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Defining Information Literacy in the 21st Century

By Sandy Campbell
Science and Technology Library
University of Alberta
Edmonton, AB
Canada

ABSTRACT

Considerable effort has been invested by practitioners in many parts of the world in defining information literacy. Much of this work has taken place in the academic environment. What is the relationship between information literacy as we define it in higher education and information literacy among non-academic populations? What forces will change how we think about the definition of information literacy in the future and how we will apply the definition in all environments? What is the future role of the International Federation of Library Associations in defining Information Literacy?

Defining Information Literacy

Information literacy is not a term without definition. In fact, so much effort and ink has been dedicated to defining this term that Edward Owusu-Ansah has suggested calling a halt to defining the term and just getting on with the business of doing information literacy.[1]

The most generally accepted definition of information literacy that one finds in the literature is the one put forward by the American Library Association in 1989:

> *To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information.*[2]

While this definition emanates from North America, it is not substantially different from those being applied in other countries such as the United Kingdom, South Africa and Australia and the Nordic countries.

Does this Definition Apply to Everyone?

"Information literacy" is a concept that is largely discussed in the context of higher education. As Hannelore Rader has noted in her extensive review of the subject, the practice of information literacy instruction is largely restricted to academic libraries, with some recent activity in public libraries around computer literacy and minimal activity in special libraries.[3] In 2000, academic librarians further specified what this definition means in practical terms in the publication of ACRL's "Information Literacy Competency Standards for Higher Education"[4]. Currently, ALA's Task Force on Information Literacy in Science and Technology is working to adapt these competencies to the scientific and technical sector of higher education.[5]

The practice of librarians undertaking the teaching of information skills has two sources, one philosophical and one practical. At the philosophical level, most librarians believe that information literacy is a part of a student's well-rounded skill set that will help him or her be more efficient and effective in the future. At the practical level, information literacy instruction is a self-defense mechanism. Librarian to student ratios are so low in most post-secondary institutions that librarians must teach students to be information self-sufficient and do so mostly in classroom settings. As the environments of academic libraries have changed, the terminology and definition have changed and broadened. What started as library orientation, grew to be library instruction and bibliographic instruction and finally became information literacy.

While the ALA definition is broad and inclusive, most of the discussion in the literature centers around the practice of information literacy in the academic environment, whether in elementary school or at the university or college level. When we in academic libraries think of the information-literate user, we have a particular picture in mind. We think of a person who has all the skills required to access the vast quantities of information that we have carefully collected and arranged for them. We think of people who can use a computer, connect to the internet, access a variety of kinds of information, distinguish between levels of quality and validity of information, comprehend the content of the information so that they can apply it and are aware of the rules around the use of information. However, I submit that academic librarians have appropriated the concept of information literacy from the population at large and focused it on our small corner of the world of information.

What of the billions of people who are not part of the higher education process? What of the people who never set foot in a library in search of information? I am not

speaking here, necessarily, of the stereotype of children in less-developed nations whose classroom is a spot in the dust under a tree. I am speaking of the average Canadian, and their counterparts in other countries, who last used a library when they were in school and now retrieve all of their information from friends and family, experts whom they contact, the media and increasingly, Google™. We view the information skills of these people through the lens of what we expect to find in the average student and consider their skills, by comparison, to be poor. Even our term "information literacy", excludes large portions of the world's population and the world's information, because it implies reading and a written format.

In fact, if we test the general population's information literacy skills against the ALA definition, we find that they meet the definition quite well. Further, if we were to put ourselves into their environment, we might find our own information skills woefully inadequate. For example, recent research by Argentinean anthropologist Claudio Aporta, reveals some fascinating information competencies among Inuit in Canada's Arctic. The Inuit of Igloolik have, for generations, routinely navigated across the treacherous and seemingly chaotic sea ice between Melville Island and Baffin Island (see map Appendix A). Aporta's research revealed that the Inuit are guided by traditional knowledge about ice structures which re-form in the same place each year as a result of ocean currents and underwater landforms: "Through detailed knowledge of ice topography, sea ice becomes a familiar territory for the Inuit of Igloolik, and, through the deep understanding of the 'codes' of the moving ice, its changing nature becomes predictable."[6] Inuit people planning to make a sea ice journey seek out someone who has information about the "ice marks" and follow their instructions to make the journey safely. The process does not require either party to be able to read and write.

Does the ALA definition of information literacy apply in this situation? Absolutely! The Inuit have a clear need for information. They know whom to approach to get the information. They can evaluate who has the most experience or is the best navigator. They can also use the information appropriately and execute the task of safely crossing the ice to a desired place. By the ALA definition, the Inuit are information literate.

It is worth noting that the Inuit are not a society restricted to traditional knowledge. Neil Christensen's recent work *Inuit in Cyberspace*[7], delineates the extent to which the Inuit in Canada, Alaska and Denmark have adopted and make use of the World Wide Web. However, in the case of the sea ice topography, the information they need is not available on the Web, or in fact, anywhere except directly from their human sources. Further, unlike their laptops, information learned orally and memorized will not run out of battery power and strand them, potentially fatally, in the middle of the ice.

By the ALA definition, most of us in this room, placed on the margin of the frozen Arctic Ocean and faced with a trek across it, would not be information literate. It is unlikely that any of us would even imagine that the ice would re-form each year in a predictable pattern and therefore we would not know that the information existed. We would not know who we needed to ask, or how to appropriately ask for the information.

Even if someone did supply us with the information, we would not be competent to apply it successfully.

So, we need to interpret the definition of information literacy very broadly, and in fact, there has been some discussion in this direction. In his summary of various academic attempts to define information literacy, Edward Owusu-Ansah concludes, "What all these proponents seek is a phenomenon that defines and advocates conversance with the universe of information within which information age participants operate in their everyday lives, in school, in their work environments, and within their social associations and interactions".[8] Perhaps what we really need to do is not study the definition of information literacy, but rather change the term to encompass this idea. Hannelore Rader has suggested the term "information fluency" as an alternative.[9] "Information competence", might be another way of encompassing our users' complete set of information skills.

Whatever we call it, the ALA definition, itself, is broad enough to encompass the entire spectrum of information skills from Inuit traditional knowledge to high-tech search engines, and will probably still be applicable for many decades.

What Forces Will Shape How We Apply the Definition of Information Literacy in 21st Century?

In the short term the practical definition of information literacy will change little for much of the world's population. It will take a long time before we realize the sweeping goals of the recent World Summit on the Information Society:

> *"…to build a people-centred, inclusive and development-oriented Information Society, where everyone can create, access, utilize and share information and knowledge, enabling individuals, communities and peoples to achieve their full potential in promoting their sustainable development and improving their quality of life…"*[10]

One of the primary steps toward the creation of the Information Society is the deployment of Information and Communications Technologies (ICTs) of "people in all corners of the world". As more ICTs are dispersed, appropriate levels of information literacy instruction must accompany the delivery of technology to ensure that people will be able to use it.

As we work towards the goals of the Summit, we need to find ways to meet the information literacy needs of those people who are not part of the Information Society. As Gary E. Gorman says in his recent work on issues around sustainable development and information literacy, "it is better to focus on teaching people how to utilize the information they can readily and regularly access, whether it is in a printed pamphlet from a government department, a radio programme, a newspaper – whatever is locally available."[11]

In libraries where we already have access to ICTs, there a number of forces at work that will cause us to redefine how we deliver information literacy programs in the future.

1. Libraries are no longer the primary sources of information

Our users have a wide variety of sources from which they can acquire information. In the past, we knew what information sources our users would be accessing, because we supplied them. We defined for our users what their information literacy needs would be and how we would satisfy them. We were able to maintain that stance because libraries were the gatekeepers of information and if people wanted to use it, they had to be trained to our set of rules.

All that has changed. The verb, "to google", now exists in English with a new meaning. When a student says, "I'll google it", it means that he or she is going to perform a search of the Internet through the Google™ search engine. Through the Internet many people, including our post-secondary students are satisfying a broad spectrum of their information needs. A recent announcement from CrossRef™ tells us that some of the largest scholarly research data sources, such as Institute of Physics Publishing, Oxford University Press and Blackwell Publishing will be searchable through Google™ [12]. From the students' perspective, "what I need to know for my research" and "what I need to know in the rest of my life" can now be answered by a search in a single box. The library has become just one of a variety of information sources for our users and the users have developed their own skill sets to deal with each. The only thing that will force the user to come to us and learn our systems will be that libraries will have the money to buy information products and license them for users.

2. We will not be dealing face-to-face with our users

The ARL *LibQUAL+™ Spring 2003 Survey* tell us that across ARL libraries, twice as many users access library resources through a web page on a daily basis, as use the resources on the library premises. More than four times as many of the same users use Yahoo™, Google™ or some other non-library gateway on a daily basis.[13] Libraries have been responding to that reality with instruction in the electronic environment.

At the University of Alberta, our experience with virtual reference tells us that our users ask the same range of questions electronically that they asked in person at the reference desk. One-on-one instruction has always been a large part of the reference process and we are conducting similar instructional sessions through chat and co-browsing technologies. The literature contains many examples from around the world of information literacy being delivered electronically. Information literacy courses are being delivered on-line, librarians are collaborating with faculty to include information components in on-line courses, librarians are creating point-of-use electronic guides and web sites for information literacy purposes and instruction is being delivered through e-mail and virtual reference services.

3. User defined information literacy

Because the users will come to us with a variety of skills acquired in a variety of environments, they, not librarians, will define the information literacy instruction they need. Librarians in higher education will still have the opportunity to supply instruction that will take users to a general level of competence but much more of the instruction will become point-of-use or just-in-time, as the users identify gaps in their knowledge and seek help, either from context-sensitive help pages or from a librarian.

4. Requirement of Rigorous Assessment

Because of the substantial changes happening in the availability and delivery of information and the variety of environments in which users require information, everyone delivering information literacy instruction must evaluate their programs rigorously. Not only must we meet the users' changing needs, we must also be able to demonstrate in a concrete way that information literacy programs are good value for the resources invested. The definition of any information literacy program must now include some evaluative component that will reveal the extent to which the program was successful. Project SAILS (Project for the Standardized Assessment of Information Literacy Skills)[14] is an attempt to develop a standardized tool which will allow librarians in advanced educational institutions to assess their programs.

How Will We Apply the ALA Definition in Our Instruction in the Future?

As we adapt to the changing environment, we will see changes in how we apply the ALA definition of information literacy in our instructional activities. Because search engines are integrating searches of library catalogues, journal indexes, e-texts and web-sites, there is less need to teach the peculiarities of diverse secondary and tertiary sources. Our focus will move away from teaching people what tool to use to locate information to other parts of the information literacy definition, specifically:

a. Critical Thinking and Awareness of Information

Because fewer of our users are presenting themselves to us in the traditional library environment, librarians will have less opportunity to work with them over the course of a research project. Therefore we must work to make them more self-reliant at the very beginning of their search for information. We will need to focus more of our information literacy efforts on developing students' ability to identify the fact that information is needed, their awareness of what kinds of information are needed and whether or not that information is likely to exist. In some jurisdictions the "critical thinking" part of the information literacy definition is already being embedded into the elementary school curriculum.

b. Decoding the Packaging

Even in the print environment, the packaging of information in formats other than text requires the user to have extra information skills to use the information. Interpretation of statistical data, cartographic and spatial data, and visual information require additional information literacy instruction. It will become much more important to teach people how to decode the electronic packaging of information so that they can

evaluate the authenticity and authority of the information they find. Identifying the credentials of the creator of the information will be more of a challenge. Also, more information is being delivered visually. Even text accessed through the Internet is now delivered as an image on a screen. Because of this, the ability to understand why an image is presented in a particular way and the impact of the visual presentation on the viewer will become a critical piece of information literacy.

c. Appropriate Use of Information

The ease with which users can move and alter information in the electronic environment has amplified a whole range of social, ethical, legal and economic issues around the appropriate use of information. Within the academic sphere, we are already seeing considerable efforts in the development of instruction around cyber plagiarism. As more people from around the globe make their information available through the web, information literacy instruction will need to develop sensitivity to cultural variations in what is considered to be appropriate use of information. In several jurisdictions we have already seen the introduction of information privacy legislation, adding a whole new set of skills to the definition of information literacy took kit.

What is IFLA's Role in Defining Information Literacy in the 21st Century?

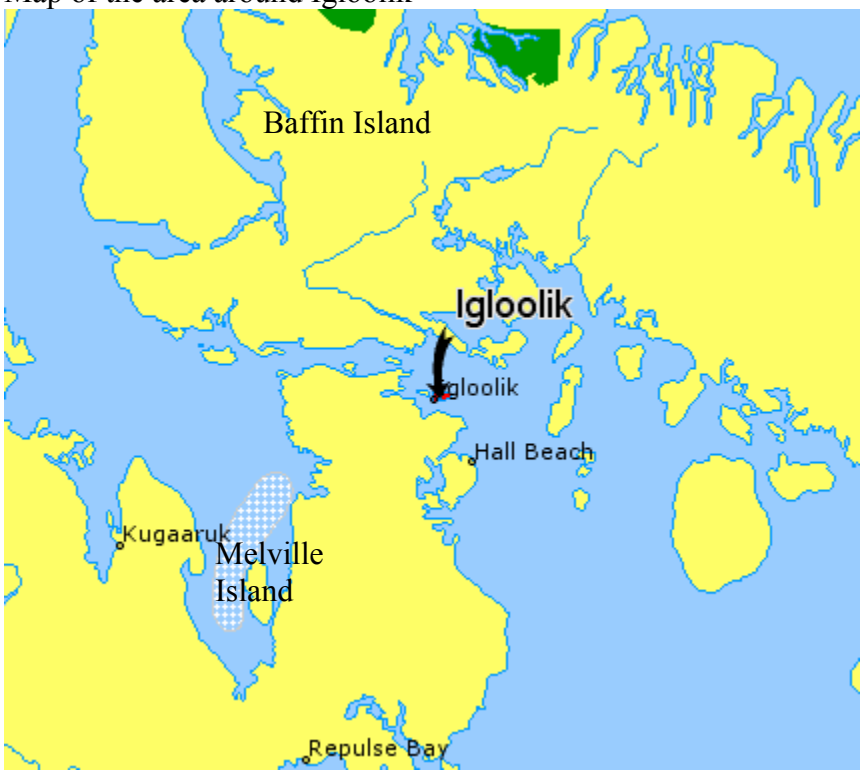
There is little point in continuing the discussion around the definition of information literacy unless we also discuss ways in which we can realize the goals described in the definition. The role of IFLA in defining information literacy in the future is one of balance and inclusiveness. I have demonstrated that the discussion around information literacy is heavily weighted towards practices in the academic arena, in part because this is where it is most often practiced and researched. IFLA has a role in broadening the practical definition to include all forms of information literacy for all people.

IFLA has included information literacy statements in many of its policy documents, including The IFLA Internet Manifesto[15], The IFLA/UNESCO School Library Manifesto[16], and The UNESCO Public Library Manifesto[17]. More recently, we can see the impact of IFLA's activities in section C4 of the *World Summit of the Information Society* *Plan of Action*, which reads, "Everyone should have the necessary skills to benefit from the Information Society" and goes on to refer to ITC (Information and Communication Technology) literacy and later e-literacy.[18] However, there is much more work to be done in specifying how ITC literacy and e-literacy will be developed and implemented in tandem with the delivery of the Information and Communication Technologies.

In addition to continuing its information literacy related lobbying efforts and partnerships with other organizations, IFLA has a role in supporting the creation of standards against which librarians and libraries can evaluate all forms of information literacy, in supporting and valuing all forms of information literacy, and in continuing to provide various forums in which all interested parties can share their successes in defining information literacy in their own environments.

APPENDIX A

Map of the area around Igloolik



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Author Contact Information:
Sandy Campbell is Acting Collections Manager for the Science and Technology Library at the University of Alberta. She can be contacted at sandy.campbell@ualberta.ca.