Social capital, lifelong learning, information literacy and the role of libraries

Stuart Ferguson

Stuart Ferguson is an Assistant Professor in Information Studies at University of Canberra, where he leads development of the librarianship specialisation in the Master of Information Studies. He has an academic background in politics, political theory and librarianship and holds a PhD in literary theory. He has published widely in the fields of information systems, knowledge management, information ethics, information literacy, information organisation and Marxist aesthetics, and is a member of the Faculty of Arts and Design's Public Communication Research Cluster. He recently edited the Australasian section of Global Library and Information Science (International Federation of Library Associations and Institutions, 2009).

Abstract

The role of libraries in lifelong learning is examined, with specific reference to information literacy. The paper discusses the concept of social capital and the significance of lifelong learning to theories of social capital, which address issues of democratic health and civic participation, as distinct from economic issues such as the need to reskill the workforce. It argues that information literacy is a strong component of the learning process and that, if lifelong learning is to be fostered, so too must information literacy, which is part of the mission of many libraries, especially in the educational sector. The paper examines some of the most relevant issues facing libraries, such as the increasing reliance of many clients on Google, the relative lack of information literacy skills, even among younger clients with strong digital literacies, and the uptake of Web 2.0 for information literacy instruction. It concludes with a discussion of areas of research, such as evaluation of information literacy programs and questions about the transferability of information literacy skills from one context to another.

Introduction

This paper is part of a study of the role of libraries in the creation of what several commentators call "social capital" and more specifically the fostering of lifelong learning. A high-level, international colloquium on information literacy and lifelong learning in 2005 produced a report (the "Alexandria Proclamation"), which called on governments and inter-governmental agencies "to pursue policies and programmes to promote Information Literacy and lifelong learning". It explicitly linked "investment in Information Literacy and lifelong learning strategies" to the creation of "public value" and "the development of the Information Society" (Garner, 2006, p. 4). The Report identified librarians as one of the professional groups that should be delivering such programs (one of the sponsors of the colloquium, it should be added, was the International Federation of Library Associations and Institutions).

Over the past decade, lifelong learning has grown to "become one of the major policy goals of Western governments" and to be linked with other key social policies such as ICT literacy, "or digital citizenship, training and reskilling citizens for the "Information Society", competitiveness and job creation" (Eve, de Groot & Schmidt, 2007, p. 394). In the European Union, where the building of "competences and skills through high quality education and training" is seen as "an essential part of Europe's strategy to meet

challenges such as globalisation, technical progress and the ageing of society", lifelong learning is seen as "the key to personal development and economic success" (European Commission, 2009, p. 4). Lifelong learning has been promoted in "high profile policy initiatives" by "successive UK governments", which have seen the "need to skill the workforce so that industry can operate in an increasingly competitive global market" (Jones & Symon, 2001, p. 269).

Much of the literature sees information literacy (IL) as an essential component of any lifelong learning strategy. Citizens and workers of the 21st century have "an unprecedented volume of information" at their fingertips, through the many technologies of "the Information Age" but, in order to know "what is available, when to use it, and how to find out about it", they need more than "the basic skills of reading, writing, and arithmetic"—they increasingly need "complex analytical skills" (Hancock, 2003). Information literacy, it is suggested, "seems the best widely used term to describe the kind of literacy which the twenty-first century citizen requires: recognising appropriate information, collaborating, synthesising and adapting it wisely and ethically" (Godwin, 2009, p. 267).

Noting that "[k]nowing how to ask the right questions may be the single most important step in learning", Christina Doyle argues that information literacy, which she defines as "the ability to access, evaluate, and use information from a variety of sources", is "central to all successful learning and by extension to all successful living" (Doyle, 2003). Moreover, people obtain information through a variety of channels, much of it "unfiltered", raising "questions about authenticity, validity, and reliability" (Bundy, 2004, p. 3). "Sheer abundance of information and technology", Bundy suggests, "will not in itself create more informed citizens *without* a complementary understanding and capacity to use information effectively" (2004, p. 3).

Not surprisingly, librarians, who have provided some form of IL instruction and education for many years, see a key role for themselves in the fostering of lifelong learning and the development of information-literate communities and workforces. Several years ago, Nancy Kranich, former President of the American Library, gave the following clarion call:

> It is from librarians that citizens learn how to find, evaluate, and use the information essential for making decisions that affect the way we live, learn, work, and govern ourselves. Libraries prepare citizens for a lifetime of civic participation and support them throughout. In other words, libraries build social capital as they encourage civic engagement. (Kranich, 2001, p. 41)

Kranich's reference to social capital is an interesting one. Social capital, discussed in this paper, is regarded as the value that stems from social networks. Kranich goes beyond the common claim that librarians can help foster lifelong learning through teaching information literacy and suggests that many in the profession, inspired by social scientists such as Benjamin Barber and Harry Hoyte, "have proposed new models to invigorate a weakened democracy and encourage more active citizen involvement", including "the creation of free spaces or commons for public discourse and deliberation" (Kranich, 2001, p. 41). This is an extraordinarily bold claim, suggesting a role for public libraries in the "Public Sphere" promoted by Habermas.

This strong claim is beyond the scope of this paper, which focuses on the somewhat less contentious one that libraries can help build social capital through their IL programs and the opportunities for lifelong learning that information literacy is believed to afford.

It examines these IL programs within the context of growing technological opportunities, increased reliance on the internet for information and the emergence of a generation of people with relatively strong digital literacies. It begins by attempting to map the relationships between social capital theory and lifelong learning and those between lifelong learning and information literacy.

Social capital

One brief definition of social capital is the "social networks and the norms of reciprocity associated with them" (Putnam & Goss, 2002, p. 3). Robert Putnam relates social capital "to what some have called 'civic virtue'", adding that there is a difference, namely "that 'social capital' calls attention to the fact that civic virtue is most powerful when embedded in a dense network of reciprocal social relations" (2000, p. 19). The notion that "social networks are a valuable asset" is central to social capital theory. Social networks, according to John Field, "provide a basis for social cohesion because they enable people to cooperate with one another—and not just with people they know directly—for mutual advantage" (Field, 2003, p. 12).

Social capital, it is suggested, is like other forms of capital—in being productive, "making possible the achievement of certain ends that in its absence would not be possible" (Coleman, 1988, p. 98). A "group within which there is extensive trustworthiness and extensive trust", for example, "is able to accomplish much more than a comparable group without that trustworthiness and trust" (Coleman, 1988, p. 101).

Forms of social capital include:

1. formal groups, such as trade unions, and informal ones, such as a group gathering at a pub;

2. "thick" forms, such as people who work and drink together, and "thin" ones, such as nodding acquaintances;

3. "inward-looking groups", such as chambers of commerce, and "outward-looking groups", such as environmental movements; and

4. "bonding social capital", involving "people alike in some respect" such as gender, and "bridging social capital", in which unlike people come together (Putnam & Goss, 2002, pp. 10-11).

Putnam cautions that "the external benefits of social capital", such as the bonding form, may not always be "positive"—for instance, the case of Timothy McVeigh bombing a building in Oklahoma City with the help of a network of friends (Putnam, 2000, p. 21).

The notion that social capital has productive potential prompted the earliest reported use of the term by Lyda J. Hanifan in 1916 (writing about rural school community centres) "to urge the importance of renewed community involvement to sustain democracy and development" (Putnam & Goss, 2002, p. 3). He used the word "capital" to refer, not to things such as real estate and cash, but to "good will, fellowship, sympathy, and social intercourse among the individuals and families who make up a social unit", which he saw as "that in life which tends to make these tangible substances count for most in the daily lives of people" (Hanifan cited in Putnam & Goss, 2002, p. 4). He went on to say:

> The individual is helpless socially, if left to himself . . . If he comes into contact with his neighbour, and they with other neighbours, there will be an accumulation of social capital, which may immediately satisfy his social needs and which may bear a social potentiality sufficient to the substantial improvement of living conditions in the whole community. (Hanifan cited in Putnam & Goss, 2002, p. 4)

Hanifan's "conceptual invention" attracted little notice and disappeared, only to be "independently reinvented at least six more times" by John Seeley, Jane Jacobs, Glenn C. Loury, Pierre Bourdieu, Ekkehart Schlicht and finally James S. Coleman (Putnam & Goss, 2002, p. 5).

Lifelong learning and social capital

According to Christy Stevens and Patricia Campbell, the term social capital is strongly associated with concepts such as civic virtue, participative democracy and lifelong learning:

> Social capital conceptions of lifelong learning emphasize the creation of learning societies, in which continual learning enhances connections among individuals and engenders civic participation. (Stevens & Campbell, 2006, p. 539)

Ian Jones and Graham Symon note that "rather than being concerned with economic output, [social capital] concentrates more on civic society and networks in the family and community" and that "[t]he level of engagement that participation in adult education and learning can foster has been found to strengthen the fabric of communities and encourage citizenship, critical awareness and understanding" (Jones & Symon, 2001, pp. 275-276).

In support, they note an Australian example of "learning based programmes of reconciliation between the Aboriginal people" and the "settlers" (Johnston cited in Jones & Symon, 2001, p. 276).

On a less positive note, however, Jones and Symon refer to a shift in emphasis in Britain from 19th century ideals of "how learning could benefit the individual, the community in general, enriching lives in a cultural sense" to an approach that emphasises "the vocational, economic and "skilling" aspects of learning" (2001, pp. 269-270). Stevens and Campbell suggest that in the last decade of the 20th century, in particular, "a campaign to retrain workers for employment in a capitalist economy" eclipsed the notion of "learning for learning's sake" (2006, p. 538). Jones and Symon refer to public policy and managerialism, which "in the case of lifelong learning . . . means the acquisition of skills for work, thus providing *human capital* for the economy" (Jones & Symon, 2001, p. 276, italics added). Here it is worth noting the distinction generally made between human capital and social capital. Human capital is "embodied in the skills and knowledge acquired by an individual", whereas social capital is less tangible than human capital (in its turn less tangible than physical capital), because "it exists in the *relations* among persons" (Coleman, 1988, pp. 100-101). Referring to "neo-liberal approaches to lifelong learning", Jones and Symon claim that:

> the agenda since the 1990s has definitely become devoted to servicing industry, making the population viable economic units. The idealistic purposes of adult education such as personal fulfilment and more radically democratization, civic engagement and participation appear to have taken something of a backseat. (2001, p. 279)

Lifelong learning and information literacy

As suggested earlier, lifelong learning and information literacy have been closely related for some years: "Information literacy and lifelong learning are of the same essence" (Garner, 2006, p. 5). The Final Report of the US Presidential Committee on Information Literacy called on schools and colleges to "appreciate and integrate the concept of information literacy into their learning programs" and to "play a leadership role in equipping individuals and institutions to take advantage of the opportunities inherent within the information society". It continues:

> Ultimately, information literate people are those who have learned how to learn. They know how to learn because they know how knowledge is organized, how to find information, and how to use information in such a way that others can learn from them. They are people prepared for lifelong learning, because they can always find the information needed for any task or decision at hand. (American Library Association, 1989)

The Australian and New Zealand Information Literacy Framework is based on four overarching principles, namely, that information literate people:

- engage in independent learning through constructing new meaning, understanding and knowledge;

- derive satisfaction and personal fulfillment from using information wisely;

- individually and collectively search for and use information for decision making and problem solving in order to address personal, professional and societal issues; and

- demonstrate social responsibility through a commitment to lifelong learning and community participation. (Bundy, 2004, p. 10)

The link between lifelong learning and information literacy is a strong one but it remains to be seen whether libraries have a significant role to play in the development of information literate communities.

Libraries and information literacy

Stevens and Campbell see libraries "as cultural agencies" that create "the conditions for the generation of social capital, lifelong learning, and the productive relationship between the two" (2006, p. 539). Professional bodies such as the Australian Library and Information Association promote information literacy and the role of librarians in fostering "lifelong learning, personal fulfilment, improved decision making, knowledge development, innovation, imagination, creativity and cultural continuity" in "a democratic, progressive, technologically sophisticated and culturally diverse society" (2005).

These seem overly strong claims since for many years information literacy in libraries took on the narrow form of "bibliographic instruction", in which library clients were introduced to information retrieval tools such as the library catalogue—hardly the stuff of lifelong learning. A broader approach to information literacy emerged over the years, however, especially in the school sector, where researchers such as Carol Kuhlthau encouraged information literacy to be seen as an integral part of the learning process. This approach was reinforced in the 1990s with the shift "from teacher directed to enquiry-based learning with its emphasis on independent student research" (Bundy, 2002, p. 56). This has spread to other parts of the library sector, with many researchers calling for a broadening of the definition of information literacy. Jennifer Kirkton and

Lyn Barham (2005, p. 365), for instance, argue that information literacy "goes beyond simply acquiring the skills to use information tools and to find information resources" and that it must include "lifelong learning and professional development, and the ability to interact in the information society".

In the library sector, the most commonly used definition of information in recent years has been the one developed by American College and Research Libraries (ACRL):

> Information literacy is a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information. (American College and Research Libraries, 2000, p. 2)

The ACRL definition also refers to the information-literate individual being able to:

- determine the nature and extent of the information needed;

- access needed information effectively and efficiently;

- evaluate information and its sources critically;

- incorporate selected information into their knowledge base;

- use information effectively to accomplish a specific purpose; and

- understand the economic, legal and social issues surrounding the use of information, and use information ethically and legally (American College and Research Libraries, 2000, p. 3).

This definition has been extremely influential—it has been adapted, for instance, by the Australian and New Zealand Information Literacy Framework (Bundy, 2004)—and goes beyond "traditional" library-orientated approaches to information literacy, which have tended to focus on the first three attributes.

The International Federation of Library Associations (IFLA) embraces the notion that information competencies "are the first step in achieving educational goals" and that the

> development of such competencies should take place throughout citizens' lives, especially during their educational years, where librarians, as a part of the learning community . . . have or should assume the key role of facilitating information literacy. (International Federation of Library Associations and Institutions, 2006, p. 4)

It specifically refers to the need for "curriculum-integrated programs" and provides a set of guidelines to assist the development of IL programs in educational libraries, noting, however, that most of the principles embedded in the guidelines "can also be applied to public libraries" (International Federation of Library Associations and Institutions, 2006, p. 4).

For several years, libraries in the higher education (HE) sector have made efforts to promote the integration of IL instruction (ILI) into the curriculum. As a Nordic survey put it:

> [i]nformation literacy is not a "library thing"—and it is not concerned only with database searching and Boolean logic; information searching is a part of the learning process and should be taught as such embedded in the curriculum. (Skov & Skærbak, 2003, p. 332)

Philippa Levy (2000, pp. 47-8), drawing on a constructivist notion that "knowledge is constructed through, and builds upon, experience", suggests that "skills are most effectively learned when related to learning needs arising directly from academic work".

Librarians in higher education institutions have increasingly taken a team approach, building bridges to academic staff and learning support units (Currier, 2003).

It is worth noting that moves to integrate information into the curriculum do not all come from the library sector. Arguing that "political literacy and information literacy are inextricably linked and impossible to separate", for instance, Ross Alexander outlines his use of both political and information literacy exercises to teach his political science unit at North Georgia College and State University, seeing his task to help his students "become more politically literate, more information literate, and therefore better students and citizens" (Alexander, 2009, p. 11). Noting that many of the students at the military college are conservative and "rely solely on FOX News for information", he assigns them "an exercise in which they must read, listen to, and watch a variety of media sources (at least ten)", then "review each source for content, bias, and quality of information" (2009, p. 11).

Information literacy instruction in the web environment

Building on frameworks such as the ANZIL one and constructivist approaches to education, many academic libraries have developed information literacy instruction programs that can be embedded in the curriculum and used by students at the "point of need", as part of their assignment work. In place of (or typically in addition to) the face-to-face user education class, which cannot, by its very nature, address point-of-need access, there has been a growing emphasis on the development of self-paced ILI modules that teach library-based research skills. Libraries have been quick to exploit new technologies to develop electronic versions of information literacy instruction. The use of virtual learning environments (VLEs) such as Moodle, WebCT and Blackboard, has further facilitated the embedding of information literacy instruction in curriculum and in recent years attention has turned to the use of Web 2.0 technologies. The challenge, however,

> is to provide learning space that is relevant to digital natives and those who exhibit the characteristics of digital immigrants both of whom work in virtual and real spaces. (Beard & Dale, 2008, p. 100)

It is commonly assumed that the (younger) "digital natives" have a head start when it comes to information literacy skills but recent research suggests that this is not necessarily the case. There are indications of a "growing skills gap", with students lacking "sophisticated skills in either searching for or evaluating resources", despite appearing "conversant with technology" (Whitaker & Dunham, 2009, p. 52). A US study of college students discovered information retrieval problems, with students saying they were "overwhelmed by all the choices", "lacked a necessary orientation to find things" and "always have trouble finding what [they are] looking for" (Head & Eisenberg, 2009, p. 10).

A report from the Centre for Information Behaviour and the Evaluation of Research (University College, London) contained some sobering findings for librarians, such as the fact that "many young people do not find library-sponsored resources intuitive" and turn to search services such as Google and Yahoo: "these offer a familiar, if simplistic solution, for their study needs" (Centre for Information Behaviour and the Evaluation of Research, 2008, p. 12). Despite young people's reliance on these internet tools, however, the report suggests they "have unsophisticated mental maps of what the internet is", with the result that "the search engine, be that Yahoo or Google, becomes the primary

brand that they associate with the internet" (Centre for Information Behaviour and the Evaluation of Research, 2008, p. 12).

The report also contradicts the widespread "myth" that "Web generation" people "are expert searchers" and that digital and information literacies "go hand in hand" (Centre for Information Behaviour and the Evaluation of Research, 2008, p. 20). It refers to worrying research from the United States, which suggests serious problems for those students at "the lower end of the information skills spectrum", and suggests that, by the time these students reach university age, intervention "is too late: these students have already developed an ingrained coping behaviour: they have learned to 'get by' with Google" (Centre for Information Behaviour and the Evaluation of Research, 2008, p. 23). The research notes "a big gap" between students' "performance in information literacy tests and their self-estimates of information skill and library anxiety" and suggests that the students "simply do not recognize that they have a problem" (Centre for Information Behaviour and the Evaluation of Research, 2008, p. 24).

There is also a sobering finding on the "myth" that the "google generation" prefers "quick information in the form of easily digested chunks, rather than full text":

> CIBER deep log studies show that, from undergraduates to professors, people exhibit a strong tendency towards shallow, horizontal, "flicking" behaviour in digital libraries. Power browsing and viewing appear to be the norm for all. The popularity of abstracts among older researchers rather gives the game away. Society is dumbing down. (Centre for Information Behaviour and the Evaluation of Research, 2008, p. 19)

Such research suggests that, if libraries are going to play a significant role in the fostering of lifelong learning, they face problems addressing the needs of their clients, especially the so-called Google generation, which needs to be persuaded that it actually needs information literacy instruction programs. As noted above, use of VLEs such as Moodle has facilitated the embedding of information literacy instruction in curriculum—effectively taking it to the client—and over the years a range of other teaching technologies, such as Web-based video streaming, has been introduced. In recent years, libraries have experimented with Web 2.0 technologies, such as: Second Life, particularly "EduNation"; something called the SLoodle Project, which combines Moodle with Second Life (Foggo, 2007); podcasts; Facebook; RSS feeds; blogs; wikis; social bookmarking and tagging sites, such as Del.icio.us; Instant Messaging (IM); and file and photo sharing sites such as Flickr and YouTube.

It cannot be assumed, however, that all recipients of information literacy instruction will be equally positive about each of these technologies. Peter Godwin notes that "Web generation students", as he calls them, "are more concerned with Facebook, YouTube and iTunes than blogs, wikis, podcasts, or RSS feeds" (Godwin, 2009, p. 266). Similarly, the CIBER study cautions that, while some libraries have presences in spaces such as MySpace and Facebook, there is no evidence yet that this will have a positive impact and indeed that there are "dangers in trying to appear "cool" to a younger audience". Younger users, it suggests, may resent "the library invading what they regard as their space" (Centre for Information Behaviour and the Evaluation of Research, 2008, p. 16).

On the other hand, there are drawbacks with use of technologies such as Second Life as a learning space since it would be suitable only for those "students who are extremely comfortable and confident in using computers" (Foggo, 2007). This might suit "digital natives" but runs the risk of excluding the older "digital immigrants".

Directions in information literacy research

This paper cannot claim to have made an exhaustive review of lifelong learning and information literacy instruction, but it does suggest fruitful areas of research. One emergent area is evaluation of the information literacy programs, with a view to capturing best (or good) practice in a relatively fast evolving field. A study published last year, for instance, attempted to evaluate a project at the University of Leicester that "aimed to develop medical students' information literacy by embedding it directly into their course at the point of need using Web 2.0 tools" (Whitaker & Dunham, 2009, p. 51). It found that students were selective in their use of the Web 2.0 technologies, although it should be noted that the study was limited in that Phase I evaluated a short course, during which one might not expect a "fundamental change" in students' "research behaviour" (Whitaker & Dunham, 2009, p. 55). Phase II evaluated a special study module, which took place over a more sustained period of time, and, although there was not much use of discussion boards, there was some enthusiasm for a custom search engine, which "comprised 150 preselected websites, collated by the course tutor", and preference for learning through YouTube video. Significantly, the search engine was considered popular because "Google is regarded as a "trusted brand" and selecting sites to search allows quality control" (2009, pp. 56-57)—a point that librarians should perhaps heed.

Second, underlying attempts to develop information literacy models is the assumption that one can study a set of information users, such as school students, and develop an education program based on a notion of the broad strategies that people follow in order to locate and use information. This is challenged by much of the research on workplace information literacy, such as Bonnie Cheuk's study of auditors in Singapore. Her research led her to suggest that in the workplace information literacy involves:

- "critical evaluation of information system/sources", as distinct from being "an obedient user" of them;

- "collaborative competence, not individual competence";

- "a creative, iterative and dynamic process", not a process of following "rigid step-by-step guidelines";

- "deep thinking and personal meditation", as distinct from "having a set of information skills and knowledge"; and

- development of "personal information seeking strategies" (Cheuk, 2000, pp. 185-186).

More recent research in the United Kingdom mapped responses from higher education administrators against the JISC (Joint Information Systems Committee) "i-skills" model and found some that "did not easily fit into the headings offered by the model, but which nonetheless had a significant bearing on staff management of information"—comments relating to "time management and information overload", "social networking" and "team working" (Hepworth & Smith, 2008, p. 220).

Some research suggests that information literacy skills learned in one context are not necessarily applied easily in another. One of the conclusions of the CIBER report discussed earlier, for instance, raised questions about whether schools and colleges are capable of developing "the search capabilities of the Google Generation to a level appropriate to the demands of higher education and research" (Centre for Information

Behaviour and the Evaluation of Research, 2008, p. 24). A slightly earlier Scottish study contains a similar view, taken from an interim report by HM Inspectors of Education, which reported:

> Few schools had systematic approaches to developing *information literacy* to ensure that all pupils acquired this set of skills progressively as part of their passport of core and life skills. (Crawford & Irving, 2007, p. 21)

On the other hand, the authors also report a study of university students and alumni which found that "respondents broadly understood the concept of information literacy", especially "among alumni as a result of the experience of work", and suggest that "[i]n many cases information-seeking skills, learned at university, could be directly applied to the workplace" (Crawford & Irving, 2007, p. 18). This whole area of the transferability of information literacy skills is one that continues to warrant study.

Finally, it is worth noting that this paper has been limited to the role of libraries in providing information literacy instruction for lifelong learning. Another role was suggested by Nancy Kranich, namely that libraries be "free spaces or commons for public discourse and deliberation". It is evident that many public libraries already provide a physical meeting space for their local communities. Whether this constitutes a significant enough space for a healthy, participative democracy and whether public libraries can forge *virtual* spaces that can compete with Google—indeed, whether they would want to do so—is another. These questions are beyond the scope of this paper. We know, however, that the public library sector has embraced information and communication technologies and typically provides its clients with internet facilities and basic instructional classes on how to find information. If there is any validity in the claim that libraries create social capital through the provision of such services then further research through some form of social audit seems the logical next step.

References

American College and Research Libraries. (2000). *Information literacy competency standards for higher education*. Retrieved from http://www.ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm

Alexander, R.C. (2009). Political literacy as information literacy. *Communications in Information Literacy, 3*(1), 9-13.

American Library Association. (1989). *Presidential Committee on information literacy: Final report*. Retrieved from: http://www.ala.org/ala/mgrps/divs/acrl/publications/whitepapers/presidential.cfm

Australian Library and Information Association. (2005). *The library and information sector: Core knowledge, skills and attributes: Core knowledge statement*. Retrieved from http://www.alia.org.au/policies/core.knowledge.html

Beard, J. & Dale, P. (2008). Redesigning services for the net-gen and beyond: A holistic review of pedagogy, resource, and learning space. *New Review of Academic Librarianship, 14*, 99-114.

Bundy, A. (2002). Essential connections: School and public libraries for lifelong learning. *Australian Library Journal, 51*(1), 47-70.

Bundy, A. (Ed.). (2004). *Australian and New Zealand Information Literacy Framework: Principles, standards and practice* (2nd edn.) Adelaide: Australian and New Zealand Institute for Information Literacy.

Cheuk, B.W. (2000). Exploring information literacy in the workplace: A process approach. In C. Bruce & P. Candy, *Information literacy around the world: Advances in programs and research* (pp. 177-191). Wagga Wagga, NSW: Centre for Information Studies.

CIBER (2008). *The information behaviour of the researcher of the future: Report prepared for the British Library and JISC*. Retrieved from http://www.jisc.ac.uk/media/documents/programmes/reppres/gg_final_keynote_11012008.pdf

Coleman, J.S. (1988). Social capital in the creation of human capital. *The American Journal of Sociology, 94*, 95-120. Retrieved from http://www.jstor.org/stable/2780243

Currier, S. (2003). *INSPIRAL Case Study 4: Edge Hill College of Higher Education: Post-Graduate Certificate in Teaching & Learning in Clinical Practice* (Introductory Module). Retrieved from http://inspiral.cdlr.strath.ac.uk/documents/INSPcasestudy4EH.doc

Doyle, C.S. (2003). *Information literacy in an information society*. Retrieved from http://www.libraryinstruction.com/information-literacy2.html

European Commission (2009). *Lifelong learning programme: Creativity and innovation*. Retrieved from http://ec.europa.eu/dgs/education_culture/publ/pdf/ll-learning/creativity_en.pdf

Eve, J., de Groot, M. & Schmidt, A. (2007). Supporting lifelong learning in public libraries across Europe. *Library Review, 56*(5), 393-406.

Field, J. (2003). *Social capital*. London: Routledge.

Garner, S.D. (ed.) (2006). *High-level colloquium on information literacy and lifelong learning: Report of a meeting sponsored by the United Nations Education, Scientific, and Cultural Organisation (UNESCO), National Forum on Information Literacy (NFIL) and the International Federation of Library Associations and Institutions (IFLA) , Bibliotheca Alexandrina, Alexandria, Egypt November 6-9, 2005*. Retrieved from http://unesdoc.unesco.org/images/0014/001448/144820e.pdf

Godwin, P. (2007). Information literacy meets Web 2.0: Is it just hype? *Program: Electronic Library and Information Systems, 43*(3), 264-274.

Godwin, P. (2009). Information literacy and Web 2.0: How the new tools affect our training and our teaching. *New Review of Information Networking, 13*(2), 101-112.

Hancock, V.E. (2003). Information literacy for lifelong learning. *ERIC Digest*, 1993. Retrieved from http://www.libraryinstruction.com/information-literacy.html

Hanifan, L. J. (1916). The rural school community center. *Annals of the American Academy of Political and Social Science, 67*, 130-138.

Head, A.J. & Eisenberg, M.B. (2009). *Finding context: What today's college students say about conducting research in the digital age*. Retrieved from http://projectinfolit.org/pdfs/PIL_ProgressReport_2_2009.pdf

Hepworth, M. & Smith, M. (2008). Workplace information literacy for administrative staff in higher education. *Australian Library Journal, 57*(3), 212-236.

International Federation of Library Associations and Institutions, Information Literacy Section (2006). *Guidelines on information literacy for lifelong learning*. Retrieved from http://www.ifla.org/en/publications/guidelines-on-information-literacy-for-lifelong-learning

Johnston, R. (1999). Adult learning for citizenship: Towards a reconstruction of the social purpose tradition. *International Journal of Lifelong Education, 18*(3), 175-190.

Jones, I. & Symon, G. (2001). Lifelong learning as serious leisure: Policy, practice and potential. *Leisure Studies, 20*, 269-283.

Kirkton, J. & Barham, L. (2005). Information literacy in the workplace. *Australian Library Journal, 54*(4), 365-376.

Kranich, N. (2001). Libraries create social capital. *Library Journal,* November 15, 40-41.

Levy, P. (2000) Information specialists supporting learning in the networked environment: A review of trends and issues in higher education. *The New Review of Libraries and Lifelong Learning, 1*, 45.

Putnam, R.D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.

Putnam, R.D. & Goss, K.A. (Eds.). (2002). *Democracies in flux: The evolution of social capital in contemporary society*. New York : Oxford University Press.

Skov, A. & Skærbak, H. (2003) Fighting an uphill battle: Teaching information literacy in Danish institutions of higher education. *Library Review, 52*(7), 326-332.

Stevens, C.R. & Campbell, P.J. (2006). Collaborating to connect global citizenship, information literacy, and lifelong learning in the global studies classroom. *Reference Services Review, 34*(4), 536-556.

Whitaker, S. & Dunham, J. (2009). Experimenting with Web 2.0 to cultivate information literacy within a medical ethics, law and human rights course. *Journal of Information Literacy, 3*(1), 51-59.