CHAPTER 6

FINDINGS, SUGGESTIONS AND CONCLUSION

Introduction

Information is a vital resource, which is required for each and every individual in their day today life. Every individual collects information to enhance his/her knowledge in a particular subject or group of subjects. However, it is invariably found that, with the increasing quantum of information produced and distributed in different mediums in all the areas of universe of subjects, it has become humanly impossible to find out the required information within a given timeframe. To locate the right information from a right source at right time requires specialized skills. Information literacy is a tool which fractionalizes the contents of information in a way suitable to each individual. Information literacy enhances individual skill levels in retrieving the required information using specialized search skills and enables one to filter and evaluate the collected information. As information is a fundamental channel for gaining knowledge and information literacy covers the aspects related to use and synthesize of such knowledge.

In this Internet era, information is available in multiple formats, wherein e-information has dominated the scene. Electronic access, navigation and exploitation of such e-information has somewhat become difficult and confusing for individuals, which calls for e-information literacy. E-information literacy is a step ahead of information literacy which travels around digital world, support federated search and provide discovery services by accessing information in e-format to the users.

University teachers being core group of users’ require varied type of information for their teaching and research work. Owing to limited skills, like other users, they too also find it difficult to locate, filter and evaluate information from vast array of information resources. Both information literacy and e-information literacy offer flawless and lucid access to mounting collections of heterogeneous resources and exposes university teachers to the potential sources of information in a simpler and easier manner. The present study showcases their e-information literacy skills in retrieving and use of various types of e-information.
6.1 Summary of the findings

The present study has brought out some interesting findings that reflect the e-information literacy skills of university teachers working in the universities of state of Maharashtra. In addition to vital empirical findings of the study, fulfillment of set objectives of study has been detailed below.

6.1.1 Compliance of Objectives

The objectives and their compliance through the research work are as follow:

**Objective-1:** To understand awareness of e-resources amongst university teachers.

**Compliance:** Chapter 4 reports under the heading II, sub-heading 4.2, corresponding tables 4.8 and 4.9 reveal the understanding about awareness of different e-resources amongst the university teachers.

**Objective 2:** To know the type of e-information required by the university teachers and how they acquire the information from e-resources.

**Compliance:** Chapter 4 reports under the heading III, sub-headings 4.3.1 to 4.3.3, corresponding tables 4.10 to 4.14 relates to types, sources and use of e-information required by the university teachers.

**Objective 3:** To understand the purpose and problems of the teachers while acquiring e-information.

**Compliance:** Analysis reported below the headings IV and V (Chapter-4), sub-headings 4.4 and 4.5.1 and their corresponding tables 4.16 and 4.17 highlights the purposes and problems of the university teachers while acquiring e-information.

**Objective 4:** To understand the impact of e-information literacy on information seeking behavior of university teachers.
Objective 5: To ascertain the measures of esteems like citations, consultancy, evaluation and project work of teachers due to e-information literacy.

Compliance: Chapter 4 under the heading VI, sub-headings 4.6 to 4.6.2 having corresponding table 4.19 exposes the measures of esteems like citations, consultancy, evaluation and project work of teachers due to the impact of e-information literacy.

Objective 6: To know the use of computers, Internet search tools and e-information literacy skills of the teachers in retrieving information.

Compliance: The heading VII, sub-headings 4.7.1 to 4.7.12 having corresponding tables ranging from 4.21 to 4.37 (Chapter-4) relates to university teachers’ use of computers, internet search tools and e-information literacy skills of the teachers in retrieving e-information.

Objective 7: To know the role of university libraries in conducting various types of e-information literacy programmes for developing e-skills of university teachers.

Compliance: In Chapter 4 below the heading VIII, sub-headings 4.8.1 to 4.8.4 having corresponding tables from 4.38 to 4.41 narrate the role of university libraries in conducting various types of e-information literacy programmes for developing e-skills of university teachers.

Objective 8: To recommend e-information literacy model for university libraries.

Compliance: The conceptual e-information literacy model for university libraries is designed and described in Chapter-5
6.1.2 Empirical findings:

Following are some of the major findings of the present study:

1. University teachers who are responded to survey, categorized into three designations viz. Professor (21.61%), Associate Professor (27.67%) and Assistant Professor (50.72%), covering 43 academic departments under 3 faculties viz. Science (38.04%), Social Science (37.18%) and Arts (24.78%).

2. In regard to awareness of e-resources by the university teachers it is found that, 92.22% of teachers surveyed are aware of e-journals (including Open Access/Free Journals) followed by e-books (91.07%). Their awareness also found to be high in case of general search engines like Google (87.32%) and e-newspapers (83.29%). When looked at faculty wise distribution it showed that again e-journals appeared at first order in case of Science and Social Science faculty and e-books in case of Arts and Humanities faculty.

3. While determining type of e-information required by university teachers it has been found that, 41.21% of teachers prefer full text of journal articles highlighting their keenness to have full copy of the article for their reference. While looked at faculty wise breakup, full text articles found to be highly preferred by Science faculty having a mean value of 4.40 and information about current developments seems to be high on the agenda in case of Social Science and Arts and Humanities faculty having mean value of 4.28 and 3.94.

4. Regarding priority of e-resources, it is observed that the General Search Engines and Scholarly Search Engines are the most frequently used by university teachers with rank position one and three. When looked at different faculties, frequent use of e-resources found in Science (3.79) and Social Science (3.48) faculties and occasional use in case of Arts and Humanities field (3.24).
5. In regard to source of acquiring e-information, it has been found that, 94.81% university teachers surveyed consult Internet sources followed by library (73.77%).

6. Majority of university teachers (93.08%) prefer English language as a language to access e-information.

7. Regarding the purposes of seeking e-information, it is observed that the writing and presenting papers and delivering lectures were the main purposes for which university teachers frequently seek e-information having a mean value of 4.03.

8. While determining problems in accessing e-information, the findings reveal that lack of Internet Bandwidth (Slow Internet connection) was a major problem in accessing e-information observed by 32.28% of the university teachers.

9. To retrieve and access e-information, it has been found that 57.92% university teachers take help from their colleagues.

10. Interestingly, survey of the majority of university teachers (93.94%) revealed that the knowledge of e-resources and an effective use of such electronic resources have a greater impact on their research and teaching activities. Further 92.79% of university teachers have revealed that the training or orientation programmes to know about availability and use of e-resources will enhance their academic and research work.

11. Regarding impact of training on use of e-information resources, it is found that 53.60% teachers would be able to evaluate information critically.

12. It is interesting to find out that, majority of university teachers (98.27%) have access to computers and 93.37% of them have an internet connection. Access to other ICT infrastructure also found to be good.
13. In regard to accessing technique on internet to retrieve the required information the study has disclosed that use of general search engines like Google, Bing and Yahoo occupies first rank.

14. The study has disclosed that, among the search criteria adopted to retrieve information from search engines, entering keywords in simple search is frequently adopted by university teachers (34.87%). It correlates with the general perception in regard to use of search engines by various kinds of users. In regard to adoption of other search criteria’s across the disciplines few of these are found to be used occasionally.

15. It is significant to find out that, only 75.50% university teachers have awareness about access to E-Resources available from INFLIBNET e-consortium.

16. Interestingly, majority of university teachers (83.57%) found to be aware of different FREE or Open Access online databases/resources/E-books available on the Internet and also they are making use of the same for their teaching and research work.

17. Regarding method of accessing full text journal articles on the internet, it is found that, searching through Google (35.16%) and Google Scholar (29.39%) search engines is frequent among university teachers. In regard to application of methods across disciplines, it is found that teachers from Science faculty (3.39) on the top followed by arts and humanities faculty (3.31) and Social science faculty (3.23).

18. The study reveals in regard to use of different Web 2.0 tools that, maximum number of university teachers (58.79%) use Wikis followed by social networking sites (51.01%) for their teaching and research work.

19. Regarding orientation programmes organized by university libraries to improve e-information literacy skills of the teachers, it is found that awareness
programme on E-Resources (51.30%) is quite commonly known to the teachers. This may be attributed to INFLIBNET’s efforts in conducting such programmes at various universities to make faculty and students aware of e-resources given under its consortium.

20. It is interesting to find out that, maximum number of university teachers (69.74%) expects library to develop tutorials on the use of e-resources and host these on library website to enhance their e-information literacy skills.

21. The study has disclosed that 57.06% university teachers are satisfied about the total number of e-resources available in their field of work for which University library has an access.

6.2 Suggestions:
The identification of difficulties opens the new ways for development and improvement. Keeping in view of the analysis and interpretation of observed data, following suggestions are drawn for the present study:

1. Awareness amongst the e-resources like Journal contents alert services, Discussion forums/ Groups, Abstracting and Indexing Databases, Subject Gateways and portals and Subject Specific Search Engines found to be poor among university teachers which needs to be improved by arranging user awareness programmes.

2. The occasional or rare use of type of e-information like Scientific and Technological Developments, Computer programs, Statistical and Mathematical models, Statistical, Economic and Social data, General, Scientific, Business and Economic News and Scientific Formulae by university needs to be strengthened by arranging discipline specific programmes by experts in the domain.

3. Search criteria adopted by university teachers on the internet is found to be limited to entering of keywords in a single search box, efforts need to be made
by university libraries in teaching them about advanced search options and make a way for teachers to look beyond Google type of search engines through continued education programmes on alternate resources.

4. In many universities it has been observed that, use of access to e-resources is restricted to campuses. If remote access is made available to university teachers, it may ensure the enhanced usage resources may also help in increasing their publications.

5. Subscription to databases in multidisciplinary subjects and in multilingual languages apart from resources available from INFLIBNET consortium to meet the e-information seeking needs of arts and humanities faculties, which indirectly assist in qualitative and balanced collection development.

6. Universities need to enhance the internet bandwidth to save valuable time of teacher’s in finding the required e-information. Attention towards security and safety for accessing Internet also needs attention looking into threat perception such as viruses, cybercrimes perceived by university teachers with adequate ICT facilities.

7. University libraries need to provide access to enough discipline specific e-resources for teaching and research activities of the university teachers and also organize training cum orientation programmes to strengthen the skills of teachers in handling of Internet/Computers and in finding of information as an independent learner.

8. University libraries need to make an effort in using Web 2.0 tools for the effective dissemination of e-information to their clientele and also take steps in training university teachers about the use of tools like RSS feeds, blogs, Wikis, Mashups to keep them updated in their field of teaching and research.

9. The impact activities like evaluation of theses and dissertations, undertaking consultancy needs to be strengthen by adopting the skills and techniques of e-
information literacy so that it may report as a high impact on teachers information seeking behavior.

10. Practical demonstration regarding accessing information from internet or search criteria applied for searching information through search engines needs to be arranged by the library for better understanding of various search skills and its use.

11. Role of university library is crucial in enhancing e-information literacy among university teachers. The library should arrange regularly the orientation programmes like awareness programme on citations, evaluation and use of information, plagiarism, E-resources, demonstration of use of databases/software and web tools and development of interactive online tutorials/courses.

12. Information Literacy training program should be considered as part of compulsory faculty development program.

13. Formation of ‘Skill Learning Center” for continuous training and hands on approach for the university teachers may be considered.

14. The poor index value of university teachers under the designed ‘e-information literacy index’ needs to be accounted with sufficient awareness campaigns, ICT facilities and online training about searching techniques by the universities and university libraries.

6.3 Scope for Further Areas of Research:
From the study it is clear that apart from the awareness and use of e-resources, role of library in promoting of e-information literacy of university teachers regarding the use of technology for accessing e-information for various academic and research activities needs considerable attention. The further areas of research in this direction are suggested below:
- Undertake a comparative study to assess the e-information literacy levels of post graduate students and research scholars from all disciplines studying in the universities of Maharashtra or any other state.

- To study, develop and implement ‘e-information literacy’ as a part of curricula at different levels of LIS schools and centers especially for Choice Based Credit System (CBCS)

6.4 Conclusion:

For the success in the information-based society and in the process of life-long learning, both self-regulated learning skills and information literacy skills are uniformly required.

In this era of information deluge, use and applicability of e-information literacy is a lifelong learning process for academia to enhance their knowledge, grow up professional competency with cognitive development and suffice to live with the changes and challenges of changing ICT technology. Now e-information literacy has become a need of the hour considering the availability of quantum of e-information, 24 x 7 access and ease of use. It is observed that individuals who are information literate and have skills to acquire knowledge are more successful in lifelong teaching and learning processes. Information Literacy must become the possession of every individual. At the same time in the cycle of information behavior process of the teachers, the factors such as time, interest, job, type of information etc are the other influencing parameters which need to be adjusted with the kind of situation.

Information Literacy facilitates the teachers and students for independent and authentic learning rather than dependent on the teaching and academic activities. It is the need of the hour for inclusion of Information Literacy/E-Information Literacy courses at UG and PG level curriculum to shape the futuristic independent learner. E-Information Literacy can come out as ‘Best practice’ in higher education system with its numerous applications. The teachers have their own information ideology which meets many of their needs and the library is little used. If the teachers are well trained in Information Literacy skills, definitely they will enhance information
literacy in a planned and systematic way form their wide learning experiences in to the minds of students.

University libraries as a center of knowledge need to take initiatives in enhancing e-information literacy skills of teachers in the present digital era as it is found from the study that, many of them still lack certain basic and advanced search skills and awareness and use of certain type of e-information. Universities in turn need to build required ICT infrastructure to ensure teachers make effective use of e-resources and Internet by applying suitable search strategies.