

International Conference on Knowledge Networking in ICT Era
January 22-24, 2009
Chennai, India

Special Session on Information, Media and Digital Literacy

Organized by:

Society for the Advancement of Library and Information Science (SALIS)
B.S. Abdur Rahman Crescent Engineering College, Chennai
UNESCO

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Information Literacy - Basics, Standards, Models and Case Studies

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University of Colombo
Colombo 03, Sri Lanka

Information Literacy

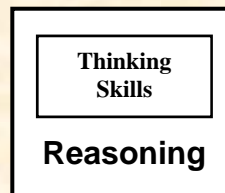
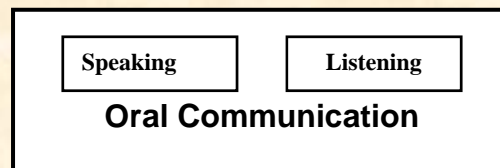
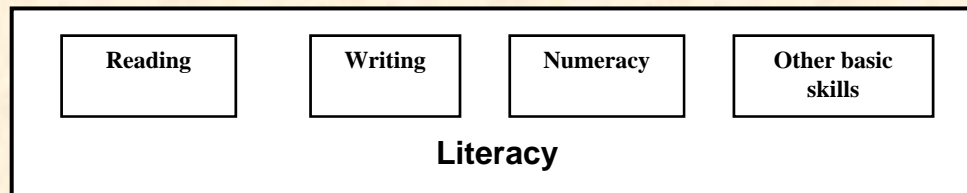
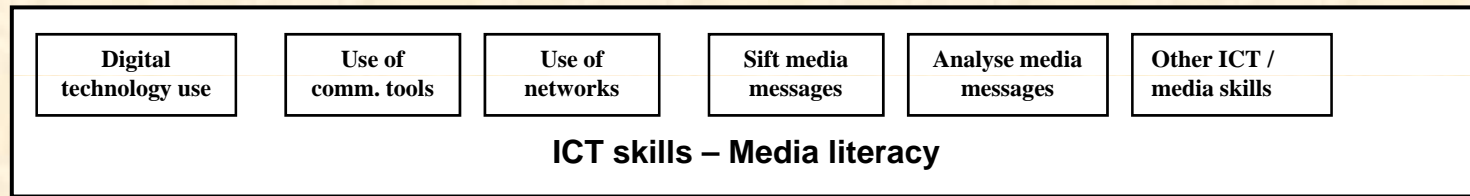
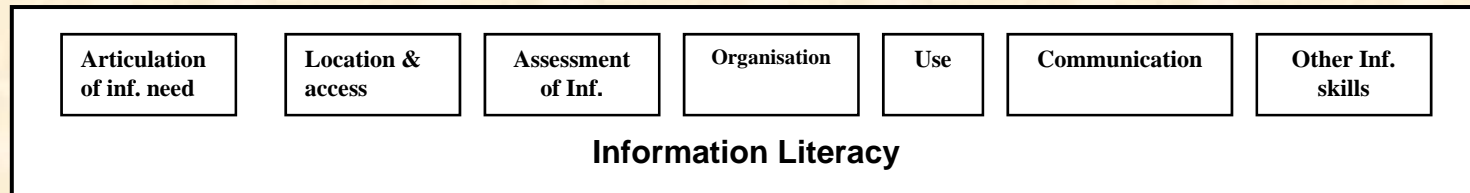
is the capacity of people to

- Recognise their information needs
- Locate and evaluate the quality of information
- Store and retrieve information
- Make effective and ethical use of information
- Apply information to create communicate knowledge (Catts and Lau 2008).

IL is not IT

- People can become information literate even without ICT literacy.
- But in the contemporary society ICT has penetrated everyday life to a great extent and it has become difficult to survive without ICT literacy.

IL depends on many other skills



Why we need IL

- Creation and dissemination of knowledge has increased.
- As a consequence, generation of new knowledge and technology has escalated
- Current skills possessed by the workforce depreciate much faster.
- The need to upgrade their skills in a speed equivalent to that of the advances in technology has become essential.

Why we need IL

Global economy demands a workforce with a wide variety of

- technical skills,
- interpersonal skills
- methodological skills.

Pillars of knowledge

- 1) Educated and skilled workforce who can adapt their skills to create and use knowledge efficiently
- 2) An effective innovative system of firms, universities, research centres and other organisations.
- 3) A modern and adequate information infrastructure and
- 4) An economic incentive and institutional regime (Chen and Dahlman 2005).

Why we need IL

The survival in the competitive global economy depend upon the extent to which new knowledge is created and used in its development processes.

If the intellectual capacity of the people is low, the potency for development will be low but if the intellectual capacity of the people is high the potency of development will be high.

Necessity of a new learning paradigm

- The traditional method of education, is not capable.
- Hence a new paradigm of education is necessary - lifelong learning
- The instrument for lifelong learning is information literacy,

IL in South Asia – Major International Events

1. In November 2004 an international workshop was held in Colombo in collaboration with IFLA/ALP.
2. A follow up workshop was held in Patiala, India in October 2005 again in collaboration with IFLA/ALP and UNESCO.
3. Training of Trainers workshop in Patiala in November 2008.

Essential components

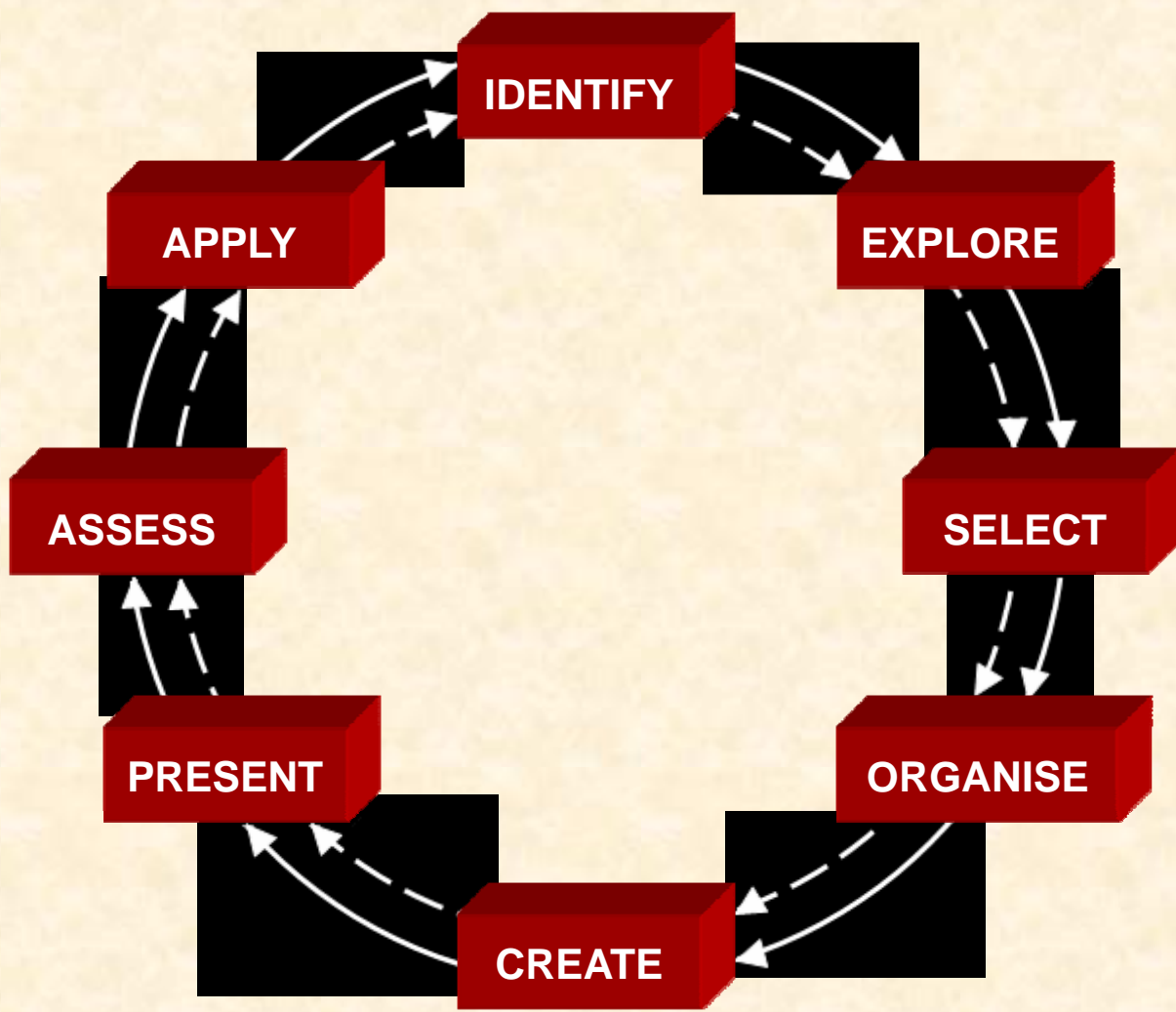
- Conducive national information literacy environment – Stakeholders collaboration
- A specific IL model
- National information literacy standards.
- Integration with key sector domains (Education, Health, Work, and Civil society)

IL models

- **8Ws (Lamb)**
- **Follett's Pathways to Knowledge (Pappas & Tepe)**
- **Big 6 (Eisenberg & Berkowitz)**
- **Information seeking (Kuhlthau)**
- **Information Process (New South Wales)**
- **Information skills (Irving)**
- **Research Process (Pitts/Stripling)**
- **Info Zone**
- **Research Cycle**
- **Empowering 8**

Empowering **8**

A problem-solving model



Case study based on E8

- IL is best understood and practiced when integrated with the curriculum activities.
- A training module was developed for the postgraduate diploma students integrating the eight components of Empowering 8™

INFORMATION LITERACY: INDICATORS & MODULES

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Information Society

- Information is a source of instant power for the information society
- It eliminates and improves quality of life and work
- Automobile in the Industrial Society, and ICT in the information society have made a profound impact upon the life and work of people

Ascent of Intangibles

- Knowledge and information (Intangibles) are critical for obtaining one's personal, professional, and educational goals.
- Information has become fluid, global and transcendental.
- Library is just one part in the information chain in the Internet era. There are many sites of information
- Hence, there is an urgent need for information literacy to empower the end-users.

Domains of Information, Knowledge and Wisdom

- Information facilitates decision-making
- Knowledge helps in problem-solving, and
- Wisdom warns us of the consequences of our decisions and actions
- Information facilitates wealth generation, security, control, and recreation
- Since information is a source of instant power, need for promoting Information Literacy across frontiers is a necessity and not a matter of discretion

Information Literacy

- Information Literacy (IL) is the ability to define one's information needs and then to access, evaluate, process and use retrieved information strategically.
- Unfortunately, the concept and practice of IL has not gained ground at grass root levels in the developing countries.

Information Literacy (contd.)

- Information Literacy includes:
- Traditional literacy
- Visual Literacy
- Media literacy
- Computer literacy, and
- Network literacy

Learning Outcomes of IL

- Information Literacy aims at developing stakeholders across frontiers into independent learners and critical thinkers.
- Among students, IL must facilitate a shift from rote-learning to resource-based student-centred learning to take the net generation to next level of consciousness

IL Indicators

- Ability to access information efficiently and effectively
- Ability to evaluate information critically and competently
- Ability to use information accurately and creatively

Independent Learning Indicators

- Ability to pursue information related to personal interests
- Ability to appreciate literature and other creative expressions of information
- Ability to strive for excellence in information seeking and knowledge generation

Social responsibility indicators

- Ability to contribute positively and recognize the importance of information to a democratic society
- Ability to practice ethical behaviour with regard to information and information technology
- Ability to participate effectively in groups to pursue and generate information

IL Implementation Options

- IL as a stand-alone course
- IL integrated into an existing course, or
- IL component added to a discipline specific course

Module Design

- Objectives
- Methods of instruction
- Structure and level
- Course contents, ans
- Evaluation

Objectives

- To acquaint the stakeholders with the IL philosophy
- To acquaint the stakeholders with the IL components
- To develop IL competencies, and to educate and train students in the use of various information sources and formats

Instruction Methods

- Lectures
- Demonstrations
- Case Studies
- Hands-on experience, and
- Problem-solving

Lifelong Learning

- IL must facilitate knowledge management and lifelong learning
 - For this one must look beyond the web and the degrees
 - Lifelong learning must include:
 - Learning to know
 - Learning to do
 - Learning to be, and
 - Learning to live together
- Learning: The Treasure Within UNESCO Report)

Empowering-8 Model

- There are many models of Information Literacy, but the Empowering-8 Model has been specifically developed for the Asia and the Pacific region. It includes the following 8 stages:
- Identify, Explore, Select, Organize, Create, Present, Assess, and Apply
- It includes 101 competencies and skills

Sense-Making

- The basic purpose of Information Literacy is to empower the stakeholders to make sense of the info-bulimia in the public domain on the web
- End-users are facing a diametrically opposite situation with growing information deluge on the one hand, and assimilation deficit on the other
- IL is the only way out to make sense of chaos on the web and around

Hallmark of Information Literacy

To enable the end-users to convert information into knowledge, and knowledge into information, and then to use both information and knowledge strategically to lead change and contribute critically in the development of emerging knowledge economies.

In fact, IL is the essence of information society to control the moments of truth.

Thank you

For your kind attention

Digital Literacy

Dr. Harish Chandra

Librarian

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Concept

Digital literacy is the ability to locate, organize, understand, evaluate, and create information using digital technology. It involves a working knowledge of current high-technology, and an understanding of how it can be used. Digitally literate people can communicate and work more efficiently, especially with those who possess the same knowledge and skills. Certifications are available to determine if a person is digitally literate.

Source:

http://en.wikipedia.org/wiki/Digital_literacy

Goal

Teach and assess basic computer concepts and skills so that people can use computer technology in everyday life to develop new social and economic opportunities for themselves, their families, and their communities

Role of Librarians

- Create digital interest
- Content Evaluation
- *Search Engines*
- *Evaluating a Web Site*
- Setting-Up Personal News Feeds

Central Library

Indian Institute of Technology Madras



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Welcome to the Central Library which is one of the central support services of IIT Madras. The Library homepage will provide electronic access to various full text and bibliographical databases. The Central Library has been awarded ISO 9001:2000 certification by RWTUV of Germany along with other five units of the Institute for the establishment and maintenance of quality library systems & procedures. The Central Library is well equipped with modern facilities and resources in the form of CD-ROM, On-line databases, microfiche, microfilms, audio video cassettes, books, journals, patents standards, theses, reports etc. Links from the home page will direct you to information on library policies, hours, collections, services, sections and the location of materials. The mission of the Central Library is to provide information services and access to bibliographic and full text digital and printed resources to support the scholarly and informational needs of Institute Community.

I hope you find this virtual access useful, and I also invite you to visit the library in order to enjoy the wealth of printed resources available on our shelves. Dr. Harish Chandra Librarian



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Report](#)



Prof. M.S.
Ananth,
Director, IIT
M,

Information Literacy,
Inaugurating
the Workshop
on 17.07.2007

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Best sites



Last Updated : January 20, 2009

Site Designed, Developed & Maintained by Dr Harish Chandra

Model Curricula

Course Topics

Computer Basics Course Topics

Lesson 1: Introduction to Computers Objectives

- 1.1. Describe the importance of computers in today's world.
- 1.2. Identify the main parts of a computer.
- 1.3 Identify the steps for starting and shutting down a computer.
- 1.4 Identify the different groups of keys on a keyboard.
- 1.5 Perform different tasks by using a mouse.

Lesson 2: Common Computer Terminology Objectives

- 2.1 Identify the primary hardware components of a computer.
- 2.2 Explain an operating system.
- 2.3 Explain programs and data.
- 2.4 Describe a network and the types of networks.
- 2.5 Explain the terms *Internet*, *World Wide Web*, and *intranet*.

Course Topics

Lesson 3: Introduction to Word Processors Objectives

- 3.1 Perform basic tasks in a word processor.
- 3.2 Edit and format text.
- 3.3 Work with tables and pictures.
- 3.4 Proofread a document.
- 3.5 Identify the benefits of desktop publishing.

Lesson 4: Introduction to Spreadsheet Programs Objectives

- 4.1 Identify the components of a spreadsheet.
- 4.2 Enter data into a spreadsheet.
- 4.3 Perform basic mathematical tasks in a spreadsheet.
- 4.4 Insert charts in a spreadsheet.
- 4.5 Print a spreadsheet.

Course Topics

Lesson 1: Introduction to Computer Security and Privacy Objectives

- 1.1 Explain computer security and privacy.
- 1.2 Identify natural threats to your computer.
- 1.3 Identify measures to protect your computer against natural threats.
- 1.4 Identify threats to your computer from human actions.
- 1.5 Identify measures to protect your computer against threats from human actions.

Lesson 2: Protecting Your Computer Objectives

- 2.1 Identify guidelines for protecting your computer.
- 2.2 Identify best practices for securing online and network transactions.
- 2.3 Identify measures for securing e-mail and instant messaging transactions.

Course Topics

Lesson 5: Computer Ethics Objectives

5.1 Explain intellectual property and copyright as they apply to computing.

5.2 Identify acts of copyright violation and the measures to prevent those acts.

5.3 Identify the legal concerns associated with information exchange.

Lesson 2: Introduction to Digital Audio Objectives

2.1 Identify the characteristics of digital audio.

2.2 Explain the concepts of recording, copying, and converting digital audio.

2.3 Identify the features of speech technologies.

Course Topics

Lesson 3: Computer Performance and Features Objectives

- 3.1 Compare the features of different types of computers.
- 3.2 Explain the role of memory.
- 3.3 Explain the basics of computer performance.
- 3.4 Describe the types of productivity programs and their uses.
- 3.5 Describe the types of communication programs and their uses.
- 3.6 Describe the uses of educational and entertainment programs.

Lesson 4: Computer Operating Systems Objectives

- 4.1 Explain the common functions of an operating system.
- 4.2 Identify the components of the Windows Vista interface.
- 4.3 Explain the options available in the Start menu of Windows Vista.
- 4.4 Work with the Windows Vista interface within programs.
- 4.5 Manage files and folders in Windows Explorer.
- 4.6 Perform basic file operations.

Course Topics

Lesson 1: The Internet Objectives

- 1.1 Describe the uses of the Internet.
- 1.2 Identify the requirements for an Internet connection.
- 1.3 Identify the features of two types of Internet connections.
- 1.4 Relate the term bandwidth to types of Internet connections.

Lesson 2: The World Wide Web Objectives

- 2.1 Describe the components of the Web.
- 2.2 Explain how Web addresses work.
- 2.3 Explore Web sites by using a browser.
- 2.4 Search for reliable information on the Web.
- 2.5 Explain how to perform transactions over the Web.

Course Topics

Lesson 3: Introduction to Digital Video Objectives

3.1 Identify the characteristics of digital video.

3.2 Explain what digital video editing is and the output formats for digital video.

3.3 Identify the features of Web video technologies.

Lesson 4: Introduction to Digital Photography Objectives

4.1 Explain the benefits, features, and workings of a digital camera.

4.2 Explain how to edit and manage digital images.

4.3 Identify the features of different types of printers that are available for printing photos.

Media Literacy

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Media Literacy - Definition

- Ability to access, analyze, evaluate and communicate messages in a wide variety of forms
 - Media literacy is generally defined as the ability to access the media, to understand and to critically evaluate different aspects of the media and media contents and to create communications in a variety of contexts.
 - Media Literacy is a 21st century approach to education. It provides a framework to access, analyze, evaluate and create messages in a variety of forms — from print to video to the Internet.
 - Media literacy builds an understanding of the role of media in society as well as essential skills of inquiry and self-expression necessary for citizens of a democracy.
-

Media Literacy – Basic Concepts

- Media construct our culture
- Media messages affect our thoughts and actions.
- Media effects are subtle and complex
- Media use “the language of persuasion”.
- Media construct fantasy worlds.
- Media are most powerful when they operate on an emotional level.
- Media literate youth and adults are active consumers of media
- Our media system reflects the power dynamics in our society.
- Most media are controlled by commercial interests.

UNESCO's Mission in Media Literacy

- Empowerment of people through information and media literacy
- Fostering equitable access to information and knowledge, and building inclusive knowledge societies.
- Information and media literacy enables people to interpret and make informed judgments as users of information and media
- People will become skillful creators and producers of information and media messages in their own right.
- Encouraging information and media literate societies by development of national information and media literacy policies, including in education.
- Training teachers to sensitize on the importance of information and media literacy in the education process
- Enable them to integrate information and media literacy into their teaching and provide them with appropriate pedagogical methods and curricula.
- The strategy is the integration of libraries into the programs with ~~resources and services for free and open learning and play a~~ key role in people's life-long learning.

The Cognitive Model of Media Literacy

- The media literacy model emphasizes four major factors.
 - At the foundation is the factor of knowledge structures.
 - The combination of knowledge structures feed information into the second factor, which is the personal locus, where decisions about information processing are motivated.
 - The third factor is a person's set of competencies and skills, which are the information-processing tools
 - The fourth factor is the flow of information-processing tasks. The four factors work together interactively in a system
-

Media Literacy Indicators

- As a result of the current lack of conceptual and methodological focus, no reference systems have been developed for evaluating degrees of media literacy development. This creates marked difficulties for policies in the area.
- There is not enough evidence, grounded on qualitative studies, about the real learning outcomes of media literacy initiatives.
- Promote systematic research in order to formulate indicators.
- Encourage the use of indicators in an experimental pilot phase.
- Propose the extension and general use of these indicators for the development of action policies.
- Application of the indicators for project evaluations, in order to accumulate comparable data for the development of new policies.

Information Literacy Education for Higher Education Institutions in India

Ms. V. Sakthi Rekha

Librarian

Madras School of Social Work

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Why Information Literacy

- To cope up with Information Explosion
- To identify authentic and reliable Information
- To manage information technology
- To maximise the utilisation of resources
- To be an information literate
- To become life long learners and so on.

...Why Information Literacy

Information Literacy empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their

- personal,
- social,
- occupational and
- educational goals (portal.unesco.org)

Why Information Literacy for Higher Education

- Number of tasks like assignment, presentations, etc. apart from the regular examinations
- Doing Research
- Independent learning

...Why Information Literacy for Higher Education

- “Executives have become computer-literate... but not many executives are information literate”

Peter Drucker

Information Literacy and Higher Education

- 8.8 million students enrolled in 17,625 Colleges and 342 Universities
- Higher education students need to be competent not only in their studies but also in their professional and personal life
- Ministry of Higher Education, Government of India has to have some initiatives to make the institutions to offer Information Literacy Programmes

Information Literacy Competency

- A competency is an underlying characteristic of a person that leads to or causes effective or outstanding performance.

(Balckwell Ency. of Management)

- Acquiring information literacy or being information literate is Information Literacy Competency

Information Literate

An information literate person is the one who is able to

- recognise a need for information
- determine the extent of information needed
- access the needed information efficiently
- evaluate the information and its sources
- incorporate selected information into their knowledge base
- use information effectively to accomplish a purpose

... Information Literate

- understand economic, legal, social and cultural issues in the use of information
- access and use information ethically and legally
- classify, store, manipulate and redraft information collected or generated
- recognise information literacy as a prerequisite for lifelong learning

(Council of Australian University Librarians, 2001)

Role of Library and Information Science (LIS) Professionals towards Information Literacy

- Equipping LIS professionals themselves
- Impress upon the authorities to understand the need for information literacy and enlist their support for the programme
- Communication and teaching skill
- Collaborate with faculty and administrative staff to make the teaching-learning process more effective.

Challenges for Information Literacy Education

- **Mind set** – It is difficult to change the mind set of the people (Authorities, Faculty members, students and the LIS professionals themselves) to accept new things.
- **No Collaboration** – Even though the librarians are made on par with the faculty members in terms of educational qualification, academic outcomes (research, publication, etc) and so on it is difficult to make the faculty members to collaborate well with library professionals

...Challenges for Information Literacy Education

- **Domain of teaching** – Faculty members may feel that teaching is their exclusive area and hence not allowing others to enter into
- **Lack of knowledge** – about information literacy among people (including LIS professionals) does not allow to initiate any Information Literacy Programmes

Information Literacy - Dimensions

➤ NEED

➤ LOCATE

➤ EVALUATE

➤ USE

...Information Literacy - Dimensions

➤ **NEED** –

How a student recognizes his/ her need for information?

How to identify the need?

How to define the need?

... Information Literacy - Dimensions

➤ LOCATE

- Identifying various sources of information
- Knowing various forms of information
- Understanding the related concepts
- Formulating search strategies
- Possessing library skills

... Information Literacy - Dimensions

➤ **EVALUATE**

Check for

- Authenticity,
- Accuracy
- Up-to-date

... Information Literacy - Dimensions

➤ **USE**

- Use the information to solve the problem/
purpose.
- Using the information includes reporting in
an appropriate medium by abiding the
legal and ethical issues

... Information Literacy – Dimensions

➤ **Task**

- A student was asked to conduct a small research study on “Analysing the websites of all the State Governments of India”.

...Information Literacy Dimensions Task

- Need –
 - i) Criteria to analyse a website
 - ii) details given in various state government websites
- Locate – Information on
 - i) website evaluation
 - ii) Information available in various websites

...Information Literacy Dimensions Task

- Evaluate – Check for
 - i) Whether main and enough criteria have been collected
 - ii) Check for any bias
- Use – Making an analysis is the usage of information here
 - Reporting the analysis in a best medium by considering copyright and other issues

**“Education is the most
powerful weapon you can
use to change the world”
- Nelson Mandela**

**Let us rethink that Education
includes Information Literacy
Education too**



United Nations
Educational, Scientific and
Cultural Organization

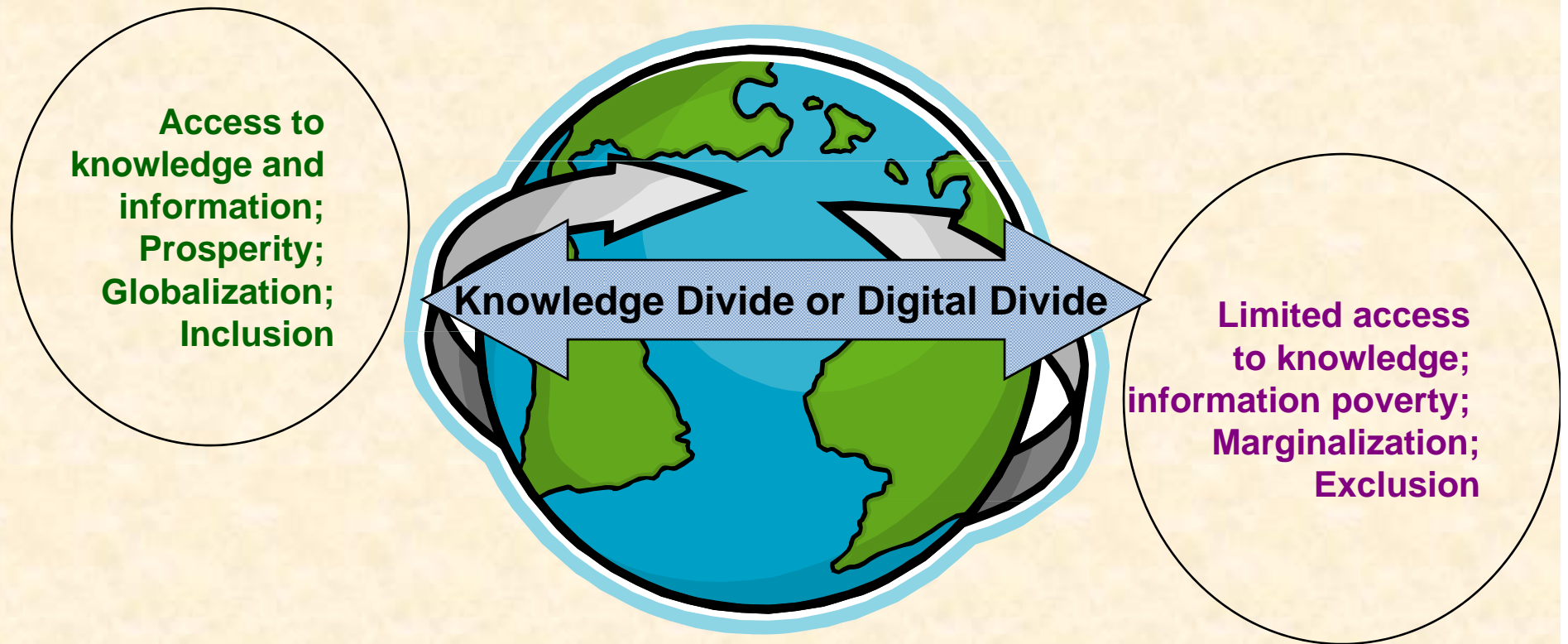
Information Literacy for All

Anup Kumar Das

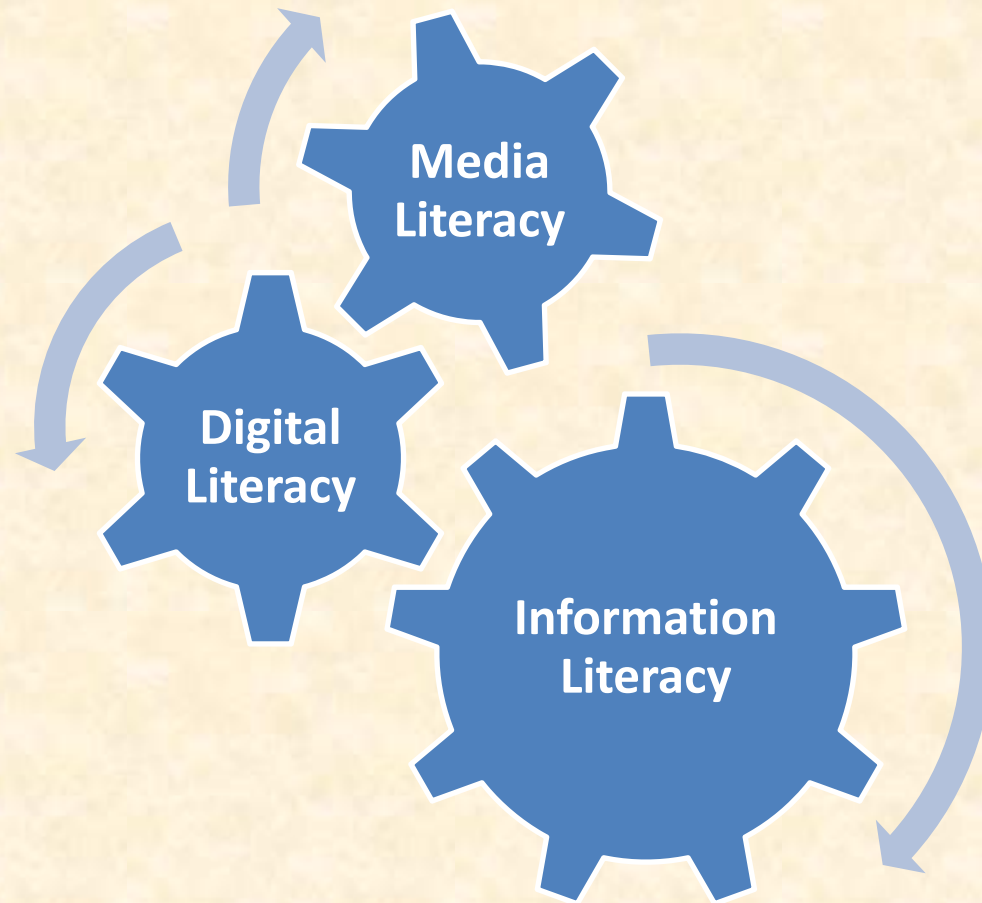
New Delhi

<http://anupkumardas.blogspot.com>

A World of Contrasts



Driving Forces of Informed Citizens Living in Knowledge Societies



Why Information Literacy and Lifelong Learning

Amartya Sen, 2001

- *A person who cannot read instructions, understand the demand of accuracy, and follow the demands of specifications is at a great disadvantage in getting a job in today's globalizing world. ...*
- *Widespread participation in a global economy would have been hard to accomplish if people could not read or write, or produce according to specifications or instructions ...*

Information Literacy and UNESCO

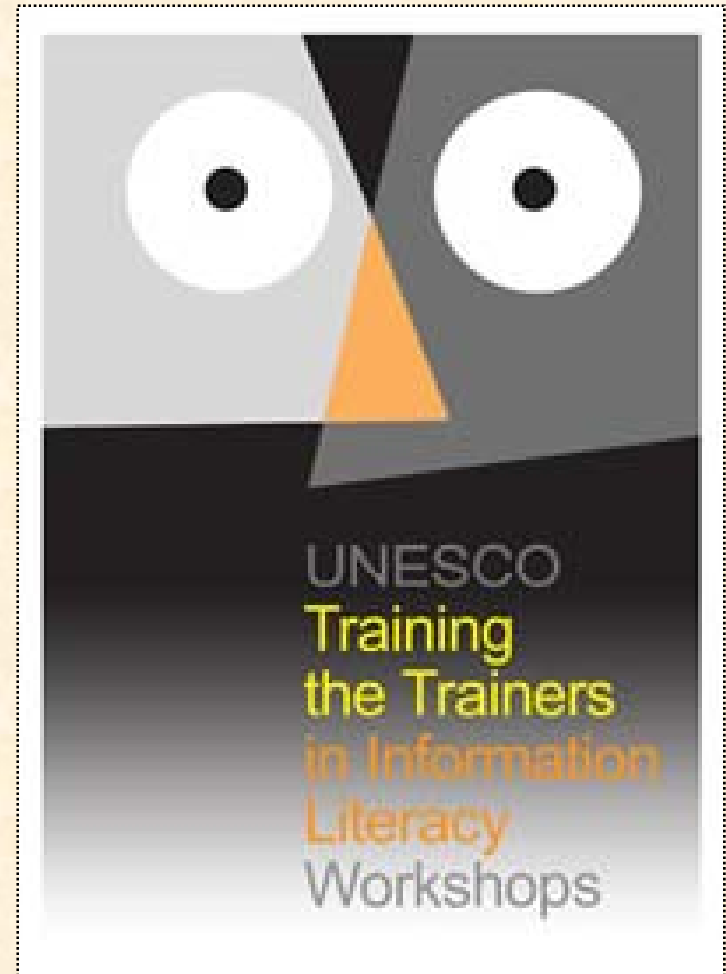
- WSIS declared “common desire to build a people-centred, inclusive and development oriented Information Society, where everyone can create, access, utilize and share information and knowledge ...”
- The basic premise of UNESCO’s vision is that *Knowledge is the driving force for social and economic transformation*”
- UN Literacy Decade, 2003-2012

Information Literacy and UNESCO

- The Alexandria Proclamation of 2005 describes information literacy and lifelong learning as the:
 - "beacons of the Information Society, illuminating the courses to development, prosperity and freedom.
 - Information literacy empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals.
 - It is a basic human right in a digital world and promotes social inclusion in all nations."

Recent UNESCO Initiatives

- Training-the-Trainers in Information Literacy Workshops
 - A series of 11 workshops covering all regions of the world funded by IFAP
 - Jamaica
 - Canada
 - Malaysia
 - Estonia
 - Turkey
 - South Africa
 - China
 - Spain
 - Egypt
 - **India**
 - Peru



UNESCO Online Resources for Information and Digital Literacy

- Empowering Information Professionals: A Training Programme on Information and Communication Technology [www2.unescobkk.org/elib/publications/ICTEIP/unesco.swf]
- ICT for Library and Information Professionals : A Training Package for Developing Countries [www2.unescobkk.org/elib/publications/ictlip/]
- UNESCO-SALIS e-Learning Portal for Awareness Raising on Information Literacy [www.salisonline.org]
- Information Literacy Resource Directory [www.infolitglobal.info/]
- UNESCO's ICT Competency Standards for Teachers: Towards ICT Skills for Teachers [<http://cst.unesco-ci.org/sites/projects/cst/default.aspx>]

Empowering Information Professionals: A Training Programme on Information and Communication Technology (2007)

Modules Available:

1. Introduction to Information and Communication Technologies
2. Introduction to Library Automation
3. Information Seeking in an Electronic Environment
4. Creation and Management of Databases using CDS/ISIS
5. The Internet as an Information Resource
6. Web Page Concept and Design: Getting a Web Page Up and Running
7. Library Management and Promotion
8. Digital Libraries and Open Access
9. Intellectual Property Rights in the Digital Age

Resources:

Student's Text, Teacher's Guide & Presentations

ICT for Library and Information Professionals : A Training Package for Developing Countries (2002)

Modules Available:

1. Introduction to Information and Communication Technologies
2. Introduction to Integrated Library Systems
3. Information Seeking in an Electronic Environment
4. Database Design, and Information Storage and Retrieval
5. The Internet as an Information Resource
6. Web Page Concept and Design: Getting a Web Page Up and Running

Resources:

Activities, Reference, Glossary, Presentations, Students' Guide



UNESCO's ICT Competency Standards for Teachers Towards ICT Skills for Teachers

Sign In

- Documents**
- The Standards (EN)
- The Standards (FR)
- The Standards (AR)
- The Standards (RU)
- The Standards (SP)
- The Standards (CH)
- Pictures**
- Lists**
- Partners
- Project Development
- Discussions**
- ICT-CST Discussion
- Reviewer's Comments
- Surveys**

This collaboration space is designed to host the UNESCO project on "ICT Competency Standards for Teachers" (ICT-CST). The core objective here is to share the various documents constituting the "standards", in many languages, and to exchange views regarding the evolving ICT competencies' benchmarks.

The "implementation guidelines" (Syllabus) part of the standards will evolve in response to technology evolutions and we hope to use the feedback received from this site to produce the future updates for the "syllabus".

The Standards (EN)

Name	File Size
ICT-CST-Policy Framework	500 KB
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Project Development

Why did UNESCO develop the "Standards"? 1/7/2008 1:50 AM

by Tarek Shawki

Optimal integration of emerging ICTs in learning requires numerous changes in the classical education infrastructure. A core factor relates to teachers' abilities to utilize such technologies effectively.

UNESCO's global efforts in the past few...

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UNESCO's ICT Competency Standards for Teachers: Towards ICT Skills for Teachers

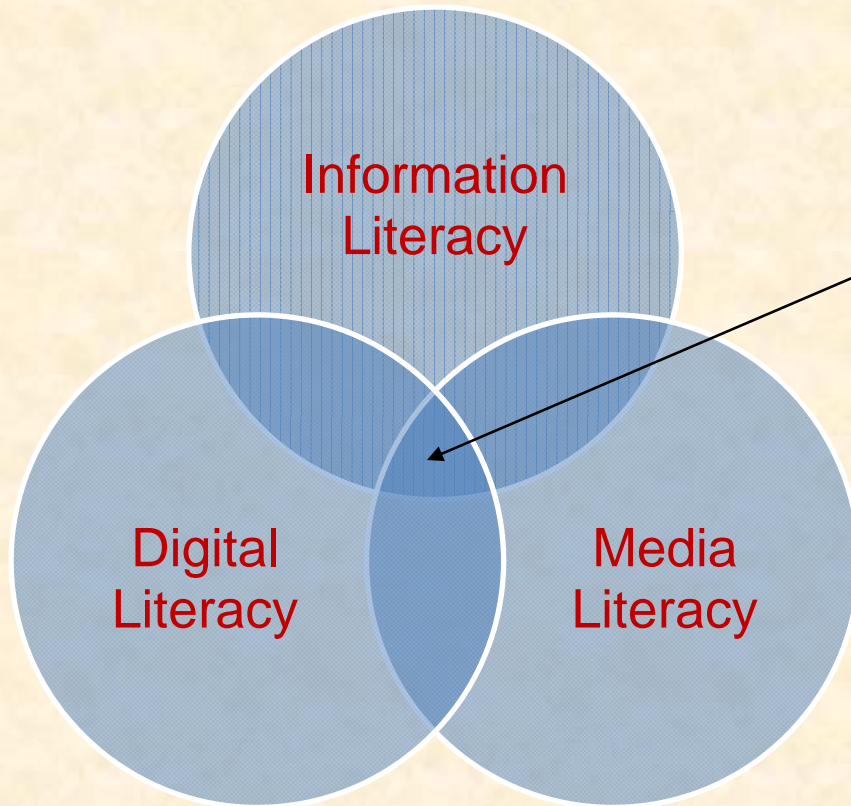
- <http://cst.unesco-ci.org/sites/projects/cst/default.aspx>
- Can be re-used & extended to other professional training

UNESCO Publications and Reports

- Understanding Information Literacy: a Primer. Paris: UNESCO, 2008.
- Towards Information Literacy Indicators: Conceptual Framework Paper. Paris: UNESCO, 2008.
- Principles of Awareness-Raising for Information Literacy: a Case Study. Bangkok: UNESCO, 2006.
- Teacher Training Curricula for Media and information Literacy: Background Strategy Paper. Paris: UNESCO, 2008.
- Development of Information Literacy through School Libraries in South-East Asian Countries. Bangkok: UNESCO, 2006.
- Information Literacy Competency and Readership Study of Five Specific Localities in Urban, Industrial and Semi-Urban Areas of Kolkata Metropolitan City. New Delhi: UNESCO, 2008.

Recommendation

Integration of Information, Media and Digital Literacy with Different Curricula



Producing responsive citizens for knowledge societies by introducing IL, ML and DL to

- Teachers’ training**
- Vocational training**
- Life skills training**
- Media schools**
- Information schools**
- Business schools**
- Research institutions**

Challenges Ahead

- Information literacy curricula development/ adaptation for undergraduate and postgraduate degree programmes
 - National/ Sub-regional Consultations
- Strategy and action plans for implementation of information literacy activities in different kinds of institutions targeting all kinds of end users
- Action Plans involving National Units of the Asia Pacific Information Networks (APIN) and IFAP National Committees

Thank You

Anupdas2072[at]hotmail.com



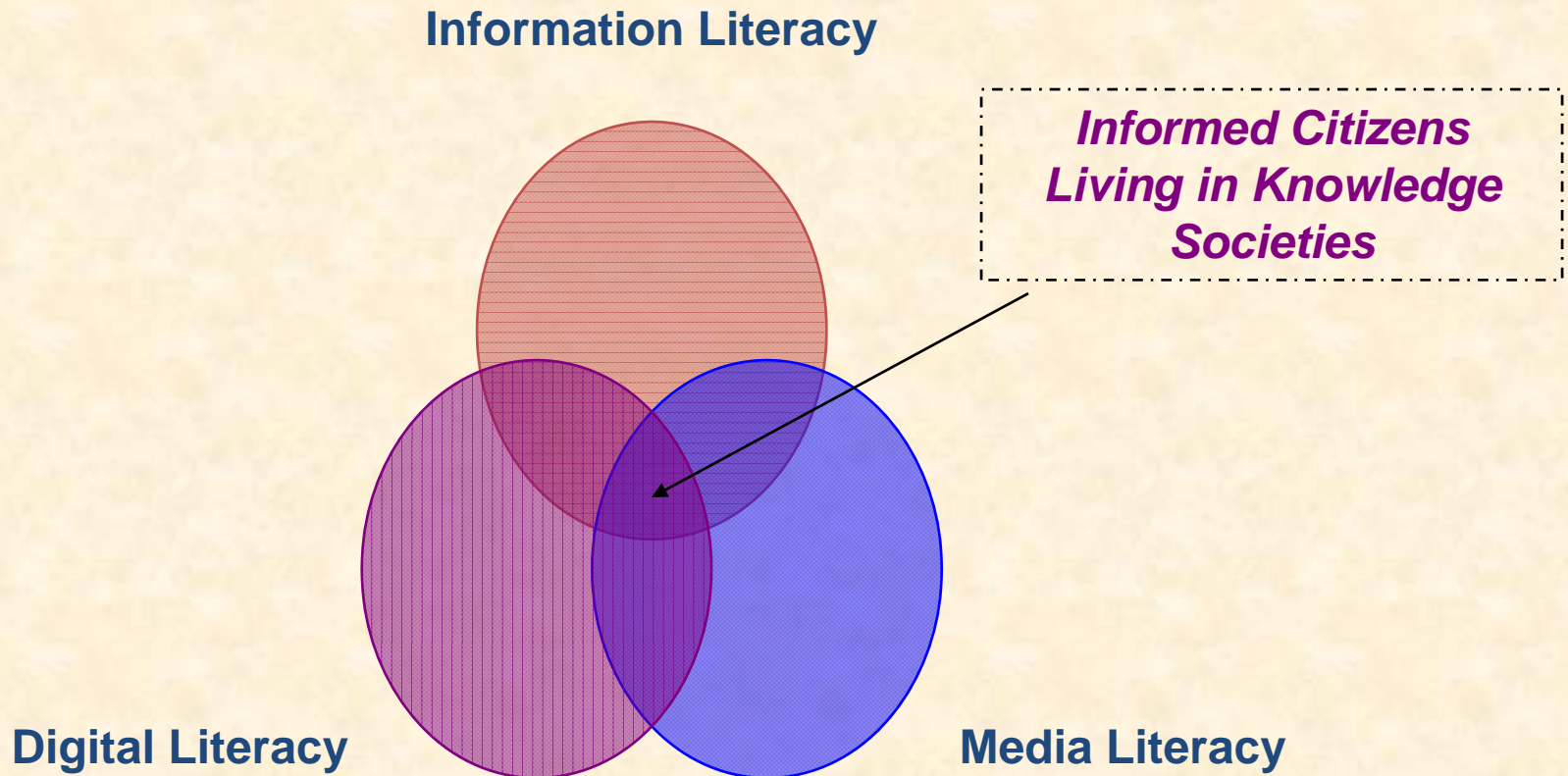
United Nations
Educational, Scientific and
Cultural Organization

Media and Digital Literacy: UNESCO Perspectives

Communication and Information Sector
UNESCO

www.unesco.org/newdelhi
www.unesco.org/webworld

Situating Information, Media and Literacy in Knowledge Societies



Six Reasons for Teaching Media Literacy

1. We live in a mediated environment.
2. Media Literacy emphasizes critical thinking.
3. Being Media Literate is part of being an educated citizen.
4. Media Literacy promotes active participation in a media-saturated environment.
5. Media Education helps us to understand communication technologies.
6. In advanced countries, Media Literacy has been integrated into all subject areas from K-12.

20 Important Ways to View Studying the Media

1. Like history, the media interpret the past to show us what has gone into making us the way we are.
2. Like geography, the media define our place in the world for us.
3. Like civics, the media help us to understand the workings of our world and our individual places in it.
4. Like literature, the media are our major sources of stories and entertainment.
5. Like literature, the media require us to learn and use critical thinking skills.
6. Like business, the media are major industries that are inextricably involved in commerce.
7. Like language, the media help to define how we communicate with each other.
8. Like science and technology, the media always adopt the leading edge of modern technological innovation.
9. Like family studies, the media determine much of the cultural fabric of our lives.
10. Like environmental studies, the media are as large a part of our everyday environment as are trees, mountains, rivers, cities and oceans. Contd....

Contd....

20 Important Ways to View Studying the Media

11. Like philosophy, the media interpret our world, and its values and ideas to us.
12. Like psychology, the media help us to understand (or misunderstand) ourselves and others.
13. Like science, the media explain to us how things work.
14. Like industrial arts, the media are carefully planned, designed and constructed products.
15. Like the arts, the media allow us to experience all the arts as no other age has ever been able to.
16. Like politics, the media continually bring us political and ideological messages.
17. Like rhetoric, the media use special codes, conventions and languages that we need to understand.
18. Like drama, the media present life as larger-than-life -- and compel us to think of ourselves as an audience.
19. Like Everest, the media are just there.
20. And finally, just as we watch the media, the media go to great lengths to study us!

As Suggested by Chris Worsnop

Media Literacy and UNESCO

- UNESCO's action to provide critical knowledge and analytical tools, empowering media consumers to function as autonomous and rational citizens, and enabling them to critically make use of the media.
- The proliferation of mass media has brought about decisive changes in human communication processes and behaviour.
- Media education aims to empower citizens by providing them with the competencies, attitudes and skills necessary to comprehend media functions.
- Media education can be contextualized within two UNESCO advocacies - the human rights based approach to programming and the creation of Knowledge Societies.

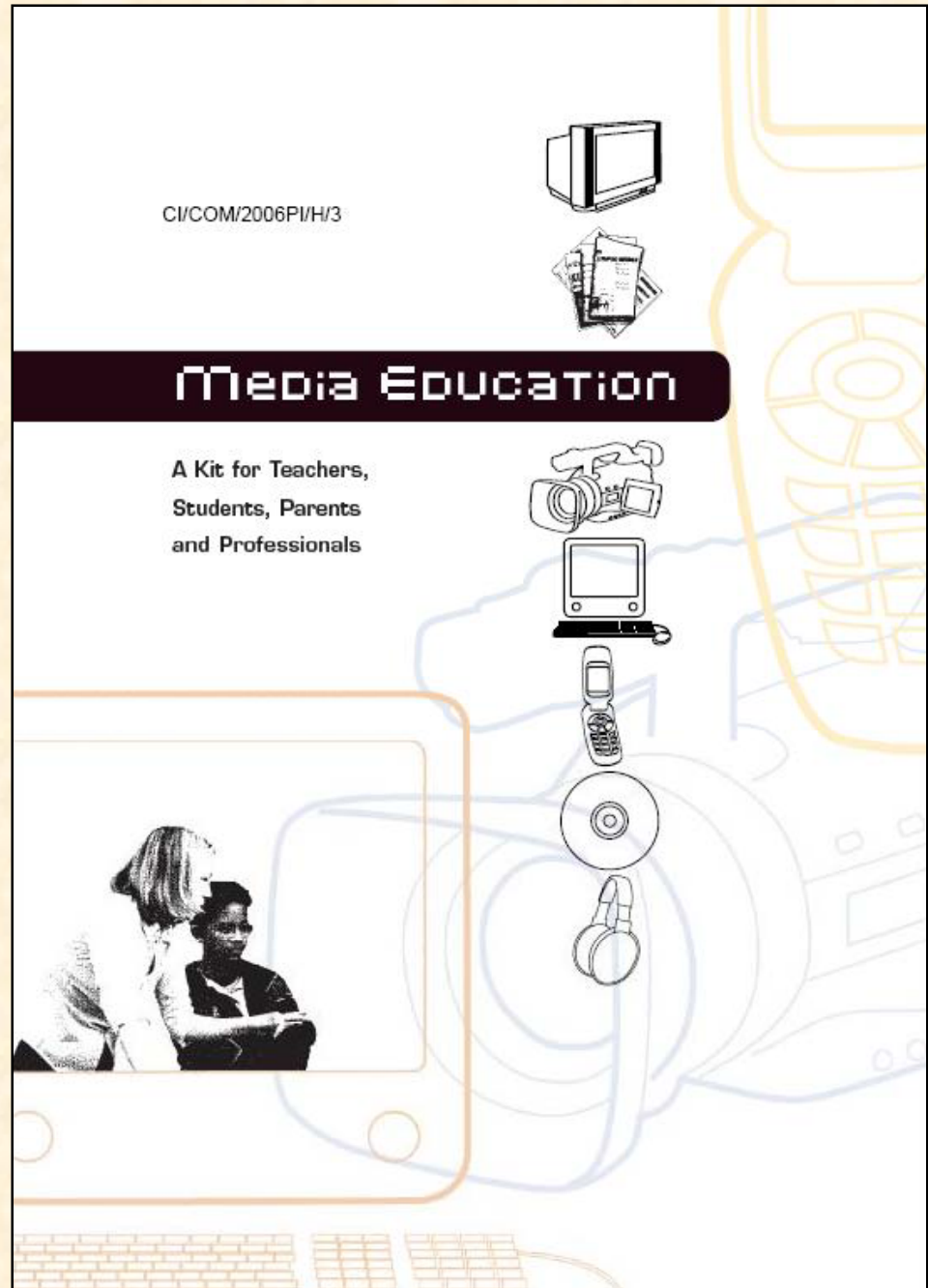
Media Literacy and UNESCO

- Access to quality media content and participation in programming are principles that are among the cornerstones of the universal right to free expression.
- UNESCO has a long standing experience in enhancing media literacy, founding the Grünwald Declaration of 1982 which recognised the need for political and educational systems to promote citizens' critical understanding of "the phenomena of communication.
- The Organisation has since supported a number of initiatives to introduce media and information literacy as an integral part of people's life-long learning
- Most recently in June 2008, UNESCO brings together experts from various regions of the world to catalyze processes to introduce media and information literacy components into teacher training curricula worldwide.

UNESCO Tools, Publications and Portals

- **Media Education: a Kit for Teachers, Students, Parents and Professionals. Paris: UNESCO, 2006.**

- provides a broad set of guidelines and insights on how to introduce media education as a subject.
- includes five handbooks for four audience groups: teachers, students, parents and media professionals.
- media education advocates and enthusiasts find this training kit of particular relevance.



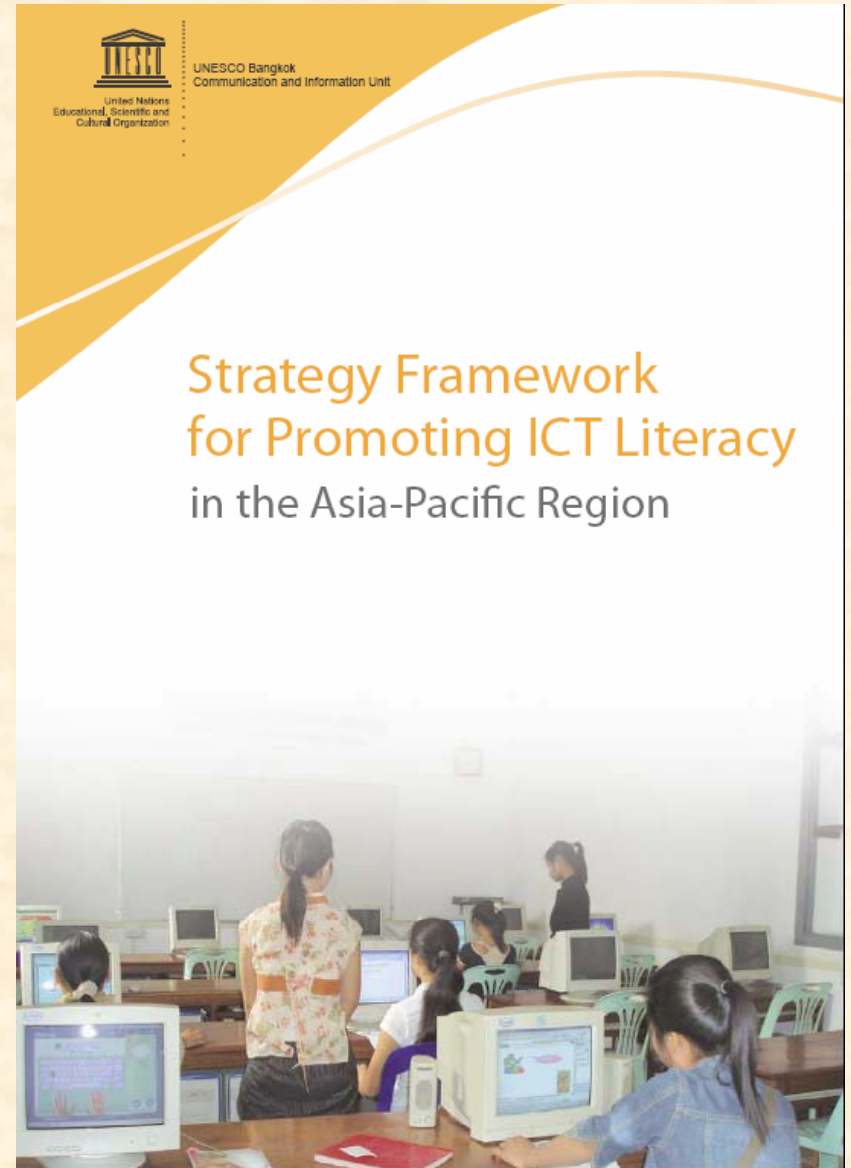
- **Teacher Training Curricula for Media and information Literacy: Background Strategy Paper. Paris: UNESCO, 2008.**



**Teacher Training Curricula
for Media and information
Literacy**



- **Strategy Framework for Promoting ICT Literacy in the Asia-Pacific Region. Bangkok: UNESCO, 2008.**



- **Media Matter - Citizens Care: The who, what, when, where, why, how, and buts of Citizens' Engagement with the Media (Advocacy Brochure on Citizens and the Media). Paris: UNESCO, 2005.**

ADVOCACY BROCHURE ON CITIZENS AND THE MEDIA

**MEDIA MATTER
CITIZENS CARE**

The who, what, when, where, why, how,
and buts
of citizens' engagement with the media

By Ammu Joseph

International Clearinghouse on Children, Youth and Media

- An International Knowledge Centre promoted by UNESCO and maintained by University of Gothenburg, Sweden.
- Aims: To increase awareness and knowledge about children, youth and media, thereby providing a basis for relevant policy-making, contributing to a constructive public debate, and enhancing children's and young people's media literacy and media competence.
- The Clearinghouse informs various groups of users about
 - research on children, young people and media
 - research and practices regarding media education, media literacy and children's/young people's participation in the media
 - measures, activities and research concerning children's and young people's media environment.

[Sommaire en français](#)
[Resumen en español](#)

<http://www.nordicom.gu.se/clearinghouse.php>

An International Knowledge Centre

The Clearinghouse collects and documents research and other information on children, youth and media across the world. By means such as yearbooks, newsletters, joint projects and databases, the Clearinghouse aims at broadening and contextualizing this knowledge, thereby increasing awareness and media literacy. A global network is fundamental to the work of the Clearinghouse, which is carried out in co-operation with UNESCO.

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- measures, activities and research concerning children's and young people's media environment.



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New Publications



"News on Children, Youth and Media in the World"
Issue No. 2, 2008
[Click here >>>](#)

UNESCO's ICT Competency Standards for Teachers: *Towards ICT Skills for Teachers*

- A collaboration space is designed to host the UNESCO project on "ICT Competency Standards for Teachers" (ICT-CST).
- UNESCO maintains *ICT-CST site* <http://cst.unesco-ci.org/sites/projects/cst/default.aspx>
- The core objective of this site is to share the various documents constituting the "standards", in many languages, and to exchange views regarding the evolving ICT competencies' benchmarks.

Contd...

UNESCO's ICT Competency Standards for Teachers: *Towards ICT Skills for Teachers*

- The "implementation guidelines" (Syllabus) part of the standards will evolve in response to technology evolutions.
- Use of the feedback received from ICT-CST site to produce the future updates for the "syllabus".
- Developed Standards:
 - ICT-CST-Policy Framework
 - ICT-CST-Competency Standards Modules
 - ICT-CST-Implementation Guidelines



UNESCO's ICT Competency Standards for Teachers Towards ICT Skills for Teachers

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Quick Launch

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- [The Standards \(EN\)](#)
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Discussions

- [ICT-CST Discussion](#)
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Surveys

This collaboration space is designed to host the UNESCO project on "ICT Competency Standards for Teachers" (ICT-CST). The core objective here is to share the various documents constituting the "standards", in many languages, and to exchange views regarding the evolving ICT competencies' benchmarks.

The "implementation guidelines" (Syllabus) part of the standards will evolve in response to technology evolutions and we hope to use the feedback received from this site to produce the future updates for the "syllabus".

The Standards (EN)

Name	File Size
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Links

- [UNESCO CI Web Site](#)
- [ICT-CST Description](#)
- [More on the Standards](#)
- [InFocus: ICTs and Education](#)
- [Global Alliance for ICT and Development](#)

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<http://cst.unesco-ci.org/sites/projects/cst/default.aspx>

Conclusion

- Participatory content creation to enhance voices of marginalized and local communities
- User-generated contents in web 2.0 environment to ensure community participation
- Child safety online – promoting online privacy and security for any individual including children and young adults
- Promoting Openness - freedom of information, freedom of expression, open access to public-held information, open access to public-funded research results and open standards

Necessity of Information Literacy in Higher Education in India

Dr. Purnima Kaushik and Shesh Mishra

Abstract : *The knowledge economy is based primarily on the production and strategic use of information and knowledge. The ability to produce and use information effectively is thus a vital source of skills for citizens of the world. As India is moving towards information and knowledge-based society, it must be necessary for university students, research scholars and faculty members to possess competencies and information literacy skills to accomplish their research goals. Information literacy(IL) is becoming an increasingly important component of the higher educational curriculum, with many disciplines incorporating elements of information literacy training within their traditional teaching. This article will highlight on necessity and importance of information literacy in higher education.*

Key Words: *Information Literacy; Higher Education, Critical Thinking, Life Long Learning, Information Skills*

INTRODUCTION

We are living in the information age. The increasingly complex world in which we live in contains an abundance of information choices – print, electronic, image, spatial, sound, visual, and numeric. The issue is no longer one, of not having enough information. It is just the opposite to too much of information, in various formats and not all of equal value. In a time of more than 17 million internet sites, three billion web pages, and more than a million items in typical medium-sized academic library, the ability to act confidently (and not to be paralyzed by information over loaded) is critical to academic success and personal self-directed learning (1). Today information is very important in every aspect of life. Information plays a very important role in the development of any country. A Country can develop socially, economically, educationally and agriculturally only when the country is giving importance to research. There is no possibility of development, of any country without research. Library and information centers play a very important role in research in any discipline, of educational institutions.

CONTEXT OF THE PROBLEM

In this information age, there is unprecedented demand for a great

diversification in higher education as well as an increased awareness of its vital importance for socio-cultural and economic development, and for building the future, for which the younger generations will need to be equipped with new skills, knowledge and ideas.

Without adequate higher education and research institutions providing a critical mass of skilled and educated people no country can ensure genuine endogenous and sustainable development. Main function of higher education is to advance, create and disseminate knowledge through research and provide as part of its service to the community, relevant expertise to assist societies in the cultural, social and economic development, promoting and developing scientific and technological research as well as research in the social sciences, the humanities and the creative arts. The advancement of knowledge through research is also a essential function of all systems of higher education, which will promote post graduate studies. Innovation, interdisciplinarity and transdisciplinarity should be promoted(2).

The central theme of higher educational institutions (HEIs) in many parts of the world is to develop life long learners with the intellectual abilities of reasoning and

critical thinking. Any training in skills provided towards this direction, not only leads to the use of the library systems effectively but also adds value to them.

Information skills, information literacy and other forms of user education training have become important strategic issues for universities and college libraries and information services. Discussions of skills in HEIs often conflate information and communication technology “ICT skills” and “information skills” . “Information skills” is a much broader phrase than “ICT skills” and is more directly related to the aims and process of higher education as a knowledge creation activity.

To create a more informed citizenry and society, and in particular a university and its library, must be in a position of enabling its people to use the information effectively.

India’s university education dates back to the nineteenth century with universities being established in Madras, Calcutta and Bombay. The importance of the library in a university has long been recognized by Indian leaders and scholars such as Nehru and Rangnathan(3). The Indian university system is one of the largest HEIs systems in the world with 320 HEIs, 16,885 colleges, 99.54 lakhs students and 4.75 lakhs teachers(4).

There is no doubt that we are presently in an information age; an era in which the more knowledgeable a person is, the more powerful he is likely to become. The advent of information technology is a great booster to this era(5).

The faculty members, research scholars and students should possess skills to get their required and relevant information in time and to know what information they need and how they can get it, and how they will use it effectively and efficiently. This set of special skills is called Information Literacy.

DEFINING INFORMATION LITERACY

Information literacy combines skills or competencies that together make for effective use of information. The professional body is responsible for the information profession, CILIP (Chartered Institute of Library and Information Professionals) sees a need to define the term in a way that is understandable by all information-using communities in the UK. In an era of lifelong learning, this effectively means that information literacy has relevance for all ages from primary school to senior citizens. The concept of “Information Literacy” was first introduced in 1974 by Paul Zurkowsky, President of Information Industry Association (6). Information literate people understand more than how to find information, they understand its limitations and the need to examine how they use information, and they understand how to manage and communicate information. Information literacy is an essential and discrete dexterity – everyone relies on information everyday. Perhaps one important point that can be drawn out, and which it is useful to emphasise here, is that Information Literacy is about information in all forms. Information may come from another person, from a paper-based magazine or book, report or newspaper, from a digital source such as a database, a search engine or a e-book accessed through a computer, or it may come from any other form of media: film, video, DVD, radio, television, etc. The definition and skills or competencies above cross all media. (7)

Perhaps the most recent alternative definition to the one offered here is that originating in the UNESCO-sponsored Meeting of Experts on Information Literacy in Prague:

"Information Literacy encompasses knowledge of one's information concerns

and needs, and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address issues or problems at hand; it is a prerequisite for participating effectively in the Information Society, and is part of the basic human right of life long learning(8)." The United States and Australia have used the same, in their earlier definitions:

"To be an information literate, a person must be able to recognise when information is needed and have the ability to locate, evaluate, and use effectively the needed information.(9)"

"Information literacy is an understanding and set of abilities enabling individuals to 'recognise when information is needed and have the capacity to locate, evaluate, and use effectively the needed information(10)".

While Sheila Webber, who was instrumental in developing this CILIP definition had also developed an earlier definition:

"... information literacy is the adoption of appropriate information behaviour to obtain, through whatever channel or medium, information well fitted to information needs, together with a critical awareness of the importance of wise and ethical use of information in society(11)."

Some common threads can immediately be seen in these (and our) definitions. In ours: "**Information literacy** is knowing when and why you need information, where to find it, and how to evaluate, use and communicate it in an ethical manner"(12)

We have tried to encapsulate the important elements simply, and in plain English, so that the definition can serve as a base-line interpretation of information literacy for all communities in the UK. The skills serve to explain in greater detail, what it means to be information literate. Society of College, National and University Libraries have used

a similar approach using seven "headline skills"(14).

It is a new liberal art that extends from how to use computers and access information to critical reflection on the nature of information itself, its technical infrastructure, and its social cultural and even philosophical context and impact(16).

It is the ability to identify, access, evaluate and make use of information in its various formats, and to choose the appropriate medium for communication effectively. It also encompasses knowledge and attitudes related to ethical and social issues surrounding information and information technology(17).

These definitions are examples of the way information literacy extends into the realms of critical thinking and ethical usage of information. These definitions also include the recognition that information may be presented in a number of formats, from simple to complex. Using information in a variety of formats requires literacies beyond the basic ones of reading and writing. Because information literacy may be presented in a number of formats, the term "information" applies to more than just the printed word. Other literacies such as visual, media, computer, digital, and basic are implicit in information literacy. To negotiate complex information formats, we must be skilled in other literacies: visual, media, computer, network, and of course, basic literacy.

Visual literacy, the ability to understand and use images, including the ability to think, learn and express oneself in terms of images. Media Literacy is the ability of a citizen to access, analyze, and produce information for specific outcomes. Computer literacy is ability to create and manipulate documents and data via word processing, spreadsheets, databases, and other software tools. Digital literacy considers the broad range of

resources that are accessible online and underscore the importance of looking at each of these resources with a critical eye. Network literacy is the ability to locate, access, and use information in networked environment(18).

AIMS OF INFORMATION LITERACY:

- ◆ The ability to apply the principles of scholarly communication to problems of information handling;
- ◆ The ability to locate, select and use appropriate information, retrieval tools in order to obtain useful information in connection with studies or work of the end users, and when required; and
- ◆ Confidence in using, and satisfaction in carrying out information searching

Some of the objectives of information literacy programmes for the learners are to

- develop a systematic method of searching for information related to areas of studies of the users;
- aware of wide range of sources (including open access sources) available for finding information and select the sources which will best meet users need;
- aware of appropriate indexing and abstracting services and databases and understand the principles of their use;
- develop database searching techniques for accessing both web-based and CD-ROM databases;
- use national and international academic networks for getting information;
- use local discussion forums, list serves, online chat services and blocks for obtaining and disseminating information;
- use local library network for obtaining documents through inter-library loan and document delivery services;
- compare and critically evaluate information obtained from various sources;

- cite bibliographic references in their academic projects, papers, articles, reports or theses; and
- construct a personal bibliographic system(19)

SPECIFIC ASPECTS OF INFORMATION LITERACY:

- Tool Literacy, or the ability to understand and use the practical and conceptual tools of current information technology relevant to education and the areas of work and professional life that the individual expects to inhabit.
- Resource literacy, or the ability to understand the form, format, location and access methods of information resources, especially daily expanding networked information resources.
- Social-structural literacy, or knowing that and how information is socially situated and produced.
- Research literacy, or the ability to understand and use the IT based tools relevant to work of today's researcher and scholar.
- Publishing literacy, or the ability to format and publish research and ideas electronically, in textual and multimedia forms (including via World Wide Web, electronic mail and distribution lists, and CD-ROMs).
- Emerging technology literacy, or the ability to adapt, to understand to evaluate and to make use of continually emerging innovations in information technology so as not to be prisoner of prior tools and resources and to make intelligent decisions about the adoption of new ones.
- Critical literacy, or the ability to evaluate critically the intellectual, human and social strengths and weakness, potentials and limits, benefits and cost of information technologies(20).

NEED OF INFORMATION LITERACY:

- According to Oberman (1991) students must be equipped with critical thinking skills to counteract the problem of information overload and to be able to take advantage of the numerous choices offered by the electronic environment.
- Moore (2002) states that the complexity of the current information environment requires skills that go beyond the ability to retrieve information from a limited range of sources. Here competences must include the ability to access information from complex information systems, to evaluate the content of the information in terms of authority and reliability and to apply the information found in a manner that fits the task.
- Grafstein (2002), reflecting on the content of information literacy programmes, makes an important distinction between generic information skills and subject specific competences of evaluating information. She identifies the skills required by the generic model as the formulation of one's information needs, the ability to break down the topic into keywords and the ability to combine these keywords into an effective search strategy. These competences are necessary to develop higher-level thinking skills and they therefore underpin research practices in any field.
- The recognition of rapid technological changes together with the proliferation of information sources that have initiated the shift from library instruction to information literacy are further documented by the ACRL Information Literacy Competency Standards for HE (ACRL, 2000).
- Lichtenstein (2000) stated that escalating complexity of the digital environment, individuals are faced with diverse, abundant information choices – in their academic studies, in the workplace, and in their personal lives... increasingly information comes to individuals in unfiltered formats, raising question

about its authenticity, validity, and reliability. In addition, information is available through multiple media, including graphical, aural, and textual, and these pose new challenges for individuals in evaluating and understanding it(21).

- Libraries as social institutions respond directly to the needs of their primary users, who are students in higher educational libraries. Librarians can help students conduct library research and evaluate what they find in a systematic manner. In other words, they assist them in becoming information literate. In recent years, many reports from different surveys all over the world reveal that most members of teaching faculty recognize the importance of information literacy education and the need to improve students' information literacy skills(22).

SOME INITIATIVES IN INDIA:

- Realizing, the importance of Information Literacy, the Central Library of IIT Madras is deeply engaged in Information Literacy activities through – bringing out various brochures, pamphlets, fact sheets, tutorials, conferences, invited talks, specialized presentations for the faculty, students, industries, library staff and librarians(23).
- The Department of Library and Information Science, University of Kerala is preparing to place before the syndicate a proposal for implementing an information literacy programme in colleges affiliated to the university. The program aims at bridging the awareness divide between colleges in the urban and rural areas and to enable students in the latter category of colleges access subject related information across a variety of formats(24).
- An international workshop was held at Punjabi University, Patiala, India with the support of Unesco and other partners to promote Information Literacy in

South and South East Asia. In this workshop they emphasized that, "Information Literacy should be introduced within national curricula at all levels including life long learning programmes(25).

- The Government of India's National Informatics Centre conducts programs in literature searching, but the reach across the country is still not adequate(26).

CONCLUSION

As We sum up the necessity of information literacy in India, for a sample as if the university offers a lot of courses with Hindi or English as medium, many students and teachers of the Department of Hindi, which runs P.G., M.Phil., and Ph.D. programmes, find it difficult to make their search for library material on OPAC. They routinely turn to manual catalogue in spite of the fact that they know the OPAC system. The main reason is that they don't know how to type in Hindi. So if they want to become independent and information literate, they have to learn Hindi Typing too.

So Information Literacy is an essential skill for the twenty-first century. University Libraries offer a range of opportunities for staff and students in India. They have all developed programs for information skills sessions based on their individual requirements. Popular sessions include: library orientation to graduates, undergraduates and new faculty members; tutorials, workshops and seminars; training/guidance to keep research up-to-date; reference management, and accessing electronic journals/databases. IL is still in its infancy in selected institutions, and has therefore not yet had a tremendous effect in utilization of resources. For the institutions to adopt an IL concept, they must tailor it to meet their specific needs and suit their local environments.

Information Literacy Education is, thus, has an undeniable importance for everyone in higher educational institutions in India.

REFERENCES:

1. http://www.media.wiley.com/product_data/excerpt/78/07879652/0787965278.pdf
2. http://www.unesco.org/education/educprog/wche/declaration_eng.htm
3. <http://www.emeraldinsight.com/Insight/viewPDF.jsp?Filename=html/Output/Published/EmeraldFullTextArticle/Pdf/2800380402.pdf>
4. <http://www.education.nic.in/higedu.asp> (accessed at 14.02.08)
5. <http://www.emeraldinsight.com/Insight/viewPDF.jsp?Filename=html/Output/Published/EmeraldFullTextArticle/Pdf/2630240510.pdf>
6. <http://www.educause.edu/pub/er/review/reviewarticles/31231.html> (accessed at 14.02.2008)
7. <http://www.cilip.org.uk/professionalguidance/ethics/> (accessed at 18.02.08)
8. <http://www.cilip.org.uk/professionalguidance/informationliteracy/definition/introduction.htm>
9. <http://www.ala.org/ala/acrl/acrlpubs/whitepapers/progressreport.htm>
10. <http://www.cilip.org.uk/professionalguidance/informationliteracy/definition/introduction.htm>
11. <http://www.cilip.org.uk/professionalguidance/informationliteracy/definition/introduction.htm>
12. <http://www.cilip.org.uk/professionalguidance/informationliteracy/definition/introduction.htm>
13. American Library Association (ALA). (1998). Information literacy standards for students learning. In Indicators of schools quality [Online] Available at <http://www.ala.org/aasl/news/indicators1.html>
14. http://www.sconul.ac.uk/activities/inf_lit/papers/Seven_pillars.html
15. State University of New York(SUNY). (1997, October 2). Information Literacy

- Initiatives. [Online]. Available at: <http://www.sunyconnect.suny.edu/ili/Default.htm>
16. Shapiro, J. J. & Hughes, S. K. (1996, March/April). Information literacy as a liberal art. *Educom Review* [Online]. Available at: <http://www.educause.edu/pub/er/review/reviewarticles/31231.html>.
 17. California Academic and Research Libraries Task Force. (1997, September 29). Recommended texts for consideration related to information Literacy [Online]. Available at : <http://carl-acrl.org/Archives/DocumentsArchives/Reports/rectoWASC.html>
 18. Eisenberg, Michael B., Lowe, Carrie A and Spitzer, Kathleen (2004) *Information Literacy: Essential Skills for the Information Age: Libraries Unlimited*, p 3 – 11.
 19. Ghosh, S.B. and Das, Anup Kumar Published in the proceedings of the International Conference on Information Literacy (ICIL 2006), June 14 – 15, 2006; Kuala Lumpur, Malaysia. Hosted by Faculty of Information Management, Universiti Teknologi MARA with the Librarians Associations of Malaysia.
 20. http://en.wikipedia.org/wiki/Information_literacy
 21. Andretta, Susie (2005) *Information literacy: A practitioner's guide: Chandos Publishing*, p 9 – 10.
 22. <http://www.emeraldinsight.com/Insight/ViewContentServlet?Filename=Published/EmeraldFullTextArticle/Articles/0721061104.html> (accessed at 18.07.08)
 23. <http://www.cenlib.iitm.ac.in/docs/library/index.php?page=infolit> (accessed at 10.08.08)
 24. <http://www.hindu.com/2006/10/04/stories/2006100409900400.htm> (accessed at 10.08.08)
 25. http://portal.unesco.org/ci/en/ev.php-URL_ID=20083&URL_DO=DO_PRINTPAGE&URL_SECTION=201.html (accessed at 10.08.08)
 26. http://openmed.nic.in/55/01/vs_9icml_ebm-india.pdf (accessed at 10.08.08)

Information Literacy Education for Higher Educational Institutions in India

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Keywords

Information Literacy, Higher Education, Competency, Dimensions of Information Literacy

Abstract

Information Literacy is a growing concept in library and information science. Many libraries especially academic libraries in developed countries like USA, UK, Australia, and New Zealand are offering Information Literacy Education to their students as a regular programme. Many libraries are also offering as a need-based programme. In the Indian context, as regards of 'Information Literacy' there is a long way to go. It is still in the nascent stages. An individual to be information literate is pertinent on many accounts. For instance, in the age of information explosion, it is very difficult for anyone to tap the right information at the right time until the individual is information literate. This paper aims to discuss the dimensions of Information Literacy Education for higher educational institutions in India It also attempts to throw light on how it could be made a regular programme of all the libraries in higher educational institution in India.

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Introduction

The essence of the term 'information literacy' is brought out or felt due to information explosion. Gone are the days when the problem was lack of information. Today in the age of information, information explosion is the problem and hence the information professionals are expected to guide the users for using the right information at the right time. Therefore it is the responsibility of the library and the educational institution on the whole to frame the Information Literacy Education based on the nature of their institution and the level of the

students. Number of schools, colleges and universities are offering information literacy programmes as a regular programme at various levels in the developed countries like USA, UK, Australia, and New Zealand. Indian educational institutions too have to start building the programme for making the students as information literates and life-long learners.

Information Literacy and Higher Education

Library orientation is the preliminary step to introduce the library, its various resources and services to the users. Information literacy is much more advanced to locate, evaluate and use the information. The term Information Literacy was first introduced by Paul Zurkowski in 1974 (Spitzer, K.L, 1998) and is being used in the field of library and information science since then. In Indian literature, the term appears only in the recent years but related concepts, services are present in research and practice during 1990s (Ramesh Babu. B, 2006). In simple terms, Information Literacy is a competency to seek and evaluate right sources of information and use it. As per Association of Colleges and Research Libraries (ACRL), Information Literacy is ‘to recognize when information is needed and have the ability to locate, evaluate and use effectively the information need’ (Association of College and Research Libraries, 2000). So information literacy is not only finding right information, it is also about evaluating and using the information effectively. Therefore to use the information effectively and have the optimum utilization of resources, information literacy and its programmes become essential. Moreover, higher education students need to be competent not only in their studies but also in their professional and personal life, hence being information literate is inevitable. Peter Drucker, well-known management guru stated that “executives have become computer-literate... but not many executives are information literate” Eisenberg, Michael.B. (2008). As on March, 2005, there were 342 Universities and 17,625 colleges available in India (Sakthi Regha, V. & Gunavathy, J.S, 2007). Ministry of Higher Education, Government of India has to have some initiative to make these institutions to offer Information Literacy Programmes similar to the Sarva Shiksha Abhiyan programme of the Government of India that seeks to achieve education for all (Mani, M.N.G, 2006).

Information Literacy and Library Professionals

Librarian or Information Librarian in a library requires good teaching and communication skill to teach information literacy to the students. He / she also needs to collaborate with library and other academic staff to integrate the information literacy into the regular curriculum to make the teaching-learning process more effective. Thanks to the Government

policy of having an established library and qualified library professionals in all the higher educational institutions, the information literacy educators are already available to start the job. What needs to be done is to put them on the job, impress upon the authorities of colleges and universities to understand the need for information literacy and enlist their support for the programme.

Information Literacy Competence

Information Literacy empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals. Information literate people are able to access information about their health, their environment, their education and work, empowering them to make critical decisions about their lives (portal.unesco.org). Competence is the ability to perform a specific task, action or function successfully (Wikipedia). Therefore acquiring information literacy or being information literate is Information Literacy Competency. According to the Information Literacy Standard of Australia (Council of Australian University Librarians, 2001), an information literate person is the one who is able to

- recognise a need for information
- determine the extent of information needed
- access the needed information efficiently
- evaluate the information and its sources
- incorporate selected information into their knowledge base
- use information effectively to accomplish a purpose
- understand economic, legal, social and cultural issues in the use of information
- access and use information ethically and legally
- classify, store, manipulate and redraft information collected or generated
- recognise information literacy as a prerequisite for lifelong learning

Dimensions of Information Literacy

ACRL has given a set of standards which also includes certain Performance Indicators and outcomes (Association of College and Research Libraries, 2000). However to frame the dimensions of Information Literacy in a simple way, the concepts used in ACRL definition alone has been used and discussed here. These dimensions can facilitate the Indian educational institutions developing the Information Literacy Programme/ education.

Dimension 1: NEED

Dimension 2: LOCATE

Dimension 3: EVALUATE

Dimension 4: USE

NEED

How a student recognize his/ her need for information? When a task, say an assignment or a presentation or a research study is given to a student, he/ she recognizes that he/she is in need of particular information. The student is also to identify what is needed and also define the need. Here defining the need is to see the area, scope and applicability of information.

LOCATE

After identifying the information need, the student has to locate that information. Locating particular information entails the following:

- Identifying the sources of information – student has to be aware of various sources of information like primary and secondary sources and the ways to locate them
- Knowing the various forms of information – information is available in various formats like print, online, CD-ROMs and so on
- Understanding the related concepts of information – to search for particular information, always one has to be aware of the related concepts to explore more relevant results
- Formulating search strategies by using various search techniques like Boolean operators (AND, OR, NOT) and so on
- Possessing library skills. Library skill is a skill which helps to locate a resource in the library by using a system of classification of resources

EVALUATE

In the period of information explosion, information is available in abundance. Hence the students have to be educated to evaluate the collected information. The collected information can be evaluated based on

- Authenticity – it should be found out whether the collected information is authentic or not. It can be checked by author, publisher or the institution from whom the information came in.
- Accuracy – it can be checked to avoid certain bias and prejudice
- Up-to-date – it has to be ensured that the collected information is the current

USE

After going through various dimensions of Information Literacy like Need, Locate, Evaluate, the collected information has to be used to satisfy the purpose for which the information was looked for. Using the information also includes reporting of the information in an appropriate way or medium and by abiding by legal and ethical considerations.

Example

To highlight the interplay of these four dimensions the following example is presented.

Task: A student was asked to conduct a small research study on “Analysing the websites of all the State Governments in India”.

- The student has to define his/her research problem first and to recognize that he/she needs information on website analysis. Here the information **need** of a student is – i) to recognize various criteria to analyse a website ii) present details available in the websites.
- To locate the information regarding criteria to analyse a website, the student has to search his/ her library and / or Internet for materials about Website Evaluation. To **locate** the details available in various state governments’ website, all the State Governments’ website have to be accessed.
- After collecting the information for the above needs, the collected information has to be **evaluated** whether all the criteria have been taken into account to analyse the website and all the websites have been gone through based on the criteria mentioned.
- To complete the process of analyzing the websites of all state governments in India, collected information has to be **used** in the context i.e, all the websites have to be analysed and reported based on the analysis made. While reporting the analytical

study, ethical and legal issues like giving credit to the cited work, not violated the copyright, etc have to be taken into consideration.

Conclusion

To overcome the issue of Information Overload, every student has to be taught to search, access, evaluate and use the information effectively by taking into the consideration of the ethical and legal issues. This whole process is possible through Information Literacy. Hence Information Literacy Education is very pertinent in each and every educational institution especially in the higher education side. When the students become information literates, they will not only gain academic achievement but also become successful in whatever field they enter into, apart from their personal life. This can be substantiated with the popular sayings 'Information is Power' and 'Information is Wealth'. "Education is the most powerful weapon you can use to change the world" – Nelson Mandela (http://www.thinkexist.com/english/Author/x/Author_3763_1.htm). It is not an exaggeration to say that this quote of Nelson Mandela, is more realistic when the term 'Education' includes 'Information Literacy Education' too.

References

Association of College and Research Libraries (ACRL). (2000). *Information Literacy Competency Standards for higher Education*.

<http://www.ala.org/ala/mgrps/divs/acrl/standards/standards.pdf> Retrieved November 22, 2008

Council of Australian University Librarians. (2001). *Information Literacy Standard*.

<http://www.caul.edu.au/caul-doc/InfoLitStandards2001.doc> Retrieved November 22, 2008

Eisenberg, Michael. B. (2008). *Information Literacy: Essential Skills for the Information Age*. DESIDOC Journal of Library & Information Technology, Vol.28, No.2, March 2008.

Mani, M.N.G. (2006). *Proceedings of UNESCO supported workshop on Information Literacy Competency Development for Library and Information Science Professionals and Special Educators*. Chennai

<http://portal.unesco.org> Retrieved November 24, 2008

Ramesh Babu. B. (2006). *Proceedings of UNESCO supported workshop on Information Literacy Competency Development for Library and Information Science Professionals and Special Educators*. Chennai

Sakthi Regha, V. & Gunavathy, J.S, (2007). *Academic Excellence Through Knowledge Management*. University of Madras: Chennai

Spitzer, K.L. (1998), Eisenberg, M.B. and Lowe, C.A. *Information Literacy: Essential Skills for the Information Age*. Eric Clearinghouse on Information and Technology: New York.

http://www.thinkexist.com/english/Author/x/Author_3763_1.htm. Retrieved November, 24, 2008.

Wikipedia. <http://en.wikipedia.org>. Retrieved November, 30, 2008

Information Literacy Skills of LIS Professional

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Abstract

This paper describes the essential skills required for LIS professionals particularly working in engineering colleges, based on ACRL standards. Various standards and models of IL are also highlighted. It also discusses the urgent need for a study to find out the areas of improvements.

Keywords: Information Literacy; skill, assessment; models; standard; LIS professionals

1. Introduction

Information explosion has resulted in volume of information in a variety of formats and medias. One needs to acquire the basic knowledge and skills about the availability of this information and also access the information effectively and efficiently, which are crucial to all people in the society. In today's digital environment, one must have sufficient knowledge and skills to know which information resources are to be used for a specific purpose, and be able to evaluate information effectively to successfully complete their work. Educational institutions and public libraries are conducting many IL programmes (library tour, instruction, user orientation, etc) for the benefit of their users to impart skills to access information effectively which are to be further strengthened on modern line using latest tools and technologies.

2. Importance of IL in the Information Age

The following factors lead to give more importance to IL in the information age.

- Global competition/ new economic order
- Information explosion, free flow of information and information overload
- Revolution of Information Technologies (IT)
- Birth of interdisciplinary subjects, fusion and fission of subjects
- Web has become the preferred media for publication
- Availability of information sources in various medias/formats/places
- Access methods
- Information retrieval techniques
- Reliability and accuracy of information
- IPR and copyright issues
- Growth of educational institutions across the globe
- Enrollment of students in academic institutions

3. Definition of IL

Many experts defined various facets of IL.

Paul Zurkowski, is the first person who introduced the concept of “ information literacy” in 1974. According to him, “ people trained in the application of information resources to their work can be called information literates.

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Some others who contributed to IL are Doyle, Kuhlthau, Eisenberg, Brown, L.S., Langfold, Breivik, P.S., McClure, etc.

American Library Association defined IL as ‘ 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’.

American Association of School of Librarians (AASL) stated that IL is attained when an individual possesses the knowledge and skills necessary for processing and utilizing needed information.

IL has been widely discussed by the educational institutions, professional organizations and experts since 1992.

4. Organizations contributed towards promotion of IL

The concept of IL has been strongly advocated in U.S, U.K. and other western countries and these countries give more importance in introducing IL in school and higher education. IL has been included in the curriculum in most of the developed countries. This resulted IL as one of the global educational movement. The U.S is the leader in the development of IL education. The following are the organizations/bodies involved in promoting IL.

- American Library Association (ALA)
- International Technology Education Association (ITEA)
- American Association of Higher Education (AAHE)
- American of College and Research Libraries (ACRL)
- American Association of School Librarians (AASL)
- Association for Educational Communication and Technology (AECT)
- Information Society of Technology in Education (ISTE)
- Wisconsin Educational Media Association
- Canadian School Libraries
- Secretary’s Commission on Achieving Necessary Skills (SCAN)
- National Forum on Information Literacy (NFIL)
- National Commission on Libraries and Information Science (NLIS), and
- Many Universities

5. Standards and Models

Professional associations, institutions and experts have developed IL standards and models for various purposes. These are used as a basis for designing curriculum, measuring the skills of students and others, etc. Some of the standards and models are given below:

a. Information Literacy Standards for Student Learning

These standards were published in 1994 by the AASL and these broadly cover:

- Defining the need for information initiating the search strategy
- Locating the resources
- Accessing and comprehending the information

- Interpreting the information
- Communicating the information
- Evaluating the product and process

b. **ISTE's National Educational Technology Standards (NETS)** have served as a roadmap since 1998 for improved teaching and learning by educators. ISTE standards for students, teachers, and administrators help to measure proficiency and set aspirational goals for the knowledge, skills, and attitudes needed to succeed in today's digital age.

c. Information Literacy Competency Standards for Higher Education

These standards were published in 2000 by ACRL.

Some of the other standards include, the National Council of Teachers of Mathematics (NCTM), the National Council for Social Studies (NCSS) and the National Committee on Science Education Standards and Assessment (NCSESA).

All these standards and models can be used to assess the information competency skills of students, teachers and others. These standards and models gave some indicators and outcomes based on which ILS skills can be measured. Many countries such as U.K., Canada, Australia are also developed IL standards to suit their own needs.

IL Models

a. **The Big6** - the Big6 model was proposed by Eisenberg and Berkowitz in 1998. Big6 is a useful method for solving information problems and it can be integrated throughout the curriculum.

b. **SCONUL** (Society of College, National and University Libraries) Seven Pillar Model for Information Literacy is used to promote excellence in library services in higher education and national libraries across the UK and Ireland.

c. **Empowering 8** – Applying a Problem-solving model in South and South East Asia to Promote IL.

Some other models include the Kuhlthau – Information seeking, Pitts/Stripling - Research Process, Pappas/Teppe - Pathways to Knowledge and McElmeel - S.P.I.R.R.E. Research

6. Why ILS skills are essential for Librarians

Educational institutions today need to prepare their students to become information literate and lifelong learners. Librarians need to play a significant role in this process. IL is increasingly important in the contemporary environment of rapid technological change and proliferation of information resources. Because of the escalating complexity of this environment, individuals are faced with diverse, abundant information choices in their academic studies, in the workplace, and in their personal live. IL is becoming an increasing important component of the higher education

curriculum. The Librarians need to enhance their IL skills not only to help their users but also to survive in the competitive world.

7. Why LIS professionals need to update their skills

To help the students and faculty members to locate, access and evaluate information effectively and efficiently

To understand and do his research work

To update his knowledge and skills

To take better decision in day to day's activities

To get recognition in the institution

To survive in the competitive world

8. Assessment Instruments

a. Project SAILS

Project SAILS, is a national effort started at Kent State in 2001 with the goal of developing a standardized test of IL skills that would allow libraries to document skill levels for groups of students and to pinpoint areas for improvement.

b. ETS ICT

Educational Testing Service has launched the ETS ICT (Information and Communication Technology Literacy Assessment), an online simulation-based testing program that measures postsecondary students' ability to define, access, manage, integrate, evaluate, create and communicate information in a technological environment.

The above two assessment instruments developed for large-scale assessment of IL are mainly based on ACRL standards.

9. Status of IL in India

IL programmes have rarely been conducted in many of the developing countries. IL has not been included in the curriculum of many of the schools and universities.

UNESCO takes a lot of efforts in spreading the concept of IL in developing countries. Many conferences and workshops on IL have been conducted by professional bodies such as the Society of Advancement of Library and Information Science (SALIS), ILA and Universities such as Patiala University with the support of UNESCO, to promote IL competency skills in India.

An e-learning portal on 'IL Competency Skills for Southern Asia', has also been set-up by SALIS with the active support of UNESCO to enhance IL competency skills of the people in the Southern Asia.

In India, much importance has not been given to IL. The reasons are:

- Lack of awareness of IL in our country
- Non-inclusion of IL in the curriculum
- Librarians not included as part of the faculty team
- IL programmes not being implemented in many of the libraries
- Lack of infrastructural facilities/ access to internet /e-resources
- Limited qualified staff in the library
- Most of the professionals have done their formal LIS course from distance education
- Librarians are not given opportunity to attend seminar, conference, workshop, training programmes to update their skills periodically
- No motivation/encouragement from the management

10. Requirement of IL skills for LIS professionals based on ACRL Standards

Skill is the ability to do things in a better way and competency is the capacity of an individual ability to perform his duties or knowing thing or solving the problem. Information literacy competency skills are essential requirements to all in a society. The IL skills of the LIS professionals need to be enhanced in order to cope with the information need of the present society. Therefore, LIS professionals need to possess IL competency skills as per the ACRL Standards in order to help their users and also successful in their personal work and life. They have to acquire various skills and be familiar with research work, research methods/techniques, popular information sources, tools/techniques, software, formats, devices, procedures, etc. to work efficiently. All these skills are given briefly under each standard.

11. Required essential IL skills of LIS professionals based on ACRL Standards

There is an urgent need to study and document the IL skills of LIS professionals in India based on standards such as ACRL to find out areas of improvements. ACRL standards can be used to measure the skills of LIS professionals as these standards are widely accepted and used by librarians in colleges and universities in the United States and many other countries.

The ACRL Information Literacy Competency Standards for Higher Education

The ACRL Information Literacy Competency Standards for Higher Education consist of 5 standards and 22 performance indicators for each given area. The standards also include outcomes under each performance indicator, which are developed with the purpose of providing guidance in the development of assessment methods, instruments and strategies for measuring students' learning outcomes.

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

Performance Indicators

1. The information literate student defines and articulates the need for information.
2. The information literate student identifies a variety of types and formats of potential sources for information.
3. The information literate student considers the costs and benefits of acquiring the needed information.

4. The information literate student reevaluates the nature and extent of the information need.

Required essential skills/knowledge and familiarity of various sources/tools

- Research skills – understand the research topic- framing questions to collect data Investigating methods to collect data, interpret the research topics, identify key terms , related terms, broader/narrower terms in the topic, expand the concept, able to revise search strategy
- Controlled vocabulary tools - classification systems, subject headings, thesaurus
- Formats and standards - AACR/ISO 2707/Dublin Core/Z39.50/SRM
- Documents formats, audio/video formats
- Primary, secondary and tertiary sources
- Bibliographical databases of various subjects
- E-resources (books, journals, standards, patents, theses)
- Subject gateways, directory, portals
- Institutional archives and repositories
- Library services such as ILL, literature service, document copy supply service, etc
- Knowledge sharing tools

Standard Two: The information literate student accesses needed information effectively and efficiently.

Performance Indicators

1. The information literate student selects the most appropriate investigative methods or information retrieval systems for accessing the needed information.
2. The information literate student constructs and implements effectively-designed search strategies.
3. The information literate student retrieves information online or in person using a variety of methods.
4. The information literate student refines the search strategy if necessary.
5. The information literate student extracts, records and manages the information and its sources.

Required essential skills/knowledge and familiarity of various sources/tools

- Research plan, identification of keywords, synonyms, selecting a suitable controlled vocabulary, constructing search strategy, selecting appropriate commands for the information retrieval system selected.
- Implement search strategy in various information retrieval systems
- To retrieve information using survey, interview, questionnaire, etc.
- Working knowledge in computers and popular software
- To use Internet to visit various sites
- Downloading the retrieving pages
- Retrieving information from popular search engines such as Google
- Search techniques in various search tools
- Simple search/Advance search
- Boolean operator (AND, OR, NOT)
- Logical operators

- Truncation, proximity search
- Searching library databases/search engines/e-resources/portals/directories etc

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

Performance Indicators

1. The information literate student summarizes the main ideas to be extracted from the information gathered.
2. The information literate student articulates and applies initial criteria for evaluating both the information and its sources.
3. The information literate student synthesizes main ideas to construct new concepts.
4. The information literate student compares new knowledge with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information.
5. The information literate student determines whether the new knowledge has an impact on the individual's value system and takes steps to reconcile differences.
6. The information literate student validates understanding and interpretation of the information through discourse with other individuals, subject-area experts, and/or practitioners.
7. The information literate student determines whether the initial query should be revised.

Required essential skills/knowledge and familiarity of various sources/tools

- Able to read and select main ideas, identify the quoted materials
- Evaluating sources based on criteria's (reliability, validity, accuracy, authority, timeliness, point of view, bias)
- Evaluate books, journals, web sites, records retrieved using search engines
- Knowledge of computer and other technologies for evaluating the sources and data
- (eg.: spreadsheets, databases, multimedia software)
- Recall and precision
- Citation index- citation styles, impact factor
- ISBN/ISSN/DOI
- Able to use knowledge sharing tools for getting opinions such as
- E-Mail and E-Group, Google talk, Yahoo messenger, Wiki, Blog, RSS Feed

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

Performance Indicators

1. The information literate student applies new and prior information to the planning and creation of a particular product or performance.
2. The information literate student revises the development process for the product or performance.
3. The information literate student communicates the product or performance effectively to others.

Required essential skills/knowledge and familiarity of various sources/tools

- To present the content in a suitable format
- To incorporate knowledge and skills gained from previous experience for creating new work
- To use quotations and paraphrasing and make annotation
- To able to revise the work based on success and failures
- To record the work systematically
- To able to select a suitable mode of communication medium/style/ citation style
- To prepare and publish scientific documents (based on LaTeX)
- To know about text formatting tools
- Databases and software such as Library software
- Open source software
- Data analyzing software such as SPSS
- Web page creation software tools
- Multimedia software
- Scanning and OCR

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

Performance Indicators

1. The information literate student understands many of the ethical, legal and socio-economic issues surrounding information and information technology.
2. The information literate student follows laws, regulations, institutional policies and etiquette related to the access and use of information resources.
3. The information literate student acknowledges the use of information sources in communicating the product or performance.

Required essential skills/knowledge and familiarity of various sources/tools

- To use information ethically and legally (should not hurt the sentiments of the people in the society - religious, common opinion, belief, etc)
- Privacy and security particularly in the networked environment (cyber crime / law)
- Censorship, Freedom of speech, Right To Information (RTI)
- Economics of information, free flow of information
- Copy right , Copyright Act 1968, fair use
- IPR, WIPO, patent rules, trademarks
- Plagiarism
- Issues related to free based access / fee based access
- Pricing models of commercial e-publishers, commercial terms and condition
- Institutional policy in accessing information
- Access models – IP based/user ID and password
- Downloading articles
- Etiquette and Netiquette
- Preservation of resources

12. Conclusion

LIS professionals are working in various types of libraries. Engineering is a main area for job opportunities. LIS professional working in engineering institutions need to familiar with the information sources and information retrieval tools, which are explained above. IL skills not only help the LIS professionals to provide service to the users more efficiently and effectively but also to complete their own research work. There is an urgent need to study the IL skills of LIS professionals based on IL standards such as ACRL to find out areas of improvements. Efforts should be taken by various bodies to enhance the skills of LIS professionals based on such studies to make all of them information literate professionals.

Reference

1. Usluel, Y.K.(2007). Can ICT make a difference on student teachers's information literacy self-efficacy. *Library & Information Science Research*, 29, 92-102
2. Secretary's Commission on Achieving Necessary Skills(SCAN).(1991). *What work requires of schools: A SCANS report for America 2000*. Washigton, DC: Government Printing Office
3. Zurkowski, P.G.(1974). *The information service environment relationships and priorities*. Washington DC: National Commission on Libraries and Information Science.
4. Eisenberg, Michael., et al. (2004). *Information literacy: essential skills for the information age*.Westport: Libraries Unlimited.
5. Wen, J. R., & Shih, W.L. (2003). Exploring the information literacy competence standards for elementary and high school teachers. *Computers & Education*. Doi: 10.1016/j.compedu.2006.08.011
6. The Association of College and Research Libraries (ACRL). (2000). *Information literacy competency standards for higher education*. <http://www.ala.org/ala/mgrps/divs/acrl/standards/standards.pdf>. Retrieved December, 2, 2008.
7. Azmi, H..(2007). Teaching information literacy skills: a case study of the QU-core program in Qatar University
8. <Http://www.iste.org/AM/Template.cfm?Section=NETS> Retrieved December, 2, 2008.
9. Http://www.sconul.ac.uk/groups/information_literacy/sp/model.html. Retrieved December, 2, 2008.
10. <Http://www.tucl.org.np/infliteracy.htm> Retrieved December, 2, 2008.
11. <Https://www.projectsails.org/sails/aboutSAILS.php?page=aboutSAILS> Retrieved November, 25, 2008.
12. <Http://www.highbeam.com/doc/1G1-127058559.html>.Retrieved November 25, 2008.
13. <http://www.librarything.com/work/980593>

Literacy for the Gross National Happiness in Eastern Bhutan

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Literacy is the base to reach any kind of government policy to its people. The UNESCO round-table report *Literacy as Freedom* recommends that literacy be understood within a rights-based approach and among principles of inclusion for human development. Literacy has been recognized not only as a right in itself but also as a mechanism for the pursuit of other human rights, just as human rights education is a tool for combating illiteracy. The rationale for recognizing literacy as a right is the set of benefits it confers on individuals, families, communities and nations. Indeed, it is widely reckoned that, in modern societies, 'literacy skills are fundamental to informed decision-making, personal empowerment, active and passive participation in local and global social community'. Literacy is inextricably linked to a process of continual education or lifelong learning. The benefits of literacy can be conveniently, if arbitrarily, classified as human, political, cultural, social and economic. Today, by conventional measurements, some 771 million adults are illiterate, two-thirds of them women. This is – for a fifth of the world's adult population – a serious violation of human rights. It also constitutes a major impediment to the realization of human capabilities and the achievement of equity and of economic and social development, particularly for women. Bhutan has not been exempted from this evil of illiteracy.

Bhutan is one of the smallest country in Asia with a population of almost 635000, located in between China and the north-east India. Virtually the entire country is located in the mountain of Himalaya. There are twenty languages being spoken by the people, among which Dzongkha is the national language. The national literacy rate is 59.5%, male literacy rate is 53% and female literacy rate is 47%. The people belong to Mahayana Buddhism. Still the country is monarchial.

Bhutan is the only country, pursuing the unique and philosophical concept of **Gross National Happiness (GNH)**. This concept, propounded by His Majesty the king of Bhutan **Jigme Singye Wangchuck** in the year 1972, is the foundation of Bhutan's approach to development. The ultimate goal of development in Bhutan is to maximize the happiness of the people, which takes into account the values of spiritual and emotional needs more than just satisfying material. GNH comprises of four goals: economic self reliance, environmental preservation, preservation of culture and promotion of good governance. These four goals are mutually linked, complementary and consistent. They embody national values, aesthetics and spiritual traditions.

Bhutan consists of twenty states (dzongkhags), each state has its own taluks (gewogs) and villages (gups). Bhutan can be divided as eastern, central and western Bhutan. The six

states namely, **Lhuntse, Mongar, Pemagatshel, Samdrup Jongkhar, Trashigang and Trashiyangshi** comprise the eastern Bhutan.

This paper reads the facilities of Information and Communication Technologies available for the people living in eastern part of Bhutan, through community information centers, non-formal education centers and the necessity of public libraries to reach highest literacy rate which are the right way to accomplish the royal government of Bhutan's major policy of GNH.

Community Information Centers (CIC):

Information and communication technology (ICT) is becoming more accessible to the Bhutanese in the form of community information centers (CIC) which have been set in remote parts of the country. These CICs are also known as e-centers, tele-centers, village information centers, community training and learning centers and multi-purpose community tele-centers are being established from 2004. This rural phenomenon holds the key to bridging the digital divide, according to officials of the Department of Information and Technology (DIT).

The 10th Five-Year National Development Plan (2008-2013) states that the DIT shall establish at least one CIC in each of the 201 *geog* highlights an important opportunity for bridging the rural–urban divide and for bringing rural communities closer to the information society. Each CIC will be equipped with computers, Internet connectivity, a telephone, a fax machine, and photocopying facilities. The intent is to use these tools to improve access to relevant information that would enhance the health, education and livelihood of the villagers. The Bhutan Portal (www.bhutan.gov.bt) would be a main source of information, and its contents which will include e-health, e-education, e-agriculture, and e-commerce/e-business services are being developed based on the results of the information needs assessment at each CIC.

To date, the DIT in collaboration with Bhutan Post and the Ministry of Agriculture, has established 36 CIC with support from the United Nations Development Programme (UNDP), Government of India, International Development Research Centre (IDRC) of Canada and Microsoft Unlimited Potential. Out of 36 CICs the Eastern Bhutan gets 14 centers which are as found in the following table.

Table 1: CICs in Eastern Bhutan (<http://www.dit.gov.bt/cic/index.php>)

S.No	District (Dzongkhag)	Place of the CIC
1	Mongar	1. Mongar (Gyelposhing)
2	Lhuntse	2. Menbi (Lhuntse PO) 3. Menbi (Tangmachu)
3	Pemagatshel	4. Norbuling, 5. Shumar, 6. Dechheling
4	TashiYangtse	7. Khamdang, 8, 9. Ramjar, 10. Khamdang, 11. Yangste
5	Trashigang	12. Kanglung, 13. Khaling and 14. Radhi

Bhutan Education System:

Education to the Bhutanese students is completely free. There are three types of educational system are existing in the country, namely monastic, formal and non-formal (or continuing) education. The development of a comprehensive education system in Bhutan was initiated in 1961. Prior to this year there were virtually no modern education facilities in the country, apart from the traditional education system given from the monasteries.

Monastic Education: The formal monastic education began with the establishment of Zhabdrung Ngawang Namgyal the first Monk body in 1622 in the monastery of Chari, Thimphu. The monastic system of education has sustained the Bhutanese society in its spiritual fold for many centuries. In the monastic education system, it was practiced through informal relationship between the master and the disciples. Both “Gomchens” (Lay monks who practice Dharma but do not observe celibacy) and “anems” (Lay female monks who also practice Dharma. Some anems are strict celibate monks while some are not) were studying under various masters in different monasteries. (**Jagar: 2005: 2-9**)

At present there are 4971 monks have registered with the Deratshang Lhentshog (Central Monastic Body). (*Bhutan Observer: dt. 13.04.2007: 1*)

Formal Education System: The development of a comprehensive education system in Bhutan was initiated in 1961. Prior to this year there were virtually no modern education facilities in the country, apart from the traditional education system given from the monasteries.

The formal educational structure in Bhutan consists of 7 years of Primary education (including Pre-Primary) and 6 years of Secondary education, comprising of 2 years each of lower, middle and higher secondary. This is followed by a 3-year Degree programme. The minimum official entry age into the formal education system is 6 at the Pre-Primary (PP) class. At present there are 523 schools and 19 institutions for higher learning are serving the country, out of which 223 schools (Lhuntse-26, Mongar-49, Pemagatshel-31, Samdrup Jongkhar-26, Trashigang-61, and Trashiyangshi-30) and 4 higher educational institutions are in Eastern Bhutan. (*Ref: RGB General Stat report 2008, pg.10*)

Non Formal Education System: The non-formal education (NFE) system is meant for those individuals who are not able to avail the facilities of formal education. This NFE system was introduced in 1992. Basic literacy skills, reading, writing and numeric skills are likewise strengthened through this system. At present there are 747 NFE centers are functioning, out of which Lhuntse has 32, Mongar has 79, Pemagatshel has 39, Samdrup Jongkhar has 35, Trashigang has 77 and Trashiyangshi 22 centers, that is Eastern Bhutan has 38% of the total non-formal education centers. (*Ref: RGB General Stat report 2008, pg.49*)

Need of Public Libraries in Eastern Bhutan...

The *IFLA/UNESCO Public Library Manifesto (1994)* says, “Freedom, prosperity and the development of society and of individuals are fundamental human values. They will only be attained through the ability of well-informed citizens to exercise their democratic rights and to play an active role in society. Constructive participation and the development of democracy depend on satisfactory education as well as on free and unlimited access to knowledge, thought, culture and information”.

This Manifesto proclaims UNESCO's belief in the public library as **a living force for education, culture and information, and as an essential agent for the fostering of peace and spiritual welfare through the minds of men and women.**

The Public Library Service: IFLA/UNESCO guidelines defines, A public library is an organization established, supported and funded by the community, either through local, regional or national government or through some other form of community organization. It provides access to knowledge, information and works of the imagination through a range of resources and services and is equally available to all members of the community regardless of race, nationality, age, gender, religion, language, disability, economic and employment status and educational attainment.

According to Dr. S.R. Ranganathan, PLS means an integrated nationwide network of public libraries giving free library and information services to one and all of the citizens- literate or illiterate, rich or poor, rural or urban. **(Ranganathan: 1972)** Earlier public libraries were considered as independent single units under the government. The concept of PLS was presented in the Model Library Act by Dr. S. R. Ranganathan at the first All Asia Educational Conference held in Banares in 1930. This concept emphasizes that PLS at different levels should be interlinked so as to form part of a system or network.

Table 2 Literacy of Eastern Bhutan: 6 years and above of age by sex

Dzongkhag	Literate				Illiterate			
	%Male	%Femal	Total	Total%	%Male	%Femal	Total	Total%
Lhuntse	32.9	22.1	7365	55.00	17.3	27.8	6032	45.10
Monggar	30.4	19.8	16265	50.20	20	29.8	16146	49.80
Pema Gats shel	34.5	23.8	7103	58.30	14.5	27.2	5077	41.70
SJ	34.3	20.3	19025	54.60	17.3	28	15792	45.30
Trashigang	33.5	22.2	24975	55.70	17.6	26.7	19918	44.30
Tyangtse	32.1	22.9	8435	55.00	17.9	27.2	6911	45.10
Total	36.5	23	83168	59.5	16.3	24.2	69876	40.5

Table 3 Literacy of Eastern Bhutan: 6 years and above of age by residence

Dzongkhag	Literate				Illiterate			
	%Urban	%Rural	Total	Total%	%Urban	%Rural	Total	Total%
Lhuntse	7.6	47.4	7365	55	2.3	42.7	6032	45
Monggar	15.6	34.6	16265	50.2	4.2	45.6	16146	49.8
Pema Gatschel	13.3	45	7103	58.3	3.3	38.3	5077	41.6
SJ	18.5	36.2	19025	54.7	8.3	37.1	15792	45.4
Trashigang	10.9	44.8	24975	55.7	2.8	41.5	19918	44.3
Tyangtse	13.3	41.7	8435	55	3.9	41.1	6911	45
Total	23.5	36	83168	59.5	7.5	33.1	69876	40.6

A survey has been taken to understand the awareness on public libraries among people and to promote the quality library services to fulfill the needs of the public. About 340 individuals were interviewed using questionnaire to find their feelings of Bhutanese towards literacy and their benefits towards GNH. Their responds are compared in terms of Gender, Residence, and literacy level.

Table 4: Respondents by Gender, Residence and Literates

Dzongkhag	Female	Male	Rural	Urban	Literate	Illeterate	Total
Lhuntse	18	32	30	20	41	9	50
Mongar	23	32	31	24	44	11	55
Pema Gatschel	20	30	29	21	43	7	50
SJ	33	37	44	26	54	16	70
Trashigang	27	38	38	27	55	10	65
Tyangtse	24	26	24	26	37	13	50
Total	145	195	196	144	274	66	340
%	42.65	57.35	57.65	42.35	80.59	19.41	100

More participants were males (57.35%) comparing to females (42.65%) in the survey. The rural and urban ratio is 57.65% and 42.35% respectively. Most of the participants (80.6%) were literate revealing that illiterates are not willing to respond to the study. This indicates the fear and negligence of illiterates.

Table 5: Respondents by Profession

Dzongkhag	Govt	Pvt	Farm	Stud	Monk	Misc	Total
Lhuntse	8	12	5	10	6	9	50
Mongar	21	11	3	8	3	9	55
Pema Gatshel	11	8	8	12	6	5	50
SJ	17	20	4	14	3	12	70
Trashigang	16	10	4	14	6	15	65
Tyangtse	12	8	3	9	5	13	50
Total	85	69	27	67	29	63	340
%	25.00	20.29	7.94	19.71	8.53	18.53	100

(Govt: Govt employees, Pvt: Private /self finance, Farm: Farmers, Stud: Students, Misc-Other group of people)

Table 6: Why education? Willing to go to non-formal education centers... (Respondents: Illiterates)

Dzo	a	b	c	d	e	f	g	H	Wil
Lhu	6	3	5	5	2	5	2	4	6
Mon	2	5	4	6	1	5	3	2	7
PGL	4	5	6	5	3	5	2	1	6
SJ	7	6	7	13	7	9	3	4	9
Trg	7	3	7	8	4	1	4	4	7
Tyg	6	8	11	8	6	9	6	0	11
Total	32	30	40	45	23	34	20	15	46
%	48.5	45.5	60.6	68.2	34.8	51.5	30.3	22.7	69.7

(a: To get a job, b: To lead an independent life, c: To gain more knowledge and wisdom, d: To be aware of the society and the world, e: To be an enlightened and be a complete man, f: To communicate with others with out fear, g: To lead a prestigious life, h: Not important, wil: willing to learn)

Almost 70% of the illiterates realize that the education is very important to survive and they are willing to get the education from the non-formal education centers.

To know rational behind the need of public library, most of the people told that they like to spend their leisure time in a productive way. The following table explains this factor.

Table 7: Reasons for the need of PL...

Dzo	a	b	c	D	e	F	g	h	i	j
Lhu	42	23	15	40	21	19	14	13	13	2
Mon	46	31	23	46	45	41	38	36	29	0
PGl	40	26	21	47	33	37	33	29	28	0
SJ	51	22	30	53	46	46	38	40	36	0
Trg	51	18	26	51	46	42	29	26	24	0
Tyg	35	12	18	37	26	28	22	19	18	0
Total	265	132	133	274	217	213	174	163	148	2

(a: To spend my leisure time usefully, b: To read comics or literature, c: To utilize the internet or computer facilities, d: To acquire knowledge or education, e: To know about my kingdom and the world, f: To get an easy access to any news or information, g: To gain more general and subject knowledge, h: To preserve cultural heritage of the country, i: To ensure the more civilized society, j: Many other reasons as I know)

Table 8: Expecting services from the PLs...

Dzo	a	b	c	d	e	f	g	h	i	j	k	l
Lhu	40	37	24	15	7	18	14	20	9	22	37	0
Mon	44	44	32	19	28	31	33	43	17	33	40	0
PGl	43	39	38	22	23	24	26	32	20	25	36	0
SJ	53	46	39	31	41	34	40	51	24	35	54	0
Trg	54	49	33	20	26	27	34	46	17	35	41	0
Tyg	39	35	18	17	24	18	22	25	14	24	26	2
Total	273	250	184	124	149	152	169	217	101	174	234	2
%	80.3	73.5	54.1	36.5	43.8	44.7	49.7	63.8	29.7	51.2	68.8	0.6

(a: Books issue / return service, b: Distribution of newspapers and periodicals, c: Reference reading like dictionaries and encyclopaedias, d: Guidance to the information sources and referral service, e: Current awareness service, f: Photocopying service [Xerox], g: Computers and Internet service, h: Services to attract the children, women and old age people, i: Inter library loan (loan facilities from other related libraries), j: Library talks on local languages, k: Education for illiterates, l: Any other services you wish to include)

While asking the expected services from the PLs, the majority of the people told that they want circulation of books. This means that they are not aware of the variety of services of the libraries.

For the question about the contributions of public libraries to achieve GNH policy of the country, 75% of the literate people said “yes”, the library can do. This illustrates the following table.

Table 9: Public Libraries towards GNH

Dzo	Literates			Illiterates			Total
	Y	N	NS	Y	N	NS	
Lhu	40	1	0	9	0	0	50
Mon	44	0	0	9	0	2	55
PGL	42	0	1	6	0	1	50
SJ	49	4	1	11	1	4	70
Trg	46	1	1	8	4	5	65
Tyg	34	3	0	12	1	0	50
Total	255	9	3	55	6	12	340
%	75	2.65	0.9	16.2	1.8	3.5	100

At last, by quest to know the interest of the people to go to public libraries to the nearest town, a question was put up to the public. In reply, urban people have shown more interest (about 80%) to go to the public library. At the same time 50% of the rural people said “no”. The main reason behind this negative answer is due to the geographical phenomena of the country and the poor infrastructure facilities like transport etc. This implies that the rural people like to avail the facility at their door steps by means of mobile libraries or branch libraries. Proper network system among public libraries is necessary to serve the people better.

Table 10: Willing to go to PLs by residences, gender and literacy group

Dzo	Geo			Gender			Literacy		
	Rural	Urban	Total	Female	Male	Total	Literate	Illiterate	Total
Lhu	18	16	34	13	21	34	33	1	34
Mon	20	21	41	17	24	41	36	5	41
PGL	17	18	35	15	20	35	32	3	35
SJ	18	21	39	16	23	39	38	1	39
Trg	17	22	39	14	25	39	35	4	39
Tyg	14	20	34	18	16	34	28	6	34
Total	104	118	222	93	129	222	202	20	222
%	53.06	81.94	65.29	64.14	66.15	65.29	73.72	30.30	65.29

Literacy is the right choice to implement the national development programme. Besides the schools, non-formal education centers and community information centers, **public libraries** are the best solution to provide life long learning and literacy to the whole society. **Robert Welch (1963)** rightly points out, *"For the majority of people the quickest and easiest access to the world's best thought is the public library, with its wealth of material."* It is a critical need that the Royal Government of Bhutan to provide the public library services to their people to implement GNH in their country.

Bibliography and References:

1. UNESCO: Literacy for Life: Education for all (EFA). EFA Global Monitoring Report. Paris, France: UNESCO, 2006
2. Armington, Stan: Bhutan, 2nd ed. Melbourne: Lonely Planet publications, 2002. pg.11, 48, 51-52, 57
3. Census Commissioner (Office of the), Royal Government of Bhutan: Population and Housing Census of Bhutan, Thimphu 2005.
4. Karma Ura and Karma Galay: Gross National Happiness and Development. Thimphu: The Centre for Bhutan Studies, 2004.
5. Jagar Dorji: Quality of Education in Bhutan: the Story of Growth and Change in the Bhutanese Education System, 2nd ed. Thimphu: KMT Publisher, 2005. pg. 2-9.
6. Ranganathan, S.R: Opening address at the All India Seminar on Public Library System. In Ranganathan and Neelameghan, ed.: Public Library System. Bangalore: SREFL, 1972