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INFORMATION LITERACY:

**SEEKING MEANING –
COMPETENCY, SKILLS AND LITERACY**

VON
SIRJE VIRKUS

INFORMATION LITERACY:
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COMPETENCY, SKILLS AND LITERACY

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Berliner Handreichungen
zur Bibliothekswissenschaft

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Conclusion:

Information literacy is a complex phenomenon and may be approached from a variety of perspectives. I look IL in my study as a way of learning and consider the characteristics of constructive learners as an important elements (prior knowledge, metacongnition, motivation, and with respect to learning itself, the complex variable "learning style").

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INFORMATION LITERACY: SEEKING MEANING – COMPETENCY, SKILLS AND LITERACY

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Lecture at Humboldt University

Agenda



- Background and Context
- Concepts
- Concerns
- Information literacy developments
- The survey

Background and Context:

Beliefs or why I started to be interested in IL

- In a learning environment the focus is still on the **technology** itself
- many students lack **'information literacy'** to transform information into knowledge and wisdom

Background and Context: Beliefs

An integrated 'information literacy' component in learning would have a positive impact on

- ✓ students' mastering of context,
- ✓ fulfilling research tasks and problem solving,
- ✓ becoming more self-directed,
- ✓ assuming greater control over their own learning,
- ✓ enabling individuals to engage in a variety of learning situations and opportunities in optimal ways

The Aim of the Study



- ‘The Impact of Information Literacy on Student Learning’
- The *aim* of the study is to develop a model for the effective delivery of ‘information literacy’ (IL) in higher open and distance learning (ODL).



Objectives:

- To map the extent of IL integration into the European ODL;
- To develop a model for the effective delivery of IL in European ODL;
- To develop procedures to measure how IL affect students' learning outcomes in ODL;

Methods



The study subjects are:

- learners
- instructors
- librarians in the ODL settings.

Phases of my study: starting point



- Information literacy - the ability to recognise when information is needed and to locate, evaluate, and use effectively the needed information (ALA, 1989; ALA, 1998).

Literacy

Learning

Concepts ?

Information

Competence

Competency

Expertise

Skill

Competence



- The concept of **competence** has different meanings and it is not always clear whether competence refers to identifiable skills, or is it related to patterns of behaviour.
- Many publications do not adequately define the exact nature of the concept to which they are referring and different terms are also being used interchangeably.
- The terms **competence** and **skill** are often described as synonyms.

Research approaches



There are competing research approaches to the phenomena of competence.

- **Rationalistic theories** approach competence as a set of relatively stable attributes possessed by actors or the set of requirements characteristic of specific work. In contrast,
- **Interpretative approaches** emphasize the importance of the ways in which actors experience the settings of action and construct meanings concerning action (Anttiroiko et al, 2001).

Competencies and skills



- Anttiroiko et al (2001) conclude that an exact definition and operationalization of the above concepts is difficult because ultimately, competencies and skills are invisible.

Competencies and skills



- They point out that **competence** has two dimensions – **knowledge** and **skills**.
- “Knowledge may be seen as our understanding how our everyday world is constituted and **how it works**. Skills involve the ability to pragmatically apply, consciously or even unconsciously, our knowledge in practical settings. In this setting, “skills” can be conceived as the technical aspects of competence, emphasizing the aspect of “**how to do**” (Anttiroiko et al, 2001).

Competence



- Complex cognitive skills (problem solving, qualitative reasoning, self-regulation, learning to learn);
- Highly integrated knowledge structures (e.g. mental models);
- Interpersonal skills and social abilities;
- Attitudes and values (Kirchner, 1997).

Skill 1



- In the UK context the report *Work Skills in Britain 1986-2001* concludes: “Despite the enormous interest in how skills in Britain have changed over time, how they are distributed, and how these trends and patterns compare with competing nations, there is surprisingly little agreement on what ‘skills’ actually refer to”.

Competencies and skills



- While there is growing agreement on the importance of skills as a key engine for economic growth and the spread of the knowledge economy, there is far less agreement on **which competencies and skills make the difference.**

Key or transferable skills



- There has been much discussion about the **key or transferable skills** needed by students to prepare them for life in the 21st century.
- The term key skills and its synonyms - **core skills, transferable skills, transversal skills, generic skills, soft skills, personal skills, core competencies, key competencies, general competencies, soft competencies**, etc. are used to describe the transferable skills which underpin competent performance in all fields.

Categories of transferable skills



There are also different approaches what kinds of skills are transferable. Stasz and Brewer have identified generic skills falling into four broad categories, each of which can be more fully defined:

- problem solving,
- teamwork,
- communications, and
- dispositions and attitudes (Stasz and Brewer, 1999).

Question?

- IS INFORMATION LITERACY TRANSFERABLE COMPETENCY OR SKILL?

Alternative approaches to competence



Cheetham and Chivers have reviewed a number of alternative approaches to competence which had been applied to professional occupations:

- **The reflective practitioner approach** - which focuses on tacit-knowledge and its application and advocates reflection as a key tool of both professional development and practice.
- **The technical-rational approach** - which focuses on teaching underpinning professional knowledge and theory as a basis for application.

Alternative approaches to competence



- **Functional competence** - typically embedded within occupational standards - which focuses on tasks to be performed and functional skills, rather than personal attributes or behaviours.
- **Personal competence** - which focuses on the personal attributes required for effective performance.
- **Meta-competence** - which stresses the importance of competencies that enable individuals to monitor and develop other competencies, or that span other competencies, enhancing or mediating them (Cheetham and Chivers, 1996; 2000).

Metacompetencies



- These competencies (creativity, problem solving, self development and related learning skills, communication) may either enhance other competencies or may be important to their acquisition. Linstead (1991), Hyland (1992) and Nordhaug (1993) use for them the term **meta-competencies**.

Question

- IS INFORMATION LITERACY METACOMPETENCY OR SKILL?

The Concept of Information

- Information seems to be everywhere. We talk of its being encoded in the genes... disseminated by media of communication... exchanged in conversation... contained in all sorts of things... Libraries are overflowing with it, institutions are bogged down by it, and people are overloaded with it ... [yet] **no one seems to know exactly what information is.**

Christopher Fox (1983, p.3)

Donald O. Case. Looking for Information: A Survey of Research on Information Seeking, Needs, and Behaviour. Academic Press, 2002

Literacy



- Literacy has been seen as a concept, a process, a competency, a skill and a tool that has meaning in relation to the demand of the economy and society or individuals and communities
- also a mode of behaviour, which enables individuals and groups to gather, analyse and apply written information to function in society
- Gilster sees it as a fundamental act of cognition (Gilster, 1997).

Literacy



- Some definitions imply that literacy is **static** or **absolute**,
- other definitions view literacy as **dynamic** or **relative**.

Literacy



- The International Adult Literacy Survey (IALS) defines literacy in terms of **proficiency levels of usage information to function in society and economy**.
- Literacy is defined as a particular **capacity and mode of behaviour**, the ability to understand and employ printed information in daily activities, at home, at work and in the community - to achieve one's goals, and to develop one's knowledge and potential (OECD/Statistics Canada, 2000, p. 12).

Literacy



In IALS literacy is measured operationally in terms of the three domains:

- **Prose literacy** - the knowledge and skills needed to understand and use information from texts including editorials, news stories, brochures and instruction manuals.
- **Document literacy** – the knowledge and skills required to locate and use information contained in various formats, including job applications, payroll forms, transportation schedules, maps, tables and charts.

Literacy



- **Quantitative literacy** - the knowledge and skills required to apply arithmetic operations, either alone or sequentially, to number embedded in printed materials, such as balancing a chequebook, figuring out a tip, completing an order form or determining the amount of interest on a loan from an advertisement (OECD/Statistics Canada, 2000).

Levels of literacy



- **Level 1** indicates persons with very poor skills, where the individual may, for example, be unable to determine the correct amount of medicine to give a child from information printed on the package.
- **Level 2** respondents can deal only with material that is simple, clearly laid out, and in which the task involved are not too complex. It denotes a weak level of skills, but more hidden than Level 1. It identifies people who can read, but test poorly. They may have developed coping skills to manage everyday literacy demands, but their low level of proficiency makes it difficult for them to face novel demands, such as learning new job skills.

Levels of literacy



- **Level 3** is considered a suitable minimum for coping with the demands of everyday life and work in a complex, advanced society. It denotes roughly the skill level required for successful secondary school completion and college entry. Like higher levels, it requires the ability to integrate several sources of information and solve more complex problems.
- **Level 4 and 5** describe respondents who demonstrate command of higher-order information processing skills (OECD/Statistics Canada, 2000).

Question

- IS INFORMATION LITERACY LITERACY AT LEVEL 4 AND 5?

Information literacy



- Skill
- Behaviour
- Attitude
- Process
- Library skill
- Research skill
- Study skill
- Factor
- Goal
- Philosophy
- Phenomenon
- Learning outcome
- Survival skill
- Key competency

Information literacy



- A new liberal art
- “an educational, societal, and democratic issue that should be of fundamental concern to all those who would call themselves educators (Bundy, 1998).”

Alternative terms



- *information empowerment*
- *information competence*
- *information competency*
- *information mediacy*
- *information problem solving*
- *information problem-solving skills*
- *information fluency*

Alternative terms



- *information literacy competence*
- *information literacy competencies*
- *information literacy and skills*
- *information literacy skills*
- *information handling skills*
- *skills of information literacy*
- *infoliteracy*

Information Literacy

- Interviews with 12 leading ODL managers and researchers in Wales, 2002, EADTU conference

Importance of Information

- “The ability to produce and use information effectively is thus a vital source of skills for many individuals. So, the knowledge economy is based on the production and use of information and knowledge... “ (OECD, 2001).

Importance of Information

Having the competence to use information effectively has been suggested also by management gurus as essential to organizational success (Drucker, 1994; Grainger, 1994; Senge, 1994).

Importance of Information

In 1992 Drucker argued, “executives have become computer-literate... but not many executives are information literate” (Drucker, 1992).

Importance of Information

In 1993 he stated that although knowledge is taking the place of capital, many people confuse data with knowledge and lack the skills to analyse and convert data into knowledge (Drucker, 1993).

Importance of Information

Alvin Toffler also claims that knowledge or information is nowadays the key to power not money or military force (Toffler, 1991).

Development of IL



- The concept of information literacy was first introduced in 1974 by Paul Zurkowski, president of the *US Information Industry Association*, in a proposal submitted to *the National Commission on Libraries and Information Science (NCLIS)*.

Development of IL



- USA (1970s)
- Australia (1980)
- Japan
- New Zealand
- Singapore
- South Africa

IL in UK



- The starting point for most information skills work in the UK remains the nine step plan identified by **Marland's group in 1981**.
- A working group was set up jointly in 1980 by the *British Library Research and Development Department* and the now-defunct *Schools Council* to produce practical guidance to teachers on developing information skills. The working party's reports *Information Skills in the Secondary Curriculum*, was sent to every secondary school in England and Wales

IL in UK



Marland provides a nine-point matrix:

1. Formulate and analyse need
2. Identify and appraise likely sources
3. Locate individual resources
4. Examine, select and reject resources
5. Interrogate resources
6. Record and store information
7. Interpret, analyse, synthesise
8. Present, communicate
9. Evaluate.

IL in UK



- SCONUL
- Big Blue
- The Chartered Institute of Library and Information Professionals
- UK OU
- Individual researchers (Webber)

SCONUL



- Their definition of IS in HE reflects the twin dimensions of the competent student and the information-literate person.
- The latter level of information skills, the adoption of the term information literacy is used.
- For the development of the information literate person SCONUL proposes seven sets of skills.
- The outline model of information skills generated in the briefing paper has now become known as the *Seven Pillars model*.

SCONUL



Stephen Town : “ information literacy is

- knowledge not skill,
- achieved by education not training,
- created through partnership between professionals and
- is a lifelong endeavour that is contextual in field and service access” (Town, 2002).

The Big Blue



- The project titled *the Big Blue* is funded by the *Joint Information Systems Committee* and is managed jointly by *Manchester Metropolitan University Library* and *Leeds University Library*. The Big Blue project is surveying present practice in IS training for students in higher and further education. The project aim is to establish a blueprint for the future, ensuring a coherent approach to the development of an information literate student population in the UK.

The Chartered Institute of Library and Information Professionals



- “We have adopted the commonly accepted distinction between information literacy and skills. **Information literacy** is about **providing all members of society with the information competences** necessary to function effectively within society – it might be termed functional information literacy.

The Chartered Institute of Library and Information Professionals



- The debate over **information skills** relates to the **higher level competences of information specialists**
- They define “**information literacy** “as a set of **basic competencies that should be used by everyone** (PAG, 2001; Muir et al, 2002).

Integration or stand alone?



- There is also a lack of agreement whether information skills should be integrated into subject areas or taught as a discrete discipline.

(Webber, SCONUL, OU UK)

David Bawden



- Bawden argues that one prevailing problem appears to be the enthusiasm of many commentators to give **a single all-encompassing definition** of information literacy.
- Some authors have drawn a very comprehensive list of skills that very few information professionals would possess in their entirety and refers to Maguire, Kazlauskas and Weir (1994) who wrote that information literacy, as commonly propounded, may be a noble concept, but it may also be a **utopian one** (Bawden, 2001).

Critics



Continuous concern about the term since 1990s.

In 1990 Arp noted that the phrase's meaning was **unclear**, especially to those outside the library community (Arp, 1990).

Critics



- According to Langford's article, Henri (1992) considered information literacy as the “**buzz concept in education**” throughout the 1980s,
- Breivik (1993) characterizes the frustration with this term: “We are going to change the term, we hate this term, it is no good. There are all these other literacies” and Wresch (1997) simply states that the “concept of information literacy is relatively new” (Langford, 1999).

Critics



- Several authors (Lincoln, 1987; Holloway, 1996; Henri, 1995) complain the labels *information literacy*, *information skills*, *study skills* are **fuzzy** and that the **teachers are not clear about what is meant by this term or how it relates to classroom practice**.
- Criticisms has also based on the difficulty of **assessing and measuring** information literacy.

Critics



- Foster (1993) suggests that its purpose is essentially to exaggerate the importance of librarians, by inventing a social malady which they alone can cure

German libraries

- **Benno Homann**, University Library of Heidelberg
- Germany: Ministry for education & research
- 2002 position paper

Questionnaire

- **SECTION A – POLICY**
- **SECTION B – CURRICULUM**
- **SECTION C – RESEARCH**
- **SECTION D – HIGHER DEGREE SUPERVISION**
- **SECTION E – ACADEMIC DEVELOPMENT PARTNERSHIP**
- **SECTION F - ABOUT YOUR INSTITUTION**

Conclusion



- Information literacy is a complex phenomenon and may be approached from a variety of perspectives. I look IL in my study as **a way of learning** and consider the characteristics of constructive learners as an important elements (prior knowledge, metacognition, motivation, and with respect to learning itself, the complex variable “learning style”).

References

- ALA (1998). A Progress Report on Information Literacy: An Update on the American Library Association Presidential Committee on Information Literacy: Final Report. <http://www.infolit.org/documents/progress.html>
- ALA (1989). ALA Presidential Committee on Information Literacy Final Report. Chicago: American Library Association.
- Anttiroiko, A.-V., Lintilä, L. & Savolainen, R. (2001). Information society competencies of managers: conceptual considerations, in: *In search for a human-centred information society*, edited by E. Pantzar, R. Savolainen & P. Tynjälä, 27-57. Tampere: Tampere University Press.

References

- Kirschner, P., Vilsteren, P. van, Hummel, H., & Wigman, M. (1997). A study environment for acquiring academic and professional competence. *Studies of Higher Education*, 22(2), 151-171.
- Felstead, A., Gallie, D. and Green, F. (2002). *Work skills in Britain 1986-2001*. The Department for Education and Skills research project: 2922000 - Skills Survey 2. Published 31-Jan-2002 WSB1. London: Department for Education and Skills.
- Stasz, C. and Brewer, D. J. (1999). *Academic skills at work: two perspectives*. MDS-1193. Berkeley, CA: RAND and the National Center for Research in Vocational Education.

References

- Cheetham, G. and Chivers, G. (1996). Towards a holistic model of professional competence. *Journal of European Industrial Training*, 20, 5, 20-30.
- Cheetham, G. and Chivers, G. (2000). A new look at competent professional practice. *Journal of European Industrial Training*, 24, 7, 374-383.
- Linstead, S. (1991). Developing management meta-competence: can learning help? *Journal of European Industrial training*, 6,14,17-27.
- Hyland, T. (1992). Meta-competence, metaphysics and vocational expertise, in: *Competence and Assessment*, 20, Employment Department, Sheffield, 22-4.

References

- Nordhaug, O. (1993). *Human capital in organisations*. Stockholm: Scandinavian University Press.
- Donald O. Case. *Looking for Information: A Survey of Research on Information Seeking, Needs, and Behaviour*. Academic Press, 2002.
- Gilster, P. (1997). *Digital literacy*. New York: Wiley.
- OECD/Statistics Canada (2000). *Literacy in the information age: final report of the international adult literacy survey*. Paris: OECD and Statistics Canada.
- Bundy, A. L. (1998). Information literacy: the key competency for the 21st century. Paper presented at the International Association of Technological University Libraries Conference, Pretoria, South Africa, June 1998.
<http://educate.lib.chalmers.se/iayul/proceedcontents/pretpap/bundy.html>

References

- OECD (2001b). *Educational policy analysis 2001*. Paris: OECD, Centre for Educational Research and Innovation.
- Drucker, P. (1993). *Post-capitalist society*. New York, NY: Harper Business.
- Drucker, P.F. (1994). *Managing in turbulent times*. Oxford: Butterworth-Heinemann.
- Senge, P.M. (1994). *The fifth discipline: the art and practice of the learning organization*. New York, NY: Currency Doubleday.
- Grainger, P. (1994). *Managing information: your self-development action plan*. London: Kogan Page.

References

- Toffler, A. (1991). *Powershift: Knowledge, wealth and violence at the edge of the 21st century*. New York, etc.: Bantam Books.
- Marland, M. (1981) (ed). *Information Skills in the secondary curriculum: the recommendations of a working group sponsored by the British Library and the Schools Council, (Schools Council Curriculum Bulletin 9)*. Methuen Educational.
- Town, J. S. (2002). Information literacy: definition, measurement & impact. *Paper presented at the International conference on IT and information literacy, 20th-22nd March 2002, Glasgow, Scotland.*
- PAG (2001). *Report of the Policy Advisory Group on a National Information Policy*. London: The Library Association.

References

- Muir & Oppenheim (2001). *Report on developments world-wide on national information policy*. Prepared for Resource and the Library Association by Adrienne Muir and Charles Oppenheim with the assistance of Naomi Hammond and Jane Platts, Department of Information Science, Loughborough University. Report printed September 2001, published on-line February 2002.
- Maguire, C., Kazlauskas, E. J. and Weir, D. (1994). *Information Services for Innovative Organisations*, San Diego CA: Academic Press.
- Bawden, D. (2001). Information and digital literacies: a review of concepts. *Journal of Documentation*, 57(2), 218-259.

References

- Arp, L. (1990). Information literacy or bibliographic instruction semantics or philosophy? *RQ* 30,1, (Fall), 46-49.
- Henri, J. (1992). *Cooperative learning and team teaching: A conceptual framework*. Wagga Wagga: Centre for Information Studies.
- Breivik P. (1993). Information literacy: What's it all about, in: *Information literacy: The Australian agenda*. Edited by D. Booker. Adelaide: University of South Australia, 6-18.
- Wresch B. (1997). *Information literacy: Lessons that work*. Available: <http://www.uwsp.edu/Acad/math/ilitlesn.html>
- Langford, L. (1998). Information literacy: a clarification. *School Libraries Worldwide*, 4, 1, 59-72.

References

- Lincoln P. (1987). *The learning school*. London: British Library.
- Holloway R. (1996). Information literacy: Diffusion of an innovation, in *Learning for life: Information literacy and the autonomous learner*, edited by D. Booker. Adelaide: University of South Australia, 32-38.
- Henri J. (1995). The information literate school community: Exploring a fuzzy concept. *Scan* 14(3): 25-28.
- Foster, S. (1993). Information literacy: some misgivings. *American Libraries*, 24 (April), 344.

Questions & Comments

Thank you for your attention