Information literacy: definitions, standards and assessment, related concepts

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Who am I?

• Valentina Kirinić:
  ▪ PhD in Information Science – Information literacy: evaluation of web information resources and web credibility
  ▪ Courses: information search/retrieval and classification, software quality, digital publishing ...
  ▪ ICT in education, ICT skills

• Information literacy (Information retrieval/search methods and classification)
Who are you?

- Students attending the Information Science course
- Students:
  - Study programmes – Business Administration?
  - Professionals to be?
  - Professional interests?
- I do not know you but ...
- I know you need information literacy:
  - For academic success (to study; to find your diploma thesis topic, to prepare it and to present it)
  - To find a job / prospective employers and present yourself to them
  - To effectively manage your tasks at a workplace
  - For lifelong learning and further professional development/growth
Information literacy topics

- Definitions
  - Zurkowski
  - ALA
  - Australian and New Zealand Information Literacy Framework
- Standards (practical aspect)
  - Academic (HE) – ACRL
- Models (theoretical aspect)
  - SCONUL
- Assessment
  - IL education/courses
  - Types of assessment
- Related concepts
  - Computer, digital, ...
Information literacy definitions

- ICT – new skills, competencies, literacies

- Skill = “subtle or imaginative ability in inventing, devising, or executing something” [http://www.merriam-webster.com/thesaurus/skill?show=0&t=1283346073]

- Competence = “the physical or mental power to do something” [http://www.merriam-webster.com/thesaurus/competence]

- Literacy = “the understanding and information gained from being educated” [http://www.merriam-webster.com/thesaurus/literacy]
“information literacy” introduced by Paul G. Zurkowski in 1974


- “The relations of the National Commission on Libraries and Information Science to information literacy and the information industry are discussed”
- “It is suggested that the top priority of The National Commission on Libraries and Information Science should be directed toward establishing a major national program to achieve universal information literacy by 1984”
Zurkowski [1974] – “We experience an overabundance of information whenever available information exceeds our capacity to evaluate it. This is a universal condition today for three reasons:

- The **information seeking procedures of individuals are different** at different times for different purposes.
- A **multiplicity of access routes and sources** have arisen in response to this kaleidoscopic approach people take to fulfilling their information needs. These are poorly understood and vastly underutilized.
- **More and more of the events and artifacts of human existence** are being dealt with in information equivalents, requiring retraining of the whole population.”
Information literacy definitions – Zurkowski

- Zurkowski [1974] – definition of information literacy = definition of information literates:

  “People trained in the application of information resources to their work can be called information literates. They have learned techniques and skills for utilizing the wide range of information tools as well as primary sources in molding information solutions to their problems.”

- **Illiterates**: “... while literate in the sense that can read and write, do not have measure for the value of information, do not have an ability to mold information to their needs...”
Information literacy – set of abilities requiring individuals to [ALA, 1989]:

"recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information"
Information literacy definitions – Australian and New Zealand Information Literacy Framework

- Information literacy elements – the dimensions of learning [Australian and New Zealand Institute for Information Literacy, 2004, 7]:
  - "Generic skills" include problem solving, collaboration and teamwork, communication and critical thinking.
  - Information skills include information seeking, information use and information technology fluency.
  - Values and beliefs include using information wisely and ethically, social responsibility and community participation.”
Information literacy standards – HE (ACRL)

- **ACRL-Assocation of College & Research Libraries** (under ALA)
- Information Literacy Competency Standards for Higher Education (HE) [ACRL, 2000] – Information Literacy and Pedagogy:
  - “Courses structured in such a way create student-centered learning environments where inquiry is the norm, problem solving becomes the focus, and thinking critically is part of the process. Such learning environments require information literacy competencies.”
Information literacy standards – HE (ACRL) - Structure

- Information Literacy Competency Standards for Higher Education [ACRL, 2000] – The structure:
Information literacy standards – HE (ACRL) - Structure

**Standard One** – The information literate student determines the nature and extent of the information needed.

**Performance Indicators:**
1. defines and articulates the need for information

   **Outcomes** Include:
   a) Confers with instructors and participates in class discussions, peer workgroups, and electronic discussions to identify a research topic, or other information need
   b) Develops a thesis statement and formulates questions based on the information need
   c) Explores general information sources to increase familiarity with the topic
   d) Defines or modifies the information need to achieve a manageable focus
   e) Identifies key concepts and terms that describe the information need
   f) Recognizes that existing information can be combined with original thought, experimentation, and/or analysis to produce new information

2. identifies a variety of types and formats of potential sources for information

   **Outcomes** Include:
   ...

3. considers the costs and benefits of acquiring the needed information

   **Outcomes** Include:
   ...

4. reevaluates the nature and extent of the information need

   **Outcomes** Include:
   ...

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• **Standard One** – The information literate student **determines the nature and extent of the information needed**:
  - defines and articulates the need for information
  - identifies a variety of types and formats of **potential sources for information**
  - considers the **costs and benefits** of acquiring the needed information
  - reevaluates the nature and extent of the information need

• **Standard Two** – The information literate student **accesses needed information effectively and efficiently**:
  - selects the most appropriate investigative **methods** or **information retrieval systems** for accessing the needed information
  - constructs and implements effectively-designed **search strategies**
  - retrieves information online or in person using a **variety of methods**
  - refines the **search strategy** if necessary
  - extracts, records, and manages the information and its sources
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:

- summarizes the main ideas to be extracted from the information gathered
- articulates and applies initial criteria for evaluating both the information and its sources
- synthesizes main ideas to construct new concepts
- compares new knowledge with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information
- determines whether the new knowledge has an impact on the individual’s value system and takes steps to reconcile differences
- validates understanding and interpretation of the information through discourse with other individuals, subject-area experts, and/or practitioners
- determines whether the initial query should be revised
Information literacy standards and performance indicators – HE (ACRL)

- **Standard Four** – The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose:
  - applies new and prior information to the planning and creation of a particular product or performance
  - revises the development process for the product or performance
  - communicates the product or performance effectively to others

- **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:
  - understands many of the ethical, legal and socio-economic issues surrounding information and information technology
  - follows laws, regulations, institutional policies, and etiquette related to the access and use of information resources
  - acknowledges the use of information sources in communicating the product or performance
Information literacy models – SCONUL

- SCONUL – Society of College, National and University Libraries, Working Group on Information Literacy, The SCONUL Seven Pillars of Information Literacy - Core Model For Higher Education [SCONUL, 2011, 3]:
  - “model defines the core skills and competencies (ability) and attitudes and behaviours (understanding) at the heart of information literacy development in higher education”

[SCONUL, 2011, 4]
### SCONUL – example [SCONUL, 2011, 10]:

<table>
<thead>
<tr>
<th>MANAGE</th>
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<tbody>
<tr>
<td>Can organise information professionally and ethically</td>
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**Understands:**

- Their responsibility to be honest in all aspects of information handling and dissemination (e.g. copyright, plagiarism and intellectual property issues)
- The need to adopt appropriate data handling methods
- The role they play in helping others in information seeking and management
- The need to keep systematic records
- The importance of storing and sharing information and data ethically
- The role of professionals, such as data managers and librarians, who can advise, assist and support with all aspects of information management

**Is able to:**

- Use bibliographical software if appropriate to manage information
- Cite printed and electronic sources using suitable referencing styles
- Create appropriately formatted bibliographies
- Demonstrate awareness of issues relating to the rights of others including ethics, data protection, copyright, plagiarism and any other intellectual property issues
- Meet standards of conduct for academic integrity
- Use appropriate data management software and techniques to manage data
Information literacy assessment – IL education/courses

- Australian and New Zealand Information Literacy Framework [Australian and New Zealand Institute for Information Literacy, 2004] – adapted from Bruce [2002]: “Current practice in information literacy curriculum design incorporates a mix of generic, parallel, integrated and embedded components”

Information literacy program components [Australian and New Zealand Institute for Information Literacy, 2004, 6]

<table>
<thead>
<tr>
<th>Generic</th>
<th>Extra curricular classes and/or self paced packages</th>
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<tbody>
<tr>
<td>Parallel</td>
<td>Extra curricular classes and/or self paced packages that complement the curriculum</td>
</tr>
<tr>
<td>Integrated</td>
<td>Classes and packages that are part of the curriculum</td>
</tr>
<tr>
<td>Embedded</td>
<td>Curriculum design where students have ongoing interaction and reflection with information</td>
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IL as a regular course
IL as a library course
IL as a course add-on
IL as a goal/outcome of a course/curriculum
According to Stec [2004] there are three types of learning assessment (for different purposes):

- **Prescriptive or diagnostic** – assesses the knowledge and skill of participants before the instruction is designed (in the form of standardized or instructor-developed tests, audits or review of a student’s prior work)

- **Formative** – provides feedback about student learning while the instruction is in progress and allows the instructor to adjust teaching methods during a course (writing a one page “reaction paper” to a reading assignment, preparing an annotated bibliography of research materials, ...)

- **Summative** – a final evaluation of the criteria for assessment, occurs at the end of instruction (multiple choice question, essays, evaluation of citations used, ...)

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Information literacy – related concepts

- The concepts of “information literacy” and “digital literacy” and related concepts are described (by a literature survey and analysis)
- “six terms (some of which have related terms which appear to be used synonymously) are found [Bawden, 2001, 219]:
  - information literacy,
  - computer literacy: synonyms – IT/information technology/electronic/electronic information literacy,
  - library literacy,
  - media literacy,
  - network literacy: synonyms – Internet literacy, hyper-literacy,
  - digital literacy: synonym – digital information literacy”
Information literacy – related concepts

- According to Bawden [2001, 223-4] **library literacy** has two meanings:
  - the competence in the use of libraries ... with a particular emphasis on being able to make informed decisions about sources of information
  - the involvement of libraries in literacy programmes in the traditional sense, i.e. the teaching of reading skills

- **Media literacy** – the “term is used to imply critical thinking in assessing information gained from the mass media: television, radio, newspapers and magazines, and (increasingly) the Internet” [Bawden, 2001, 225]
Information literacy – related concepts

- **Computer literacy, IT literacy and electronic literacy** [Bawden, 2001, 226]:
  - “the skills required to operate a variety of computer applications packages – word processing, databases, spreadsheets, etc. – together with some general IT skills, such as copying disks and generating hard-copy printout”

- According to Tuckett [1989] in [Bawden, 2001, 227] computer literacy has three components:
  - a general understanding of what computers can do
  - the skills necessary to use them as an effective tool
  - the demonstration of self-reliance in use of computers
Information literacy – related concepts

- Digital literacies: network literacy, Internet literacy, hyper-literacy, and multimedia literacy
- Network literacy is “the ability to identify, access and use electronic information from the network” – the basic components of network literacy include [McClure, 1994] in [Bawden, 2001, 249]:
  - knowledge:
    - an awareness of the **range and uses of networked resources**,  
    - an understanding of the **role and uses of networked information in problem solving** and ‘basic life activities’,  
    - an understanding of the system by which **networked information is generated, managed and made available**,  
  - skills:
    - **retrieval** of specific types of information from networks,  
    - **manipulation** of networked information; combining, enhancing, adding value,  
    - **use** of networked information to help make work-related and personal decisions”
Information literacy – related concepts

Literacies we are familiar with and other...

Information, knowledge society

It's all about information! And knowledge too!

[Ferguson, 2005]
Conclusion

- Information literacy – importance & value for:
  - Education – academic success
  - Workplace – professional success and growth
  - Lifelong learning

Relationship of information literacy to lifelong learning  [Australian and New Zealand Institute for Information Literacy, 2005, 5]
Literature