

Benefits and Limitations of WordPress for eLearning Purpose

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Abstract – A lot of Learning Management System (LMS) software has been developed by developers and offered to be used for eLearning purposes. For sustainable education reason, many institutions encourage their educators to participate and contribute in the eLearning system by learning how the LMS works. Most of them provide complete features for eLearning activities.

However, the complexity of LMS software creates a difficulty for some educators whose limited computer skills. As the impact, they may not optimal to use the eLearning system in their institution.

Moreover, some educators do not continue their activities in participating and contributing in eLearning system. It will obstruct the purpose institution in sustainable education purposes. The institution should have another alternative to bridge this problem.

WordPress can be a good solution for most educators who do not have high computer skill. WordPress is a Content Management System which is easy to be used for common people. To be used for eLearning, it should be customized to meet certain eLearning standards and also fulfil the educator's needs. This paper will explain the techniques to customize WordPress for eLearning purposes and to seek the benefits and limitations of WordPress for eLearning purposes.

Keywords – eLearning, eLearning Complexity, LMS, WordPress Customizing, WordPress for eLearning.

I. INTRODUCTION

There are only a few Content Management System (CMS) applications which can be customized for Learning Management System (LMS). WordPress is one of the CMS that can fulfil criteria as LMS software. The CMS should be able to do six activities: centralize and automate administration, use self-service and self-guided services, assemble and deliver learning content rapidly, consolidate training initiatives on a scalable web-based platform, support portability and standards, personalize content and enable knowledge reuse [2]. In summary, a good LMS should provide a system to manage educational training and records and also system to distribute course over the internet.

Based on software license, LMS is divided into two categories: commercial LMS and open source LMS. Commercial LMS is a type of LMS software that requires the customer or LMS user to buy the license before the user can make use of LMS features completely. In the other hand, open source LMS is a type of LMS software that requires no commercial license, hence it is free of charge and anyone can modify the codes to meet several requirements. Between these two types of LMS, to ensure most educational institutions able to make use of LMS features completely without having the responsibility to buy license, it is wise to choose open source LMS software. WordPress is an open source CMS and when it is modified and customized for LMS, it will become open source LMS as well.

One important thing that should be concerned in order to develop a powerful LMS is about multi-user feature. LMS should be

accessible to various users with various privileges; for example: only lecturer is allowed to upload assignment instructions and the privilege of student is to download all educational contents and probably upload the results of assignment. In default, WordPress provides this multi-user feature.

II. CONCEPT OVERVIEW

It is obvious that LMS software should be able to support multi-user feature. Multi-user feature in LMS enables all lecturers and students to access educational contents. Lecturers can upload, edit or delete their own content while student can easily download them and make use of it. With multi-user feature, the number of lecturers who can upload educational contents can be nearly unlimited depends on the server capacity. Multi-user feature should also come with multi-privilege feature. Privilege separates the right of access of administrator, lecturers, students and anonymous users. For example, the access of upload, edit and delete educational contents should be only for administrator and lecturers. Students usually only have access to download the contents.

Another vital feature that must exist in LMS is the feature to update educational contents easily. To provide quick and easy update feature, WordPress can be integrated with XML-PC. XML-RPC is a remote procedure call (RPC) protocol which uses XML to encode its calls and HTTP as a transport mechanism [3]. When WordPress has been successfully integrated with compatible XML-RPC, lecturers can easily update contents without having to ask the administrator for help. This is absolutely important remembering the fact that some lecturers may have limited computer and internet skills. XML-RPC is remote procedure calls using HTTP as the transport and XML as the encoding [1]. XML-RPC is the simplest web service approaches and makes it easy for computers to call procedures on other computer. That's why XML-RPC is a good option to provide easy update feature in customized WordPress for LMS.

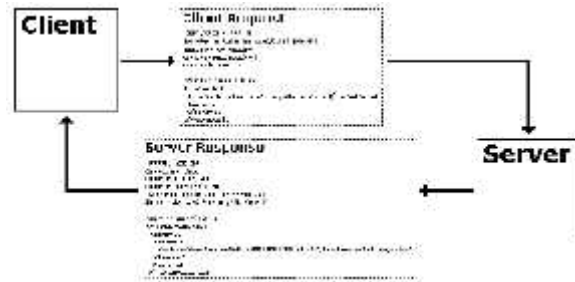


Fig.1 The Mechanism of XML-RPC

Lecturers should be able to upload new educational contents to LMS easily. Most of the time, educational contents are in PDF format. It is needed to activate PDF file upload feature in WordPress. When the feature has been activated, lecturers can upload their contents in PDF files to LMS without having difficulty.

However, it is not guaranteed that all educational contents from lecturers are in PDF format. Sometimes, lecturers have multimedia contents such as video file to support their teaching. For that issue, educators or lecturers can upload the video in free video hosting websites. The benefits, the server storage needs can be maintained in a small size.

III. STRATEGIES

There are three essential features that must be integrated into WordPress for LMS. Those features are multi-user feature to enable many lecturers use the LMS, XMLRPC to enable educators to update their educational contents easily and file upload feature to help educators in uploading their educational contents.

The essential features above should be integrated to WordPress for LMS consecutively. The flowchart of integrating those features into WordPress for LMS can be seen in the figure below.

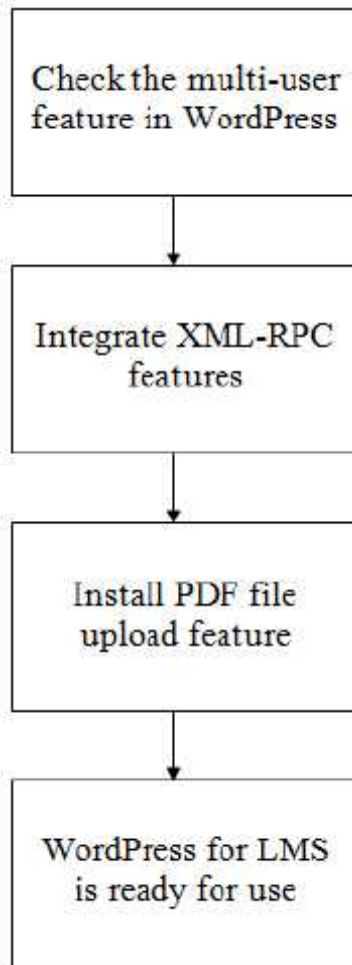


Fig.2 Customizing WordPress for LMS

IV. IMPLEMENTATION

Since 2010, WordPress has been including multi-user feature into their core WordPress system. In other words, by default, WordPress Content Management System comes equipped with multi-user feature so it doesn't need to make further change related to that feature because it is a built-in feature from WordPress. Only some little configurations need to be done in WordPress to enhance the experience of educators and also students in using the LMS. Some little configurations need to be done such as customize the administration panel, install spam filter plug-in, set-up email for each educators.

In multi-user scheme like this, administrator is the highest role. It means that administrator can do all things related to the LMS site. Administrator can do many things from deleting certain educator's accounts until ban certain user or student's account.

After multi-user feature has been checked and configured to meet certain criteria from

institutions, XML-RPC feature should be integrated with WordPress. WordPress also comes with XML-RPC built-in feature. To activate XML-RPC in WordPress, the administrator simply logs in to dashboard and click Settings Menu in sidebar navigation. Then, click writing sub-menu and check the box beside "Enable the WordPress, Movable Type, MetaWeblog and Blogger XML-RPC publishing protocols". When Administrator clicks Save button, the WordPress should be able to work with XML-RPC feature.

WordPress also provides file upload feature where educators can upload various types of file including PDF file. The process to upload PDF file in WordPress is very easy by just clicking "Add Media" icon above WYSIWYG (What You See Is What You Get) editor when educators want to write new content. They can upload PDF file from local computer or from other websites.



Fig.3 Upload PDF File

For the video content educators probably need to show in their contents, they can put it easily in WordPress by just copy-paste the HTML code of video in YouTube. The educators must have uploaded the video previously in YouTube. This process is very easy and it will not take the Lass's server bandwidth.

V. CONCLUSIONS

Customizing WordPress for Learning Management System is an uncomplicated thing to do. WordPress is very powerful software to

be used and customized as LMS because it comes equipped with several features such as XML-RPC, advanced multiuser configuration until file upload feature. Another benefit of using customized WordPress for LMS is free of charge. WordPress is an open-source Content Management System so any institutions can download it from WordPress official website, customize it and upload it to server and the LMS can be used completely. WordPress also has user friendly interface that will help those educators with limited computer skill in running Learning Management System.

In the end, using WordPress as LMS is highly recommended to all educational institutions that need LMS with familiar interface and free or charge.

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