

## CONVERGENCE OR COLLISION? WHEN IT AND LIBRARY SKILLS MEET.

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### **Introduction**

Clarity of roles in libraries was once a given – you worked in cataloguing or acquisitions or reference or loans. Materials were ordered, physically received and placed on shelves. Helping the client locate physical items to meet a need was the challenge. Systems staff knew they needed to keep the server that ran the catalogue operational, and perhaps throw together a webpage. The two areas complemented each other, but in-depth knowledge of how the other worked was optional. Roll forward to today, and the picture is very different. The challenge now is to connect the client to format-independent information, wherever the client may be. It is essential all staff understand how all operations fit together to deliver this service. Cataloguers deal with metadata and MARCXML, generate PURLs in records and send data via EDI. Front line staff trouble-shoot computer problems which may affect the client experience of connecting to the information. To support this and more, Systems staff must understand library operations and record structures. The myths of ‘secret librarian business’ and ‘secret system business’ have been debunked. Instead there are questions to which no-one yet has the answers. What challenges does this need for convergence of skills present? What do our clients expect of staff? How do we ensure staff members are sufficiently knowledgeable in these areas? What impact does terminology used to describe positions and skills have on recruitment processes and staff expectations?

Library, cybrary, hybrid library.... these terms and more have been used to describe the modern library and even the modern librarian. The 21<sup>st</sup> century library has evolved from a book warehouse where clients went to borrow physical materials into a place where traditional information delivery skills have merged with information technology skills to deliver format-independent information to location-independent clients. While this provides huge benefits to time-poor, mobile clients it poses significant challenges to the staff providing the services. Expertise with similarly styled card catalogues and/or print abstracting services has been replaced by mastery of diverse online systems requiring computer literacy in addition to information literacy. At the same time, the professional IT person is adding library knowledge to their skill base in order to provide a cohesive, if not seamless, service to clients.

It may be said librarianship has existed since the time of the ancient Greek philosophers and the great library of Alexandria. Skills and competencies have evolved over time, but the essence of the role remains the same – to provide expertise in the access to and provision of recorded information in any format. However, the late 20<sup>th</sup> century marked the start of a major change in how libraries and librarians provide this service. The dramatic growth in technology which led to personal computers and the internet being as common as televisions and radios has resulted in an irreversible shift in the manner in which information is stored and delivered. Concurrently the

emergence of the Net generation who expect the information they need, when they need it and in the format they want it means traditional information skills are now irrevocably linked to technological infrastructures. So, what skills are needed in a 21<sup>st</sup> century library by 21<sup>st</sup> century library staff?

## **Competencies in libraries**

Many studies have been done on 'core competencies' for library staff. Although the method of information provision has changed, traditional competencies have remained core to the profession of librarianship. These are well documented around the globe, however until relatively recently the focus was solely on traditional skills. It can be argued that this has been done at the expense of identifying the necessary IT skills required to support these competencies. Mention of the need for staff to be technologically literate (Materska 2004) or to possess the skills to use databases in order to be 'competent' (Rehman et al 1997) was described as incidental to assisting clients. This is finally changing, with increased recognition that clients expect technologically competent staff who can not only find the information but also instruct the client on how to access it from home or office, how to print/scan/email it, or even SMS an answer to them.

The requirement for success is to ensure staff have the skills they need. The challenge is identifying what those skills are, and how best to encourage staff to continue to improve and expand their skill base.

The position of Systems Librarian emerged in the late 1990s, often seeking to formally recognise the need for technical expertise within the library context. As demonstrated by Xu and Chen's research project (1999) and subsequent follow up report (2000), the stated requirements for systems librarian positions and expectations of the role were not clearly defined, with the job description rarely matching the actual duties. In her 2004 study Exner speculated that the very terminology used by libraries to describe the technical requirements of a role may lead to confusion over the expectations of the position. Is a systems librarian primarily a librarian, or primarily a technical expert? The focus of the role will of course be shaped by the type and size of library, and the other support structures within which it operates. However, if the intent of the role is not clearly defined at the outset, then the potential exists to employ a technical specialist who may not possess the required library focus. Conversely, a professional librarian may never truly possess the necessary detailed technical skills.

It is essential also to recognise that while support of the key infrastructure requires specialist technical skills, support of day-to-day client information services requires a variety of IT-related skills and competencies. This means every library worker needs to develop core IT competencies in order to successfully meet core library competencies. Rehman, Majid and Baker (1997) recognised this in their suggested competencies for future academic library professionals. They clearly identified basic technical skills required across all areas of the library to support specific skills – including 'back room' operations such as cataloguing and acquisitions. Sophisticated ILMs and

online databases were only just emerging, leading to apparently simple suggestions about IT skill requirements. However it is important that these were recognised as core to future development. In 1993 Singh presented a revised version of Segals' 1983 list of core competencies, expanding this to 8 key areas incorporating the 'sea change' brought about by a reliance on IT infrastructure to deliver information. Gorman and Corbitt (2002) examined the required competencies from the context of training information professionals, noting that singling out IT skills as individual components showed that as a profession we are yet to fully assimilate these changes whilst for many clients, IT infrastructure is as second-nature as electricity.

There exists a glaring gap in the area of research on core competencies in libraries – that of the core skills required by IT staff supporting library operations. In the early to mid 1990's IT support tended to be carried out by IT-literate librarians. However, as systems have become more complex and the business of libraries more technologically dependant, the need for professional IT support has grown in most areas of the library profession. Yet this niche-market is under catered for in recognised training. In no computing course will you find more than a passing mention of library systems; in no library course will you find the level of technical training in server-side operating systems, ILMS software or even website development that is required in libraries. Instead, the details of the job are often learnt on the job, with technical staff learning library-specific needs (such as understanding the wonderful world of MARC tags) to meet an identified programming requirement; library staff may need to understand 'technical' infrastructures such as understanding XML or how network ports operate, in order to meet client needs.

This leads to the conundrum facing us today – how do we ensure staff have the skills they need? How do we identify what those skills are?

### **Skill identification and training**

In 1997, the government of the United Kingdom identified a need for public libraries in particular to have skilled staff to assist the public with information access. A government-commissioned report in 1998 identified 3 key areas in which training was required for employees, and significant funding was dedicated to this project. In 2006, King, McMenemy and Poulter reviewed the perceived effectiveness of the training provided. Interestingly, the staff surveyed reported they would have preferred to receive 'problem solving and troubleshooting' training, rather than generic 'how to' training. While this may be a result of not having technical staff available to them, it may also be interpreted as an increasing recognition that mastery of these 'tools' is essential to meet their professional goals.

We are not all as fortunate as the UK public library staff in having the funding for skill identification and training coming from government sources. Instead, internal skills audits are becoming increasingly utilised as a means for identifying requirements. These range from formally administered and assessed audits (such as that conducted triennially by the University of

Western Sydney Library, discussed further below) through self-administered questionnaires (Staffordshire University) to a checklist of skills for self-identification of skill gaps (State Library of North Carolina) and everything in between. Some focus specifically on IT skills, while others look at a wider set of skills required for positions.

The University of Western Sydney (UWS) Library designed, administered and assessed its first skills audit in 2003. A bank of 130 questions was developed, drawing on requirements in position descriptions and supplemented by specific skill set requirements provided by supervisors. The questions covered generic skills such as use of a computer, specific IT skills such as the ability to use different web browsers, traditional library skills relating to client service provision and 'personal' skills such as mentoring and communication. A sliding scale of self-assessment ranging from 'training required' to 'proficient' was used by staff to rate their skill level for each question; an 'n/a' option was also provided for staff to use if they felt a skill was not applicable to their position. Results were collated centrally so that overall trends and training requirements could be assessed and library-wide training strategies determined. Additionally, individual summaries were returned to staff members and their immediate supervisors to be used as part of established performance management processes and the basis for a tailored training program. Interestingly, while most library-trained staff identified IT areas as essential to their positions few IT staff identified library skills as a requirement. Subsequent review of the outcomes of the audit led to a decision to implement a regular, triennial audit.

Training programmes were developed to cover the areas identified by staff. These ranged from utilisation of University offered sessions on customer service, through area-specific training such as regular detailed sessions on using the acquisitions modules, to tiered library specific technical sessions ('basic' and 'advanced' modules) developed and conducted by the UWS Library systems team staff. The highest take up of the technical sessions was, in 2003, at the 'basic' module level.

The second audit was completed in August 2006. In order to retain consistency of approach, allow some reasonable comparison between 2003/2006 data and show general trends, the majority of questions from the 2003 audit were retained, although they were reviewed and amended to reflect current work practices. Additional questions were added to the question bank to ensure new competencies were included in the audit.

In response to feedback from staff, supervisors and library managers on the manual process used in 2003, an automated questionnaire was developed in MS Access by Library systems staff. This allowed each position holder to see only the questions deemed relevant by the senior staff responsible for that functional area. The ranking scale was amended from the broader one used in 2003 to a more detailed Lickert scale indicating levels of proficiency.

Once completed by the staff member, the questionnaire was forwarded via email notification to the immediate supervisor for their comparative ranking and comments, then submitted to a database for analysis. Analysis was

undertaken at the functional area level, at campus level and at an all of library level. Once again, summary reports were provided to the individual and the supervisor, enabling them to discuss any differences in rankings for skills and determine a tailored training program, drawing on the training options identified as part of the overall analysis. Knowledge of the workings of traditional ILMS operations and client service functions was included in the audits for the library IT staff, providing a starting point for training identification. Technical skills once again rated as high areas for training, though at a more advanced level than in the 2003 audit.

Although a small number of staff requested 'basic' level training in technical areas, a much higher number rated themselves as competent at the basic level and requested the advanced modules, particularly in the areas of web browser use and configuration. The advanced sessions in this area cover, for example, understanding how different browsers impact on how pages are viewed, configuring security levels and knowledge of network ports required for different services - all in the context of internal and remote client support.

The skills audit approach has been welcomed by all areas and levels of the library. It offers a relatively non-threatening means by which staff self-assess their skill levels in areas identified as required for them, is a tool for supervisors to use in performance management reviews, and gives library managers an overview of skills, skills gaps and trends in training needs. While it can never be considered a total solution, skills audits help to address the questions facing the 21<sup>st</sup> century library on how to identify the skills needed and how we ensure staff members are sufficiently knowledgeable in these areas.

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