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INFORMATION LITERACY IN HIGHER EDUCATION

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ABSTRACT

Information has become so important for decision making in today's world. In the present world Air, Water, Food, Shelter is the four basic needs of human beings and now information is added as the fifth need. The technology world depends upon the information for social, economic, scientific, technological and industrial development. The problem of information used to be scarcity of information but in the present century it has become abundance of information. Information literacy is the surest way of helping solve the problem of choosing the right information from the abundance of information from various media. Information literacy can play a vital role in educating the users of libraries on various information and documentary resources, where to start searching for information, what, where and how to access them and compare retrieved information and how to communicate their information. Information literacy is importance particularly in this age because it allows us to cope by giving us the skills to know when we need information and where to locate it effectively and efficiently. In this paper describes development of the concept of IL, Need for IL, Model of IL, Medium and Standards of Information Literacy, also explained information literacy programme in developing countries and Indian scenario.

1. INTRODUCTION

The term Information literacy was first used by the president of US information Literacy Associations - Prof. Paul G. Zurkowski in 1974. Information literacy is the ability to identify what information is needed, understand how the information is organised, identify the best sources of information for a given need, locate those sources, evaluate the sources critically and share that information. IL is the only way to enable people to make efficient, effective, creative, legal, ethical and strategic use of information for achieving their goals. 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 (Association of College and Research Libraries [ACRL], 2000). Information is available through libraries, community resources, special interest organisation, media and the internet and increasingly, information comes to individuals in an unfiltered format, raising questions about its authenticity, validity and reliability. Information literacy forms the basis of lifelong learning. It is common to all disciplines, to all learning environments, and to all levels of education.

Information is available from many sources and in many formats, such as printed text, television, videos, websites, library databases, etc. To be information literate, one needs to know why, when, and how to use of all these tools and think critically about the information they provide. IL is concerned with teaching and learning about the whole range of information sources and formats. The information literacy is the ability to recognize the need of information and locate access, use, compare and evaluate information so as to take quick and take right decision and thereby progressing towards knowledge society.

2. DEVELOPMENT OF THE CONCEPT

A seminal event in the development of the concept of information literacy was the establishment of the American Library Association's Presidential Committee on Information Literacy whose final report outlined the importance of the concept. The concept of information literacy built upon and expanded the decades-long efforts of librarians to help their users learn about and utilize research tools (e.g., periodical indexes) and materials in their own libraries. Librarians wanted users to be able to transfer and apply this knowledge to new environments and to research tools that were new to them. Information literacy expands this effort beyond libraries and librarians, and focuses on the learner, rather than the teacher (Grassian, 2004; Grassian & Kaplowitz, 2001, pp.14-20).

The time-line of origin and growth of the Concept of 'IL':

- **1974:** The related term 'Information Skills' was first introduced by Zurkowski to refer to people's ability to solve their information problems by using relevant information sources and applying relevant technology (Zurkowski, 1974).
- **1983:** 'A Nation at Risk: The Imperative for Education Reform' shows that Americans are "rising a new generation of Americans that is scientifically and technologically illiterate."

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- **1986:** 'Educating Students to Think: The Role of the School Library Media Program' outlines the roles of the library and the information resources in school education.
- **1987:** 'Information Skills for an Information Society: A Review of Research' includes library skills and computer skills in the definition of information literacy.
- **1988:** Information Power: Guidelines for School Library Media Programs.
- **1989:** National Forum on Information Literacy (NFIL), a coalition of more than 65 national organizations, had its first meeting.
- **1998:** 'Information Power: Building Partnerships for Learning' emphasizes that the mission of the school library media program is to ensure that students and staff are effective users of ideas and information.

3. NEED FOR INFORMATION LITERACY

The purpose of library is to collect information and make the information available, but the ultimate goal is to ensure that library users gain ready to access the information they need in a timely manner. So, that the information is not only collected but use appropriately. Information is the main aspect of every human's life, education and business activities etc. The need of information literacy may be essential due to the following reasons:

Sl. No	Need	Description
1.	Locate and access	Information literacy entails the ability to search, locate, evaluate and use this information or facts to create useful knowledge.
2.	Self-motivated learners	Information literacy creates greater responsibility towards their own learning, which is turn would help them become self-motivated learners and thinkers who are creative, analytical and effective.
3.	Effective communication	The information disseminated correctly and accurately and effective and scholarly communication of information handling.
4.	Recognize information	Information is available through community resources, special internet organisations, manufactures and service providers, media, libraries and the internet. Information is available and retrieved for various sources and services. But the information seekers should be selecting the best information as per need.
5.	Develop and implementation	The indispensable nature of IL led to the development and implementation of IL standards and guidelines for the integration of information related skills in the academic curriculum, where such competencies can be imparted more effectively to information seekers.
6.	Use for ICT for IL	Information technology skills enable an individual to use computers, software applications, databases, and apply related technologies to achieve a wide variety of academic, work related, and personal goals. Among these, information literacy is to focus on content, communication, analysis, information searching and evaluation; whereas information technology fluency focuses on a deep understanding of technology and graduated increasingly skilled use of it.
7.	Changing library environment	The changing library environment requires the libraries to play more important role through information literacy programmes. The abundance of information available through the internet in public domain is in the form of subject gateways, e-books, e-journals, subject and subject concept, web pages, etc.

MEDIUM OF INFORMATION LITERACY

1. **Computer Literacy:** Computer is a tool that facilitates and extends our abilities to learn and process information. Computer literacy is generally thought of as familiarity with the personal computer and the ability to create and manipulate documents and data via word processing, spread sheets, databases and other software tools (ACRL,

2000). As technology changes by leaps and bounds, existing skills become antiquated and there is no migration path to new skills.

2. **Network Literacy:** It is a closely related term to computer literacy, but is still evolving. Network literacy is the ability to locate, access, and use information in a networked environment such as World Wide Web (ACRL, 2000).
3. **Digital Literacy:** Digital literacy is the ability to understand and use information in multiple formats from a wide range of sources when it presented via computers. Digital literacy enables to critically examine the wide range of resources that are accessible through on-line (ACRL, 2000). Digital literacy is the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyze and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process.
4. **Visual Literacy:** Visual literacy is defined as the ability to understand and use images, including the ability to think, learn and express oneself in terms of images (ACRL, 2000). It is divided in to three constructs - visual learning, visual thinking and visual communication. Visual learning refers to the acquisition and construction of knowledge as a result of interaction with visual phenomenon. Visual thinking involves the ability to organize mental images around shapes, lines, colours, textures and compositions. Visual communication is defined as using visual symbols to express ideas and convey meaning. Visual thinking and visual learning may come more easily than visual communication.
5. **Media Literacy:** Media literacy is the ability of a citizen to access, analyse and produce information for specific outcomes (ACRL, 2000). Those who advocate media literacy recognize the influence television, motion pictures, radio, recorded music, news papers and magazines have on us daily. Both fictional and non fictional media provide information, help organize information and ideas, help create, reinforce and modify values and attitudes, help shape expectations and provide models for action. By developing lessons organized around these five assumptions, teachers can help students to be critical viewers and listeners who realize that all media are constructions that contain implicit messages.

INFORMATION LITERACY AND HIGHER EDUCATION

Why is information literacy important to higher education? Studies have shown that students are entering college and university environments without fundamental research and information competence skills (for example, the ability to formulate a research question, then efficiently and effectively find, evaluate, synthesize, and ethically use information pertaining to that question).

Students may have picked up the skills to send electronic mail, chat, and download music, but many have not learned how to effectively locate information; evaluate, synthesize, and integrate ideas; use information in original work or give proper credit for information used. Moreover, faculty want to see an improvement in the quality of student work, and students want to become more confident in their ability to complete assignments, carry out research projects, and become active, independent learners. In addition, information literacy is required by accredited organizations, expected by employers in the workplace for organizational success, and desired by society, which needs an informed citizenry that is capable of making well-reasoned and well-founded decisions.

INFORMATION LITERACY STANDARDS

Association of College and Research Libraries (ACRL, 2000), a division of the American Library Association (ALA), released the 'Information Literacy Competency Standards for Higher Education'. There are five standards, which are directly linked to a host of performance indicators. These standards and performance indicators are often considered the best practices against which institutions of higher education can implement and assess information literacy programs. The standards are:

- **Standard One**: The information literate student determines the nature and extent of the information needed.
- **Standard Two**: The information literate student accesses needed information effectively and efficiently.
- **Standard Three**: The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.
- **Standard Four**: The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose.
- **Standard Five**: The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally.

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These standards are meant to span from the simple to more complicated, or in terms of Bloom's Taxonomy of Educational Objectives, from the "lower order" to the "higher order". Lower order skills would involve for instance being able to use an online catalogue to find a book in an academic library. Higher order skills would involve critically evaluating and synthesizing information from multiple sources into a coherent interpretation or argument.

There are five standards and twenty two performance indicators for assessing information literacy competency. The standards focus upon the needs of the students in higher education at all levels of education. The standards also list a range of outcomes for assessing students' progress towards information literacy. These outcomes serve as guidelines for faculty, librarians and others in developing local methods for measuring students learning in the context of an institution's unique mission.

4. INFORMATION LITERACY MODELS

Different models have been developed and propagated by authors, theorists and academicians.

Information Search process (Kuhlthau C. C., 1993): Information Search process model based on constructivist approach was developed by Kuhlthau. The model has seven stages which include initiation, selection, pre focus exploration, formulation, collection, presentation and assessment. This model demonstrates users' approach to the research process and how users' confidence increases.

Seven Pillars of information Literacy (Society of College, 1999): SCONUL Advisory Committee on Information Literacy developed Seven Pillars of Information Literacy model in 1999. The model has seven competence levels which include the ability to recognise a need for information, the ability to distinguish way in which the information gap may be addressed, the ability to construct strategies for locating information, the ability to locate and access information, the ability to compare and evaluate information obtained from different sources, the ability to organise, apply and communicate information to others in ways appropriate to the situation and the ability to synthesise and build upon existing information, contributing to the creation of new knowledge.

The Big 6 Skills (Eisenberg & Berkowitz, 1990) : This is a process model developed to solve an information problem. It has 6 stages of the information problem-solving process that students apply in their information problem solving process, namely task definition, information seeking strategies, location and access, use of information synthesis and evaluation.

Research Process Model (Stripling & Pitts, 1988) is used by students as a guide through the stages of creating a research paper. It has ten steps starting from choosing a research topic and ending with the presentation of the final topic.

Pathways to Knowledge (Pappas & Tepe, 2002): The Information Inquiry model by Pappas and Tepe includes pathways to knowledge and is meant to encourage students to continuously explore and re-assess as they go about with their information process. The model has six steps namely appreciation and enjoyment, pre-search, search, interpretation, communication and evaluation.

INFORMATION LITERACY IN DEVELOPING COUNTRIES

Developing countries face a number of problems which stand in the way of developing their IL programs. The major problems confronting these countries are the traditional education system, lack of required human resources in the library and financial constraints and lack of support by the management. Unfortunately, the educational system in many developing countries does not encourage student initiatives and critical thinking. Moreover, the ratio of faculty to students is disproportional and educational institutions lack basic facilities such as functional classroom buildings, appropriate computer labs and library facilities.

INFORMATION LITERACY PROGRAMME IN INDIAN SCENARIO

Information literacy is a key component of and contributor to lifelong learning. Educational systems and institutions must take seriously the challenge of the information age. The central theme of higher education institutions in many parts of the world is to develop lifelong learners with the intellectual abilities of reasoning and critical thinking. Any training in skills provided towards this direction not only leads to the use of the library systems effectively but also adds value to them.

In India, University Grants Commission has taken sincere efforts to bring a boost in the higher education system by introducing UGC – INFONET E-Journals Consortium project. Information and Library Network (INFLIBNET) which is the coordinating agency for UGC – INFONET project conducts various training programmes, user awareness programmes, workshops and seminars to research scholars, faculty members and library staff from more than 40 universities across the country, on how to access these abundant resources offered by the UGC. INFLIBNET is also

responsible for providing training to university library professionals in the use of this network for providing a variety of services to the users. Examples include:

- Computer Application to Library and Information Services (CALIS): a four – week intensive training programme focusing on the practical aspects in the use of computers in libraries.
- Workshop on Automation and Networking of University libraries (WANULIP), which covers the implementation of INFLIBNET in university libraries and
- Training in library management systems for university library staff.

There are several institutions that run continuing professional development courses and programmes for library and information professionals in India. Indian National Scientific Documentation Centre (INSDOC) and Professional bodies such as the Indian Library Association (ILA), the Indian Association of Special Libraries and Information Centres (IASLIC) and the Society for Information Science (SIS) un training sessions in small groups with hands – on experience for all users, with training to use the OPAC.

5. CONCLUSION

The various efforts on behalf of information literacy represent an extraordinary convergence of several forces concerned with education: accrediting agencies, state legislatures, employers, and university administrators, faculty, and librarians. In addition, it reflects some of the most progressive thinking on pedagogy. It takes into account the changes wrought both in the academy and in the society of which it is a part by the rapid development in computer technologies. Incorporating information literacy across curricula, in all programs and services, and throughout the administrative life of the university, requires the collaborative efforts of faculty, librarians, and administrators. Through lectures and by leading discussions, faculties establish the context for learning. Faculty also inspire students to explore the unknown, offer guidance on how best to fulfill information needs, and monitor students' progress. Academic librarians coordinate the evaluation and selection of intellectual resources for programs and services; organize, and maintain collections and many points of access to information; and provide instruction to students and faculty who seek information. Administrators create opportunities for collaboration and staff development among faculty, librarians, and other professionals who initiate information literacy programs, lead in planning and budgeting for those programs, and provide ongoing resources to sustain them.

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