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KEYNOTE ADDRESS: SINGAPORE'S VISION OF THE 21ST CENTURY LIBRARY SERVICE

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Abstract

The article scans global and library trends to discuss the future of 21st century libraries. In spite of both the importance and difficulty of addressing the future of libraries, there has been no shortage of attempts to do so. The author draws insights from leading futurist to articulate the relevance of libraries in Singapore. Libraries are important in the context of the evolving experience economy in capturing tacit knowledge and understanding learning patterns. The author posits that library education in the future would have to incorporate both tacit and explicit knowledge management.

Introduction

Librarians and other information professionals are experiencing both excitement and trepidation as sweeping societal changes impact our users and our institutions and indefinitely transforming our discipline. Libraries all over the world are responding with adaptability, creativity, flexibility and resolve. Not long ago a basic LIS (Library and Information Science) textbook would simply have been about libraries, librarians and classification systems. This is no longer a possibility. The library is now embedded in a complex and dynamic society, one that has placed considerable emphasis on knowledge and its multiplier effects.

The multi-terabyte databases of modern Alexandrian projects today challenges the inspiration of the printed book. Printed text vanishes and their pages fade. Most important, information buried in books is difficult to unearth. Defining technologies do create important breakthroughs in the ability of humans to communicate with each other; enables important changes in how we preserve, update and disseminate knowledge; how we retrieve knowledge; the ownership of knowledge; and how we acquire knowledge. As library professionals we can anticipate that networked computers could produce profound cultural changes in our time, creating unintended consequences that are likely to upset conventional extrapolations of current trends or even historical parallels, and the visibility of its impact could take decades. The consolation however is that when Google, Yahoo, Microsoft, Amazon and Grokker make bold manoeuvres in an intense commercial competition, it is clearly a civilizing war, one that builds libraries rather than burns them. It does hold a promising future for libraries, an opportunity that needs to be capitalised rather than ignored.

Pastward Forward

At the wake of the new millennium, many libraries experienced false starts and dead ends as they embarked on futuristic experiments that were not built on the fundamentals of library practice. Hence it is important to chart the future with grounded principles. In the words of Howard Besser, "Librarians need to find the parts of their core mission that will be sustainable in a changed environment." (Besser, 1998, p. 133-146) Libraries throughout generations have served six core functions and these are widely acknowledged:

- Statutory – Library of the last resort (Legal Deposit) where libraries compile and maintain National Bibliographies, manage the National Union Catalogue and Periodicals Index, and guide libraries in the adoption of standards and best practices etc.,
- Heritage – Collect and preserve historical materials on community, nation and the region for posterity.
- Social – Promote reading and life-long learning, bridge the information divide, and serve the less affluent. Help build a well-informed, knowledgeable society.
- Cultural – Promote a well-informed, cultured, gracious and creative society.
- Academic – Provide reference and research services. Publications, seminars and conferences. Thought leadership on information society.
- Economic – Provide timely information and knowledge that is of economic value to business and government.

Libraries today confront formidable challenges and buffeting winds of change. Futurists concur that libraries will be subjected to threats posed by the integration of information with new forms of media as content converges with communication technologies and evolves into what Kevin Kelly calls a “culturfact.” (Kelly, 2005, p.2) Paul Saffo in his article “Farewell Information, It’s a Media Age” argues that we are on a two-way trip with personal media where “blogging, chat groups and adding comments to online articles are obvious examples, but just the beginning.” (Saffo, 2005) He warns that personal media shuts out the world and erodes our shared information space that libraries and mass media have long established. The trend towards recreating experiences at the comfort of the home is often referred to as “insperience.” Insperience is experience and immersion converged in a semi-public domain. (Evers, 2004)

“This is social dynamite, for shared knowledge and information is the glue that holds civil society together. It is the stuff that causes people to change their opinions and to empathize with others. Exposure to unexpected --and sometimes unwelcome-- news and information is crucial to democratic processes. Traditional mass media is a center-seeking centripetal force: it nudges society together, back towards a middle ground. Personal media is the opposite, a center-fleeing centrifugal force that inexorably pulls us away from the center.” (Saffo, 2005)

Thomas Frey, in the same vein outlined the following trends:

- Communication systems are continually changing the way people access information
 - All technology ends. All technologies commonly used today will be replaced by something new.
 - We haven’t yet reached the ultimate small particle for storage. But soon.
 - Search Technology will become increasingly more complicated
 - Time compression is changing the lifestyle of library patrons
 - Over time we will be transitioning to a verbal society
 - The demand for global information is growing exponentially
 - The Stage is being set for a new era of Global Systems
 - We are transitioning from a product-based economy to an experience based economy
 - Libraries will transition from a centre of information to a centre of culture
- (Frey)

Beyond the “googleage” trends, libraries have a problem of public perception. OCLC (Online Computer Library Centre) in November 2005 collected over 20,000 open-ended responses, unedited views about users’ perceptions, thoughts and attitudes about libraries and electronic resources. The “Perceptions of Libraries and Information Resources” study concluded that information self-service and seamlessness are irreversible trends. Libraries’ are lagging behind newer entrants in acquiring mindshare in the e-resource environment. The majority of respondents anticipate their usage of

libraries will be flat in the future. While many agree that libraries are best places to learn, “books” is the library brand and borrowing print books is the most used library service. Very interestingly only 10 percent of college students indicated that their library’s collection fulfilled their information needs after accessing the library website from a search engine. (De Rosa et al, 2005)

On a more positive note, Chris Anderson in his article “The Long Tail” argued that the traditional strength of libraries in providing high-point demand has now become a business principle on the Internet. He believes that immediacy, availability and affordability are key attributes of libraries in the new millennium. (Anderson, 2004). He opines that libraries have a greater opportunity to thrive than to become disintermediated.

Investing into the Future

In July 2005, NLB released its Library 2010 blueprint “Libraries for Life, Knowledge for Success” responding to the immediate and long-term challenges facing Singapore’s society. The report outlined the strategies to bring the world’s knowledge to Singapore to create a positive social and economic impact. Library 2010 was to build on the foundations of its predecessor Library 2000. The latter was a study carried out between 1992-1994 to transform Singapore libraries to provide Singaporeans with better information access. (MITA, 1994) It provided a vision that focused on expanding the learning capacity of the nation, resulting in rapid physical infrastructure upgrading, process re-engineering and Internet connectivity to create a borderless library. The eight-year investment programme came with quick successes and worldwide recognition. However by 2003, Singapore libraries were at the helm of a new challenge. Loans reached a plateau and visitorship began stagnating. NLB had to reconstruct its future with a new plan that will repurpose the library for the knowledge economy.

Singapore’s Vision of the 21st Century Library is one of an inspiring beacon of lifelong learning, bringing knowledge alive, sparking imagination and creating possibility for a creative and vibrant Singapore. This would entail a library and information service that is trusted, accessible and globally connected to promote a knowledgeable and engaged society. The knowledge society operates with the complexities of connections. All individuals, communities, and systems are massively interconnected in an evolving economic and social ecosystem. In the connected society and economy, each network actor (individual, team, or organization) is embedded in a larger web that affects each participant and, in return, is influenced by that participant.

Library 2010 was to build on the existing “access” platform to create dividends that would redefine the purpose of the library in the knowledge economy. In the context of this narrative, the library is a key instrument of social capital building, enterprise innovation and adaptive government. This articulation is best described as a knowledge triad diagrammatically presented in **Figure 1.1**. (NLB, 2005)



Figure 1.1 –Knowledge Triad © NLB Singapore

Knowledge broadly refers to a body of facts and principles accumulated in the course of time, which is affirmed to be true. Hamilton defines knowledge as “certainty founded upon insight.” “Knowledge is where we take in and understand information about a subject, and then make decisions, form judgements, take opinions or make a forecast. We do this by using rules about the world that we have worked out through having lots of information from the past. Data leads to information, and information leads to knowledge.” (Millner)

Beyond expanding the learning capacity of the nation, we will now create the collaborative space and environment that builds social capital and deliver knowledge dividends to Singapore. While NLB has a leading role in building up Singapore’s collection of knowledge assets and ensuring easy access to these, it also plays a supporting role to other agencies as a valued collaborator and partner.

Collaboration - the new “S” curve

Libraries of the new millennium need to focus on reaching out to the community through its wide spectrum of activities encourage interaction, learning and social bonding in a conducive environment. Libraries will become a shared community learning space for the people providing easy access to information and knowledge. Librarians will act as mentors, guides and coaches to the users. However, new approaches will be adopted to enhance the community’s creative capacity and sustain a culture of reading, learning and applying knowledge. Up till now, Singapore libraries have adopted the more passive ‘shop-front’ approach, one where people use the library facilities for specific purposes such as to read or research, borrow a book, surf the Internet or participate in a programme. With the shared learning space philosophy, libraries will be inter-generational, supporting both private and collaborative study, cultivating experimental as well as experiential learning.

A community-oriented space is one that effectively connects with other services especially those of memory institutions such as the archives, museums and galleries. It will blend formal and informal information sources and material culture to facilitate information sharing and discovery in a more spontaneous manner. This will be an integral component of the community’s wider strategy for

expanding the individual's horizons and his or her ability to learn and absorb knowledge in creative ways. It provides a unique opportunity to harness the resources across communities and minimize any cultural divide by promoting greater participation and interaction.

The collaborative approach will also help remove barriers to access, facilitate flexible hours, hyperlink knowledge domains, create extensible audience, and provide a total perspective shaped around the needs and aspirations of individuals. The Singapore library user will be introduced to different genres of experiences and learning from a cross-pollination of people from different disciplines and a fusion of knowledge and insights. Depending on his or her needs at a particular time, each citizen will value the new learning space differently - it may serve as a community campus, a multi-purpose resource centre, an incubation laboratory, a study, a studio, a library, a museum or its equivalent.

At the Internet front, a social networking site online is getting more hits than Google where invisible bands are transformed into mini entertainment networks. MySpace has become the MTV for the net generation raking up 9.4 billion page views with new memberships at the rate of 3.4 million per month. (Howe, 2005) MySpace is a social networking site like Friendster but with 400,000 of the sites with an estimated 30 million user pages belonging to amateur bands or music groups. MySpace is built on friendships; a platform for social networking that is transforming entertainment itself. Similar teen social sites include xanga and facebook (Wallis, 2006)

Likewise LinkedIn (www.linkedin.com) offers one of the most powerful platforms for networking and collaboration, providing global connectivity to businesses, individuals and institutions. The fundamental premise is that knowledge resides in people and the knowledge economy actively promotes active social interaction to facilitate the transfer of knowledge.

The new focus will also serve as an important nexus for information and communication. L2010 will reinforce the core values around equitable access to content and their exploitation. More importantly it will focus on developing beyond the individual's ability to continuously access, appreciate, absorb and apply pertinent information and knowledge for personal and professional development to that of building collective intelligence and social capital.

The transformation of libraries to incorporate services beyond books is taking place all over the world. The March Library in Cambridgeshire for example houses the Registrar of Births, Marriages and Deaths, incorporates a new Marriage Suite and has established itself as one of the most accessible and elegant modern buildings in the town. Other new libraries, such as the Hetton-le-Hole in Sunderland, incorporates nursery facilities, housing association offices, careers and youth services, and even administrative offices for the local police. These non-library service providers were involved in the planning and funding of the new building – where the public library is the anchor tenant.

In Bishop Auckland, the refurbished town library now houses a fine new art gallery and theatre, and in Sunderland city itself, the library building is also the home of the Northern Gallery for Contemporary Art. It is imperative therefore that library spaces are effectively optimised with other services that would justify government expenditure.

On the Internet, the emerging geoweb (www.dgeo.org) is a case in point. The geoweb is linked to places, and the residents of those places can take an active part in helping define its uses— public, commercial, and private. Geoweb applications have the ability to define a neighborhood or a city, its architecture, provide pathfinders to health and safety choices with real-time/real-place health or crime maps. Geoweb opens the opportunity for local public agencies like libraries, community foundations, and commercial interests to collaboratively engage the public in choosing and implementing the kinds of applications that will best serve the local community, integrating the virtual with the physical.

These are early resemblances of a knowledge-based environment, a “multidimensional matrix and this matrix consists of knowledge, information, facts and data that are recorded in published or written works” and a “multifaceted knowledge machine that helps to facilitate precise retrieval of knowledge.” (Keller, 2006, p. 4)

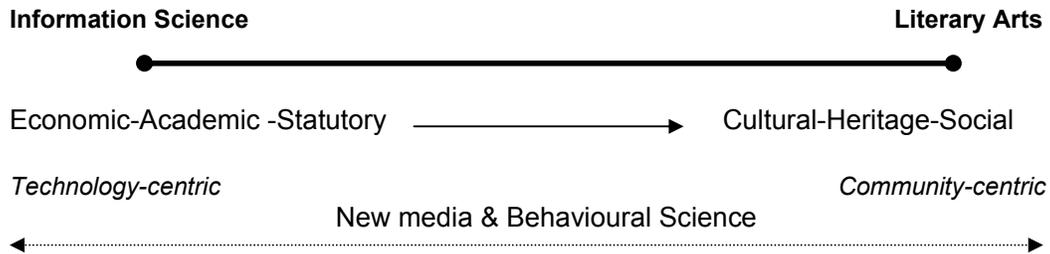
Beyond supporting lifelong literacy, libraries can proactively nurture and support a creative knowledge-based society. As a wellspring of innovation, libraries will open up new possibilities for the development of new enterprises, be it business or government. Access to “trusted” knowledge and a collaborative knowledge exchange platform would enable enterprising individuals, companies and organisations to enhance their entrepreneurial abilities and create innovation efficiencies. Libraries of the future will provide the collaborative platform for organisations to create new value through access and exchange of knowledge. Knowledge is central to the creative and innovative lifestyle of Singaporeans too. In the pursuit of developing an enterprising and imaginative society, libraries can help Singapore to actualise knowledge through interaction and exchange. By constructively engaging society in conversations, facilitating easy retrieval from knowledge repositories and in stimulating the re-use of knowledge, NLB would have scaled new heights in empowering Singaporeans.

Changing Face of the Librarian

What do these mean for Librarians of the future? We can conceive of four hypothetical but possible scenarios of the future, which are instructive. The first is where books exist alongside other forms of media but the latter is more affordable and accessible than books. In such a scenario, librarians from being a sheer custodian of books will become gatherers and distributors of knowledge in all media. Librarians will manage knowledge in media rather than the media itself. Analogous to “Intel inside” libraries will be cherished by the “knowledge inside” defined by the depth of the librarian’s expertise. A second scenario is one where access to huge bases of information is immediate and organised. These terabytes of content are automatically indexed, classified and catalogued by artificially intelligent knowledge systems. Knowledge intensive institutions create more content than can be consumed by patrons. Librarians in this scenario will be “hyperlinks” to different tiers and segments of content where users can seamlessly plug and play with multiple domains of knowledge. Yet a third scenario is one where the librarian is totally disinter-mediated. Information filtering becomes redundant, as users are equipped with robotics powered search engines that can effectively filter and identify trusted content. Search and retrieval is second nature to users. In this scenario, the librarian will become a knowledge coach helping users in the construction and deconstruction of knowledge in contextualised environments. Knowledge coaches identify pathways rather than point to a destination. Generalist librarians will be replaced by information specialists with consulting skills, supported by tools that can synthesize and analyse huge bases of information. Librarians in this scenario help to create knowledge rather than provide access to knowledge. The last scenario is one where the library as a distributor and dispenser of information is overtaken by the likes of Amazon, Walmart and Ebay. Libraries become knowledge institutions with the ability to extract and analyse patterns of knowledge seeking behaviour thereby enhancing the learning and innovation cycle of societies.

Wither Library Education

These images of the distant future may least represent present realities, but they are guideposts for planning and educating the future generation of knowledge service providers. In planning for an effective librarianship programme that can service the future demands of society as well as the changing nature of content itself, one should conceive of library education from two ends of the same continuum: information science at one end and literary arts on the other.



Library schools vacillate between the two ends of the continuum with library curriculum leaning towards information science in the late 90's. Manpower requirements in most libraries shifted focus from literary arts to information science especially with the introduction of the Internet and web based technologies in libraries. The next wave of change in library science education would focus on new media and behavioural science, which will augment the existing information science curriculum. Information science will delve into greater depths of sophistication with the use of robotics and artificial intelligence. Specialist knowledge would be scarce and not all information science schools will be at the forefront of new technological know-how. Societies with long-standing investment in hard sciences will naturally take the lead in such specialisations.

Additionally, accelerating globalisation will re-ignite national, cultural and social issues which would require architects of social cohesion and social capital building to play a significant role in libraries. As more libraries converge into centres of culture, library curriculum must necessarily focus on social and behavioural aspects of learning. The demand for manpower at the two ends of the continuum would be more marked with the role of libraries being redefined and repurposed to service an integrated, globalised and creative economy of the future.

With these likely shifts, the debate over the distinctiveness of librarianship will once again resurrect. The lack of clarity would spill over into the question of whether librarianship remains a profession and if library science or information studies should be a first degree or a post-graduate qualification. There are no right answers to these questions and this conference I hope will draw on the collective wisdom of experts to arrive at some reasonable conclusions.

On the human resources side, libraries will need a better understanding of how they can hire, develop and manage for tacit skills rather than transactional ones. Localised training and apprenticeship programmes will feature more prominently in libraries which reward tacit librarians who collaborate to achieve results. In an age of complex interactions (Johnson, 2005) driven by specialisation, globalisation and technology, librarians need to deal with ambiguity, exercise high levels of judgement and draw from deep knowledge or tacit knowledge. Knowledge management will become an integral part of Library and Information Science education beyond the understanding of technology-centric solutions. Library curriculum would need to embrace both tacit and explicit knowledge management skills acquisition. This means that library education will have to go beyond a post-graduate degree to one that is practice oriented. Knowledge is created in the process of problem solving. Libraries would have to develop the competency to capture tacit knowledge where real-time tracking on how people solve problems with the help of information would be critical. Cataloguing and classification of information will have to incorporate patterns of knowledge-seeking behaviour.

Ancient wisdom has it that the librarians were responsible for “the promotion of wisdom in the individual and in the community” (Butler, 1951) Librarians had to nurture understanding and judgement within the citizenry and society. This traditional social value of librarianship is still relevant and should form the context for the exploitation of new technologies by librarians. By the same token, information and communication technologies create a new social context that changes the meaning and significance of libraries and librarians. These are not incompatible but libraries that maintain the delicate balance and the dialogue between the two seemingly contrasting demands will thrive in this new millennium.

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