Library Trends – Future horizons and a few realities

ABSTRACT

In 2014 the New Media Consortium (NMC) produced the first Academic and Research Library Horizon trends report. The research for the report, published in August 2014 http://library.wiki.nmc.org included input from a group of 50 international expert panel members, including four Australian library executives.

The New Media Consortium (NMC) produces a number of Horizon trends reports each year, focussing on technology and issues in higher education, schools and the library and museums sector. They have become essential reports for all library and information professionals around the world. The NMC use a number of online collaboration and voting techniques to gather research information for each report and gain opinions and decisions from the international expert panel. The paper will outline these techniques, as well as the results of the 2014 Library report. The author will also suggest that for many libraries, the 'trends' are often aspirational and some libraries may not be able to identify how they will meet the challenges of upcoming trends. How to implement the proposed future trends in libraries with receding budgets within an environment of rapid change will be discussed.

A short summary video of reflections from a number of the international library expert panel members and NMC staff will accompany the presentation.

Library Trends – a brief background

The discussion and debate about what the future holds for libraries and librarians seems perennial. While many would say that we cannot be predictors of the future, the phrase "Be the change that you wish to see in the world" would indicate that all of us should be, in some small way, changing our libraries towards a better future. Learning about innovative developments in our industry is a part of our working lives. For library leaders and decision makers, it is also a part of constant environmental scanning, which is then aligned and compared with your own library and organisations' strategic directions.

In this paper and presentation I'll be briefly discussing library trends and the range of information sources and resources that library staff can access to encourage constant updating in this area. As a member of the 2014 New Media Consortium Horizon Report Library Edition Expert Panel, I will outline the process of how one of the most well-known library trends reports is developed. Finally, I will comment on the question "Are library trends reports relevant for 'my' library?" and the realities of following and advancing current trends and challenges for libraries.

Library trends reports now come in a variety of formats such as: books, journals e.g. *Library Trends*[1], published articles, freely available reports such as the IFLA Trends Report[2] and the New Media Consortium Horizon Report Library Edition[3]. There are many library bloggers who regularly discuss library and technology trends. MOOCs (Massively Open Online Courses) on the topics have also been developed[4] as well as iTunes U, Slideshares, thinktanks, conferences[5], colloquiums[6], webinars, events and institutes[7].   The Australian Library and Information Association (ALIA) conducted a Future of the Profession and Library Futures discussions via a number of platforms during 2013 and 2014[8]. These ALIA reports are designed for different

library sectors; public, academic, vocational education, schools and special libraries. They cover a range of issues, trends, technologies and ways that ALIA will advocate, participate and work with libraries to advance the trends and meet the challenges within the Australian library community.

Technology trends are often the most critical and important for libraries, as it is technologies (moreso than any other aspect) that are rapidly changing and influencing library services to meet customer demands and expectations. Each country has many companies that release technology trends lists. Many of the big consultancy firms like PWC and Deloittes will release reports, often as the new year approaches. Another example from New Zealand is CORE-Ed, a consultancy based organisation which releases technology trends lists and reports with a NZ perspective. Associations such as SETDA (State Educational Technology Directors Association)[9] in the US and CAUDIT (the Council of Australian University Directors of Information Technology) in Australia produce reports and issues lists for the public and for members[10]. Gartner and Educause reports and resources are other examples of technology and education trends reports, however it should be noted that these reports are often expensive subscriptions and are closed access.

The Pew Internet and Libraries project has provided extensive and useful reports with a focus on public libraries[11]. While studies such as these are not yet conducted in Australia, there are many Australian comparisons that can be made relating to libraries, internet use and broadband access as a few examples. The American Library Association's Library and Information Technology Association (LITA)[12] is another group that provides library staff opportunities for information sharing and to explore and enable new technologies as well as hosting annual events, webinars and articles about current library technology trends.

Public libraries in Australia have worked with futurists to develop library and technology trends scenarios such as the State Library of New South Wales Bookends Scenarios[13]. State Library of Queensland is currently envisioning futures with its 'Vision 2017' activities[14]. The Public Library Victoria Network has also developed briefs for public libraries on current trends e.g. Pop-up Libraries[15].

Each of these reports focus on a slightly different aspect of libraries, and also use a variety of methodologies to develop their perspectives and lists of current trends and challenges. Each provide library staff with opportunities for their particular library and sector to reflect on.

{There are many and varied examples of library and technology trends reports and information. This is not meant to be a comprehensive list, rather a brief summary.}

The NMC Horizon Reports

The New Media Consortium (NMC) is an organisation formed in 1993 by a group of hardware manufacturers, software developers, and publishers. The NMC has always focused on the future and the implications of emerging technology for schools, museums, universities, and society. NMC members include schools, universities, colleges, libraries and museums and partners have also included Educause, JISC and the Institute of Museum and Library Studies (IMLS).

In 2003, the NMC launched the first Horizon Report research cycle. Each year, the higher education, schools K-12, museum, and regional editions of the NMC Horizon Report[16] identify important developments, technologies, challenges and trends. The

reports are aimed primarily at the higher education sector as it relates to technology. Specific editions e.g. the Museum edition were subsequently produced to meet a need to focus on the differences for particular sectors.

The first Horizon Report Australia & New Zealand Edition Technology Report was released in December 2008, and have been produced each year since. The Australian reports are useful, as they provide a focus for our particular region, and highlighted slightly different trends, which reflected local priorities at the time. For decision makers, it enables a localised discussion and confirmation of how trends might be changing at different paces in different regions depending on a range of factors.

The NMC Horizon Report series and the NMC's regionally focused Technology Outlooks allow the education community to benchmark their work with others around the world, to see where the most exciting and innovative applications of educational emerging technology and issues are currently unfolding, and to incorporate examples of projects already delivering on the trends. The NMC is often regarded as an important collective voice in advancing innovation in learning-focused organisations and cultural institutions such as museums and libraries.

Libraries, especially academic and research libraries, traditionally focussed on the freely downloadable NMC Technology Outlook Horizon reports, utilising the content and listed trends to define their focus on specific future directions, and assisting with confirming decisions to invest in particular new technologies or services. As academic libraries are often aligned with IT services, these trends lists and discussions become a part of planning and direction-setting. It is essential to have evidence-based resources and reports that re-confirm why your organisation is investing time, money and resources into certain technologies.

The first NMC Horizon Report Library Edition in 2014

Libraries, like the NMC, have the goal of being catalysts for discussion, and convening people around new ideas that encourage exploration and experimentation. The first Library edition of the Horizon series was published in August 2014[17].

The methodology
The process used to research and create the NMC Horizon Report: 2014 Library Edition is consistently used across all the research conducted within the NMC Horizon report projects. All editions of the NMC Horizon Report are informed by both primary and secondary research. Dozens of meaningful trends, challenges, and emerging technologies are examined for possible inclusion in the report for each edition. Every report draws on the considerable expertise of an international expert panel that first considers a broad set of important trends, challenges, and emerging technologies. The panel then examines each of them in progressively more detail, reducing the set until the final listing of trends, challenges, and technologies is selected. This process takes place online, where it is captured in the NMC Horizon Project wiki and openly accessible. The wiki used for the NMC Horizon Report: 2014 Library Edition[18] provides a record of the collaborative efforts of the primary researchers and the expert panel members. The wiki is also a transparent and real-time view for those who are interested, and who also might contribute into the work of the project through accompanying conversations on social media.

The work of the expert panel is conducted using the Delphi method.[19] The Expert Panel discusses and then ultimately makes the decisions about what will be included

in the report through the voting methodology. These decisions are collated, edited and written by the staff at NMC with research partner universities. The NMC uses that work as the foundation for the writing and background research. Dozens of potential topics are considered by the Horizon Expert Panel before the final six are selected.

There were two rounds of Delphi-style voting to determine the final selection of trends, challenges and technologies. The analogy used is from the Survivor TV series, where individual trends are prioritised and then 'voted off the island' by the expert panel members. The trends and emerging technologies are also ranked in terms of an adoption timeline i.e fast moving (1-2 years), mid-range (3-5 years), or long-range (5+ years). The challenges are categorised into; solvable (we know the solutions and are working on implementing them), difficult (we understand the challenge but are still figuring out solutions), and wicked (challenges that are seemingly impossible to define, let alone solve).

The 'experts'
The call for international expert panel members for the Horizon Report Library Edition was conducted in April 2014. The panel was quickly formed and the main body of contribution occurred in April and May 2014. The 2014 report brought together 47 library and technology experts from 16 countries on five continents. Panel members were nominated and selected from a variety of types of libraries, with a higher education focus. Other experts included technology futurists with an interest or connection with the library industry, and academics in the field.
It should be noted that for the 2014 Library Edition report there were no experts from African, Middle Eastern or South American countries. Panel members from these regions are encouraged to nominate for future library horizon expert panels to make the reports more international. There were a few panel members from research libraries/cultural institutions such as State Libraries as well as consultants, academics, university librarians and technologists. The 2014 Library Edition included research input from staff at the University of Applied Sciences (HTW) Chur, Technische Informationsbibliothek (TIB) Hannover and the ETH-Bibliothek Zurich.
The Australian expert panellists convened via teleconference to discuss the online collaborative methods, the trends of significance and regional perspectives on the trends.

The experience
As predicted, it was a fun and illuminating process. As an expert panel member, it was certainly a new experience to be formed into a large online team in such a short period of time. Remote collaboration can be quite unfamiliar territory for some, and it's something that does take practice, confidence and 'learning the ropes'.
Thankfully there were many experts who had already been on other NMC online collaborations that lead the way. It was clear that everyone on the expert panel had various strengths and perspectives. There were many trends to comment on, to consider and decide on their relevance and importance, and all within a short timeframe in addition to normal work and life commitments. As an expert panel member on a slightly different timezone, it was always interesting to see the work of other panel members overnight. There was a continuous 24x7 input and collaboration cycle panel input for a few weeks.   It was a rewarding, useful and interesting voluntary experience, where I would say that all of the 2014 panel members learnt new things, made connections with colleagues and shared insights and opinions.

The results

Once the rounds of research and wiki collaborations are complete, the staff at NMC write the report very quickly. While you might say that it is 'templated', it's also a system that works. The consistency of the reports is also useful to be able to compare over time the change and evolution of the trends.

The NMC Horizon Report: 2014 Library Edition was launched at the International Federation of Library Associations (IFLA) World Library and Information Congress in Lyon in August 2014. Six key trends, six significant challenges, and six emerging technologies are identified across three adoption horizons from one to five years.

Key Trends:

Increasing Focus on Research Data Management for Publications
Prioritization of Mobile Content and Delivery
Evolving Nature of the Scholarly Record
Increasing Accessibility of Research Content
Continual Progress in Technology, Standards and Infrastructure
Rise of New Forms of Multidisciplinary Research

Challenges:

Embedding Academic and Research Libraries in the Curriculum
Rethinking the Roles and Skills of Librarians
Capturing and Archiving the Digital Outputs of Research as Collection Material
Competition from Alternative Avenues of Discovery
Embracing the Need for Radical Change
Maintaining Ongoing Integration, Interoperability and Collaborative Projects

Developments / Technologies:

Electronic Publishing
Mobile Apps
Bibliometrics and Citation Technologies
Open Content
The Internet of Things
Semantic Web and Linked Data

Each of the trends, challenges and developments are summarised and discussed in the report as well as examples of initiatives or innovative projects that demonstrate progress in relation to that particular aspect. Many of the examples are US focussed, however projects from all over the world are provided on the wiki and similar examples can often be found in your local region. Many Australian libraries have similar projects currently planned or being implemented.

The Key Trends horizon timelines included predicting trends and issues that were Fast (1-2 years), Mid-Range (3-4 years) or Long-range (5 years or more). Some libraries may adopt or be influenced by a trend sooner than others. The aim of the NMC reports is to identify emerging technologies with a strong likelihood of adoption in academic and research libraries. In other words, on average, an academic library is likely to have a number of the trends and technologies already influencing change in their institution. The 2014 Horizon library report is academic library focussed, however many of the trends and wicked challenges cross library sectoral boundaries.

There could be questions like "Why did you leave a current trend out of the report?" Many trends are discussed but voting is required to make the final decisions. The wiki provides many more comments, links and research into other potentially future trends topics. As of December 2014, the first Horizon Library report download count was 1.5 million across 112 countries with the top 5 countries downloading the report being 1. USA 2. Australia 3. UK 4. Canada 5. Germany ; a demonstration of the report's impact, reach, authority and relevance.

"My library is doing great things or has an innovative project that I think should have been included in the report". The response to this is: It's time get ready to nominate your projects for the next report. You can also be part of the conversation via social media and the #NMChz hashtag by identifying your particular project or contribution. Consider nominating yourself or someone from your library for the next expert panel. Similarly, with reports such as the IFLA Trends Reports and the ALIA Future of the Profession reports, discuss the trends with your library leadership team and colleagues to determine the relevance to your library.

Realities

Many library leaders and staff might look at trends reports and say; "We won't ever be able to do that in our library"; "We don't have enough money for new technologies"; "Why is that relevant to us?" There might also comments like "That's a trend for public libraries, it has no relevance for academic libraries". There's always many arguments from a range of staff as to which trends are more appropriate for particular sectors and particular libraries. It should however be recognised that there are always crossovers between library sectors.

Each of the six trends, challenges and developments identified by the expert panel in the 2014 NMC report has numerous implications for academic and research libraries. If libraries do not remain relevant and current in their relative environments and be aware of alignments, new services, technologies and facilities that they need to innovate and lead in before other parts of their organisation do, they will be marked for further review, budget cuts and downsizing. Change is not only inevitable, but a sign of success, especially in the higher education and research sector.

While not every library can be at the cutting edge of every innovation or library trend discussed in the Horizon Reports, it is important that library staff maintain their awareness of the wide range of issues and trends. Decision makers will consistently ask library staff to compare their services and technological offerings with other libraries e.g. "So how does our library compare with X library (of a similar type)". It is important for us to be able to make comparisons about where our library might differ due to circumstances or align and the example might be relevant and applicable to advance library services. Each new trends report may have only one or two relevant topics, trends or issues for your particular library, and your library's circumstances, size, budget, staffing etc. Your library staff may also have hidden and new talents that can enable your library to lead with a particular trend as it comes into focus. Regularly ask your staff if they are interested in following up or making new plans around a new technology, trend or challenge.

Trends reports are useful when talking with library decision makers and funders, to be able to benchmark new ideas and proposals. They can confirm the appropriateness of proposing something on a local level and makes a comparison internationally. For example; makerspaces, the use of mobile applications or the

provision of particular services such as advanced bibliometrics are all current topics for academic libraries.

Trends reports offer perspectives on potential changes to library workforce planning. Into these reports creep new job titles, or insights into where future job skills will be required. These are all useful considerations for new librarians looking at how they can craft a long career in the industry.

Technology trends reports and discussions are a valuable guide for strategic technology planning.   Actively using technology trends comparisons contributes to meeting standards for academic and research libraries. For example they align well with two of the Association of College and Research Libraries (ACRL) Standards for Academic Libraries:

7.9 The library has the IT infrastructure needed to collect, analyse, and use data and other assessments for continuous improvement.
8.6 Personnel responsible for enhancing and maintaining the library's IT infrastructure keep current with library technology applications and participate in ongoing training.

During 2015 Australian university libraries through the Council of Australian University Librarians (CAUL) will be discussing how to develop a similar set of standards for Australian academic libraries.

"Make your own future" – implementing trends

Library leaders and staff, from all types of libraries, will continue to advance the ways in which libraries serve their clients and deliver new and innovative services, resources and facilities. "The best way to predict the future is to create it" (a quote often credited to both Abraham Lincoln and Peter Drucker). Library trends reports are just one way to spark discussions about innovation, learning and creativity. All library staff can choose one or two trends that are relevant to your position and your library and make a start on progressing how your library responds to the trend. Use the toolkits and resources supplied with the reports to create activities, proposals and discussions with your library staff and decision makers. Collaborate with colleagues to work on new and innovative projects and research. Align new developments with your organisation's strategic vision, goals and plans and perhaps track your own progress over the horizon timelines. The ability to be able to keep pace with change will continue to assist in demonstrating relevance, timeliness and flexibility of services to ensure the continued evolution of your library.

REFERENCES

[1] *Library Trends Journal*. 2014. Accessed January 2, 2015.
http://www.press.jhu.edu/journals/library_trends/

[2] *IFLA Trends Report*. 2014. Accessed January 2, 2015. http://trends.ifla.org

[3] Johnson, L., Adams Becker, S., Estrada, V., and Freeman, A. 2014. *NMC Horizon Report: 2014 Library Edition*. Austin, Texas: The New Media Consortium. Accessed January 2, 2015.

http://www.nmc.org/publication/nmc-horizon-report-2014-library-edition/

[4] *Emerging Future: Technology Issues and Trends MOOC.* 2012. Accessed January 2, 2015.
http://ischool.sjsu.edu/emerging-future-technology-issues-and-trends-mooc

[5] *Institute for the Future – Technology Horizons conference.* 2014. Accessed January 2, 2015. http://www.iftf.org/what-we-do/events/technology-horizons-2014-conference/
http://www.iftf.org/what-we-do/events/technology-horizons-2014-conference/

[6] MLIS Colloquium. 2013. "Panel Discussion: Emerging technologies and trends in the library world". YouTube video, posted March 6, 2013. Accessed January 2, 2015. https://www.youtube.com/watch?v=ACDoINzoPss

[7] Da Vinci Institute. 2008. 2015. *The Future of Libraries.* Accessed January 2, 2015. http://www.davinciinstitute.com/papers/the-future-of-libraries/

[8] Australian Library and Information Association. 2014. *ALIA Futures: Future of the LIS Profession reports.* Accessed January 2, 2015. https://www.alia.org.au/futureoftheprofession

[9] SETDA. 2015. *National Trends.* Accessed January 2, 2015. http://www.setda.org/about/advocacy/ed-esea/

[10] Council of Australian University Directors of Information Technology. 2015. *CAUDIT Top Ten Issues.* Accessed January 2, 2015. https://www.caudit.edu.au/caudit-top-ten-issues

[11] *Pew Internet: Libraries.* 2015. Accessed January 2, 2015. http://libraries.pewinternet.org

[12] American Library Association. 2015. *Library Information Technology Association (LITA).* Accessed January 2, 2015.http://www.ala.org/lita/

[13] State Library of New South Wales. 2009. *The Bookends Scenarios.* Accessed January 2, 2015 http://www.sl.nsw.gov.au/services/public_libraries/docs/bookendsscenarios.pdf

[14] State Library of Queensland. 2014. *Vision 2017.* Accessed January 2, 2015 http://plconnect.slq.qld.gov.au/manage/21st-century-public-libraries/vision2017

[15] *Public Libraries Victoria Network.* n.d. Accessed January 2, 2015 http://www.plvn.net.au/node/20

[16] *NMC Horizon Project Reports.* 2015. Accessed January 2, 2015. http://www.nmc.org/nmc-horizon/

[17] Johnson, L., Adams Becker, S., Estrada, V., and Freeman, A. (2014). NMC Horizon Report: 2014 Library Edition. Austin, Texas: The New Media Consortium. Accessed January 2, 2015 http://www.nmc.org/publication/nmc-horizon-report-2014-library-edition/

[18] *NMC Horizon Report Library Edition Wiki*. n.d. Accessed January 2, 2015
http://library.wiki.nmc.org

[19] *The Delphi Method*. 2015. Accessed January 2, 2015
http://en.wikipedia.org/wiki/Delphi_method