



Libraries of the Future : What Our Users Want : the NLB Singapore's perspective

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Abstract:

The role of the library today, tomorrow, and probably even in 2020 is not likely to change, we figure. Libraries and librarians will still be the connector of people to people, people to resources and resources to resources. We will still play the role of guide and coach, and help people find information they need for the purpose specific to them. What will change is the number of new channels and new circumstances where libraries can play a useful role in the lives of the people we serve, and the way we present this information to them, especially digitally. This paper attempts to paint the picture of what would be an ideal library in the eyes of the Singaporean user, in the year 2020.

Background

The NLB Singapore serves a population of 5 mil people. With a library membership of 2 mil, it receives some 35 mil visitors a year at its 23 libraries, with loans of over 33 mil last year. Digital use has been increasing dramatically over the past 5 years, and as more digital content is put out to the internet search engines for access, the reach to users had grown and increasingly, new users use these resources not because they came to the library or its website, but because they were looking for information using popular internet search engines.

The use patterns of users have been evolving in the past few years. From the time of the first OCLC report on users in 2005, where findings revealed that more and more users are going to Google, other internet search engines and social networking sites to look for and to share information, this change towards the web has accelerated. Libraries are trusted and respected by many users, however, the use of libraries is not growing as quickly due to many more options out there.

Research also shows that though many users use the web for information, they are not as information literate as librarians would like. Many struggle to find the useful info that they need. This is not made easier by the lack of integration of search engines for proprietary information that is rich but not easily accessible in the eyes of the general user.

A survey in Nov 2010 of researchers and general users of the National Library of Singapore shows that most users find the physical library inconvenient to use. They indicated that if they have a choice, they would prefer to access all materials digitally, without having to travel to the library. They also indicated that though the library has good database resources, they are not easy to use and it takes too much effort for them to find the relevant information that they need. For most of them, Google and other internet search engines would be their preferred starting point for searches. Generally, they will approach the librarian to ask for assistance only when they are not able to find the required information on their own.

Users : Wish-list for Library of the Future

The following summarises the list of wishes from users gathered in the past 3-4 years:

- Ease of access, ie users would like to have as much content as possible online and remotely accessible from wherever they are, using any device they have at hand
- Ease of search across databases and available content assets, ie users would like our search engines to be like Google, easy to use, yet much better and more precise
- Richness of content, ie users would like to have easy access to a very rich repository of content in all formats and languages, 24 by 7
- Affordable services, ie users are prepared to pay for service, however, they would like libraries to help them negotiate for lower fees and make the payment process easy and convenient. Most would prefer to pay as they use, rather than by subscriptions
- Content translated into the mother tongue languages that they understand, ie users would like access channels and navigation paths to be in the languages that they choose, and the content to be in the language that they are able to read
- Easy access to resource persons or librarians who can help them to navigate and provide suitable coaching when they need help

I would like to share our thoughts on how we can work towards building this Library of the Future as we see it.

Ease of Access

Although many libraries today are doing significant work to improve on access, we are far from the “ideal” state of what is possible. For content that the library owns, there is less of a problem to package them in such a way that anyone can access them from anywhere, including internet search engines and social networking sites. Examples of these at the NLB Singapore include its Infopedia service and digitised newspaper service that saw increases from 400 page views a month to 180,000 a month, and from 3,000 microfilm users a month

to 350,000 page views a month respectively due to content made searchable via internet search engines.

An example of this use happened on 1 May 2011 when two Australian researchers found a few articles from internet that pointed them to the NLB Singapore's NewspaperSG service. From this, they found documentary evidences that led them to discover a 1942 shipwreck of a cotton commercial ship that sailed from India to China and sank in Borneo waters. Alas, no money was found, only some cutlery and old wines. The couple intends to write a story on the find. This is the power of digitisation, and making the digitised content searchable and findable via internet search engines. Anyone has the ease of access to this content via the internet from anywhere.

For the bulk of published materials not owned by the library, the hurdle to enable access is tremendous. For databases that are proprietary, each database has its own search engine, algorithm and navigation path, and it is hard for the average user to learn the different ways they need to access and find the content they want easily.

For books and other materials published, getting them digitised and OCR-ed takes budgets and effort. Even if this is done, there are tedious steps needed to secure rights and business models to enable search and find remotely and digitally from anywhere. This is not only labour-intensive, it is also costly.

Between now and 2020 is not that long. If we can secure rights at the point of deposit or donation at the library, and negotiate fees for use for content that is copyrighted, it would be fantastic for the end-user. As more libraries secure more rights directly with owners and producers at the point of production over time, users will have greater ease of accessing and using the content from anywhere. When this happens, the library of the future will truly become a borderless library, in every sense of the word.

Effectiveness of Search

Today's library catalogues and indexes are not meeting the needs of the users. Users are so used to the ease of searching on Google and other internet search engines that they expect to search and find the content that they need instantaneously when they key in a search term. They do not want to be led to mere titles or links that require them to make an additional effort to get to the content. The search engines in our online catalogue are usually so ineffective that most times, users cannot find what they need, and they go away disappointed. Today's users do not want titles, they want the actual content after a single search.

Metatagging is important, however, our metatags have not been able to help our users find the information that they need easily, as it depends on the specific terms they search, which may not be the terms that we use to catalogue the items. Social tagging helps, however, it is far from perfect. There is still a lot the library community needs to do to help users find what they want more easily. To metatag to the extent that it helps users find what they want efficiently and effectively takes enormous resources, and this is one area which libraries find increasingly difficult to do, as the quantum of digital materials now grows at a speed that is extremely hard to catch-up. New ways of organising materials for access need to be found.

Searching across repositories is another big hurdle faced by our users. The federated search facility is not efficient and not effective, as it takes too much time for the user to find what he needs. Today, many publications and research outputs are not even available for access, and when they are, a search process needs to be designed for the user to search across all these repositories seamlessly.

Richness of Content

In the past, with print materials, the richness of content that one library can provide depends on the budget and the physical space available. In today's context, space and budgets are not the reasons why libraries cannot provide richness of content, as the internet world has a lot more to offer than what we need to pay to get. Internet resources and the availability of open source allow libraries to do significantly more than ever before.

Budgets are still needed, however, even with smaller budgets, it is possible for libraries to collaborate with partners to resource share and to secure a lot more content and make it accessible from each library.

Affordability

With digital commerce, library users can make payment for content that they use easily if libraries can set up systems for payment to be made as and when fees are charged. This can happen anywhere anytime. The library's role is to help ensure that services are kept affordable by keeping costs low in designing and delivering services so as not to be forced to charge a fee.

Translation services

With materials published in so many different languages all over the world, today's users wish that they could be given an easy way to understand the language that the original text is written in without them having to find someone to translate for them. There are ways to make this happen, however, the way these services are currently provided is not exactly user-friendly, and users have to make significant effort to get the translations done at the time when they need the content.

Our Vision

Knowing the wishes of our users, how do we envisage the library of the future to look like?

The physical library will continue to enjoy a certain level of visitorship and use as libraries will continue to play a social community space for bonding, individual and communal learning. Physical library spaces will undergo reinventions to better meet the social needs of users. They may be embedded in spaces where user frequent, and at congregation points. Physical libraries will continue to play its role of the social leveller, providing learning materials to those who cannot afford these materials, nor tools to enable convenient digital access.

It is in the space of digital content and access that a lot more is expected and where dramatic changes are expected. Before internet and mobile devices became so pervasive, libraries had been working on ideas such as personalised libraries, libraries on the go and a

seamless library experience, hoping to make library content and its services as borderless and accessible as they can. Today, with the pervasive internet and mobile devices, the library of the future where rich content and access to content can be made accessible from anywhere is finally becoming a reachable reality.

What exactly do users want when they ask for the ideal library experience? Users want the information that they need at the time they need it wherever they are, and not wait for responses that take half a day or more. This has always been the users' desire. With the digital platform, with digitisation, and with the mobile platforms, libraries are much closer to this reality.

We envisage that users can use the library of the future in the following ways :

The Library as a Service

The library of the future is no more just a place where people visit to borrow and make references to books. It will exist as an integral part of the users' lifestyle. It will provide the information service to people wherever and whenever they needed it most. Digitally it will exist as a service in the cloud where "digital-first" users can reach and get the appropriately provided information service anytime they need it. Physically, the library of the future will be modular, adaptive and agile, and "embedded" in places and touch points where people frequent.

The Library as a Companion

The library of the future will provide a connected library experience to information seekers as they live their lives each day. It will provide information services depending on where the user is, what he holds in his hands and what he needs. Services will be contextualised and adapted to the device in their hands. The way services will be offered is likely to be "one service, multiple expressions" depending on the device used.

The Library as a Gateway

The library of the future is the user's personal information concierge pointing him to the best sources of information, whether from the Internet, library partners, or the library's own content. The librarian will authenticate content and add value to the selected sources (content containers) through subject categorisation and annotations. The library would act as a content portfolio manager. It will also facilitate social tagging to enable community discovery. The library will be the user's information filter and information harvester, harvesting authenticated content into digital subject containers. Through the librarian's careful categorisation, annotation, and community tagging, the community of users can enjoy community discovery too.

The Library as a Social Leveller

The library of the future will be a social leveller acquiring content on behalf of users who otherwise will not be able to afford these resources. The library will also subscribe and negotiate with proprietary content owners to make such content accessible via the library's digital or physical spaces. As a social leveller, the library selects appropriate content for

users of different backgrounds and to encourage them to read through proactive programming.

The Library as Memory

The library of the future is the preserver of the country's history, heritage and culture. It is the country's and the people's memory bank. It will preserve present memory for future generations. With the rapid changes in technology and information explosion via the Internet, library plays the role to preserve present heritage and ensure the readability of these contents even when technology becomes obsolete over time.

The Library as an Experience

The library of the future has content that no one else will ever have – unique content about the country, past and present. It is therefore in a unique position to create a unique experience for its users. For the content that is curated by the library, it has full control to package it into knowledge nuggets to allow patrons to enjoy and consume in different environments and through a range of devices. The library also facilitates users to create unique content about their country.

The Library as a Network

The library of the future connects content to content to create a network of connected knowledge to enable patrons to discover related yet useful content for their research or serendipity purposes. The library creates a “oh! I didn't know this existed” experience for its users. It is like visiting an exhibition when librarians dynamically select a set of content under the exhibition theme (dynamic collection management), making sense out of the selected content through “story telling” in an exhibition setting. Such curating and knowledge networking skills of a librarian can be applied to the whole database of knowledge resulting in a truly “internet” of knowledge. Patrons can traverse into different paths of knowledge discovery every time he enters into this “internet” of knowledge.

Implications for Libraries and Librarians Today

What is a library?

Our mental model of libraries will change. Libraries are no longer physical spaces nor websites where we expect all our users to come to. Users go to wherever they feel there is information for them, using whatever gadgets that they hold in their hands. Most of them will make do with good enough information available at the point of time when they need it. They do not have the patience for libraries to bring it to them, nor will they turn to libraries to get them, if they have other sources of get the information. The existence of the physical or digital library is no longer important to the user. What is important is that users get what they need when they need it.

The library's role is to focus on unlocking information and resources that are not available to users, and to find the most convenient ways to deliver this content to them, 24 by 7. Whether the information is in the physical or digital form, it does not matter to the user, so long as they have an easy way to get it. As it is today, most users will start with the digital search, and if they find what they want, they will stop there. If not, they will go further, and

may end up in the physical library to look for something that is only in the physical format. Various studies by OCLC and JISC have confirmed this time and again in the past 5-6 years.

Role of a librarian

Our mental model of librarians will also change, as librarians move from being custodians of books and other materials, to being a coach, guide, and curator, helping users find what they want from afar, and not necessarily always having direct contact with the customer. Most users will be using library content and services from outside the library, and most will remain nameless and faceless to the library providing the service. Librarians will continue to do what they do very well, ie select the best materials for their users, however, this time, it will be done more dynamically all the time as they serve the users, and educating and helping users real-time on the web, and round the clock. More services will move from physical to digital, and the way users interact with librarians will undergo significant changes.

Service models

Self-service will definitely become a bigger thing in most libraries, as libraries move from being manned by staff to Do-It-Yourself. User habits evolve over time. Today's users prefer looking for information by themselves, with librarians providing self-help tools. Librarians will find themselves doing more and more of the work to design and provide intuitive self-help tools for users to find what they want, and more innovative curatorial work, to introduce users to valuable collections that they own, and to entice them to want to stay connected to the library.

Turnaround time for developing services will be shorter as libraries struggle to find ways to experiment with new services to find new ways to reach the users and to find out if users will bite. Today, as the NLB Singapore experiments with ways to put more Singapore content onto the mobile phones, the team faces difficulties in formatting and delivering digitised content which is not digitised with the mobile phone service in mind. With textual information, the NLB is able to manage the digitisation process quite well, and to ensure that the digitised content can be delivered through both standard and mobile devices. However, audio-visual content is another matter altogether. Digitisation standards need to be established to ensure that AV content that is digitised is searchable and findable through the devices used by the general user. This is a very big challenge today.

Managing rights and fees on these internet and mobile service platforms are new challenges to the team. Speed in delivering content, especially audio-visual and having to manage logons are also challenges to be taken care of. Service development teams must be armed with the right mindset. They have to be very resourceful, resilient and open-minded to anticipate issues and to constantly find new ways to address unexpected challenges as they find new ways to service users constantly on the go.

User engagement and contributions

Today's users demands not only more quality services, they also want to be part of the library's development and processes. By 2020, this will become more commonplace and libraries will need to find ways to enable this and also, respond to this need. While user engagement and contributions are desired outcomes, the quality of their contributions,

whether in social tagging, indexing or curatorial work will differ from person to person. Librarians have to find ways to engage them meaningfully and also to use the content that they contribute meaningfully.

Traits of librarians

The desired traits of aspiring librarians will also be different. Apart from being curious and keen on learning, librarians will need to be equipped with many more skills, and these would include skills for problem solving, networking, negotiating, designing services, and engaging users in the digital spaces. Librarians have always had to learn new skills as they perform their roles in the past. In the future, the rate of having to learn new skills will accelerate, as the use patterns of users change faster than ever before in the digital space.

As example of this is in engaging users in getting their feedback, help in designing new library services, and having them help the library organise materials, or curate them. The National Library of Australia (NLA) has a very successful programme in engaging users to help the library correct digitised newspapers that have been digitised, as OCR usually does not give the library 100% accuracy. Users have been correcting hundreds of thousands of lines of text in the millions of articles digitised, and this has helped increase the accuracy of search results for the content.

When done right, users who are very much more participatory and very much more connected digitally can help the library of the future do a lot of what the library wants to do, without the user having to leave the comfort of their homes. This is what the NLA does with its users. Many libraries have successfully engaged users to social tag their content, especially photographs that lack metadata on basic details such as the date of when photographs were taken, and names of people in the images. Engaging users digitally meaningfully is a new skill librarians will need.

Library processes

Libraries will want to leverage on social networking sites and internet search engines to enable library content and services to be delivered more effectively. Libraries will work more closely with other libraries and content repositories to enable search across repositories, and libraries will find that more can be done with others more easily due to digital platforms and processes which need not be duplicated in different libraries. Resource sharing will take a new shape and the impact of collaboration can be created across nations and between nations. In the library of the future, international digitisation projects for access will be more common place as libraries learn how to work together across boundaries without incurring high costs.

Measurement of success

The way libraries measure success will change. In the past, libraries focused mainly on measuring library membership, visitorship, loans and enquiries as proxies of use of libraries. With digital spaces and social media, library resources are not always used within the confines of the library spaces, and measurement of use of the databases subscribed by libraries is not easily made available to libraries to be fruitfully used. As a result, it is not easy for any library to make a good assessment of how users are using libraries resources, as what is available is traditional data on the physical use of libraries. There are no

standardised ways of comparing between libraries. By 2020, clearer standards and measurements would have evolved and adopted to make benchmarking more meaningful.

Conclusion

Is the Library of the Future a vision or a dream?

Librarians all over the world have been dreaming of the library of the future for many years. For many users, the library of the future is one where they can access content they want in any language from anywhere, anytime, free, and with any device they have in their hands.

With digitisation and with remote access to digitised content where rights have been secured, and for public domain content, the above dream is already reality. One can access any of this content from anywhere, free and with relatively easy access from internet or mobile phones. NLB's NewspaperSG is one of the many examples.

However, this category of material is still a very small percentage of the total possible and the reason for this is that not all copyrighted content has been digitised, especially in the non-English languages, and those in smaller special libraries are not able to get funds to digitise them. The first step towards realising the vision of the library of the future is to identify the public domain content that is useful and valuable, that users want to use, and seek funding to digitise them within each country to provide access.

For those under rights, if each National Library of each country can secure rights to provide some level of access digitally at the point of deposit or donation, it would help expand the pool of content that can be accessed digitally outside libraries. This will take time, however, once the process is started, it is a matter of time when more content will be made accessible in a more convenient manner.

Given that more digital content with appropriate use and re-use rights will be available, the role of librarians is to design services that can deliver the content anywhere anytime, and via any new devices that come up in the market in the most efficient and effective manner. Users can be engaged to help shorten the process and improve the quality of the service and content.

We are confident that by 2020, the library of the future will become a reality, at least for many more users, and for a lot more content that users have access to, with the help of the library community working together and engaging users in way they want to be engaged, anywhere, anytime.

References

Calhoun, K. and Cellentani, D. (2009). Online catalogs: what users and librarians want: an OCLC report. Dublin, Ohio: OCLC. Retrieved May 10, 2011, from <http://www.oclc.org/reports/onlinecatalogs/default.htm>

De Rosa, C. et al. (2005). Perceptions of libraries and information resources: a report to the OCLC membership. Dublin, Ohio: OCLC. Retrieved May 10, 2011, from <http://www.oclc.org/reports/2005perceptions.htm>

De Rosa, C. et al. (2010). Perceptions of libraries, 2010: context and community: a report to the OCLC membership. Dublin, Ohio: OCLC. Retrieved May 10 2011 from <http://www.oclc.org/reports/2010perceptions.htm>

De Rosa, C., Dempsey, L. and Wilson, A. (2003). The 2003 OCLC environmental scan: pattern recognition: a report to the OCLC membership. Retrieved May 10, 2011, from <http://www.oclc.org/reports/escan/default.htm>

Information behaviour of the researcher of the future: a ciber briefing paper. University College London. Retrieved May 10, 2011, from http://www.jisc.ac.uk/media/documents/programmes/reppres/gg_final_keynote_11012008.pdf

Lim, Y. H., Neo, T. S. and Teng, S. (2011). Libraries of the future. Singapore: National Library Board.

Researchers and discovery services: behaviour, perceptions and needs. A study commissioned by the Research Information Network. Retrieved May 10, 2011, from <http://www.rin.ac.uk/our-work/using-and-accessing-information-resources/researchers-and-discovery-services-behaviour-perc>

Study of usage behaviour of Lee Kong Chian Reference users. (2010) Singapore: National Library Board.

Wong, W. et al. (2010). JISC User behaviour observational study: user behaviour in resource discovery final report. Joint Information Systems Committee (JISC). Retrieved May 10, 2011, from <http://www.jisc.ac.uk/publications/programmerelated/2010/ubirdfinalreport.aspx>