Reaching out to the web user practices by Malaysian public libraries

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ABSTRACT

This paper aims to provide an overall view of the use of the application of Web 2.0 technologies by Malaysian public libraries. The focus of the research is to explore the types of Web 2.0 technologies used and to ascertain how widely these applications are being adopted. All fourteen state public libraries were included in this study. Data was collection using web analysis, interviews with the librarians and a user survey. The result indicates that National Library of Malaysia (PNM), has adopted most of the Web 2.0 application while social networking site applications (especially Facebook) is the highly used among Malaysian public libraries. The findings also indicate that the main use of this application, about 33%, is to provide information on library activities, announcements and any matters related to the library. The adoption of Web 2.0 application is at an initial stage and most libraries are planning to enhance the use for better services. However, the study also found that there are no definite policies on the adoption of these applications and there is a lack of monitoring of the activities by librarians and users. It is hoped the findings of this study will improve librarians' understanding of the existence and importance of Web 2.0 applications in reaching out to the new library users of the 21st century.

Keywords: Public libraries, Web 2.0, Social Media, Library 2.0, Worldwide web, Malaysia

INTRODUCTION

Public libraries play an important role in the delivery of various forms of information such as books, journals, electronic, microform, online learning, etc. to their community. In the modern sophisticated era, particularly in the era of the Internet, World Wide Web and the Web 2.0, services and facilities are offered in a more wider and complicated environment. The development of Web 2.0 technology requires public libraries to make changes in the delivery of information in a more up to-date, reliable, and dynamic manner which can better attract their users. Web 2.0 technology is now a popular trend and has become a phenomenon used by all segments of society in the world to communicate and socialize. The term Web 2.0 was first defined by Tim O'Reilly and John Batelle in 2005. According to them, the term implies that Web 2.0 differs from an earlier web by being participatory, interactive, instantaneous, and emphasizes on online collaboration as well as sharing among users. In a library environment, this technology or application is termed Library 2.0. According to Chad and Miller (2005), Library 2.0 as a concept that is very different from the service we know today, that operates according to the expectations of today's users.

In Malaysia, this new technology has infiltrated significantly throughout the country. A recently published report about online usage in Malaysia has revealed that the top visited web sites in Malaysia are social networking sites (comScore, 2009). The report also shows that as of mid-2009, there were 9.3 million Malaysian (out of a population of 25 million) aged 15 and above who accessed the Internet from various locations, consumed an average of 1.066 pages of content and spent nearly 14 hours online during the month (Mohd Hafiz, Watsons and Edwards, 2010). The latest data shows that the penetration of Facebook in Malaysia is 48.18% compared to the country's population and 74.56% in relation to the number of Internet users in the country. The total number of Facebook (FB) users in Malaysia reached 12,603,400 and grew by more than 337,260 in the first six months in 2012 (socialbakers.com, 2012). This data and statistics show that Malaysia is among the most active Asian country using social networking as a medium of communication and sharing information. Therefore, public libraries need to be more exposed to these developments and provide as many Web 2.0 applications to get closer to their users and improve the quality of online information delivery. The public library can also use this application by using outreach programs. An outreach program can be defined as a method to reach users by creating an activities or programs. The activities are undertaken to expose the existence of libraries and the services offered. Outreach programs can help libraries in increasing the presence of users, promote reading and can also create "networking" between library and users. To achieve this, libraries must go out to the users and Web 2.0 application provides the opportunity, as a promotion tool, to alert users about the outreach programs. Since the Malaysian public is becoming more Web savvy, public libraries can tap onto Web 2.0 applications to attract users to the library and increase patronage. There are evidence of these applications making way into public library services, but to date, there has been little documentation on the use of Web 2.0 applications in public libraries in Malaysia and what the users of these libraries expect from public libraries in terms of delivering services through social media.

RESEARCH OBJECTIVES AND RESEARCH QUESTIONS

This study attempts to identify Web 2.0 applications adopted by Malaysian public libraries in servicing their community and further examine the specific purposes of Web 2.0 used in Malaysian public libraries.

To achieve the objectives above, this study answers the following research questions:

- What types of Web 2.0 applications are adopted by Malaysian public libraries?
- For what purposes are Malaysian public libraries using Web 2.0 technologies?

LITERATURE REVIEW

In recent years, many studies have been carried out which have revealed the use of Web 2.0 and Library 2.0, especially among developed countries, such as United Kingdom (UK), United States of America (USA), and Australia (Serantes, 2007; Linh, 2008; Gosling, Harper, Michelle, 2009; Nesta and JiaMi, 2011; Curran, Murray and Christian, 2007). Along with the development of Web 2.0 applications, libraries have also kept pace of this application to initiate major changes in the delivery of online information. This can be confirmed by several researchers in this field. As stated by Breeding (2007), "Web 2.0 has become a

trendy marketing concept. Library 2.0, on the other hand, is the integration of Web 2.0 features in library web-based services. The term "Library 2.0" and was believed to be defined firstly by Michael Casey in 2005 on his Library Crunch blog. According to Maness, Library 2.0 if different from the previous Library 1.0, as it consists of four element features such as being user-centered, multimedia, socially rich, and communally innovative. Similarly Xu, Ouyang and Chu (2009) in their study of application and implication of Web 2.0 in academic libraries, state that Library 2.0 should be open to all, interactive, convergent to accommodate various Web 2.0 tools, collaborative with others and also participatory in Web 2.0 movements. Besides that, Kim and Abbas (2010) in their study of the adoption of Library 2.0 functionalities by academic libraries and users mention that Web 2.0 enables library users to get closer to the library using two-way communication and knowledge exchanges such as participating in activities like building subject heading through cataloging via folksonomy, or providing comments on books via blogging. In addition, according to Paroutis and Al Saleh, (2010) Web 2.0 allows users to collaborate in providing inputs, produce and update information and knowledge.

Development and Trend of Use Web 2.0 among Libraries

Findings in the library and information science (LIS) literature indicate that libraries that use Web 2.0 applications, contribute to providing better service to their clients and the opportunity to gain more customers (Curran, Murray and Christian 2007). By using this service, users would be able to view online, borrow locally, request from afar and buy or sell as appropriate to their situation (Miller, 2006b). In addition, Shin (2010) states that Social Networking Sites (SNS) provide a variety of ways for users to interact such as email and instant messaging services. SNS are being used regularly by millions of people and it seems that social networking will be an enduring part of everyday life (Dwyer, 2007). From research done on the SNS usage in Korea in 2008, the membership figures showed that 90% per cent of all Koreans in their 20s and around 25% of Korea's entire population are registered with Cyworld (Shin, 2010). Research by Li, Wong and Chan (2009), investigating the use of Web 2.0 application as outreach program by using MyLibrary Calendar revealed interesting innovations. This application enables patrons to use their own personal calendar computer applications that support the open and standard iCalendar format as a one-stop-shop platform to automatically collect and manage library calendar events, library e-mails and notices, and their own records of circulation, interlibrary loan and room reservation in an efficient and centralized channel.

In Malaysia, the use of Web 2.0 or social media is very high and is increasing substantially each year. Recent data from the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU), which monitors the network on ICT in Putrajaya Campus Network (PCN), found a total of 19.96 million transactions were performed on the access sites of social networking website from 1st to 30th March, 2011. This monitoring found the top three highest access on the social networking website were: profile.ak.fbcdn.net, www.facebook.com and static.ak.fbcdn.net. Although the use of social media or Web 2.0 are rising rapidly each year in Malaysia, very scarce research on the use of Web 2.0 applications in Malaysia was found. In an investigation on the use of Web 2.0 technology by Malaysian students by Mohd Hafiz, Watson and Edwards (2009), it was found that students are not familiar with some of the Web 2.0 applications such as podcast, social tagging and second life. Meanwhile, Danyaro, Jaafar, De Lara and Downe (2010), found that Facebook, Wikipedia and Youtube are the three most popular social networking websites among tertiary students in Universiti Teknologi Petronas, Malaysia.

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The latest research on Facebook in Malaysia done by Riza Ayu and Abrizah (2011) investigating the use of Facebook among academic library Malaysia, found that most of the academic libraries in Malaysia have just started using Facebook in early 2010, although this application has been in existence since February 2004. Similarly, research from Rafidah, Zuraidah and Ruzita, (2011) in their study of the implications of Library 2.0 tools in Malaysian academic libraries towards reference services, found that the most popular social media used by the academic library is Facebook, with 9 out of 15 Malaysian academic libraries using it.

Research Study on Web 2.0 Application Tools

Web 2.0 encompasses a wide range of applications and tools ranging from blogs to social networking sites and wikis. However, a few libraries have only implemented one of the applications. A survey of the application of Web 2.0 in Australasian university libraries reported by Nguyen (2008), adopts a content analysis method for the home pages of 37 libraries. The survey reports that among the Web 2.0 technologies utilized by Australasian university libraries, RSS was the most widely applied technology and instant messaging was the least used technology. In an earlier survey, Xu (2007) surveyed 82 academic libraries of New York State and Long Island in the USA and found that blogs, IM and RSS were the main Web 2.0 applications which have been used extensively compared to social bookmarking, social networking sites and podcasts. Liu (2008) proposed a conceptual model of an academic library web interface based on the analysis of 111 ARL academic library web sites. While analyzing the library web sites Liu tried to identify innovative content and design features including the use of Web 2.0 tools. The study found that IM has been employed in almost all libraries considered in his study. Blogs, on the other hand, were popular among school library web sites (Valenza, 2007). Han and Liu (2009) in their study found more than two-thirds of the top 38 Chinese university libraries adopted one or more Web 2.0 tools through the basic functions of their web sites. From the six types of tools, Catalog 2.0 and RSS were the most common, while IM, Blog, SNS and Wiki were less frequent. However, most of the publications have focused on a single Web 2.0 technology or a single service provided by libraries.

In order to fill the gaps in the literature and advance the professional understanding of Web 2.0 technologies' application in Malaysian public libraries, the study tries to present the findings of the content analysis that systematically examines various Web 2.0 applications in all 14 Malaysian public libraries, and attempts to describe the extent of their applications of Web 2.0 tools in an attempt to reach out to their users.

METHODOLOGY

A combination of Web analysis and interview is applied to a sample of 14 Malaysian public libraries. The web analysis was based on the standard or criteria to measure the Web 2.0 applications for the use of research data collection based on previous studies by Han and Liu (2009) and Linh (2008). However, this instrument is modified for library practices. This instrument has 8 main categories and consists of 41 checkpoints (Table 1). All 14 Malaysian public library (Table 2) websites were examined from 1st Jun till 15th Jun 2011.

Table 1: Checkpoints Used in Web Analysis

Category	Number of Checkpoints
Category 1 – Web 2.0 Application	8
Category 2 – RSS use	6
Category 3 – Blogs use	6
Category 4 – Podcasts/vodcasts use	7
Category 5 – Instant messaging / chatting use	4
Category 6 – Wikis use	4
Category 7– Social Networking Sites	4
Category 8– Community Photo / Sharing Photo	2
Total	41

Next, individual in-depth interviews were conducted with library officers (IT officer/Librarian) to identify and confirm issues not evident from the web analysis instrument, and to gather the important factors that may have impacted the implementation of the Web 2.0 application in these libraries (Refer to Appendix A – Structure Question for Interview).

Table 2: List of Malaysian State Public Libraries

No.	Library Name	URL Address
1.	Perpustakaan Negara Malaysia	http://www.pnm.my/index.php?id=50
	National Library of Malaysia	
2.	PerbadananPerpustakaanAwam Johor	http://www.ppaj.johordt.gov.my/
3.	PerbadananPerpustakaanAwam Kedah	http://www.kdhlib.gov.my/
4.	PerbadananPerpustakaanAwam Kelantan	http://kelantanlibrary.gov.my/v2/
5.	PerbadananPerpustakaanAwam Melaka	http://www.perpustam.gov.my/
5.	PerbadananPerpustakaanAwamNegeri Sembilan	http://nslibrary.gov.my/
	PerbadananPerpustakaanAwam Pahang	http://www.pahanglibrary.gov.my/
3.	Perbadanan Perpustakaan Awam Negeri Perak	http://www.ppanpk.gov.my/peraklib/index.php
).	Perbadanan Perpustakaan Awam Negeri Perlis	http://perlislib.gov.my/v1/
0.	Perbadanan Perpustakaan Awam Pulau Pinang	http://www.penanglib.gov.my/
1.	PerbadananPerpustakaanAwam Sabah	http://ssl.sabah.gov.my/
12.	PustakaNegeri Sarawak	http://www.pustaka-sarawak.com
13.	PerbadananPerpustakaanAwam Selangor	http://www.ppas.gov.my/
14.	PerbadananPerpustakaanAwam Terengganu	http://www.trglib.gov.my/v1/index.php

RESULT AND DISCUSSION

Identifying Public Libraries that have Web 2.0 Applications

The existence of the Web 2.0 applications in Malaysian public libraries were identified through the library's website or the official portal of the public library. Only the main public library in each state was selected. If it appears that the public library's website had one or more Web 2.0 icon, the library was marked as "Yes", while if the library did not have the Web 2.0 icons, it will be marked as "No" (Refer to the Table 1). Web 2.0 icons in the library homepage were also tested to ensure all links were working links.

Based on the observation all of these public libraries, including the national Library, it is evident that they are using the Web 2.0 application, having at least one Web 2.0 application. Referring to Table 3, it shows that the National Library of Malaysia (PNM) has

actively adopted most of the Web 2.0 applications, 6 out of the 7 Web 2.0 applications in the list, excluding the Instant Messaging. Although the chat icon is available on the second link of PNM website, it is not owned or operated by PNM. The chat facility is provided and maintained by a third party of PNM, U-Pustaka. The Penang Public Library (PPAPP), uses 5 out of the 7 Web 2.0 applications, except for Wikis and RSS. The third highest usage of Web 2.0 applications is by the Negeri Sembilan Public Library (PPANS) and the Selangor Public Library (PPASL), both are using 4 different types of Web 2.0 applications. The Public Library of Kelantan, Public Library of Perak and Public Library of Sarawak are using 3 out of the 7 Web 2.0 applications. While, the Public Library of Johor (PPAJ), Public Library of Melaka (PPAM), Public Library of Perlis, Public Library of Sabah and Public Library of Terengganu, are only using 2 out of the 7 Web 2.0 applications. From the 14 Malaysian public libraries, Public Library of Kedah (PPAK) and Public Library of Pahang have the least number of Web 2.0 applications adopted.

WEB 2.0 APPLICATION PUBLIC LIBRARY COMMUNITY INSTANT PODCATS / SNS WIKIS Total MESSAGING **VODCAST** (FACEBOOK) PHOTO (FLICKR) 800 You Total $\boldsymbol{\Xi}$ flickr Chat 6 1 PNM Yes Yes Yes No Yes Yes Yes 5 2 PPAPP No Yes Yes Yes Yes Yes No 4 3 PPANS Yes No No Yes Yes No Yes Yes No 4 4 PPASL No Yes Yes No Yes 5 PPAKB Yes Yes No No No Yes No 3 PPANPK Yes No No Yes Yes No 6 No 3 7 **PPASK** No Yes No No Yes Yes No 2 No PPAJ No No 8 No Yes No Yes 2 No 9 **PPAM** No No No No Yes Yes 2 No PPANP No No Yes No No Yes 2 11 PPASB No No No No Yes No Yes PPATG No No No Yes No 2 12 No Yes No 1 No No 13 PPAK No No No Yes No 1 14 PPAPH No No No No No 3 Total 3 9 4 1 13

Table 3: List of Web 2.0 Application used by Malaysian Public Libraries

What are the Web 2.0 applications adopted by Public libraries in Malaysia?

Figure 1 shows the type of Web 2.0 applications adopted by the Malaysian public libraries. According to this data, the use of social networking site applications, Facebook, is the highest among the 13 public libraries. This was followed by the use of RSS application (9), Podcast / Vodcast applications (7), blog applications (4), Wikis (3) and Photo sharing (1).

Main Purpose and Characteristic of Web 2.0 Application Adoption

Overall, from the web analysis of each of the applications in each library portal at random, showed (Table 3) that the highest use of this application aims to provide information on library activities, announcements and any matters related to the library (33%). In addition to that, the main purpose is also to share a collection of photos between libraries and users (19%). Twelve libraries have adopted this application through a social network site, Facebook and 7 libraries adopt it using photo sharing, Flickr. Furthermore, 18% of the libraries use Web 2.0 tools to share general information related to public library or other matters that are appropriate for user information. From this data, it can be established

that three libraries are using Wiki, seven libraries are using RSS, three libraries using blogs and five libraries are using Youtube.

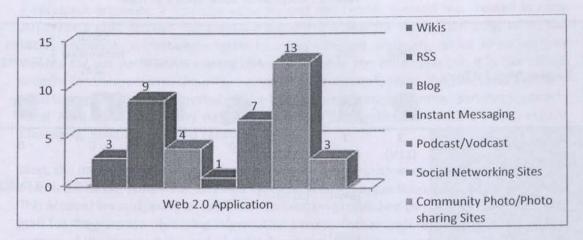


Figure 1: Web 2.0 Application Use

It is evident that 16% of the libraries are using this Web 2.0 tool for disseminating information such as official government circulars (*Pekeliling*), current issues, tenders, Minister's speeches, a collection of traditional Malay music, MoUs, videos, etc. The Web 2.0 tool used for this purposes consist of Wikis (3 libraries), RSS (5 libraries), Blogs (2 libraries), Instant Messaging (1 libraries), Podcat / Vodcast (5 libraries). The fifth highest usage of Web 2.0 tools among Malaysian public libraries is to give advice and reference services to the user (17%). Of these, four libraries are using Facebook, 2 libraries are using Instant Messaging and 1 library is using Wiki.

Five libraries have adopted the RSS application to promote their new books /new journal collection to their users. Only 1% of libraries are using Web 2.0 tools for the purpose of publicising book reviews and discussions (via Youtube), library orientation videos (via Youtube), and library resource guidance (via Instant Messaging). None of the libraries use the Web 2.0 tools for library instruction.

Development and Service Offering Of Web 2.0 Applications: Views from Librarians

The development and service offerings of Web 2.0 applications among public (state) libraries in Malaysia have been slow and began in 2008 even though these Web 2.0 applications have been around since 2004. From the interviews, it was ascertained that most of the public libraries in Malaysia begun experimenting with Web 2.0 application in the year 2009 (Terengganu, Sabah, National Library, Sarawak, Johor, Perlis.) While Selangor, Pahang, and Penang began in 2010, Negeri Sembilan is the earliest, having started in 2008 and the rest of the public libraries have only developed the Web 2.0 in 2011. From interviews, two main issues of the finding were identified as (i) background on the adoption of Web 2.0 application and (ii) main purpose for adopting this application.

Table 3: Purpose of using Web 2.0 Tool

No	Purpose /Web 2.0 Tools	Wikis	RSS	Blogs	Instant Messaging	Podcat / Vodcast	Social Networking Sites	Photo Sharing
		2			9		M B	OQ'
1	General News	3 (21%)	7 (50%)	3 (21%)	0	5 (36%)	0	0
2	Library News, Announcement and Event	0	9 (64%)	3 (21%)	0	6 (42%)	12 (86%)	3 (21%)
3	New books/journal	0	5 (36%)	0	0	0	0	0
4	Book review and Discussion	0	0	0	0	1 (7%)	0	0
5	Searching Skill	0	0	0	0	0	0	0
6	Advice and Reference services	1 (7%)	0	0	2 (14%)	0	4 (28%)	0
7	Library orientation	0	0	0	0	1 (7%)	0	0
8	Sharing Photo	0	0	0	0	0	12 (86%)	7 (50%)
9	Resources Guidance	0	0	0	1 (7%)	0	0	0
10	Others	3 (21%)	5 (36%)	2 (14%)	1 (7%)	5 (36%)	0	0

1) Adoption of Web 2.0 Application

An interesting outcome of the interviews was that through the content analysis of public library websites revealed some evidence of adoption, some important findings contradict findings from the interview. According to the content analysis, it is show that National Library of Malaysia is the most active library in providing Web 2.0 application for their user. Most of the Web 2.0 applications examined in this study are provide by PNM except for Instant Messaging. However, in searching to the second link of PNM portal - U-Pustaka, there is a facility for chatting (Chat with Your expert). Unfortunately, it was not functioning. Through the interview, the IT officer of PNM mentioned that U-Pustaka portal is not created and maintained by PNM, but maintained by a third party hired by the central government. The officer mentioned that the first development of Web 2.0 application at National Library of Malaysia is a Blog. However, there is a mistake in the use of the blog icon, the library used the Wikis icon instead. It was confusing to the researcher when searching the Wiki but it was linked to the Library blog. The blog also does not use the official name of PNM, instead it is uses the PNM Director's initials. As mentioned by the interviewee, "the Director likes to write library news, activities, events, speech and so on related to the National Library in the blog. So the management look upon it as a good practise to link the blog in the library portal. Now, the blog is maintained by the Corporate Unit".

While from the interview with IT officer of Public Library of Penang, it was found that the library began adopting Web 2.0 with a blog account on June 2010. Later 2 Flickr accounts, 2 Facebook accounts, 2 YouTube account, and one twitter account was created in early 2011. For a blog account, for the time being it is a blog for library staff only. While the Flickr, Facebook, and Youtube each had two different accounts, which is an account created for the partnership among library staff while the other account, it is the official account for library users. The officer mentioned "Facebook, Flickr, YouTube, and Twitter", all of this application is suggested by the library users through customer services feedback. As at April 2012, the library has 5 type of Web 2.0 application which is Flickr, Instant Messaging, YouTube, RSS and Facebook.

Next, the interview with the IT officer of *Perbadanan Perpustakaan Awam Selangor* (PPAS) revealed that the library has only two types of Web 2.0 application, Facebook and Twitter. This account was originally an unofficial declaration established by the photographic library staff for the purpose of sharing information between other staff. But after the rebranding process of the library at the end of 2010, Facebook and Twitter become the official account for all users. While for the RSS, it is an application from Joomla software. Through the content analysis (second analysis) on April 2012, the library has 4 type of Web 2.0 application which is Blog, YouTube, RSS and Facebook.

The IT officer of *Pustaka Sarawak* reported that the library develop Facebook applications at the end of 2009, while the Twitter account was set up in mid-2010. For this application development, Pustaka Sarawak set up a committee which is responsible for updating, maintaining, promoting and reporting on all activities carried out via these applications. This committee operates under the Knowledge Management Unit under the supervision of Community Networking Technology. The members of this community consists of at least one representative of each department in the Pustaka Sarawak. Members are selected based on the active member using the web applications to assist in making the promotion of Pustaka Sarawak or giving advice to the user. As at April 2012, the library has 4 types of Web 2.0 application which are Webcast (Podcast/vodcast), Twitter, RSS and Facebook.

The interesting facts found from the interview with the IT officer of Perbadanan Perpustakaan Awam Terengganu, revealed that the library does not provide any Web 2.0 application for their user even though the researcher found there is a Facebook account under the name of PPATG available via the library website and also RSS application in the library portal. The officer clarified that the Facebook account that exists now is not an official library account because it is created by one of the library staff on his own initiative. However, the library has an official Facebook account, restricted for staff only. The officer also mentioned that the library is now developing a new portal where it has RSS and disabled facilities.

2) Purpose for Web 2.0 Adoption

i) Directive from the government (state government / government agencies)

Most of the interviewees stated that the development of Web 2.0 applications are built upon the directive issued by the government, whether it is the federal government, state governments or government bodies such as the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) and the Multimedia Development Corporation (MDeC). The IT officer in Kelantan Public library informed, "facebook application was

started based on a directive from MAMPU...all government agencies need to have a social media network...so that all announcements can be done easily". The Malacca Public Library, IT officer mention that "Melaka state government has urged all government departments to have social networking sites like Facebook for closer ties with the community. It is also from the Web 2.0 application such Facebook, it is to facilitate the library to a wider range of promotions, fast and most importantly it is free".

In contrast, at the Pahang Public Library, the development of Web 2.0 application such as Facebook and Blog is because of the criteria set by MDeC to assess the government agencies portal. In the assessment, if a governmental agencies portal has links to social media, it will be an advantage. Therefore, it encouraged the Pahang Public Library to develop social media applications like Facebook to their user as one of the service. This was also the case at the Selangor Public Library and Johor Public Library. The Selangor Public Library IT officer stated "I am monitoring the activities in Facebook, and my staff will monitor the technical side only. Through this approach, the information given and received is updated every day so that the delivery of quality information is better and people will not dispute the Selangor Public Library Facebook. Through this approach also, the Selangor Public Library web portal including Facebook have received 4 stars award from MDeC and won the Innovation Web site award from MAMPU". It seems that the focus is on winning awards rather than focussing on the needs of library users or the society at large.

ii) Facilitate the promotion and dissemination of information and library activities

The use of social media in disseminating information or even promoting activities is very quick, easy, cheap and simple. This fact is recognized through interviews with all public libraries representatives in Malaysia. According to the Public Library Kelantan officer, "these applications facilitate the making of a library for communication or promote library activities, event or any information in faster and efficient way. By using this application, the cost of promotion and spreading information is minimal rather than using the conventional medium such as making banners, bunting, advertise in newspapers or radio and so on". At the Malacca Public Library, the officer mentioned "Web 2.0 also facilitates the library to a wider range of promotions, fast and most importantly it is free". This statement was also supported by the participant from the National Library of Malaysia. According to the officer, "the main objective and purpose of using this application is to promote library activities. This application can be considered as a free platform especially for promotion, and everyone nowadays are using this application. If the libraries use a promotion method such as advertisement in newspapers and TV, it need a big cost". Moreover, the interviewee from Selangor Public Library also mentioned, "at the present time PPAS has conducted many activities and programs implemented on an ad-hoc basis. With this application, it makes it easier for PPAS to broadcast and promote the ad-hoc programme immediately and directly to customers and it also saves time and operational costs rather than using the conventional method." Perbadanan Perpustakaan Awam Sabah and Perbadanan Perpustakaan Awam Perlis also stated that the purpose of developing Web 2.0 application is to provide and disseminate library information, news and events for informing library users.

It was slightly different at the Penang Public Library, they used this application not only to promote or disseminate library news but also help deliver as many current issues and programs conducted in the vicinity of Penang or promote other government activities/events. They obtain this information through the state government calendar

activities and government-related bodies and organizations around Penang. However for the Terengganu Public Library, it does not have a Web 2.0 application for use to dissemination information, activities or any other information about the library. This library uses a different approach, through the SMS service for the purpose of disseminating information to their users. The libraries also now planning to inform the user about late returning or any membership information through this SMS service. At present the library could spread SMS to more than 48,000 users at one time. By using this method, the spread of library information can be implemented more easily, quickly, effectively and at a low cost. For example, in the case of overdue of books, the library can SMS their customer at the rate of RM0.04 cents per transaction, and the process is easier and faster instead of give a reminder letter.

iii) Socializing and networking purpose

Web 2.0 offers the latest trend in forming new relationships (networking) and also on socializing online. According to the Kelantan Public Library officer, "this application is also more friendly and well-known to the user especially among teenager, and information spreading will be more wide and quick. For example, when spreading the Library post on Facebook, then all customers who have become members will get to see that information/news and it can also be seen by their friends, through the Facebook wall. If their friends click on the information/news, so indirectly it will be displayed on the wall and can be seen next by their peers". This process will be repeated and facilitate the acceptance of such information to the user and it can generate a new networking between library, existing user and new user. In addition, the officer at the National Library of Malaysia mentioned "hopefully by using this application it can attract more users to join/participate in the libraries activities, borrow book etc."

While for the Perbadanan Perpustakaan Awam Negeri Sembilan, they use the application to form an effective relationship in the dissemination of information between users and library. As well as Perbadananan Perpustakaan Awam Selangor, as mentioned by the officer, "the social media can create a two-way communication between libraries and users...through this network also, the user is free to give suggestions easily, share their ideas, express opinions and give comment". While for Pustaka Sarawak, according to the officer, "the main objective of developing this application is to reach out to the community of users and society at Sarawak, creating a network or two-way communication between the library and the community and also makes promotion or dissemination of information or activities to be organized or are being organized." In addition, the officer from Johor Public Library stated "the main purpose of the development of this application is to realize a communication network that is easier between the library and users. It was also aimed to have closer relations with library users".

Librarians clearly understand the role of social media to foster a relationship between the public library users and librarians but there is a lack of serious undertaking of applications that focus on the users based on specific needs of the users and services created based on their requirements.

CONCLUSION

Although, Web 2.0 applications are widely accepted and used by society today for the purpose of communication or exchange of information and knowledge, its usage is low among public library in Malaysia. As a result of the investigation of 14 public library Web sites in Malaysia, it is revealed that the average library has only one or two Web 2.0 applications and they are still in their basic development stage and not consistently updated. The most popular applications used are Facebook and RSS. Similarly, from the findings through interviews conducted with participants from the public libraries, it can be concluded that most of the libraries using this application just follow the trend popularity of these applications without having clear guidelines for developing and maintaining these applications account with the correct procedure. Conversations with librarians revealed that the main purpose of Web 2.0 application development, especially Facebook, is for promotional purposes and to form two-way communication between user and libraries, but content analysis of the facebook posts do not indicate so. There is a library that takes days to update their account and also there are some libraries that do not respond to queries from users. Libraries should play a proper role in providing quality services when offering new services. Use of Web 2.0 applications is one of the most popular trends at this time. Malaysian public libraries need to be more consistent in updating each of the applications developed and fully exploit the intelligent functions that are available in each of these Web 2.0 applications. The public libraries should also conduct user requirement studies to suit the Web 2.0 applications to fulfill user needs and not be subjected to other external factors.

REFERENCES

- A.R., Riza Ayu and Abrizah, A. 2011. Do You Facebook? Usage and Applications of Facebook Page among Academic Libraries in Malaysia. *The International Information and Library Review*, Vol.43, no.4: 239–249
- Breeding, M. 2007. We need to go beyond Web 2.0. *Computers in Libraries*, Vol.27 no.5: 22-26.
- Chad, M. and Miller, P. 2005. "Do libraries matter?: The rise of library 2.0". Available at: www.talis.com/downloads/white papers/DoLibrariesMatter.pdf
- Chua, A. Y. K., and Goh, D. H. 2010. A study of Web 2.0 applications in library websites. *Library and Information Science Research*, Vol.32 no.3: 203-211.
- Curran, K., Murray, M. and Christian, M. 2007. Taking the information to the public through Library 2.0. *Library Hi Tech*, Vol.25 no.2: 288-297.
- Danyaro et.al. 2010. An Evaluation of the Usage of Web 2.0 among Tertiary Level Students in Malaysia. *Information Technology (ITSim)*, Vol.1: 1-6.
- Eldon, E. 2008. 2008 Growth Puts Facebook In Better Position to Make Money.

 VentureBeat (San Francisco). Available at

 :http://venturebeat.com/2008/12/18/2008-growth-puts-facebook-in-better-position-to-make-money/
- Frederick, N., and Jia, M. 2011. Library 2.0 or Library III: returning to leadership. *Library Management*, Vol. 32 no.1: 85-97
- Gosling, Maryanne, Harper, Glenn, and McLean, Michelle. 2009. Public library 2.0: some

- Australian experiences. The Electronic Library. Vol.27 no.5:846-855
- Han, Zhipingand Liu, YanQuan. 2010. Web 2.0 applications in top Chinese university libraries. Library Hi Tech, Vol.28 no.1: 41 62
- Harinarayana, N. S., and Raju, N. V. (2010). Web 2.0 features in university library web sites. *The Electronic Library*, Vol.28 no.1: 69-88.
- Kim, Y. and Abbas, J. 2010. Adoption of Library 2.0 functionalities by academic libraries and users: a knowledge management perspective. *The Journal of Academic Librarianship*, Vol.36 no.3: 211-218
- Kim, H., Isto, H., Maria, K.B., and Gunilla, W. 2009. What is Library 2.0? *Journal of Documentation*, Vol.65 no.4: 668-681.
- Liu, S. 2008. Engaging users: The future of academic library websites. *College and Research Libraries*, Vol.69 no.1, 6–27.
- Linh, N.C. 2008. A survey of the application of Web 2.0 in Australasian university libraries. *Library Hi Tech*, Vol.26 no.4: 630-653.
- Malaysia Ranked No. 1 in Social Networking. 2010. Malaysian Broadband Overview.

 Available at http://www.malaysianbroadband.info/malaysia-ranked-no-1-in-social-networking/
- Mohd Hafiz, Z., Jason, W., and Sylvia, L. E. 2010. Investigating the use of Web 2.0 technology by Malaysian students. *Multicultural Education and Technology Journal*, Vol.4 no.1: 17-29.
- Nesta, F. and Mi, Jia 2011. Library 2.0 or Library III: returning to leadership. *Library Management*, Vol.2 no.1/2: 85 97
- Nguyen, L. 2008. A survey of the application of Web 2.0 in Australasian university libraries. *Library Hi Tech*, Vol.26 no.4: 630-653.
- O'Reilly, T. 2005. What is Web 2.0 design patterns and business models for the next generation of software. Available at: http://oreilly.com/web2/archive/what-is-web-20.html
- O'Reilly, T. 2007. What is Web 2.0: Design patterns and business models for the next generation of software. *Communications and Strategies*, Vol. 65: 17–37.
- Paroutis, S., and Al Saleh, A. 2009. Determinants of knowledge sharing using Web 2.0 technologies. *Journal of Knowledge Management*, Vol.13 no.4: 52 63
- Rafidah, A. A., Zuraidah and Ruzita, R. 2011. The implications of library 2.0 tools in Malaysian academic libraries towards reference. *Proceedings of the Asia-Pacific Conference On Library and Information Education and Practice*, 22-24 June 2011, Putrajaya, Malaysia. Asia Pacific Conference Library and Information Education and Practice (p.579-588)
- Secker, J. 2008. Case study 5: Libraries and facebook. Libraries and Social Software in Education. Available at: http://clt.lse.ac.uk/Projects/Case Study Five report.Pdf
- Serantes , L,C. 2009. Untangling the relationship between libraries, young adults and Web 2.0: The necessity of a critical perspective. *Library Review*, Vol.58 no.3: 237 251.
- Socialbakers.com. 2012. Malaysia Facebook statistics. Available at: http://www.socialbakers.com/facebook-statistics/malaysia
- Solis, B., and Thomas, J.. 2009. Conversation Prism: The Language of Human Connections is International. Available at : http://www.briansolis.com/2009/01/conversation-prism-language-of-human/
- Valenza, J. K. 2007. Discovering a descriptive taxonomy of attributes of exemplary school library Websites. Denton, University of North Texas. ProQuest Dissertations and Theses. Available at:
 - http://search.proquest.com.ezaccess.library.uitm.edu.my/docview/304830119?accountid=42518.

Mohd Ismail, A. and Kiran, K.

- Wikipedia. 2007c. Library 2.0 meme map. Available at : http://en.wikipedia.org/wiki/Image:L2meme2.gif.
- Xu, C. 2007. The academic library meets Web 2.0: applications and implications. Available at:
- http://eprints.rclis.org/12108/1/The Academic Library Meets Web 2.0 Applications%26 Implications.pdf
- Xu, C., Ouyang, F. and Chu, H. 2009. The academic library meets Web 2.0: applications and implications. *Journal of Academic Librarianship*, Vol.35 no.4: 324-31.

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