CHAPTER 4

Information Literacy

Information literacy is characteristics qualities essential to recognize when information is needed and have the capability to find, assess, and use efficiently the information required to take better decisions.

4.1 Definitions of Information Literacy:

National Forum Information Literacy of United Nations defines, “The capability to know when there is a need for information to be able to recognize, find, evaluate, and efficiently use that information for the solution”.

Chartered Institute of Library & Information Professionals (CILIP) defines, Information Literacy as, “Information Literacy is knowing when and why you need information, where to find it, and how to evaluate, use and interconnect it in a moral manner”.

SCONUL (The Society of College, National and University Libraries) defines, Information Literacy as “Information literate person will show an awareness of how they collect, use, manage, produce and generate information and data in a moral manner and will have the information skills to do so effectively”.

JISC (Joint Information Services Committee) defines, Information Literacy as “the ability to recognize, assess, retrieve, evaluate, adapt, organize and communicate information”.

The American Librarian Association’s (ALA) (1989) Presidential Committee on Information Literacy report Information Literacy is “A set of capabilities demanding individuals to identify when information is required and have the talent to locate and use effectively the needed information.” In other words, Information Literacy is a required skills, which facilitates the user to identify his/her information requirement. In addition, it also allows to find, assess and use the required information efficiently.

According to Bruce (1994) Information Literacy is a organized information utilization which deals with:
1. Significant tasks
2. Strategy to develop information- pursuing policies
3. Searching, recovering the information
4. Effective utilization of information
5. Generating and judging the information.

Shapiro and Hughes (1996) defines, “Information literacy should in fact be considered generally as a new liberal art that ranges from knowing how to use computers and access information to critical reflection on the nature of information itself, its technical infrastructure, and its social cultural and even philosophical context and as essential to the mental framework of the educated information age citizen as the trivium of basic liberal arts( grammar, logic and rhetoric ) was to the educated person in medieval society”.

According to Barefoots (2006) Information Literacy is ”One should be information literate to resolve difficulties related to information and to become information literate one should learn technology skillset which includes how to find and use the information for their problems and effective and efficient decision making”.

Bruce and Candy defines, “Information literacy is the ability to locate, evaluate, manage and use information from a range of sources for problem-solving, decision-making and research”

Association of College and Research Libraries defines, “Information literacy is the basis for lifelong learning. For all disciplines it is common, to all learning environments, and to all levels of education. It makes user or learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning”.

President Committee on Information Literacy defines, “information literacy as a bunch of skills, which require user to: “identify when information is required and have the capability to locate, evaluate, and use efficiently the desired information”.
The American Association for Higher Education and the Council of Independent Colleges defined Information Literacy as “The Standards describe that an information literate person:

- **Determines** the extent and nature of required information.
- **Accesses** the required information efficiently and effectively
- **Evaluates** information and its sources critically and adopt selected information into his or her knowledge base and value system
- **Uses** information effectively for his needs
- **Understands** or knowledge of legal, economical and social issues of the use of information, and accesses and uses information legally and ethically”.

ICT knowledge or ability is one’s capability to use digital technology, communication technology, or networks to correct access, manage, evaluate and use the required information from several sources. Capable to create a new information and communicate the same with others.

Overnight one will neither become information literate or information communication technology literate.” Just as with writing & speaking skills, ones skills will develop over time as one gain expertise in the topics choose to study”. “This method will give practice in searching for, choosing and assessing the information one come across and will allow him to create new thoughts, which he communicate to others using a variety of technical tools”.

According to Chartered Institute of Library & Information Professionals “Information Literacy is knowing when and why one need information, where to find it, and how to evaluate, use and communicate it in a moral manner”.

### 4.2 Library and Information Literacy:

The 21st Century is known as Information Age because of information uncontrolled explosion of information sources and outputs. Which make it very difficult to students to learn everything they need to know. Here Information Literacy plays a big role in teaching critical skills to become experts or lifelong learners.
In 1989 American Library Association Presidential Committee on Information Literacy says, “Ultimately, information literate people are those who have learned how to learn. “They know how to learn because they know how knowledge is organized, how to find information, and how to use information in such a way that others can learn from them”. “They are people prepared for lifelong learning, because they can always find the information needed for any task or decision at hand.”

Information Literacy gives a platform for lifelong learning which is common in all disciplines, all level of educations and all learning environments which improve searching skills of users and make them lifelong learners.

Since long back librarians are working with Library orientation. Efficiently train the users on library use, resources and services. Different vocabularies like Library instruction, Library orientation, bibliographic instructions and user education are used to describe the method of helping users the method of using library and its resources effectively. Today Information literacy is replaced all these terms.

Librarians what started as library orientation will grownup to be library instruction, Bibliographic instruction and now become Information Literacy.

In this information age students are facing it very difficult to know everything what is available in the library in print or digital format. Academic libraries are having their own experts for training or teaching library users (May be students or faculties) on how to locate, evaluate and use information effectively. Now a days librarians are specially trained/ qualified to teach and handle information literacy programs. Information Literacy made users lifelong learners. It is fundamental principal of higher education.

4.2.1 Role of Library and Librarians in effective Information literacy program:

Librarians plays very important role in effective execution of Information Literacy Program at institutions. Listed below are necessary for implementation of effective Information Literacy Program.

a) To understand the need of users, customers, learners
b) To understand users learning ability and how information and information resources contribute to the process of learning

c) Libraries should not be served as store house of information and quite place but should be dynamic gateway for disseminating information.

d) As ALA defines,” In this information age information literacy is survival skill or life line” Libraries and library professionals should take a lead role in developing and delivering effective information literacy programs so that students or faculties to effectively retrieve, explore and investigate the information whenever and wherever it found in digital or print.

e) Librarians should collaborate with faculties and other specialists for delivering effective information literacy program.

f) Effectively design syllabus for Information literacy program keeping in mind user needs.

g) Educate the users how to use and evaluate the information.

h) Developing and executing information policy

i) Archival of required information in all formats

j) Become a leader in introducing information technologies and ensuring their effective use.

k) One should be expert in technology, subject knowledge and available resources.

l) Smart enough to evaluate the information, organize and store for future use.

m) Should have the ability to add value to information

n) Fair knowledge of effective delivery mechanism and dissemination of information.

Should understand legal and economical aspects of information.

o) Required good marketing and communicational skills.

p) Should be practical and creative thinker.

4.3 Information Communication Technology (ICT) and Information Literacy:

In this information era, technology is a part of every walks of life and learning. Information Communication Technology (ICT) has entered efficiently in Libraries and Information Centers and changed the look of library or resource centers in terms of processing of collection, new variety of available collection, effective recovery and sharing of information to needy and assisting the library specialists to do
their work more efficiently & accurately, “Libraries or information centers are always busy in providing information to their users from manuscripts to microfilms, from leaf to clay tablets, from printed materials to Audio visuals, and online databases/electronic resources”. Presently the databases/e-resources and information literacy methods are assisting them to provide content based information to their users so that their information needs to be satisfied.

However it is not enough to become Information Communication Technology literate, rather in this 21st century desires a border literacy which includes use of these applications and tools. Literacy with Information Communication Technology includes Choosing ICT to judgmentally, artistically and morally to recover the information.

Through proper instruction and exercise, users will learn:

- “how sensibly and morally use a variety of information and communication technologies to take resolutions, Solving problems, inquire, cooperate, communicate and validate,
- how technology aspects and structures are normally have equivalent designs and functions that can be educated and the knowledge carried to new policies and circumstances;
- how Information Communication Technology can improve the relationships; and
- how to identify which methods, tools and techniques are appropriate for several circumstances”.

Information Communication Technology (ICT) tools made incredible impact on success of Information Literacy Programs. “Which is connected to information technology skills which makes user to use digital technology i.e. computers, e resources and other technologies to satisfy their academic necessity, personal information need and work related issues”. Information literate person definitely develop some information technology skills. In 1999 a report by the National Research Council endorses the concept of “fluency” with information technology and defines several distinctions useful in understanding relationships among information literacy, computer literacy, and broader technological competence. Computer or Digital Literacy in the report related with learning of specific software and hardware applications and fluency
with technology focuses on understanding the thoughts of technology and relating
problem-solving and serious thinking to using technology. The report also emphasis on
differences between Information Literacy & Information technology fluency
Information literacy’s focus on content, communication, analysis, information
searching, and evaluation; whereas information technology “fluency” emphases on a
thorough understanding of technology, skills to practice it.

4.4 Information Literacy Standards and Models:

4.4.1 Standards:

Information Literacy standards offers outline for accessing information literate
individual.

IFLA’s information literacy standard consists three components

- Access,
- Estimate or Evaluation and
- Use of knowledge or information.

These important components are found in most of the information literacy standards

ALA has five standards and twenty two performance indicators. These standards stress
upon necessities of a user at all levels. The standards also lists outcomes for testing
user’s growth towards information literacy. These outcomes play as strategies to
administrators (Librarians) in developing local information literacy policies.

4.4.2 Models:

Information literacy models are many, researcher has discussed few popular models to
understand the concept very clearly:

- SCONUL Seven pillars of information literacy
- CILIP information literacy model
- ANCIL A New Curriculum for Information Literacy
- Scotland’s National Information Literacy Framework
4.4.2.1 SCONUL Seven pillars of information literacy:

SCONUL in 1999 published on information literacy “information skills or abilities in higher education: a SCONUL position paper “. Article deals with SCONUL’s seven pillars or stages of information ability model and the same model has been recognized by many librarians /library science professionals across the world as a base for delivering information skills or literacy programs and helping to their users.

In 2011, there was a need to revise the basic principles of SCONUL’s seven pillars according to information age so that replicate more clearly the vocabularies and conceptions, which is then known as information literacy.

The revised model is known as “core “model for university and higher education, in order to suit with different users’ community and ages. Different Lenses are used to identify different group of learners. In revised model research lens and core model are part of it., may be librarians, teachers and library professionals will take active role in developing other lenses according to the environment.

The word information literacy consists of conceptions like Information handling, information skills, data management, visual media and digital literacy.

Information literate person able to together, manage, use and create the information in a moral manner and has the skills to do efficiently. “The 21st century is called information age, in this era information literacy is very important skill or quality for everyone irrespective of age and experience. The Information literacy witnessed through which data is created, handled and ones learning skills”. In this circumstances learning is measured as the constant search for meaning by the reaching of information, replication, commitment and dynamic application in numerous conditions

Emerging as an information literate user or person or user is an endless process with related activities which are part of seven pillars of information literacy. With each pillar or step user can improve from learner to expert as they progress through their learning life, as the word information itself is always emerging and changing. It is possible to come down a pillar and goes up, on each pillar, the hopes of level reach will be different with different circumstances and for different age group and also depends on one’s information requirement and experience. Information literacy progress is always
measured in the background of broad information background in which one manage their personal information scenery.

The core model defines skills or abilities & competencies (ability) and approaches & behaviors (Understandings) of information literacy expansion in university education.

**Lenses:**
Numerous lenses are developed/proposed for different group of users to allow the model to be used in actual or particular circumstances. These may spread or streamline the model based on age of learners or users. From professional working groups continuous contributions are going on to develop the lenses.

![Seven Pillars of Information Literacy](http://www.sconul.ac.uk/topics_issues/info_literacy/)

**Figure 4.1** – Seven pillars of information literacy
(Source: www.sconul.as.uk)

The core model is identified as 3D (dimensional) structure on information landscape which contains information word, it is followed by an individual at the time, their aptitude, experience & background which reveals on how they react to any expansion or development in information literacy.
Model reveals that becoming information learned is not a right practice, an individual can be emerging within pillars individually and same time although in practice they are interconnected.

Each pillar or step is distinct by chain of statements related to a set of skills or capabilities and set of identifications. It is witnessed that as a person grow into more information literate will exhibit more of abilities in each pillar and moves at the top.

Figure 4.2 – Seven pillars of information literacy
(Source: www.sconul.as.uk)
Depends on the user community, the core model express set of qualities and understandings. Lenses can be developed which subsidizes attributes/qualities with simple or complex statements and uses reasonable language accepted by the specific user group which it represents. It is assumed that model can be used adaptably by individuals and can adapt it according to personal requirement.
4.4.2.2 CILIP Information Literacy Model:

CILIP Information Literacy model: CILIP have developed an information literacy model which identify 8 competencies or skills in a person to become information literate.

a) Need or requirement of information
b) Availability of resources
c) Ways to retrieve information
d) Calculate the outcome or results
e) Ways of applying results to work
f) Accountability and integrity of using information
g) Ways of sharing the findings or results
h) How to cope or handle findings or results

Need for requirement of information: User should understand or recognise that he needs information, why he needs information, what type of information he needs, sources to recover the required information or data.

Available resources: User should recognise available resources, where and how to access, content of each resources and suitable time to use the resources.

Retrieve information: User should recognise suitable resources which covers relevant information.

Evaluate the results: One should be able to evaluate the results for its accurateness and genuineness, also careful that results gained should not be ambiguous.

Apply of results – Examine, assess and apply results or information to deliver correct, presentable results or emerge with new creation.

Responsibility and ethics in using information: Information should be used in morally, responsible manner. Always preserve agreement privacy. Respect others work cite or refer them properly.

How to share findings: Ability to share the findings or results in a manner or format that is suitable to information according to audience and condition.

How to manage findings: Ability to manage and store the necessary information assimilated using most consistent and effective methods.
4.4.2.3 ANCIL A New Curriculum for Information Literacy:

As a result of Emma Coonan and Jane’s research ANCIL had developed model or programme for information literacy. The key purpose of evolving this model is to bring revolution in information literacy teaching and suitable skills necessary for the 21st century techno savvy users.

The model consists of ten standards which takes a universal approach to information literacy learning.

![ANCIL Information Literacy Model](http://hlwiki.slais.ubc.ca/index.php/Information_literacy)

**Figure 4.3** – ANCIL information literacy model

4.4.2.4 Scotland’s National Information Literacy Framework:

Scotland’s national information literacy model works in to diverse levels depending on level of education.

This model is developed using skills of SCONUL Seven Pillars of Information Literacy, improved these skills according to the level of education to create their information literacy model.
4.5 Information Literacy in Higher Education:

Management schools prepare students/pupil for corporate careers. This made them to dedicate with greater understanding in society affairs. In the 21st century the technological developments and information explosion has brought unexpected change in the higher education. According to Rader and Allan (2006) “these changes affect all level of education and every part of society. Due to this students need high levels of literacy in every phase of their education.”

Higher education is undergoing major changes generally. Stallings (1997) states that “legislators, funding agencies and consumers of higher education are demanding approximate learning outcomes and graduates prepared to function successfully within the global economy. The ICT applications to libraries has made tremendous change in Information. Many consider the library less important since they believe that the Internet is the world's library. During this information age libraries are one of the most important components dealing successfully with advance technologies. Library professionals are helping society understand the value and contributions of libraries, particularly in organizing, preserving, and providing access to information.”

The information explosion stress on the competence to remain to learn throughout life. The rising number of interdisciplinary subjects is additional factor for the improvement of user education. Academic libraries undergone fast collection growth and acknowledged new techniques of handling and retrieval. Specializations in education also lead to recovered interest in library orientation or user education. Such courses which over power the obsolete limitations of subjects, they have become gradually important in all institutions of higher education. The amount of material to be searched because of the varied discipline requires that effective instruction methods should be developed. It is not just the amount of the material but also sources and formats. In the digital age, criticizing around library resources is an unfavorable task. Moreover the instructional necessities of users have transformed completely as new methods for teaching and learning have been appeared. While information sources and methods for finding information are still a valuable component of library orientation, a wider concept of information literacy has arose as a structure for effective information investigation. In fact this exercise is going to be a significant ability in new learning circumstances. There are several possible ways to apprehend these new dimensions of
learning and related abilities. One of these are the necessity for abilities to exploit technology to use information efficiently. Another aspect is the need for a clear considerate of information and knowledge processes. Developments in technology have radically altered, how information is accessed, stored and dispersed. Formerly information provision in academic libraries were depends upon the collection of physical library resources, but it is now progressively the case that academic libraries are moving into the virtual resources with developments in technology and access levels. Huge amount of scholarly literature is accessible in electronic format. To cope with ICT libraries in higher education are adapting to new technologies.

4.6 Information Literacy in India:

Information literacy program in India are already part of several information centers & libraries in the forms of library instruction, user orientation, library education, library class etc. At school level major steps have been taken. Today prospectus of CBSE and ICSE schools have increased necessity of libraries more by engaging pupils using available databases to prepare project report and they use information and Information Technology to streamline learning practice.

Most of the Schools have library structure with Information technology facilities and ways of making use of library resources like e-resources, encyclopedias, Journals, dictionaries, atlas, periodicals, etc. will be conveyed and validated. Now library resources are viewed both in print and electronic format. INSDOC, National Institute of Science Communication and Information Resources, formerly known as INSDOC (Indian National Scientific Documentation Centre) created an aid of audio-visual to support for kindergarten school kids about searching information from such sources. As a part of their curriculum many Schools have library hour, naturally to demonstrate students to use of library resources for class room assignments and for their personal growth. Likewise, now a days all schools irrelevant of levels have good library facilities and resources, library periods are allocated for all the classes in all levels where to teach information literacy skills.
In academic institutions, user education on Library, library orientation programs, and library instruction are provided. In universities for doctoral degree curriculum, a subject on research methodology is covered where library search skills are being taught. Many academic institutions subscribe to the databases/electronic resources, the publishers/vendors of databases conduct database orientation/training programs for users. Present day in many reputed institutions librarians will do database trainings. At NMIMS university, they have Database management committee consisting of active library science professionals, frequently they conduct database training programs for teaching faculties in turn faculties educate/promote their students to use databases for their assignments instead of going to google for everything. Centre of National Informatics Centre of Indian Medllers conducts every fourth month user orientation program on their services and products like, open journal literature of OpenMed, database of IndMed, union catalogue of UNCat databases, open access archive of OpenMed, etc., which are scheduled generally for doctors and medical college librarians. Literacy programs and Orientation programs also improve information literacy capability to the users. From time to time academic libraries also organize database awareness program to their users for use of hi end resources.

In the organizations and institutions and R&D centers, expert information awareness is an essential skill of the information personnel and researchers. The staff and information professionals are always trained about newest information resources subscribing in the organization.

In India Institutional libraries are conducting various information awareness programs, most of the universities and organizations uses the commercial automation package for its library automation. I.e. Mangalore University, Gulbarga University, Delhi University etc. NMIMS (Deemed to be university) conducting information literacy program for their staffs and students. They all are using LIBSYS software for automation of their libsys functions, acquisition, cataloguing, circulation, webopac, serial control.

Indian Statistical Institute, Bangalore’s DRTC (Documentation Research and Training Centre) conducting several information awareness programs for library professionals in various IT related areas like Open source software’s, Library automations, Cloud
computing, Digitization, ICT applications to Libraries etc., and also conducts many seminars and workshops in collaboration with other organizations.

INFLIBNET (Information and Library Network) of the University Grants Commission (UGC), India is organizing several workshops to create awareness among Library & Information Science professionals, organize training programs for Library and information professionals on SOUL, Library management software and information on union catalogue. In addition, it validates four week training program the information literacy through computer application to library and information services (CALIS) concentrated on the practical use of computers in libraries, also conducts workshop on Automation and Networking of University libraries, onsite training and service.

National Information on Science Communication and Research previously known as INSDOC along with advanced two years Associateship in Information Science, organizes information literacy programs, conduct short-term training courses on the bibliometrics, Open sources, information retrieval skills, library automation, Cloud computing, database management systems, resource sharing, plagiarism software’s etc.

4.7 Information Literacy Programs Abroad:

a) UCLA (University of California at Los Angels):
The observations by UCLA Library is parallel to general conventions as undergraduates do not own prerequisite abilities for recovery of information for their requirement. To check user information skills, the UCLA Library Committee piloted a valuation venture. Their key objective of the venture was to recognize methods to make information awareness program, it is more real and simple to its user community and main intention was to get information to use in discussion with teachers about students information retrieval and usage skills and its influence of those abilities on students class room assignments and the possible information awareness program to prove them.

b) California State University:
CSU California State University’s initiatives are also worth to mention. This is a geographical study of information awareness program. It is the significance of a
considerate strategy to upturn information awareness skills among students of all standards at CSU campuses. The mission complemented in amalgamation with California State University at San Marcos ‘s, the social and Behavioral Research Institute, with below three stages:

Phase I: It is based on question computable study to know student information capability.

Phase II: Multi method qualitative study to know user behavior when they need required knowledge.

Phase III: Study to include some or all of the following:

- Geographical homework of a pilot of users using particular groups and particular instructional actions;
- Improvement and examination of queries for an entrance/exit assessment; and
- Overall assessment of staff behavior, opportunities and consciousness of student information awareness skills.

c) France

The French Ministere de l’Education Nationale, de la Recherche et de la Technologie is come out with a report on information awareness comprises standards for development of Information Literacy program.

The report is of opinions that students are enrolling for higher education are not a basic searchers, having diverse academic, social and cultural backgrounds and information explode desires a progressively thoughtful procedure to search for required knowledge and university library team held responsible for this. Today’s youths must trained for tomorrow’s information persistence. Library education of orientation make them to gain new working techniques and methods to link with information and university. The backgrounds will change very fast and users will must to carry on learning after
finishing of their education and it is main strength in their career as to how to find, assess and use information and knowledge for their requirement.

d) Germany:

With the influence of Anglo American models in 1990, University of Heidelberg and the University of Hamburg have started the information awareness courses and online tutorials for their users. At university library of Heidelberg an integrated teaching method was introduced, which is based on the Anglo-American method of information awareness and it was deployed to their user needs. The information center is identified as heart for universities’ e learning initiatives and information literacy classes.

At Hamburg University, information literacy courses developed which consists of project related approach, which includes use of individual thematic issues. Now today’s university libraries in Germany use modularized courses and activating teaching approaches for information literacy.

e) Quebec

Quebec, University de Montreal in 2001 recognized a strategy or policy on information literacy program. According to this policy university identified that one’s ability in the correct usage of knowledge and knowledge related technologies is important to the achievement of vision of institution. All these abilities generate a continuous learning objective, and institution consider these skills to be an essential proficiency mandatory for all its users at all levels. This strategy is based on the efforts of the library committee which mentions five skills and seven principles. Values cover all other features identified as being required for the success of information awareness programs.

Summary of the chapter

In this chapter researcher discussed in detail definitions of information literacy, concepts, the role of library and librarians in effective information literacy program, the impact of ICT on information literacy program, studied various information literacy standards and models, information literacy in higher education, information literacy in India and abroad.
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