CHAPTER 1
INTRODUCTION

The objective of the present chapter is to highlight the concept of Literacy, Information Literacy, E-information literacy and to specify objectives, hypothesis, limitations, methodology and conspectus of the study.

1.1 PREAMBLE

The greatest challenge for society in the 21st century is to keep pace with the knowledge and technological expertise necessary for finding, applying and evaluating information. It is acknowledged that we live in an information-rich society where the amount of information in the world is presently doubling every three years. Therefore it is necessity of 21st century to include information literacy (IL) in education.

The information society calls for all people to become information literate which means that they should not only be able to recognize when information is needed but also be able to identify, locate, evaluate and use effectively information needed for decision making or fulfilling different goals. IL is increasingly important in the present context of the information explosion and related uncertainties about its authenticity, validity, and reliability.

In 21st century, IL has become a crucial issue for the political, economic, social & cultural development in all countries. IL is global phenomenon today. It is information gap that divides the nations & the citizens of a nation into rich & poor. It is information literacy that helps in closing this gap.

1.2 PROPOSED RESEARCH

The term information literacy achieved its current prominence within the library community with the advent of the information explosion. An information environment characterized by an exponential increase in information that is freely available over the internet, along with the rapid
development of information technologies that facilitate the access and dissemination of this information (Grafstein, 2007).

The term “information literacy” was first introduced in 1974 by Zurkowski (the President of the US Information Industry Association), in a submission to the US National Commission on Libraries and Information Science, to identify people trained in the application of information resources to their work (Joint, 2005; Singh, 2008; Faust, 2001).

The idea of information literacy, which emerged with the advent of information technologies in the early 1970s, has grown, taken shape and strengthened to become recognized as the critical literacy for the 21st century. He recognized that ‘information literates’ would be better able to exploit information resources (Bruce, 2002).

E-Literacy and Information Literacy are different but mutually compatible concepts with validity within specific contexts. Most librarians work within hybrid library environments, and may feel that e-Literacy is a single medium concept and as a practical tool for promoting the use of their mixed medium information service it is less useful than Information Literacy (Joint, 2005).

Electronic information literacy (E-IL) refers to literacy activities (such as reading, writing, and research) that are delivered, supported, accessed, or assessed through computers or other electronic means rather than paper; is awareness, skills, understandings and reflective-evaluative approaches that are necessary for an individual to operate comfortably in an information rich and IT-supported environment (Martin and Radar, 2003); ability to search retrieves, organizes, employ, and evaluate information derived from electronic information resources (Fortier, 1998); to encompass the combined literacy skills which relate to IT literacy as well as information literacy skills and concomitant creation of new information (Beatty and Mountifield, 2005).

The development of IL is central to the academic success (Faust, 2001). Information literacy makes the students beyond the role of passive listener and note taker and allows them to take some direction and initiative
during class. The main purpose of including this in education system is to
direct the students that will allow them to discover the material they work with
fellow students to understand the curriculum.

IL instruction assists users in identifying and selecting necessary
information, and using appropriate search strategies in evaluating, organizing
and synthesizing the information thus acquired into a meaningful state. It
makes them self-reliant and gives them a sense of being in control of their
learning (Kavulya, 2003).

The need of IL may be essential due to the following reasons.
1. Rapid increase in the stream of information due to information revolution;
2. Advent of information and communication technologies (ICT);
3. Significant changes in information environment in content are affecting
   information users in several dimensions.
4. Research on complex and interdisciplinary topics. (Dhiman, 2006).
5. Availability of information in abundance in various forms & formats.
6. Availability of information is free of any geographical boundaries.
7. Abundance of information makes it difficult to find exact information.
8. The question of authenticity, validity & reliability of culled out information
   clubbed with expanding quantity is a serious problem and needs valid
   consideration.
9. Majority of users to use IT & to take advantage of wealth of resources
   currently available is becoming an important objective, for learners of all
   ages.
10. Information kiosks, learning resource centers etc. play key role in
    imparting Information Literacy to their beneficiaries to acquire compatible
    skills for handling printed vis-à-vis electronic sources.
11. Skills of Information Literacy would train beneficiaries to take a logical
    path in their search for & application of Information (Mokhtar and Majid,
    2008).
IL is important from the view point of:

1. To be an independent lifelong learner it is essential to achieve a high level of information literacy (Rockman, 2005).
2. Equity of opportunities among citizens is extremely important. One of the ultimate benefits of information literacy is to help close the gap between the information poor and the information rich (Ercegovac, 1998).
3. IL is required to have a critical thinking approach. An approach that would lead to economic and cultural progress of a nation.
4. IL is also important to understand the difficult questions of ownership of information and copyright.
5. IL is a prerequisite for – participative citizenship; social inclusion; the creation of new knowledge; personal empowerment; and learning for life (Bundy, 2005).

1.2.1 Statement of Research Title


Present research focuses on the E-information literacy of M.Sc as well as Ph.D Scholars in all Science Departments of Dr. Babasaheb Ambedkar Marathwada University (BAMU) Aurangabad.

1.2.2 Explanation of the Concepts

1. Information - information is data that has given shape. It may be considered as processed data. Thus, information is data plus the meaning, which has to be a result of human action (Seetharama, 1999).
2. **Literacy** - literacy involves the ability to use language in its written form: a literate person is able to read, write and understand his or her native language and expresses a simple thought in writing (Bawden, 2001).

3. **Information Literacy** - Information Literacy is an understanding and set of abilities requiring individuals to recognize when information is needed, have the ability to locate, evaluate, use effectively the needed information and create information within cultural and social context (ACRL, 2004; ALA, 1989; CILIP, 2005; UNESCO, 2003; Karisiddappa and Kavita, 2005).

4. **E-Information Literacy** - Electronic information literacy refers to literacy activities (such as reading, writing, and research) that are delivered, supported, accessed, or assessed through computers or other electronic means rather than paper (Martin & Rader, 2003).

5. **E-document** - E-documents, an abbreviated term for electronic documents, are documents that exist only in electronic form such as data stored on a computer, network, backup, archive or other storage media such as e-journals, ETD, e-database & e-archives etc (Kane, 2009).

6. **BAMU** - Marathwada University established in August 1958 was renamed in 1994 as Dr. Babasaheb Ambedkar Marathwada University (BAMU) is located at Aurangabad. The jurisdiction of BAMU is Aurangabad, Jalna, Beed & Osmanabad districts.

1.3 **AIMS & OBJECTIVES**

Present study has been undertaken with a view.

1. To review the current developments in the filed of “Information Literacy”.

2. To study the extent of Information Literacy in M.Sc & Ph.D Students of the Science Departments in BAMU, with special emphasis on the E-Information Literacy.

3. To design & develop demo packages in E-Information Literacy for training students, researchers & other users.

4. To survey satisfaction level of users on demo package.
1.4 HYPOTHESIS

The science faculty students of university lack sophisticated skills that are needed to exploit the library’s research potential.

1. Majority of the students realize the need for training in E-Information Literacy.
2. Awareness of use of Internet is prominent.
3. E-resources accessibility is poor.
4. Awareness of E-resources is present among students.

1.5 SCOPE & LIMITATION

The present study is limited to M.Sc as well as Ph.D students of Science faculty in BAMU, Aurangabad. The main focus of this study is to identify the needs & requirements of users in general & to know the use of e-resources. While teachers of all faculties including science faculty & M.Sc & Ph.D students of other faculties have been excluded from the present study.

1.6 POPULATION SAMPLE

The study is based on the Faculty of Science in BAMU. There are 10 Science Departments in the campus of BAMU. All these departments are included in the population. The user population according to departments is given table 4.1

The sample size for user population of 1037 is 360 as per Krejcie & Morgan table (Krejcie & Morgan, 1970). Accordingly, of the total 1037 users, the questionnaire was distributed randomly to 360 i.e. 34.71% users which is shown in table 4.1. Of the 360 respondents 312 (86.66%) have returned the questionnaire duly filled in.

After analyzing responses from 312 respondents, it was found that 211 (67.63%) respondents needed training in use of E-resources. From the 211 respondents 136 were chosen sample as per Krejcie & Morgan (Krejcie & Morgan, 1970) table for training. All the 136 respondents who were present for training were given feedback questionnaire. Of the 136 respondents 50 respondents returned feedback questionnaire duly filled in giving 36.76%
response. Department wise distribution of the 50 respondents is shown in table 4.2

1.7 METHODOLOGY

Present study has used survey method in combination with experimental method.

Survey method plays a significant role in research as can be seen from the statement. “The survey method is one of the most effective and sensitive instruments of research. Survey research can produce much needed knowledge” (Kasyap, 1969).

Experimental method is a systematic & scientific approach to research in which research manipulates one or more variables, controls & measures any change in other variables (Experiment Resources, 2008). Following experiments were conducted on the sample population.
1. The user’s knowledge about use of services listed in scope was collected by distributing questionnaire to PG & Research Students in Science departments in Dr. Babasaheb Ambedkar Marathwada University.
2. Depending on the knowledge, the interactive courses were developed along with online tutorials.
3. The package was tested with experimental group of PG as well as Research Students.
4. Users’ satisfaction level about the package have been collected & analyzed.

The steps in the research methodology included:
   a) Data collection;
   b) Data analysis and Interpretation.

1.7.1 Data collection

Researcher collected the data with the help of structured questionnaire.
Design of Questionnaire:

To know the needs of students covered, a structured questionnaire was designed and factual questions, opinion questions were asked (Chaudhary, 1991).

Data Collection Questionnaire

The questionnaire (Appendix - A) consisted of 5 sections; in all 5 sections there are 29 questions, viz.

Section I  Consists of 7 questions on basic information of the user/students i.e. Name, Age, Class, and Gender etc.

Section II  Consists of 8 questions pertaining to Use of computer as well as Internet.

Section III  Consists of 11 questions which deal with the concept of E-resources in general i.e. Types of e-resources, purpose, availability & frequency etc.

Section IV  Consists of 2 questions i.e. General Search, Open Source journals, & Problems faced by users while using e-journals etc.

Section V  Consist of 1 question which covers the satisfaction level.

Feed Back Questionnaire

The questionnaire (Appendix- B) consisted of 2 sections; in all 2 sections there are 9 questions, viz.

Section I  Consists of 4 questions on basic information of the user / students i.e. Name, Age, Class, and Gender etc.

Section II  Consist of 5 questions pertaining to use of e-resources after tutorial.

It was estimated that it would take about 10 to 15 minutes of user time for responding to the questionnaire.

Demo Packages

Based on training needs of respondents demo packages were developed for tutorials on E-journals, E-books, ETD, OPAC & Subject Gateways along with user manuals (Appendix – C) by using Windows XP, Internet Explorer (IE) & Macromedia Flash 8 Program with the help of
English Language & Intel Pentium with 1GB RAM Platform. Each of the tutorials / demo packages have 3 parts i.e. Biological Science, Mathematical Science & Pure Sciences, each of the parts cover the strategy for General Search & Advance Search. The General Search covers Journal Homepage, Author Index, Abstract & Full Text in HTML / PDF format, while Advance Search uses Boolean Operators for Searching.

1.7.2 Data Analysis & Interpretation

Collected data has been analyzed by using Statistical Software Package i.e. SPSS package and presented data in table from. For the purpose of analyzing the data collected some statistical techniques like, correlation tools, Ti, Ti – Square, Chi – Square etc. were used for analyzing data (Zar, 1999; Gupta, 2009).

1.8 MAJOR CONCLUSIONS / FINDINGS OF THE STUDY

Some of the major findings of the research are given below…

- Of the total 312 respondents 259 (83.01%) were locating information in Library for study / research, 19 (6.08%) were asking for information on ILL, & 308 (98.72%) were locating information on Internet. This indicates that the hypothesis, “Awareness of Internet use is prominent” (Hypothesis No.2) is valid.

- Of the total 312 respondents 189 (60.58%) respondents were using Internet daily, 61 (19.56%) respondents were using Internet once in a week, 54 (17.30%) respondents were using Internet once in a month & 8 (2.56%) respondents were using Internet once in a while. This indicates that the hypothesis, “Awareness of Internet use is prominent” (Hypothesis No.2) is valid.

- Of the total 312 respondents 141 (45.19%) were accessing Internet at Netcafe, 106 (33.98%) were accessing Internet at Home, 217 (69.56%) were accessing Internet at UGC INFONET Center, 187 (59.94%) were accessing Internet at their own Department, 92 (29.48%) were accessing Internet at University Library. This indicates that the hypothesis, “Awareness of Internet use is prominent” (Hypothesis No.2) is valid.
Of the total 312 respondents 140 (44.88%) were rate the Skill for using Internet is Excellent, 96 (30.76%) were rate the Skill for using Internet is Very Good, 39 (12.50%) were rate the Skill for using Internet is Good, 28 (8.98%) were rate the Skill for using Internet is Fair & 9 (2.88%) were rate the Skill for using Internet is Poor. This indicates that the hypothesis, “Awareness of Internet use is prominent” (Hypothesis No.2) is valid.

Of the total 312 respondents 294 (94.23%) were using Internet for E-mail purpose, 231 (74.03%) were using Internet for using E-resources & 157 (50.32%) were using Internet for using OPAC. This indicates that the hypothesis, “Awareness of Internet use is prominent” (Hypothesis No.2) is valid.

Of the total 312 respondents 287 (91.98%) respondents were using e-journals. This indicates that the, hypothesis, “Awareness of e-resources is present among students (Hypothesis No. 4) is valid.

Of the total 312 respondents 208 (66.66%) users need training for using e-journals. This indicates that the, hypothesis “Majority of the students’ realize the need of user training” (Hypothesis No. 1) is valid and “E-resources accessibility is poor” (Hypothesis No. 3) is valid.

Of the total 312 respondents 190 (60.90%) of the users are using E-Thesis & Dissertations (ETD). This indicates that the, hypothesis, “Awareness of e-resources is present among students (Hypothesis No. 4) is valid.

Of the total 312 respondents 251 (80.45%) users need training for using ETD. This indicates that the, hypothesis “Majority of the students’ realize the need of user training” (Hypothesis No. 1) is valid and “E-resources accessibility is poor” (Hypothesis No. 3) is valid.

Of the total 312 respondents majority 259 (83.01%) of the users are familiar with the e-books. This indicates that the, hypothesis, “Awareness of e-resources is present among students (Hypothesis No. 4) is valid.
➢ Of the total 312 respondents 153 (49.04%) users were of the opinion that they need training for using E-books. This indicates that the hypothesis “Majority of the students’ realize the need of user training” (Hypothesis No. 1) is valid and “E-resources accessibility is poor” (Hypothesis No. 3) is valid.

➢ Of the total 312 respondents 139 (44.56%) were fully satisfied about the infrastructure facilities provided by university for accessing e-resources, 85 (27.24%) were partially satisfied about the infrastructure facilities provided by university for accessing e-resources & 88 (28.20%) were unsatisfied about the infrastructure facilities provided by university for accessing e-resources. This indicates that the hypothesis, “E-resources accessibility is poor” (Hypothesis No. 3) is valid.

➢ Of the total 312 respondents 211 (67.63%) users need training for using e-resources, while 32.37% users do not need training. This indicates that the hypothesis “Majority of the students’ realize the need of user training” (Hypothesis No. 1) is valid and “E-resources accessibility is poor” (Hypothesis No. 3) is valid.

➢ Of the total 312 respondents 232 (74.35%) were using general search for retrieval of information, 163 (52.24%) were using advance search for retrieval of information. This indicates that the hypothesis “Majority of the students’ realize the need of user training” (Hypothesis No. 1) is valid and “E-resources accessibility is poor” (Hypothesis No. 3) is valid.

➢ Of the total 312 respondents 220 (70.51%) users require training for using of Open Source Journals. This indicates that the hypothesis “Majority of the students’ realize the need of user training” (Hypothesis No. 1) is valid and “E-resources accessibility is poor” (Hypothesis No. 3) is valid.

➢ Of the total 312 respondents 204 (65.38%) were facing problem about Not Easy to Use, 151 (48.39%) were facing problem about Difficult to Read on Screen, 61 (19.56%) were facing problem about Time
Consuming, 285 (91.34%) were facing problem about Lack of Training & 91 (29.16%) were facing problem about Lack of IT Knowledge. This indicates that the, hypothesis “**Majority of the students’ realize the need of user training**” (Hypothesis No. 1) is valid and “**E-resources accessibility is poor**” (Hypothesis No. 3) is valid.

- Of the total 312 respondents 136 (43.59%) were accessing e-resources at Netcafe, 103 (33.01%) were accessing e-resources at Home, 207 (66.34%) were accessing e-resources at UGC INFONET Center, 181 (66.34%) were accessing e-resources at their own Department & 107 (34.29%) were accessing e-resources at University Library. This indicates that the, hypothesis, “**Awareness of e-resources is present among students** (Hypothesis No. 4) is valid.

- Of the total 312 respondents 279 (89.42%) were preferring PDF format for downloading, 191 (61.21%) were preferring HTML format for downloading, 146 (46.80%) were preferring DOC format for downloading & 81 (25.97%) were preferring RTF format for downloading. This indicates that the, hypothesis, “**Awareness of e-resources is present among students** (Hypothesis No. 4) is valid.

### 1.9 SUGGESTIONS

#### 1.9.1 For University Authorities

1. The library should start bulletin board services to inform the research scholars about new additions of e-resources & consortium.
2. Introduce proper feedback systems to know about proper use of e-resources facility.
3. Number of journals available through consortia should be increased to access more journals in their respective field.
4. More trained and skilled staff should be appointed, who are trained in the functioning of both software & hardware, which will help the students in areas like accessing, downloading & printing of e-resources.
5. Library collection link should be provide to the detailed bibliographic information about the collection and also online access to some of the e-journals, databases and e-books, etc.

1.9.2 For Heads of the Department
1. The faculty should organize regular workshops to enhance usage of e-resources.
2. It should provide printing facility of e-resources free or at a minimum cost.
3. User training should be given for the proper exploitation of e-resources to give justice to UGC-INFONET Programme.
4. Heads of the Department should motivate the students to adopt the skills for accessing E-resources.

1.9.3 For Teachers
1. Teachers should be aware about latest trends in his subject field.
2. Teachers should give guidance to students for how to access e-information.

1.9.4 For Research Scholars
1. Research students should aware the latest online information in his / her fields in any format i.e. e-journals, e-books, etd, opac etc.
2. Research Scholars should attend the workshops like Information Literacy, Information & Communication Technology [ICT], Online Accessing Information, Use of E-resources.
3. The researcher should write in peer reviewed journal.

1.9.5 For M.Sc Students
1. M.Sc students should be aware of the latest online information in his / her fields in any format i.e. e-journals, e-books, etd, opac etc.
2. They should interact with the Researchers, laboratory staff as well as teachers.

1.10 CONTRIBUTIONS TO THE RESEARCH

Researcher has developed demo packages along with user manuals (Appendix – C) for use of E-Information Literacy viz.

- Tutorial on E-journals
- Tutorial on E-books
- Tutorial on ETD
- Tutorial on OPAC
- Tutorial on Subject Gateways

Which itself are the original contributions to the research.

1.11 CONSPECTUS

The chapterization of the thesis is given below:

CHAPTER 1 : INTRODUCTION

This chapter deals with Preamble, Proposed Research, Definitional analysis, Objectives, Hypothesis, Scope and Limitations, Methodology and Conspectus.

CHAPTER 2 : E-INFORMATION LITERACY: A REVIEW

Explains definitions of Information, Literacy, Information Literacy, E-Information Literacy etc. and reviews related literature.

CHAPTER 3 : DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY (BAMU)

 Presents brief profile of BAMU, its objectives, functions & detailed information about University & its departments in general and science departments in particular.

CHAPTER 4 : SURVEY OF DATA COLLECTION
This chapter presents details regarding the procedures adopted in data collection from M.Sc & Ph.D Students using a structured questionnaire.

CHAPTER 5: DATA ANALYSIS & INTERPRETATION

This chapter also presents data analysis from M.Sc & Ph.D Students using a structured questionnaire and subsequent analysis, followed by interpretation.

CHAPTER 6: DESIGN AND TRIAL OF DEMO PACKAGES

This chapter includes creation of demo on how to use E-resources, ETD, OPAC, Subject Gateways etc. After that give trial / demo to M.Sc & Ph.D students in Science Faculty in BAMU.

CHAPTER 7: CONCLUSIONS AND IMPLICATIONS

Summarizes the conclusions and implications of the study.

The thesis ends with the list of bibliographical references and appendices.

1.12 CONCLUSION

For any research, it is necessary to survey what others have written on the topic, search and sees how many scholars have written on the topic of research. Hence it was felt necessary to review the relevant literature on Information Literacy, E-Information Literacy etc. Therefore Chapter 2 provides the review of literature on E-Information Literacy.

REFERENCES


• Anthony, Ho Wai Pan (2003). Integrating information literacy into the curriculum: Collaboration between university library and faculty. Unpublished doctoral dissertations, University of Hong Kong, Hong Kong.


• Faust, Judith (2001). Teaching information literacy in 50 minutes a week: The CSUH experience. *Journal of Southern Academic and Special Librarianship.*

• Faust, Judith (2001). Teaching information literacy in 50 minutes a week: The CSUH experience. *Journal of Southern Academic and Special Librarianship.*

• Isenburg, Megan Von (2004). Information literacy beyond the library: a study of the attitudes and practices of history faculty at UNC. Unpublished doctoral dissertations, University of North Carolina, Chapel Hill.
• King, Lizette (2007). Information literacy of incoming undergraduate arts students at the University of Western Cape:


- Mandy, Chan Yuen Chin (2003). Rethinking information literacy – a study of Hong Kong Students. Unpublished doctoral dissertations, University of Hong Kong, Hong Kong.


- Mccaskie, Lucy (2004). What are the implications for information literacy training in higher education with the introduction of federated


- Philip, Rhoda (1991). *A study to determine the extent in which high school students of Hyderabad and Secunderabad have developed scientific literacy and to identify causes for scientific literacy with a view to suggest remedial measures*. Unpublished doctoral dissertation, Osmania University, Hyderabad.


- Rajgoli, Iqbalamad Umarfaruk (2008). *Role of information literacy in maximizing the use of information for productivity and development: a case study of selected library and information centers of higher learning*. 


• Wing, Leung Hon (2003). A study of computer science student’s conceptions of information literacy and their experience in information search process and use. Unpublished doctoral dissertations, University of Hong Kong, Hong Kong.


• Ying, Ning Kon (2008). A case study examining the transfer of information literacy across subjects in primary schools. Unpublished doctoral dissertations, University of Hong Kong, Hong Kong.