Providing the eLearning Services for the Blog

Ridwan Sanjaya[1], **Saranphong Pramsane, PhD**[2]

[1] Soegijapranata Catholic University, Semarang, Indonesia.
[2] Graduate School of Information Technology, Assumption University, Bangkok, Thailand.
Email: ridwan.sanjaya@gmail.com, prammicester@hotmail.com

Abstract

Weblog or Blog is common for the people in the world nowadays, including who works in the education field. People use it because of the easiness. Some of lecturers use it to share their class meeting material to their students. Others use it to share their documents or presentations of research and workshop. They also can upload the multimedia contents to the Blog for describing the knowledge more detail.

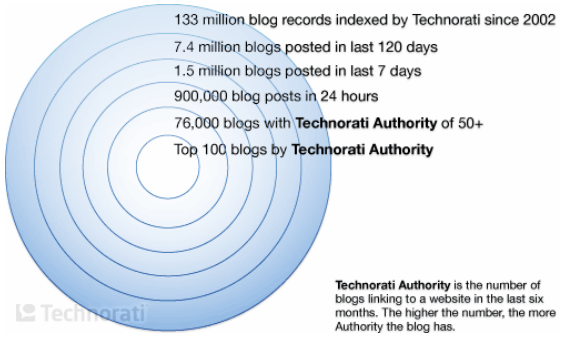
However, the Blog features are not the same with the Learning Management System (LMS) features. The LMS software usually provides the facility to do the eLearning activities, such as giving a quiz to the students, sending the assignments to the lecturer, and grading the assignments. Blog does not provide those eLearning features. It needs additional elements/widgets provider to provide the eLearning facilities. By combining the eLearning widgets from several providers to the Blog, people should get the benefits from the easiness of using the Blog and easiness of providing eLearning activities.

Presently, there is no widget provider who is really support eLearning activities to their Blogs. Users have to combine several widgets from different providers to give all the eLearning services in their Blog. This paper will explain the technical side to provide the eLearning supports for the Blog. The design of those supports should offer the facility to upload a course material, creating a quiz or an assignment, sending the answer, and grading the assignments. However, it must not change the characters of Blog which is easy to use by everyone.

Keywords: eLearning, Blog, Service, Widget, Element, Provider

1. Introduction

A Blog is a Web site, usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video. Entries are commonly displayed in reverse-chronological order. [4]. The owner who maintains the entries in the Blog is called by Blogger. Since 2002, there are 133 million Blog in the world, based on the Technorati's survey [5].

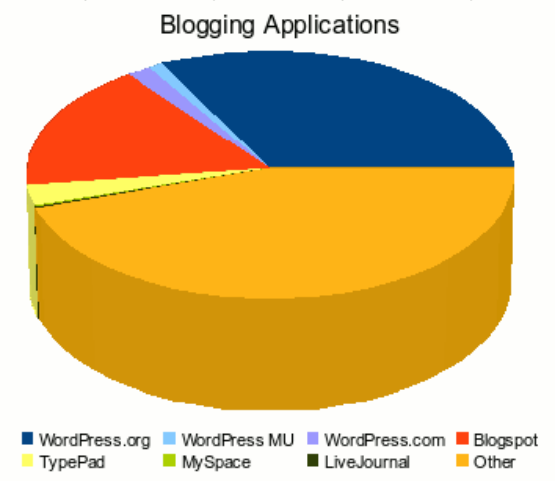


Source: Technorati

Figure 1: Number of Blog

There are several Blog providers which are commonly used by people in the world, such as Blogger.com, Wordpress.com, Multiply.com, etc. Blogger.com, one of the famous Blogs from Google, can be customized easily by the common users without any background of programming. They don't have to pay anything to get the full feature from Blogger.com because all features are offered for free to the users. If they want to show any

accessories in their Blog, the users only have to copy any script from the widget providers and paste it to their Blog. Because of its easiness, Blogger.com became the popular Blog provider in the world. This paper used Blogger.com as a part of the experiment. However, other Blog platforms can be used also for this purpose.



Source: pressedwords.com

Figure 2: Blogging Platforms' users

Basically, a Blog does not have any accessories in their interface. However, the users can add several elements by themselves via its Graphical User Interface (GUI). They can add a widget to show a quiz using the service from quibblo.com. They also can add a widget from scribd.com to show a presentation, a widget from 4shared.com to share documents, a widget from flickr.com to share images, a widget from youtube.com to show a video presentation, and a widget from imeem.com to learn a voice record. These widgets usually are used in the Blog which has e-Learning contents.

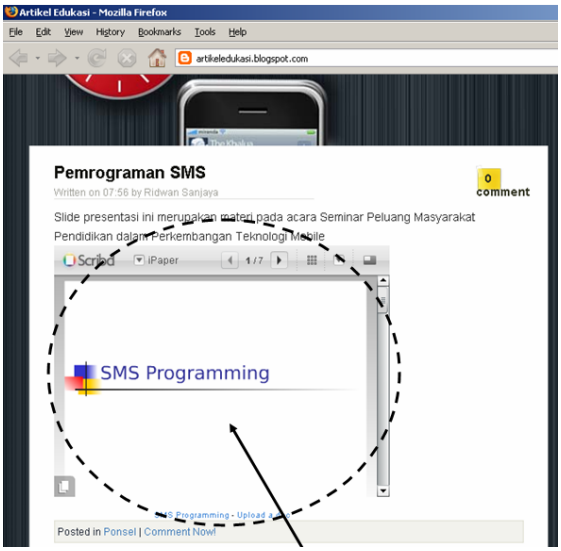


Figure 3: Display a Presentation in a Blog

However, if the Bloggers want to give a full feature of eLearning in the Blog, they have to combine the elements from several widget providers by themselves. Even though it can give a complete service of eLearning in the Blog, the widgets can not connect each other. The Blogger has to manage several accounts in each widget. It will create a complicated administration for them.

Presently, there is no widgets provider who is really providing the complete eLearning features which are connecting each other. This paper explains the design of application which supports all of eLearning activities. It should offer the facility to upload a course material, creating a quiz or an assignment, sending the answer, and grading the assignments. However, it must not change the characters of Blog which is easy to use by everyone.

2. Concepts Overview

Weblog or blog is derived from web + log. [2] Most blog platforms provide a personal writing space that is easy to publish, sharable, and automatically archived and empower users to form learning communities by way of inter-linkages. [1]

Widget, element, accessory, or gadget is a term of blog tool which is easy to

be placed into the Blog sidebar or part of web page without knowing HTML, PHP, or any code by inserting a simple piece of code from its provider.

In this experiment, Ajax will be used to run the widget in the Blog. There is no additional feature that must be added to users' computer because Ajax is not a new technology. Ajax helps developers narrow the gap between desktop and web applications. It is basically a web development technique which uses existing technologies like Asynchronous JavaScript and XML [3].

Asynchronous means that users can make a request to a server and perform other actions while the server is processing users' request. The response can be performed only in the specific part of webpage. In the classic web applications, the user has to wait and see the blank screen while the server is processing the request [3].

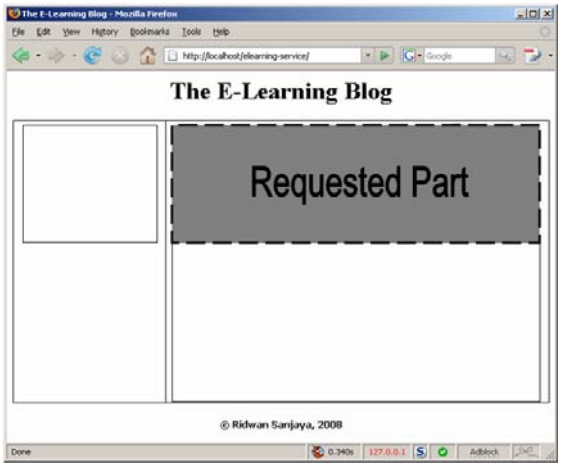


Figure 4: Specific part of webpage

It will help the widget provider to work in several parts in the Blog which are selected by the Blog owner. Only the specific part will be requested to the web server. In this case, eLearning widgets from the web server will be displayed in the specific part of the webpage after the user's authentication process. The page should not be reloaded to show it.

3. Strategies

The eLearning widget provider should provide a back-end side and a front-end side. The back-end side is created for the Blog owner to manage the eLearning content. In the back-end side, the Blog owner can create a data of students who take the course, upload the course materials, creating the quizzes or the assignments, and also grading the assignments. It looks like the back-end on the common LMS software.

In the front-end side, a Blog will display 2 (two) page elements of eLearning. The first element will show the login form and the second element will show the eLearning content after the successful authentication. To display these elements, the widget provider should provide 2 (two) HTML /JavaScript codes. The Blog owner has to insert the first code in the sidebar to show the login form. The second code has to be inserted to another part to show the eLearning content.

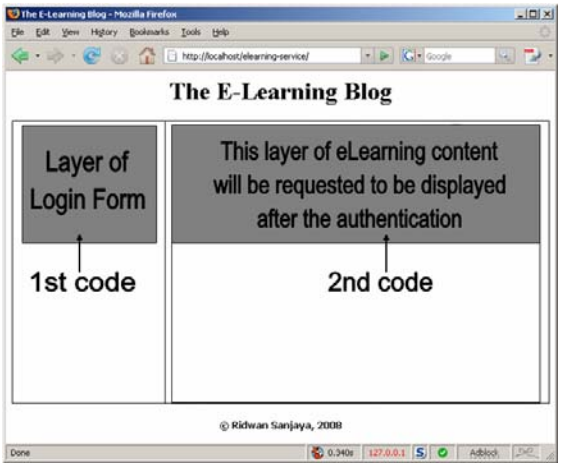


Figure 5: Script for two parts of page

The login form is used to validate the students who take the course. If the students can pass the authentication process, the script will call a server side script to display the eLearning menu and content in another part. Using Ajax, the eLearning widgets can be shown in the requested part without reloading the whole page.

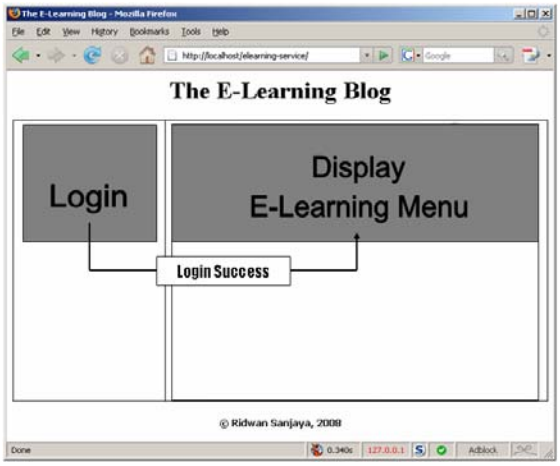


Figure 6: After a successful authentication

The students can see and download the course material in the eLearning part of the page. They also can join to the quiz or the assignment, sending the answer, and see the assignments result score.

Figure 7: The eLearning menu

After the user's logout from the system, the eLearning service layer will be set to be blank area.

4. Implementation

To provide the eLearning widget for the Blog, the web developer can create a web based application using PHP and a database. The back-end should provide a feature to upload the course materials, writing any articles, creating quizzes or assignments, receiving the assignments, and grading the assignments.

Figure 8: Back-end side for the Administrator

In the front-end, the provider should provide 2 (two) JavaScript codes for the user. The JavaScript will be used to display the login form and the eLearning content. Ajax and PHP will be used in this experiment to authenticate the users and display the eLearning content in another part of webpage without reloading the whole page.

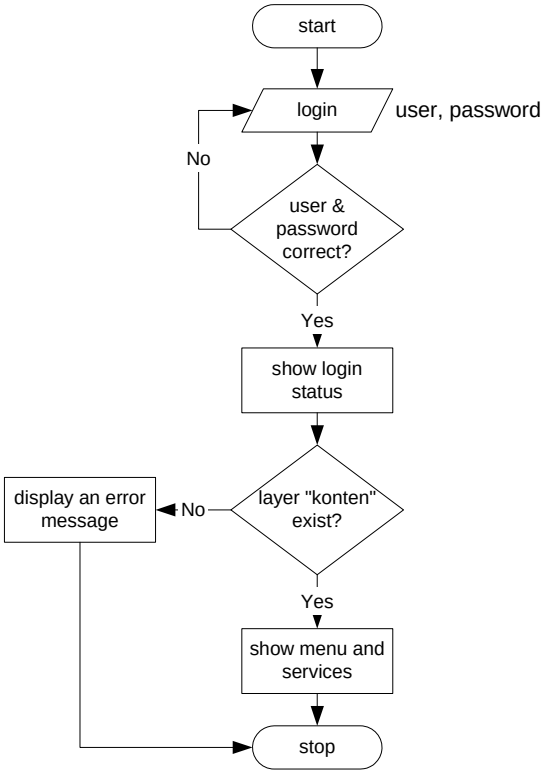


Figure 9: Content Display Flow Chart

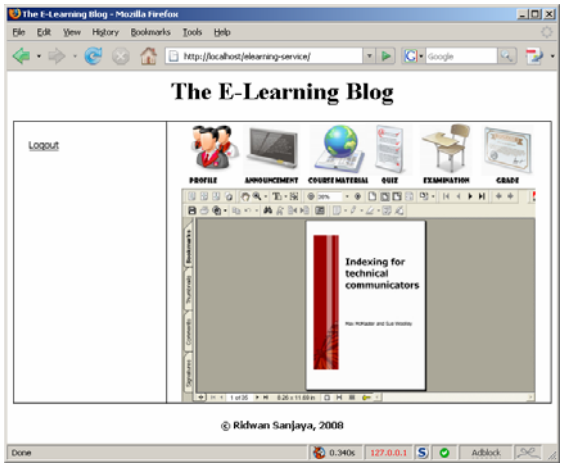


Figure 10: Front-end application

5. Conclusion

The widget provider should provides 2 (two) JavaScript codes to display the login form and the eLearning content in the front-end side. The codes should be inserted in 2 (two) parts of the Blog. The first script has a function to display the login form in the sidebar and the second script has a function to show the eLearning content in another part of webpage.

This facility will not change the characters of Blog which is easy to use by everyone. Blog owner only has to copy the JavaScript from the provider and paste it to the Blog as a part of page element. The Blog owner can manage the eLearning contents by using the back-end application which should be provided by the provider also.

Because all of the eLearning features are running in the one location provided by one provider only, each widget will connect each other and easy to be managed. The administrator also has a full control to allow the users who can login and use the eLearning features.

Compared with the LMS software, no software installation in the server is needed to provide this kind of service inside the Blog. Only the JavaScript insertion in two parts of the Blog's layout is needed to show the eLearning features in the Blog. It is a common and an easy thing for the Blog users.

Because the Blog user is still growing, Moodle, ATutor, and the other LMS software developers should have a strategy to provide the eLearning support to the blog. Expanding their technology for the Blog will increase the number of users also.

References

[1] Chang, Yao-Jen, et al. Third 2008 International Conference on Convergence and Hybrid Information Technology, Volume 1, 11-13 Nov. 2008 Page(s):184 – 189.

[2] Cheng-Chao Su. *An Open Source Platform for Educators*, Proceedings of the Fifth IEEE International Conference on Advanced Learning Technologies (ICALT'05), IEEE, 2005.

[3] Eginam. 2007. *An Introduction to Ajax*. http://www.topcoder.com/tc?module=Static&d1=features&d2=071706.

[4] Hutchinson & Associates, Inc. 2008. *Blogging*. http://blogclasses.com/blogging/

[5] Technorati. 2008. *State of the Blogosphere 2008*. http://www.technorati.com/blogging/state-of-the-blogosphere/