Information Literacy Framework for Higher Education

*Dr. Rajani Mishra

*Associate Professor, Department of Library & Information Science, Banaras Hindu University, Varanasi (UP) India; Email: rajanimishra5@gmail.com

---

Abstract

The term "information Literacy" first appeared in 1974 in US, its widespread use started after 1989 and has gained importance worldwide over the last decade. The information Literacy is the ability to know, locate and evaluate the information sources by which ability to take right decisions for the development of the society with the objective of transforming the world into a knowledge society can take place. It is the basis for lifelong learning and to develop sense- making ability among the readers. There are various types of literacy e.g. traditional literacy, computer literacy, media literacy and traditional information literacy. Through the union of Information literacy with knowledge Management, knowledge will be properly organized and retrievable. Information is the basic requirement for every human activity and it is as important as food, air and water. Information Literacy is nothing but the information technology skills having implications for the individuals, and for society. Information literate individuals must necessarily develop certain technology skills for success in any technical endeavour. The knowledge economy is based primarily on the production and strategic use of information and knowledge. The ability to produce and use information effectively is thus a vital skill required by citizens of the world. Information Literacy is becoming an increasingly important component of the higher education curriculum, with many disciplines incorporating elements of information literacy training within their traditional teaching. This article will highlight on necessity, aims, scope, skills, standards, specific aspects and importance of information literacy in higher education.

---

1. Introduction

We are living in the information age. Today's complex information world contains variety of information formats like - electronic, image, print, audio-visual and numeric. The issue is now of information abundance instead of not having enough information. These information products are of varied value and format. At present there are more than 20 million internet sites, four billion web pages and more than a million items available for consultation by a typical medium- sized academic library, the ability to act confidently is critical for academic success and self-directed learning.[1] Today information is very important in every aspect of life. Information plays a very important role in the development of any country. A country can develop socially, economically, educationally and agriculturally only when country is giving importance to research and knowledge thus created. The possibility of development of any country without research becomes very low. Library and information centers play a very important role in research in any discipline in any educational institution.

2. Information Literacy

The first public use of the term "Information Literacy" occurred in 1974 when Paul Zurkowski suggested the establishment of a 10 year strategic framework for achieving nationwide "Information Literacy" in his report to US National Commission on Libraries and Information in what is now perceived as seminal moment in the history of information literacy. The widespread use of "Information Literacy" followed after the publication of ALA final report of the presidential committee on information literacy in 1989.[2]

Information literacy is "a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information".[3] A UNESCO Sponsored "Meeting of experts on Information Literacy" held in Prague said that, "Information literacy encompasses knowledge of one's information concerns and need and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address the issue or problem at hand. It is perquisite for Information society and is part of the basic human right of lifelong learning".[4] According to Dupis information literacy includes "skills and knowledge involved in information seeking and retrieval and strives for higher levels of understanding regarding the context of information in today's society, its composition and organization, as well as its use in lifelong learning".[5]

Information literacy is important to students, teachers, scientists and researchers as rapid technological changes and proliferation of information sources have significant influence on them. Information comes often "unfiltered" raising questions about its authenticity, validity and reliability. Information literacy skills help to overcome these problems. It is a step to forward information to all the human beings without any restrictions.

Needs of Information Literacy

Information is the basic requirement for every human activity and it is as important as food, air and water. Information in itself has no value, but its value lies in its communication and use. The need of information literacy may be essential due to the following reasons:

- Rapid increase in the stream of information due to information revolution;
- Advent of information and communication technologies;
- Vast variety of information sources;
- Changing shape of libraries;
- Wide dispersal of information;
- Increase in number of users; and
- Research on complex and interdisciplinary topics.

Aims of Information Literacy

i.   To make students aware about different information sources and how to retrieve information from different sources as well as preparing them for lifelong learning.
ii. It acts as a basis for lifelong learning and survival in digital environment. It is common to all disciplines, learning environments and all levels of education.
iii. It helps learners to master the various ways and means of searching information and extend their investigations, become more self – directed and assume greater control over their own learning.

iv. To ensure that people understand how and why of learning about different information sources in an informed society.

v. To prepare students for scholarly investigation and understanding. The shift in focus from teaching to learning in higher education can be compared with the shift from bibliographic instruction to information literacy.

Scope of Information Literacy

Information literacy includes a range of different literacy types which is as follows:

- **Traditional Literacy:** the ability to read and write.
- **Visual Literacy:** the ability to understand, use and express using images.
- **Computer Literacy:** the ability to understand and operate computer with different interfaces between information and end users.
- **Network Literacy:** the ability to locate access and use information in the World Wide Web environment.
- **Media Literacy:** the ability to access analyze and produce knowledge in television, motion picture, radio, newspaper and magazines.
- **Traditional Information Literacy:** to locate, select, evaluate and use information effectively.[6]

Skills of Information Literacy

According to a study by Kathryn Ray and John Day in students attitude towards electronic resources (1998) found it that majority of students who have passed out are without the necessary transferable skills to adopt in information based society.[7] Therefore, the students need to be trained to become information competent. Some of the major information skills required by the students as defined by SCONUL (Society of College National and University Libraries) Institutions in UK [8] are:

i. The recognition ability of existence for need of information.
ii. The ability to distinguish various ways of addressing the information gap (e.g. kinds of resources print and non- print).
iii. Ability to construct strategies for locating information.
   - articulate information need and become able to match different resources
   - understand the principle of construction and generation of databases
iv. Ability to locate and access information.
   - develop appropriate searching techniques (e.g. use of Boolean Logic)
   - use information and communication technologies effectively, academic networks and online databases
   - use appropriate indexing and abstracting services, citation indexes etc.
   - use current awareness methods and tools to keep up to date
v. The ability to compare and evaluate information.
   - awareness of bias and authority issues
   - awareness of peer review process of scholarly publishing
   - retrieve information matching the information need
vi. The ability to organize, apply and communicate information as per the requirement of the situation. For example
   - be able to site bibliographical references in project report and theses
   - communicate effectively using appropriate mediums

- understand issues of copyright and plagiarism
- to be able to construct personal bibliographical system

vii. The ability to re-synthesize and re-build already existing information.
viii. To contribute in creation of new knowledge, an information literacy course integrated to the core curriculum of universities, is supposed to be the best way to make university students skilled in handling different gadgets which will ensure that the students leave the university as an information literate citizens.

3. Information Literacy Standards

There are some well-known standards:
i. Information Literacy Standards for Student Learning published by the ASSL.
ii. Information Literacy published by IFLA.
iii. ISTE's National Educational Technology Standards (NETS).
iv. Information Literacy Competency Standards for Higher Education by ACRL.

The ACRL standards are very popular and widely accepted and tested around the world. It includes the expected outcomes under each performance indicator, which are developed with the purpose of providing guidance in the development, assessment methods, instruments and strategies for learning outcomes. These standards can be used to assess the Information Literacy skills of teachers, librarians etc. The standards focus upon the needs of students in higher education as well as research. The standards enlist a range of outcomes to assess the level of information literacy of the student's. In addition to assessing all students' basic information literacy skills, faculty and librarians should also work together to develop assessment criteria and standards with the context to a particular discipline, as information literacy manifests itself in the specific understanding of the knowledge creation, scholarly activity and publication processes found in those disciplines. In implementing these standards, institutions need to recognize that different levels of thinking skills are associated with various learning outcomes and therefore different instruments or methods are essential to assess those outcomes.[9]

IFLA Information Literacy Standards
The IFLA standards have been grouped under the three basic Information Literacy components- Access, Evaluation and Use: [10]

Access: The user can access information effectively and efficiently

I. Definition and articulation of need
- Identifies the existence of need for information
- Decides to find the needed information
- Express and defines the particular information need
- Initiates the search process

II. Location of Information
- Identifies and evaluates potential sources of information
- Develop search strategies
- Access the selected information resources
- Selects and retrieve the located information

Evaluation: The user evaluates information critically and competently

I. Assessment of information
- Analyzes the examines, then extracts information
- Generalizes and interprets information
- Selects and synthesizes information
- Evaluate accuracy and relevance of the retrieved information

II. Organization of information
- Arrange and categorize information
- Groups and organizes the retrieved information
- Determines which is the best and most useful information

Use: The user applies information accurately and creatively

I. Use of information
- Finds new ways to communicate, present and use information
- Applies the retrieved information
- Learns for personal knowledge
- Presents the information product

II. Communication and ethical use of information
- To understands ethical use of information
- To respect the legal use of information
- To communicate the learning product with acknowledgement of intellectual property
- To use the relevant acknowledgement style standards

4. Benefits of Information Literacy

- Expansion of knowledge through substantive operations of knowledge creation.
- Synthesis of data into information and information into knowledge.
- Appropriate and critical application of information and knowledge in problems solving.
- Enhancement of the critical thinking.
- Incorporation of validated information in the personal or the corporate knowledge base.
- Motivation for self-directed learning.
- Appreciation for lifelong learning.

5. Specific Aspects of Information Literacy

Some specific aspects of information literacy are as follows:

i. Tool literacy or the ability to understand and use the practical and conceptual tools of current information technology relevant to education and the areas of work and professional life that the individual expects to adopt.

ii. Resource literacy or the ability to understand the form, format, location and access methods of information resources, especially daily expanding networked information resources, databases, repositories etc.

iii. Social-structural literacy, or knowledge of the socially produced, available and utilized information.

iv. Research literacy i.e. the use and understanding of IT based tools, databases relevant to work of researchers and scholars in the R& D.

v. Publishing literacy i.e. ability and knowledge of e-publishing the result of research, in PDF, or other forms.

vi. Technology literacy, or the ability to adopt, understand, evaluate and to make use of emerging tools of information technology so as not to be slave of past tools and resources and to make intelligent decisions about the adoption of new ones.

vii. Critical literacy i.e. critically evaluating the social and intellectual strengths and weakness, potencies and limits, and cost benefits analysis of information technologies.[11]

6. Information Literacy and Higher Education

The higher education institution has been established for ensuring to develop lifelong learners and promoting skills of intellectual abilities of reasoning and critical thinking. Information literacy competency blurs boundary of formal classroom settings and extends teaching learning throughout the globe. It helps in generating competency for evaluating, managing and using information for students of higher education institutions. Information literacy has now become a necessity in the current society of rapid technological change and ever-increasing information resources. The availability of variety of the information in variety of electronic/ digital formats for the research and development in the field of the academics led the development of information literate society.

Higher education involves collection, analysis, evaluation and use of enormous amount of information by individuals, researchers and faculty members. Information literacy competency provides scope for search of varied information sources by the managers and entrepreneurs involved in the management and decision-making responsibilities in organizations. Students who are in campuses get traditional library service, e-journals and person to person contact with peers. But students, who are not in traditional campuses, have to depend on different e-resources and www. Distributed learning technologies allow interactive sessions to take place when students and their mentors are distributed over a large area. Information literacy competencies help them to be at par with those "on campus".

Information Literacy for Academic Staff Members

Unlike Information Literacy course for students in universities and colleges there are no formal courses for teaching or upgrading information literacy skills to teaching and support staff. The universities and research institutes have access to networked resources through N-LIST or other e-resources on consortium or subscription-based databases. The publishers or producers of these electronic resources train the information professional through user training programs who in turn train their students to access and use databases effectively. Some vendors like Indian Medlars Centers of National Informatics Centers (NIC) conducts user training program from time to time on their product and services like MedIND open access journal literatures, 'UNcat' union catalogue databases etc. Besides many academic staff colleges has been established in the universities with idea to organize regular orientation/ refresher courses for teachers and information professionals to upgrade their skills in changing environment. Some National Institute of Technology like IITs and documentation centre like National Social Science Documentation Centre (NASSDOC) erstwhile National Institute of Science Communication and Information Resources (NISCAIR) play important role in training the information professionals in the country to acquire and upgrade their skills on retrieval techniques from time to time.

Students Perceptions of the Information Resources

In the fast growing changing knowledge world, the perceptions of the young generation of information seekers are multidimensional with special reference to the access of electronic information resources. Strouse (2004) identified four broad trends in user behaviors and perceptions: [13]

1. Users are increasingly independent and focused on content in electronic formats.
2. Users prefer searching over "navigating" when seeking information.
3. Users have created a social publishing movement that is growing well beyond the bounds of the traditional publishing establishments.
4. Users are getting better decision making choices with varied information options, increasing efficiency.

We can closely observe that information technology and information literacy are complimenting each other in promoting the uses of electronic resources, Therefore, ICT and information literacy programs are going to play a major role in maximizing the usage of electronic resources.

7. Some Information Literacy Initiatives in India

Followings are the some important Information Literacy initiatives for higher education takes place in India:

- Realizing, the importance of Information Literacy, the Central Library of IIT Chennai is deeply engaged in Information Literacy activities through- bringing out various brochures, pamphlets, fact sheets, tutorials, conferences, invited talks, specialized presentations for the faculty, students, industries, library staff and librarians.
- The Department of Library and Information Science, University of Kerala is preparing to place before the syndicate a proposal for implementing information literacy programmed in colleges affiliated to the university. The program aims at bridging the awareness divide between college in the urban and rural areas and to enable students in the latter category of colleges access subject related information across a variety of formats.
- In Punjabi University, Patiala, India with the help of UNESCO an international workshop was held to promote Information Literacy in South and South East Asia. In this workshop they emphasized that, "Information Literacy should be introduced within national curricula at all levels including lifelong learning programs.
- The Government of India's National Informatics Centre conducts programs in literature searching, but the spread of information literacy programs across the country is still not adequate.

8. Conclusion

Information Literacy is an essential skill for the twenty first century. University libraries offer a range of opportunities for staff and students in India. They have all developed programs for information skill sessions based on their individual requirements. Popular sessions include: library orientations to graduates, undergraduates and new faculty members; tutorials, workshops and seminars; training/ guidance to keep research up-to-date; reference management and accessing electronic journals/ databases. Information Literacy is still in its

infancy in selected institutions and has therefore not yet had a tremendous effect in utilization of resources. For the institutions to adopt an Information Literacy concept, they must tailor it to meet their specific needs and suit their local environments. Information Literacy education is, thus, has an undeniable importance for everyone in higher education institutions in India.

References:

1. www.media.wiley.com/product_data/excerpt/78/07879652/0787965278.pdf
2. MacGuiness, C. (2003). Information literacy in Ireland: a hidden agenda. In information literacy in Europe: a first sight by Carli Basili. Roma Publications. pp. 150-151.
3. American Library Association, Presidential Committee on Information Literacy. Final Report (Chicago: ALA, 1989).
4. UU. (2003). National Commission on Library and Information Science.
5. Dupis, E. (1997). The Information literacy and challenge: addressing the changing needs of our students. *Reference Service Quarterly*, 2, 93-111.
6. Spitzer, K.L., Eisenberg, M.B. & Lowe, C.A. (1998). Information literacy: essential skills for the information age. Centre for Science and Technology, Syracuse University, New York.
7. Singh, N. (2006). Restructuring LIS user education courses in universities of agriculture sciences: a study. *Annals of Library and Inf. Studies*, 53, 134-142.
8. Indian Library Association. (2005). Resolutions at the 51st All India Conference New Delhi: Indian Library Association.
9. http://www.ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm.
10. Babu, B.R. (2008). Information literacy- competency standards and performance indicators: an overview. *DESIDOC Journals of Library and Information Technology*. 28 (2), 56-65.
11. www.hindu.com/2006/10/04/stories/2006100409900400.htm
12. Strouse, R. (2004). The changing face of content users and the impact on information providers. *Online,* 28 (5), 27-31.

■ ■ ■