### Information Literacy in the 21st Century

#### Carmel McNaught

The Chinese University of Hong Kong, China

#### **OVERVIEW**

Information literacy is a key capability for the 21st century. The distinction between information and knowledge is central to understanding the meaning of information literacy. Information literacy goes beyond that of information retrieval and evaluation. An information-literate person actively uses information to further personal learning and growth with respect to all facets of life. The importance of planning information searches and prioritizing potential sources of information is stressed, as is the need for active engagement with information to seek understanding. It is at this point that the bridge between information literacy and learning occurs; the transformation of information into knowledge that is demonstrated in the production of a unique product (be it an essay, report, media object, etc.). Technology can facilitate learners' development of information literacy skills but also bring new challenges. The model of a community digital library may be a valuable one in this regard. One challenging but exciting new area is how e-books may contribute to curriculum design in the 21st century. Another emerging area that will impact on information literacy is the nature of online communities and whether Web 2.0 will bring new levels of information literacy to learners of all ages in the 21st century.

# BACKGROUND: THE NATURE OF LEARNING

Normally, the goal of searching for information is to learn more about the topic under investigation. It is worthwhile spending a little time looking at the meaning of learning. Learning is a complex process. How do people learn the important ideas they need to know? Do they assimilate information which they then reproduce? This might be possible for certain facts, but even then, if the facts are all unrelated, it is hard to remember them. Learning is much easier if connections can be made between ideas and facts. How can these connections be made? Is it by rules, as in a

system of information processing, much like the way a computer can be programmed? This might be possible for learning fixed processes which are always the same, for example, a laboratory procedure such as setting up an electrical circuit from a diagram, or routine clinical procedures such as taking a patient's blood pressure. But sets of rules are not enough when learners need to solve a problem they have not seen before, or when they want to design something quite new (a bridge, a poem, or a plan for doing new research). Something else is needed then. In these cases, learning appears to be a complex process where knowledge is constructed from a variety of sources. What people learn depends on what they already know, how they engage with new ideas, and the processes of discussion and interaction with those they talk to about these ideas. Learning is thus a personal adventure leading to knowledge construction. The outcomes of one learning process often have deep implications for how future learning might occur.

The outcomes of any education process, especially if we take a lifelong view of learning, are usefully described by broad capabilities, such as the list of clusters of abilities noted by Nightingale, Te Wiata, Toohey, Ryan, Hughes, and Magin (1996): thinking critically and making judgments; solving problems and developing plans; performing procedures and demonstrating techniques; managing and developing oneself; accessing and managing information; demonstrating knowledge and understanding; designing, creating, performing; and communicating. It is with broad view of learning that I now turn to a consideration of information literacy.

# SPECIFIC FOCUS ON INFORMATION LITERACY

#### **Meaning of Information Literacy**

Information literacy is integral to the development of many of the capabilities listed above. A useful working definition of information literacy might be as follows:

Information Independent Social responsibility literacy learning Information Literacy

Figure 1. Nine information literacy standards (after ALA & AECT, 1998)

Standard 1: The person accesses information efficiently and effectively.

Standard 2: The person evaluates information critically and competently.

Standard 3: The person uses information accurately and creatively.

Independent Learning

Standard 4: The person pursues information related.

Standard 5: The person appreciates literature and other creative expressions of information.

Standard 6: The person strives for excellence in information seeking and knowledge generation.

Social Responsibility: contributing positively to the learning community and to society Standard 7: The person recognizes the importance of information to a democratic society.

"Information literacy involves accessing, evaluating, managing and communicating information."

Information literacy is not synonymous with learning and, in order to understand this, the difference between information and knowledge needs to be explored. This difference is often not clearly defined, and indeed there is often a strong overlap in normal conversation. The analogy of the difference between the bricks and mortar and the house can be useful. Information is the bricks, and learning skills and processes constitute the mortar. Combining "bricks" of information together using appropriate strategies (mortar) can result in a new house of knowledge. Knowledge is constructed from information. Thus, an information-literate person is someone who can find and select the right information for any given task. In this sense, information literacy is a prerequisite for learning.

With this basic definition in mind, let us take a more detailed look at information literacy standards and skills. The American Library Association and Association for Educational Communications and Technology (ALA & AECT, 1998) produced a list of nine information literacy standards. By standards

is meant goals or benchmarks. There are three areas with three standards in each area. The three areas are information literacy, independent learning, and social responsibility. The fact that information literacy itself is a subset of the information literacy areas is an illustration of the challenges that occur when one tries to define the boundaries of information literacy. What is helpful about this framework is the sense of moving from a more neutral skills orientation to a value-laden position of social connectedness. The nine standards are shown in Figure 1 with the centrality of the information literacy area highlighted.

One other useful term is "critical literacy." This essentially encapsulates all nine of the standards described above. Van Duzer and Florez (1999) describe critical literacy as encompassing "a range of critical and analytical attitudes and skills used in the process of understanding and interpreting texts, both spoken and written." The term is often used with adult language learners but its applicability is much wider. It is useful to be reminded that aural (and oral) skills are also needed in developing high levels of information literacy. In our multilingual societies this reminder is especially important.

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