there were lack of curriculum for IL programme, Low learning motivation of students and Lack of skillful /trained manpower and about 13 (52.00 %) said that In-adequate Library staff, and Limited funds & facilities.

➢ It is found that majority of the librarians strongly agree that the library staff should possess skills and competencies in the Computer & Networking literacy 18 (72.00 %), online information searching tools & techniques 17 (68.005 %) and latest ICT tools 15 (60.00%)

➢ Majority of the librarians have indicated that their staff still need proper training in handling all ICT tools and e -resources. And also about 19 (76.00%) librarians are willing to participate in the training programs in educational technology to improve the standards and their efficiency in providing IL Programme.
➢ The study reveals that 16 (64.00%) librarians strongly agree and 07 (28.00%) agree that training / Seminars / Workshops will help in improving the efficiency of the library staff.

➢ To measure the effectiveness of any system a feedback is essential, which in turn helps to analyze, evaluate and revise the existing contents of that system. 13 (52.00 %) libraries are conducting assessment through Survey 12 (48.00 %), Objective tests 01 (04.00 %) and the Search Exercise by 2 (08.00 %).

8.1 Implied Suggestions

A thorough examination of the analysis of the data and findings of the study enabled the researcher to enlist the following suggestions to the respondents for the effective implementation of information literacy programmes.

It is found from the study that in most of the Libraries I L Programme is designed and developed in-house by the librarian with a team of library professionals. Hence, it is suggested to the authorities to incorporate I L programme into their curriculum 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.

1. It is revealed from the study that in most of the Libraries I L Programme is designed and delivered by the librarian alone. Hence, it is suggested to the authority that
faculties and librarians can achieve better learning outcomes in terms of critical thinking and lifelong learning skills if they work together on designing curricula to include appropriate course content and modules to teach information skills.

2. Throughout the history of academic librarianship, the librarians have been teaching research skills to college and university students. The instruction librarians taught students research skills through bibliographic instruction and information literacy instruction. The faculty-librarian collaboration plays an important role in both types of instruction. The librarians and college faculty experience difficulty in collaborating because of different “cultures.” The faculty is more content-based in their instruction, whereas the instruction librarians are more process-based. This difference in cultures is an obstacle for the librarians needing to collaborate with faculty for the improvement of students’ information literacy skills. The collaborations between faculty and librarians will ensure that faculty is prepared for electronic information use, which they will be able to integrate technology into their teaching processes and that students are taught viable information skills.

3. It is indicated from the study that some significant problems are experienced by engineering college librarians in delivering the information literacy programmes; and there is a lack of understanding of the importance of IL for student learning outcome. Hence, it is suggested to make the course compulsory; then new 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 special effort to raise the learning motivation of students. This
can be done by constantly evaluating the programs by collecting feedbacks from the students to understand what appeals to them.

4. The majority of engineering college libraries in Mumbai are providing information literacy to their faculty and students. It is also evident from the study that almost all the libraries are using a brief introduction of library in the beginning and Library tour and orientation. Hence, it is strongly suggested to the librarians that a structured approach is necessary in order to make sure that everyone receives training. Though variety of methods are existing but using a combination of several methods is advised since different methods are more suitable for different aspects of information.

5. The study indicates that the awareness among librarians about the significance of providing information literacy is high. The majority of the librarians are conducting IL programme only every year, at the beginning for the new users of the library for half an hour duration. Since most of the users of engineering college libraries are undergraduates. It is suggested to the concerns 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.

6. The engineering college libraries have been in the forefront for procuring online resources for their users. The librarians’ ability to manage the electronic resources and its services largely depends upon their own ability to use them effectively. Hence, the library staff are required to make additional efforts to upgrade their ICT skills. In this study, the librarians’ revealed that for providing effective information
literacy, knowledge about computers and networking is highly needed. Hence it is suggested to the authorities of the colleges to depute regularly the working librarians to attend refresher courses and training programmes organized by the different agencies.

7. The study reveals that in a changed environment, the Information Literacy programmes are compulsory in almost all organization including engineering institutes. Hence it is suggested to the library and Information schools that they must support accredited course in the I L programmes. LIS Experts should suggest for integration of information literacy programme as an integral part of higher education curriculum. The curriculum also needs to be planned in such a manner that practical aspects and project work become more stressed part of user education. It is recommended that all the university departments of library and information science should start short-term courses on “Information skills teaching for librarians”. It should be grade based like Orientation and refresher course.

8. The organizations like State government technical dept. and AICTE should take initiatives and direct the higher educational institutions to integrate the Information Literacy programme across the curriculum by designing a separate paper at Graduate, Post-graduate level students. The authorities at different level of planning and program implementation should come forward and formulate a national information policy to promote the cause of information literacy programmes.

8.2 Future Areas of Research

- In the information society, the students and faculty are witnessing enormous changes in the way information is being identified, retrieved and accessed. The
developments in ICT have affected every segment of society and all levels of education. The users need to acquire new sets of skills in order to utilize the resources at learning centers. They will have to be taught how to manage their learning process to an unprecedented degree. The present study is an effort to investigate the availability of information literacy programmes at the engineering colleges located in Mumbai region and there is ample scope for the future research.

The present study has the geographic limitation of covering engineering colleges only in Mumbai region. This scope may be expanded to survey the engineering colleges in the whole of Maharashtra. Such a study will give comprehensive picture about information literacy in Maharashtra state. And also, if the scope is extended to cover other professional education like, management, dental and medical, it will be an exhaustive study covering all disciplines.

Another area where the future research can progress is the content and delivery method of information literacy programmes. New and innovative content needs to be identified and added into the curricula of literacy programmes. Delivery method is also as important as the content. So, research must be carried out to identify which is the most interesting mode of presentation that will catch the attention of users and draw their attention towards libraries. This will certainly help in turning the casual users of libraries into lifelong learners who are ardent fans of libraries and their services.

8.3 Conclusion

With the rapid growth of the information, the ability of science and engineering graduates to be information literate has become critically important. The students need to
acquire information skills and critical thinking skills as part of their higher education so they can become productive participants in the workforce and be prepared for life-long learning. Today’s engineering educated workforce needs skills beyond the technical knowledge traditionally taught in the post secondary curriculum. In today’s information rich environment, lifelong learning skills have also become extremely important. The students must be able to identify problems, decide what information they need in order to solve the problem, locate the information they need, analyze it, synthesize it and communicate their solution to others.

In the current situation, it is no longer sufficient to educate those in the academia on how to use the library. Due to the proliferation of digitized information students and researchers must know not only how to access this information but also how to evaluate it in the most effective way. This implies that students must be taught to understand how to use the library and its varieties of resources and services including how to become information literate simultaneously.

Thus, the librarians working in different types of libraries in general and engineering colleges in particular have to play a significant role to promote information literacy in the society. They can play imperative role in the educational changes taking place in teaching, learning and research in higher education by creating and providing an appropriate information environment for the efficient and effective use of all types of information resources. To sum up, the integration of I L programme in engineering colleges is entirely the responsibility of library and information professionals, library associations, library and information science schools and policy makers. Hence, it is strongly advocated that the
higher education system must devise ways and means to implement IL programme at all levels especially in engineering and technology education.

Within the framework of the United Nations Literacy Decade (2003-2012), in the new Information Literacy Programme of UNESCO, the objectives outlined for IL are to -

- foster the development of an information literate citizenry with the technical and critical-thinking skills and abilities needed to identify, acquire, manage and use information to enrich all aspects of their work and personal lives;
- identify and encourage effective practices in IL around the world;
- promote IL through regional approaches and to facilitate exchanges;
- propose innovative curricula about IL; and
- To improve cooperation between government officials, researchers, educators, librarians and media practitioners.

The focus of these objectives is to make the citizens information literate through effective strategies and practices and integrated curricula, which in turn makes collaboration between academicians, researchers, administrators, and information communication practitioners (LIS and mass-media professionals) obligatory. To achieve the objectives outlined by the UNESCO for information literacy programmes. The sincere efforts by the members of the faculty and working LIS professionals must work together not only at the time of implementing IL programmes before that in planning, designing and delivering an appropriate and useful IL programmes in different levels of education is must, then only the working librarian will become successful in helping each and every user to become an information literate as well as lifelong learners.
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