

The Implications of Library 2.0 Tools in Malaysian Academic Libraries towards Reference Services

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ABSTRACT

A library 2.0 application is an adaptation of Web 2.0 into a library environment to strategically adopt new technology in enhancing the role of libraries. Usage of Library 2.0 tools is just recently present in Malaysian academic libraries. In this paper, the authors attempt to study the implications of implementing Library 2.0 in Malaysian academic libraries. The study is about the implications brought on by e Library 2.0 in Malaysian academic libraries. The purpose of this research is to identify the current trends of the Library 2.0 tools in Malaysian academic libraries towards reference services. The paper attempts to determine the use and the implications of Library 2.0 in reference services in the Malaysian academic libraries. The study covers six research questions including, Which academic libraries fully utilized Library 2.0 tools?, Which Library 2.0 tools are highly used by the academic libraries in Malaysia?, What is the usage statistics of Library 2.0 tools?, What are the implications of Library 2.0 tools in the Malaysian academic libraries?, Which Library 2.0 tools are appropriate for reference services in the Malaysian academic libraries?, and How does Library 2.0 tools assist reference services?. The study used the qualitative method whereby the research performed two approaches: website observation of 15 Malaysian academic library websites and semi-structured interview with five librarians from different academic libraries. The results indicated that *Facebook* is the most popular with 9 of 15 academic libraries in Malaysia had used this application. Most of the academic libraries used Library 2.0 for the purpose of increasing the interaction with library users in informal ways. Findings from the research are useful for librarians and researchers in studying the usage of Library 2.0 in Malaysia and the benefits gained by the libraries.

Keywords: Library 2.0; Reference Services; Social networks; Academic libraries; Malaysia

INTRODUCTION

Library 2.0 is a new application in the library world. It involves in information work in libraries including information acquisition; information dissemination; information organization; and information sharing (Chua & Goh, 2010). The term Library 2.0 was introduced by Michael Casey on his LibraryCrunch blog in 2005. The Library 2.0 term make use of Web 2.0 and business 2.0 terms. In defining Library 2.0, Manness (2006) described Library 2.0 as the application of interactive, collaborative, and multimedia web-based technologies to web-based library services and collections. Traditionally, patrons are physically drawn to the library for services and information but with the interactivity capabilities of Library 2.0 tools, the library is brought to the patrons through their laptops or mobile phones. Library 2.0 tools not only helped libraries in promoting their services but librarians are now able to provide reference services for a wider Library community. It is a user-centered tool, able to address to the larger masses and serves individual needs at the same time. Some tools used in providing reference services are Instant messaging (IM), which allows real-time communication between librarians and patrons (Desai & Graves, 2006; Hvass & Myer, 2008; Nielsen, 2009); social networking platform sites such as Facebook, Twitter and MySpace to enhance the virtual Library community (Steiner, 2009; Fields, 2010); and blogs which encourage creative writing either from the library staff or the users (Pomerantz & Stutzman, 2006). Academic libraries are now making their existence more visible to the patrons by integrating Library 2.0 and penetrating all generations especially the new users, making services available and reachable anytime and anywhere.

This study attempts to identify the current usage of the Library 2.0 tools in reference services in the Malaysian academic libraries. It particularly determines the use and the implications of Library 2.0 tools in the Malaysian academic libraries and how these tools constitute in enhancing reference services in academic libraries. Currently, Web 2.0 applications are widely used in Malaysia especially the social networking services. Based on the usage statistics by Burcher (2010) on the use of Facebook, the total of Malaysian users were 9,544,580 in 31st December 2010 compared to 7,317,520 on the 1st July 2010. The Malaysian board overview reported that by October 2010, Malaysians are the heaviest users of SNS with 9 hours per week compared to Russians with 8.1 hours and Turkish people with 7.7 hours per week. There are three objectives in this study:

1. To identify the use of Library 2.0 tools and its implications in Malaysian academic libraries.
2. To study on the use of Library 2.0 tools in enhancing library services.
3. To justify the benefits of Library 2.0 tools in serving quality reference services.

This study aims to answer six research questions:

- i. Which academic libraries fully utilized Library 2.0 tools?
- ii. Which Library 2.0 tools are highly used by the academic libraries in Malaysia?
- iii. What is the usage statistic of Library 2.0 tools?
- iv. What are the implications of Library 2.0 tools in Malaysian academic libraries?
- v. Which Library 2.0 tools are appropriate for reference services in Malaysian academic libraries?
- vi. How Library 2.0 tools assist in reference services?

LITERATURE REVIEW

There are studies on the usage of Library 2.0 tools in academic libraries including on the Instant Messaging (IM) and Social Networking Services. Barry, Bedoya, Groom and Petterson (2010) in a survey of 130 individual respondents of UK academic libraries, stated that 32 academic libraries are currently offering virtual reference services with seven of those offered on trial. Majority or 70 institutions never offer any virtual reference services but are considering the services. IM is the tool used to offer virtual reference services. Meanwhile, Hvass and Myer (2008) conducted a research on the used of IM in reference services. The research was based on case study which 194 chat recorded at the University of Teesside in the UK. From the research, one the advantage of chat reference services is it enables patrons to report anonymously. Desai and Grave (2006) studied on the use of Morris Messenger, an IM reference service. Transcript analysis was done for seven weeks during spring semester 2005 at the Morris Library, Southern Illinois University Carbondale. A total of 169 eligible transcripts were analyzed. Majority of the transcript shows that librarian provided instruction with or without request by the patron. A survey was done to support the transcript analysis which involved 50 respondents. 70 percent of respondents heavily used the chat media and 98 percent indicated that they would use the Morris Messenger again. Nevertheless, Barratt, Acheson and Luken (2010) in their research, during spring semester 2009 at the Miller Learning Centre (MLC), University of Georgia tested several reference models to explore new ways of providing research support to MLC patron. From the research, MLC received 1,343 questions through chat reference and 2,970 walk-up questions through reference services desk. In a survey conducted by MLC to assess patron use of MLC services and resources, a total of 634 survey returned shows that chat reference services is used far more heavily than in-person reference services.

Scale (2008) in his research exploring the social search, evaluated the performance of Facebook as a social search engine. From the findings, it is found that participation in Facebook may result in the before-request information delivery – where information is disseminated

through daily communication before a question is prompted. The research also showed that users use Facebook to seek for information and answers. Other than that, Epperson and Leffler (2009) conducted a web survey focusing on four software programs; Facebook, MySpace, Instant Messaging (IM), and Second Life. The survey was done at the University of Northern Colorado and Denver campus of Johnson and Wales University. From the findings, a total 60 viable responses were retrieved. Based on the findings, 50 over 60 users used Facebook, while 35 over 60 users used MySpace, and 34 users used IM. Meanwhile, Park (2010) conducted a study which aimed to explore the usage of social networking services (SNS) by three types of users at Yonsei University in Seoul Korea. The study used semi-structured and open-ended interviews conducted with undergraduates, graduates, and faculty members. Interviews were conducted on June 2008. The interviewees were selected from the College of Liberals Arts, the College of Business Administration, and the College of Sciences. The findings indicated that undergraduate and graduates students were the active users of SNS. Meanwhile, faculty members did not indicate any interest in using the SNS.

METHODOLOGY

In this study, observation and interview were used. Observation was made on the usage of Library 2.0 tools on academic libraries website. The similar approached used by Shoniwa and Hall (2007) when they conducted a study on the experience of UK academic librarian who adopted Library 2.0. The study was based on three data collection approaches used which are, an audit of university library web pages, web survey, and follow-up interviews. The findings show that RSS and blogs are mostly used. Interactions on these tools were recorded. The observation made was identified from the list of selected academic libraries, the numbers of academic libraries in Malaysia that applied Library 2.0. The interviews were then conducted with five of the 15 academic libraries in Malaysia used for this study. The selection was based on the high usage of Library 2.0 tools by the variability of Library 2.0 tools, i.e. Facebook, blogs, RSS feeds, and Podcasts, The lists (see Table 1) of ten public universities in this study were retrieved from the Ministry of Higher Education in Malaysia website (http://www.portal.mohe.gov.my/portal/page/portal/ExtPortal/MOHE_MAIN_PAGE/Information/LIST_OF_IPTA) and five of the private universities were selected through web searching.

Table 1: List of Malaysian Academic Libraries

| University | Library | URL Address |
|--|---|---|
| Universiti Sains Malaysia (USM) | Universiti Sains Malaysia Library | http://www.lib.usm.my/equip-usm/custom/home.jsp |
| Universiti Malaya (UM) | Perpustakaan Universiti Malaya | http://www.umlib.um.edu.my/ |
| Universiti Kebangsaan Malaysia (UKM) | Perpustakaan Tun Sri Lanang | http://www.ukm.my/library/ |
| Universiti Putra Malaysia (UPM) | Perpustakaan Sultan Abdul Samad | http://www.lib.upm.edu.my/ |
| Universiti Teknologi Malaysia (UTM) | Perpustakaan Sultanah Zanariah | http://portal.psz.utm.my/psz/ |
| Universiti Malaysia Sabah (UMS) | Perpustakaan Universiti Malaysia Sabah | http://www.ums.edu.my/library/mukadepan.html |
| Universiti Utara Malaysia (UUM) | Perpustakaan Sultanah Bahiyah | http://cmslib.uum.edu.my/new/ |
| Universiti Pendidikan Sultan Idris (UPSI) | Perpustakaan Tuanku Bainun | http://pustaka.upsi.edu.my/web/guest/home |
| Universiti Kuala Lumpur (UniKL) | University Kuala Lumpur Library and Resource Centre | http://library.unikl.edu.my/equip-unikl/custom/home.jsp |
| Universiti Industri Selangor (UNISEL) | University Industri Selangor Library | http://library.unisel.edu.my/equip-unisel/custom/home.jsp |

| | | |
|---|---|---|
| Multimedia Universiti (MMU) | Siti Hasmah Digital Library | http://vlib.mmu.edu.my/SHDL/Index.php |
| Open Universiti Malaysia (OUM) | Tan Sri Dr. Abdullah Sanusi Digital Library | http://iportal.oum.edu.my/ |
| Universiti Tun Abdul Razak (UNITAR) | University Tun Abdul Razak Library | http://elib.unirazak.edu.my/ |
| Universiti Tunku Abdul Rahman (UTAR) | UTAR Library | http://www.utar.edu.my/contentPage1.jsp?catid=13&contentid=232 |
| International Islamic University Malaysia (IIUM) | Library International Islamic University Malaysia | http://lib.iium.edu.my/ |

RESULTS OF OBSERVATION

The researchers observed all 15 Malaysian academic libraries websites in order to record at least one Library tool in library website. Most of the library websites listed provides Library 2.0 tools for their patrons. Based on the observation it has been discovered that twelve over fifteen academic libraries used at least one Library 2.0 tool. Meanwhile, three academic libraries were not adopting any. Referring to Figure 1, it shows that Tan Sri Dr. Abdullah Sanusi Digital Library (TSDASDL), OUM is one of the private university academic libraries which fully utilized five Library 2.0 tools in their library websites, such as Facebook and blogs. Perpustakaan Sultanah Zanariah (PSZ), UTM and University of Malaya (UM) Library, are equally similar on the usage of Library 2.0 with four tools. Meanwhile, Perpustakaan Sultanah Bahiyah (PSB), UUM and University Kuala Lumpur (UniKL) Library are using three Library 2.0 tools in their academic library. However, Perpustakaan Tun Sri Lanang (PTSL), UKM; Perpustakaan Universiti Malaysia Sabah (PUMS), UMS and UTAR Library, do not adopt any of the Library 2.0 tools.

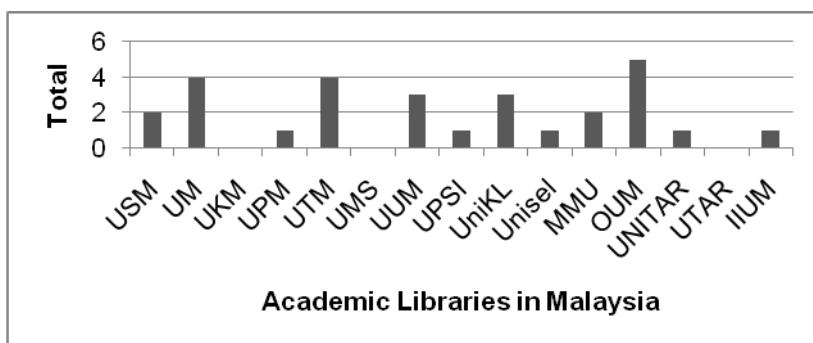


Figure 1: The Usage of Library 2.0 by Fifteen Malaysian Academic Libraries

Table 2 indicates the types of Library 2.0 tools used in Malaysian academic libraries. TSDASDL, OUM leads with the usage of five Library 2.0 tools, Real Simple Syndication (RSS), blogs, podcasting, Facebook and Youtube. Meanwhile, the UM Library used RSS, blogs, Facebook and Delicious in their library website. On the other hand, PSZ UTM used four Library 2.0 tools in their library websites; RSS, blog, Instant Messaging (IM), wikis, and Facebook. Out of fifteen academic libraries, five were chosen based on their high utilization of Library 2.0 tools (see Figure 1). Facebook was also chosen as it has the highest number of users among Malaysian academic libraries with 9 of 15 libraries. The researchers conducted an observation on the usage of Facebook in a range of period from November 2010 to the current date. Based on the observation, academic libraries used Facebook as a medium in socializing with their users as well as disseminating information on the library activities through formal announcements and daily communication. Looking at its function, Facebook seems to be an ideal platform as it is a social networking services. The observation observed different types of information and statements provided by academic libraries. These information and statements

are categorized accordingly; adopted from Ryan (2008), with additional categories added (Refer to Table 3).

Table 2: The usage of Library 2.0 Tools in Malaysian Academic Libraries

| No. | Academic Libraries | Library 2.0 Tools | | | | | | | |
|-----|--------------------|-------------------|------|-----|-------------|-------|-----------------|-------------------------|--------------------------------|
| | | RSS | Blog | IM | Pod-casting | WIKIs | SNS (Face-book) | Video Sharing (Youtube) | Social Bookmarking (Delicious) |
| 1 | USM | | | Yes | | | Yes | | |
| 2 | UM | Yes | Yes | | | | Yes | | Yes |
| 3 | UPM | | | | | | Yes | | |
| 4 | UTM | Yes | Yes | Yes | | Yes | Yes | | |
| 5 | UUM | | Yes | Yes | | | Yes | | |
| 6 | UPSI | | Yes | | | | | | |
| 7 | UniKL | Yes | Yes | | | | Yes | | |
| 8 | Unisel | | | | | | Yes | | |
| 9 | MMU | Yes | | Yes | | | | | |
| 10 | OUM | Yes | Yes | | Yes | | Yes | Yes | |
| 11 | UNITAR | | Yes | | | | | | |
| 12 | IIUM | | | | | | Yes | | |

Table 3: Type of Information or Statement Provided by the Academic Libraries

| No. | Category of Information | UM | UTM | UUM | UniKL | OUM | TOTAL |
|-----|---------------------------------------|----|-----|-----|-------|-----|-------|
| 1 | Activity | 2 | 0 | 1 | 4 | 8 | 15 |
| 2 | Announcement | 18 | 5 | 7 | 2 | 43 | 75 |
| 3 | Reference | 11 | 1 | 0 | 0 | 6 | 18 |
| 4 | Collection | 0 | 0 | 0 | 0 | 22 | 22 |
| 5 | Online Database | 3 | 0 | 0 | 1 | 1 | 5 |
| 6 | OPAC | 0 | 2 | 0 | 0 | 0 | 2 |
| 7 | Directional: Information Oriented | 17 | 1 | 4 | 2 | 4 | 28 |
| 8 | Technology | 8 | 0 | 0 | 0 | 1 | 9 |
| 9 | Directional: Non-Information Oriented | 12 | 0 | 6 | 0 | 5 | 23 |
| 10 | Look-up | 41 | 6 | 0 | 0 | 6 | 53 |

Table 3 shows the results of the observation on different categories of information and statements found in the Facebook page of the five academic libraries in the study. Based on the observation, announcement is the highest category with 75 posts within the observed period. Meanwhile, 28 posts were on information; 23 and 22 posts on non-information oriented and information on library collections. The highest five information gives by libraries are on announcement, directional information oriented, directional non-information oriented, collection and reference. The lowest three are information are on the technology, online database, and OPAC. Table 4 provides the example of real post in the Facebook being observed.

Table 4: The Example of Statement from Facebook Page

| No. | Category of Information | Example Statement |
|-----|---|---|
| 1 | Activity | <i>Library Roadshow -</i> |
| 2 | Announcement | <i>Library Closure in Conjunction With Thaipusam Public Holiday</i> |
| 3 | Reference | <i>Research, Writing, and Style Guides (MLA, APA, Chicago/Turabian, Harvard, CGOS, CBE)</i> |
| 4 | Collection | <i>Books on Business Presentations</i> |
| 5 | Online Database | <i>UniKL eResources Knowledge Acquisition (UeREKA)</i> |
| 6 | OPAC | <i>LESTAR! Welcome to the new library catalogue.</i> |
| 7 | Directional: Information Oriented | <i>Search bahan no hal - http://www.pendeta.um.edu.my/. Nak pinjam kena jadi ahli http://www.umlib.um.edu.my/scontents.asp?tid=23&cid=94&p=1&vs=en</i> |
| 8 | Technology | <i>You should be able to print the questions with a printer connection. Please check your PC settings.</i> |
| 9 | Directional: Non- Information Oriented | <i>Please go to the Information Skills Division</i> |
| 10 | Look-up | <i>Great Web 2.0 resources for students!</i> |

Table 5 indicates the categories of questions asked by users in the Facebook page. The result shows that research question is the most frequent question asked by users with 17 questions. Meanwhile, question on technology related to information-oriented is second with 11 followed with 10 questions on directional related to information oriented and 8 questions related to directional on non-information oriented. Based on the observation, UM Library users actively utilized the Facebook in terms of getting library assistance.

Table 5: Category of Question Asked by Users

| No. | Category of Question | UM | UTM | UUM | UniKL | OUM | TOTAL |
|-----|---------------------------------------|----|-----|-----|-------|-----|-------|
| 1 | Direction & machine: non-information | 3 | 0 | 1 | 0 | 1 | 5 |
| 2 | Directional: information-oriented | 3 | 0 | 1 | 2 | 4 | 10 |
| 3 | Technology: information-oriented | 6 | 0 | 0 | 0 | 5 | 11 |
| 4 | Research | 8 | 0 | 1 | 0 | 8 | 17 |
| 5 | Look-up | 20 | 0 | 0 | 0 | 4 | 4 |
| 6 | Database help | 7 | 0 | 5 | 0 | 1 | 13 |
| 7 | Catalog Search | 2 | 0 | 0 | 1 | 4 | 7 |
| 8 | Serials solutions | 0 | 0 | 1 | 0 | 0 | 1 |
| 9 | Directional: Non-Information Oriented | 1 | 0 | 5 | 0 | 2 | 8 |

RESULTS OF INTERVIEW

There were five academic libraries interviewed using semi-structured interview by the researchers in order to collect data on the information provided by libraries, types of questions asked by the patrons and the counter statistics on the usage of Library 2.0 tools. The interviewees were selected by their library usage on Library 2.0 tools (see Figure 1). The interview was conducted. The conversation language during the interview used the English language and mixed with the Malay language to provide a comfortable situation to the interviewee in expressing their facts and opinions. The interview was recorded into .wav format and kept as evidence. The transcription process highlighted only the important part that could answer the interview question and not verbatim. In that sense, it helped to correct mistaken impressions, and enabled to transcribe any short and highly pertinent answers (Gorman & Clayton, 2005). The records were then translated and transcribed using the English language.

The librarians involved in the interview sessions were involved directly with the Library 2.0 implementation in the selected academic libraries; UTM, UniKL, OUM, UUM, and UM.

With regard to the use of Library 2.0 tools in enhancing library services. The respondent responded are as follows, in term of the usage statistics of Library 2.0 tools it was found out that Facebook is the Library 2.0 tools that highly popularly used by all the academic libraries, However, not all the libraries have the usage statistics for the use of Facebook. There were also libraries that were concerned in keeping statistics for Library 2.0 tools i.e. blogs, and wiki used in library website. It can be seen as describe by Mr. Razib, Automation Librarian from PSZ, UTM, "*The Facebook fans from 15 Mac until November 2010 had increased to 1779 fans. Wikipedia (was) used by 5333 users; blogs received 1440 comments but only 611 comments displayed by PSZ, and (there were) 1071 registered users for chat online. Another Library 2.0 application is the chat online that only available for two hours, Monday to Friday from 3-5 pm*". Meanwhile, Mr. Khairul Anwar, Reference Librarian from, UniKL responded as, "*In January 2011, 10 enquire (were) received and there are 300 active users in UniKL Facebook library. However, UniKL did not take any statistic on the usage of Facebook.*" Nevertheless, Mr. Muhamad Hafiz, Senior Librarian from TSDASDL, OUM responded that library Facebook is highly used by their users. This is describes by "*On December 2010 there were 2272 monthly active users on TDSAS Library Facebook and there were 236 weekly visits by the users*". However, the situation are not the same in UUM library as Mr Salleh Hudin, Chief Librarian from, PSB, UUM stated that, "*Statistic on the usage of Library 2.0 tools does not apply in PSB library*".

In terms of the period that Library 2.0 tools were highly utilized by the users, it was found out that the open semester is the period that Library 2.0 were highly used by its users due to the dissemination of information on Library 2.0 in library skills class. This is as mentioned by the respondents, UTM library described, "*The highest users were during open semester period with most of users are female with 60-40 against male users*". Meanwhile, UniKL library stated that, "*the highest enquires (Facebook) is during the open semester and most of students are male with 70-30 over female students, meanwhile blog is more to one way channel*". . However, the situation is different in certain cases as in UUM library, "*exam week is the period that Facebook highly being used by users*".

In terms of the implications of Library 2.0 tools in Malaysian academic libraries. The librarians agreed that Library 2.0 gives positive impact on the academic libraries in Malaysia. Even though, there is no certain indicators in describing the effect of Library 2.0 tools to the library as the whole, but it is believed that somehow the Library 2.0 give positive impact in the library such as in two ways communication, library promotion, as well as reference services This can be seen by the interviewee responses, UTM library described that, "*The Library 2.0 is an option (for those) who are not confident to meet the librarians; for users (who are) not comfortable to have face-to-face interaction, and also for library to have two ways interaction. Online chat response to users enquires in real time and Facebook enquires also answers in just-in- time (manner) but there are also cases that library response (are) delayed however there are friends (who) helped in answering enquires*". Meanwhile, UniKL library stated that, "*Since using Library 2.0 last year (2010) there were campaigns on library books and online databases using Library 2.0. The Library 2.0 also can support distance learning. (In) the analysis on year 2009, the usage of reference collection increased almost 50% affecting from the used of Library 2.0*". However, TSDAS library mention that, "*There is no proof that relates Library 2.0 with the increased of collections*". And UUM library also mentioned that, "*There is no indicator for UUM library in assessing if the usage of library collection increased due to the usage of Library 2.0. There is no certain time for library in response to users' enquiries*". Meanwhile, Pn. Zanaria, Head of Information System from UM Library describe that, "*From the loan side it has increased. But, it cannot be sure (if) it is caused by the Library 2.0 or not. It is a combination of Library 2.0 plus library promotion, and Library 2.0 is one of the factors to the increasing loan*".

In terms of the response time to the users enquires through the Library 2.0 tools, the results revealed a balance in terms of entertaining the users enquires, i.e. to entertain users during office hours and to entertain users at any time. It can be seen from the respondents responses as follows. UTM library responded as, "*After the office hours, all enquires shall be answered on the next day during office hours*". Meanwhile, UniKL described their Library 2.0 tools operated as, "*In UniKL there is a standard for enquiry received for Facebook which is half*

hour during office hours. After office hours, enquires will be answered in the next morning at 8.30 a.m. (However), in some cases there are enquires answered after office hours". Meanwhile, TSDAS Digital Library entertain their users enquires even after office hours". TSDAS Digital Library requires that each librarian be alert with users enquires (at any time). The Library still response even after office hours". Meanwhile, UM Library described that, "...does not have any written policy to response for enquires but verbally library will response to enquiries by users at any time. There are six peoples responsible in answering users enquires. UM library also will be responsible in answering enquiries at home".

Meanwhile, in terms of the appropriateness of Library 2.0 tools for reference services in academic libraries, most of the academic libraries except UUM agreed that Library 2.0 is appropriate for reference services. The interviewees responded as follows: UTM described that, "The Library 2.0 is very good and appropriate for reference services in UTM library. Online chat became the most popular because reference question need instant answers, and Facebook is the number two. There are complaints from reference services staffs that there are lots of enquiries on chat online, this shows high demand from users". Meanwhile, UniKL library stated that, "Facebook became the number one for reference services purpose because of (current) trends in using Facebook". Nevertheless, TSDAS Digital Library adopted Library 2.0 to serve their distance learners, TSDAS has responded as, "Library 2.0 is appropriate for TSDAS Digital Library since OUM is an open and distance learning university which has students all over Malaysia and elsewhere." However, UUM library stated that, "The used of Library 2.0 is not so much compared to physical library, phone and email. The UUM Library has stopped using online chat because it cause website problem last year (2010)". However, UM library responded as, "The Library 2.0 is appropriate because by looking at users comments, there are users (who) asked to have extra references materials. So it is quite relevant. Facebook functions for instant approach and it received high comments but blog does not receive same response".

Lastly, in term of the used of Library 2.0 tools in assisting reference services. The respondent's perceptions toward the Library 2.0 tools in the reference services are positive. The UTM library responded as followed," "Library 2.0 really assisted reference services based on the high statistics. It is also a platform for knowledge sharing, and dissemination of information becomes easier". However, UniKL mentioned that, "Library 2.0 helps in reference services because it follows the trend. ... branch users can (also) ask questions to the Main Campus library. There are two popular information search questions provided by the library – (they) are on directional and specific search". However, TSDAS Digital Library stated that, "Library 2.0 assists in disseminating the information to OUM users and Library 2.0 brings library to users". However, UUM library mention that: "In UUM, Library 2.0 is not really a success". However, UM mention that: "Of course Library 2.0 can assist reference services because it could provide information in a faster way to users. The purpose of Library 2.0 is to give feedback to users immediately, give faster response and encourage more interaction with the users". Most of the types of information provided by the academic libraries and the type of question asked by users during the interviews are similar with data collected in the observation of Facebook by researchers.

DISCUSSIONS

The findings show that the academic libraries in Malaysia adopted Library 2.0 in assisting reference services. The Facebook became the most popular Library 2.0 tools used in Malaysian academic libraries compared to others tools. The function of Facebook as social networking services follows the current trends of users that use Facebook in their daily lives. Through the finding, it can be seen that the purpose of implementing Library 2.0 is to increase the interaction with users and provides another platform for users to reach the library. Although Facebook is highly preferred in providing reference services, however, more Malaysian academic libraries could find opportunities in using IM for reference services as implemented by a few since it provides real time communications with instant feedback from a reference librarian. However, the low usage of blogs might not be appropriate for reference services since a blog is seen as more of a one-way communication from the Library to users. Furthermore, users are using Facebook for faster communication and creating their own 'study group', rather than using blog for the same purpose. Looking from the perspective of the actual used of Library 2.0, most of

the libraries implement Facebook and the user statistics are increasing from time to time. As the Facebook used by the library as promotional tools as well as a platform in disseminating information (see Table 3). It is also become the medium in answering user enquiries (see Table 5). Therefore, the implications of Library 2.0 are impacted to library as well as library users. Library used as library promotional tools by gives information on library services meanwhile for the library users Library 2.0 providing them with virtual reference services. It is believed that Library 2.0 had contribute in the increasing in the usage of library collection, a further research need in studying on how far does the Library 2.0 gives impact in library collections. On the other hand, the active participation by the library as the moderator had impacted on the active users participations in the discussions. This is the good move that succeed in created two ways communication between library and users. The comments from the users can be used as the proof. However, the used of Facebook are more to socialize; library might want to consider the used of IM as implemented in UTM Library. It is directly used for the purpose of virtual reference services in real-time. However, there is also a library that experience less success in implementing Library 2.0, as experienced by UUM library. On the other hand, there is certain Library 2.0 such as library blog that is less successful compared to Facebook, as it is mostly used as one-way communication.

CONCLUSION

In conclusion, the usage of the Library 2.0 is increasingly seen as important in reaching out to a wider number of library users especially in providing reference services. This study is important in giving the current situation of Library 2.0 in Malaysian academic libraries, especially in terms of reference services. Clearly, Library 2.0 has changed the pattern of seeking behavior of library users, users especially students now have used Library 2.0 as the medium in searching for information. It also assists library in creating user-based services by approaching the users as well as develops two-way communication with library users. Based on the findings, Facebook is used highly by academic libraries and used for the several of reasons, such as reference services, promotional tools, as well as a medium in engaging users with the library. However, in terms of providing reference services, there is room for improvement. Even though academic libraries in Malaysia used Facebook in disseminating information to users, there is also a need to study the extent of information by the library via Facebook fulfill users' needs. Other than that, it is suggested that a study on the barriers or the problems as to why the other Library 2.0 tools such as library blogs, and IM are not as popular as Facebook in providing reference services. The feedback from the respondents show positive impact, and with lesser cost implications, the researchers believe that Library 2.0 is effective in increasing the library interests among users. Although the data collected is limited for three current months, the findings could be used to determine whether all Malaysian academic libraries should embark in the Library 2.0 or 3.0 journeys in the future. Further studies should also be carried out to determine the actual impact of Library 2.0 usage towards the increase of library usage and also information literacy skills.

REFERENCES

- Barratt, C. C., Acheson, P. & Luken, E. (2010). Reference models in the electronic library: The Miller Learning Center at the University of Georgia. *Reference Services Review*, 38(1), 44-56. Retrieved from <http://www.emeraldinsight.com.ezaccess.library.uitm.edu.my/>
- Barry, E., Bedoya, J. K., Groom, C., & Patterson, L. (2010). Virtual reference in UK academic libraries: The virtual enquiry project 2008-2009. *Library Review*, 59(1), 40-55. Retrieved from http://www.emeraldinsight.com.ezaccess.library.uitm.edu.my
- Burcher, N. (2010, July 2). *Facebook usage statistics by country - July 2010 compared to July 2009 and July 2008* [Web log post]. Retrieved from <http://www.nickburcher.com/2010/07/facebook-usage-statistics-by-country.html>
- Chua, A. Y. K., & Goh, D. H. (2010). A study of web 2.0 applications in library websites. *Library & Information Science Research*, 32, 203-211. Retrieved from <http://www.sciencedirect.com.ezaccess.library.uitm.edu.my/>

- Desai, C. M., & Graves, S. J. (2006). Instruction via Instant Messaging reference: what's happening?. *The Electronic Library*, 24 (2), 174-189. Retrieved from <http://www.emeraldinsight.com.ezaccess.library.uitm.edu.my/>
- Epperson, A. & Leffler, J. J. (2009). Social software programs: Student preferences of librarian use. *New Library World*, 110(7), 366-372. Retrieved from <http://www.emeraldinsight.com.ezaccess.library.uitm.edu.my/>
- Fields, E. (2010). A unique Twitter use for reference services. *Library Hi Tech News* No.6,14-15. Retrieved from <http://www.emeraldinsight.com.ezaccess.library.uitm.edu.my/>
- Hvass, A., & Myer, S. (2008). Can I help you? Implementing an IM service. *The Electronic Library*, 26(4), 530-544. Retrieved from <http://www.emeraldinsight.com.ezaccess.library.uitm.edu.my/>
- Maness, J. M. (2006). Library 2.0 theory: Web 2.0 and its implications for librarians. *Webology*,3(2). Retrieved from <http://www.webology.ir/2006/v3n2/a25.html?q=link:webology.ir/>
- Malaysia Ranked No. 1 in Social Networking. (2010, October 2). *Malaysian Broadband Overview*. Retrieved from <http://www.malaysianbroadband.info/malaysia-ranked-no-1-in-social-networking/>
- Nielsen, H. J. (2009). Library communication outside a library context: Instant messaging as library service. *New Library World*, 110,(5), 237-248. Retrieved from <http://www.emeraldinsight.com.ezaccess.library.uitm.edu.my/>
- Park, J.-H. (2010). Differences among university students and faculties in social networking site perception and use: Implication for academic library services. *The Electronic Library*, 28(3), 417-431. Retrieved from <http://www.emeraldinsight.com.ezaccess.library.uitm.edu.my/>
- Pomerantz, J., & Stutzman F. (2006). Collaborative reference work in the blogosphere. *Reference Services Review*, 34(2), 200-212. Retrieved from <http://www.emeraldinsight.com.ezaccess.library.uitm.edu.my/>
- Ryan, S. M. (2008). Reference transactions analysis: the cost-effectiveness of staffing a traditional academic reference desk. *The Journal of Academic Librarianship*, 34(5), 389-399. Retrieved from <http://www.emeraldinsight.com.ezaccess.library.uitm.edu.my/>
- Scale, M. S. (2008). Facebook as a social search engine and the implications for libraries in the twenty-first century. *Library Hi Tech*, 26(4), 540-556. Retrieved from <http://www.emeraldinsight.com.ezaccess.library.uitm.edu.my/>
- Shoniwa, P. & Hall, H. (2007). Library 2.0 and UK academic libraries: drivers and impacts. *New Review of Information Networking*,13(2), 69-79. Retrieved from <http://web.ebscohost.com/ehost>
- Steiner, H. (2009). Reference utility of social networking sites: Options and functionality. *Library Hi Tech News*, No.5, 4-6. Retrieved from <http://www.emeraldinsight.com.ezaccess.library.uitm.edu.my/>