Sustainability through Website Development: The Case of Public Libraries in Malaysia

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Abstract. With the introduction of the World Wide Web and graphical browsers in the 1990s the Internet has become widely accessible and many people have grabbed the idea of using it for their multifarious purposes and agenda The library website is the most important window and the gateway for interactivity with the publics. So much so that higher quality websites tend to exhibit high traffic pattern and are capable of attracting more links and thereby rendered those websites as highly visible.

The question of visibility and accessibility is therefore important for any type of websites and should be addressed painstakingly with the notion that sustainable development of the website may assist the library in reaching its goals. Through the development of quality websites libraries in Western countries are able to sustain their growth through generating income through charges, particularly for access to unique materials, making it attractive to sponsors or making it possible for third parties to deliver their own services based on website contents. It is the purpose of this paper to study on the question of visibility and accessibility of the websites of selected public libraries in Malaysia through the use of two major software, *Alexa* **and EvaAcess**.

Keywords : Accessibility, sustainability, public libraries, Malaysia, websites

1. Introduction

The public library development in Malaysia began only in the eighties. The number of public libraries grew rapidly during 2000 and it was reported that there were 1386 public libraries at the end of 2009 comprising 14 State Libraries, 1 regional library, 173 branch or district libraries, 27 town libraries, 82 mobile libraries and a total of **1,089** rural libraries. Rural libraries in Malaysia are agents of social restructuring as they provide learning and skill support to local communities in areas such as basic skills, family learning and education to the young. Most rural libraries are involved in reading campaign programs for young people such as storytelling and reading aloud. A Rural

Library Convention which was attended by about 1,200 participants from all the rural libraries in Malaysia was held in February 2009 (National Library of Malaysia, 2010). The mark increase in rural libraries is due to the fact that the Government has decided that each constituency of the elected member of Parliament will be provided with a rural library services.

One of the challenges that the public libraries have to face is on the issue of ability to operate their services independently. In other words the public libraries should be financially sustainable with the revenue inflow that could cover expenses and generate a surplus. If this is not possible its operation will slow down and eventually be forced to shut down. Although there are cases in Malaysia where a couple of rural libraries have to shut their doors because of financial insufficiency they were not reported in the media. However, there was a case in Great Britain where the authority decided to shut down the Stony Stratford Public library services. In response to this threat all the citizens of the town borrowed all the books that can be borrowed and as a result for a couple of days the shelves are bare.

This is not a rare case in Great Britain with regards to closure of public libraries. It was reported in the International Herald Tribune on January 5, 2012 that 423 libraries have either closed down or been slated for closure---that's almost 10 percent of all public libraries in Great Britain (International Herald Tribune, 2012). It is not what Mark Twain expected to befall on public libraries as he once wrote ," A public library is the most enduring of memorials, the trustiest monument for the preservation of an event or a name or an affection; for it, and it only, is respected by wars and revolutions and survives them. "

This scene is not just happening in Great Britain alone. It is happening all over the globe. It was reported in New York Review on May 2011 that "All across the United States, large and small cities are closing public libraries or curtailing their hours of operations. Detroit may close all of its branches, Denver half of its own. Such closure will affect families who do not have computers or can not afford Internet connection and rely on the ones in public libraries to look for jobs, the consequences will be even more dire.

The task of the public libraries to promote enlightenment, education and other cultural activity by making books and other materials available free of charge to all those who lives in the constituencies is becoming more irrelevant day by day. Even the High Court in Great Britain have ruled that the Councils have the right to close down libraries despite protests that   services are being "decimated "as reported in the Dailymail on October 14, 2011 (Dailymail, 2011).

All the above examples show the importance of financial sustainability in public libraries operations. As in most cases financial sustainability depends mostly on the financial contributions of local governments. Public libraries have no choice but to emerge as a strategic partners with their local governments in shaping and achieving sustainability goals. One of the ways that public libraries could secure a sustainable operating funding is to ensure that they keep up with the priorities

of the local government. It was reported that public libraries in Ontario, Canada responded to the priorities of the provincial and municipal government by offering extensive programs in the following areas: " economic development by supporting small businesses and entrepreneurs with the provision of resources such as e-databases on market trends and information on relevant legislation, employment by providing resources for career planning, job search and upgrading skills, early literacy development by facilitating success in the school system through their vast array of pre-school and children's literacy programs, and efficient government services by serving as the first point of contact for information and referral on community and government programs". (Federation of Ontario public libraries,2010).

All the public libraries in Malaysia except for the States of Sabah and Sarawak are governed by State Library Board which is part of the local government organization. In the context of Malaysia the local government authorities are represented by the City councils, the Municipality Councils and the District Councils of the various States. One thing which is common to all the public libraries is the presence of websites for each of the State Library Corporation.

With the introduction of the World Wide Web and graphical browsers in the 1990s the Internet has become widely accessible and many people have grabbed the idea of using it for their multifarious purposes and agenda. They have established all types of websites to foster their mission and visions. They recognize that Internet can enhance their scale of communication through the websites as the Internet is capable of delivering large quantities of information in a speedy manner to the public. All public libraries in the world have taken advantage of these phenomena by having their own websites. It is envisaged that public libraries websites do partake in the success or failure of public libraries to market their services to the public at large. Perceptions of public as to the quality of services offered by public libraries could be judged from their websites. Through the development of quality websites libraries in Western countries are able to sustain their growth through generating income through charges, particularly for access to unique materials, making it attractive to sponsors or making it possible for third parties to deliver their own services based on website contents. Their judgment might be swayed by what are available in the websites. As Conway and Dorner (2004) pointed out "a party may be providing large amounts of information on its website, but if this information is difficult to find, its usefulness will be reduced. Likewise, a website may offer a high level of interactivity, but if a user cannot access the site it will count for little." The crux of the problems lies in the visibility and accessibility of those websites.

What needs to be addressed is whether there are differences in terms of visibility and accessibility of the websites representing the public libraries in Malaysia. As these websites are around for quite sometimes already it is therefore appropriate to question on how effective are those websites. A study should be conducted to explore the differences.

2. Purpose of the study

The objective of this study is to determine whether there are differences in terms of visibility and accessibility of the public libraries websites. All the thirteen States in Malaysia with public libraries websites were sampled.

Visibility

The first thing that any organization would like to tell the world of its presence is through its website. A valid indicator of site visibility and online stature would be the volume of web traffic to a given site. Higher quality websites tend to attract more links.

According to Rowlett (2006), linking is an extremely important way to increase website visibility. The greater number of quality links you have coming to your site, the better your visibility. It has also been shown that search engines generate a large proportion of web traffic and most modern search engine algorithms tend to return heavily–linked sites first.

One of the techniques that can be applied to study the issue of visibility is using the software, *Alexa*. In their study on quality of website, (Lin et. al, 2004) reiterated the significance of *Alexa,* " With an installed base of well over 10 million toolbars, the *Alexa* traffic rankings represent the largest and most global sample of Internet usage available in the world." According to (Hanson, 2000) the rankings of Alexa are based on the user popularity. The website usage can be an indicator of online quality.

Table 1 and Table 2 below indicate the number of web traffic volume and in-links for the State Public Libraries Corporation in Peninsular Malaysia and the State Public Libraries in Sabah and Sarawak based on the evaluation performed by *Alexa*.

Table 1 Number of in-links, web traffic volume of the websites for the following State Public Libraries Corporation

Name of Public Library	Web traffic	Number of in-links
Penang Public Library Corporation	25,242,122	54
Selangor Public Library Corporation	1,356,734	72
Kelantan Public Library Corporation	11,081,697	6
Kedah Public Library Corporation	21,721,988,	44
Pahang Public Library Corporation	14,868,630	28
Terengganu Public Library Corporation	4,351,000	54
Johor Public Library Corporation	362,445	805
Negeri Sembilan Public Library Corporation	8,042,960	25
Melaka Public Library Corporation	20,440,727	34
Perlis Public Library Corporation	20,038,465	15
Perak Public Library Corporation	6,815,813	15

Table 2 Number of in-links, web traffic volume of the websites for the State Libraries of Sabah and Sarawak

Name of Public Library	Web Traffic	Number of in-links
Sabah State Library	245562	1114
Sarawak State Library	4857,853	97

Table 1 and Table 2 indicate that the highest web traffic volume is found in the Penang Public Libraries Corporation with 25,242,122 visitors. This is followed by the Kedah Public Libraries Corporation with 21,721,988 visitors. The Sabah State Library has the highest in-links with 1114 institutions or organizations link to it. This is followed by the Johor Public Libraries Corporation with 805 in-links. The finding from this study showed Penang Public Libraries Corporation is more visible than the others based on its traffic and in links.

Accessibility
The development of any website has to comply with the existing accessibility guidelines. It is futile to have a website that is difficult to access by users owing to non compliance with the existing standards on accessibility. To check for such irregularities a software EvalAccess 2.0 was used. It is an on-line web accessibility evaluation tool which has been developed using Web Service technology. This tool provides different methods for evaluating web accessibility: evaluation of a single web page, evaluation of a web site and evaluation of HTML mark-up. It returns a complete report of errors as a result of the evaluation. For the purpose of this study we are concerned only with Priority 1 errors. Priority 2 errors are excluded from our evaluation. In cases where Priority 1 are zero errors no report will be made for those cases. It means that they have satisfied the Web Content Accessibility Guidelines(WCAG).

Table 3 Number of Priority 1 and Priority 2 errors for the following Public Library Corporations

Name of Public Library	Priority 1	Priority 2
Kelantan Public Library Corporation	37	75
Selangor Public Library Corporation	17	67
Terengganu Public Library Corporation	3	1
Johor Public Library Corporation	25	35
Negeri Sembilan Public Library Corporation	6	50
Melaka Public Library Corporation	15	18
Perlis Public Library Corporation	3	32
Perak Public Library Corporation	9	76

From the thirteen public libraries websites which were analysed, only four of them have some irregularities in relation to accessibility. Only the Kelantan Public Library Corporation has the highest Priority 1 errors with 37 errors while Johor Public Library Corporation and Selangor Public Library Corporation have

25 errors and 17 errors respectively . Overall the Priority 1 errors seem not to be serious.

3.   Conclusion

By comparing the state of visibility and accessibility among the public libraries websites in Malaysia the findings of the study revealed that those public libraries websites that have incorporated the utility of information and communication technologies widely are more visible and accessible as in the case of the Penang Public Libraries Corporation. It is pertinent therefore, for those public libraries that are not highly visible and accessible to take the necessary steps to improve the development of their websites. Hopefully by taking these measures it would help the university in their drive to be the best among their contemporaries.

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