Rethinking Information Literacy in Higher Education: the Case for Informatics

Chris Blackall
Research Associate, South Seas Project
Centre for Cross-Cultural Research
Australian National University
chris.blackall@anu.edu.au

Abstract:

This paper discusses the implications and problems of the Information Literacy Standards published by the Council of Australian University Librarians in 2001. Its focus is on the difficulties implementers of university-based information literacy programs increasingly face as they attempt to 'integrate' or 'embed' information literacy in subject curricula as suggested by the Standards. The most central of these difficulties are the political dangers facing library teachers/educators as they attempt to expand into the academically controlled areas of curriculum design and teaching. This paper suggests that an inclusive model of 'informatics' can help overcome such barriers to program implementation.

Information Literacy Standards

The publication of the Information Literacy Standards (or the Standards) by the Council of Australian University Librarians (CAUL 2001) was a singular event. The Standards are a welcome development for educators in the higher education sector and are likely to be a focus of curriculum innovation for years to come.

The release of the Standards is also timely. The Commonwealth Government has clearly identified as priorities the need to ensure that "graduates enter the workforce with the competencies needed, including information literacy and lifelong learning skills" (ANTA & DETYA 2000, p.82). But how these priorities are to be achieved and who will be responsible for them remains to be answered.

This paper discusses the problems the Standards raise for implementers of university-based information literacy programs and in relation to 'integrating' or 'embedding' information literacy in subject curricula. 'Curriculum integration' is central to the Standards, and I am decidedly in favour of it, but it will be difficult to achieve due to the almost inevitable political dangers of expanding into the formerly academic controlled areas of curriculum design and teaching.

My solution to this problem, outlined in the conclusion of the paper, is an 'informatics' model that aims to overcome these potential barriers. But first I give an overview of the Standards, and also some personal background relevant to this discussion.

Personal Background

Unlike many of my colleagues working in the information literacy area, I am not a library professional. I have, however, worked in libraries and have gained some understanding of how they work and their 'information cultures'. My academic qualifications are in communication studies, art history and teaching, and my professional experience has mostly been working in information technology related positions in the higher education sector.

My pathway into information literacy is a circuitous one. Over a decade ago, I managed one of the first student computer laboratories established at the University of Melbourne. I learnt a great deal about supporting students in their 'information literacy' needs, although that term was not then in use. This work involved solving technical problems, offering formatting and editorial advice and providing training to students in the software and computer technology used on campus. In one capacity or another, I've continued in this line of work. My speciality then was, as it is now, in computer graphics and multimedia. Because of this background I tend to appreciate that 'information' is available in a number of modes and each has its own set of contingencies and associated skill sets.

Most recently, I co-ordinated an information literacy program for graduate students at the Australia National University.[1] There I engaged in spirited discussions and debates about the Standards and their implications for the Library's programs and for the University in general with my colleagues. I am thankful to them for those discussions and acknowledge their influence to what I discuss below.

The CAUL Information Literacy Standards

The first edition of the CAUL Information Literacy Standards was released in 2001 and is largely derived from the US Information Literacy Standards for Higher Education approved by the Association of College and Research Libraries (ACRL) in January 2000.

The Standards document consists of three sections: (a) an overview and rationale for the Standard, (b) high-level learning outcomes and associated sub-outcomes with examples, and (c) chronological listing of information literacy developments and sources.

Within the higher education context, the Standards are designed to ensure that individuals acquire the portfolio of skills, competencies and fluency required to successfully undertake information-related tasks as students and through their working and social lives as lifelong learners. In some universities the Standards are being considered for use in general staff development programs as well.

The Standards specify that the information literate person:

1. Recognises the need for information and determines the nature and extent of the information need.

2. Accesses necessary information effectively and efficiently.

3. Evaluates information and its sources critically and incorporates selected information into their knowledge base and value system.

4. Classifies, stores, manipulates and redrafts information collected or generated.

5. Expands, reframes or creates new knowledge by integrating prior knowledge and new understandings individually or as a member of a group.

6. Understands cultural, economic, legal, and social issues surrounding the use of information and accesses and uses information ethically, legally and respectfully.

7. Recognises that lifelong learning and participative citizenship requires information literacy.

Perhaps the first observation to make about the Standards is that they are in fact not 'standards'. By this I mean the Standards differ in crucial respects from the type of formal standards typically developed by a standard setting body, such as Standards Australia. The Standards have no accreditation from a standard setting body and there are no agreed-upon mechanisms within the higher education sector to ensure that the outcomes of information literacy programs conform to it. The Standards are discretionary and non-binding.

It would be more accurate to describe the first edition of the Standards as a curriculum framework document. Those with formal teaching qualifications, or with experience in the K-12 schools sector, will be familiar with this genre. Essentially, a curriculum framework provides a set of high-level learning outcomes and a wide range of supporting materials to ensure the outcomes are achieved; detailed manuals, such as guides to best practice, checklists, assessment instruments, sample lesson plans.

The first edition of the Standards, however, lacks many of the essential elements of a curriculum framework. While these elements may be added in future editions, at present the Standards are pitched at a high level of generality and lack the detail and guidance necessary for information literacy practitioners to achieve 'best practice'.

Operational contexts

In order to appreciate the arguments that follow it is important to understand the operational environment in which the Standards are being implemented.

In most Australian universities the responsibility for information and information technology training and/or education is divided between libraries and central IT services divisions. Taken together, IT training and library 'user education' programs are the starting point for any information literacy program.

Most of us are familiar with the training offered by IT services divisions. It's the sort of corporate 'off-the-shelf' training that focuses on the mastery of specific software applications and computing platforms – mostly Microsoft ones. This training tends to be popular but is rarely aligning to the specific educational or information needs of trainees.

Libraries on the other hand, have traditionally provided training in the skills involved in effectively locating and using information in library collections. Within the library profession this is referred to as 'user education' and 'bibliographic instruction'. In contrast to the generic and decontextualised training offered by central IT services divisions, the library profession has sought to work closely with academic staff and taken care to recognise their unique information needs. In some notable, but rare cases, librarians and academics have worked together to integrate library education elements into academic courses. In general, IT training and library education programs have been offered independently of the academic curriculum.

Curriculum integration?

The educational philosophy underpinning the Standards strongly promotes the idea that information literacy should be tightly woven into the web of mainstream teaching and learning activities. To quote the Standards, information literacy "is not extraneous to the curriculum but is woven into its content, structure and sequence" (CAUL 2001 p.3). This approach of weaving information literacy into mainstream academic curricula is described as curriculum 'integration' or 'embedding'. The Standards therefore represents a decisive break with the past in recommending that all academic curricula be reformed in line with its recommendations as a matter of university-wide policy.

Changes of this scope will obviously require the full support and financial backing of university administrators, as fully implementing the Standards will involve reengineering many university services, particularly those closely associated with teaching and the provision of information infrastructures. This raises the problem of funding such changes. Since information literacy is just one of the many educational priorities on campus and its implementers must line up with everyone else for their share of already stretched university budgets, one is just a likely to get an elbow in the eye as they are a helping hand.

It is therefore essential to the successful implementation of the Standards that the academic community willingly embraces the inclusion of information literacy learning outcomes in their teaching curricula. But will the enthusiastic advocacy by information literacy educators, or the crude application of rewards and punishments by university administrators be enough to ensure the support of the academic community? After all, the Standards have the hallmarks of a 'top-down' policy initiative and if handled insensitively many academics and students may consider the new information literacy dispensation as yet another external priority to be resisted.

It seems possible that some Australian universities will appraise the Standards and consign them to the too-hard basket. Indeed, it would be tempting for university decision makers to simply 'rebadge' their existing IT training and library education programs as 'information literacy' and resume a business-as-usual approach. Other universities may attempt to implement the standards as recommended. This is more likely to happen in universities where library administrators and rank-and-file librarians are strongly positioned within institutional power structures. Either way, the combined weight of government policy, workplace needs and student-led expectations will force universities to make substantive progress in information literacy education.

Information literacy 'politics'

The Standards requires of the academic community that they collaborate with non-academic teaching staff at their universities to integrate information literacy into their curriculum. While it is generally agreed that such collaborations should be encouraged, (Young & Harmony 1999), the Standards *assumes* they will emerge in order that its listed learning outcomes are implemented as a core part of scheduled academic units.

But can such an assumption be made? At present, the Standards are principally the initiative of the library profession, while the university teaching curriculum is almost the sole reserve of academics. In the past libraries have had have only modest degrees of success influencing curriculum design. Any potential attempts by them to integrate information literacy in the curriculum may carry high political overheads – a crucial barrier to the success of the Standards.

Judith Peacock, a leading information literacy practitioner, has also identified this as a key problem. Peacock (2001) argues that the relative inequality of librarians and academics prevents library professionals from fully integrating information literacy into the curriculum. Peacock's solutions are to develop an new breed of librarian educators, retrained as "learning facilitators" and, where possible, forge campus-wide "alliances" to ensure that library professionals and libraries to overcome their marginalisation and engage as "equals" in the academic enterprise (p. 27).

I agree that the library profession needs to respond to the challenges of information literacy enriched curricula with more sophisticated and expanded approaches. But why is it necessary for reference librarians to have the "educational competence and professional confidence" equal to academics? Peacock, as she also makes clear, is really discussing the asymmetries of power that persist between academics and librarians. This in turn is part of a bigger problem of the overall marginalisation of libraries and librarians within the higher education sector and the long-term impacts of chronic levels of under funding (Hayes 2001).

Peacock identifies four key barriers that disadvantage libraries and library professionals in their search for a greater role in the teaching and learning:

1. Limited understanding of the inherent link between generic attributes and information literacy and the library's contribution to the development of both.

2. Narrow appreciation of the role of the library as an active contributor to teaching and learning process (as that which extends beyond being a passive resource).

3. Reluctance to engage the library in teaching and learning partnerships and projects, either by exclusion or oversight.

4. The high profile technologically-driven initiatives which inhibit a library's ability to (i) equally attract funding that relates to teaching and learning initiatives, (ii) acquire access to course development pathways and (iii) participate in collaborative faculty and/or university projects (pp. 29-30).

This list of problems will be easily recognised by those with even a passing familiarity with libraries in the higher education sector. Peacock argues that in order to solve these problems it is vital that the "systematic barriers between academics and librarians are broken down". Her recommendation to librarians is that they must "challenge the power quotient in universities and develop, exploit and foster strategic and diverse teaching and learning alliances"(p. 30).

Alliances are usually entered into when each partner sees that they have something to gain. With alliances between academics and librarians in the emerging information literacy 'industry', librarians do in fact appear to get the better deal; a bridgehead into the core business of universities and the chance to improve their 'power quotient' and status on campus. But what do the academics get? Perhaps if library educators are contacted to conduct information literacy sessions or tutorials they can reduce their teaching load. Perhaps they can more quickly correct papers if students have learnt how to correctly research and format their bibliographies. These are useful outcomes, but if they are the only educational outcomes, then it might argued that such teaching material is generic and highly amenable to conversion to stand-alone computer-based training. To cost-conscious administrators, there are obvious benefits in one-off costs of computer-based training compared to paying staff to repeatedly offer generic services.

To improve the focus of information literacy education, Peacock suggests that library educators must be professionally competent in "content knowledge", which she refers to as "information as a subject discipline in its own right" (p.33). But given the range of disciplinary knowledges is it reasonable to think that the content knowledge of library educators would be sufficient to convince administrators and academics to employ another expert group? And even though Nimon (2001 p.46) concluded that "generic skills programs are an educational nonsense", her own experience indicated that there are considerable problems involved in customising information literacy initiatives to fit the teaching needs of individual academics.

Further, if information literacy is so important to the higher education sector and new roles or qualifications will be required, then why should academics not also insist on *their* equality with librarians? Perhaps they too will want to incorporate an information literacy teaching portfolio into their careerist stratagems. Indeed, what should prevent aspiring academics, IT specialists, or anyone else from becoming teachers, trainers or newly qualified 'learning facilitators' in the emerging information literacy market? The library profession neither has nor is likely to develop an unassailable franchise in this labour market.

Territorial competition for control of work (and rewards) between professional groups is a pattern repeated in many industries – doctors compete for control with allied health workers and lawyers with para-legals. Now, through the agency of the Standards, academics who have traditionally controlled teaching in universities are beginning to compete with library professionals and other para-academic groups to secure slices of the teaching pie.

However committed librarians are to educational excellence (and I am not questioning that they are), and recognising that information literacy is arguably one of their few positive career opportunities, it is unlikely that academics will welcome their expanding influence into their curriculum. Indeed, librarians must be prepared for some degree of resistance (Chiste,

Glover & Westwood 2000), for the academic community jealously protects their territory, and often quite ruthlessly. Academics not only face both perceived and actual threats from outside their community, but constant internal territorial struggles over who has the legitimate authority to teach and interpret certain sanctioned bodies of knowledge. The struggle to control and set curricula is a minefield of academic politics. Why then should academics be likely to happily share control over curriculum design with those whom they consider to be 'outside' their profession?

Peacock answers this question with the claim that:

> academics are now facing the challenge of teaching concepts and skills which exist beyond discipline-based content and in which they themselves may demonstrate limited understanding or proficiency. Such a refocus demands that individual academic must seek out complimentary expertise and specialized guidance from support areas such as libraries (p. 27).

Undoubtedly, many academics 'demonstrate limited understanding or proficiency' in teaching the concepts and skills related to information and information technologies. Indeed, some sport their ignorance with pride, believing that proficiency in information technology is somehow incompatible with the true ideals of scholarship. But most academics are acutely conscious of their shortcomings in this area and are often anxious and embarrassed about their failures to keep pace with technological change or master new forms of scholarly communications. (We are unfortunately without detailed or reliable data regarding the information literacy skills of the Australian academic community, and therefore unable to judge their true levels of proficiency).

Should academics simply concede defeat and have library educators undertake teaching activities in areas where academics are assumed to fall so conspicuously short? Should they perhaps be taught to be more information literate so they might in turn teach others the same? Or are information literacy concepts and skills ultimately beyond their expertise in discipline-based content? This belief, so often proffered, is incorrect. To consider discipline-based 'content' as somehow divorced from its manifestations as 'information' is to seriously misunderstand the interrelationships between information and – for the want of a better term – scholarly knowledge. As Biggs' (1999) principle of 'constructive alignment' suggests, one of the best ways for students to learn scholarly content is through the process of information use. For instance, learning the skills of an art historian or curator goes hands-in-glove with the need to view, analyse and quickly identify images, hence skills to effectively locate, organise and reframe visual information are essential (see Stafford 1996). It follows that if scholarly 'content' resides in full-text databases, supercomputers, web-sites, print-based journals or other types of media, then academics must find ways to become 'information literate' in order be effective, both as teachers and learners. Indeed, it would be educationally irresponsible for academics not to learn information-related skills or teach them to others.

There can be no doubt that some additional teaching support for academics from information literacy specialists is required. But these specialists should focus less on teaching 'generic skills' to students, and tailor their teaching to the specific information needs of their academic community. Not only would their energies be more effectively employed, they would be helping academics to improve the overall quality of their teaching. Ultimately, however, these specialists must be collocated with academics so that together they can fully 'embed' information literacy approaches into the teaching curriculum. This would result in improved teaching and learning skills of the academic community and in turn better learning outcomes for students. But for this to be possible, universities need to remove the political barriers

between information literacy specialists (principally library professionals) and academics and foster an integrated educational culture between them.

An Informatics alternative?

At present the Standards do not offer a way of fostering an integrated culture between these two groups, but in fact threaten to create new and wider divisions. As way of a solution to this problem, I propose we rethink information literacy through the framework of 'informatics'.

Informatics is a term that describes the interweaving of the philosophical, technological and social dimensions of information. It is as much as way of thinking about information as a descriptor. Informatics offers a unified approach to the organisation of information-related disciplines and new ways of studying and understanding the representation, manipulation, distribution, maintenance, and use of information. The term is now regularly conjoined with others to describe new branches of enquiry involving the application of advanced information technologies and techniques. For example, the technologies and techniques pioneered in genetic sequencing have progressed to the point where it is a widely recognised discipline called bio-informatics.

Some theorists describe informatics as being 'human-centred' (Kling & Star 1998) in so far as it attempts to take into account the social contexts of information and the 'situated' nature of human cognition and learning (Wenger 1998). Overall, the informatics tradition adopts an 'ecological' or 'relational' approach to the concept of information and rejects the abstracted and reified views of information commonly in use. Philosophically, informatics draws inspiration from the phenomenological tradition (Ihde 1991) and contemporary studies in the sociology of science and technology (Grint & Woolgar 1997; Golinski 1998; Rouse 1987). Consequentially, informatics is open to ethnographic and other qualitative research traditions and is amenable to analysing a wide range of social issues related to information needs and uses (Schlecker & Hirsch 2001). In particular, Social Informatics has emerged as an energetic sub-discipline dealing with social, legal and attitudinal issues raised by information and information technologies (Sawyer & Rosenbaum 2000; Kling 1999). There are interesting and as yet unexplored connections to be made between Social Informatics and the pioneering information literacy research of Christine Bruce.[2] Bruce's (1997b; 1997a) 'relational' model of information literacy shares deep affinities with the informatics approaches cited above.

Although one can construct a plausible intellectual genealogy for informatics, it is important to recognise that it is not a discipline that comes to us neatly pre-packaged and complete. In reality, informatics is more of a 'bottom-up' social and intellectual trend than a self-contained 'discipline'. In reality, informatics has grown out of the widespread acknowledgement that more inclusive and 'holistic' paradigms for information studies are needed. The utility of the informatics concepts has been widely recognised and with some academic divisions reorganising their curricula in line with informatics models. For example, the University of Edinburgh (2001) is a leader in this area and has combined a wide range of engineering disciplines and research centres under the umbrella of a Division of Informatics. Other universities are following their lead (see Gannon 2000; Kling et al. 2001).

Again, these trends are not restricted to software engineering and information technology areas of universities where one would reasonably expect a high degree of 'information literacy'. Paradoxically, some of the most interesting developments have emerged in academic areas that have been traditionally reluctant to acknowledge the value or place of

information technologies in the curriculum. Perhaps the most interesting examples are drawn from the humanities. Here academic leaders are rethinking their course offerings to better equip students with the information technology skills considered essential by employers and society more generally. This shift also reflects the fact that information technology has had a major impact on humanities scholarship (ACLS 1998; Mullings et al. 1996, Smedt et al. 1999). These changes have flowed through to humanities education and recent conferences have discussed the relationship of information technologies and skills formation in the humanities curriculum (see Malaspina 2001). On a more theoretical level, some humanities scholars have gone as far as rethinking their disciplines through concepts like 'humanistic informatics' (Aarseth 1998). But as McCarty (1999) points out, informatics is not a term widely recognised in the humanities and does present some terminological problems. Nomenclature aside, McCarty and Kirschenbaum's (2001) comprehensive list of institutions, programs and resources involved in 'humanities computing' provides sufficient evidence to conclude that major changes are underway in the humanities.

Closer to home in the Australian humanities sector, one can point to number of examples of this shift towards informatics. The most explicit example of this shift is the *Bachelor or Arts - Informatics* program offered by the University of Sydney (2001). It is clear from the published course structure and syllabus that the program is not, as might be suspected, an ad hoc amalgam of pre-existing units drawn from the arts and sciences. Rather, it attempts to ground the degree in a broad overview of informatics, including its "political, historical, social, cultural and aesthetic dimensions" (ARIN 2001) thus leaving a great deal of scope for the traditional humanities subjects. Equally balanced are the information technology units offered to students as part of the program. Here the primary focus is on using information technology to create and manage scholarly content that is relevant to the humanities, in the process, exemplifying Biggs' principle of 'constructive alignment' cited previously. Taking a slightly different approach, the University of Melbourne (2001) has introduced a *Bachelor of Arts - Media and Communications* which covers similar intellectual territory as the Sydney program, albeit from a less coherent theoretical perspective.

In the Australian context it is significant that some of our leading 'sandstone' universities are starting to broaden the liberal arts curriculum by embracing informatics models and recognising the need to teach students vocationally relevant information skills. To some extent these programs are exemplary and could be usefully emulated elsewhere, however, in order to really understand the scope of these trends one needs to appreciate the increasingly wide range of new media, multimedia or communications degree programs being offered by regional and technical universities. Because of their greater adaptability and higher proportion of distance and international students, these institutions have been able to strategically outflank their sandstone competitors in developing innovative educational programs to supply the information skills desired in high technology workplaces.

A good example of this trend is the Bachelor of Multimedia offered by Griffith University (2001). This degree program has a strong foundation in the sciences and includes the computational skills needed for multimedia production but it also encompasses a wide range of elective units drawn from the University's Education and Arts programs. However, Ruben Gonzalez (2000) – one of the architects of the Griffith program – concedes that the current crop of multimedia educational programs tend to be ad hoc affairs that lack, as yet, any clear sense of their own disciplinary or interdisciplinary foundations. A survey of multimedia and communications programs currently on offer in Australia would suggest that Gonzalez is correct in this view. In many instances, these programs appear opportunistic and cobbled together from pre-existing course units, apparently with little effort invested in establishing an adequate level of disciplinary coherence. As a result, Gonzalez is right to suggest that the

lack of disciplinary focus can result in students having a "shallow grasp" of the disciplines involved in multidisciplinary programs (p.76). This suggests that the new generation of degree programs in the humanities (and social sciences) need to fundamentally rethink their approach to curriculum design and teaching. Arguably, informatics would be a good place for them to start.

The theoretical sophistication and broadly inclusive nature of informatics would also enable us to overcome, if not abandon, some of the problematic assumptions inherent in the to the concept of information literacy as it is used within the Standards. Firstly, the term 'literacy' to describe the ability to interpret information could well be jettisoned. It already competes in the same semantic space as computer literacy, IT literacy, media literacy, visual literacy and the many other ways we are expected to be 'literate' nowadays. By subsuming all information-related learning outcomes under the conceptual umbrella of 'literacy' means that alternative or complimentary models of learning and cognition may be overlooked.

But most fundamentally, literacy already has a precise meaning as the ability to read and write, while information literacy is not reducible to the mastery of print-based information alone. Alternative approaches to the current vogue for 'literacy' therefore needs to be explored. Poracsky (1999) has suggested using 'graphicacy' to describe the skills involved the mastery of visual information and reports the successful integration of 'graphicacy' skills into mainstream curricula. Similarly, Stafford (1998, pp. 69-78) has strongly argued that university curricula must be reoriented to produce "new imagists": people equipped with the skills needed to effectively deal with the visual media and technologies becoming increasingly available to the public. Some disciplines have answered this call and are reorienting their research and curricula around the concept and practices of 'visualisation' (MacEachren 1992; MacEachren 2000). Monmonier (2000, pp. 893-894) defines visualisation as the "technical and cognitive processes of displaying, manipulating, viewing and understanding quantitative measurements representing the behaviour of complex systems". When combined with the immense power of computer graphics, visualisation offers ways to develop curricula that engages a wider spectrum of information media than the traditional print-based curricula. Overall, informatics can provide the theoretical and practical framework for students to become fluent in all information types and manifestations.

As a bottom-up initiative of the academic community, informatics does not share the same 'political' overheads as information literacy. It neither has nor seems to need an activist lobby or campaign to ensure its progress. The informatics tradition is evidence that many academics are working extremely hard, often against the odds, to independently develop their own information skills and to rethink curricula in terms of the information needs of their cognate disciplines. Because informatics is already grounded in the academic community it is more likely to form a basis for sustainable curricula change than the current model of information literacy represented by the Standards.

Taken together, the broadly inclusive and theoretically sophisticated nature of informatics and its pre-existing foundations in academic communities suggest that they may provide a sound basis for rethinking information literacy and for building bridges between academics and information literacy specialists. This would not involve abandoning the valuable work already done to bring the Standards forward, but a rethinking of the Standards through informatics in order to invigorate and broaden its appeal. By taking informatics seriously, the strategic emphasis of the information literacy community would shift from dependence on politically and financially expensive policy initiatives from the university administrators, to

identifying and supporting academic trends that would provide a much more solid and sustainable basis for curriculum change and collaboration.

Conclusion

I have given a broad account of the Standards and its institutional contexts with particular focus on the issue of curriculum integration and the political problems this raises for academics and library professionals. While the Standards provide a useful starting point for progress in ensuring that all participants in the Australian higher education sector develop the portfolio of skills required to become 'information literate', a considerable amount rethinking is necessary before 'best-practice' approaches to their implementation can emerge. In this process, attitudinal, cultural and political barriers need to be considered and theoretical and pedagogical assumptions questioned. Indeed, if the Standards were rethought through the ideas of informatics, new cultures of teaching and learning could emerge making all wavelengths of the information spectrum visible to teachers and students alike.[3]

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Notes

[1] I have since taken up a research position through the ANU. However, the observations made in this paper are personal ones and I do not speak for the ANU. It would be incorrect to read this paper as a commentary on the ANU, or its Information Literacy Program. Readers wishing to know more about the ANU's Information Literacy Program can consult the relevant ANU web site [see http://ilp.anu.edu.au]. This site contains extensive documentation about the goals and ongoing progress of the Program.

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