



**1-2 February 2008
Brisbane, Australia**

Library Futures – From Information Gateways to Knowledge Gateways

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Abstract:

Emerging ICT technologies provide the opportunity for libraries to extend on their role in ensuring equitable access to the world of information, ideas and knowledge. Web 2.0 and information communication technology is changing the way we create, present, engage with and communicate information and is also changing the way we learn and teach.

Information literacy is a key role for the library profession but is melding more and more with educational pedagogies that promote life long learning as an individual's ability to locate, access and use information for a specific need. IT based learning tools are developing at a rapid rate to assist teachers and students to explore core concepts and ideas relative to an area of learning and to map out key arguments and conflicts associated with these. Who is promoting and demonstrating these information management and presentation tools in the public realm?

This paper advocates the potential for public and state libraries and the library profession to use these emerging IT and Web 2.0 tools to organize and present information resources into bodies of knowledge. To take up a more pro-active role in assisting the community to learn about and develop informed opinions to important social issues and to engage with these issues in the

web 2.0 environment - to move beyond the development of information gateways to the creation of knowledge gateways.

Thinking on the library's role as mediator

Coming from a background of working with non-government organisations in the area of environmental and human rights issues I have been struck by how little society is supported in understanding some of the key social and political issues that impact us. For example, when the Yugoslavian states broke down through civil war in the early 1990's people were crying out for a way to understand what was going on and why – there was a world wide focus on this issue and speculation around the causes of this horrific conflict. There was a plethora of media, reports, publications, sponsored websites and online communication in response to this social concern.

More recently the UN report into climate change, and the general acceptance by many governments and corporations that we must act to minimize our impacts on our planet, has led to an incredible push for change and huge opening up of questions around what this will mean for our society in general. Again this social questioning has led to a plethora of content and commentary about this important social topic from a range of sources government, non-government organisations, corporations, think-tanks, specialist professional bodies.

The mass media has developed as the main and until recently exclusive means by which society as a whole is informed about these issues in a structured way. We are fortunate in Australia that we have networks like the ABC and SBS who have a tradition of strong documentary television. As such they undertake a vital role in informing and educating the general community about some of the most pressing social and political issues. With the development of web 2.0 technologies there is a growing public commentary about news breaking issues as they occur. In some cases adding a unique and informative perspective in others adding misinformation.

But where are libraries in this growing social commentary on issues that are being debated and defined in this online environment, could they play a more pro-active role in meeting society's information needs in a more structured way. As the professional group most identified with gathering and ensuring access to information for the community at large and their stated recognition of the importance of this access to our very democracies, could they not help bridge the gaps between the mass media and the cacophony of the World Wide Web. Libraries could build their place in the public mind as trusted institutions that can give society at large ways to understand and make sense of the issues that are impacting us. To help not just in accessing a 'warehouse' full of information but to bring information together in a way that can guide individuals in learning and knowledge building.

No doubt, in taking on this role, there is a political mind-field to be traversed in how these issues can be tackled and presented to ensure that the range of viewpoints and the breadth of these issues are tackled. Lessons from our most respected media outlets will need to be learnt and applied and the special skills of librarians in evaluating information sources further developed. The tools being developed to support the use of information technology in education, in knowledge management and in social networking (web 2.0) provide a means by which libraries can present and share information in innovative and informative ways; to give context to social issues, and reflect a range of views through links to the most relevant and authoritative information resources and sources.

Knowledge gateways - showcasing librarian's skills as information specialists

Besides the traditional library OPAC, information gateways – in bringing together external and internal information sources around a broad topic area - have developed as a core way of assisting clients to locate information specific to their needs. On the whole however each and every

individual wanting to gain an understanding of a social or topical issue is left to navigate or travel their own information seeking path through the burgeoning information world.

When an issue becomes of high social relevance, you can anticipate that many members of the society will be trying to learn about or understand that issue. Could library professionals play a role in responding to this social need by bringing together information in a way that will help interested individuals to gain knowledge both about the social issue and the information seeking strategies.

With new information sharing and information communication technologies librarians' collection and research skills could be utilised to build and maintain knowledge gateways to support communities in gaining a more in-depth knowledge of specific issues and topic areas. Knowledge gateways in contrast to information gateways would have done the hard work of pulling together a range of information resources and sources that specifically addressed an aspect of a defined social issue. Rather than just providing access to information related to very generic subject areas library professionals could package information to provide a context through which areas of knowledge can be understood. Knowledge management is often discussed in relation to organisations gathering operational knowledge to support decision making (Wikipedia, 2007; Bellinger, 2004). Can libraries adopt information and knowledge management tools and technologies to build knowledge gateways for the community at large, to support communities in making informed decisions about important social issues?

Such a role could help to break-down public perceptions of libraries as loosely structured warehouses where books and information are catalogued and stored in ways that are difficult for users to navigate leading to the greater reliance on search engines such as Google. If libraries packaged information in a way that could provide a guided entry point and context to areas of knowledge pertinent to their communities it would both highlight the range of information resources and sources made accessible through

libraries as well as model information seeking skills? This embedding of information literacy skills within a specific social information need would demonstrate in a very tangible way both the worth of libraries and the skills set of library professionals.

(NB: Some information packaging is being developed especially in relation to online curatorial packages focused on historical library collections; these bring together resources related to a historical figures or event often within a narrative context)

Visualising Knowledge Gateways – and their ICT infrastructure

So what might a library sponsored knowledge gateway look like and what might it do? To start with it should seek to incorporate the information seeking cycle and set out to mimic this. So we might start with a statement of an information need, or of a problem needing a solution. Concept or argument mapping software technologies developed as learning tools for education institutions and corporate organisations may provide a way to both explore and present core concepts to clients of library knowledge gateway.

These tools promote higher order thinking by allowing core ideas, considerations, concepts or positions relevant to an understanding of a specific social issue or topic area of interest to be set out schematically (Rider, 2006). The added benefit of this technology, used optimally, is the ability to present all facets of an issue or topic succinctly and clearly. This technology may be able to be adapted to provide the scaffold upon which a range of links to more in-depth information sources and interactive opportunities can be built upon.

Knowledge management is another area of research and development that has blossomed in the ICT environment and that would offer parallel insights to inform the development of library sponsored knowledge gateways. Although knowledge management practice and tools have developed mainly in support of corporate organisational needs and objectives they offer ways

in which library professionals can bring together bodies of information in meaningful ways. Researchers in knowledge management such as Patrick Lambe (2006) have developed important conceptual understandings around the building of "information neighbourhoods" that help bring together pertinent and relevant information vital to a users understanding of a given issue or topic area.

Wiki's have developed as way in which the building of information and knowledge content can be shared and organised. As a web 2.0 technology it provides a simple to use interactive software package allowing for building of content pages, a navigational table of contents, page tagging and embedding and hyper-linking to other web 2.0 technologies, web-sites and resources. Wiki technology, like concept mapping, could be used both as an in-house tool to develop and plan knowledge gateways and as the public interface through which the areas of a given topic or issue focus could be integrating and presented. The Wikipedia site provides an example of the development of rich content through a wiki platform. In a library sponsored knowledge gateway the wiki interface could be used to expand on the core concepts or arguments related to the topic or issue, provide the links to high quality resources that inform the debate and provide further links to search strategies used and that can be utilised and built on by clients.

For example the library's wiki for a given knowledge gateway could explain further the positions or facets of an issue or topic area and provide links to profiles of some key or prominent exponents and thinkers on these issues. This could be achieved through a link to who's who entry or a research institute. Links to some of the most recent publications of these researchers or authors latest books or published research papers could be provided. This could be packaged together with a link option of how to find more publications by this author or other authors writing about this topic area and the database packages accessible to clients to do so. The library wiki for a particular knowledge gateway would include an overview section, linking to online or hard-copy encyclopaedias, or to recent pod-casts of radio interviews or TV documentaries that have explored this issue area. A

link from these mass media based citations may include a further link that explains how these can be accessed, and copyright law in relation to them. Other recent publications on the topic could be profiled and links through to catalogue records and inter-library loan requests be facilitated. The library wiki could profile key government agencies working on this area and their role, or perhaps key NGO's and summarize their stated concerns with links through to them and advice about searching for this specific topic on their web-sites.

So, to re-cap, my initial early visions for a library sponsored knowledge gateway is that the first entry point would be a topic or issue heading, searchable on our catalogue or through a Google search, with the usual facets of a catalogue record or indexed article associated with it. This would link through to our concept map for the given topic as the preferred first entry point to a knowledge gateway, giving the overview of facets of the given issue. The wiki would be linked through to from the concept map entry point. It would provide further introduction to the facets being outlined, but would need to demonstrate restraint. The object of the library sponsored wiki is not to be the source information but to point to sources of information either within the library's collection or in the wider WWW environment.

In short the library sponsored knowledge gateways should have walked users through, and provided a concrete model of, the information seeking cycle. An effective library sponsored knowledge gateway should demonstrate how to identify and define the information needed to answer a question, solve a problem or need or satisfy a curiosity of the given topic or issue. Other stated information literacy skills include the skills to find the information needed and to know how to understand the information found. The library knowledge gateway in outlining the arguments, in giving a context to the given topic or issue, in linking to and providing access to a highly selected set of information sources and supporting users in developing further search strategies around this topic area should ultimately be a model of the information seeking cycle in practice.

Linking Web 2.0 User Input

The final part of the information seeking cycle has to do with the integrating of information and ideas on a given topic, on coming to a personal position or making a decision or applying this knowledge or understanding. It also typically includes the skills of presentation, communication and arguing of positions which seems to fit nicely with the Web 2.0 technology and philosophy. A library knowledge gateway should also facilitate this linking to other Web 2.0 technologies to allow for and invite communication and input specific to the target knowledge gateway areas.

Effective library sponsored knowledge gateways, in bringing together a context and learning environment around social or topical issues should generate a range of opinions and debate. Strong links with the variety of Web 2.0 technologies supporting communication and information sharing should be integrated into the knowledge gateway interface to facilitate this. This should provide both a means of bringing traffic in as well as a way to link to wider community discussion outside of the institutional boundaries.

The use of a Wiki interface for a library sponsored knowledge gateway will facilitate a coordinated library presence on Web 2.0 interfaces facilitating the linking back to the library site. This linking back to meaningful library content and context will be important in maintaining a profile and the reputation of libraries and library professionals in the web 2.0 environment. Just having a web 2.0 presence without a strong connection back to library services may simply further dilute and mitigate this role.

The effectiveness of a library sponsored knowledge gateway will also be gauged by how effectively it engages client user groups and stimulates them to discuss and share their understandings and concerns about the issue area. The web 2.0 environment is well geared to support community discussion of topics and issues and this should be facilitated through a community portal within each library knowledge gateway.

As well as the possibility of a library sponsored discussion area, the community portal would make links to external wiki's and blogs that already promote discussion on the given topic area. No doubt client users will want to make their own suggestions about other information resources and source links – be they print based, or web 1.0 or 2.0 –that they feel add a new or emerging perspective to the issue focus. Library Thing and book marking software such as Magnolia and Del.li.ci.ous can be utilised to facilitate this. They may welcome the opportunity to comment on the treatment of the topic area or to contribute content to the libraries knowledge gateway focus through video sharing tools such as YouTube and slide share technologies. Alternatively, they may wish to link with other library service support platforms to further explore the topic such as Australia's "Ask Us" and "Ask Now" services.

The benefits to libraries of facilitating the community sharing and linking to web 2.0 are manifold. One of the most important is direct feedback on the usefulness of the content being developed. Another is the support of the collection development role of libraries and the benefit of focused feedback around topic areas of emerging sources and resources. A further benefit is the development of relationships and networks in the community, with the Wikipedia environment demonstrating the willingness of working professionals to contribute and share their knowledge. Finally the community portals within a library knowledge gateway will help to develop the presence of library professionals on web 2.0 interfaces in an integrated and meaningful way.

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The Beyond the Hype: Web 2.0 Symposium is an ALIA event.