IMPACT AND APPLICATION OF WEB 2.0 IN LIBRARIES: A CASE STUDY OF 12 NATIONAL LIBRARIES OF THE DEVELOPED NATIONS

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ABSTRACT

The dramatic advances in technologies, particularly in Internet technologies have changed the way individuals seek and obtain information. The emerging of new programming languages for the web has promised new transformation for more dynamic web applications. This shift in web technologies is commonly under a sobriquet for several of online activities known currently by Web 2.0. There is little research that focuses on the impact and applications of web 2.0 in the libraries. The current study was undertaken to explore the impact and use of web 2.0 in libraries. The authors confined the study to twelve National Libraries of developed countries.

Keywords: Web 2.0; RSS Feeds; Podcasts; Blogs; Instant Messaging; Collective Intelligence; Checklist.

1 INTRODUCTION

The last two decades have witnessed the rapid transformation of the library in applying information technology. Libraries have developed and diversified their services based on advanced information communication technologies. A typical technology is Web 2.0 which has recently emerged as a second generation of web-based technologies for communication. Web 2.0" was reportedly first conceptualized and made popular by Tim O'Reilly and Dale Dougherty of O'Reilly Media in 2004 to describe the trends and business models that survived the technology sector market crash of the 1990s (O'REILLY, 2005). The companies, services and technologies that survived, they argued, all had certain characteristics in common; they were collaborative in nature, interactive, dynamic, and the line between the creation and consumption of content in these environments was blurred (users created the content

in these sites as much as they consumed it). The term is now widely used and interpreted, but Web 2.0, essentially, is not a web of textual publication, but a web of multi-sensory communication. It is a matrix of dialogues, not a collection of monologues. It is a user-centered Web in ways it has not been thus far.

This characterization of the current state of the Web is at times contended, and though the clear delineation between the first and second Webs is here admitted to be rather arbitrary, it still must be recognized that the Web is indeed evolving into a more interactive, multi-media driven technological space. As O'Reilly (2005) observed in what is often cited as the seminal work on Web 2.0, personal web-pages are evolving into blogs, encyclopedias into Wikipedia, text-based tutorials into streaming media applications, taxonomies into "folksonomies," and question-answer/email customer support infrastructures into instant messaging (IM) services.

2 PURPOSE AND OBJECTIVES

Web 2.0 has been strongly applied in the field of e-commerce, online advertising and other online services. However, it has not been a widely applied technology in the library community. The implications of this revolution in the Web are enormous. Librarians are only beginning to acknowledge and write about it, primarily in the "biblioblogosphere" (weblogs written by librarians). Journals and other more traditional literature have yet to fully address the concept. The current study is under taken to explore the impact and use of web 2.0 in libraries. The main objectives of the study were: 1. To understand the major concepts and technologies behind web 2.0.; 2. To discuss the impact of web 2.0 on libraries; 3. To examine purpose of web 2.0 use in libraries; 4. To investigate features of the use of web 2.0 in libraries.

3 SCOPE

The present study was confined to twelve national libraries from 12 developed countries and to following web 2 tools: a) RSS; b) Blogs; c) Podcasts; d) Instant Messaging (IM).

4 METHODOLOGY

Twelve national libraries that use web 2.0 were selected for case study. The data was collected by means of checklist. Based on data collected from the checklist (Appendix 1), statistical techniques were used to analyze data. The checklist was converted into Microsoft Excel spreadsheets. Each checkpoint in the checklist was assigned a value either 1 or 0 (yes or no answers). These values were input directly in a spreadsheet and then the "SUM" function of Excel was used to calculate the overall weighting, types, purposes and features of Web 2.0 technologies in the libraries.

5 RESULTS AND DISCUSSIONS

5.1 Use of Web 2.0 Tools

It could be seen that RSS (83,66%) was the most commonly used technology while IM was the least used one with only five libraries (41,66%). The popularity of RSS may be due to its clear function, simplicity and easiness. As various researchers affirm RSS has been one of the most utilized technologies as it enables users to create a one-stop-shop of information. Users can easily and flexibly subscribe to information that meets their needs. On the contrary, IM was the least used even though it is a good technology for the library to implement virtual reference services. The reason is that such a technology requires librarians to be always online to support users. Therefore, some libraries possibly did not employ it because of a lack of library staff.

Graphic 1: Use of Web 2.0 Tools.
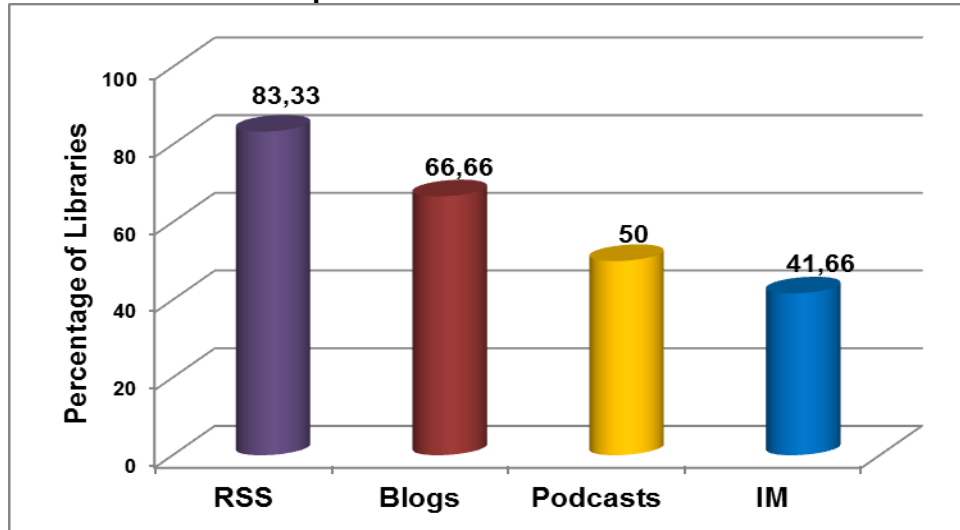
More than 65% of libraries (8 out of 12) utilized blogs and half of libraries employed Podcasts. Blogs were the second most common used Web 2.0 technology in national libraries because of its benefits. Some notable advantages of blogs are that libraries can use cheap or free software, and blogs require a minimal maintenance and staff's time. Additionally, blogs allow library users to freely exchange ideas on different library topics that traditional publications or services cannot offer. Besides, the number of libraries that used Podcasts is modest. The reason possibly is Podcasts require libraries to have sound recorders, accompanying equipment as well as soundproof rooms. Also, the audio files are normally quite large for users to download or listen to online.

5.2 Purposes of the Use of Web 2.0

Table 1 provides the number of libraries that used RSS for different purposes. The primary purpose of RSS was "new books" (66,66%). Most of these libraries used RSS for new books in specific fields or subjects. Only a few of them used RSS for all new books and Less than a half of libraries applied RSS for "new e-journals" and 58,33% used RSS for "library news and events".

Not many libraries used RSS for "general news" because users can access freely news web sites such as *The British Broadcasting Corporation* (BBC) and *Cable News Network* (CNN) for general news without depending on libraries.

"Custom catalogue search" feed is a subset of "new books" or "new journals" feeds that defines a specific set of new items being input into the library catalogue systems. This is very useful for users to keep up-to-date with new items in libraries based on their defined search expressions (the searches that are implemented previously). However, it was not widely used by libraries. The only library which used RSS for "custom catalogue search" was National library of Australia.

Besides the above purposes, some libraries used RSS for "other" purposes such as new web site introduction and new library staff, institutional repository newsletters, notices on nearly due items, overdue items and availability of inter-loan items.

Table 1: Purposes of RSS Use.

No.	RSS Used For	Quantity	Percentage (%)
1	New books?	8	66.66
2	New e-journals?	5	41.66
3	Library news and events?	7	58.33
4	Others?	3	25.00
5	General news?	3	25.00
6	Custom catalogue search?	1	8.33

Table 2 shows the list of purposes of blogs use. More than a half of libraries used blogs for "library services" and a similar percentage of libraries used blogs for "library news and events". These were the two main purposes of blogs that enabled library users to be aware of library services such as opening hours, borrowing services, and questions and answers relating to library services. As discussed earlier, many libraries used RSS for "library news and events". Thus, "library news and events" is one of the main purposes of Web 2.0 application.

Only 25% of libraries used blogs for "new books"". Libraries might prefer RSS for "new books" to blogs as 66,66% of libraries using RSS vs. 25.00% of libraries used blogs for this purpose. Possibly, library users normally required to know what new books were in the libraries instead of looking for comments on new books.

33.33% of libraries used blogs as a tool for "information literacy" and "general information". "Information literacy" usually focused on library courses and seminars in order to help library users to improve their searching, studying and information skills. Besides this, "general information" was normally organized in "web sites" or "links" category that led users to internet sources.

"Book reviews" and "suggestions" were not common purposes of the library blogs. Some libraries used blogs for book reviews such as Library of Congress, National Library of Norway and National Library of Singapore. National Library of New Zealand and National Library of Czech Republic also had categories in their blogs for users to suggest new ideas in order to improve library services.

Table 2: Purpose of Blogs Use.

No.	Blogs Used For	Quantity	Percentage (%)
1	Library services?	8	66.66
2	Library news and events?	8	66.66
3	New books?	3	25.00
4	Information literacy?	4	33.33
5	General information?	4	33.33
6	Suggestions?	3	25.00
7	Book reviews?	2	16.66

As Table 3 shows, the top three purposes of Podcasts were "advice on library skills", "guidance with resources" and "library orientation tours". It is notable that these are not easy to present in text or other media. Therefore, audio files (Podcasts) are one of good ways to help library users be familiar with general library skills, library resources and library environment. Audio files are usually large hence library Podcasts did not focus on purposes/services that can be presented by other Web 2.0 technologies (blogs, RSS). As a result, not many library Podcasts were used for "library news" and "book reviews". Also there were no Podcasts for "general information' because users could look for such information in news web sites.

Some libraries used Podcasts as step-by-step guidance for library users to search for information on the internet or library catalogues. Podcasts are useful because they do not require users to read a number of pages. Instead, they listen to Podcasts and follow instructions.

Some libraries used Podcasts for other purposes such as special library services for people with disability (Library of Congress and National Library of Canada). Such Podcasts are very useful for visually disabled people.

Table 3: Purpose of Podcasts Use.

S. No.	Podcasts Used For	Quantity	Percentage (%)
1	Advice on library skills?	6	50.00
2	Guidance with resources?	4	33.33
3	Library orientation tour?	5	41.66
5	Others	2	16.66
6	General searching skills?	3	25.00
7	Searching the library catalogue?	5	41.66
8	Library news?	1	8.33
9	Book Reviews?	0	0.00
10	General information?	0	0.00

Table 4 presents the purposes of IM use. It is clear that IM was mostly used as a tool for virtual reference services in terms of chat services. According to Stephens (2006), IM is an integral tool for reference services and at least 75% American libraries use IM for their reference services. However, as Figure 2 shows, IM was the least used in comparison with other Web 2.0 technologies. Only 33,33% of national libraries used IM for reference services. Modest numbers of libraries used IM for other purposes such as "guidance with resources" and "advice on library services" (8,33% and 16,66%, respectively).

Table 4: Purpose of IM Use.

S. No.	IM Used For	Quantity	Percentage (%)
1	Reference services?	4	33.33
2	Guidance with resources?	1	8.33
3	Advice on library services?	2	16.66

5.3 Features of Web 2.0 Applications

Table 5 shows typical features of RSS in national libraries. Most of the libraries (using RSS) either provided links to web sites offering RSS reader function (8 libraries – 66,66%) or provided links to download RSS readers (6 libraries – 50%). These were very helpful for library users, especially new users who were not familiar

with RSS readers. Some libraries did not provide such help for users such as library of National Library Netherlands and National Library of Ireland. The "adequacy of instructions on how to use RSS" is also important as it enabled users to easily subscribe to RSS feeds of libraries. This feature was measured by the availability of explanation on what RSS is, how to find RSS feeds in library web sites and how to subscribe to an RSS feed. Approximately a half of libraries provided sufficient information. Just over a third of libraries classified news (RSS feeds) into topics and sub-topics, so library users could easily subscribe to a specific RSS feed. Some libraries classified RSS feeds for new books by using classification schemes and other libraries classified RSS feeds by types of materials (new books, new e-journals, new databases, etc.).

Table 5: Features of RSS.

S. No.	Features of RSS	No. of Libraries with this Feature	% Age of Libraries with this Feature
1	Provide links to websites offering RSS reader functions?	8	66.66
2	Provide links to download RSS readers?	6	50.00
3	News is classified into topics?	5	41.66
4	Adequacy of instructions on how to use RSS?	7	58.33
5	News is searchable?	4	33.33
6	Library builds its own RSS reader?	0	0.00

There was a wide range of blogs in national libraries. Some libraries had only one blog while others had two to five. Some had only one blog for all library users while others might have different blogs for different groups of users. Table VI gives the list national library blogs' features. The majority of blogs was administered by liaison librarians and used free-based blog services such as Bloglines, Wordpress and Blogspot. Some libraries designed their own blogs (Library of Congress, British Library and National Library of Australia). The overall design of blogs of these libraries was quite good as they comprised most of the key features of a good blog.

A noticeable point is that all of 8 library blogs had categories and archives for postings. Six library blogs used RSS to feed blogs' entries, and entries were

browsable by topics and date. These features were useful for users to retrieve information in the blogs.

Also, 5 library blogs had a link to the library home pages. All of these blogs were linked from the library home pages. Not many library blogs had links to relevant internet resources. Possibly, the nature of blogs is two ways communication (a member post a piece of information and others can comment on it); therefore, most of the library blogs did not provide links to other internet resources. Such links are normally found on other pages of the library web sites

There was an absence of instructions or guidance on how to use blogs. None of the 7 blogs had such information. It would be useful if library blogs provided information on rights and limitation of blog users, how to create a new entry, how to reply/make a comment because not all library users could be familiar with such issues, especially new users.

Table 6: Features of Blogs.

S. No.	Features of Blogs	Quantity	Percentage (%)
1	There are categories of postings?	8	66.66
2	There are archives for the blogs?	8	66.66
3	Library use RSS to feed blogs entries?	6	50.00
4	Entries are browsable by topics?	6	50.00
5	Entries are browsable by date?	6	50.00
6	Link to the library homepage?	5	41.66
7	There are links to relevant internet resources?	3	25.00
8	Entries are searchable by keywords	5	41.66
9	There are dates and times of posting?	5	41.66
10	Library designs its own blogs?	4	33.33
11	Adequacy of instructions on how to use blogs?	0	0.00

Due to the fact that Podcasts were applied to a limited number of topics and because of features of audio files, not many Podcasts were available on National library web sites. Some libraries had a low number of Podcasts such as National Library of Australia. Other libraries had modest numbers even though they had employed Podcasts for a year. Podcasts searching and browsing functions were almost absent from the libraries. As can be seen from Table VII, the majority of Podcasts recently appeared on the library web sites. Only two libraries had archival

Podcasts up to one year (Library of Congress and Library and Archives of Canada). This technology was lately deployed probably because it required accompanying equipment and it had large audio files.

Four libraries (33,33%) used RSS to feed their Podcasts and same number of libraries provided sufficient instructions on how to use Podcasts. The use of RSS to feed Podcasts is a good idea as it keeps users up-to-date with current information in the libraries. Instructions are necessary for Podcasts users to easily take advantage of Podcasts in the libraries.

Similarly, the availability of accompanying transcripts for Podcasts made it easier for library users to comprehend new information and it gave users more options in using Podcasts. For example, a transcript accompanying a Podcasts on how to use the library (library orientation tour) could help new library users to understand the content of the tour. Also, Users could read accompanying transcripts instead of listened to Podcasts as some people still have dial-up connection to the internet.

Table 7: Features of Podcasts.

S. No.	Features of Podcasts	Quantity	Percentage (%)
1	Library uses RSS to feed Podcasts?	4	33.33
2	Adequacy of instructions on how to use Podcasts	4	33.33
3	A transcript accompanies each Podcasts?	3	25.00
4	Archival posts are up to one year?	2	16.66
5	Podcasts are browsable by topics?	0	0.00
6	Podcasts are searchable by keywords?	0	0.00
7	Podcasts are browsable by date?	0	0.00
8	Archival Podcasts are more than one year?	0.00	0.00

5.3.4 Features of IM

Table 8 displays features of instant messaging in national libraries. "Text-based chat" was offered by six libraries (50%) while no library offered "voice chat". The total time that libraries made IM available for virtual reference services was up to

eight hours and no libraries offered more than eight hours. This was because they required librarians to be always available and ready to answers users' questions.

According to the results, two libraries provided sufficient instructions on how to use IM in their libraries. Library of Congress provided a users' guide that contained information on different issues such as who can use the chat service, types of valid questions and how to configure chat programs as well as technical support information. National Library of Australia presented detailed explanation on how to configure Internet browsers to use the chat service and provided solutions for potential technical issues.

Table 8: Features of IM.

S. No.	Features of Instant Messaging (IM)	Quantity	Percentage (%)
1	Library offers text based chat?	6	50.00
2	Adequacy of instructions on how to use instant messaging?	2	16.66
3	Instant messaging services are available eight hours day?	5	41.66
4	Library offers voice chat?	0.00	0.00
5	Instant messaging services are available more than eight hours a day?	0.00	0.00

6 FINDINGS

From what has been presented in the literature, the concept of Web 2.0 is still being established. There is a unique desire to describe either a tangible technological development or a shift to a new technological era. Perhaps Web 2.0 is step in future development, which is paving the way for the web interfaces to be ready for a new advent. In the Web 2.0 world, applications are run online, with no installation, updates are constant and continuous and access is instant from any computer with a browser.

Leveraging the approaches typified by Web 2.0 principles allows libraries opportunities to better serve existing audiences and to reach out to potential beneficiaries where they happen to be, and in association with the task that they happen to be undertaking. This new approach makes it possible for searchers to be

presented with choices to view online, borrow locally, request from afar, buy or sell as appropriate to their needs and circumstance. Library 2.0 (L2) reinforces the role libraries play in the community by building on today's best and continually improving the service. L2 can be summarized as being user-driven and aiming to save the each library user time in retrieving information.

Libraries make use of collaborative tools and technology to engage and share information rather than just provide it. Blogs, wikis, RSS feeds, and instant messaging are changing the traditional library functions of indexing, cataloging and information dissemination. The greatest impact of these tools is visible in the areas of information access and delivery. From "push" information, we are moving towards "pull" information and beyond. Libraries today utilize wikis and RSS feeds to deliver library news and catalog updates; they also solicit patrons' feedback and participation in the form of blog comments and the ability to alter existing information. The nature of library-related functions is therefore becoming collaborative and flexible as users become active participants

Among Web 2.0 technologies utilized by national libraries, RSS was the most widely applied technology and instant messaging was the least used technology. Web 2.0 technologies were mainly applied for some specific purposes. Similarly, each Web 2.0 technology appeared on the library web sites with basic features.

CONCLUSION

Web 2.0 is a wave of rapid development driven by user-centered change that revolutionize and evolves libraries to deliver a new range of functions and services to meet the varying and new demands of its web savvy users. Web 2.0 encourages constant and purposeful change, engages users in the creation of physical and virtual products and services that are being constantly evaluated through feedback, contribution and conversations. Many libraries around the whole have embraced these changes quickly and we now witness a proliferation of new services and functionalities that are unheard of few years ago.

This research draws an overall picture of the impact and application of Web 2.0 in libraries. It attempts to provide libraries with helpful information to better meet their user needs by effectively applying Web 2.0. Additionally, library managers, librarians and other libraries may also find this research beneficial as they plan to deploy Web 2.0. Furthermore, researchers and information professionals may also find this research useful once they intend to do research relating to Web 2.0 in libraries.

Further research in a similar area may have a wide range of choices. An evaluation or a survey on Web 2.0 applications in public libraries that focuses on some specific groups of users may be a potential issue for exploring. Also, the application of Web 2.0 in professional organizations is also another interesting topic for further analysis. Some Web 2.0 technologies appear to be intended for communication with a specific audience like the professional library community. An investigation to see if librarians can take advantage of information communicated via Web 2.0 applications may be a potential area for future research.

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APPENDIX 1 - CHECKLIST

N.	CHECKPOINTS	A	B	C	D	E	F	G	H	I	J	K	L
	Category No. 1 - Web 2.0 Use												
1	Does the library use any of web 2.0 technologies?	1	1	1	1	1	1	1	1	1	1	1	1
2	Does the library use RSS?	1	1	1	1	1	1	0	1	0	1	1	1
3	Does the library use blogs?	1	1	1	1	0	1	1	0	1	1	0	0
4	Does the library use IM?	1	1	1	1	0	0	1	0	0	0	0	0
5	Does the library use Podcasts?	1	1	1	1	0	0	1	0	1	0	0	0
	Category No. 2 - RSS Use												
	Purpose of RSS Use												
6	New books?	1	1	1	1	0	1	0	1	0	1	0	1
7	New e-journals?	1	1	1	0	1	1	0	0	0	0	0	0
8	Library news and events?	1	1	1	1	0	0	0	1	0	0	1	1
9	Others?	1	0	0	0	1	0	0	0	0	0	0	1
10	General news?	1	0	1	0	0	0	0	0	0	1	0	0
11	Custom catalogue search?	0	0	0	0	0	0	0	0	0	0	0	1
	Characteristics of Library RSS												
12	Provide links to websites offering RSS reader functions?	1	1	1	1	0	1	0	0	0	1	1	1
13	Provide links to download RSS readers?	1	1	1	1	1	0	0	1	0	0	0	0
14	News is classified into topics?	1	0	1	1	0	0	0	1	0	0	0	1
15	Adequacy of instructions on how to use RSS?	1	1	1	1	0	1	0	1	0	0	0	1
16	News is searchable?	1	0	1	1	0	0	0	0	0	1	0	1
17	Library builds its own RSS reader?	0	0	0	0	0	0	0	0	0	0	0	0
	Category No.3 - Blogs Use												
	Purpose of Blogs												
18	Library services?	1	1	1	1	0	1	1	0	1	1	0	0
19	Library news and events?	1	1	1	1	0	1	1	0	1	1	0	0
20	New books?	1	1	1	1	0	1	1	0	1	1	0	0
21	Information literacy?	1	1	0	0	0	1	0	0	1	0	0	0
22	General information?	1	0	1	0	0	0	0	0	0	1	0	0
23	Suggestions?	1	0	1	1	0	0	0	0	0	0	0	0
24	Book reviews?	1	0	0	1	0	0	0	0	0	0	0	0
	Characteristics of Library Blogs												
25	Library designs its own blogs?	1	1	1	0	0	0	0	0	0	0	0	0
26	There are archives for the blogs?	1	1	1	1	0	1	1	0	1	1	0	0
27	Library use RSS to feed blogs entries?	1	1	1	1	0	0	1	0	0	1	0	0
28	Entries are browsable by topics?	1	1	1	1	0	1	0	0	0	1	0	0
29	Entries are browsable by date?	1	1	0	1	0	1	0	0	0	1	0	0
30	Link to the library homepage?	1	1	1	1	0	0	0	0	0	1	0	0
31	There are links to relevant internet resources?	1	0	1	1	0	0	0	0	0	0	0	0
32	Entries are searchable by keywords	1	1	0	1	0	0	0	0	0	0	0	0
33	There are dates and times of posting?	1	1	1	1	0	1	0	0	0	0	0	0
34	There are categories of postings?	1	1	1	1	0	1	1	0	1	1	0	0
35	Adequacy of instructions on how to use blogs?	0	0	0	0	0	0	0	0	0	0	0	0
	Category No.4 - Podcasts Use												
	Purpose of Podcasts Use												
36	Advice on library skills?	1	1	1	1	1	0	1	0	0	0	0	0
37	Guidance with resources?	1	1	0	1	0	0	1	0	0	0	0	0
38	Library orientation tour?	1	1	1	0	1	0	1	0	0	0	0	0

		A	B	C	D	E	F	G	H	I	J	K	L
39	General searching skills?	1	0	1	0	1	0	1	0	0	0	0	0
40	Searching the library catalogue?	1	1	1	0	1	0	1	0	0	0	0	0
41	Library news?	0	0	1	0	0	0	0	0	0	0	0	0
42	Book Reviews?	0	0	0	0	0	0	0	0	0	0	0	0
43	General information?	1	0	0	1	0	0	0	0	0	0	0	0
Characteristics of Library Podcasts													
44	Library uses RSS to feed Podcasts?	1	1	1	1	0	0	0	0	0	0	0	0
45	Adequacy of instructions on how to use Podcasts	1	0	1	1	0	0	0	0	0	0	0	0
46	A transcript accompanies each Podcasts?	1	1	1	0	0	0	0	0	0	0	0	0
47	Archival posts are up to one year?	1	0	0	1	0	0	0	0	0	0	0	0
48	Podcasts are browsable by topics?	0	0	0	0	0	0	0	0	0	0	0	0
49	Podcasts are searchable by keywords?	0	0	0	0	0	0	0	0	0	0	0	0
50	Podcasts are browsable by date?	0	0	0	0	0	0	0	0	0	0	0	0
51	Archival Podcasts are more than one year?	0	0	0	0	0	0	0	0	0	0	0	0
Category No.5 - Instant Messaging Use													
Purpose of IM Use													
52	Reference services?	1	1	1	1	0	0	0	0	0	0	0	0
53	Guidance with resources?	1	0	0	0	0	0	0	0	0	0	0	0
54	Advice on library services?	1	0	1	0	0	0	1	0	0	0	0	0
Characteristics of Library IM													
55	Library offers text based chat?	1	1	1	1	0	0	1	0	0	0	0	0
56	Adequacy of instructions on how to use instant messaging?	1	0	1	0	0	0	0	0	0	0	0	0
57	Instant messaging services are available eight hours day?	1	1	1	1	0	0	1	0	0	0	0	0
58	Library offers voice chat?	0	0	0	0	0	0	0	0	0	0	0	0
59	Instant messaging services are available more than eight hours a day?	0	0	0	0	0	0	0	0	0	0	0	0
Total No. of Yes Answers		48	33	40	35	9	16	18	7	19	17	4	10

Legend:
0=No
1=Yes
A=Library of Congress (USA)
B=National Library of Australia (Australia)
C=British Library (UK)
D=Library and Archives Canada (Canada)
E=National Library of Czech Republic (Czech Republic)
F=German National Library (Germany)
G=National Library of Ireland (Ireland)
H=National Diet Library (Japan)
I=National Library of Netherlands (Netherlands)
J=National Library of New Zealand (New Zealand)
K=National Library of Norway (Norway)
L=National Library (Singapore)

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