Information Literacy or Information Chasm? : Looking towards an equitable information philosophy

INTRODUCTION

Information literacy is broadly defined as our ability to understand, negotiate and utilise all sources and media that present us with information. To comprehend the recent urgency for information literacy to be an accepted concept in contemporary society, it is necessary to discuss information literacy in parallel to our emergence as an 'information society' in an 'information age'. Information literacy and the mastery of new technologies are necessary for all members of society to be productive in the workplace and to increase their personal development by accessing relevant knowledge. The paper will discuss the concern by key global and international bodies that the lack of information technologies and vital education in information literacy to some sectors of society is adding to the information 'rich' and 'poor' chasm. Australian educational and government sectors are addressing information literacy needs for Australian citizens. The paper will discuss concerns that education in information literacy is being emphasised in the context of technology and computer competencies rather than as a philosophy. It will become clear that issues of 'information poor', 'information economy' and 'information technology' is inextricably linked to information literacy. There is a much wider scope to the 'information profession' than half a century ago and the paper will discuss the importance of information literacy as an ongoing learning process for information professionals and their clients.

HISTORY

Being 'literate', that is, having the ability to use and understand language, has been an issue for centuries. To be 'information literate' had not been widely discussed until 1974, when Paul Zurkowski from the then US Information Industry Association envisioned the need for all people to become adept in information technologies and the evaluation of information (Spitzer, Eisenberg and Lowe 1998, p22; Bundy 2000 p 508). In his report he wrote:

People trained in the application of information resources to their work can be called information literates. They have learned techniques and skills for using a wide range of information tools as well as primary resources in moulding information solutions to their problems. (Zurkowski 1974 cited in Candy, 2003 p6). In the context of history the emphasis on information literacy is a relatively recent but important one. Fang (1997 p. xvi) defines six information and communication 'revolutions' throughout history, times when there have been:*"...profound changes involving new means of communication that permanently affect entire societies...".*

Consider Fang's timeline briefly:

Writing in 8 BC, Phonetian Alphabet – Storing Knowledge

Printing in 1450, Gutenberg Press and paper from China – Information Spread

Mass Media 1850, Newspapers and telegraph to the masses, development of libraries

Entertainment 1900, Stored sound, nickelodeons and motion photography

Communication Toolshed Home 1950 TV, radio broadcasting and telephone

Information 2000 Information Superhighway! Satellite and visual technologies (including the development of the networked computers ie the Internet in 1969 and the blossoming of the World Wide Web in 1989 when networks started talking to each other) (Fang, IE 1997).

Society as we know it today is defined by Fang (1997 p. xvii) as the *"The sixth revolution, the Information Highway, is now being constructed out of convergence of computer, broadcasting, satellite, and visual technologies.*

With the latest expansion to the WWW's dimension's, including the interactive Web 2.0 and the Knowledgeable Web 3.0, it is clear the revolution continues**!**

Bell (1973, cited in Middleton 2002 p447) saw that post industrial society was increasingly relying on information workers. The economy was becoming more dependent on knowledge and information management and to function efficiently the workforce needed to be information literate. The world economy is today more reliant on knowledge and information management than any era in history. For example, Bartholomeusz (2004) and Kohler (2004), in articles in *The Age,* respectively emphasised the economic importance and the electronic efficiency of *Sensis,* Telstra's Yellow Pages, now in the form of an electronic business database. Changes such as these highlight the greater importance on information literacy skills necessary to

conduct business and negotiate new forms of information. There is strong evidence however that all sectors of society are not yet equipped and ready to thrive in the information age.

GLOBAL

Muir and Oppenheim (2001 p2) found that in their *Report on Developments World-Wide on National Information Policy* that there was little initiative from Governments throughout the world to address information literacy. Although there was talk of the importance of information literacy, the focus was on information infrastructure, literacy and ICT skills are seen as separate entities, not as one holistic approach.

The United Nations Literacy Decade (UNLD) was declared by the United Nations General Assembly in December 2001. UNESCO is convinced that "literacy is crucial to the acquisition, by every child, youth and adult, of essential life skills", that It aims to support the goal of achieving education for all by addressing the more than 774 million adults and 72 million out-of-school children in this world who are still deprived of literacy and of access to literacy learning activities.

http://www.unesco.org/uil/en/focus/unliteracy.htm

In 2003 UNESCO declared the *United Nations literacy decade 2003 – 2012* to promote to world governments and leaders the creed of *Literacy as Freedom* in response to: '*Inequities among nations and individuals in today's Information Society*' (UNESCO 2003 p1). Aoyagi (cited in UNESCO 2003 p1), from UNESCO'S division of Basic Education saw the need for information literacy to become an important part of policies that promote human development and democratic participation. Consequently delegates from UNESCO, the US National Commission on Libraries and Information Science (NCLIS) and the National Forum on Information Literacy met in the Czech Republic to formulate *The Prague Declaration* in September 2003. The declaration strongly advises Governments to address information literacy programs nationally, as a key to the development of society in reaching equity of access and use of information for all citizens, thus enhancing information flow to education, culture and economy. The proponents of *The Prague Declaration 2003* propose that Governments and international communities should do

this by: *providing ready access to communication technologies, unrestricted availability of needed information, and information literate citizenry... to create a competitive workforce* (The Prague Declaration 2003).

For many third world communities, who are still coming to terms with basic human needs and basic literacy, these new directives seem more inequable than ever. For third world and developing countries who are without participation in, and exposure to, the worldwide technology phenomenon, the information rich and poor chasm will undoubtedly grow wider, not correct this divide, and definitely not quickly create an economically viable workforce. Bannerman (1996 p250) reinforces the dilemma of cultural poverty as a combination of illiteracy in one's own culture and the failure to be connected with technological forms of communication, concluding that *technological competence has joined literacy as a potent factor capable of separating culturally rich from culturally poor.* Hawkins (2001, cited in Stern 2003 p5), Stern (2003 p5) and Pejova (2003 p2) relate that developing nations need solid education programs in basic information literacy, that is, basic literacy skills and the skills in seeking, evaluation and productive use of any means of non digital information and knowledge accessible to them. This will then place these citizens and students in a much improved situation to tackle digital information literacy when the technology arrives.

The Association of College & Research Libraries (1989 p2) indicated that the Information Age was dictating that only those with money could access large components of information. This report went on to say *'The cultural and educational opportunities available in an average community are often missed by people who lack the ability to keep informed of such activities'* and *...the people who most need the empowerment inherent in being information literate are the least likely to have learning experiences that will promote these abilities'* This report is based on American society. It seems even the 'superpower' of the world economy needs to be concerned with its own information illiteracy.

PERSONAL EXPERIENCE

In 2007, this author had the privilege of working as a Visiting Professional with the library of the International Criminal Court in the Hague.

The International Criminal Court (ICC) in Den Haag (The Hague) was been set up in 2003 for the purposes of representing victims of crimes against humanity and

genocide, who have no access to a fair judicial system in their homeland, and bringing the perpetrators of those crimes to justice using the legal community of the ICC.

The ICC Library was established in 2003 and now represents an important tool and mandatory point of reference for ICC officials, the legal community, academic representatives, researchers and members of the media interested in the development of international criminal law.

In the context of a mutually beneficial Internship Programme, Interns gain an understanding of the Court's objectives and of the challenges faced by the organisation in general, and a detailed knowledge of the mission and work of one area of the Court in particular. With practical experience of the implementation of international criminal justice in this unique institution, participants will have an opportunity to augment their knowledge and expertise at the national or international level whilst making a valuable contribution to the work of the Court.

Most importantly through the Internship Programme, the Court aims to foster an international cadre of active supporters and advocates who will be ideally placed within their respective professional and national communities, to raise awareness of the role of the Court; contribute to the strengthening of their national judicial systems; and promote cooperation with the Court, thus giving effect to the spirit of complementarity. (International Criminal Court, Den Haag, 2007)

Interns to the court came from third world countries including Sierra Leone and The Congo, grasping to make sense of information and sources for research, especially large databases such as Westlaw. IT is where, w in the library as information workers gave a great deal of support, experience and expertise o the interns. These interns were are from developing nations and the ICC is giving them rare opportunities, however, it is still not enough and funding is drying up.

DEVELOPING NATIONS AND THE ICT INDEX

Report 'Measuring the Information Society' by the International Telecommunications Union 2009

'In the developing world, mobile phones have revolutionized telecommunications and have reached an estimated average 49.5 % penetration rate at the end of 2008 – from close to zero only ten years ago. This is not only faster than any other technology in the past, but the mobile phone is also the single most widespread ICT today. The

number of Internet users, on the other hand, has grown at a much slower rate, in particular in the developing world, where at the end of 2007 only 13 out of 100 inhabitants used the internet. fixed internet access in developing countries is still limited, and where available, often slow and/or expensive. high speed (broadband) connections are rare and mobile broadband, while increasing steeply in high-income countries is sill insignificant in most developing countries.'

'in the light of such developments, the question remains as to whether the global digital divide is widening or narrowing, what the contributing factors are, and what progress has been made by individual countries to close the digital divide'.

The ICT Development Index provides trends and developments to ICT service providers, market analysts and policy makers with measurable facts and comparable indicators to provide a comprehensive picture of where countries stand in their evolution towards an information society.

'One of the objectives of this publication (ICT Development Index) is to respond to those calls and provide policy makers with a useful tool to benchmark and assess their information society developments, as well as to monitor progress that has been made globally to CLOSE THE DIGITAL DIVIDE.

'Measuring the Information Society: The ICT Development Index'. 2009, International Telecommunications Union, Geneva

AUSTRALIA

GOVERNMENT

In 1991, the Australian Parliament released the report titled *Australia as an Information Society: grasping new paradigms* The report addresses the need for Australia to assess what it means to be an information society in the context of a global and national economy and issues such as information literacy need to be formalised in a National Information Policy (Australia, parliament 1991, p19). It is recognised in the report that a National Information Policy needs to address the issue of the class differences that may widen when one sector of society has a growing skills base and the other suffers significant disadvantage of similar opportunities. (Australia, parliament 1991, p20) This report indicated that to achieve an understanding of the implications of information for informed citizens as well as an

informed workforce, educational programs must develop through the three tiers of education (Australia, parliament 1991, p26). The Australian Bureau of Statistics (ABS) figures for 2001 indicate a direct correlation between lower income, less educational opportunity and decreased use of computers (ABS 2001, pp194 – 195).

WORKPLACE

The National Board of Employment Education and Training (1994) discussed the implications of converging communications and computer technologies on the future employment and skills of Australia's workforce. While there is a real need to equip workers with technological skills and competencies for the workforce there is also danger of not emphasising the 'human' qualities of communication, evaluation, processing and knowledge management. Bruce (1997 pp31-34) relates the seven fundamental tenets or 'faces' of information literacy that combine to present an 'information philosophy' that can blanket the needs of society, education, industry, business and corporations. Central to the heart of Bruce's philosophy is that *information literacy should be a significant element of learning organisations as well as being a key characteristic of lifelong learners*. (Bruce 1997 p 29). Two of the Bruce's seven faces of literacy are the cornerstones, which if applied, can assist all members of society to make sense of, and thrive in our information age; they are the importance of creatively combing knowledge and personal perspectives, and using information wisely for the benefit of others (Bruce 1997 p33).

The Seven tenets of Information Literacy:

➢ Using Information Technology
➢ Using Library and Computer Literacy
➢ Acquiring mental models of information systems
➢ Combination of information and technology skills
➢ Information literacy as a process
➢ Information literacy as an amalgam of skills, attitudes and knowledge

Information literacy as first component in the continuum of critical thinking

(Bruce 1997)

EDUCATION

These three media examples express a feeling that the understanding of computer technology is being emphasised at the expense of understanding information itself and how to use it:

- 'Information literacy – the effect of new technology on literacy' (1996), a discussion with educational consultant Don Tinkler on ABC Radio National, relates that 'computer studies' have outstripped fundamental literacy as a necessary competency in the school syllabus since computers became a feature of the school landscape in the 1980's.

- Kingsley (2003) relates to the ABC's *News in Science* that Australia is actively addressing the needs of teenagers to productively navigate the world wide web in the light of research from Britain that suggests teenage confidence in their ability to find relevant information 'sucks'.

- Cochrane (2003) relates in his article in *The Age* titled *Too much information,* that the state of being information literate, is more than being computer literate and involves the ability to evaluate what we really want to find out in the midst of mind boggling choices.

The Department of Education, Training and Youth Affairs (2000) introduced *An education and training action plan for the information economy,* responding to the Government's 1998 framework to educate Australians for the 'information economy'. For schools, from early years to tertiary education the action plan is concerned with the importance of keeping pace with Information Communication and Technology Skills (ICTs) and *information technology literacy* (DETYA p82). Indeed schools have incorporated ICT into their curriculum with the emphasis on computer technology. However, there is evidence and discussion from the schools library sector that places more importance on information literacy as a complete educational process: *The information literate school community can be viewed as philosophy as well as place…* (Cooper and Boyd 1995, pers. comm. by Henri, 3 September 2004).

Plowman (1996 p7); Hanson (1999 p15); and Moloney (2001 p22) all emphasise that information literacy skills are not subject specific and need to be woven into the whole school curriculum. They also reiterate the fundamental information education that comes from teacher librarians and school libraries, calling for collaboration of

teacher and teacher-librarians in curriculum planning. There is a risk that the curriculum as prescribed by DETYA is ICT based and will not incorporate the information philosophy of the teacher librarian. There is also another risk, one that is real and happening – the disappearance altogether of the teacher librarian from school libraries (Robinson 2004 p1). This is despite research that decisively links the school library and teacher librarian with positive student achievement regardless of the students' social or economic background (Hartzell 2002 p3; Robinson 2004 p1).

HORIZON REPORT

The Horizon Report is

*'An ongoing research project by the **New Media Consortium** that seeks to identify and describe emerging technologies likely o have a large impact on teaching, learning, research, or creative expression within education around the globe'.*

The Horizon Report Identifies emerging technologies and Key Trends (ie 30 identified) affecting the practice of teaching, learning and creative expression in K-12 schools. The following two are identified in the top five trends:

Trend 1 Horizon Report on the Digital Divide

'Technology continues to profoundly affect the way we work, collaborate, communicate and succeed. information technologies impact how people work, play, learn, socialize and collaborate. increasingly technology skills are also critical to success in almost every arena, and those who are most facile with technology will advance while those without access or skills will not.

the digital divide, once seen as a factor of wealth, is now seen as a factor of education: those who have the opportunity to learn technology skills are in a better position to obtain and make use of technology than those who do not. Evolving occupations, multiple careers and an increasingly mobile workforce contribute to this trend.

Trend 2 Horizon Report on the Information Literacy Philosophy

'Technology is increasingly a means for empowering students, a method for communication and socialising and a ubiquitous, transparent part of their lives. Technology IS impacting our lives and the lives of students, in new and expanding ways. once seen as an isolating influence, technology is now recognised as a primary

way to stay in touch and take control of one's own learning. multisensory, and inter disciplinary technology is integrated into everything we do.
it gives students a public voice and a means to reach beyond the classroom for interaction and exploration.'

'the way in which we think of learning environments is changing. traditionally, a learning environment has been a physical place, but the idea of what constitutes a learning environment is changing. the 'spaces' where students learn are becoming more community-driven, interdisciplinary and supported by technologies that engage virtual communication and collaboration. this changing concept of the learning environment has clear implication for schools, where learning is the key focus of the space.

Schools may be the key position to provide a BRIDGE over the digital divide.

http://www.nmc.org/pdf/2009-Horizon-Report-K12.pdf

Johnson, L., Levine, A., Smith, R., Smythe, T., (2009). *The Horizon Report: K-12 Edition.* Austin, Texas: The New Media Consortium.

WEB 2.0 TECHNOLOGIES

This is just a small example of the ways we need to integrate literacy, technology and communication for our students:

Emmanuel College WIRED Blog

Integration of literacy, technology and communication

http://ecwired.blogspot.com/

UNESCO SCHOOL LIBRARY MANIFESTO

The school library provides information and ideas that are fundamental to functioning successfully in today's information and knowledge-based society. The school library equips students with life-long learning skills and develops the imagination, enabling them to live as responsible citizens.

http://www.unesco.org/webworld/libraries/manifestos/school_manifesto.html#3

PROFFESSION

In the research relating to information literacy and its implications for the information professionals, it is easy to get caught up with articles by current professionals who are defining their roles for the future. Callioni (2000 cited in Maker 2003 p25) directs librarians to become, *information managers... knowledge managers...to manage and to grow information and techniques that assist in creating value.* Maker (2003 p25) continues that library professionals can identify and promote to the community the skills needed in the information age. McSwiney (2003 p379) and Cronin (1998 p91) emphasise there needs to be an awareness by library professionals to the needs of library users in times of change and the potential to connect users with information. A realisation set in from these viewpoints that the library profession is redefining itself in the information society by addressing its own educational needs and that of their clients, so that together they become information literate in changing information and economic society. The Council of Australian University Librarians (CAUL 2001) is addressing information literacy needs with the publication of *Information Literacy Standards.* Although primarily written as standards for the educational environment, these standards set a guide and philosophy for the entire profession now and in the future: *information literacy as the intellectual framework which provides the potential for lifelong learning.*(CAUL p1*)* The Australian Library and Information Association (ALIA 2003) has a short but poignant policy statement that broadly supports the philosophy of information literacy for government, corporate, community, professional, educational and trade union sectors. Despite ALIA'S broad stance on information literacy needs of society, Browne (1999 p30) contends that ALIA may not be recognising the breadth of emerging information professions as the new workforce in the information industry.

CONCLUSION

In the context of the historical timeline, contemporary society has undergone an unprecedented rapid information revolution in the last half century. The reliance on information as an economic, educational and social factor in our society means that we need to learn the language of information, which involves fast changing technologies. Global and national leaders are recognising the need for all people to keep informed and attain information literacy. There is evidence that information literacy is defined only by acquiring a proficiency in information communication technologies rather that embracing the philosophy of information literacy and life long learning. The information profession is setting standards for information literacy, however to keep pace with the needs of the information society it must do more to redefine it self in the information age.

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