

BASICS OF INFORMATION LITERACY

B.L.I.Sc., Semester – II, Paper-II

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FOREWORD

Since its establishment in 1976, Acharya Nagarjuna University has been forging ahead in the path of progress and dynamism, offering a variety of courses and research contributions. I am extremely happy that by gaining 'A' grade from the NAAC in the year 2016, Acharya Nagarjuna University is offering educational opportunities at the UG, PG levels apart from research degrees to students from over 443 affiliated colleges spread over the two districts of Guntur and Prakasam.

The University has also started the Centre for Distance Education in 2003-04 with the aim of taking higher education to the door step of all the sectors of the society. The centre will be a great help to those who cannot join in colleges, those who cannot afford the exorbitant fees as regular students, and even to housewives desirous of pursuing higher studies. Acharya Nagarjuna University has started offering B.A., and B.Com courses at the Degree level and M.A., M.Com., M.Sc., M.B.A., and L.L.M., courses at the PG level from the academic year 2003-2004 onwards.

To facilitate easier understanding by students studying through the distance mode, these self-instruction materials have been prepared by eminent and experienced teachers. The lessons have been drafted with great care and expertise in the stipulated time by these teachers. Constructive ideas and scholarly suggestions are welcome from students and teachers involved respectively. Such ideas will be incorporated for the greater efficacy of this distance mode of education. For clarification of doubts and feedback, weekly classes and contact classes will be arranged at the UG and PG levels respectively.

It is my aim that students getting higher education through the Centre for Distance Education should improve their qualification, have better employment opportunities and in turn be part of country's progress. It is my fond desire that in the years to come, the Centre for Distance Education will go from strength to strength in the form of new courses and by catering to larger number of people. My congratulations to all the Directors, Academic Coordinators, Editors and Lesson- writers of the Centre who have helped in these endeavors.

Prof. P. Raja Sekhar

Vice-Chancellor (FAC)

Acharya Nagarjuna University

SYLLABUS
202BL21- BASICS OF INFORMATION LITERACY

Unit-I

Information literacy – Meaning, definition, and Importance Information Literacy and User Orientation programmes Information literacy in an Information society Information literacy and lifelong learning

Unit-II

Information literacy – Effect on education Information literacy programmes – In schools and higher education institutions including distance education. Information literacy models –

Unit-III

Information literacy standards and guidelines – ACRL, ALA, IFLA, National Forum on Information Literacy, USA ILP

Unit-IV

Information literacy programmes – Planning and implementation – Issues involved Collaboration with Academics, Administration and Public Information literacy curriculum – Components Assessment evaluation of information literacy programmes.

Text and reference books :

1. A.L.A. Final Report of the A.L.A. Presidential Committee on information Literacy. Chicago, A.L.A., 1989
2. Blanchett, Helen. A guide to teach Information Literacy. London, Facet, 2010
3. Corral, Sheila. Information literacy through inquiry. London, Facet, 2010
4. Devine, Jane. Going Beyond Google: The invisible web in learning and teaching. London, Facet, 2009
5. Godwin, Peter and Parker, Jo. Eds. Information literacy meets Library 2.0. London, Facet, 2008
6. Martin, Allan and Rader, Hannelore. Information and IT Literacy: Enabling learning in the 21st century. London, Facet, 2003
7. Information Age. V 3 (3) July 2009
8. Proceedings of the National Seminar on Information Literacy for Higher Education, January 29-30, 2007. Organized by Dept. of Library and information Science, University of Madras

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MODEL QUESTION PAPER
ACHARYA NAGARJUNA UNIVERSITY
CENTER FOR DISTANCE EDUCATION
2nd SEMESTER EXAMINATIONS, December 2022
B.L.I.Sc.
Basics of Information Literacy (Paper 2)

Time: 3 Hours

Maximum Marks: 70

Answer any five questions.

All questions carry equal marks.

1. What is Importance of Information Literacy?
2. Explain about the Information Literacy and lifelong learning.
3. Information literacy programmes affecting the students of higher learning.
4. Models of Information literacy.
5. Explain the guidelines of ALA on Information Literacy.
6. Propose a plan for implementing the best Information literacy programme.
7. Problems arise at the time implementing the Information Literacy programme in Academic Institutions.
8. Explain the components of information literacy Programmes.
9. Explain about the National Information Literacy programme in India.
10. Meaning and definition of Information Literacy.

BASICS OF INFORMATION LITERACY

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LESSON 1

INFORMATION LITERACY

STRUCTURE

- 1.1 Introduction
- 1.2 Information
- 1.3 Definitions & Meaning of Information Literacy
 - 1.3.1. Definition
 - 1.3.2. Meaning
- 1.4 Importance of Information Literacy
- 1.5 Self Assessment Questions

1.1 INTRODUCTION

Information literacy (IL) is a popular topic in today's research. Professionals in the field of library and information science (LIS) are writing about it and doing research on it. With the rising relevance of information in our lives, it has developed as a notion. Though it is equally useful in work and other aspects of life, information literacy is more prevalent in the education and research sectors. Let's start with a definition of information literacy.

1.2 INFORMATION LITERACY CONCEPT

It is important to know the different concepts that are related to information literacy to identify a clear direction for an information Literacy program.

1.3 DEFINITIONS & MEANING OF INFORMATION LITERACY

1.3.1. Definition

According to Behrens, “.. the skills of being able to read and write alone will not enable an individual to cope effectively with the economic, political, social and cultural dimensions of urban living. If one considers literacy in the sense that it relates to an information society, people who are presently regarded as being literate are possibly not literate on a level which will enable them to function in such an evolved society.”

The United States Workforce Investment Act of 1998 defines literacy as "the capacity to read, write, speak English, calculate, and solve problems at levels of skill sufficient to operate in the workplace, the individual's family, and society."

According to the American Library Association (ALA), information literacy is "becoming more crucial in today's world of fast technological development and proliferation of information resources":

- Information literacy is a set of skills requiring persons to understand when information is required and to be able to seek, analyse, and utilise that information effectively.
- Information literacy is the foundation for lifelong learning and is universal across all disciplines, learning contexts, and educational levels.

It is the capacity to "recognise when information is required and having the ability to search, assess, and utilise effectively the needed information,"

At the UNESCO-sponsored conference of experts on information literacy in Prague, a complete definition of information literacy was reached. "Information literacy encompasses knowledge of one's information concerns and needs, as well as the ability to identify, locate, evaluate, organise, and effectively create, use, and communicate information and address issues or problems at hand; it is a prerequisite for effectively participating in the information society, and is a part of the basic human right of lifelong learning," according to the statement.

1.3.2 Meaning:

Paul Zurkowski, then the President of the Information Industry Association, initially proposed the notion of information literacy in 1974. He saw that information literates are taught how to use information resources in their jobs. When compared to individuals who are not information literate, it allows them to make better informed judgments at work and in research. The ALA Presidential Committee on Information Literacy issued one of the first definitions of information literacy in 1989. "To be IL," it read, "a person must be able to detect when information is required and have the capacity to search, assess, and effectively employ the required information." The notion arose from the ever-increasing amount of data created across all disciplines, as well as its growing relevance. Both too much and too little information cause challenges when it comes to making decisions. Due to a lack of knowledge, a decision may be made that does not include all aspects of the situation or the many experiences that have been recorded. Excess information, often known as "information haze," makes it harder to sort important data from a massive amount of data, impacting decision-making. It is assumed that a user is capable of handling information efficiently and effectively, utilising the many tools, forms, and formats available.

To reflect these abilities, terms like computer literacy, media literacy, library literacy, digital literacy, and network literacy have lately emerged. Computer literacy is defined as the ability to use computers to create, process, save, and retrieve data. The phrase "technology literacy" has a wider definition since it refers to the ability to handle all aspects of information management that include information technology (ICT). Another skill that a person needs to have in order to manage information effectively is media literacy. Information is accessible in a variety of formats, including print, electronic media such as television, the Internet, and others. The capacity to access, store, organise, search, and transmit information in various mediums is referred to as media literacy. Because information does not exist in isolation and all institutions and organisations are linked and exchange information, network literacy is also considered an element of information literacy. The Internet and Intranet are two examples of networks that play an important part in our lives when it comes to accessing information. It is necessary to be able to publish, access, send, and utilise information on a network in order to be considered network literate. Today, digital information is on the increase. Its features include simple transmission across long distances, manoeuvrability, and numerous and simultaneous accesses. A vast amount of current data is accessible in digital format. Even printed materials are being converted to digital ones. To be able to manage digital information, one must be digitally literate. Library literacy refers to the ability to properly utilise a library to obtain and utilise information. It entails understanding the extent of reference and information sources, as well as their structure and search engines that may be used to index printed materials. Library skills have been compared to general search abilities. Some authors have gone so far as to equate library skills with analytical abilities.

1.4 IMPORTANCE OF INFORMATION LITERACY

- Information literacy is critically important because we are surrounded by a growing ocean of information in all formats.

- Not all information is created equally: some is authoritative, current, reliable, but some is biased, out dated, misleading, false.
- The amount of information available is keep increasing. The types of technology used to access, manipulate and create information will likewise expand.
- "Ultimately, information literate individuals are those who have learnt how to study," according to the American Library Association Presidential Committee on Information Literacy (January 10, 1989, Washington, D.C.). They understand how to learn because they understand how knowledge is organised, how to obtain information, and how to apply information so that others may benefit. They are individuals who are ready to learn for the rest of their lives since they can always locate the knowledge they need for any activity or choice. "
- The expression "Information literacy is a requirement for participatory citizenship, social inclusion, the generation of new knowledge, personal empowerment, and lifelong learning" sums up the importance of information literacy. The following are some examples of the relevance of information literacy:
- Understanding the challenging issues of information ownership and copyright requires reading information literature.
- Students should learn to respect the rights of authors.
- A high degree of information literacy is required to be an autonomous lifelong learner.
- The goal of information literacy is to bridge the gap between the information affluent and the information poor.
- Information literacy is necessary for a critical thinking approach that will lead to the nation's economic and cultural advancement.
- Because of the vast amount of information available in electronic form, information literacy has become more vital.
- A high degree of information literacy is required to be an autonomous lifelong learner.
- It is critical that people have equal chances. One of the most important outcomes of information literacy is that it may assist bridge the gap between the information wealthy and the information poor.
- Information literacy is necessary for critical thinking, which leads to national advancement.
- Democracy requires information literacy.
- Because of the vast amount of information available in electronic form, information literacy has become more vital. A quality assurance procedure might be applied to traditional printed materials. On the other hand, online e-resources in the form of web pages appear. "None of the quality assurance methods may be expected with Internet sources."
- Understanding the tough issues of information ownership and copyright requires information literacy.
- It's important for academic success and for lifelong learning.
- It promotes problem solving approaches and thinking skills, asking questions and seeking answers, and finding information.
- Evaluating sources and making decisions confident individuals and responsible citizens.
- It empowers students to learn by themselves.
- It enables informed decision-making.
- It encourages the careful evaluation of information sources.
- It helps students deal with information overload.

- Participative citizenship, social inclusion, the development of new knowledge, personal empowerment, and lifelong learning all need information literacy.
- There are many essential features of librarians' and libraries' roles in information literacy. They are:
- Information literacy is not solely a library problem, even if libraries and librarians are uniquely positioned to facilitate and teach it. It is a core element of higher education because it allows students to be lifelong learners and critical thinkers.
- Students are encouraged to take charge of their own learning under the new pedagogic paradigm, which stresses personal empowerment. The student becomes a coach, the teacher-centered university becomes a learner-centered educational environment, and instruction is changed into learning experience design and administration. Because academic libraries play such an important part in the development of the learning environment, the new learner's environment has a big influence on them.
- Libraries bring the exhilaration of piercing compassion and stimulated understanding. They fill a need for additional information and serve as dominating caretakers of imagination encourage greater want to comprehend to supply specifics of science and art promotes participation, reasoned action, and concentration capacity.
- Libraries will play an important role in determining what their clients, the learners, need. They must understand how individuals learn and how providing knowledge and information resources aids in learning.
- Libraries should be more than just a storehouse of knowledge and a place for quiet reflection; they should also be a dynamic information gateway. As a result, they should offer an active laboratory for students and staff to examine, extract, and study materials available locally or online.
- Libraries serve as information literacy education partners. According to the ALA (1989), "Information literacy is a necessary ability for survival in the information age." They should be able to assume a leadership position in designing and implementing learning support techniques to guarantee the actual meaning of information literacy.
- Librarians serve as mentors for computer literacy. They should be able to help users with two key skills. The World Wide Web (WWW) and library databases as database builders are two examples. They should make finished studies and investigations available to the public.
- Librarians are important resources for locating accessible materials. They should give consumers access to an infinite data warehouse. They should have a medium of technical experience, troubleshooting abilities, and be able to aid users in reading wrong messages or figuring out how to get out of troublesome solutions as skilled troubleshooters.
- The librarian must not only be knowledgeable about the many information technologies accessible today, but also be able to collaborate with instructors to help students develop information literacy abilities.
- Telecommunications, information storage and retrieval, computer applications, and instructional design are all areas where librarians must stay current.

1.5 SELF ASSESSMENT QUESTIONS

1. Explain the need and purpose of Information Literacy?
2. Explain the importance of the Information Literacy?

LESSON 2

USER ORIENTATION PROGRAMMES

STRUCTURE

2.1. Introduction

2.2. User Orientation Programmes

2.2.1 Process of Library Orientations

2.2.2 User Orientation Methods and Media

2.2.3 Different Levels of User Orientation

2.2.4 User Orientation in Different Libraries

2.2.4.1 User Orientation in a School Library

2.2.4.2 User Orientation in a University/College Library

2.1 INTRODUCTION

In order to encourage students to make optimum use of the library, it is necessary to familiarise them with its atmosphere. Here, the function of user orientation comes into play. In other words, user orientation includes familiarising students with the various areas, collections, services, personnel, and catalogue. The purpose of user orientation is to assist and serve library patrons. Libraries can better serve and assist their patrons by informing them of the resources available to them. Therefore, user orientation or user education is an essential library activity. It is all about teaching people on how to utilise the library's collection and services to their fullest potential. User orientation programmes contribute to the notion of lifelong learning. They aid in the cultivation and grooming of pupils and users into knowledgeable individuals.

According to Fjallbrant and Malley, user education consists of two components: orientation and instruction. These two components are mutually exclusive, and there is considerable overlap between them as well. Orientation is "mainly concerned with exposing the customer to the broad concepts of library use and available services, as well as the organisation, layout, and amenities of a specific library." Instruction is "focused on the use of information resources within subject-specific disciplines."

The definition of orientation is "the adjustment or alignment of oneself or one's thoughts to one's surroundings or conditions." The purpose of library orientation or user orientation toward the library is to acclimate new library users to the library. It raises library customers' awareness of the library and its offerings. It instructs users on the general usage of the library, the location of particular objects, and how to access the desired library materials. Users who are visiting the library for the first time benefit significantly from orientation. Students who visit a new location, such as a library, often feel bewildered and lost. Users may be intimidated by the libraries' complexity, vast amount of books and other library materials, and new tools and technology. Therefore, the library personnel should do their utmost to make new library customers feel at ease and enjoy the atmosphere.

2.2. USER ORIENTATION PROGRAMMES

2.2.1 Process of Library Orientation

- Explain to the new user how the library functions, including the hours of operation, the quantity of things that may be borrowed at once, the regulations for utilising library materials, etc.

- Take the new users on a guided tour of the library and show them all of the various areas. As users navigate the library, the staff explains how the contents are organised in the various categories. Users may be presented with the whereabouts of various things, such as reference books, textbooks, and newspapers.
- Introduce them to the library's primary personnel, who may be reached for various questions.
- Show them the various collections, such as books, reference materials, textbooks, theses and dissertations, academic journals, periodicals, and newspapers.
- Explain to the user how to utilise the card catalogue or OPAC to locate information in the library.
- Describe the many services that are available to users. The library's orientation provides the staff with a chance to market their services to the library's patrons.
- Provide them with the library's brochure, leaflet, or other printed materials. The users will use the knowledge gathered via orientation sessions.

2.2.2 User Orientation Methods and Media

There are different organisational approaches and mediums for user orientation. According to their usefulness, Fjallbrant (1984) and Malley have categorised the approaches and media as follows:

- **Group Instruction-** Lectures, seminars/tutorials/demonstrations, and guided tours.
- **Group and Individual Instruction-** Using Film, Videotape, Tape/Slides, and Audiotapes
- **Individual Help-** Books, printed guides, practical exercises, programmed instructions, self-instructional materials, and individual instruction.

Presently, booklets and PowerPoint slides are often used for user orientation programmes. This means that when a group of students must be oriented to a library, they can receive group instruction; library staff can deliver a lecture to the group or hold a seminar where students can learn about the library's collection and services; and students can also receive hands-on training in a seminar organised by the library. The staff may take students on a tour of the library to familiarise them with the departments, services, and layout of the facility. The term for this is "library tour" or "guided tour." In addition, libraries may publish brochures, guides, and pamphlets that provide concise descriptions of the library's hours, collections, and services.

2.2.3 Different Levels of User Orientation

- The user orientation programmes should be designed with the following user tiers in mind:
- All customers who visit a library for the first time should get an orientation and a tour at the beginning of the academic year or session.
- At this level, students must be informed about the location of the various departments of the library, as well as provided with relevant information about the catalogue, reference sources, etc.
- At this level, students must be informed of the library's categorization systems, bibliographies, and other services.
- The methods of literature search, compilation of bibliographies, technical writing, footnotes, information retrieval, interlibrary loan, etc. should be explained to researchers and educators.

2.2.4 User Orientation in Different Libraries

2.2.4.1 User Orientation in a School Library

User orientation is necessary in school libraries for the simple reason that some students are expected to move on to tertiary educational institutions where they will be required to make extensive use of the library, while those who are unable to do so will need to consult public libraries for a variety of purposes. Through user education, students learn not just what the library has to offer but also how to effectively use it for their personal benefit. The programme for user orientation should be meticulously developed and recorded. The objectives of a school library include the following:

- to support the teaching and educational work of the students by supplementing class work with additional reading;
- to equip students with the skills that will enable them to learn more effectively by using the variety of materials held within the library;
- to develop in students the habit of reading both for pleasure and for the purpose of gathering information that is not taught as part of the curriculum; and to deter students from reading materials that are inappropriate for their age.

2.2.4.2 User Orientation in a University/College Library

A university or college library must periodically organise and implement user education programmes for students, researchers, and faculty. Before implementing a user education programme, the goals, content, methodology, and venue must be meticulously prepared and recorded. The objectives of a college library user orientation programme are as follows:

- to acquaint students or users with the potential of the Internet;
- to demonstrate how to retrieve information from subscribed databases;
- to teach how to download and save full-text content;
- to provide training on how to store and arrange citations;
- to instruct on how to use Boolean operators;
- to instruct on how to cite an online full-text article;
- to make them aware of what online databases & books are being subscribed to by the library;
- to tell the students about the open educational resources (OER) related to their courses;
- to teach the students how to evaluate the information resources by using the parameters of currency, authority, scope etc.;
- to enlighten the students about proper citation styles, IPR issues, etc. and to tell them about how to avoid plagiarism and give due attribution.

LESSON 3

INFORMATION LITERACY IN AN INFORMATION SOCIETY

- 3.1. Introduction**
- 3.2. Technology Impact**
- 3.3. Educational Reform**
- 3.4. Curriculum Standards**
- 3.5. Information literacy and lifelong learning**
- 3.6. Self assessment questions**

3.1 INTRODUCTION

For an innovation to be effective, it must be woven into the fabric of current practise. The Secretary's Commission on Achieving Necessary Skills (SCANS) Report, "What Work Requires of Schools" (1991) and "Goals 2000," the national education strategy, are two significant events that have propelled information literacy into the realm of ideas. The SCANS Report described the economic trend towards information services in modern American culture. It advocated and suggested skills that all Americans will need for entry-level jobs. These guidelines were formulated as outcome measurements and encompassed both foundational and applied competences. SCANS recommended a three-part skills foundation consisting of: (1) basic skills, such as communication and comprehension in reading, writing, and speaking; (2) thinking skills, such as problem solving, knowing how to learn, the generation of new ideas, setting goals, and selecting the best alternatives; and (3) personal qualities, such as responsibility, self-esteem, sociability, self-management, integrity, and honesty (SCANS, 1991, p. xviii). There is a tight link between the complete definition of information literacy and the recommendations of the SCANS Report, and this congruence offers a compelling rationale for extending the notion of information literacy.

The National Governors' Conference released a list of national educational objectives in 1975, but little action was taken to accomplish them. In 1990, the objectives were publicly promoted by the administration of President Bush. In 1994, President Clinton authorised Objectives 2000 via law, giving the national education goals legal standing. Individually, to encourage improved levels of student accomplishment, and collectively, to produce a globally competitive American workforce, was the stated objective of Goals 2000. (America 2000, 1991, p.2). Six objectives were developed, addressing concerns ranging from preschool education through adult literacy. In 1992, a panel of experts from the National Forum for Information Literacy's organisational memberships cooperated on a Delphi study examining the National Education Goals. One of the goals of this panel was to establish the outcome measures of information literacy that might be associated with the methods of attaining certain National Education Goals. Achieving this target would result in a list of methods for achieving these educational objectives via the use of information literacy. According to the findings of this study, the panel members obtained agreement on 45 outcome indicators for information literacy within the framework of specified national education objectives.

Both the SCANS Report and Goals 2000 agree on a substantial number of requirements. There should be a stronger emphasis on training all students to become autonomous lifelong learners, critical thinkers, adept users of a range of technology, and successful collaborators.

3.2 TECHNOLOGY IMPACT

In order to gain meaning from learning, information literacy involves not just the acquisition of a set of skills, but also a new style of thinking. The technological storage and dissemination of information has greatly expanded the availability of data. This information is mostly accessible through telecommunications. Information literacy in telecommunications is attained when students know when to utilise online resources, how to acquire information properly, how to assess knowledge for accuracy and relevance for each requirement, and how to communicate successfully using this information. Those who are able to do so will possess the lifetime skills necessary in the Information Age.

3.3 EDUCATIONAL REFORM

Much of what happens in classrooms now was developed during the industrial age of American economic history in the early twentieth century. Curriculum was considered as a way of imparting to students all of the skills required for productive citizenship. As the United States develops toward an information society, the need of critical thinking, problem-solving, and information literacy abilities to absorb information increases for all pupils. Information literacy must evolve in the context of educational reform, reorganisation, evaluation, and national objectives. The professional curricular organisations of key academic areas are now revising their national standards.

3.4 CURRICULUM STANDARDS

The National Council of Teachers of Mathematics (NCTM) established the groundwork for all national curriculum reform initiatives based on national standards. "Curriculum and Evaluation Standards for School Mathematics" defines mathematics as "more than a collection of ideas and abilities to be acquired; it involves techniques of investigation and reasoning, modes of communication, and conceptions of context. It entails the growth of personal self-assurance " (NCTM, p. 5). Information literacy, as taught in mathematics curricula, comprises problem solving, estimating, thinking processes for fundamental facts, developing and researching questions based on issue scenarios, and the use of computers, calculators, and other technology. Mathematics assessment fits into the greater context of information literacy since the emphasis of evaluation is on demonstrating comprehension via meaningful information usage.

The National Council for Social Studies (NCSS) has been rewriting its standards, with many phases remaining before release of "Curriculum Standards for the Social Studies." To comprehend and apply the social studies curriculum's presented themes. Students must be able to relate knowledge, skills, and values to action while doing social inquiry, according to the criteria (NCSS, 1993). The foundation of the new social studies standards is equipping students with the ability to make sound judgments, and information literacy is implicitly and openly integrated.

The National Committee on Scientific Education Standards and Assessment (NCSESA) is in the process of developing national science standards titled "Science for All" (NRC, 1993). The part under "The Nature of Science" contains "knowledge of the inquiry process, the capacity to plan and conduct an investigation, viewpoints associated with critical thinking or mental habits, and other positive attitudes often associated with learning." This is a wonderful application of information literacy using a hands-on method pertinent to a certain topic.

3.5 INFORMATION LITERACY AND LIFELONG LEARNING

Information literacy and lifelong learning have a strategic, mutually reinforcing connection that is essential to the success of every person, institution, and nation-state in the global information society. Lifelong learning is the use of formal and informal learning opportunities throughout a person's life for career advancement and the enhancement of information and skills required for employment and professional advancement. It is connected to topics like as remote education courses, adult education, continuing education, trainings, short-term courses, and other non-formal learning. Knowledge is developing daily, as are advancements and changes in the area of Information and Communication Technology (ICT), which enables access to a great deal of this information and the application of core skills for utilising information resources. It facilitates individual student learning and improves task/information mastery performance. Information Literacy and Lifelong education are both:

- Self-motivated and self-directed to a large extent: They do not need the mediation of an external person, organisation, or system outside the individual.
- Self-empowerment: They attempt to enable persons of all ages help themselves, regardless of their social or economic standing, position in society, gender, race, religion, or ethnicity.
- Self-sustaining: The more information literate a person is, the more likely he or she is to maintain strong information literacy learning and apply these habits, particularly if they are maintained for a lifetime.

Theoretically, it is possible to pursue the objective of increasing one's information literacy, but not consistently throughout one's career. On the other hand, it is possible to pursue lifelong learning without first acquiring information literacy. In conclusion, lifelong learning is a healthy habit that must be learned and supported by the adoption of a positive frame of mind. The readiness to adapt and a sense of curiosity or thirst for information are highly beneficial prerequisites for lifetime learning.

3.6 SELF ASSESSMENT QUESTIONS

1. What type of the role is playing by the Information literacy in the technological era.
2. Define the educational reforms is taken place in Information literacy?
3. How useful to a user for his lifelong learning?

References and Further Readings:

- Behrens, Shirley J. Literacy and the Evolution Towards Information Literacy: An Exploratory Study. *South African Journal of Library and Information Science*, 58 (4) 1990.
- Darch, C., C.Karelse, and P. Underwood. "Alternative Routes on the Super Highway". *Independent Online-Higher Education Review*. (1997). Print.
- Drucker, P. F. "The Age of Social Transformation". *Atlantic Monthly* 27 (1994):53-80. Print.
- ERIC Clearinghouse on Information and Technology Syracuse NY. (1994, April 30). *Information literacy in an information society. Eric Digest*. Information Literacy in an Information Society. ERIC Digest. Retrieved May 20, 2022, from <https://www.ericdigests.org/1995->

1/information.htm#:~:text=Information%20Literacy%20is%20the%20ability,skills%20(Costa%2C%201985)

- Fjallbrant, Nancy and Malley, Ian (1984): User Education in Libraries. 2nd ed: London:- Clive Bingley.
- Fjallbrant, N: (1996). Educate.- a networked user education project in Europe. In IFLA Journal, zz(I).
- Fleming, Hugh, ed. User Education in Academic Libraries. London: Library Association Publishing , 1990. Print.
- Girja Kumar and Krishan Kumar (1983). Philosophy of User Education. New Delhi: Visas Publishing House.
- IFLA InfoLit Global (n.d.) 'Information Literacy Resources Directory,' at: <http://www.infolitglobal.info/>.
- Kumar, S. K., & Surendran, B. (2015). Information Literacy for Lifelong Learning .*International Journal of Library and Information Studies*, 5(2), 130–137.
- Koltay, Tibor. "Abstracting: Information Literacy on a Professional Level". *Journal of Documentation* .65.5(2009):841-855. Print.
- Kirkendall , C.A. (1980). Library Use Education: Current Practices and Trends.. *Library Trends*, 29(I).
- Knapp, P.B. ('1964). The Monteith College Experiments. New York: Scarecrow Press.
- "Library User Education Examining its Past, Projecting its Future". Free Online Library.htm. Web. 10 Mar.2011.
- Lubans, J, ed. (1974). Educating the Library User. London: BOWKER.
- Marland, M. Information Literacy Skills in the Secondary Curriculum: the Recommendations of a Working Group Sponsored by the British Library and the Schools Council. London: Methuen Educational, 1981. 30-37. Print.
- Mews, Hazel .Reader Instruction in Colleges and Universities: an Introductory Handbook. London: Clive Bingley, 1992. Print.
- Moghdam, D (1975). User Training for :Online Information Retrieval Systems. *JASIS*, 26 (1975).
- Rajagopalan, T.S (1978). Education and Training of Information Users. *Library Science*, 15 (1978).
- Revil1, H.H. (1970). Teaching Method in the Library; A Survey from the Education Point of View. *Library World*, 71(1970)
- Satyanarayana, N.R. ed. (1988).User Education in Academic Libraries. New Delhi: ESS ESS Publications.
- Satyanarayana, R (197b). Training Courses for Users of Scientific Information. Paper 11.4a DST Course Material: New Delhi: INSDOC.
- Stevenson, M.B. (1977). User Education Programmes: A Study of Their Development; Organisation, Methods and Assessment. Wetherby; British Library.
- Tadesse, Taye and Neelameghan, A (1995) User sensitisation and orientation: a case study in postgraduates in the medical sciences. *Journal of Inf. Se.*, 21(I).
- Taylor, P.7. (1978) User Education and the Role of Evaluation. *Unesco Bulletin for Libraries*, 3291
- Tocatlian, Jacques. (1978) Training Information Users. *Unesco Bulletin for Libraries* 32 (1978). Paris: Unesco.
- Unit 6- User Orientation. (n.d.). Retrieved May 19, 2022, from <https://www.egyankosh.ac.in/bitstream/123456789/34976/1/Unit-6.pdf>
- Unit 11- User Education and Information Literacy. (n.d.). Retrieved May 19, 2022, from <https://egyankosh.ac.in/bitstream/123456789/35344/5/BLI-222-B4.pdf>

- Unit 12- User Education. (n.d.). Retrieved May 19, 2022, from <https://egyankosh.ac.in/bitstream/123456789/33052/1/Unit-12.pdf>
- Wallis, Jake. "Cyberspace, Information Literacy and Information Society". *Library Review*.54.4 (2005):218-222. Print.

Welsh, T. S., & Wright, M. S. (2010). *Information literacy in the digital age: An evidence-based approach*. Chandos Publishing

LESSON 4

INFORMATION LITERACY PROGRAMMES ON EDUCATION

STRUCTURE

4.1 Introduction

4.2 Effects Information Literacy programmes on Education

4.2.1 Schools

4.2.2 Higher Education

4.3 Information Literacy Models

4.3.1 Kuhlthi's Information search Process Models

4.3.2 PLUS model

4.3.3 8ws Information Literacy Model

4.3.4 DIALOGUE Model

4.3.5 SCONUL Seven Pillars Information Literacy models

4.3.6 The Big 6 Model

4.3.7 Empowering 8 IL Models

4.4 Self assessment questions.

4.1. INTRODUCTION

Information literacy should in fact be conceived more broadly as a new liberal art that extends from knowing how to use computers and access information to critical reflection on the nature of information itself, its technical infrastructure, and its social, culture and even philosophical context and impact as essential to the mental framework of the educated person – age citizen as the trivium of basic liberal arts (grammar, logic and rhetoric) was to the educated person in medieval society.

4.2. EFFECTS OF INFORMATION LITERACY PROGRAMMES ON EDUCATION

4.2.1 Schools

Very few schools in India provide a course-related or course-integrated information literacy curriculum. The majority of Indian schools feature weekly or biweekly library hours during which pupils are handed general reading materials. Kumbar says that each class receives two library times each week, with the first session designated as the issue/return period and the second as the library activity period. In addition, the author noted that this phase consists of Loud/oral reading, Individual quiet reading, Cooperative or Participatory reading, and reading-based writing assignments (Kumbar, 2009). Students' academic performance will improve as a result of their capacity to do research and acquire knowledge from a variety of sources, and their general awareness and performance in extracurricular activities will grow.

It contributes to the entire development of youngsters. But organised IL programmes would be far more useful for children's overall development. The Kendriya Vidyalaya Sangathan (KVS) has established eight Standards for IL: define an information task, develop information seeking strategies, locate and access information, use information, synthesise

information, participate in collaborative activities, evaluate the process and the product, and value literature (KVS, 2012). In her research paper, Kumbar (2008) discusses some of the successful strategies implemented at Zydus School of Excellence, Ahmedabad, for the effective use of library resources by K-2 students:

Structured Library Periods, Adopt a Book Project, Five Best Friends in the Library, and Application of Multiple Intelligence Theory. The NavodayaVidyalaya, a network of residential schools for rural Indian students from sixth to twelfth grade, has created a curriculum that encourages the use of information and technology to enhance the learning process. According to several reports, the National Institute of Science Communication and Information Resources (NISCAIR), formerly known as INSDOC, has created an audio-visual curriculum for elementary school students that teaches them how to locate information from different sources. And many schools include a library hour in their curriculum for project work and homework (Barul&Naskar, 2016). In each classroom at S.D.V. Government School, Neerakunnam (Kerala), a kid will be responsible for issue/return work. Students use textbooks, dictionaries, newspapers, and other materials inside the classes. One pupil, known as the child librarian, maintains the circulation records. With this technique, children in every class use more resources, which are also maintained in a methodical manner. The need for individual project work has increased library use. Consequently, there is a rising need to promote information literacy across the curriculum, with school librarians actively promoting these abilities.

Marland proposed the following information literacy skills for secondary school use:

1. What do I need to do? (formulation and analysis of need)
2. Where could I go? (identification and appraisal of likely sources)
3. How do I get to the information? (tracing and locating individual resources)
4. Which sources shall I use? (examining, selecting and rejecting individual resources)
5. How shall I use the resources? (interrogating resources)
6. What should I make a record of? (recording and storing information)
7. Have I got the information I need? (interpretation, analysis, synthesis, evaluation)
8. How should I present it? (presentation, communication, shape)
9. What have I achieved? (evaluation)

4.2.2 Higher Education

Higher education institutions are societal pioneers in providing higher education to the general populace. They must address the needs of society by generating highly competent individuals. They serve as a leader for social change and serve as a model for society. The educated graduate of the 21st century should be equipped with various skills and abilities, such as lifelong learning skills, inquiry and research skills to conduct systematic investigation for finding solutions to complex problems, employability and career development skills to succeed in the rapidly changing workplace, the ability to survive in the current globalised society, communication and information literacy skills, and ethical, social, and professional

competencies. Universities and other higher education institutions should be accountable for creating such graduates. Information Literacy (IL) plays a crucial role in producing such competent graduates in the current technology age of fast change. IL is a set of skills that need persons to understand when information is required and to be able to successfully search, assess, and apply the required information. It aids the students in topic mastery, independence, and better control over their own learning. Additionally, it assists students in becoming autonomous, critical thinkers and lifelong learners. Consequently, the notion of IL is receiving increased attention in higher education communities worldwide. Several organisations, educationalists, and library professionals in Western nations such as the United States, the United Kingdom, Australia, etc., have created IL models to successfully integrate information literacy courses at all levels of education.

The topic of information literacy has received a great deal of attention in higher education circles. It is widely held that institutions of higher education should include the instruction of lifelong learning skills into their missions. Universities are responsible for equipping their students with the abilities required to navigate the world of knowledge autonomously. Since the 1990s, higher education communities throughout the world have stressed the importance of information literacy for the following reasons:

- **Information literacy is essential to successful lifelong learning:** Lifelong Learning is shortly called LLL. In simple terms it means “learning that continues throughout a lifetime.” Hojat et al., 2003 defines LLL is a concept involving a set of self-initiated activities (behavioural aspect) and information-seeking skills (capabilities) that are activated in individuals with a sustained motivation (predisposition) to learn and the ability to recognize their own learning needs (cognitive aspect) .IL forms the basis of lifelong learning. It helps to make the students as lifelong learners and empowers them to acquire all the knowledge, values, skills and understanding they will require throughout their lifetimes and to apply them with confidence, creativity and enjoyment in all roles, circumstances and environments. IL competencies have been identified as a crucial element to foster lifelong learning and keep up with the fast emerging world.
- **Information literacy is a core competency in the information age:** The arrival of information age and its rapid growth has created challenges throughout the world. It has brought an enormous increase in the quantity of information available to the public (includes students) and multiplied the media of knowledge transfer such as internet, CDs and electronic databases. Students can easily acquire large amount of information but they don’t know how authentic, valid and reliable the information is. This poses special challenges for students in evaluating, understanding and using information in ethical and legal manner. Information literacy as core competency helps students to locate needed information and evaluate it critically in order to face the new challenges of the information age.
- **Information literacy contributes to the improvement of learning and teaching:** Information literacy rejects the traditional teacher centered learning model, rather, it is based on active learning model in which the student is at the centre of the learning environment. Information literacy programs provide learners with self-directed, independent and constructive learning opportunities. The Alexandria Proclamation on Information Literacy and Lifelong Learning recommends: “Implement active pedagogical practices such as problem-based learning, service learning and constructive learning that are both in support of and well supported by the practice of information literacy”.

- **Information literacy is one of the most critical literacy for an educated person in the 21st century:** In the present 21st century information era, students are needed to develop critical thinking abilities to become skilled users of information sources available in different locations and formats for their own self-directed learning. Foundation for Critical Thinking defines Critical Thinking as the “intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, experience, reflection, and reasoning or communication, as a guide to belief and action”. People who think critically consistently attempt to live rationally, reasonably, empathically. IL acts as a key component in making students as critical thinkers, so that they are able to find the right information among the myriad of sources and apply it to make wise decisions.

4.3 INFORMATION LITERACY MODELS

Information Literacy Models are like a roadmap through an information seeking process. They show a perfect path to each individual about how to find, analyze and use information depending on many things including how to learn, the resources available, how to complete information tasks in our hands such as finding information to answer questions, complete an assignment or exploring something about our curious topics. They serve as a guideline for developing information skills among the students' community. They can also help to frame information literacy curriculum objectives, learning outcomes, course content and assessment criteria's. Many researchers, education professionals and organizations have developed information literacy models through research and evaluation. A list of some of the important information literacy models developed throughout the world is as follows:

- Kuhlthau's Information Search Process Model
- PLUS Model
- 8Ws IL Model
- DIALOGUE Model
- SCONUL Seven Pillars Information Literacy Model
- EMPOWERING-8 IL Model
- The Big6 Information Process Model
- The Research Cycle
- The Alberta Model
- Action Learning Model
- Super 3 Model
- Follett's Information Skills Model etc.

4.3.1 Kuhlthau's Information Search Process Model

This model was developed by Carol C. Kuhlthau, Professor of Library and Information Science at Rutgers University in New Jersey in 1988. It is a six stage model; task initiation, selection, exploration, focus formulation, collection and presentation present a holistic view of information seeking from the user's perspective. It incorporates three realms of experience; the affective (feelings) the cognitive (thoughts) and the physical (actions) common to each stage (as shown in Table 1). Thoughts that begin as uncertain, vague, and ambiguous become clearer, more focused, and specific as the information search process progresses. Feelings of anxiety and doubt become more confident and certain. Through their actions, people seek information relevant to the general topic in the beginning stages of the search process and pertinent to the focused topic toward closure. Formulation of a focus or a personal perspective of the topic is a pivotal point in the search process. At that point,

feelings shift from uncertain to confident, thoughts change from vague to more clear and interest increases.

Sl. No.	Six Stages	Description
1.	<i>Initiation</i>	<i>When a person first becomes aware of a lack of knowledge or understanding and feelings of uncertainty and apprehension are common.</i>
2.	<i>Selection</i>	<i>When a general area, topic, or problem is identified and initial uncertainty often gives way to a brief sense of optimism and a readiness to begin the search.</i>
3.	<i>Exploration</i>	<i>When inconsistent, incompatible information is encountered and uncertainty, confusion, and doubt frequently increase and people find themselves “in the dip” of confidence.</i>
4.	<i>Formulation</i>	<i>When a focused perspective is formed and uncertainty diminishes as confidence begins to increase.</i>
5.	<i>Collection</i>	<i>When information pertinent to the focused perspective is gathered and uncertainty subsides as interest and involvement deepens.</i>
6.	<i>Presentation</i>	<i>When the search is completed with a new understanding enabling the person to explain his or her learning to others or in some way put the learning to use.</i>

Table 1 Six stages of Kuhlthau’s Information Search Process Model

4.3.2 PLUS Model

PLUS information skills process model was developed by James E. Herring in 1991 at Scotland. It is an information literacy model which encourages pupils to identify purpose (e.g., brainstorming and concept mapping), to locate relevant sources (e.g., using print and electronic sources), to use the ideas and information found effectively (e.g., reading for information, note-taking) and to reflect on their own information skills through self evaluation (e.g., evaluation of original plan or range of sources used). According to this model, a successful information solving process involves four interrelated steps and each step includes the range of skills required to be possessed by a student or an individual to solve an information problem as shown in Table 2 given below.

STEPS	KEY ELEMENTS	RANGE OF SKILLS
1.	<i>Purpose</i>	<ul style="list-style-type: none"> ✦ <i>Cognitive skills in identifying existing knowledge.</i> ✦ <i>Thinking skills such as brainstorming or concept.</i> ✦ <i>Skills in identifying information resources.</i>
2.	<i>Location</i>	<ul style="list-style-type: none"> ✦ <i>Location skills such as the ability to find information in library catalogues, books, journals, CD-ROMs and online information resources.</i> ✦ <i>Selection skills in assessing the relevance of information resources.</i> ✦ <i>IT skills in using electronic sources such as the Internet.</i>
3.	<i>Use</i>	<ul style="list-style-type: none"> ✦ <i>Reading skills including the ability to skim and scan information resources to find relevant information or ideas.</i> ✦ <i>Interactive skills including the ability to understand what is being read, viewed or listened to and the ability to relate this to existing knowledge.</i> ✦ <i>Selective skills including the ability to select the appropriate information and reject information in the context of the purpose identified for using a particular information resource.</i> ✦ <i>Evaluation skills including the ability to evaluate information and ideas in relation to aspects such as the currency of the information or ideas, the author and any possible bias in the text.</i> ✦ <i>Recording skills including the ability to take notes in a systematic way which relates to understanding and purpose.</i> ✦ <i>Synthesizing skills including the ability to bring together related ideas, facts and information about a topic and relating this to existing knowledge.</i> ✦ <i>Writing or presentation skills including the ability to write an essay or report or project in a well-structured, logically ordered manner which uses the information and ideas found to good effect.</i>
4.	<i>Self-Evaluation</i>	<ul style="list-style-type: none"> ✦ <i>Skills to reflect on the processes involved in assignment-related work and to identify areas of improvement in the effective use of information resources in the future.</i>

Table 2: Four key elements and range of skills of PLUS IL Model

4.3.3 8Ws IL Model

8Ws Information literacy model was developed by Annette Lamb in the early 1990s. It is an eight-phase model for project and community based learning on the web/internet. A project and community based learning environment involves wondering about a topic, wiggling through information, and weaving elements together. This model was used to stimulate student interest and focus on the student's perspective in information inquiry on the web. This model states and describes eight phases of information inquiry skills which are needed to be developed among students in the digital environment to complete a project. The eight phases of this model are as follows as shown in table 3 given below.

Sl. No.	Eight phases	Outcomes
1.	<i>Watching (Exploring)</i>	✚ <i>It states students to explore and become observers of their environment to know about world around.</i>
2.	<i>Wondering(Questi oning)</i>	✚ <i>It states students to focus on brainstorming options, discussing ideas, identifying problems, and developing questions.</i>
3.	<i>Webbing (Searching)</i>	✚ <i>It directs students to locate, search for, and connect ideas and information. Students select those resources that are relevant and organize them into meaningful clusters.</i>
4.	<i>Wiggling (Evaluating)</i>	✚ <i>It involves evaluating content, along with twisting and turning information looking for clues, ideas, and perspectives.</i>
5.	<i>Weaving(Synthesi zing)</i>	✚ <i>It involves organizing ideas, creating models, and formulating plans. It focuses on the application, analysis, and synthesis of information.</i>
6.	<i>Wrapping (Creating)</i>	✚ <i>It involves creating and packaging ideas and solutions.</i>
7.	<i>Waving (Communicating)</i>	✚ <i>This phase deals with communicating ideas to others through presenting, publishing, and sharing.</i>
8.	<i>Wishing (Assessing)</i>	✚ <i>It is concerned with assessing, evaluating, and reflecting on the process and product. Students begin thinking about how the project went and consider possibilities for the future.</i>

Table 3: Eight Phases and Outcomes of 8Ws IL Model

4.3.4 Dialogue Model

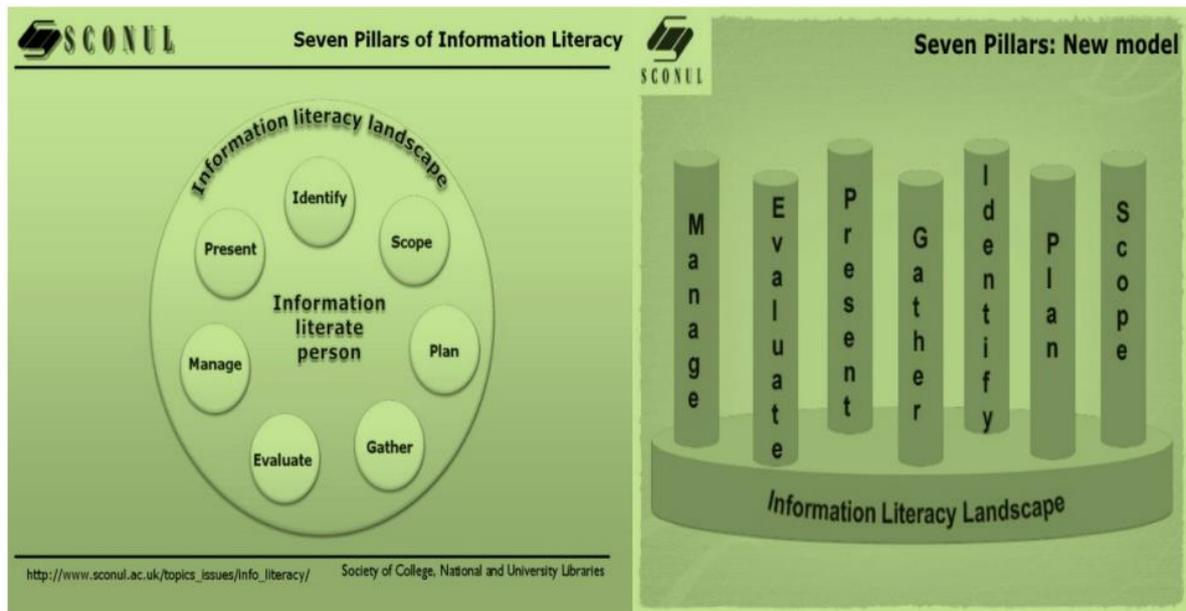
DIALOGUE model is developed by INFOhio, the Information Network for Ohio Schools in Cuyahoga County in 1998. INFOhio is a statewide cooperative project to create an electronic network linking of Ohio students, teachers, library/media specialists and others. It is responsible for incorporating 21st century literacy and learning skills to encourage all students to reach their full potential in today's technologically advanced society. It conducted a series of Information Literacy Skills Workshops from 1998-2003. DIALOGUE model is developed and used by them to develop information skills among the students, educators and parents. The DIALOGUE model (1998) involves the following areas or stages or steps that spell DIALOGUE as shown in table 4 as given below,

Sl. No.	Eight phases	Outcomes
1	<i>Define</i>	<ul style="list-style-type: none"> ✚ Explore/Identify the need for the information. ✚ Determine the basic question.
2	<i>Initiate</i>	<ul style="list-style-type: none"> ✚ Distressing ignorance
3	<i>Assess</i>	<ul style="list-style-type: none"> ✚ Identify keywords, concepts, and possible resources.
4	<i>Locate</i>	<ul style="list-style-type: none"> ✚ Identify possible sources of information. ✚ Develop a search strategy. ✚ Locate and retrieve available resources.
5	<i>Organize</i>	<ul style="list-style-type: none"> ✚ Identify the best and most useful information sources. ✚ Evaluate the information retrieved.
6	<i>Guide</i>	<ul style="list-style-type: none"> ✚ Provides student assistance in searching the information.
7	<i>Use</i>	<ul style="list-style-type: none"> ✚ Determine presentation format and to develop communication skills.
8	<i>Evaluate</i>	<ul style="list-style-type: none"> ✚ Evaluate the project/results. ✚ Evaluate the process. ✚ Assess the teaching and learning.

Table 4: Eight Phases of DIALOGUE Model

4.3.5. SCONUL Seven Pillars Information Literacy Model

SCONUL Seven Pillars Information Literacy Model is a model of Information Skills in higher education prepared and developed by SCONUL (The Society of College, National and University Libraries) Advisory Committee on Information Literacy at UK in 1999. Since then, this model has been adopted by librarians and teachers around the world as a means of helping them to deliver information literacy skills to their learners. To make valid and relevant in the presenting changing information environment, SCONUL updated the original seven pillars model into a new model called as “The SCONUL Seven Pillars Information Literacy: Core Model in 2011. (as shown in figure 1)



The new core model is conceived as a three dimensional circular “building” founded on an information landscape which comprises the information world as it is perceived by an individual at that point in time. The information literacy landscape refers to the individual information literacy landscape, i.e., their attitude, background and experiences which will affect how they respond to any information literacy development. The circular nature of the model demonstrates that becoming information literate is not a linear process; a person can be developing within several pillars simultaneously and independently although in practice they are often closely linked. Each pillar is further described by a series of statements relating to a set of skills/competencies and a set of attributes/understandings. It is expected that as a person becomes more information literate they will demonstrate more of the attributes in each pillar and so move towards the top of the pillar. This model describes a set of generic skills and understandings; for different user communities a „lens“ can be developed which highlights different attributes, adds in more complex or simpler statements and uses language recognized by the specific community which it represents. In this way, this model can be used flexibly by individuals and teachers who can adapt it as appropriate to personal circumstances. According to this model, the attributes of an information literate person is as shown in table 5 given below.

SL. NO.	PILLARS	AN INFORMATION LITERATE PERSON
1	Identify	✚ Able to identify a personal need of information.
2	Scope	✚ Able to understand and assess current knowledge and identify gaps.
3	Plan	✚ Able to construct strategies for locating information and data.
4	Gather	✚ Able to locate and access the information and data they need.
5	Evaluate	✚ Able to review the research process and compare and evaluate the information and data.
6	Manage	✚ Able to organize information professionally and ethically.
7	Present	✚ Able to apply the knowledge gained: presenting the results of their research, synthesizing new and old information and data to create new knowledge and disseminating it in a variety of ways.

Table 5: Attributes of information literate person-SCONUL Seven Pillars Information Literacy: Core Model

4.3.6 The Big 6 Model

The Big6 information problem-solving approach is an information literacy model developed by Mike Eisenberg and Bob Berkowitz of USA in 2001. It is an information search process model which states how people of all ages solve an information problem. It integrates information search and use skills along with technology tools in a systematic process to find, use, apply, and evaluate information for specific needs and tasks. According to this model the successful information solving process encompasses six stages or six steps with two sub-stages or sub-steps shown in table 6 as given above. It is a set of basic, essential life skills. These skills can be applied in all situations to school, personal, and work settings. It is applicable to all subject areas across the full range of grade levels. Students can use this model whenever they need information to solve a problem, make a decision, or complete a task. The Big6 Skills are best learned when integrated with classroom curriculum and activities. It is most widely known and widely used model to teach information and technology skills in the world. This model is also used in thousands of K-12 schools, higher education institutions, and corporate and adult training programs.

STEP	STAGES	SUB-STAGES
1.	<i>Task Definition</i>	<ul style="list-style-type: none"> ➤ <i>Define the information problem.</i> ➤ <i>Identify information needed.</i>
2.	<i>Information Seeking Strategies</i>	<ul style="list-style-type: none"> ➤ <i>Determine all possible sources</i> ➤ <i>Select the best sources</i>
3.	<i>Location and Access</i>	<ul style="list-style-type: none"> ➤ <i>Locate sources (intellectually and physically)</i> ➤ <i>Find information within sources</i>
4.	<i>Use of Information</i>	<ul style="list-style-type: none"> ➤ <i>Engage (e.g., read, hear, view, touch)</i> ➤ <i>Extract relevant information</i>
5.	<i>Synthesis</i>	<ul style="list-style-type: none"> ➤ <i>Organize from multiple sources</i> ➤ <i>Present the information</i>
6.	<i>Evaluation</i>	<ul style="list-style-type: none"> ➤ <i>Judge the product (effectiveness)</i> ➤ <i>Judge the process (efficiency)</i>

Table 6: Six Stages and Sub-stages of the Big6 Model

4.3.7. Empowering 8 IL Models

EMPOWERING-8 an information literacy model has been developed at an IFLA-ALP sponsored Information Literacy Workshop hosted by National Institute of Library and Information Sciences (NILIS), University of Colombo, Sri Lanka in 2004 specifically for the stakeholders in the Asia-Pacific Region. It is now registered as an intellectual property of NILIS and being promoted in LIS programmes offered by NILIS and in a variety of other educational contexts of Sri Lanka. This model can be used to solve any information problem effectively using eight stages with several sub-stages under each component. It's not necessary to complete these stages in a linear order, but one can enter the cycle from any point and proceed in a cyclical manner. However, one is taken through all stages in a successful information problem solving situation. Two arrowed lines denote the teacher and the teacher librarian getting involved in the process (Figure 2). This model has a set of 108 corresponding skills ranging from defining the need for information to application of new concepts learned to other situations. This list of skills is still being reviewed depending upon the experience gained. Developing competencies in these skills will take place according to the nature and complexity of the problem being solved using this model. It is applicable to all subject areas across the full range of levels from kindergarten to postgraduate. It is not limited only to the educational context but can be applied in a variety of information problem solving situations in the personal and work environments as well.

STEPS	COMPONENTS	LEARNNG OUTCOMES
1	Identify	<ul style="list-style-type: none">▪ <i>Define the topic/subject.</i>▪ <i>Determine and understand the audience.</i>▪ <i>Choose the relevant format for the finished product.</i>▪ <i>Identify the key words.</i>▪ <i>Plan a search strategy.</i>▪ <i>Identify different types of resources where Information may be found.</i>
2	Explore	<ul style="list-style-type: none">▪ <i>Locate resources appropriate to the chosen topic.</i>▪ <i>Find information appropriate to the chosen topic.</i>▪ <i>Do interviews, field trips or other outside research.</i>
3	Select	<ul style="list-style-type: none">▪ <i>Choose relevant information.</i>▪ <i>Determine which sources are too easy, too hard, or just right.</i>▪ <i>Record relevant information through note making or making a visual organizer such as a chart, graph, or outline, etc</i>▪ <i>Identify the stages in the process.</i>

		<ul style="list-style-type: none"> ▪ <i>Collect appropriate citations.</i>
4	Organize	<ul style="list-style-type: none"> ▪ <i>Sort the information.</i> ▪ <i>Distinguish between fact, opinion, and fiction.</i> ▪ <i>Check for bias in the sources.</i> ▪ <i>Sequence the information in a logical order.</i> ▪ <i>Use visual organizers to compare or contrast information.</i>
5	Create	<ul style="list-style-type: none"> ▪ <i>Prepare information in their own words in a meaningful way.</i> ▪ <i>Revise and edit, alone or with a peer.</i> ▪ <i>Finalize the bibliographic format.</i>
6	Present	<ul style="list-style-type: none"> ▪ <i>Practice for presentation activity.</i> ▪ <i>Share the information with an appropriate audience.</i> ▪ <i>Display the information in an appropriate format to suit the audience.</i> ▪ <i>Set up and use equipment properly.</i>
7	Assess	<ul style="list-style-type: none"> ▪ <i>Accept feedback from other students.</i> ▪ <i>Self assess one's performance in response to the teacher's assessment of the work.</i> ▪ <i>Reflect on how well they have done.</i> ▪ <i>Determine if new skills were learned.</i> ▪ <i>Consider what could be done better next time.</i>
8	Apply	<ul style="list-style-type: none"> ▪ <i>Review the feedback and assessment provided.</i> ▪ <i>Use the feedback and assessment for the next learning activity / task.</i> ▪ <i>Endeavour to use the knowledge gained in a variety of new situations.</i> ▪ <i>Determine in what other subjects these skills can now be used.</i> ▪ <i>Add product to a portfolio of productions.</i>

Table 7. Components and Learning outcomes of Empowering 8 IL Model

4.4. SELF ASSESSMENT QUESTIONS

1. Describe the literacy programmes in Schools and Higher education
2. Explain any three models of Information Literacy

References and Further Readings

Assessment of higher education learning outcomes ... - *search.oecd.org*.(n.d.). Retrieved June 5, 2022, from <https://search.oecd.org/education/skills-beyond-school/45755875.pdf>

High-level colloquium on information literacy and ... - *eprints.rclis.org*.(n.d.). Retrieved June 5, 2022, from <http://eprints.rclis.org/3829/1/alexfinalreport.pdf>

Information literacy model for higher education institutions in India.(n.d.). Retrieved June 5, 2022, from <http://www.ijodls.in/uploads/3/6/0/3/3603729/4ijodls3717.pdf>

(PDF) information literacy models and standard: An overview. (n.d.). Retrieved June 5, 2022, from https://www.researchgate.net/publication/356892985_Information_Literacy_Models_and_Standard_An_Overview

LESSON 5

INFORMATION LITERACY MODELS

Structure

5.1. Introduction

5.2 Information literacy Model: concept.

5.3 Various information literacy Models

5.4. Information Literacy standards and guidelines

5.5 Conceptual design of Information literacy Models for Higher education

5.6. Self Assessment Questions

5.7. References

5.1 INTRODUCTION

Information literacy includes the capabilities to perceive information needs and to find, assess, apply and make information inside instructive, social, and social settings. It is essential to the upper hand of people, ventures, districts, and countries to give the way to compelling access, utilization, and production of the substance. It additionally stretches out past current innovations to include learning, basic reasoning, and an interpretative aptitude crosswise over the expert limit and enables people and networks. The idea of IL advocates preparing individuals for the effective utilization of information. In the period of information and information society, each individual should be information proficient and have the capacity to perceive the need of information including the capacity to find, assess and utilization of the information and it assumes an imperative part in learning, training, and research in the present rising learning society. The information Literacy models is a framework developed to explain the various process, knowledge and skills required to develop the information Literacy skills of the learners. Many of these models are based on learning theories and explain how the learner can transform the available information into usable and applicable knowledge. The Scope and importance of information literacy can be understood effectively with the help of IL models.

5.2 INFORMATION LITERACY MODEL: CONCEPT

It is primarily for the following studies to shape out how to consider information instead of to get pre-bundled actualities or resources in increasing information-based society. The massive six critical thinking approaches are an instructional philosophy used to combine information recovery straight into any subject educational programs. It created essential and investigative reasoning abilities by applying the student's particular ability and experience to the underlying issues tackling and information improvement. The massive six critical thinking approaches are prominent amongst the most fundamental instructing procedures that

can take normal circumstances. According to "The Information Literacy models explicitly user focusing centaur on the needs and abilities of users". The information literacy models have been developed to explain the process involved in learning in information literacy skills in the person life of individuals, in the education environment and work. The existing models help the learner in the Models following ways. help us to plan thoughts Provide a system to Give is design against phrasing to start a Help us dialog to quantify advance . Allow us to express the Give result an unmistakable structure and shared Prove guides into other expert fields Need to be adaptable and versatile shared objectives Information Literacy Model and Standard.

5.3. VARIOUS INFORMATION LITERACY MODELS:

Among the different Information Literacy Models the following are some of the widely used IL models which are the most relevant to academic institutions: Information Search Process : The Information Search Process (ISP) gives us an inclusive perspective of information searching from the users' point of view in different six phases "assignment start, determination, investigation, centre detailing, gathering, and introduction". All the six-phase model of the Information Search Process joins three domains of experience; the reaction of the psychological and the physical normal to every stage. The ISP depicts regular encounters throughout the time spent looking for an unpredictable task that has a discrete start and finishing and that requires significant development and figuring out how to be sophisticated. The model uncovers a hunting procedure in which a man is looking for importance throughout searching for Information. From the Cent s point of view, the essential goal of information seeking is to achieve the task that started the hunting, not simply the gathering of information as an end in itself. The ISP presents searching for information as a way to achieve an objective. The model of the SP1s explained in an all-encompassing perspective of information searching from the client's viewpoint in six phases.

Initiation: when a man initially winds up mindful of an absence of information or comprehension, sentiments of vulnerability and anxiety are normal.

Selection: when a general zone, Subject, or issue is distinguished, starting vulnerability frequently offers a route to short feeling of confidence and an availability to start the hunt.

Exploration: when conflicting, contradictory information is experienced, vulnerability, disarray, and uncertainty as often as possible increment and individuals wind up "in the plunge" of certainty.

Formulation: when an engaged point of view is framed, vulnerability lessens as certainty increments.

Collection: when information related to the engaged point of view is assembled, vulnerability dies down as intrigue and inclusion extends.

. Presentation: at the point when the chase is done with another understanding enabling the person to illuminate his or her make Sense of how to others or by one means or another put the making sense of how to use.

5.4 INFORMATION LITERACY STANDARD AND GUIDELINES

Worldwide Standards this part incorporates a scheme rol information literacy benchmarks for the IFLA universal librauy group. They are the center part of these rules. The models can ue received as they may be, in any case, if conceivable, it is desirable to adjust them to the

nearby needs of associations or natio Structure of the gauges: The information Literacy measures for getting to be successful students include three essential parts: ffctive access, ctive assessment, and utilization of information in the most eithe way. These centre objectives are found in the vast major majority of the benchmarks made by library professional, for exanm Iuformation Literacjy Model and Standard: An Overview 411 4 applicable commitments of AASL, ACRL, SCONUL and the Australian and New Zealand Institute for Information Literacy, trailed by crafted by different nations, similar to Mexico, and individual teachers" The IFLA information education measures depend on these worldwide encounters and commitments and are completely depicted in the list of sources toward the finish of the archive. The IFLA models are assembled under the three fundamental IL segments. ACCESS. The client gets to information successfully and productively.

Definition and verbalization of the information required:

- a) Defines or perceives the requirement for information
- b) Decides to accomplish a remark the information
- c) Express and characterizes the information require Initiates the hunting **procedure**

Location of information:

- a) Identifies and assesses potential wellsprings of information
- b) Develops seek procedures
- c) Accesses the chose information sources
- d) Selects and recovers the found information The client assesses information **basically and**

capability Appraisal of information:

- a) Analyzes looks at and extricates information
- b) Generalizes and deciphers information
- c)Selects and combines information
- d) Evaluates the precision and importance of the recovered information

Organization of information:

- a) Arranges and orders information
- b) Groups and sorts out the recovered information
- C. Utilize the client applies/utilizes information precisely and innovatively

Utilization of information:

- a) Finds better approaches to impart, present and utilize the information Era Strategies of Library Management in Digital
- b) Applies the recovered information
- c) Learns or disguises information as individual information

d) Presents the information item.

Communication and moral utilization of information.

a) Understands moral utilization of information.

b) Respects the legitimate utilization of information

c) Communicates the learning item with an affirmation of protected innovation d) Uses the significant affirmation style principles.

5.5 CONCEPTUAL DESIGN OF INFORMATION LITERACY MODEL FOR HIGHER EDUCATION

After going through the review of literature it is found that the information literacy model consist of range of stages starting from Defining to the synthesizing and evaluating applicable to all disciplines. The proposed SERVICE Model discussed below is designed considering university library set up, its readers and the terminology from library and information science discipline except the first component STARTER, so that LIS professionals can provide better services to the library users by using simple terminologies from library and information science. The details of the model are as mentioned below:

- Name: ‘SERVICE’ model consisting of seven stages

S	STARTER
E	ENTRY
R	REPOSITORY
V	VALIDATION
I	INDEX
C	CIRCULATION
E	EXPLICIT

- Stages: Seven
- Process Description: It is a network model based on following processes and level of information search process

Stage 1: STARTER

- At the affective level user will approach library with quest in mind and success or failure of quest information.

Stage 2: ENTRY

- In the second stage library/staff will expose the resources for selection of information based on quest of user.

Stage 3: REPOSITORY

- At the cognitive level user urges to know the location and access for the desired quest of information

-

Stage 4: VALIDATION

- At the fourth stage user find a suitable source for his quest after guiding and value (reliable) of acquired information/Search by the library.

Stage 5: INDEX

- At the action level user will confirm the information for which quest is made. If it is unsuccessful then repeat the stage 1 to 4

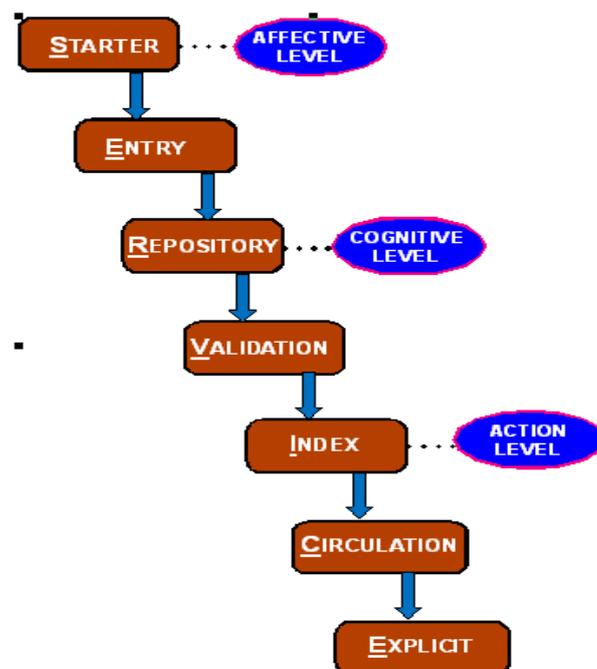
Stage 6: CIRCULATION

- Then the source will be circulated to the inquirer / user

Stage 7: EXPLICIT

- It is the final stage of this process for evaluation, feedback for library from the information seekers.

**Flow Chart of CONCEPTUAL IL MODEL FOR HIGHER
EDUCATION: S E R V I C E**



S E R V I C E Model

How does this model work?

1. Act as a practical working model to share the resources to ensure lifelong learning in the networked world
2. It combines ideas between information and ICT skills for Information search, assessment, processing and communication/dissemination of information and present it in an easier form suitable for users.
3. Acts as a problem solving, research and teaching tools by directing information skill to handle textual, visual and electronic resources
4. Provide a framework within which users can acquire relevant/ desired information/object
5. It displays the potential resources and services of a library
6. Serve as a desktop workplace to direct flexible search strategy for selection of alternative
7. It assess users information seeking behaviours, needs , problems & skill

5.6 SELF ASSESSMENT QUESTIONS

1. Explain about various information models
2. Conceptual design of Information Literacy for higher Education

5.7 REFERENCES

1. CHOUKHANDE Vaishali G. (2009). **Information Literacy curriculum in academic libraries.** *Information Age*, 3(3),5.
2. EISENBERG, Michael B. LOWE, Carrie A, SPITZER, Kathleen L. (2004). **Information Literacy. Essential Skills for the Information age.** (pp.6). Chennai: Rain tree Publishing Pvt.Ltd.
3. LIHITKAR Shalini R. AGASHE Ajay. LIHITKAR R.S. (2009) **Models of Information Literacy.** *Information Age*, 3 (3),29.
4. KADAM, Reshma. KAPRE, Namrata. **Role of information literacy in librarianship** (2009). In Dr. B. S. Kademani (Ed.) *Putting knowledge to work: Best Practices in Librarianship.* Proceedings of the National Conference, C-DAC, Mumbai, 1st -2nd May 2009.
5. International Federation of Library Associations and Institutions (IFLANET). **Teaching the research process - for discovery and personal growth.** Available at <http://archive.ifla.org/IV/ifla65/papers/078-119e.htm> (Accessed on 30-11-2010)..
6. Information Fluency. 21st **Century Information Fluency.** Available at <http://21cif.com/> (Accessed on 30-11-2010).
7. KOGANURAMATH, M M. KUMBAR, B D. KADEMANI, B S.(2008) **Festschrift of Professor C R Karisiddappa, Library and Information Science Profession in the Knowledge society,** New Delhi: Allied Publishers.
8. BEATTY, S. WHITE, P. (2005) **Information Commons: Models for eLiteracy and the Integration of Learning.** *journal of e literacy*,.2(1)
9. KHAN Khaisar M. BEENAMOLE T. **ICT Skills of College Librarians in University of Kerala** (2010). In Khan Khaisar M, Kumar Gopa, Vishala B K (Eds.) *Empowering library professionals in managing digital resources and providing extension activities.* Proceedings of the UGC sponsored national level conference, St. Agnes College, Mangalore, 18th -19th January 2010. (pp.330-344).

10. UPADHYAY M P. BAJPAI R P. (2010) **Developing knowledge centers for rural development in India: Existing State of digital divide in knowledge society.** *University News*, V.48 (33)
11. SATIJA, M P. (2010) **Need for revamping the LIS Education in India.** *IASLIC bulletin*. V.55 (1)
12. KONNUR, P.V. RAO K. Kavita. **Information literacy in higher education: a revolution in learning** Available at <http://www.slideshare.net/kkavitarao/information-literacy-in-higher-education> (Accessed on 13/12/2010).

LESSON 6

INFORMATION LITERACY STANDARDS

STRUCTURE

6.1. Information Literacy Standards

6.1.1 ACRL

6.1.2 IFLA

6.1.3 USA ILP (Indian Literacy Project)

6.1.3.1 Initiatives of ILP

6.1.3.2 Model

6.2. National Forum on Information Literacy

6.2.1 Background

6.2.2 Recent Progress Report

6.2.3 Future Plans

6.3. References and Further Readings

6.1. INFORMATION LITERACY STANDARDS

6.1.1 ACRL

Association of College and Research Libraries (ACRL), 2000 formulated standards of information literacy for higher education that help in developing an information literacy curriculum for an educational institution. The standards also provide Performance Indicators (PI) and Outcomes for each standard that have been presented briefly below.

Standards of Information Literacy

The information literate student:

- 1) Determines the nature and extent of information needed.
- 2) Accesses the needed information effectively and efficiently.
- 3) Evaluates information and its sources critically and incorporates selected information into her or his knowledge base and value system.
- 4) Individually or as a member of a group, uses information effectively to accomplish a specific purpose.
- 5) Understands many of the economic, legal and social issues surrounding the use of information and accesses and uses the information ethically and legally.

IL Standard-1: The information literate student determines the nature and extent of information needed.

Performance Indicator

The information literate student:

- a) Defines and articulates the need for information.

- b) Identifies a variety of types and formats of potential sources of information.
- c) Considers the costs and benefits of acquiring the needed information.
- d) Re-evaluates the nature and extent of information need.

Outcomes 1

- Discusses with peers and in class to identify information need or identify a research topic.
- Explores information sources to gain familiarity with the topic and modifies the need to be more focused.
- Identifies key concepts that identify the need.
- Knows how information is produced, organised and disseminated.
- Recognises the difference of sources in different formats.
- Differentiates between primary, secondary and tertiary sources.
- Recognises that information may have to be constructed with raw data from primary sources.
- Determines the availability of local resources and decides on broadening his search beyond local resources and go for inter-library loan.
- Defines a realistic timeline to acquire the needed information.

IL Standard-2: The information literate student accesses the needed information effectively and efficiently.

Performance Indicator

The information literate student:

- a) Selects the most appropriate IR(information retrieval) system for accessing the needed information.
- b) Constructs and implements effectively designed search strategies.
- c) Retrieves information online or in person using a variety of methods.
- d) Refines the search strategy if necessary.
- e) Extracts, records and manages the information and its sources.

Outcomes 2

- Identifies appropriate investigative methods for information search.
- Investigates the pros and cons of the different methods.
- Selects the efficient and effective methods for information search.
- Develops a research plan appropriate to the investigative method.
- Identifies keywords and related terms for information search.
- Selects controlled vocabulary for information retrieval.
- Constructs a search strategy using appropriate commands.
- Implements the search strategy in various information retrieval systems using different user interfaces and search engines with different command languages.
- Implements the search using protocols appropriate to the discipline.

- Uses various search systems to retrieve information in a variety of formats.
- Uses class numbers to physically locate sources in the library.
- Uses online or in person service to retrieve information.
- Assesses the quality of search results to determine if alternative information retrieval systems are to be used.
- Checks whether a change in search strategy needs to be done.
- Repeats the search using a revised search strategy.
- Selects an appropriate ICT to extract the information.
- Creates a system to organise the information.
- Records pertinent citations for future reference.

IL Standard-3: The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.

Performance Indicator

The information literate student:

- a) Summarises the main ideas to be extracted from the information gathered.
- b) Articulates and applies initial criteria for evaluating both the information and its sources.
- c) Synthesises main ideas to construct new concepts.
- d) Compares new knowledge with prior knowledge to determine the value added, contradictions or other unique characteristics of the information.
- e) Determines whether the new knowledge has an impact on the individual's value system and takes steps to reconcile differences.
- f) Validates understanding and interpretation of the information through discourse with individuals.
- g) Determines whether the initial query should be revised.

Outcomes 3

- Reads text, selects main ideas and presents in his/her own words.
- Quote verbatim matter in quotes.
- Evaluates information regards its reliability, accuracy, validity, timeliness and point of view or bias.
- Recognizes prejudice, deception or manipulation.
- Recognises relationship among concepts and combines them into useful primary statements.
- Extends initial synthesis when possible to a higher level of abstraction to construct new hypothesis that may require additional information.
- Uses ICT for analysing and presenting information.
- Determines whether information satisfies research or information need.
- Draws conclusions based on information gathered.
- Integrates new information with the previous information.
- Participates in discussions to verify if the information need has been satisfied.

- Review search strategy and information retrieval sources and expands if needed.

IL Standard-4: The information literate student individually or as a member of a group, uses information effectively to accomplish a specific purpose.

Performance Indicator

The information literate student:

- a) Applies new and prior information to the planning and creation of a new product or performance.
- b) Revises the development process for the product or performance.
- c) Communicates the product or performance effectively to others.

Outcomes 4

- Organises the content in a manner that supports the purpose and format of the product or performance.
- Articulates knowledge and skills transferred from prior experiences to plan and create a new product.
- Maintains a log of activities related to information seeking, evaluating and communicating.
- Reflects on past successes, failures and alternative strategies.
- Chooses a medium that best supports the purpose of the product or performance.
- Design in a way that best conveys the thought.

IL Standard-5: The information literate student understands many of the economic, legal and social issues surrounding the use of information and accesses and uses the information ethically and legally.

Performance Indicator

The information literate student:

- a) Understands many of the ethical, legal and many of the socio-economic issues surrounding information and information technology.
- b) Follows laws, regulations, institutional policies and etiquette related to the access and use of information resources.
- c) Acknowledges the use of information sources in communicating the product or performance.

Outcomes 5

- Identifies and discusses issues related to privacy and security in print and electronic environment.
- Identifies and discusses issues related to free vs. fee-based access to information.
- Identifies issues related to censorship

- Demonstrates an understanding of IPR, copyright and fair use of copyrighted material.
- Participates in electronic discussions following netiquette.
- Uses approved passwords and other forms of passwords to access information.
- Complies with institutional policies on access to information sources.
- Preserves the integrity of information resources, systems, equipment and facilities.
- Demonstrates an understanding of plagiarism and earnestly practices it.
- Selects an appropriate documentation style and consistently follows it.
- Posts permission granted notices for copyrighted material.

6.1.2. IFLA

The information literacy standards for becoming effective learners include three basic components: access, evaluation and use of information. These core goals are found in most of the standards created by library associations, such as the relevant contributions of AASL, ACRL, SCOUNL and the Australian and New Zealand Institute for Information Literacy, followed by the work of other countries, like Mexico, and individual educators. The IFLA information literacy standards are based on these international experiences and contributions, and are fully described in the bibliography at the end of the document. The IFLA standards are grouped under the three basic IL components.

A. ACCESS: The user accesses information effectively and efficiently

1. Definition and articulation of the information need

- Defines or recognizes the need for information
- Decides to do something to find the information
- Express and defines the information need
- Initiates the search process

2. Location of information

- Identifies and evaluates potential sources of information
- Develops search strategies
- Accesses the selected information sources
- Selects and retrieves the located information

B. EVALUATION: The user evaluates information critically and competently

1. Assessment of information

- Analyzes, examines, and extracts information
- Generalizes and interprets information
- Selects and synthesizes information
- Evaluates accuracy and relevance of the retrieved information

2. Organization of information

- Arranges and categorizes information
- Groups and organizes the retrieved information
- Determines which is the best and most useful information

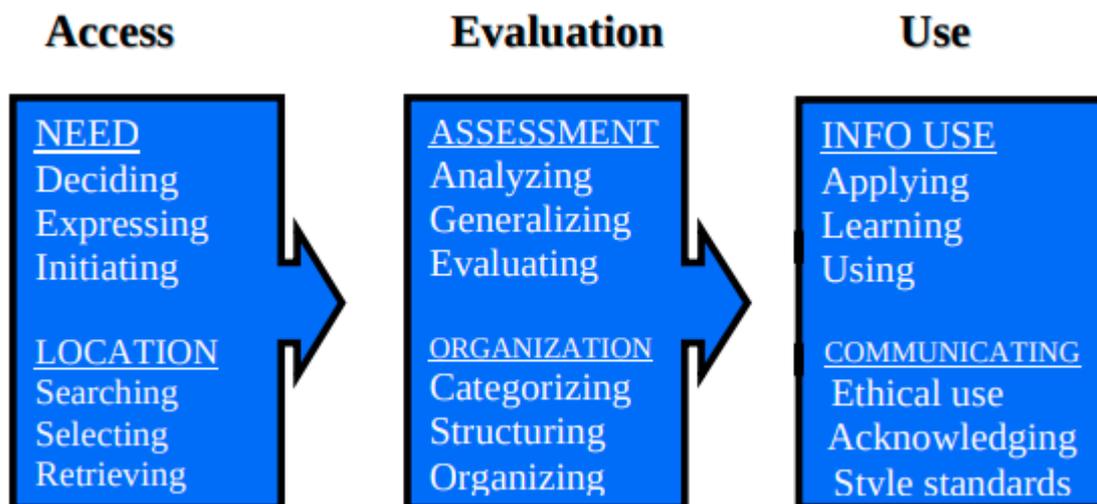
C. USE: The user applies/uses information accurately and creatively

1. Use of information

- Finds new ways to communicate, present and use information
- Applies the retrieved information
- Learns or internalizes information as personal knowledge
- Presents the information product

2. Communication and ethical use of information

- Understands ethical use of information
- Respects the legal use of information
- Communicates the learning product with acknowledgement of intellectual property
- Uses the relevant acknowledgement style standards



6.1.3 USA ILP (Indian Literacy Project):

India Literacy Project, ILP, is a non-profit organization dedicated to the cause of literacy in India. By empowering every individual we serve with functional literacy and an understanding of their basic rights and responsibilities, we strive to be a catalyst for 100% literacy in India. The primary objectives of all ILP programs are to enroll and retain children in government schools and enable them to attain grade appropriate skills and competencies.

India Literacy Project (ILP) is a volunteer based organization with chapters across US and India. With its vision to be 'A catalyst for 100% literate and educated India', ILP works at the grassroots to innovate and implement meaningful interventions to improve access to schools, enroll out of school children, retain children who are vulnerable to drop out, improve learning and provide pathways to productive careers. ILP scales its interventions through its partnerships with other NGOs, Government, CSRs, Foundations and Individuals.

ILP is registered as a Non-profit 501(c)3 organization (Tax Id. 36-3779020) in the US. Donations to ILP in the USA are tax-deductible under Section 501(c)3 of the IRS Code.

ILP is registered as a Public Charitable Trust in India. It is also registered under the section 12A Indian Income Tax 1961. Donations to ILP in India are tax-deductible under section 80G of the India Income Tax Act, 1961.

6.1.3.1 Initiatives of ILP:

Enroll and Retain children in preschools and schools: The education scenario in India has seen rapid progress over the last two decades in addressing the diverse challenges. Enrollment in primary schools has increased to around 96% and school infrastructure has also improved, but there are still significant challenges in enrollment for vulnerable communities. Our projects focus on vulnerable communities who face challenges with universal coverage, out of school children, poor attendance and retention. Some of these communities live in deep rural areas and are primitive tribal groups, socially disadvantaged communities such as scheduled castes, linguistic minority communities and migrant populations.

Enable learning in innovative ways: 70% of children in India attend government schools predominantly in rural areas. Many children attending government schools are first generation learners. Their families are not equipped to guide their education at home (78% of rural adults have less than 5th grade literacy). As a result, teachers become the only source of guidance, thus putting extra burden on the already over-burdened teachers.

Empower students with career pathways: Education plays an important role in preparing students for successful and productive careers and to make positive contributions to society. The education system must provide the information, skills and confidence required for students to have productive careers. Our student-centric Career Guidance and Pathways program equips them with detailed information about various careers, and enables them to effectively compete for jobs in the industry.

6.1.3.2 Model to attain the objectives:

- Work with rural communities and government schools in India to enroll, retain and ensure children attain grade appropriate skills.
- Partner with local NGOs and create sustained community engagement and ownership around government schools and children's education.
- Design and deploy high quality, low cost, replicable interventions to address gaps in delivery of education through the government system.



6.2. NATIONAL FORUM ON INFORMATION LITERACY

6.2.1 Background

The educational reform reports of the 1980's were remarkable for their lack of mention of the heralded arrival of the Information Age, information technology, or even libraries. In response to this Columbia University and the University of Colorado entered into a one-time collaboration to bring together leaders from higher education and librarianship to explore the question: How can meaningful educational reform take place without consideration of the Information Society in which current and future generations of students would live and work?

One of the attendees at the conference was incoming ALA President, Margaret Chishom. Margaret felt that the dialog initiated from the latter event needed to continue and be expanded to include K-12 leaders. It was she who established the ALA Presidential Committee on Information Literacy which resulted in a report that was released at a national press conference held during ALA mid-winter in Washington, D.C., in January 1989.

Later that year the National Forum on Information Literacy was created as an outgrowth of the ALA Presidential Committee on Information Literacy Final Report. The Forum's focus is on the need to promote individual empowerment within the information society. Now the Forum's broadly-based membership of over 75 national (and recently international) organizations has a combined membership in their organizations of over 5,000,000. The Forum defines information literacy as an individual's ability to know when they need information, to identify information that can help them address the issue or problem at hand, and to locate, evaluate, and use that information effectively.

Only recently have other groups such as the Global Knowledge Partnership (GKP) also acknowledged the need for people empowerment in using information technology. GKP is made up of representatives from governments, UNESCO organizations, banks, foundations, etc. GKP is "committed to sharing information, experiences and resources to promote broad access to, and effective use of, knowledge and information as tools of sustainable, equitable development."

As other countries have realized the need for a lifelong learning workforce, increasing attention is being paid to information literacy. Indeed some countries are ahead of the United States in linking information literacy to economic development. Other countries are also having national conferences on information literacy, but to date there is no equivalent to the

National Forum Information Literacy, which regularly brings together leaders from education, business and government (See attached list of current members.) to network with library organizations around this important issue.

The National Forum on Information Literacy, in fact, serves as a valuable link to non-library organizations primarily through its three times a year meetings in Washington, D.C. Forum members focus on major issues of concern to their memberships, wherein individual and corporate empowerment inherent in information literacy abilities can foster success. Usually this presents opportunities for members from library-based organizations to become involved with programming, writing and sometimes joint undertakings with non-library organizations. Librarians and libraries become part of the "answer" to larger-than-libraries challenges.

The broad-based Forum membership also provides a high credibility base when issues such as teacher accreditation standards are addressed, and the Forum has become a focal point (primarily through word-of-mouth by its members and its web page at infolit.org) for inquiries regarding information literacy.

The following highlights recent Forum activities.

6.2.2 Recent Progress Report

The 1989 national report on information literacy lists five challenges to be met. Progress has been made in some of these areas over the last year.

Recommendation 1: Forum members should encourage and champion the growing support of accrediting agencies.

The Western Association of Schools and Colleges has become the second regional accrediting agency to join the Forum. The current restructuring of its accrediting process includes information literacy expectations and support.

Recommendation 2: Teacher education and performance expectations need to include information literacy skills.

With leadership from Forum members (American Association of Colleges for Teacher Education, American Association of School Librarians, American Federation of Teachers, and the National Education Association, the Forum was successful in getting information literacy into the new National Council for Accreditation for Teacher Education standards for teacher preparation and will now be addressing NCATE standards for Professional Development Schools.

Recommendation 3: Librarian education and performance expectations need to include information literacy.

Pru Dalrymple who represents Association for Library and Information Science Education on the Forum had an open discussion regarding information literacy at the last ALISE meeting, and based upon questions and concerns raised will feature programming at the 2001 ALISE conference.

Recommendation 4: Forum members need to identify ways to illustrate to business leaders the benefits of fostering an information literate workforce.

As part of its efforts to deepen Forum members' understanding of information literacy, the first hour of each meeting is now devoted to an in-depth discussion of information literacy in regard to some important issue; recent topics have linked information literacy to consumer rights, economic development and health care. This provides an opportunity for raising the awareness of other leaders to the potential value of information literacy to their fields.

Recommendation 5: There needs to be more research and demonstration projects related to information literacy and its use.

The Institute for Museums and Library Services (a Forum member) lists information literacy as a priority area. A program highlighting information literacy projects funding in its first year of grant will be from the Association of College and Research Libraries which will take place from March 15 - 18, 2001.

It is clear, however, that with the exception of the K-12 level that the United States is producing very little research regarding the practice or benefits of information literacy efforts. It is to be hoped the endorsement of AAHE (a Forum member) of the ACRL (a Forum member) information literacy standards will foster more research at the higher education level. However, leadership for research of information literacy in the workforce remains with countries like Australia and Singapore.

6.2.3 Future Plans

There is increasing interest by Forum members and others to undertake a major effort to raise awareness of the importance of information literacy with policy makers both here and abroad. The rationale for such thinking is that across the globe, the rapid development and expansion of information technology is impacting on the well being of nations and individuals. Huge sums are being expended for network and computer technology in the hope of economic improvement, better education and enhanced quality of life. To date, the results-while making many new millionaires-has not paid off for the economically and socially at-risk nor for the poorer countries of the world. Indeed, the result of our high tech world is a growing digital divide between the information haves and have-nots.

The National Forum on Information Literacy will partner with other key organizations to sponsor this event. The projected outcomes for this effort will be to raise awareness of the importance of information literacy, to identify public policy and other aides to promoting information literacy and ultimately to close the gap between the information haves and have-nots.

6.3. REFERENCES AND FURTHER READINGS

Sbires. (2017, July 18). *National Forum on Information Literacy 1999–2000 report*. About ALA. Retrieved May 23, 2022, from <https://www.ala.org/aboutala/national-forum-information-literacy-1999%E2%80%932000-report>

ACRL. (2004, February). *Information Literacy Competency Standards for Higher Education*. Retrieved July 26, 2004, from web Site: <http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm>

Bundy, A. (2004). *Australian and New Zealand Information Literacy Framework: Principles, Standards and Practice*. Retrieved July 26, 2004, from the Australian and

New Zealand Institute for Information Literacy Web site:
<http://www.caul.edu.au/infoliteracy/InfoLiteracyFramework.pdf>

Byerly, Greg and Brodie, Carolyn S. (1999). Information Literacy Skills Models: Defining the Choices. In *Learning and Libraries in an Information Age: Principles and Practice*. Ed. Barbara K. Stripling, Englewood: Littleton: Libraries Unlimited, p. 54-82

Cortés, J.; González, D.; Lau, J.; Et al. Normas sobre alfabetización informativa en educación superior. Juárez: México: UACJ, 2002.

Dibble, Mark. (2004). Directory of Online Resources for Information Literacy: Information Literacy Standards. Retrieved July 26, 2004, from

the University of South Florida web site: <http://www.lib.usf.edu/ref/doril/standard.html>

Information Literacy Standards. (2001). Retrieved July 27, 2004, from the Council of Australian University Librarians web site:
<http://www.caul.edu.au/cauldoc/InfoLitStandards2001.doc>

Kuhlthau, C. (1999). Literacy and Learning for the Information Age. In Stripling, Barbara K., *Learning and Libraries in an Information Age. Principles and Practice*. Littleton: Libraries Unlimited.

Normas sobre alfabetización informativa en educación superior. (2002). Retrieved July 28, 2004, from the Tercer Encuentro de Desarrollo de Habilidades Informativas. web site:
<http://bivir.uacj.mx/dhi/DocumentosBasicos/Default.htm>

LESSON 7

INFORMATION LITERACY: PLANNING AND IMPLEMENTATION

STRUCTURE:

7.1. Information Literacy Programmes: Planning and Implementation

7.2. Factors in Organising Information Literacy

7.3. Steps in the Implementation of Information Literacy Programs

7.4. Information Literacy Programmes: Evaluation

7.4.1 Scope

7.4.2 Methods

7.5. References and Further Readings

7.1. INFORMATION LITERACY PROGRAMMES: PLANNING AND IMPLEMENTATION

Information literacy is regarded as the global issue and there have been documentation of many information literacy initiatives throughout the world, particularly in the field of higher education. The information literacy is characterised by a constant increase in the volume of information and advancements taking place in information and communications technologies. The traditional concepts of organization, bibliographic descriptions and dissemination of information are to be developed in accordance to the new environment. This task is primarily implemented by the library and information professionals. The library and information professionals have been working in the area, where they are required to undergo number of problems and challenges. Therefore, it becomes important for the individuals to hone their skills in terms of information literacy.

The term 'literacy' has been connected with cultural literacy, information literacy, library literacy and technological literacy. Through information literacy programs, the individuals are augmenting their knowledge and competencies to identify, evaluate, organize and make use of information in a judicious manner. Information literacy is regarded as the set of abilities, enabling the individuals to recognise, when the information is in need and the ability to locate, evaluate and make use of needed information. Information literacy is also regarded as the survival skill in the information age. Information literacy forms the basis of lifelong learning. It is common to all disciplines, learning environments and to all levels of education. The individuals are able to recognize the need of information literacy programs, through the rapid increase in the usage of technology at all levels of education. In educational institutions as well as in other organizations, individuals are making use of technologies to a major extent.

7.2. FACTORS IN ORGANISING INFORMATION LITERACY

The factors that need to be taken into consideration in the organization of information literacy programs have been stated as follows:

Human Resources - Human resources are considered vital in the implementation of not only information literacy programs, but other programs as well, curriculum and instructional systems, teaching-learning methods and other aspects that are necessary to augment student learning and the overall system of education. When selection and recruitment of human resources takes place, it is necessary to ensure that they possess the essential educational qualifications, skills and abilities, aptitude and personality traits. The human resources that render a significant contribution in organization of information literacy programs are, library staff members and there is also the need to hire human resources with experience working in the organization of information literacy programs. The human resources need to undergo training programs which would help them to hone their skills, acquire efficient knowledge in terms of performance of job duties and carry out their job duties satisfactorily.

Instructional Materials - To organize and promote development of the programs, it is necessary to put into operation appropriate instructional materials. The most common instructional materials that have proven to be advantageous to the instructors as well as the students are technologies. The computers and lap-tops are the most common technologies that are used within the classroom settings. Normally there is just one computer, which instructors make use of to show presentations to the students. Through the use of projectors, one can promote instruction through presentations. Apart from technologies, the other instructional materials that are primarily used in the case of adult learners are, books, articles, reports, projects, notes and other reading materials. In order to make use of instructional materials in an appropriate manner, it is vital to make a planning, which would be assisting in how to make use of them in an appropriate manner.

Different Category of Users - The information literacy programs are organised in accordance to the different category of users. These include, researchers, scientists, engineers, IT staff members, administrative staff members, faculty members and students. These individuals are regarded as members of educational institutions, but there are differences in their job duties and personal and professional goals and objectives. Though the job duties of all individuals are different, but they need to make use of information in their successful implementation. Therefore, it is vital for the individuals to generate information in terms of various aspects and augment their competencies and abilities in terms of various forms of technologies. During the initial stage, members of the educational institutions may experience problems, but with thorough practice, they are able to develop the essential skills. Therefore, it is necessary for all category of users to get engaged in practice to achieve positive outcomes.

Effectiveness in the delivery of Programs - The instructors are the ones, who are vested with the job responsibility of making provision of adequate knowledge and information to the students. In the implementation of this job duty, it is vital for them to possess the essential knowledge, competencies and aptitude that would enable them to carry out their job duties in a well-organized manner. In promoting effectiveness in the delivery of programs, the instructors need to take into account certain factors, these are, grade levels of students, academic goals and their needs and requirements. Furthermore, effectiveness can be increased with the implementation of teaching-learning methods and instructional strategies in an appropriate manner. Observing that students are able to acquire an efficient understanding of the concepts and appropriate answers are provided to the questions put forward by them. When these aspects are acknowledged by instructors, they would contribute in promoting effectiveness in the delivery of programs.

Providing Solutions to Problems - Within the course of organizing and delivering the programs, the individuals encounter number of problems. These are, lack of understanding in terms of modern, scientific and innovative methods, lack of knowledge in terms of concepts, inadequate infrastructural and other facilities, inappropriate teaching-learning methods and instructional strategies, scarcity of financial resources and lack of experience on the part of human resources, particularly in terms of programs. In order to make provision of successful organization and delivery of programs, it is essential to provide solutions to problems. To provide effective solutions to problems, the members of the educational institutions need to work in collaboration and integration with each other, conduct an analysis of the alternatives, make effective decisions and augment their knowledge and competencies in terms of various factors.

Utilization of Resources - In the implementation of information literacy programs, it is essential to make use of resources in an appropriate manner. There are three main types of resources that need to be taken into account. These are, financial resources, human resources and teaching resources. Financial resources are regarded to be of utmost significance, which enable the individuals to make provision of tools, technologies, equipment and infrastructure that would facilitate in the creation of pleasant and amiable environmental conditions. Human resources are the personnel, who need to possess the knowledge, information and competencies, which are required in performing their job duties in a well-organized manner and enriching the overall system of education. Teaching resources are the teaching-learning methods and the teaching-learning materials that are required in providing instruction and delivery of programs. The individuals, who are in leadership positions need to work in collaboration and integration with their subordinates and make wise decisions.

Utilization of Training Aids - Training aids are regarded as effectual tools that are needed in the successful implementation of programs. The various kinds of training aids that have been put into practice are, communication, audio, video and multimedia. Communication is regarded to be of utmost significance, the instructors and students communicate with each other in a verbal as well as written manner. Verbal communication takes place either through face to face or through the use of telephone. Whereas, written communication takes place through letters, emails, messages etc. Verbal and written, both forms of communication takes place, when instruction is provided to the students. Audio training aids facilitate the acquisition of knowledge and information to individuals through listening. Video facilitates the acquisition of knowledge and information to the individuals through observing. Multimedia has been beneficial to the individuals in augmenting knowledge and information in terms of various areas and implementing their job duties in a well-organized manner.

Utilization of Modern and Innovative Methods - With advancements taking place, it is essential to put into operation modern, scientific and innovative methods in the delivery of programs. In educational institutions and training centres, the instructors are encouraging the utilization of modern and innovative methods and causing a reduction in traditional methods. The utilization of technologies are regarded as indispensable, modern and innovative method that has acquired prominence at all levels of education. In order to identify whether modern and innovative methods have been beneficial to the students and in leading to progression of the overall system of education, it is necessary to evaluate the programs from time to time. The evaluation methods primarily focus on increase in the relevance of technological and subject developments. It needs to be ensured that technologies are focused upon to a major extent.

Implementation of Teaching Methods - The teaching methods that are implemented are of various types. In the case of information literacy programs, the teaching methods that have been put into operation are, face to face interaction, lectures, demonstrations and presentations. These methods are being commonly used. The instructors need to ensure that they come prepared and impart efficient knowledge and information to the students. Within the classroom settings, they need to ensure that their lectures are well-organized. While delivering their lectures, they need to put into practice, demonstrations and presentations. The implementation of teaching methods in an effective manner would render an important contribution in generating positive outcomes. The instructors and students will be able to carry out their tasks and functions in an appropriate manner and make improvements in the system of education.

Implementation of Evaluation Methods - Evaluation methods are regarded as the methods that are put into operation to identify the flaws and inconsistencies and bring about improvements. Within the course of impartment of knowledge and acquisition of education, the instructors and students may experience problems. It is crucial to bring about solutions to these problems to achieve the desired academic outcomes. Hence, evaluation methods are regarded to be of utmost significance in providing solutions to barriers and limitations that are taking place within the course of achievement of desired goals and objectives. The most common evaluation methods that are used by the instructors to evaluate the performance of students are, class assignments, homework assignments, tests, competitions and so forth. On the other hand, the students are also given a survey questionnaire to evaluate the competencies and abilities of the instructors. They are given a survey questionnaire on which they need to express their responses to various questions, such as, implementation of effective teaching-learning methods, abilities to provide solutions to their problems, and so forth.

7.3. STEPS IN THE IMPLEMENTATION OF INFORMATION LITERACY PROGRAMS

The major steps that need to be taken into consideration in the implementation of information literacy programs have been stated as follows:

Defining Mission - The first and foremost step is to define the mission of the information literacy programs. The mission statement makes provision of clear ideas and information to the individuals in terms of how they need to organize tasks and activities. A mission statement for the information literacy program includes, definition of information literacy. It should be consistent with the Information Literacy Competence Standards for Higher Education. The other aspects that are taken into account are, aligns with the library's mission statement to correspond with the larger mission statement of the institution, adheres to the format of campus strategic documents, incorporates the institutional stakeholders, clearly reflects their contributions and the extended benefits, appears in appropriate institutional documents and promotes lifelong learning and professional development.

Goals and Objectives - The goals and objectives of the information literacy programs need to be consistent with the mission. It establishes measurable outcomes for the evaluation of the program, reflect a sound pedagogical practice, accommodate inputs from the institutional stakeholders, clearly present the integration of the information literacy across the curriculum for student's academic goals and lifelong learning, focus upon the development of skills and

abilities of the students throughout education and take into account all learners, irrespective of the delivery systems or location.

Planning - Planning the function that bridges the gap from where one is in the present and where one has to be in future. In the planning of the information literacy program, the main aspects that need to be taken into account are, mission, goals and objectives, articulation with the curriculum, administration and institutional support, collaboration, pedagogy, staffing, outreach and assessment, and addresses future opportunities and challenges. This function is connected with library and institutional information technology planning and budgeting cycles, incorporates findings from environmental scans, accommodates the level of program, departments and institutions, it prioritises support of human, technological and financial resources and includes a program of training and development.

Administrative and Institutional Support - The administrative function with the institution assigns information literacy leadership and responsibilities. It incorporates information literacy in the institution's mission, strategic plans, policies and procedures. It makes provision of financial resources to establish ongoing support for teaching facilities and resources, appropriate staffing levels and professional development opportunities. It recognizes and encourages collaboration, communicates support for the program and rewards achievement and participation in the information literacy programs.

Articulation with the Curriculum - The articulation with the curriculum of the information literacy program includes identifying the scope with the competencies, integration of competencies and information takes place throughout the academic programs of the students, emphasis is put on student learning and courses and programs are specified that are charged with implementation.

Collaboration - The individuals, who are in leadership positions, such as, heads, directors, and instructors, need to work in collaboration and integration with other members of the educational institutions. When collaboration takes place, it puts emphasis on augmenting student learning and skills development for lifelong learning. The communication processes between individuals takes place in an appropriate manner. The process of collaboration promotes alignment of information literacy with disciplinary content. It works within the framework of the course content and other learning experiences to achieve information literacy outcomes. Collaboration needs to take place at various stages in the implementation of various tasks and activities. The important tasks include, planning, delivery, student learning and evaluation and refinement of the program.

Pedagogy - In the pedagogy, the important areas that need to be taken into consideration are, it supports diverse approaches to teaching, is suitable to the types of instructions, takes into account diverse learning styles, incorporates relevant information technology and other media resources, advances learning through collaborative and experiential learning activities, promotes critical thinking, reflection and recursive learning, augments the existing knowledge of the students in preparation of assignments and contextualizes information literacy within the course-work, which is appropriate to the academic program and course level.

Staffing - The staff members that render a significant contribution in the implementation of information literacy programs include, librarians, library assistants, administrators, program co-ordinators, disciplinary faculty, graphic designers, teaching and learning specialists and

other program staff members. Endeavours need to be enriched to work collaboratively with others. They should be knowledgeable regarding the teaching- learning methods, curriculum development and assessment of student learning. Emphasis need to be put on lifelong learning and it needs to be ensured that they are appropriate in number.

Outreach Activities - Outreach activities leads to providing a clear description of the programs and its value to targeted audiences. Creates markets and publicity materials for distribution. It identifies relevant groups amount stakeholders and support groups. It uses a variety of communication methods, including formal and informal networks and media channels. Provides collaboration with campus professional development, workshops and programs relating to information literacy. Sharing of information, plans and methods are regarded important in promoting advancements in literacies and all the members need to participate in outreach activities in leading to progressions in information literacy programs. Through the outreach activities, the members of the educational institutions are also able to provide information to the public regarding programs and courses of study.

Assessment - The assessment methods in the case of performance in the programs and student outcomes are taken into account in the case of information literacy programs. Program evaluation develops a program for planning and evaluation, measures the objectives of the programs, integrate the curriculum and instruction methods, institutional evaluations and regional and professional accreditation activities and making use of appropriate assessment methods for identifying the limitations and bringing about improvements. This is apparent that there are differences in the academic outcomes of the students. It is necessary to acknowledge the differences in the learning and teaching styles. It is vital to employ a variety of outcome measures, i.e. portfolio assessment, oral defence, quizzes, essays, direct observation, anecdotal, peer and self-review and experience. In addition, they need to focus upon student performance, knowledge acquisition and attitude appraisal, access the performance of the students and student peer and self-evaluation.

7.4. INFORMATION LITERACY PROGRAMMES: EVALUATION

Evaluation has been described and interpreted in different ways by educational research workers: Evaluation is concerned with the collection of information about the effects of an educational course or programme. It involves the comparison of observed effects with expectations or intentions. It is important to consider why evaluation is carried out when trying to understand what evaluation is. "Evaluation is concerned with the collection and analysis of information about the input, in terms of educational potential, the variables affecting the educational process, and the end product or output. Evaluation can be directed towards the various aspects of the educational course or programme." The basic purpose of evaluation is to collect and analyse information that can be used for rational decision making. In the context of library, user education, evaluation is also concerned with the economic use of specific libraries and information systems in general. The goals and objectives of a successful programme of library user education must be based on the synthesis of the needs of students, academic staff and library staff. Evaluation, based on attempts to measure the realisation of prespecified goals and objectives, must be multifaceted, concerned with library use and. information skills, attitudes to libraries, effects of various instructional programmes, and use' of a given library or information resources.

7.4.1 The Scope of Evaluation

"Evaluation might range from the study of details such as the use of given teaching methods or media, through the effects of specific courses, whole library instructional programmes, to the extreme of general educational systems".

7.4.2 Methods of Evaluation

There are three methods which are normally used for evaluation purpose. They are; i) the psychometric, ii) the sociological or management, and iii) the illuminative or responsive. Psychometric evaluation is based on the assumption that it is possible to expose experimental and control groups to different treatments, while all other variables are controlled, and to measure the changes by means of psychometric tests, achievement tests or attitude scales. Thus, the experimental group may be exposed to a new type of course whereas the control group follows the traditional course, in every other respect the two groups are exactly comparable. Pre-tests and post-tests are given to both groups and the analysis is concerned with establishing significant differences in performance of the two groups. This evaluation procedure is concerned with measuring output in terms of pre-specified goals and no attention is paid to unexpected effects: The sociological evaluation method is used in the study of changes in the structure of an organisation. This type of evaluation makes use of interviews and questionnaires: Attention is focused on the organisation undergoing the change, rather than on comparison with any control group. The third type of evaluation has been called illuminative evaluation by Parlett and Hamilton. It is not limited by the initial formulation or aims, but allows the expression of unexpected results. The actual implementation of an innovation is regarded as the most important part of the study, Research is focused on what is actually happening in response to the innovation, This type of evaluation is not concerned so much with testing of an educational programme, but with describing and understanding the conditions in which the programme works, and how the participants are affected by it: Observational studies and explorative interviews are used to obtain the information.

7.5. REFERENCES AND FURTHER READINGS

- (PDF) *information literacy programs - researchgate*. (n.d.). Retrieved May 20, 2022, from https://www.researchgate.net/publication/337242888_Information_Literacy_Programs
- *Approach*. India Literacy Project. (2019, September 29). Retrieved May 20, 2022, from <https://www.ilpnet.org/approach/>
- *Guidelines on information literacy for lifelong learning - ifla.org*. (n.d.). Retrieved May 20, 2022, from <https://www.ifla.org/wp-content/uploads/2019/05/assets/information-literacy/publications/ifla-guidelines-en.pdf>
- *India Literacy Project*. India Literacy Project - GuideStar Profile. (n.d.). Retrieved May 20, 2022, from <https://www.guidestar.org/profile/36-3779020#mission>
- *Information literacy model for higher education institutions in India*. (n.d.). Retrieved May 20, 2022, from <http://www.ijodls.in/uploads/3/6/0/3/3603729/4ijodls3717.pdf>
- Spires. (2017, July 18). *National Forum on Information Literacy 1999–2000 report*. About ALA. Retrieved May 20, 2022, from <https://www.ala.org/aboutala/national-forum-information-literacy-1999%E2%80%932000-report>

- *Unit 11 user education and information literacy ... - blog.egyankosh.ac.in.* (n.d.). Retrieved May 20, 2022, from <https://blog.egyankosh.ac.in/bitstream/123456789/35346/5/Unit-11.pdf>
 - *DSpace JSPUI.* eGyanKosh. (n.d.). Retrieved May 18, 2022, from <https://egyankosh.ac.in/>
 - ERIC Clearinghouse on Information and Technology Syracuse NY. (1994, April 30). *Information literacy in an information society. Eric Digest.* Information Literacy in an Information Society. ERIC Digest. Retrieved May 18, 2022, from [https://www.ericdigests.org/1995-1/information.htm#:~:text=Information%20Literacy%20is%20the%20ability,skills%20\(Costa%2C%201985\).](https://www.ericdigests.org/1995-1/information.htm#:~:text=Information%20Literacy%20is%20the%20ability,skills%20(Costa%2C%201985).)
 - *Importance of Information Literacy.* (n.d.). Retrieved May 18, 2022, from <http://www.ijodls.in/uploads/3/6/0/3/3603729/9434.pdf>
 - *International Journal of Library and Information Studies.* (n.d.). Retrieved May 18, 2022, from <https://www.ijlis.org/articles/information-literacy-for-lifelong-learning.pdf>
- Unit 11 user education and information literacy ... - blog.egyankosh.ac.in.* (n.d.). Retrieved May 18, 2022, from <https://blog.egyankosh.ac.in/bitstream/123456789/35346/5/Unit-11.pdf>

LESSON 8

ISSUES INVOLVED COLLABORATION WITH ACADEMICS

STRUCTURE

- 8.1. Introduction**
- 8.2. Information Literacy**
 - 8.2.1 Academic Writing**
 - 8.2.2. Assessment**
 - 8.2.3.The Original task**
 - 8.2.4. The Redesigned task**
- 8.3.The Collaboration**
 - 8.3.1 Opportunities and Challenges**
- 8.4. Future Directions**
- 8.5. Self-Assessment Questions**
- 8.6 References.**

8.1 INTRODUCTION

There is a need for supportive learning environment in the transition to higher education to allow students to become accustomed to discipline norms and academic standards. Kift and Field (2009) called for a holistic approach to the first year experience with embedding of core academic skills within a high – challenge, high-support curriculum. The current trend is to direct effort towards providing educational instruction for first year students so that key learning outcomes such as information literacy and written communication are met from the start of the degree. This ensures students have these skills when required in later years and into employment situations. To support the acquisitions of these skills through curriculum development, partnerships have been formed between lecturers and librarians and lecturers and academic advisers. Less common is three-way partnership approach to support the development of these skills to enhance student’s success.

In this lesson the team approach developed by the librarian, the first year learning advisor and the lecturer extended to all facets to the assessment process with each member drawing on individual expertise and contributing to the assessment task, lecturer, tutorials, online, face-to-face and informal support, evaluation and review. This inclusive approach of embedding academic literacies within the discipline provided a holistic assessment.

8.2 INFORMATION LITERACY

Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning. Information literacy has now evolved to become more than just a set of specific skills to be taught and acquired, as seen in the old model of generic library classes. Information literacy acquisition has the ability to empower and transform individuals, organisations and society. The role and power of information as a socially constructed

phenomenon does however, come with added responsibilities. Academic staff has a greater responsibility in providing opportunities for student engagement with the core ideas about information within a discipline- specific contest. This can be done by designing well-constructed curricula and meaningful assessment task that foster these skills within the discipline. Librarians and academic advisers also have a greater responsibility in identification areas where collaboration within the faculty can lead to the certain of a more cohesive and integrated approach to information and knowledge synthesis with the ultimate aim of extending the learning opportunities for students. Constructive alignment of assessment tasks to better equip students with life-long learning skills can be attained by adopting a holistic three pronged approach by lecture, librarian and students. Librarians have found the best way to teach information literacy is through embedding the relevant skills within the units of study, rather than teaching generic skills in library workshops during orientation.

8.2.1 Academic Writing

For first year students, the tertiary landscape is unfamiliar and expectations are unclear; this is particularly so in the area of academic writing. Academic writing is governed by rules and practise that adhere to traditional convention. This situation created a space that favoured establishment of constructive working relationships and the development of joint curricula. Elton(2010) posits that the disciplinary rules of academic writing are often tacit and successful development of skills is reliant on input of academic writing are often tacit and successful development of skills is reliant on input from disciplinary specialists as well as writing specialists. Co- location afforded crucial collegial conversations where assumptions and values could be safely explored and challenged. This led to an understanding of roles, sharing of knowledge and ideas and ultimately contributed to the credibility of the students.

8.2.2 Assessment

Assessment is important at a student, lecturer, institutional and community level; and is about understanding the quality of student learning. A well designed assessment task can encourage students to study and keep up to date with their work, as well promote the development of knowledge acquisition skills. Students require clear understanding of what is expected in the assessment task and they also need information about their academic progress.

Academics often work in isolation when developing course curricula; however, the development of an essay writing task is an ideal situation for a collaborative process between academic, librarian and learning-support staff . This paper describes the collaborative processes which led to a re-structured essay task that was responsive and encouraged success and confidence by allowing for the development of core skills in information literacy and academic writing.

8.2.3 The Original task

The initial assessment task in a core unit for first semester engineering students was a 1500 word essay where a draft-redraft process included writing an essay for initial submission (draft), and then rewriting the essay incorporating feedback from markers in the redraft stage. This final submission was not achieving the desired outcomes in the development of academic writing and information literacy. Although the feedback on the draft essay was comprehensive and supported by in-class discussion, final submissions (redrafted essay) demonstrated limited active engagement by students. Students frequently

resubmitted the first draft with minimal, if any, changes or simply reordered the material so it appeared they had made changes with no real change. To enable comparison between the draft and redraft submissions, students were requested to attach the original to the redraft for final assessment. This was problematic as not all students were compliant with the instruction. As a back-up for markers in later years the original marking framework was recorded and a copy of the feedback sheet was kept to ensure students had addressed the issues raised in their draft. Overall, this process was very time consuming for staff. A revitalised assessment task incorporating input from students, librarian and lecturer was instigated.

Building on a long established working relationship and experience of assessment strategies across the units taken in the first semester by engineering students, the team of lecturer, students and librarian set out to review the initial assessment task. Whilst there was an appreciation of the existing draft/redraft essay design as embedded in social constructivism, there was a desire to increase opportunities for the development of information literacy and writing skills in a supportive learning environment that acknowledged and valued the diversity of student backgrounds and promoted early success. For almost a decade, a feed-back loop had existed between the students, students and lecturer. In addition to this, the librarian had acquired an understanding of the students' information seeking behaviour and support needs. The shared observations of the lecturer, librarian and STUDENT, student comments and an evaluation of the effectiveness of the task in achieving the desired learning outcomes, contributed to redesigning the assessment.

8.2.4 The Redesigned Task

Overall weighting of the task (40%) and the learning outcomes were retained from the original assessment task, but the redesigned task was staged to introduce students to the expectations of essay writing in a scaffold manner. The assessment was divided into four steps that addressed basic essay writing and emphasised such threshold concepts as critical reading and synthesis. To keep students engaged in learning, the early steps built on skills required for the main task and were linked by content, thus establishing and maintaining task relevance.

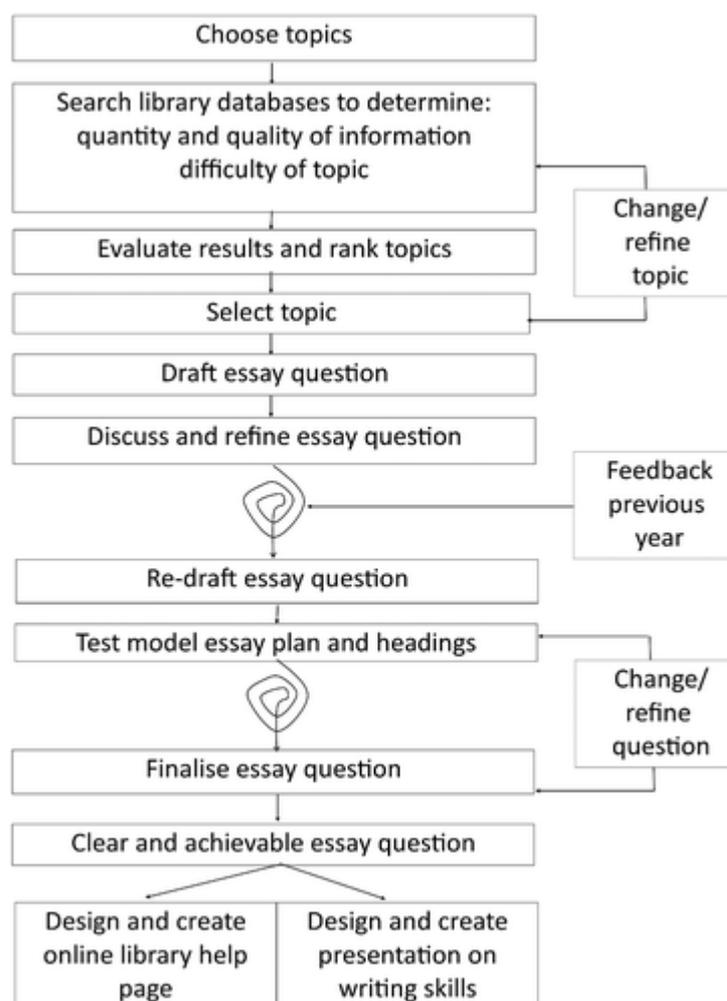
8.3 THE COLLABORATION

The collaborative approach to topic selection and finalisation of the essay question took several weeks to complete. Whilst this represents a considerable time investment, the work took place well ahead of the busy teaching period. This process has now been streamlined and we are now much more time efficient. It was important from the librarian's point of view that the chosen essay topic had adequate library resources to assist student. Initial discussions between the lecturer and librarian about current issue of interest and significance to the unit informed and streamlined the librarian's research on possible topics. In her experience of supporting students in finding information for assignments, they found that some topics were such easier to retrieve relevant resources than others. The content knowledge of the lecturer and experience of the librarian together enabled the identification of topics suitable for first year undergraduate students. The outcome of the continued collaboration between the lecturers, librarian and the student was an assessment strategy in four achievable parts, building one upon the other and using a high-challenge, high-support approach with staff collaboration and embedded support to develop confidence and promote student engagement. The notion of high-challenge, high-support approach with staff

collaboration and assessment task is fundamental to intentional first year curriculum is considered as best practice in first year pedagogy.

In consultation with the students, the lecturer and librarian defined the essay question and the lecturer wrote an essay plan. It was important for the students that the question wording was optimised to ensure students had a clear understanding of the question being asked and that the expectations of students and lecturer were aligned.

Schematic diagram of the collaborative process.



The outcome of the continued collaboration between the lecturer, librarian and students was an assessment strategy in four achievable parts, building one upon the other and using a high-challenge, high-support approach with staff collaboration and embedded support to develop confidence and promote student engagement. The notion of high-challenge, high-support assessment tasks is fundamental to intentional first year curriculum (Kift & Field, 2009) and is considered as best practice in first year pedagogy (Kift & Field, 2009; Kift, Nelson, & Clarke, 2010).

Also considered best practice, according to the American Library Association's *Characteristics of programmes of information literacy that illustrate best practices: A guideline* (2012), is the process whereby librarians effect collaboration in

information literacy embedding projects with disciplinary faculty members. This focus on enhancing student learning and skill development within a discipline-specific context is more effective when it takes place at different stages – as in this project: at the planning, delivery, assessment, evaluation and refinement stages of the intervention.

Embedded support was provided by both the librarian and students throughout the semester. The librarian produced search strategies that showed students where to find background information and which library databases to use to locate relevant full text articles – a previously identified difficulty for this cohort (Gurney & Wilkes, [2008](#)). Targeted search strategies were placed on an assignment help page which was then placed in the online Moodle unit in the Learning Management System. The librarian also designed and presented a 1.5 hour hands-on library tutorial including search strategies and tips to develop information literacy skills which complemented the online assignment help page.

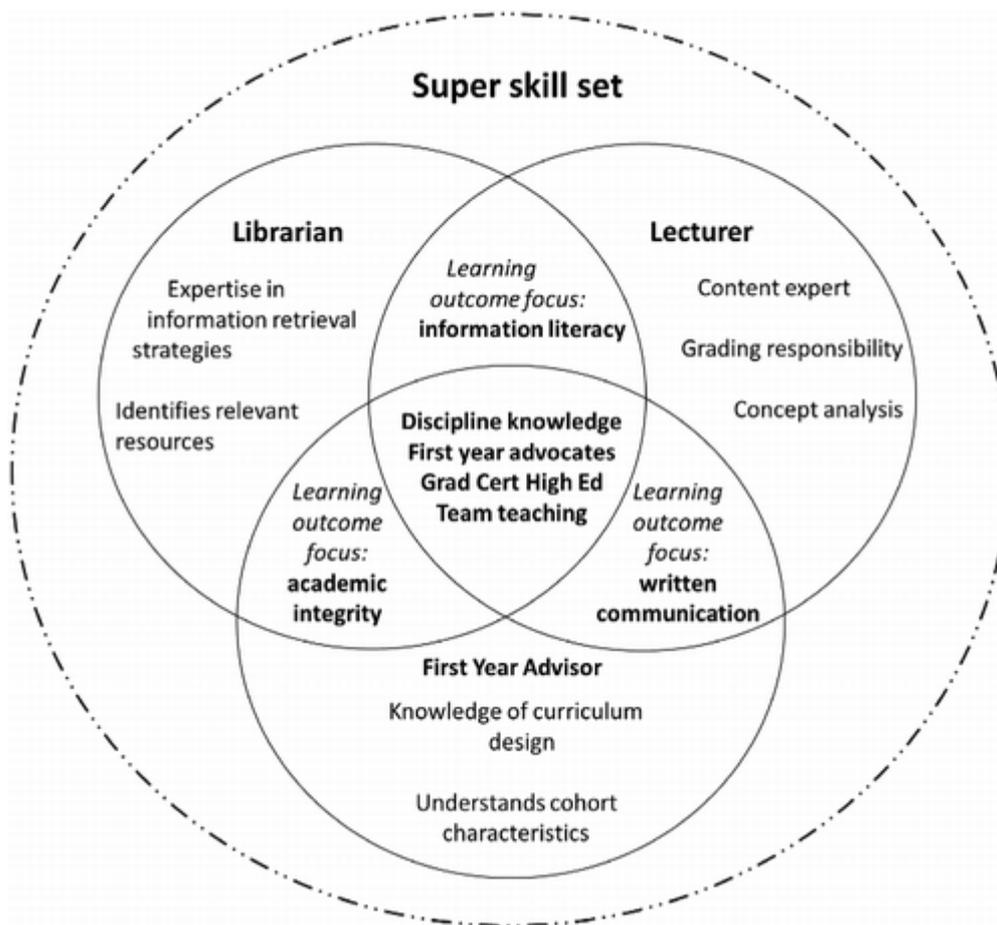
The students designed a 1.5 hour tutorial to instruct students on how to approach an annotated bibliography and how to write in a scientific, engineering style in higher education. In week 6, the students and lecturer ran another 1.5 hour tutorial on how to approach the essay including structured advice as to breaking down the essay into five paragraphs (Cismas, [2010](#)). In 2009 and 2010 the tutorial was presented as a lecture, but on reflection of student comments and observations by both the lecturer and students, from 2011 it was conducted using a social constructivist approach (Sullivan, Johnson, Mercado, & Terry, [2009](#)). Students were given a copy of an exemplary essay on a previous topic and asked to critique it using the same marking framework used to assess their assignment. The students was available for one-on-one and small group consultations with students throughout the semester either by face-to-face, telephone, email or through the Moodle discussion forum.

8.3.1 Opportunities and challenges

Collaboration between the lecturer, librarian and students brought together knowledge and skill sets that promoted developmentally appropriate assessment and sustained a holistic approach to student learning. The librarian offered expertise in organising, evaluating, and locating resources; essential skills for academic success. As content expert, the lecturer supported students to synthesise, theorise and add meaning to the essay topic as well as grade the assessment. In an environment without the feeling of being judged, the students provided an avenue for students to discuss challenges and difficulties with the task. Neither the librarian nor the students graded the assessments.

Identification of team skills revealed interesting overlaps. All three team members held science degrees and postgraduate qualifications in higher education, were experienced in their respective fields, and had a keen interest in supporting student learning. These attributes alone do not necessarily mean that collaboration is easy, indeed there are many complex dynamics at play in the collaborative environment. Pham and Tanner ([2015](#)) investigated some of the enablers and constraints on the collaborative process suggesting that ‘relationship-building over time is fundamental; collaborations do not occur without mutual trust and respect of the involved parties’.

Schematic diagram showing the skills and context each member brought to the team.



Frequently librarians struggle to find buy-in from faculty to seamlessly incorporate information literacy skills into the curriculum and assessment tasks. Badia (2013) suggests lecturers, despite thinking that information literacy competencies are important for their students to master, have not yet found systematic ways to integrate this into their units. Tewell's (2013) survey indicated that whilst 82% of faculty felt that information literacy instruction was required by all students, 47% never actually addressed it in their teaching. The availability of library staff and academic advisors to assist in this area is often not taken up by lecturers for many reasons – often time-constraints are cited – and it remains the responsibility of the librarian to engage in discussions to encourage this activity. When an academic is actually interested and passionate about information literacy, the opportunity to become involved in the assessment process provides a good entry point for a librarian and students. Additionally, the students involved in the first year engineering unit initiative had already worked with two previous coordinators of this unit and the current lecturer could see the value of including the students support.

The lecturer and librarian undertook their GCHE together and developed a productive working relationship along the way. Both the science degree and GCHE qualification provided a shared common language and an enthusiasm for developing new ways of engaging students. A shared interest in information literacy resulted in two projects examining how students were using information (Gurney & Wilkes, 2008; Wilkes & Gurney, 2009).

The students had the same professional background, along with a heightened awareness of student support requirements at the first year level. These positive factors helped to overcome the often stifling constraint of power asymmetry seen between academics and support staff (Pham & Tanner, 2015). Diverse professional backgrounds and cultures can challenge a collaborative partnership, but mutual understanding and respect for the abilities of each of the team members can contribute to its success. The lecturer realised the common ground and shared interest with the librarian and students could instigate improved information literacy outcomes for students. From this heightened awareness, new methods of improving students' experiences were envisioned.

Pham and Tanner (2015) also highlighted the temporal and spatial dimensions of collaborative relationships – the 'time-space' factor. In the present collaboration, the lecturer, students and librarian have worked hard over a number of years to refine the assessment task, always respecting each other's skills and expertise which are brought to the table. The lecturer found the collaboration beneficial in focussing on the Scholarship of Teaching and Learning and reflecting, researching and publishing in her practice of teaching. Early career researchers with heavy teaching loads and imperatives to publish can develop productive relationships, as in this case, providing them with avenues for research output that are non-traditional for scientists.

The opportunity for the librarian to become involved with the assessment task provided three levels of interaction. An initial Library hands-on class, followed by the creation of an assignment help page which was added to the Moodle unit, plus on-going interaction throughout the period of assessment all increased the validity of the Library as a go-to place for student support. The unique lecturer, students and librarian interaction was instrumental in promoting these services to faculty.

For the student, involvement with this assessment task provided scope for the normalisation of learning support that promotes early help seeking behaviour which is critical to student success. Notably, as the student works with considerable autonomy, the opportunity to form a partnership and work collaboratively with the lecturer and librarian has afforded great opportunities to support the student role within the university.

8.4 FUTURE DIRECTIONS

The establishment of collaborations with other lecturers to improve student information literacy and academic writing skills within teaching units will always require the basic enablers of a successful collaborative relationship. Essential to these collaborations are a focus on communication, shared values and benefits, and recognition and balance of the power asymmetry often experienced on a university campus. The 'time-space' dynamic of developing personal understanding and respect takes time and commitment from all parties and is necessary for successful university collaboration.

The on-going positive relationship between the lecturer, librarian and students was strengthened through this collaboration, exemplifying how librarians can be regarded as partners with lecturers, rather than servants (Malefant & Demers, 2004). The members of the team have many similar skills and discipline backgrounds ensuring that each is on a 'level playing field' in interactions.

As found in previous studies all team members have a strong desire to support students to succeed and this provides motivation to continuously optimise this assessment task and their research nexus. The collaborative process has contributed to the professional development of the team members through presenting conference papers, writing journal articles, applying for grants, mentoring and motivating each other to continue lifelong learning through research and training.

It was important for the team to reflect upon the assessment to make improvements and ensure academic standards were being maintained. Some of the ways in which one may reflect upon an assessment task are by: learning from students' mistakes and changing teaching methods to address this; focusing on validity before reliability; asking yourself if you could answer the question posed; thinking of better ways to give feedback to help students improve; and finally, doing 'everything in your power to lessen the anxiety raised by assessments'.

This collaborative approach, drawing on the skills and knowledge of the lecturer, librarian and students, in an open, transparent and trusting environment enabled the successful redesign of the assessment task. The scaffold task was created, enhancing the opportunity for students to develop their information literacy and writing skills. Reflections of staff were documented throughout the development and review stages to help inform assessment tasks in later years. The two most important criteria for the success of the assessment task were topic selection and the clear formulation of the essay question.

8.5 SELF-ASSESSMENT QUESTIONS

1. Explain Opportunities and challenges celebrations in Information literacy.
2. Explain about the academic writing.

8.6 REFERENCES

1. Adie, L., Lloyd, M., & Beutel, D. (2013). Identifying discourses of moderation in higher education. *Assessment and Evaluation in Higher Education*, 38, 968. doi:10.1080/02602938.2013.769200. [Taylor & Francis Online], [Web of Science ®], [Google Scholar]
2. Badia, G. (2013). Faculty knowledge of information literacy standards has an impact in the classroom. *Evidence Based Library and Information Practice*, 8, 242–244. Retrieved from <http://www.ejournals.library.ualberta.ca/index.php/EBLIP/issue/view/1446>. [Crossref], [Google Scholar]
3. Beckman, J., & Rayner, G. (2011). Embedding academic-professional collaborations that build student confidence for essay writing: Student perceptions and quality outcomes. A Practice Report. *The International Journal of the First Year in Higher Education*, 2, 83–90. doi:10.5204/intjfyhe.v2i2.87. [Crossref], [Google Scholar]
4. Bruce, C. (2001). Faculty-librarian partnerships in Australian higher education: Critical dimensions. *Reference Services Review*, 29, 106–116. doi:10.1108/00907320110394146. [Crossref], [Google Scholar]
5. Cismas, S. (2010). Education academic writing skills in engineering. Paper presented at the international conference on Engineering Education and Educational Technologies, Corfu Island, Greece. [Google Scholar]
6. Coates, H. (2010). Defining and monitoring academic standards in Australian higher education. *Higher Education Management and Policy*, 22(1), 1–17. doi:10.1787/hemp-v22-art2-en. [Crossref], [Google Scholar]

7. Dobozy, E., & Gross, J. (2010). Pushing library information to first-year students: An exploratory study of faculty/library collaboration. *Australian Academic & Research Libraries*, 41, 90–99. [[Taylor & Francis Online](#)], [[Web of Science ®](#)], [[Google Scholar](#)]
8. Elton, L. (2010). Academic writing and tacit knowledge. *Teaching in Higher Education*, 15, 151–160. doi:10.1080/13562511003619979. [[Taylor & Francis Online](#)], [[Web of Science ®](#)], [[Google Scholar](#)]
9. Engineers Australia. (2013). Stage 1 competency standard for professional engineer. Retrieved from http://www.engineersaustralia.org.au/sites/default/files/shado/Education/Program%20Accreditation/130607_stage_1_pe_2013_approved.pdf. [[Google Scholar](#)]
10. Ford, P. J., Foxlee, N., & Green, W. (2009). Developing information literacy with first year oral health students. *European Journal of Dental Education*, 13, 46–51. doi:10.1111/j.1600-0579.2008.00536.x. [[Crossref](#)], [[PubMed](#)], [[Web of Science ®](#)], [[Google Scholar](#)]
11. Gurney, L. J., & Wilkes, J. (2008). Creating a library presence in online units. *Australian Academic & Research Libraries*, 39, 26–37. [[Taylor & Francis Online](#)], [[Web of Science ®](#)], [[Google Scholar](#)]
12. [Janelle, Wilks 2015 Developing Informtion literacy and Academic writing skills through the collaboration...](#)
13. Kift, S., & Field, R. (2009). Intentional first year curriculum design as a means of facilitating student engagement: Some exemplars. Paper presented at the 12th Pacific Rim First Year in Higher Education Conference, Townsville, Queensland. [[Google Scholar](#)]
14. Kift, S., Nelson, K., & Clarke, J. (2010). Transition pedagogy: A third generation approach to FYE: A case study of policy and practice for the higher education sector. *The International Journal of the First Year in Higher Education*, 1(1), 1–20. [[Crossref](#)], [[Google Scholar](#)]
15. Lea, M. R., & Jones, S. (2011). Digital literacies in higher education: Exploring textual and technological practice. *Studies in Higher Education*, 36, 377–393. doi:10.1080/03075071003664021. [[Taylor & Francis Online](#)], [[Web of Science ®](#)], [[Google Scholar](#)]
16. Leckie, G., & Fullerton, A. (1999). Information literacy in science and engineering undergraduate education: Faculty attitudes and pedagogical practices. *College of Research Libraries*, 60, 9–29. [[Crossref](#)], [[Web of Science ®](#)], [[Google Scholar](#)]
17. Liu, T., & Sun, H. (2012). Gender differences on information literacy of science and engineering undergraduates. *International Journal of Modern Education and Computer Science*, 2, 23–30. [[Crossref](#)], [[Google Scholar](#)]
18. Lo, L. S., & Dale, J. M. (2009). Information literacy “learning” via online tutorials: A collaboration between subject specialist and instructional design librarian. *Journal of Library & Information Services in Distance Learning*, 3, 148–158. doi:10.1080/15332900903375325. [[Taylor & Francis Online](#)], [[Google Scholar](#)]
19. Meyer, J. H. F., & Land, R. (2005). Threshold concepts and troublesome knowledge (2): Epistemological considerations and a conceptual framework for teaching and learning. *Higher Education*, 49, 373–388. doi:10.1007/s10734-004-6779-5. [[Crossref](#)], [[Web of Science ®](#)], [[Google Scholar](#)]
20. Moss, T., Pittaway, S. M., & McCarthy, R. (2006). The first year experience: Transition and integration into teacher education. Paper presented at the Australian Association for Research in Education Conference, Adelaide. Retrieved from <http://www.eprints.utas.edu.au/4798/1/4798.pdf>. [[Google Scholar](#)]
21. Palmer, S., & Tucker, B. (2004). Planning, delivery and evaluation of information literacy training for engineering and technology students. *Australian Academic & Research Libraries*, 35, 16–34. doi:10.1080/00048623.2004.10755254. [[Taylor & Francis Online](#)], [[Google Scholar](#)]

22. Pan, D., Valliant, M., & Reed, B. (2009). Creative collaboration: Developing a partnership with an academic advisor to promote information literacy and student success. *College and Undergraduate Libraries*, 16, 138–152. doi:10.1080/10691310902993191. [[Taylor & Francis Online](#)], [[Google Scholar](#)]
23. Tewell, E. (2013). Full-time faculty view information literacy as important but are unlikely to incorporate it into their teaching. *Evidence Based Library and Information Practice*, 8, 84–86. Retrieved from <http://www.ejournals.library.ualberta.ca/index.php/EBLIP/article/view/18534>. [[Crossref](#)], [[Google Scholar](#)]
24. Toohey, S. (1999). *Designing courses for higher education*. Buckingham: SRHE and Open University Press. [[Google Scholar](#)]
25. Venables, A., & Summit, R. (2003). Enhancing scientific essay writing using peer assessment. *Innovations in Education and Teaching International*, 40, 281–290. [[Taylor & Francis Online](#)], [[Web of Science ®](#)], [[Google Scholar](#)]
26. Wilkes, J., & Gurney, L. J. (2009). Perceptions and applications of information literacy by first year applied science students. *Australian Academic & Research Libraries*, 40, 159–171. [[Taylor & Francis Online](#)], [[Web of Science ®](#)], [[Google Scholar](#)]

LESSION 9

ADMINISTRATION AND PUBLIC INFORMATION LITERACY CURRICULAM

Structure

9.1 Introduction

9.2. Information Age

9.3. Types of information literacy

9.3.1. The implementation of information literacy

9.4. Importnce of information literacy

9.4.1. Public Service Management

9.5. Curriculum designed modular

9.5.1. The Information Literacy Teaching

9.6. Curricular Approach to improve the Information literacy

9.6.1. Implementing the curriculum

9.7. Self Assessment questions

9.8 References.

9.1. INTRODUCTION

The effects of information literacy on administrative secretaries of these two selected public organisations, kinds of digital equipment used in the organisation, and to determine if the administrative secretaries of these two selected public organisations, kinds of digital equipment used in the organisation, and to determine if the administrative secretaries know how to use the digital equipment available to the organisation.

Information literacy are fundamentally altering the nature of knowledge to enable a more creative, objective, collective and personal way of communicating knowledge through information advancement . Information literacy is the knowledge, skills, and styles used in broad range of devices such as Smart phones, tablets, and desktop. All of these are seen as network instead of technological devices. Information literacy are fundamentally altering the nature of knowledge such that, they enable a more creative, active, collective and personal way of communicating knowledge through advancement in technology.

9.2. INFORMATION AGE

The 21st century has been tagged “Information Age” because of the massive explosion of information resources. This was unlike fifty years ago when people had limited sources such as books, newspapers, and community experts from which to obtain needed information. In the postmodern “information society”, however, information is not only available from these sources but also online databases, the Internet, multimedia packages, and digitized government documents among others. The amount of information from all of these sources, especially the electronic, is awe-inspiring and the issue of quality of information such as its authenticity, scope of coverage and objectivity is often compromised. Such is the case because anyone with adequate knowledge in information technology can post or upload information onto the Internet, and according to Wilson (2001) this overload of information, especially as it relates to the growth of digital information, has even caused a new ailment

called 'information fatigue syndrome' (IFS). In the Alexandria Proclamation of 2005, Information .

9.3. Types of information literacy

- I. Management information system Kenneth and Jane (2002) also says that, management information system designate a specific category of information system serving management level functions. MDS serve the management level of the organisation, providing managers with reports or with online access to the organisations current performance and historical records. Typically, they are oriented almost exclusively to internal, not environmental or external event. MDIS primarily serve the functions of planning, controlling and decision making of management level.
- II. Decision Support System Kenneth and Jane (2002) says, decision support system serve the management level of the organisation. It helps managers make decisions that are unique rapidly changing and not easily specified in advance. It address problems where the procedure for arriving at a solution may not be fully predefined in advance and are built explicitly with a variety of model to analyse data. It condenses large amounts of data into a form where it can be analysed by decision makers.
- III. Business Information System According to Stair and Reynolds (2003) the most common types of information system used in business organisations are transaction management information system, decision supporting system. These systems help employees in organisation to accomplish both routine and special task like recording, processing and supporting decision in various department.
- IV. Transaction Processing System Kenneth and Jane (2002) said that, transaction processing is the basic system that serves the operation level of organisation. This system is a computerised system that performs and records the daily routine transaction necessary to conduct the business transaction processing system are often so central to a business that TRS failure 1or a few hours can spell firms demise and perhaps other firms linked to it. Management needs TPS to monitor the internal operation and the firm's relation with the external environment TPS are also major producers of information for the other types of system.
- V. Enterprise Resource Planning Stair Reynolds (2003) additionally suggests that resource planning (ERP) system in an integrated programmed that is capable of managing company's vital business operation for an entire multisite global organisation. It can take a large number of separate systems developed over a number of years by the organisation to replace them with one unified set of program. The system is very easy to use and it is effective.

9.3.1. The impact of information literacy

According to Gordon and Steven (2000) for information to be useful, it must not only be of good quality, but must also be available at the right place. And normally, it is needed at the right place almost immediately. These requirements have given rise to the whole world of data communications. Turban, King, Marshal, Mckay (2004) say, the major

impact of information system is to provide organisation with strategic advantage by facilitating problem solving, increasing productivity and quality, increase speed, and improving customer service, Communication and collaboration and enabling business process restructuring.

9.4. IMPORTANCE OF INFORMATION LITERACY

The importance of information system is a group or interrelated components working towards the attainment of common goal by accepting inputting inputs and producing output in organised transformation process. The information system may demand a development of selected group which consist of manager and executive, who can bring experts in technological advancement of their work. The challenges and opportunities presented are the implementation system.

9.4.1. Public Service Management

Public service management is the latest flag-bearer of the traditional public administration. Woodrow lissom is considered the founder of the discipline of public administration. In his 1887 seminal essay, 'The study of public administration, Vinson proclaimed that politics and administration belong to different spheres. Following his argumentation, it has been prescribed that 'the task of public bureaucracies is purely instrumental as it is concerned with the efficient implementation of policies and programmes, Public bureaucracies were - to provide services to all citizens by strictly following rules and guidelines Public service managers are assigned the responsibility to administer public policy, while the poiiti.iar, re performing policy-making roles. Over the years, various paradigms in public administration has periodically collapsed and resurfaced in a different form depending on the prevailing circumstances. Accordingly, public administrator assumed various forms, such as new public management, public sector management, new public governance, public service management. The biggest change occurred during the L970s when demands for services outstripped supply and resources. The 1980s witnessed the emergence of NPM with a wide-scale adoption of private sector in managing public affairs. Emphasis on budgetary control, result orientation and performance measurement based on performance indicators are the hallmark of the arose out of a concern with government failures, a belief in the efficacy and efficiency of markets, a belief in economic rationalit5 and a push away from large, centralized government agencies toward devolution and, privatization'. However, the significance of public values had been lost in the efforts to achieve service efficiency and effectiveness. Moreover, public spending remained the same despite privatization and services. Financial crisis, economic recession Managing change for better public service delivery and public frustrations in the developed economies at the outset of the current millennium. The concept of public goods has originated from a manufacturing context where public goods are considered a product to be consumed by consumers. In this construct, consumers have no role in creation of the product.

9.5 CURRICULUM DESIGNED MODULAR

The curriculum is designed to be modular, and to be implemented across the whole duration of the undergraduate career. One-shot sessions - particularly 'front-loaded' induction or orientation sessions at the start of the academic year - are inappropriate vehicles for the curriculum content, which needs to be broken down into progressive modules geared to specific successive tasks and building on previous learning. In this way a spiral structure of scaffolded support can be implemented, allowing learners to develop

an informed and reflective understanding of their subject and of their own learner identity in relation to it. As the student advances, the scaffolding is progressively withdrawn, facilitating the development of autonomous learning. The spiral progression is evinced in the strategy of referencing skills and behaviours acquired in previous classes in order to build on and develop them. This scaffolded, modular development requires implementers to determine the points of need appropriate for their institution and for individual cohorts, and to customise the curriculum according to those needs. This will allow implementers to devise sessions appropriate to the timing of development in each academic discipline - for instance, it may be appropriate to teach some research skills to history students in their first year, whereas these may not be required by chemistry students until much later in their degree.

9.5.1. The Information literacy Teaching

The curriculum is intended to depict the range of facets within the information literacy continuum, some of which will already form part of the teaching at most institutions, for instance in library or study skills sessions. We are not advocating that practitioners should abandon existing teaching or session designs; rather, we suggest auditing current practice against the thematic strands and learning outcomes outlined, and ‘cherry-picking’ aspects that complement or augment your existing teaching. Active or inquiry-based learning is a vital part of developing information literacy.

The curriculum design was guided by the principle of constructive alignment outlined by Biggs (1996), which is founded on the concept of understanding as a per formative phenomenon. This principle stipulates that activities and assessments must be keyed to the learning outcomes of the session. Therefore, while we have included sample activities and assessments, these are intended as illustrative examples only: session leaders should not feel bound to follow these to the letter, but should use their own creativity and experience to design active learning and assessment elements that align with the intended learning outcomes. As with the choice of session timing, content will be informed by the needs of particular student cohorts at various points in their undergraduate careers.

9.6. CURRICULAR APPROACH TO IMPROVE THE INFORMATION LITERACY

The old saying strike the iron while its hot truly speak on the need to inculcate the skills needed in seeking information through incorporation of information literacy tutorial in a grass root level and refining it on a later stage of life. As information literacy is a lifelong learning process and the World Summit on the Information Society (2003, para. 29) emphasized that ‘each person should have the opportunity to acquire the necessary skills and knowledge in order to understand, participate actively in, and benefit fully from, the information society and the knowledge economy’. Educator plays an important role in shaping the student information literacy skill by introducing information literacy skill in their class rooms. Some argues that information literacy is the job of a librarian, which is partly right but it is complete when the faculty takes time in imparting them in their classroom too as Raspa and Ward (2000) point out that “neither librarians nor instructional faculty can adequately teach the research process in isolation from each other”, there should be a collective effort. Students in Indian scenarios are too dependent on the teachers for their information that their

desire to seek information goes haywire. The problem is with the system in general were the students are spoon fed thereby making them dependent on the teachers. Introduction of Information literacy program from a school level will empower them and independent

in their search for information. In order to implement higher education information literacy among the students there is a need to dependent on the teachers for their information that their desire to seek information goes haywire. The problem is with the system in general were the students are spoon fed thereby making them dependent on the teachers. Introduction of Information literacy program from a school level will empower them and independent in their search for information.

9.6.1. Implementing the curriculum

The New Curriculum differs from existing information literacy frameworks and models in specifically including transitional and affective elements, as well as endeavouring to articulate the broad spectrum of skills, competencies, behaviours and attitudes that comprise the IL continuum and are the foundation of autonomous learning. As such, the curriculum is not intended to be a library-owned product. Simply in practical terms of teaching time it is likely to challenge library resourcing, but in addition it is crucial to the holistic nature of information literacy that it is perceived as permeating every aspect of information, and not viewed reductively as synonymous with bibliographic instruction. Implementing the curriculum is therefore likely to call on the resources of a number of colleagues including librarians, but also study skills advisors, learning developers, supervisors and lecturers, and careers and admissions staff. While curriculum content can be shared among practitioners in this way, it is crucial that students are in a position to view information literacy learning as a coherent whole. If curriculum elements are not joined up, opportunities for making reflective associations between the various aspects provided will be lost. For this reason, information literacy should wherever possible be embedded into the academic curriculum and taught either in conjunction with academic staff or even by them entirely, with guidance and support from colleagues.

9.7. SELF ASSESSMENT QUESTIONS

1. Describe the problems in implementing the information literacy.
2. What is the curriculum design modular ?
3. Give your suggestions for improving the curricular approach.
4. What is the public service management?

9.8. REFERENCES

1. Badke, Wiliam. 2010. "Why Information Literacy Is Invisible." Communications in Information Literacy, Vol. 4, No.2, pp.129-144.
2. Carr, J. A. 1998. Information literacy and teacher education. Washington, D.C.: ERIC Clearinghouse on Teaching and Teacher education. (ERIC Document Reproduction)
3. CHED / Departments / Centre for Information Literacy (CIL).Downloaded from www.ched.uct.ac.za/departments/cil/ on 12trh June 2011.
4. The big6 model 2011, Information & Technology Skills for Student Achievement. Downloaded from <http://www.big6.com/search/task+definition> on 21st August, 2011.
5. Sconul: Society for college, national and university libraries. Downloaded from <http://www.sconul.ac.uk/publications/newsletter/43/3.pdf> on 22nd July, 2011.
6. Kope, M. 2006. "Understanding e-literacy", in Martin, A. and Madigan, D. (Eds), Digital Literacies for Learning, Facet, London, pp. 68-79. 14

7. Kovalik, Cindy L. et al. (2010). Information literacy, Collaboration, and Teacher Education. *Communication in Information Literacy*. Vol. 4, No.2.
8. Martin, A. and Rader 2002. *Information and IT Literacy*. London: Facet Publications H. Ed. p. 27.
9. Quarton, Barbara. 2003. Research skills and the new undergraduate. *Journal of Instructional Psychology*. Vol.30, pp 120-124.
10. Raspa, D., & Ward, D. (Eds.). 2000. *The collaborative imperative: Librarians and faculty working together in the information universe*. Chicago: Association of College and Research Libraries.

LESSION 10

ASSESSMENT EVELUTION OF INFORMATION LITERACY PROGRAMMES

Structure

10.1. Introduction

10.2. The evolution of concept

10.2.1. Development and importance

10.3. Assessment Approaches and Purposes

10.4. Evaluation and Tools for Competency Programmes

10.5. Evaluation Tools into an Information Literacy Programme

10.6. Self-Assessment questions

10.7. References

10.1 INTRODUCTION

The technological advancements in the world , the way the information is produced and disseminated has resulted in an unprecedented growth and availability of different forms of information resources. Sharing of information through multiple media like textual, graphical and also audio affects the various aspects of life owing to the development of the web. Accessing relevant and comprehensive information is difficult because of the complexity in searching literature from various information resources especially from digital resources. New challenges surface for the library users in understanding, evaluating and retrieving information from various information resources. Information literacy leads to lifelong learning and is common requirement to all learning environments, to all disciplines and to all levels of education. It helps the learners to master content, become self-sufficient and take greater control over their self-learning. “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”. In this era of information overload, information literacy is considered as a valuable tool for students to become lifelong learners. Libraries in the higher educational institutions conduct Information Literacy Instruction program to add value to learning and teaching. ILI helps in developing literature search skills among the students in retrieving literature related to their topic of interest from various information resources. The library science professionals in academic libraries play an important role in creating the awareness on the availability of various electronic information resources for conducting literature search and training the users in carrying out effective literature search. Libraries offer ILI to its users in the form of lectures, workshops, conferences, online courses, webinars etc. Information literacy skills help the students to become independent in finding solutions to the problems that they encounter during their learning. This eventually assists the students to become creative, analytical and efficient as life-long learners. The increase in the number of electronic resources, the differences in features and functionality between them and complexity in searching the electronic information resources necessitate information literacy programs in academic libraries.

10.2. THE EVOLUTION OF CONCEPT

The development of the concept of information literacy, in this lesion Will be explore how information literacy has developed in higher education. This will also examine other

constituencies that embrace the concept and provide examples of the importance of information literacy in other countries. The evolution of the concept of information, has taken place both within the and outside of the so-called information explosion and its result repercussion through the world. Librarians have been especially sensitive to the so-called information explosion and its resultant repercussions. The concept of information literacy, which advocates the preparation of people to be successful user of information sources, and the overwhelming amount of information available . Those outside of the field of library science have also knowledge the effects of the exponential growth of information.

10.2.1. Development and importance

The seminal event in the development of the concept of information literacy was the establishment of the American Library Association (ALA) Presidential Committee on Information Literacy in 1987. The committee, established by the ALA president Margaret Chisholm, consisted of seven national leaders from the field of education and six from the field of librarianship. Their final report, released in January 1989, provided a definition of information literacy to which all could refer, and participated the dissemination of the concept of information literacy beyond the field of library science. The committee asserted that information literacy was a necessary skill for everyday life, for the business world, and for democracy; the realities of the Information Age will have enormous impact on our democratic way of life and on our ability. To reap such benefits, people as individuals and as a nation must be information literate. To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information. Producing such a citizenry will require that schools and colleges appreciate and integrate the concept of information literacy into their learning programmes and that they play a leadership role in equipping individuals and institutions to take advantage of the opportunities inherent within the information society.

10.3. ASSESSMENT APPROACHES AND PURPOSES

A necessary first step in planning an outcomes assessment program at the program level is aligning existing Performance standards and objectives with the institutional mission and program goals to create educational learning outcomes. One of the most comprehensive examinations of information literacy has been conducted by the Association of College and Research Libraries (ACRL, 2005), which has developed a set of standards that state that the information literate student.

- determines the nature and extent of the information needed.
- accesses needed information effectively and efficiently.
- evaluates information and its sources critically and incorporates selected information into his or her knowledgebase and value system.
- individually or as a member of a group, uses information effectively to accomplish a specific purpose.
- understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally. Each of the ACRL standards has associated performance indicators and measurable student learning outcomes to support assessment initiatives. The ACRL performance indicators have been aligned with information and technology standards for teacher candidates as prescribed by the National Council for the Accreditation of Teacher Education (NCATE) and the International Society for Technology in Education (ISTE) Educational Testing Service. Alignment of the ACRL

standards with the NCATE-relied upon ISTE standards was successfully used in conjunction with the ETS Information and Communications Technology (ICT) Literacy Assessment and the Information Literacy Assessment Scale for Education (ILAS-ED), a tool specifically designed to measure teacher candidates' information literacy skill levels. Opportunity exists to make use of the existing ACRL objectives framework with locally-developed information literacy assessment tools.

10.4. EVALUATION AND TOOLS FOR COMPETENCY PROGRAMMES

Evaluation as a process of improvement and betterment must be linked to quality. It must also have the necessary tools to measure the process of qualification. These tools need to be effective, objective, and useful for statistical processing purposes, enabling results to be effectively interpreted for decision-making processes. The problem arises when evaluation has to be transferred to an object like information literacy, which is generic and competency-based, and does not refer to a knowledge area. Further complication is caused by a number of other issues, such as not defining whether certification or accreditation is required for the attainment of competencies, and not clearly affiliating them to a department for curricular design (affiliated to the library, without any impact on the academic curriculum). As a consequence of the latter, there is no preparatory instruction or progression function in a student's degree curriculum, despite the imperative need for integrated cooperation between the subjects and educational goals of the organisation in which information literacy is offered.

10.5. EVALUATION TOOLS INTO AN INFORMATION LITERACY PROGRAMME

The scope and relevance of information literacy has become so clear for political, administrative and academic authorities that turning it into a subject for formal education (it has already been incorporated into the higher education curriculum and not only in the documentation discipline) is now a reality in Spain. In 2001, Johnston & Webber offered the following classification, which corresponds to information literacy as an academic discipline according to Becher & Trowler's model: a soft applied discipline, in that it is grounded in theories that come from other sciences, of which it is an auxiliary part; its aim is to prepare citizens for managing and taking action in society; its methods are qualitative. Without a shadow of a doubt, the scientific principles, laws, standards, object, objectives, field, methods, methodology and research lines and paths have now been defined for information literacy as an academic discipline. Research teams and projects, conferences and scientific publications are evidence of this unstoppable advance. Given this situation, it would seem useful to put forward an evaluation proposal for an information literacy programme. The context for this cooperation is one of the lines of research of the research team at the mentioned university, focusing on information literacy and the development of the Baratz Absys.edu platform. This is an attempt to incorporate the social networks of library 2.0 and the semantic tagging of educational web resources into educational digital libraries (CRAI-Learning and Research Resources Centre and CREA-Learning and Teaching Resources Centre), with their content management tools. The instructional context elements of the information literacy programme are: a blended educational approach (Moodle platform); an educational space, educational libraries (university, school and public libraries); a competency model, Tuning; information literacy standards, ANZIIL; target audience, e.g., teaching staff, librarian lecturers with information literacy responsibilities and students (formal and non-formal education); teaching duration, six weeks. The instructional design of the programme is neither projected as an e-learning course or a tutorial, nor as a web resource on an educational "site". The programme has been designed on the basis of arguments

associated with educational hyper document principles (interactivity, associativity, multi sequentially, vitality, dynamicity) and, essentially, in accordance with the properties, characteristics and elements of learning objects. The programme structure is divided into five training modules: module 1, basic competencies, for skills and abilities to search for and retrieve ideal resources for knowledge generation and, above all, for collaborative learning; module 2, digital reading, for abilities to use content management tools and to evaluate educational digital content; module 3, content assimilation, through the edition of concept maps and their application to web environments; module 4, knowledge generation, through the edition of knowledge and content using Web 2.0 tools; module 5, digital writing, which demonstrates know-how through the edition of learning objects. Given its paramount importance, the programme incorporates evaluation as a substantial component, both programme-related evaluation for the institution and educational and diagnostic evaluation for the students, applying indicators to the former and questionnaires to the latter. The programme incorporates a module 0, competency recognition, with a diagnostic questionnaire to identify information literacy competency deficiencies. The purpose of this is to ensure that the programme does not conclude with a qualification, as in academic areas referring to knowledge and thought, but with questionnaires about competency attainment, evidencing that excellence in information literacy has been reached on completing module 5. Finally, the programme incorporates an impacts and benefits indicator for the programme at the institution, for the purposes of programme improvement and implementation, and educational strategy decision making.

10.6. SELF-ASSESSMENT QUESTIONS

1. What is the importance of the elevation concept of Information literacy?
2. Development and Importance of Information Literacy
3. Assessment Approach and purpose of Information Literacy
4. Explain about the elevation tools of Information Literacy

10.7 REFERENCE

Centra, J. A., Gaubatz, N. B. 2005. "Student Perceptions of Learning and Instructional Effectiveness in College Courses". Available at: <https://www.ets.org/Media/Products/perceptions>.

Chandrakumar, V. (2009, February). Use and Usefulness of E-journals: A Case Study of Research Scholars. Paper presented at the 7th International CALIBER, Pondicherry University, Puducherry, pp. 468 - 478, Available at: [www.inflibnet.ac.in/caliber2009/Caliber PDF/59.pdf](http://www.inflibnet.ac.in/caliber2009/Caliber%20PDF/59.pdf)

Chinyere, E. U. 2014. Effects of Library Instruction on Satisfaction with the Use of Library and its Services: A study of Undergraduate Students in Five Universities in the Southern Part of Nigeria. *European Scientific Journal*, Vol.10, no.13: 1857–7881

Cobus, L. 2008. Integrating information literacy into the education of public health professionals: Roles for librarians and the library. *Journal of the Medical Library Association*, Vol. 96, no.1: 28-33

Eisenberg, M. B. 2008. Information Literacy: Essential Skills for the Information Age. *DESIDOC Journal of Library & Information Technology*, Vol. 28, no. 2: 39-47.

Emmett, A. and Emde, J. 2007. Assessing Information Literacy skills using the ACRL standards as a guide. *Reference Services Review*, Vol. 35, no. 2: 210–229. Available at: <https://kuscholarworks.ku.edu/handle/1808/1659>

Huston, C. L., Krist, P. and Burkhart, H. 2011. “Information Literacy Project”. Available at: http://www.sandiego.edu/wscuc/documents/effectiveness/attachments/Information_Literacy.pdf

Information Literacy Competency Standards for Higher Education. 2000. Association of College & Research Libraries. Available at: <http://www.ala.org/acrl/sites/ala.org.acrl/files/content/standards/standards.pdf>

Issa, A. O., Amsuan, B. B., Olarongbe, S. A., Igwe, K. N. and Oguntayo, S. A. 2015. An Assessment of the Information Literacy Competence of Undergraduate Students at the University of Ilorin, Kwara State, Nigeria. *Annals of Library and Information Studies*, Vol. 62, no.2: 68-76

Kaur, B. and Verma, R. 2008. Awareness of Electronic Journals and their Usage Among the Users: A Study of Punjab Engineering College, Chandigarh. *Indian Journal of Library and Information Science*, Vol. 2, no.3: 113-119

Lau, J. 2006. Guidelines on information literacy for lifelong learning. Available at: <http://www.ifla.org/files/assets/information-literacy/publications/ifla-guidelines-en.pdf>
Nataraj, K., Suresh, B., Sivaraman, P. and Sevukan, R. 2010. Use and user perception of electronic resources in Annamalai University: A Case Study. *Annals of library and information studies*, Vol. 57, no.1: 59-64.

Navalur, S.A., Balasubramani, R. and Kumar, P.A. 2012. Usage of E-resources by Faculty, Research Scholars and PG Students of Bharathidasan University: A Study. *Journal of Advances in Library and Information Science*, Vol. 1, no. 4: 165-172.

Okki, O. C. and Asiru, S.M. 2011. Use of Electronic Information Sources by Postgraduate Students in Nigeria: Influencing Factors. *Library Philosophy and Practice*. Available at: <http://digitalcommons.unl.edu/libphilprac/500>

Perrin, C., Hossain, D. and Cumming, K. 2008. Nursing Students' Information Literacy Skills Prior to and After Information Literacy Instruction. *Proceedings of the Life Long Learning Conference*. Available at: <https://core.ac.uk/download/files/333/11037601.pdf>

Ranasinghe, P., Wickramasinghe, S. A., Pieris, R. W. A., Karunathilake, I. and Constantine, G.R. 2012. Computer Literacy Among First Year Medical Students In a Developing Country: A Cross Sectional Study. *Biomed central*, Vol.5, no.504: 1-8.

Rimland, E. 2013. Assessing Affective Learning Using a Student Response System. *Portal: Libraries and the Academy*, Vol. 13, no. 4: 385 – 401. Available at: https://www.press.jhu.edu/journals/portal_libraries_and_the_academy/portal_pre_print/archive/articles/13.4rimland.pdf

Sasikala, C., and Dhanraju, V. 2011. Assessment of Information Literacy Skills among Science Students of Andhra University. *Library Philosophy and Practice*, 2011. Available at: <http://digitalcommons.unl.edu/libphilprac/626>

Smith, M. D. and Amy, B. D. 2013. Improving and Assessing Information Literacy Skills Through Faculty-Librarian Collaboration. *College & Undergraduate Libraries*, Vol. 20, no, 3/4: 314–326. Available at: <http://cupola.gettysburg.edu/cgi/viewcontent.cgi?article=1028&context=librarypubs>
Somaratna,

S. D. 2015. A Credit Based Information Literacy Module for Science Undergraduates: An Assessment. *Annals of Library and Information Studies*, Vol. 62, no. 1: 19-26.

Syamalamba, R. 2011. Information Literacy Programmes for Undergraduate Students. *International journal of digital library services*, Vol.1, no.1: 49-61.

Tiefel, V. 1995. Library User Education: Examining Its Past, Projecting Its Future. *Library trends*, Vol. 44, no. 2: 318-38.