
Researcher's Perspective: Is Teacher Librarianship in Crisis in Digital Environments? An Australian Perspective

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The information environment of a good school library has been undergoing a transformation, powered by technology and trans-media influences in our classrooms. The role of the teacher librarian is to promote books, reading and research, in old ways and new ways, so as to promote conversation and learning. School libraries that adapt to the digital needs of their students and school community not only continue to build a reading culture in the school, but provide the divergence and convergence in media needed to provide the materials for motivation, differentiation, collaboration and connections necessary for 21st century learning. Asking questions about the nature of the current knowledge and skills requirements of a teacher librarian in digital environments, and the ongoing professional development needs is related to digital aspects of the profession is an ongoing iterative process which provides valuable insights into the priorities and points related teacher librarianship and innovation in digital environments.

Introduction

School libraries and teacher librarians have a wonderful opportunity to lead learning in today's interactive multimedia knowledge environments. Such a challenge is both exciting and challenging, encompassing many aspects of literacy, technology and professional development in collaboration with students and teachers (Fontichiaro, 2010; Howard, 2010; Killeen, 2009; Milam & Creighton, 2009).

While teacher librarians and school library services continue to adapt to the needs of their students and school community in response to student learning needs, the future is not always rosy. We have been given comprehensive evidence that in Australia there is indeed a crisis in school librarianship, and that we need to be talking about it.

The Big Picture

On Monday 23 May 2011, the House Standing Committee on Education and Employment tabled its report on the inquiry into school libraries and teacher librarians in Australian schools entitled *School Libraries and Teacher Librarians in 21st Century Australia*. The representations tabled to Standing Committee covered a wide range of issues related to the role, adequacy and resourcing of school libraries and teacher librarians in Australia's public and private schools.

For practitioners working in and involved with teacher librarianship, this report has been of significant importance in highlighting the evolving context and changing needs encompassed in providing quality library and information services in our schools. By providing this report, practitioners have also been challenged to look further into the field of school librarianship, and the factors influencing the status of teacher librarianship in that context.

The report confirms the anecdotal evidence that is often discussed related to school arrangements, that on the one hand attach higher value to the purpose and expanding functions of a school library with its Australian Library and Information Association (ALIA) credentialed staff (O'Connell, 2010), to the other extreme where schools remove a school library by adopting other arrangements to focus on innovation and learning without the involvement of an information professional.

6.6 It is indisputable that the value of teacher librarians' work has been eroded over the years and undervalued by many in the community, be it by colleagues, principals, parents or those in the wider school community. (*School Libraries, 2011*)

There are many forces at play within schools that impact on provision of library and information services that support learning, and school libraries are caught up in that potential crisis of budgeting as schools continue to adapt to 21st century learning needs. It is when competing constraints are in operation that school librarianship inevitably comes under scrutiny, resulting in adaptations and changes that can have long-term implications.

6.7 The profession has unfortunately been subject to the many competing priorities that school principals find themselves contending with in an environment in which education budgets are ever stretched. (*School Libraries, 2011*)

Perhaps one of the most disheartening conversations that has emerged has been in relation to the leadership and staffing of a school library. Many have noted the shift that can take place in a school where teacher librarianship is sufficiently undervalued, so that teaching staff are appointed to 'run' a school library, with little or no qualifications in the field appropriate to the nature of the services that a school and its students deserve. Conversely, staff may be appointed who may have a library qualification, but who are not teachers.

The implications of this shift relate directly to appropriate post-graduate training being available for teacher librarianship; to workplace demand for their appointment; and to ongoing development in the professional capacity of teacher librarians to lead their schools in new and emerging literacy and information environments.

6.9 A vicious cycle has resulted from under-resourcing school libraries and having insufficient numbers of appropriately qualified staff in them, leading to a poorer quality service, which reduces the demand for teacher librarians as well as the attractiveness of the profession to prospective students. (*School Libraries, 2011*)

What Should We Be Talking About?

This inquiry has provided us with a substantial review that indicates the vital need to continue the conversation about what a teacher librarian is, does, and can do into the future (*School Libraries, 2011*). This conversation (i.e. research activities and professional development opportunities) will ensure that individuals, groups and organizations will be better placed to continue advocacy on behalf of the profession.

A good place to gain an overview of the important areas is in the *Learning in a Changing World* (2010) series (commissioned by the Australian School Library Association and the Australian Library and Information Association), which addresses how the learning environment and the services to support it are evolving. The series presents the core areas for teacher librarians and school leaders to consider for 21st century learning: the digital world, virtual worlds, curriculum integration, resourcing, and the physical environment. Key themes have been identified, that contribute to the ongoing conversation:

1. Successful learning for 21st century students is shaped by the digital environments within society and in our schools
 - a. Learning involves connecting, communicating and collaborating in multimodal environments
 - b. Rate of technology change is accelerating as is a teacher's responsibility to facilitate learning in current and emerging digital environments
 - c. Resources are being managed with better technology tools and refined digital integration
 - d. Curriculum innovation depends on integration with digital and multimodal approaches to learning
2. The scholarship of teaching is influenced and shaped by digital environments
 - a. Models of learning are being developed that accommodate multimodal learning environments
 - b. Mobile devices and virtual environments are essential components of learning
 - c. Learning theories are responding to creative, cognitive and meta-cognitive engagement with literacy and information needs that have emerged as a result of digital environments.
 - d. Curriculum innovation depends on adopting a teaching and learning approach that is flexible, student-centered, and incorporates a range of tools and devices for digital connectivity
3. School libraries need to respond to a 21st century information ecology
 - a. Literacy and research frameworks need to be developed to respond to the unique developments in digital environments
 - b. Action-based research needs to drive the decision-making cycle
 - c. Guided enquiry is an essential tool for curriculum integration
 - d. The school library is a virtual and physical learning commons for whole-school library services
4. The teacher librarian must be a curriculum leader with responsibility for supporting whole school learning frameworks that meet challenges that the digital context has created
 - a. The teacher librarian leads information provision in their schools, with an increasingly strong focus on digital resources and environments
 - b. The teacher librarian designs the learning environment of the library to respond to the pedagogic and technologic changes in learning and teaching taking place
 - c. School libraries are hubs of professional development and collaborative
 - d. The teacher librarian leads the ethical and responsible use of resources underpinned by the mix-and-match environment of creativity, literacy and knowledge activities that digital environments have fostered.

Technology would seem to have become a key driving force affecting the context of curriculum engagement and driving changes in the information ecology within which library and information services are positioned.

The longitudinal research study of emerging technologies in K-12 education *The Horizon Report K-12* (Johnson, Adams, & Cummins, 2012) has been charting ongoing technology changes and highlighting the impacts and evolving needs in the teaching, learning, and creative inquiry practices in education globally. Schools have a responsibility to prepare students to move from the world of school to the world of adulthood, employment, further education, vocational training, and community participation. Schools can meet future learning needs by creating a sustainable learning ecology that is shaped by the ubiquity of information, globally responsive pedagogical

practices, and driven by collaboration and informal learning in multiple access points and through multiple mediums.

According to the near term horizon of the 2013 Horizon Report, that is within the current year, there are two related by distinct categories of influence: *cloud computing* and *mobile learning*. These are becoming more and more pervasive in everyday life in much of the world, and as a result the increasing expectations of students to work, play and learn via cloud-based services and apps on their mobile devices is gaining prominence. *Cloud computing* has already transformed the way we are using the Internet to help us manage information, communication, data storage and access as well as collaborative work. *Mobile learning* provides gateways to endless learning, collaboration and productivity fostered by the Internet.

Project Tomorrow (2013) revealed that school students are using social media to connect, collaborate and create content in ways that are especially meaningful for them, and that are new to past generations. Students are adapting these tools and resources to enhance and extend the learning process, and to achieve learning goals. Where internet access is steady and reliable, students are already busy personalizing their education experiences through ubiquitous online interactions. Social media and digital tools and resources have transcended the classroom and are emerging strongly as key components of 21st century school-to-home communications.

The evidence is that technologies and social media platforms are driving an unprecedented reorganization of the learning environment in and beyond schools. These disruptive shifts are already reshaping the workforce landscape and the skills required (Davies, Fidler, & Gorbis, 2011), establishing *lifelong* and *life-wide* learning as the central paradigm for the future (Redecker, et al, 2011).

There is a need for schools to develop a sustainable and responsive technology-rich learning ecology that has adaptability at its core to support 21st century learning needs.

What is the Conversation?

Understanding the breadth of technology change, and its impact on school libraries, is an essential step in leading the way forward in unraveling the potential of school libraries to meet the challenges of 21st century learning.

Ongoing work in Australia has already contributed significantly to promoting new directions. For example, the research column of SCAN – a journal for educators - published by the NSW Curriculum and Innovation Centre < <http://scan.nsw.edu.au/> > continues to provide ample evidence for and discussion of future directions for 21st century libraries. The NSW Department of Education and Community has also committed to the retraining of teachers for leadership of school libraries through a post-graduate scheme with the School of Information Studies, Charles Sturt University.

The State Library of Victoria provides the Personal Learning Network (PLN) program <<http://www.slv.vic.gov.au/pln>>, which is a self-paced online program for school library staff, educators, learning support personnel and curriculum leaders. The program is designed for those new to the world of web-based learning, as well as people keen to enhance their existing online skills and experience. The PLN program is presented in association with the School Library Association of Victoria, and was developed with support from the Department of Education and Early Childhood Development.

While some organizations continue to provide direction and support for school libraries and teacher librarians, the reality 'on the ground' is that professional library staff in schools, often working as the sole information practitioner, are faced with many challenges in this changing media landscape.

Within this context it is important to continue the conversation through a multiplicity of channels to understand how school libraries and teacher librarians are adapting to the digital needs of their students, and how they are providing the divergence and convergence in media needed to provide the materials for motivation, differentiation, collaboration and connections needed for learning in today's media rich and connected world.

Using digital mediums to connect, communicate and collaborate is an important means for teacher librarians to build collegiality beyond academic and professional development programs, professional networks, and personal learning connections.

Shining a Light on the Conversation

There are significant opportunities to research this digital conversation, in order to shine a light on the key elements of this conversation. If we are to understand what teacher librarianship needs to become in a 21st century globally connected world, then the daily interactions, workplace successes and challenges need to be considered within the broader context of the way that professional interactions take place. We need to understand how digital connectivity assists in the process.

Anecdotal stories of change continue to highlight the variety of influences (both positive and negative) at play in the organization, funding and support of school libraries and teacher librarians. Students entering the Master of Education Teacher Librarian program at Charles Sturt University share their own anecdotal stories about the purpose and place of school libraries during their study program:

"The principal thought of the library simply as release time for teachers and did not care what was taught, if anything."

" The opportunities depend on the Principal's understanding of the possible contribution to the learning and teaching in the school. "

"The school didn't have a TL and only a small room filled with books. There was no borrowing allowed. I took my year two class into the library and they didn't even know it existed".

"The TL and principal collaborate often as does the TL and other staff. It is amazing to see the difference in how students research and enjoy books."

"It seems that support from the principal in terms of budget, time and collaboration is a necessity in order for a TL to gain the respect and trust of the staff in order to make a real difference to the students. You can't have one without the other!"

"It is evident that the role of a TL has changed dramatically over the years and now takes on a large range of functions and responsibilities. The role of TL and the library in general appear to be a very important, even central part of a school community and the way in which the school and students develop and grow. It is amazing, but not surprising, the extent of the use of technology in teaching and learning within a school."

A series of informal meetings in March to May 2012 were held with teacher librarians representing primary and secondary schools in the public and private sector in order to discuss foundational

issues in 21st century teacher librarianship based on the 2011 Enquiry Report; *continue the conversation*; and, in so doing, elicit fields for future investigation. Three foundational areas were identified:

1. The school context
2. The professional practices
3. The use of online tools

These three areas were used to develop some preliminary survey questions to gain further personal perspectives on these elements that are impacting on school libraries today.

A survey, *Valuing our Services: Teacher Librarianship in 2012*, was promoted for one week via the OZTL_Net email list, ALIA schools listserv, iCentre Facebook, CSU single subject Facebook Group, and Twitter. Subsequently, the survey was also promoted by others via email and other system email lists.

There were 85 responses (Figure 1), which provided a rich additional source of input for future discussions and research. The proportion of responses from the OZTL_Net listserv indicated a clear willingness to *join in the conversation*. Of these, 15 students are currently studying teacher librarianship, 46 have postgraduate qualifications in teacher librarianship, and 17 have other information sciences qualifications at postgraduate level, have TAFE or no library qualifications. Of these respondents, 53 were working full-time; 20 part-time; one on leave; four seeking appointment; two retired; and five working in other roles in school libraries or to support school libraries.

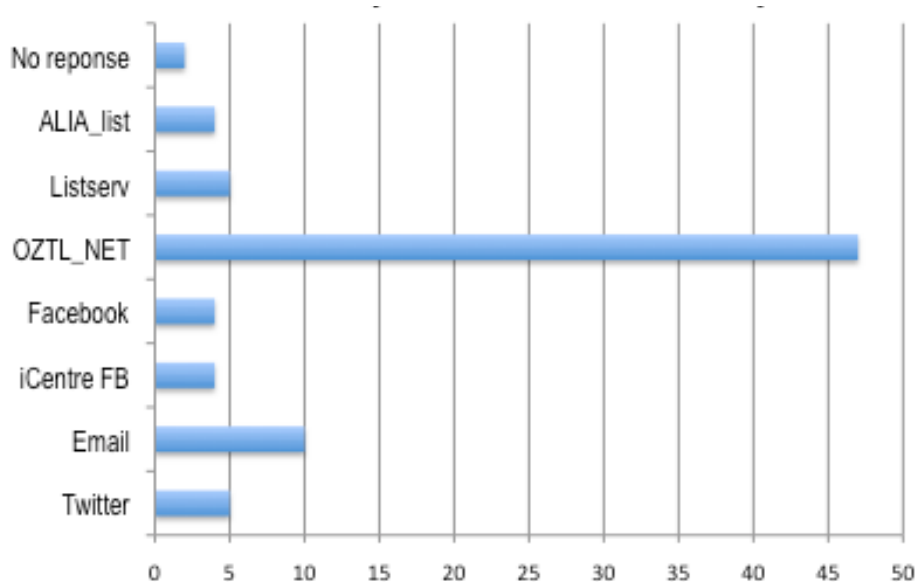


Figure 1. Where did you first hear about this survey? (N=85)

The responses to the question “*What are the key responsibilities in your role as Teacher Librarian?*” provided a descriptive landscape of activities that practitioners are only too familiar with including:

- literature, literacy and literacy events
- information literacy and trans-literacy
- teaching and collaboration with teachers
- collaboration with faculty, subject and year level teams
- provision of exemplary services in physical and virtual spaces
- community involvement and literature events;
- events management

- ICT integration and leadership
- digital citizenship initiatives
- student support and tutor groups
- library and information services management
- curriculum integration
- professional development services
- responsibility for mobile devices such as iPads
- copyright information
- content management systems
- multimedia and audio visual services

Facilities were as varied as small primary libraries to multi-campus primary/secondary, and responses were detailed and extensive. Yet, the most notable feature was the breadth of work that is undertaken by a teacher librarian, and the significant contribution to the overall learning and teaching life of a school:

"Keeping teaching staff, students and parents informed and trained in the use of information resources"

"Leading research and development of information resource provision in new formats"

"Management of physical and digital information resources and spaces, including research and development of changing spaces to meet community need and evolving education paradigms."

Teacher librarians were being valued by the leadership team on the one hand, and were also active advocates for developing new directions in school library services. Teacher librarians are keen to make learning visible, and to support the evolution of library and information services in the emerging learning contexts:

"The school leadership has always supported any progressive changes that positively impact on the school. They allowed me to visit school libraries in New York and Canada."

"The Principal was happy to reduce my teaching time as she prioritises the library and wants to see the information skills and enquiry program taught, and requests that I take place in other projects."

"The new Principal is very supportive of the library and my role, and is keen to make the most of my expertise and experience."

The responses also show that librarians understand that collaboration between teachers and teacher librarians is core business, as students benefit from team teaching and curriculum planning, helping them deepen their levels of knowledge of both information literacy and subject content. They understand that students are already immersed in creative, collaborative and socially networked environments, and that the need to harness these environments involved teaching our students to be literate, information literate and knowledgeable in these 21st century environments will help determine the success of perceived future relevance and importance of our school libraries (O'Connell, 2012):

"I have been in this position about 18 months and I am a shameless promoter of library services"

"I have only been here two years and have introduced many new technologies, have delivered PD on these to staff"

"Increase in wide-reading requests and information literacy integration has grown through word of mouth due to my initiatives"

"Changes over the last two years have occurred as a result of being approached by members of the school administration team and through my regular volunteering to be involved with initiatives"

"Coaching in the classroom has happened because I offer my services, and I have built up a friendly understanding with staff"

"All initiated by me!"

Digital Environments

Within the context of these developing environments within schools and school libraries lies the field of information organisation and dissemination in digital environments. Becoming a model for lifelong learning has been a recurring theme because school libraries are in the knowledge business. By building a future-ready personal learning network a teacher librarian can engage in new and emerging media to assist in promoting creative and authentic knowledge work in their schools (Cox, 2010; Harlan, 2009).

How does a teacher librarian utilize technology and social media, and what is considered important as reflected by personal use of online tools. Web 2.0 revolutionized the means at our disposal to filter and share information, therefore it is of interest to know what teacher librarians actually choose to use within their own personal online toolkit.

The Use of Online Tools

Responses from the survey (Figure 2) confirmed a consistent use of online tools for information organization and management for personal professional learning and information organization and dissemination. It also showed that use of blogs was by far the most common form of online publishing, indicating at these levels to have entered 'mainstream' practice for teacher librarians. Creditable percentages were also using Google Docs and online presentation tools. Interestingly Pinterest, one of the more recent tools, had already gained popularity.

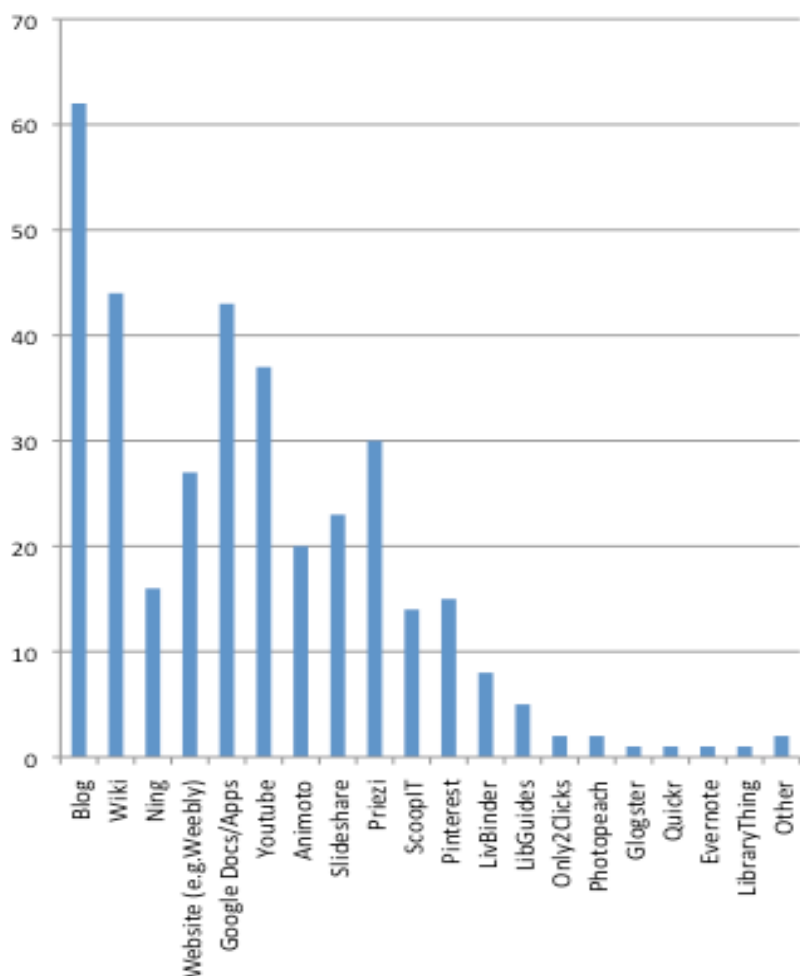


Figure 2. Online authoring tools (N=85)

Few teacher librarians were making use of Libguides (a commercial information product chosen by many librarians) or Livebinders (a free product used by many educators) – though the question that cannot be answered from this survey is the nature of information organization that might be undertaken via a school intranet.

Many of these tools include an element of online collaboration (Figure 3). However, when it comes to specific means of communication and collaboration, Facebook and Twitter showed some prominence, with listserv communication still the most common amongst this group of respondents. When the distribution of this survey is taken into consideration, this result would confirm that the most common connection point between the respondents was OZTL_Net, a more 'traditional' form of communication, even though newer forms of social media are being used.

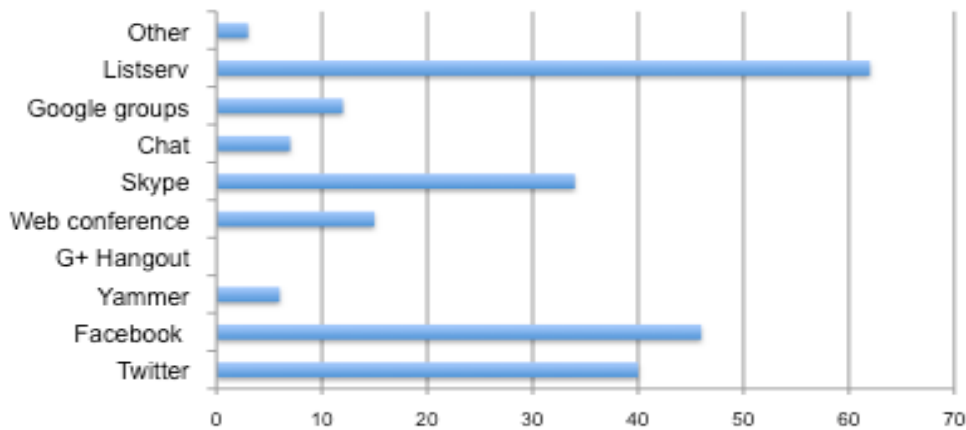


Figure 3. Online collaboration tools (N=85)

In the same way there is an indication of more limited use of newer and emerging Web 2.0 tools for social bookmarking or resource sharing (Figure 4). Yet surprisingly there is strong use of cloud storage with Dropbox, iCloud and perhaps Flickr falling into that category.

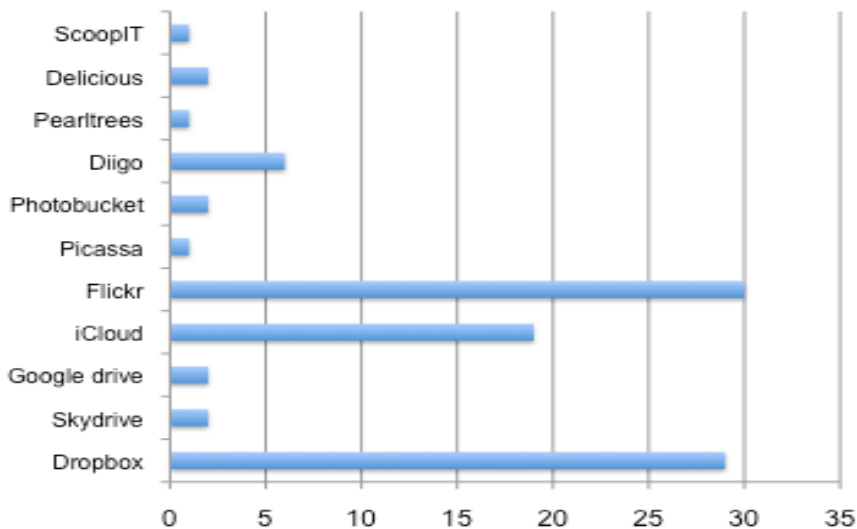


Figure 4. Social bookmarking and organization tools (N=85)

A similar observation can be applied to the use of RSS readers (Figure 5), where Google Reader/iGoogle remains the staple tool. However, the iPad and iPhone are pushing some usage into newer tools such as Flipboard.

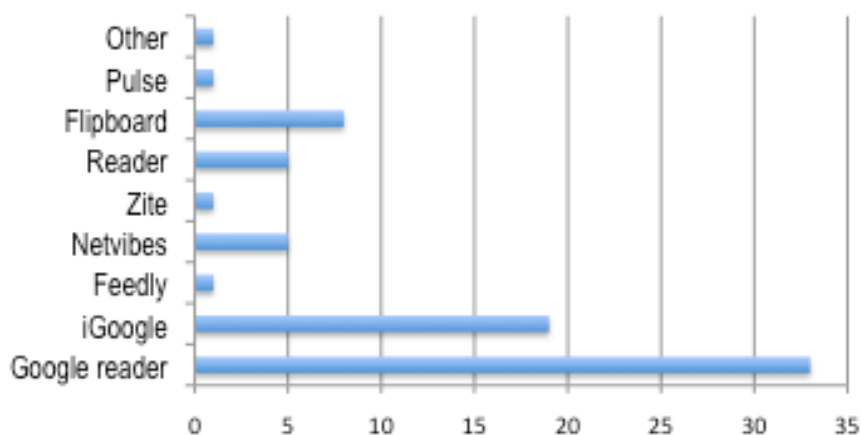


Figure 5. RSS reader tools (N=85)

Is There a Crisis of Technology Competence?

Simply using the latest 1:1 device, or the latest website, or the latest App is itself not the solution – though the ‘shiny’ new toys can provide an illusion of advancement and success. Inquiry remains the foundation of learning, and it is the teacher librarian who can provide the broad knowledge of the extensive resources in the (physical and virtual) library, on the Internet and in the community. Without this expertise, teachers can only minimally accomplish the information literacy requirement of 21st century learning standards (Kuhlthau, 2010).

The responses to the survey would indicate a degree of importance attached to the use of online tools. Yet the underlying question that begs attention is the nature of and importance of online tools to support personal professional growth and the development in the capacity to lead and promote school libraries in a climate of change.

The interactive nature of social tools on the Web has produced related actions of ‘participatory organisation’, ‘sourcing’, ‘corroboration’, ‘connected meaning’, ‘deep reading’ ‘media literacy’ and ‘ethical participation’ (Stripling, 2010).

A Little More Conversation

Samples (Figures 6, 7, and 8) taken from a survey of 75 attendees (Moore, 2012) in preparation for the Northern Sydney Regional Teacher-Librarian conference in May 2012, for a keynote on the topic of *savvy teacher librarians*, also indicate the growing capacity of teacher librarians in new media environments. However, they also highlight the ongoing need for professional conversation to continue about tools, strategies, and ways to influence the learning environment.

Teacher librarians will continue to benefit from assistance in developing their knowledge of social media, cloud computing and other emerging technologies to improve the library experience of members of their school community, and to build resources for learning through connected pathways. Hamilton (2012) provides a comprehensive study of tools and practices in the school context that demonstrates the importance of striving for more knowledge and expertise in these areas.

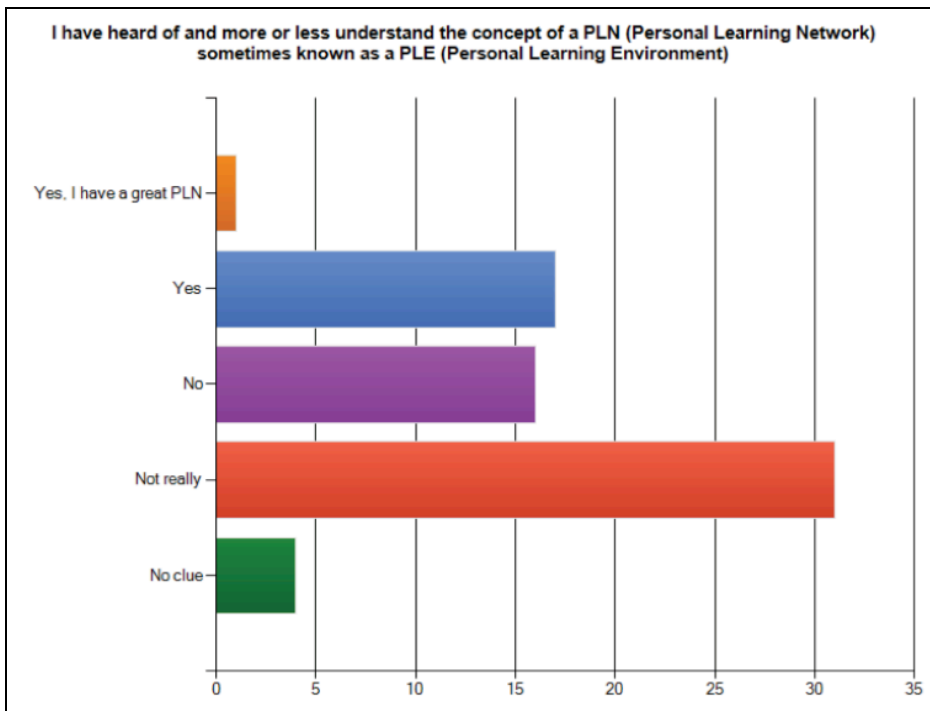


Figure 6. Librarians' knowledge of personal learning networks (N=75)

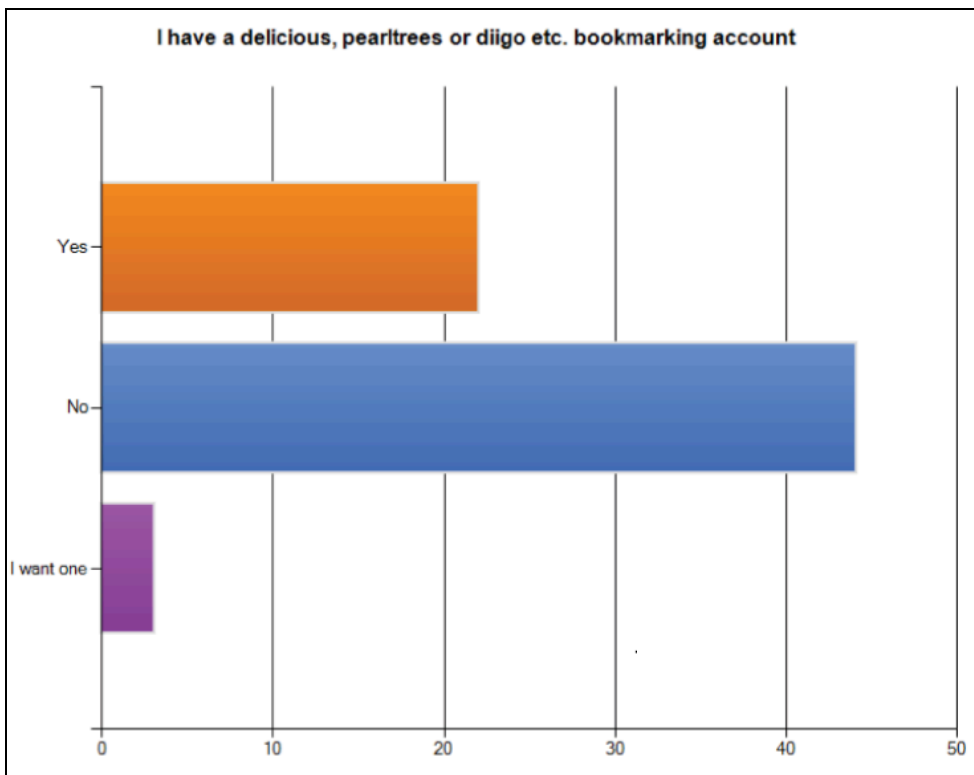


Figure 7. Librarians' use of social bookmarking (N=75)

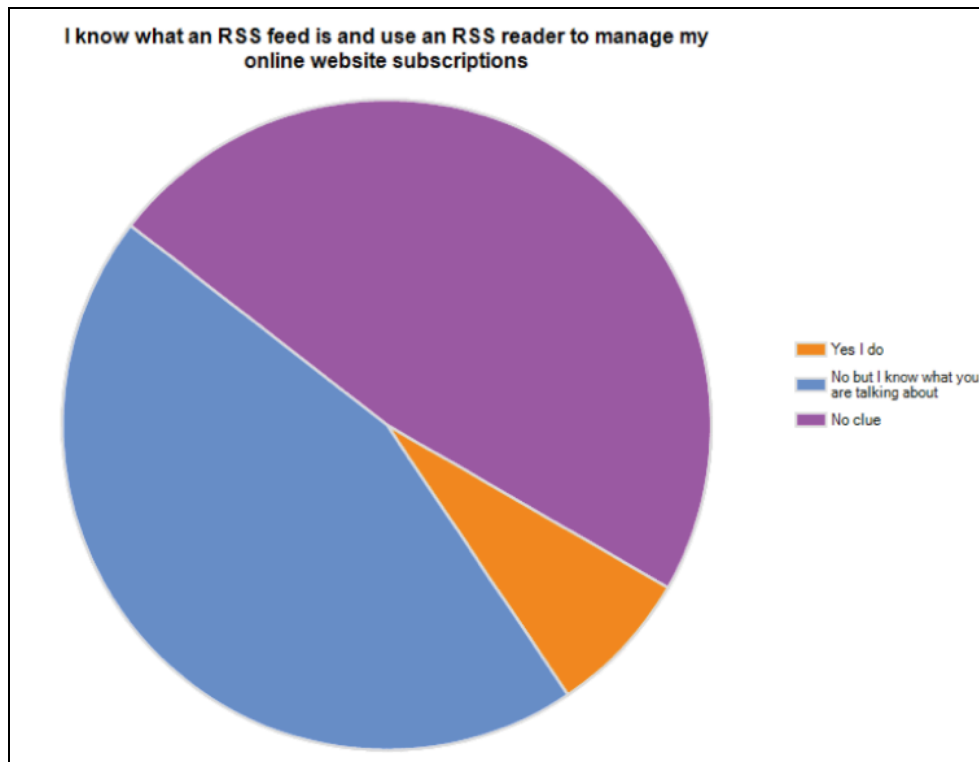


Figure 8. Librarians' use of RSS feeds

Shining the Light on Digital Media Influences

Students use technology to research online, anytime, anywhere, and because of this, students in primary and secondary schools need to be nurtured in ways to learn *how to learn* from the multiplicity of resources at their disposal, using the best information organization and critical thinking strategies that we can show them. We need to build a strong digital culture of enquiry at the heart of each of our schools. As Gordon (2010) explains, a culture of inquiry emerges as teachers become learners, and learners are self- and peer-taught, and everyone becomes a researcher.

This information organization requires a familiarity with and flexibility of communication channels to help teacher librarians develop these new dimensions of information and digital fluency. While the technologies continue to change, and the resulting approaches to learning curriculum presents new challenges, the cognitive and meta-cognitive transactions that underpin information literacy in a digital era will remain a constant.

So teacher librarians need to make learning visible in new and challenging ways. There needs to be a synergy between new and emerging technologies, a familiarity with these tools as benchmarked by the Horizon Report, and a capacity to use multimodal and mobile devices to model life-long and life-wide learning.

In Australia we face many challenges in our school libraries, and amongst these the latest one has been to respond to new media environments. The expanding the scope of our services in school libraries is a vitally important aspect of the professional development opportunities for information professionals we know as teacher librarians. The School of Information Studies (www.csu.edu.au/faculty/educat/sis/) at Charles Sturt University (CSU) is a national and international provider in the design and delivery of a comprehensive suite of courses in library and information studies.

Students in the Master of Education (Teacher Librarianship) program at Charles Sturt University soon discover the breadth of digital influences, particularly new forms of online information curation, digital citizenship, social media, Web 3.0, tools such as QR codes, and the power of personal learning networks:

I believe one of my big learning moments has been the understanding of how I wish to portray myself as a professional in the information world. With people following me on Twitter I have an obligation to maintain my professional integrity in order to be seen as someone who is willing to share and learn from her network.

During 2012-2013 a comprehensive review of the Master of Education (Teacher Librarianship) included extensive stakeholder consultations (teachers, teacher librarians, school leadership, system leadership, and graduates) across Australia and New Zealand which aimed to identify the landscape of future needs in teacher librarianship; and the nature of professional development needs of practitioners.

Amongst the challenges identified in the Review, two aspects related to digital environments were highlighted as being of significance in focus group results – emphasizing not only a need, but also the desire to respond to the digital environment:

1. Provide opportunities to upgrade skills, knowledge and capabilities
2. Respond to the current and emerging challenges of curriculum in 21st century digital and bibliographic environments

As part of the program review, an online survey “Building the School Library Profession: Postgraduate Academic Program need in Distance Education” provided comprehensive supporting information regarding the perceived priorities and future needs in professional development and further academic study related to the digital environments and priorities of school librarianship. A total of 340 survey responses were received. Once again, digital literacy and technology innovation were seen as priorities, both in professional development needs and opportunities for further credentialed post-graduate programs.

In a summary of key topic priorities (Figure 9) of 19 questions, digital literacy and technology innovation was rated by 78.1% as *extremely important*, compared to the lowest rating of 43.8% for Study tour of a range of libraries and information agencies. However, all topics in the course were rated as *important* or *extremely important*, validating the focus of the course.

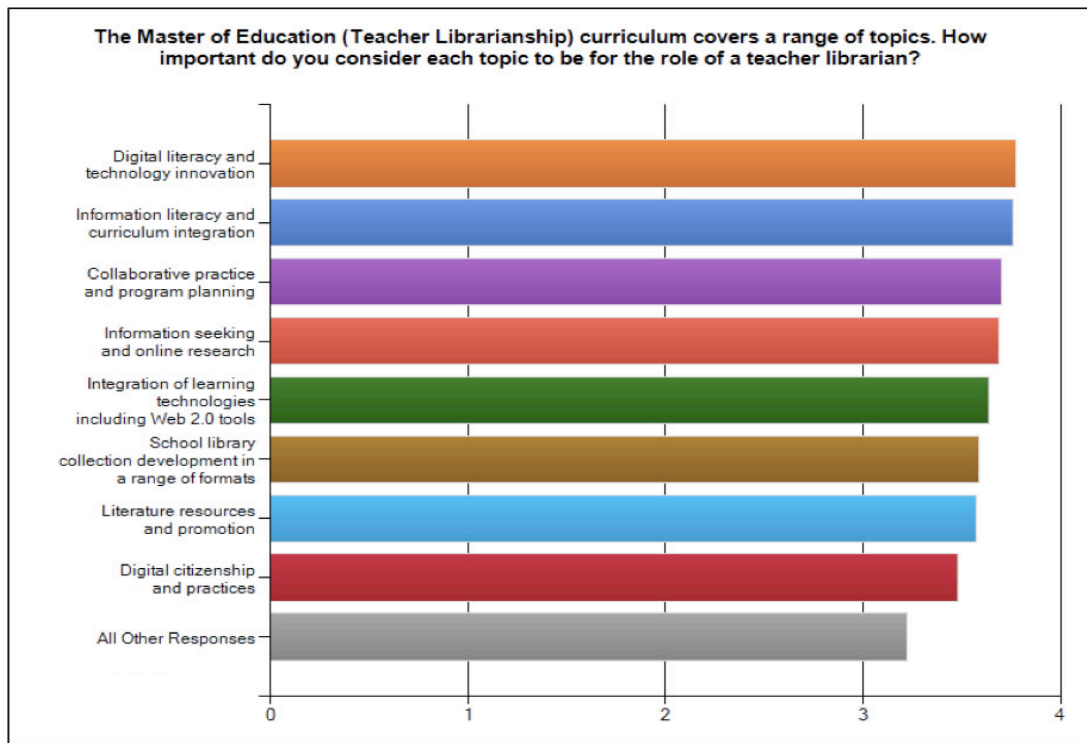


Figure 9. Importance of technology topics to teacher librarian roles (N=340)

In a summary of professional development needs and postgraduate study (Figure 10) of 27 questions, the following were rated as being of the highest priority: placing e-Book systems, management and development at 60.7% as *extremely important* compared to the lowest rating of 44.6% for hacker spaces and maker spaces in the school library.

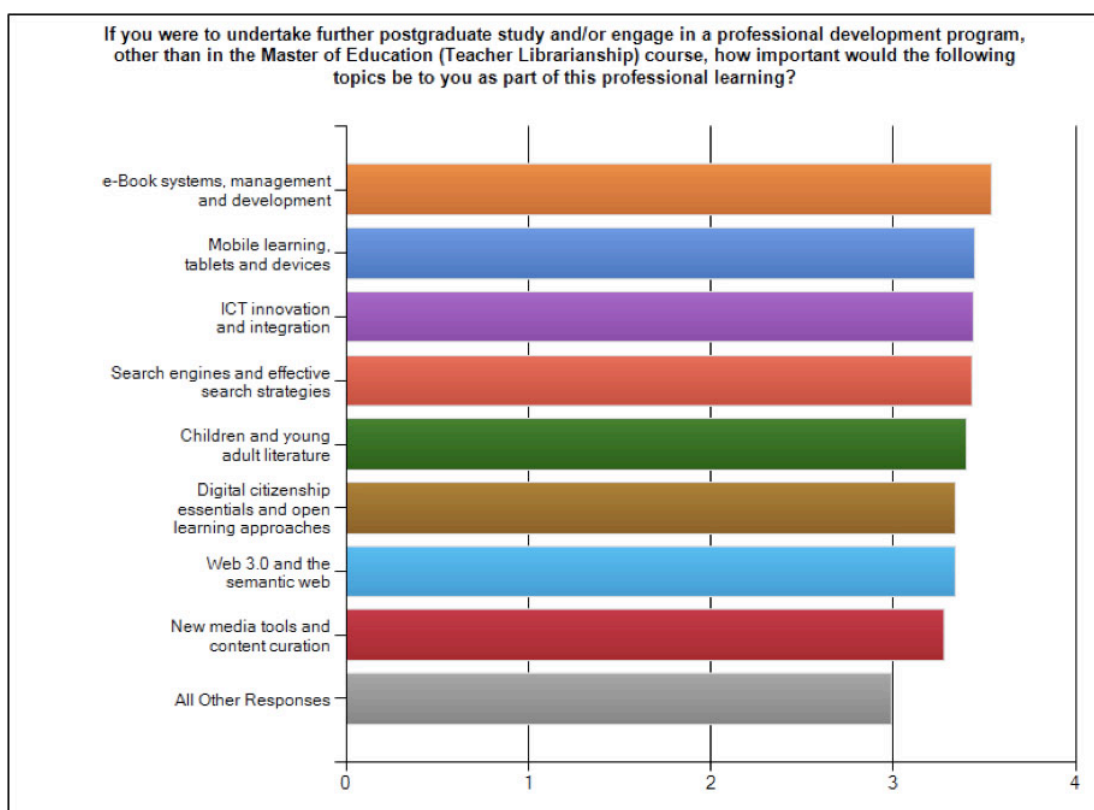


Figure 10. Importance of technology topics to future professional learning (N=340)

However all except one of the listed professional development needs and future postgraduate study options were rated as *important* or *extremely important*, with e-Book systems to Web 3.0, and the semantic web rated as *extremely important*.

In six questions about future professional or academic development (Figure 11), two questions were rated as being of the highest priority placing Graduate Diploma in areas/topics related to contemporary and emerging needs in digital environments and school libraries (46.9%) and Master of Education in areas and topics related to contemporary and emerging needs in digital environments and school libraries (45.9%) ahead of the other options.

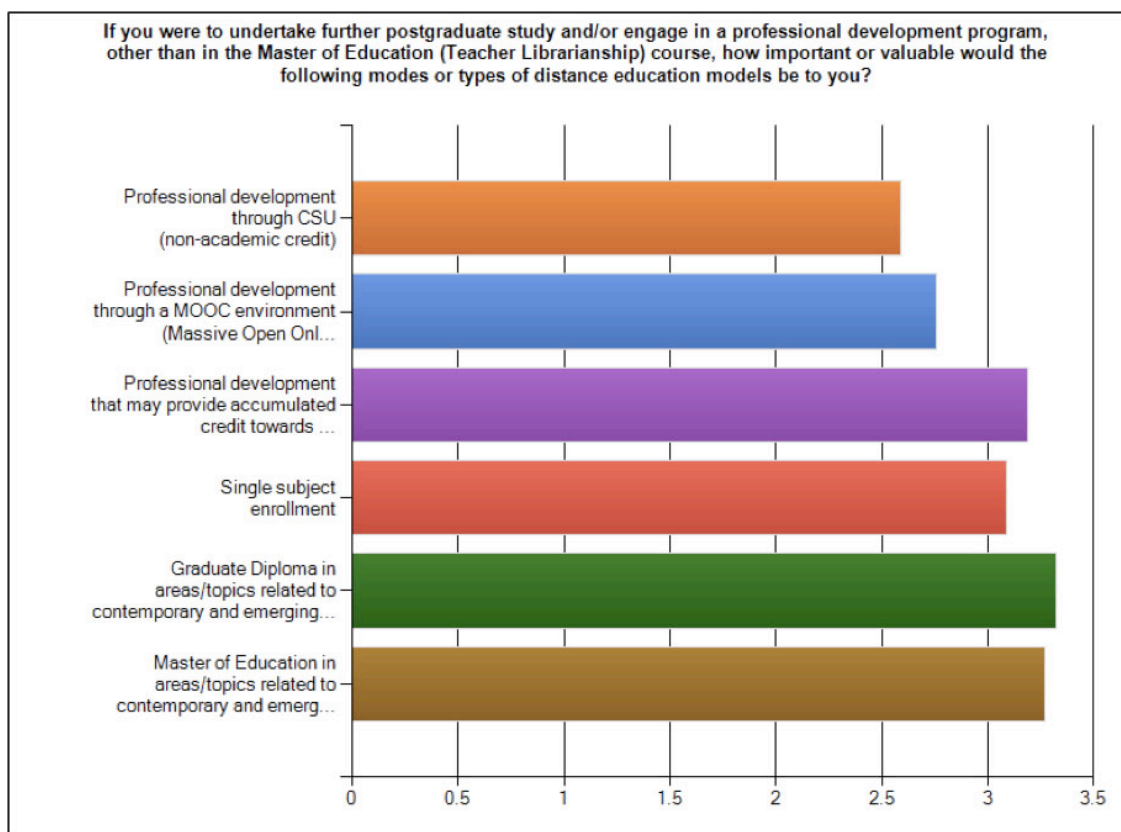


Figure 11. Importance of distance education models and topics (N=340)

Responses showed an emphasis on the availability to undertake credentialed improvement in knowledge and skills, and availability of a degree that is broader than teacher librarianship but which continues to develop the capacity of a teacher librarian to manage school change and respond to new and emerging influences in digital and curriculum environments.

Teacher Librarianship in Digital Environments – An Australian Experience

Teacher librarians are already acknowledged as being creative and wholly competent in the traditional literacy and information literacy aspects of their role. One of the key elements that we should be talking about is technology and the use of online tools.

The ongoing evidence provided in this paper seems to indicate a strong ongoing need amongst teacher librarians for further development in the range of skills and capacities in the use of online tools; a need to engage in conversation in flexible online environments; and a need to grasp the opportunity to use technology to become learning leaders in within schools.

The online Master of Education (Teacher Librarianship) at Charles Sturt University certainly includes a strong emphasis on digital environments as affirmed by the review of the degree program. However, the review has also resulted in the development of a new Master's of Education degree, Knowledge Networks and Digital Innovation, developed specifically to target the additional needs of specialist digital environments.

The reality is that teacher librarians can be the best person to have in a school – but only if they have actually learned how to fill that role well, and have understood and assimilated the principles, tools and practices of a 21st century teacher librarian.

In other words – poor school, rich school, country or city school – we need a great teacher librarian at the digital helm to lead learning and innovation with and beyond technology!

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