

## **Building relevance amidst the content revolution**

### **Author**

Bosanquet, Lyn

### **Published**

2010

### **Journal Title**

Library Management

### **DOI**

[10.1108/01435121011027318](https://doi.org/10.1108/01435121011027318)

### **Rights statement**

© 2010 Emerald. This is the author-manuscript version of this paper. Reproduced in accordance with the copyright policy of the publisher. Please refer to the journal's website for access to the definitive, published version.

### **Downloaded from**

<http://hdl.handle.net/10072/33308>

### **Griffith Research Online**

<https://research-repository.griffith.edu.au>

# BUILDING RELEVANCE AMIDST THE CONTENT REVOLUTION

**Lyn Bosanquet**

Director Information Services

Griffith University

Nathan, Qld

[l.bosanquet@griffith.edu.au](mailto:l.bosanquet@griffith.edu.au)

# BUILDING RELEVANCE AMIDST THE CONTENT REVOLUTION

## **Abstract:**

There has been much discussion in the past two decades about the need for the Library profession to change. The prophets of doom and gloom have spoken loudly about the profession's lack of relevance and the consequence of this irrelevance. Many have taken notice—marketing campaigns have been introduced, technologies are put in place, measures have been established etc. All these activities have kept us busy, and certainly made some improvements to services but the reality is that we have been tinkering at the edges rather than taking the giant steps that are actually needed.

The information profession is made up of many workers: librarians, records managers, archivists, data managers etc. A library is fundamentally different from a research centre, but there **is** a role for the information professional in both.

The challenge for us all is to find a way in which the core skills and competencies of the profession can be shown to add value to our work regardless of the context in which they are demonstrated. These skills and capabilities revolve around content; how it is created, how it is used, stored, managed, accessed and utilised in order to contribute to an ever increasing global body of knowledge.

The wider environments in which we work often fail to recognise the complexities of this cycle, and the contribution that the information professional makes to keeping accessible, relevant information available from the desk top. Big decisions whether they be company acquisitions, research methodologies or clinical trials cannot be made without appropriate content. Why then are the content managers, the information professionals under threat? Are there new skills and capabilities required by information professionals to build value in the content industry that continues to revolutionise?

What is it that needs to be done for the Information Professional to truly take their place in this brave new information rich world?

## **The Past**

The Library profession has a long history of delivering services in an appropriate and relevant manner.

Up until the late 1970s library professionals exploited complex and sophisticated systems.

These systems were predominantly created by library professionals to allow the management of and accessibility to content. The catalogue, indexes and abstracting services showcased their professional skills. The purpose of this work was to create efficient pathways to appropriate content for their primary stakeholders.

Librarians did this by:

- Managing the physical space where content was housed
- Building collections of relevant content for use by the community
- Developing tools, systems and services to make locating the content easier

Achievement in these three areas required large staff numbers, complex manual systems, and a rigorous application of standards and procedures.

In a nut shell the main purpose of libraries was to house, locate, acquire and provide access to the published resources required by the community.

It would have been impossible for a tertiary institution to continue its work without a library. Libraries were vital and important, providing the essential infrastructure that enabled access to scholarly content. Gaining access to the right content was convoluted and time consuming. Considering that scholarly content drives the process of academic endeavour, it is not surprising that in this historical environment the library's role was well understood relevant and secure.

In this world the skill of the librarian was paramount for the user to locate their required content. The front office professionals assisted the users in navigating the complex systems to retrieve the content, while the back office professionals applied systems and standards to make this process as accurate and as predictable as possible. As the provider and navigator of content the role of the librarian was critical to successful information seeking.

In the print environment there was a convergence of three disparate competencies – the management of space, collection and staff (Sennyey, Ross, Mills, 2009<sup>1</sup>), all of which

combined to create the total service offering. Collection was housed in a space that was accessed by users, using a service created by staff. These three components of the Library's work drove the development of the core competencies of the profession.

### **Core Competencies**

For the purposes of this paper “competencies” has been defined as a specific range of skills, abilities or knowledge that: enable one to carry out professional responsibilities (Dole, Hurych, Liebst, 2005<sup>2</sup>); form the basis of a profession, that will be used by successful organisations to solve current challenges and to plan for the future; provide a strategic advantage, contribute to perceived customer benefit and be difficult to imitate (Prahalad, 1990<sup>3</sup>); a combination of skills, knowledge and behaviours important for organizational success, personal performance, and career development (Special Libraries Association, 1996<sup>4</sup>). There are many definitions of competencies throughout the literature, and these have evolved over time. The majority of them refer to technical skills, disciplinary knowledge, and the information requirements of the users.

1996: “ have expert knowledge of the content of information resources, including the ability to critically evaluate them” (Special Libraries Association, 1996<sup>4</sup>)

2007: “... organizations need professionals with industry knowledge who possess core technical skills as well as research and analytical capabilities” (Shrodin, 2007<sup>5</sup>)

2009: “... able to employ techniques used to retrieve, evaluate and synthesize information from diverse sources for use by individuals of all ages and groups” (American Library Association, 2009<sup>6</sup>)

The iSchool movement is seeking to redefine how these competencies can be utilised to provide a more valued offering. It is their belief that expertise in all forms of information is required for progress in science, business, education, and culture. This expertise must include understanding of the uses and users of information, as well as information technologies and their applications. The iSchools focus on the relationship between information, technology, and people, replacing the traditional notion of physical space with technology as it is now technology or the digital environment that defines access to information.

(<http://www.ischools.org/site/about/> 2009<sup>7</sup>). This is a multidisciplinary approach where library science, computer science and psychology, sociology and management converge to prepare graduates for a variety of jobs in academics, not for profits, government and industry. (Olson, G. Grudin J. 2009<sup>8</sup>)

## **The Present**

The availability of on-line content, retrievable through freely available search engines has changed the process by which content is accessed forever. One of the many consequences of this change is that the librarian's role as provider and navigator is no longer seen as imperative or valuable. The information seeker is now able to discover and navigate through to content unassisted and in many cases will resist and resent mediation. Library professionals had traditionally provided a gateway to content, an important role that had represented both relevance and value to the organisation. This suddenly diminished with the combination of technology and the mindset of the millennium user. Ironically the Library profession was a substantial contributor to the development in technology which have driven this change (Moynihan, Geoghegan and Green, 2005<sup>9</sup>), but their contribution to these advances has not diminished the collateral damage (Green P., 2005<sup>10</sup>).

In this new environment a form of panic emerged throughout the profession as information seekers began accessing their required content without mediation. It was evident that the services and structures that had been an integral part of the library for generations were quickly being surpassed as the predominate mechanism for connecting users to content (Bosanquet, 2007<sup>11</sup>).

Librarians have jumped on a variety of bandwagons, particularly technological ones in an effort to show innovation and cement a place in the new world. As early adopters of technology libraries are now engaged in creating wikis and podcasts, generating overdue notices via SMS, building repositories, managing data sets, managing spaces, building infrastructure etc all in the hope of bringing the user community back to the library. These efforts appear to be driven by a desire to re-invent the enduring place libraries once held within the institution. Librarians are redefining themselves as copyright experts, information commons owners, IT trainers and teachers. Although there is obvious merit in some of these activities, they are often selected in an ad hoc manner, in some cases because there is a perceived void within the institution. They are rarely defined and planned, often with no nominated outcome and usually do not require the profession's core competencies for execution.

The library community had an opportunity / responsibility to identify how the profession's core competencies could be utilised in this new environment to deliver required outcomes for their communities - connecting people to content. Instead the profession has largely clung to the existing pillars of library activity designed to support the old constructs with a disparate range of peripheral interests. For example:

(a) Information literacy

In an effort to compensate for activities no longer required Librarians took advantage of the fact that the early online packages with their proprietary front ends were cumbersome and difficult. Libraries moved from providing direct access to content to teaching users how to engage with the new on-line “containers” by teaching how to navigate through the new domains. Information literacy has become a major focus for academic libraries many of which spend vast numbers of professional hours teaching.

Unfortunately or fortunately depending on the perspective, the front ends and portals of today are now intuitive and user friendly. With over a decade of experience in this new environment a self service generation has been created: the Y generation with their familiarity in the online world, and their “learn as you go - no manuals attitude” (Jaschik, S. 2007<sup>12</sup>). Information literacy classes are no longer relevant and do not support this new user.

#### (b) Reference

There has been a dwindling of support for traditional library services: reference queries continue to drop as do circulation figures. Many libraries introduced virtual reference services believing it was the face to face interaction that was unwanted, but these services failed to gain significant usage. Reference services remain at the core of the library profession, but they too belong to an old construct. Jaschik<sup>12</sup> refers to the “alter of the reference desk”. The skills and capabilities required to deliver the traditional reference services now need to be used to deliver assistance at the point of need, online, embedded in the user space, not at the reference desk.

#### (c) Space

There is no question that space and its utilisation is an important issue for both libraries and universities. As campuses continue to consolidate, there is less and less space for the



community. Libraries have traditionally had large physical spaces due to the size of their collections and as these diminish there is new space in libraries that can be utilised to fill a variety of needs across the university. Library space once filled with print resources is being taken up with coffee shops, teaching rooms, student services, lounges and computers all of which serve to increase the gate count, but it cannot be assumed that this investment within the library will increase the use of either its content or services. The core capabilities of managing space bear little resemblance to the libraries' professional capabilities and in fact are more aligned with facilities management. If the emphasis is placed on space, the library is increasing the risk of its own irrelevance as the skills required to manage space do not demand unique capabilities.

The de-convergence of space, collection and service (staff) (Sennyey et al, 2009<sup>13</sup>) has resulted in the development of different philosophies within the Library. These philosophies guide the activities required to execute these three aspects of library work that were once tightly linked, but are now completely separated. The disparate objectives of these emerging activities have a profound effect on how the library is regarded, how resources are allocated and how the activities are focused.

The digital explosion has transformed the Library's space, the library's collection and the professional activities carried out within the Library. It has also transformed the Library user, the content seeker.

It should be of major concern to library professionals that despite decades of dialogue and critical theory relatively little is known about how the new users (millennium, Google generation, digital natives etc) access content. It is only by a more critical understanding of this that one can define and deliver services to provide the twin outcomes of delivering value

and relevance. The relevance of libraries continues to reduce in proportion to the rise of unmediated access to content.

According to an OCLC report in 2006, 89% of college students use search engines to begin an information search, while only 2% start with a library web site; 93% are satisfied with their overall experience using a search engine, while 84% are satisfied with a library assisted search; “books” are still the primary library brand association (OCLC, 2006<sup>14</sup>). Many academics indicate that they do not use the library, and see the library as being a facility for the undergraduate community, yet they access the content provided to them on a daily basis. They are wooed by the notion that the library is a physical space where multiple copies of textbooks are provided for the undergraduates, and that services are designed to support teaching & learning rather than research. (Brown, S., Swan, A. 2007<sup>15</sup>) This should have an enormous impact on how libraries operate.

In 2008 the British Library and Joint Information Systems Committee (JISC)<sup>16</sup> released a report *Information behaviour of the researcher of the future: a cyber briefing paper* which investigated the new user and their content seeking behaviours. It raised a number of questions anticipating the impact on Libraries. The most fundamental issue raised is that if libraries continue their current practices, they will lose their place within the content industry and users will deal direct with creators and owners. Libraries need to compete for attention (Ross, L., Sennyey, P. 2008<sup>1</sup>).

The JISC report also noted that the new information consumer “... can switch instantly between commercial search engines, social networking sites, wikis, and book marked resources ...” to meet their requirements. These users demand dynamic and personalised content experiences. They “bounce and flick” between portals and providers while exhibiting

a new form of on-line reading – the power browse. Access to content via the traditional Library OPAC is not intuitive; it takes the user out of their space, requires too many clicks, and demands a more systematic searching strategy than they are comfortable with. In the new world convenience trumps relevance Libraries must find a way to put scholarly content into the users' environment, so they spend less time navigating to what they need and more time on using what they find.

In the analog environment the driving ethos of Library service was the ethics, values and practices of the profession as stated in the ALA core competencies Section 1 (ALA, 2009<sup>6</sup>). Service delivery was motivated by the core values of equity and access, the promotion of democratic principles and intellectual freedom. Because the major outcome of the converged library (space, collection, service) – connecting people to content was a high priority for the funding body this primary allegiance to the profession was never questioned. Today the objectives of the funding body can be at complete odds with this philosophical stance. Libraries must now re-evaluate how their priorities are selected and ensure that the objectives of the funding body are served rather than philosophical drivers of the profession. This will mean that libraries need to develop strategies to change priorities as required.

There is no question that the foundation of all academic endeavour was and still is scholarly content. 25 years ago the challenge around content was that it was hard to locate, difficult to acquire and difficult to access. The challenges around content today are almost the exact opposite but nonetheless, still considerable. In a 2003 study, Peter Lyman and Hal Varian<sup>17</sup> estimated that about 5 exabytes ( $5 \times 10^{18}$ ) of new information was generated in 2002 worldwide, with a growth rate of about 30% per year. They noted that 5 exabytes “is equivalent in size to the information contained in 37,000 new libraries the size of the Library of Congress book collections.” A 2007 study by IDC<sup>18</sup> concluded that the worldwide

production of information in 2006 exceeded 161 exabytes, increasing at a compound annual growth rate of 57%. This represents a major opportunity for libraries.

### **The content cycle**

The amount of content available on the desktop at our fingertips is substantial; it is easy to acquire and even easier to access. The number of journals and e books that are now available would be beyond the comprehension of librarians 25 years ago. Content from all over the world is available from any internet ready PC whether it be subscribed to or freely available on the web. Clearly it is simply not possible for the majority of users or library staff to remain abreast of this volume of content.

In order to maximise the value of content it is necessary to have a comprehensive understanding of the entire industry. The notion of content, its creation, management, distribution and use is complex but absolutely imperative in order to ensure appropriate and efficient use. The library profession has a substantial and important role to play from within the library as well as from within the wider sectors of the information community that contribute to this cycle. Libraries connect users to the content they need that will make their work easier, faster and more efficient. Library professionals can offer enormous value here.

**Know what content is available** – Libraries have the tools, skills and connections to understand the global publishing output across continents and across cultures. This information is imperative to any academic undertaking any form of research. The ability to unearth the works of any discipline is a high value skill. Academics are not traditionally strong in this area and in many cases do not even have an awareness that content exists outside their own focus. In their report *Researchers' Use of Academic Libraries and their Services* (Brown, S. Swan, A. 2007<sup>15</sup>) the

Research Information Network found that academics required a lot of assistance in locating and identifying the impact of specialised content to be used in their research. In addition, content is format independent – available in many containers, with a variety of pricing models and distribution channels.

**Inform appropriately** - Libraries have the mechanisms to seamlessly inform the academy of how best to access appropriate published output. There was a time when a combination of the new books display and new title slips provided this service quite effectively, but this is no longer the case. It is just as important for the academic in the hard sciences to be aware of the publishing output of India as it is to be aware of the publishing output of the US. Most interestingly in order to inform appropriately we need more than ever to have good relationships, partnerships in fact, with publishers and distributors in ways that we have failed to have in the past. We need to work with them to ensure that appropriate discovery tools are available regardless of format and that content is appropriately classified. It is imperative that the informing process is succinct and targeted, that the process be flexible to cater for change over time, and managed to ensure that change if required does occur. In addition the Library must build and maintain strong relationships with the academy or customer base. This relationship must be based on an understanding of their work and what is important to them to ensure that the results meet the varied expectations of the user. Special libraries have done this well over the years. Classification of content is vital for this to be effective. As delivery to the desktop is mandatory, mechanisms need to be put in place to allow this to happen.

**Provide access to content** – In a constantly changing environment libraries provide access to subscribed and / or purchased content and to free content via web links or

feeds. Libraries implement intuitive discovery tools to ensure that the content being provided is accessible.. In the print environment Library staff knew the collection. It was physically handled a number of times prior to its availability It is however becoming increasingly difficult for the Library to know what constitutes the collection and even more difficult to know what the collection contains as it is not seen, handled or individually selected. Increasing numbers of users seek content via Google (Housewright R., 2008<sup>19</sup>) rather than via Library portals. The overwhelming amount of content available forces users to implement refining strategies to limit the results; create bookmarks to make content found re-accessible; to download to store these results until needed etc. These practices do not provide an appropriate mechanism for seeking content. The process of searching is simple but dealing with the mass of results is onerous.

**New content management** – The manner in which new content is managed has significant ramifications on how it is valued and what return is generated from it. Publishing in high impact journals is the traditional methodology, but this may not be the most appropriate course for all new content. Rapid time to publication may be the most important criteria for the academic, the discipline and the institution. Depending on the type of content in question, the library can inform and assist in identifying where content is being published and how its maximum impact can be achieved. Libraries the world over are involved with digital repositories providing information management to large collections of content. In some cases these repositories provide a second wind for content that was perhaps overlooked when first created. The traditional library skills of building complex systems and standards are being reborn, providing a framework for the storage, retrieval and preservation of e-research and research outputs. There are enormous opportunities for Libraries to utilise bibliometrics to support the institutions

desire to increase research impact. This is a relatively new area for libraries but for a bibliometrics service to be implemented effectively core Library capabilities are required. The paper, *RIMS: The Research Impact Measurement Service at the University of New South Wales* by Robyn Drummond and Richard Wartho<sup>20</sup> to be published in AARL, June 2009 illustrates this.

Historically content was formally published and distributed as print through well-known suppliers. In the current environment relevant content is delivered in a multitude of ways: self published, via open access, with varying licensing models, and available via web sites, platforms, aggregators or repositories. It is a constantly shifting world. If access to the right content is the required outcome for the user, there is a need to focus search strategies to deliver appropriate content in manageable bites. Information professionals can do this by using standards, technology and having an awareness of user needs.

The core capabilities of the profession allow Library and Information workers to contribute to the content cycle at every level. This is ‘on target’ work is core to the academic endeavour and provides libraries with an important role to play.

## **The Future**

The radically new environment of digitised resources, unmediated access, and self-help pose many challenges for the Library profession, which also presents significant opportunity. If the Library profession takes advantage of these opportunities it will cement itself as a valued and relevant profession within the digital community.

### **(a) Understand how content is used**

By understanding how content is accessed and used, libraries will be able to redefine their core services; whether this be putting help at the point of need, establishing specific content feeds to meet demand, or eliminating barriers to access. It is imperative to make the search for library content as easy as a Google search. The literature indicates that users do not access content via library portals as their predominate information seeking behaviour because of the complexities it creates. Change is needed here. There is a distinct difference in the information seeking behaviour of diverse user groups. The 'one size fits all' approach does not work in this context. At a tertiary level the undergraduate, the higher degree student and the academic all exhibit quite different behaviours around content and inhabit different virtual spaces. Library services must take these disparities into account. Google is the current benchmark for information seeking. If something is not simple to access or navigate then it will not be used: "simplicity, efficiency and transparency combined with savvy marketing drive the users' decisions in selecting information resources" (Ross L, Sennyey, P. 2008). This creates enormous opportunity for library professionals in terms of creating and managing content. If publishers and owners of digital content want their material to be used new models of purchase, technologies for access, and classification for distribution need to be created.

#### **(b) Integrate content and services into the users space**

It has been identified that the location of appropriate content is a time consuming activity for many users who subsequently chose convenience over appropriateness. Feeding content to the desk top can eliminate the need for time consuming search strategies that deliver huge numbers of results. However the appropriateness of these content feeds rely heavily on the quality of classification of the content at the point of distribution. Classification that is too broad will deliver too many results; classification that is too specific will eliminate potentially relevant content. Library professionals are well equipped to contribute to this



process at the point of creation and / or distribution phase of the content cycle. Access to services need to be placed at the point of need inside the users space.

### **(c) Leadership**

In any environment of rapid and major change it is expedient to have strong leadership both at the institutional level and at the wider professional level. Strong leadership at the professional level provides constructs, frameworks and possible solutions to large challenges while strong leadership at the local level provides direction, relevance, and focus.

As in many professions, promotions in libraries have often been awarded based on the candidates understanding of the work, rather than on one's ability to lead the work. This has meant that many senior managers continue to drive the process of the work because in simple terms this is what they know. This practice has a detrimental effect on the library profession:

- Workers are unable to own their work. Management needs to identify the required outcomes, not the processes to get there. To make an engaged contribution to the work it is essential for workers to be active participants in their work.
- Innovative thinkers leave. Innovative thinkers within the workplace become frustrated by lack of opportunity to contribute and leave not only the institution but often the profession.
- Continuous improvement cannot occur as decisions about the work are being made away from the work.
- Management time is spent on work processes rather than on strategic solutions to the changing environment. Without the strategic solutions and the pathway forward it is not possible for either the Library at the local level or the profession at the broader level to build relevance and represent value.

The digital revolution has seen libraries take up a range of new activities but many of these can be seen as tinkering with the “traditional protocols and services”. Library leaders need to build a new paradigm for libraries rather than fine tune a proven model from a previous age. The market place has embraced a completely new model and for libraries to remain relevant change must occur. (Ross L, Sennyey, P. 2008<sup>1</sup>).

Leadership is vital for the library and the profession and based on the amount of literature on this subject it is clearly one that is resonating around the world.

#### **(d) Create a service framework**

Libraries have been working within the digital environment for some years seeking new ways to show relevance. Unfortunately much of this work has been sporadic, without an overarching framework under which to operate. Libraries need a newly defined, unifying strategy to evaluate current projects, identify gaps and provide a collective view of expectations, possibilities and priorities. (Lavoie, B., Henry, G., Dempsey, L. 2006<sup>21</sup>). This would / could better define the library’s role within the institution and assist in documenting this role. The framework is required to create relevance, without which the work remains ad hoc. It also provides the toolset to communicate goals and environments, and support the implementation of common systems to support emerging library goals. This new paradigm needs to be service orientated, consistent, and outward facing.

#### **(e) Align to strategic objectives**

Libraries need to define core services and clearly align them to the strategic objectives of the funding body. It is only by establishing a close alignment to these objectives that the Library can truly articulate its value in the wider context. Before this can be achieved, it is necessary

to understand the objectives of the funding body and how the Library's activities can tangibly support the achievement of them. In some instances this will be easy, and in others it will not. It is more than likely that the Library will need to redefine the services it offers to achieve this connection. It must identify staff capabilities outside the context of traditional services and work through how these capabilities can be utilised to produce products and services that assist the institution to meet its strategic objectives. In such a scenario, the Library then becomes a partner working with the institution towards common goals. An excellent example in an academic context can be found at *RIMS: The Research Impact Measurement Service at the University of New South Wales* by Robyn Drummond and Richard Wartho<sup>20</sup> to be published in AARL, June 2009.

The Library's work needs to be so closely aligned to the institutional objectives that should these change the library can quickly transform its services to ensure an ongoing relevance. The flexibility required to achieve this goal is significant and under normal structures is usually not possible. It is necessary for libraries to move to business structures that facilitate an innovative, flexible and appropriate approach to service delivery. It is the business structure that drives how staff respond internally and externally, how communications are managed and how cultures are formed. Structures drive allegiances and loyalties. Libraries need to think about the possibilities for the future and be ready to change as required.

As previously mentioned there are many activities that the library may be involved with: information commons, institutional repositories, web 2.0, copyright, infrastructure, e-research, data management to name a few. It is important to balance the strategic options to ensure that there is a consistent understanding both internally and externally what the priorities are and what the work is. This is important to ensure appropriate resourcing, and to

develop a shared understanding of where the library sits within the institution. Without this it is not possible to form a value proposition.

#### **(f) Develop a value proposition**

The library profession has unique capabilities that traverse quite different skill sets. When the capabilities for managing content, technology and people are combined, libraries can create valuable and relevant services to substantially impact the research and learning & teaching outcomes of our academic institutions and the health of our companies and government services.

Libraries need to identify how they bring value to the institution and communicate this widely. This needs to be positioned within the business framework of the institution rather than from within the cultural framework of library practice.

Economic rationalism of the sector has brought a reduction in funding (in real terms) for many libraries. Senior management supports what they understand and what they value.

There is probably not a great understanding of what the Library delivers or the complexity of its work. Many users openly indicate that they do not use the library; they access content on-line and have no understanding that the access is provided and managed by the library. The actual work of the library is becoming invisible. It is vital that the funding body understands the value that that the Library brings – for this to occur the Library must become master of the message and inform its community how it brings value. Objective, relevant and appropriate measures need to be established to test the value proposition, making the library accountable to its funders.

#### **Conclusion**

Libraries need to implement a structure that will allow them to sell, deliver and communicate value. This business perspective provides an opportunity to reinvent libraries as an integral, relevant and valued part of the organisation and removes the risk of becoming increasingly marginalised in the digital scholarly marketplace. The library profession will succeed if it continues to own the expertise and innovation regarding content, how to find that content and how to use it. The time is here – the library profession must determine what its core business is, create a value proposition and utilise its core competencies to deliver outcomes aligned to the strategic objectives of its funding body. It is time to position the profession as a central player in the digitised information landscape.

1. Ross, L., Sennyey, P. *The library is dead, long live the library. The practice of academic librarianship and the digital revolution.* The Journal of Academic Librarianship. Vol 34, No 2 2008
2. Dole, Wanda V., Hurych, Jitka M., Liebst, Anne (2005). *A Core competency for Library leaders* Library Administration and Management, Chicago, Summer 2005 Vol 19.
3. Prahalad, C. K., Hamel, G.' *The core competence of the corporation.* Harvard Business Review, 68, no. 3 1990
4. Special Libraries Association, *Competencies for Special Librarians of the 21<sup>st</sup> Century.* Washington, Special Libraries Association, 1996.
5. Srodine, Sharon (2007). *Radical reinvention: life beyond the library.* (Information technology) Searcher Mar 2007, Vol. 15 Issue 3, p8-11 4p
6. ALA. ALA's core competencies, Jan, 2009 Final Core Competences Statement – January 2009 Available <http://www.ala.org/ala/educationcareers/careers/corecomp/index.cfm> Accessed 20th May 2009.
7. <http://www.ischools.org/site/about/> Accessed April 27<sup>th</sup>, 2009.
8. Olson, G. Grudin J. *The information school phenomenon* Interactions, 2009
9. Moynihan, C.T, Geoghegan, I.A & Green, P (2005) *The web of collaboration: teamwork behind the scenes of the online learning experience.* Paper given at *EDUCAUSE Australasia Auckland - The Next Wave of Collaboration*, April 2005, Auckland, New Zealand. Available <http://espace.lis.curtin.edu.au/archive/00000353/01/A2.PDF> Accessed September 27, 2006.
10. Green, P. 2005, 'GROWING THE LIBRARY'S PRESENCE IN A UNIVERSITY WIDE STUDENT PORTAL', In *EDUCAUSE Australasia Auckland - The Next Wave of Collaboration*, Auckland, April 2005. Available <http://espace.lis.curtin.edu.au/archive/00000336/> Accessed 19<sup>th</sup> May 2009
11. Bosanquet, L. 2007. *Transforming the academic library – the new value proposition* Lianza 2007 Rotorua, New Zealand.
12. Jaschik, S. 2007. *When digital natives go to the library.* Inside Higher Ed., Available [www.insidehighered.com/layout/set/print/news/2007/06/25/games](http://www.insidehighered.com/layout/set/print/news/2007/06/25/games). Accessed 27 June 2007
13. Sennyey Pongracz et al 2009. *Exploring the future of academic libraries: a definitional approach.* The Journal of Academic Librarianship May 2009
14. OCLC. *College students perceptions of the Libraries and Information Resources: a report to the OCLC membership.* Dublin, OH. OCLC 2006.
15. Brown, S., & Swan, A. 2007. *Researchers' use of academic libraries and their services: a report commissioned by the Research Information Network and the Consortium of Research Libraries:* School of Electronics and Computer Science, University of Southampton.

16. British Library & JISC (2008) Information behaviour of the researcher of the future: a cyber briefing paper.
17. Lyman, P., Varian, H. R., How much information, 2003. This study was produced by faculty and students at the [School of Information Management and Systems](#) at the [University of California at Berkeley](#) Available [How Much Information?](#)  
<http://www2.sims.berkeley.edu/research/projects/how-much-info-2003/> Accessed 20<sup>th</sup> May 2009
18. Gantz, J. *The expanding digital universe. A forecast of worldwide information growth through 2010*. An IDC white paper. IDC. 2007
19. Housewright, R., Schonfeld, R. *Ithaka's 2006 studies of key stakeholders in the digital transformation in higher education*.  
Available <http://www.ithaka.org/research/Ithakas%202006%20Studies%20of%20Key%20Stakeholders%20in%20the%20Digital%20Transformation%20in%20Higher%20Education.pdf>  
\_Accessed
20. Drummond, R., Wartho R. *RIMS: The Research Impact Measurement Service at the University of New South Wales*. AARL, June 2009
21. Lavoie, B., Henry, G., Dempsey, L. *A service framework for libraries* D-Lib Magazine, vol 12, 7/8 2006.