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A STUDY ON USING WEB CONTENT MANAGEMENT SYSTEMS IN UNIVERSITY SPORTS CLUB

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ABSTRACT:

The purpose of this paper is to present and elaborate the benefits of using Web Content Management Systems in university sports club. Sports clubs are those associations that lack the resources required to create and sustain a web presence. Unfortunately, many non-IT students currently lack the technical skills to create their own web application. Content Management Systems can avoid these issues by eliminating the need to teach PHP, HTML, SQL, etc., and allowing non-IT students to concentrate on content management that is important for university sports clubs. Web Content Management Systems are clarified, preceded by a concise WordPress overview. Examples are provided, together with university experiences.

INTRODUCTION

Computer desktop apps, smartphone applications or online applications give users many ways to handle all sorts of information as time passes and technology advances. Getting a website is a very important part of the marketing today. Moreover, if users with little or no IT experience (non-IT students) have no comprehensive exposure to HTML, PHP, SQL etc., it is difficult to handle a website framework. Web application will enhance communication process and enable the club to interactively conduct certain administrative tasks online. This is the reason why the WordPress, Web Content Management System was introduced into Sports Clubs web application system at the Asia Pacific University.

CONTENTMANAGEMENTSYSTEMS

Content Management Systems (CMSs) are World Wide Web platform software developed by web development communities to create a website and allow the management of web content such as animations, video text, audio and image [1]. A CMS is a forum to manage a standardized web interface for the related workers without the need for technological skills [2].

There are currently several types of Content Management Systems, such as Business CMS, Product CMS etc., but this paper will only cover Web CMS. In short, a Web Content Management System is a CMS designed to simplify web content publication on websites, enabling content creators to submit content without requiring technical knowledge of HTML (hypertext markup language) or file upload. [1].

A CMS is a modern way of handling online information compared to the traditional techniques. The business processes and required resources are considerably simplified as many of the members of the technical team are no longer needed for updating online information on a regular basis.

Table 1. With a CMS vs. Without a CMS [3]

With a CMS	Without a CMS
A new page section is designed depending on a predefined default. All navigation links are instinctive modified, and there is a complete audit trail.	A new page section is a replication of an existing one. The site map as well as links to the backdrop navigation must be modified by hand in an adhoc manner, and standards must be followed.
Layout are segregated from page content, with consistency strictly kept across the web. The CMS enforces continuity in display.	Layout and content are intrinsically linked together, making changes site-wide hard to update. The programmers determine the accuracy of displays.
Workflows are structured to replicate the specified business requirements as such. The CMS workflow engine reports an analysis of each change, with comments. Content material is automatically released online upon final approval.	Workflows are typically done in an ad-hoc manner via email. Emails will be sent to various members of the company and published online manually after corresponding approvals.
If the requisite approvals have been made, content is released at once.	Content will be published whenever the web editor has time available that may require many days to reconfigure and cause errors.
The system implements compliance which keeps track of content changes and content publishing.	Compliance has been must be done by team members. Content changes must be manually backed up and a record held when publishing the content.

To allow non-IT students to create websites, the deliver this information will require a tremendous deal of effort and time. When a more complex website is desired, information of multiple programming languages like Java, PHP, SQL to manage database, etc. will be required. CMS can minimize time

consumption and effort-creating a robust and efficient website is simple without knowing HTML, CSS, PHP, SQL etc. [1].

Today, the most popular open source Web Content Management System such as Joomla, Drupal and WordPress are used. There are many free and commercial Web Content Management Systems. WordPress, Joomla and Drupal are the very top open source CMSs that control the market today [4]. WordPress and Drupal are frequently contrasted plus they equally have a big army of followers. WordPress is possibly the simplest and most efficient website content management and blogging system (or CMS) in existence today. It can also be used effectively to build simple websites, in addition. Development on WordPress is simple, and one can see changes in real time as changes are made on their website [5]. For this reason, authors chose WordPress to be the best way for usage in tertiary schooling.

WORDPRESS- HISTORY AND FEATURES

WordPress is an open source Web CMS that uses PHP and MySQL and is usually used with the MySQL or MariaDB database servers but can also use SQLite database engine. It is published under the GNU Public General License. WordPress is the website management system with the most common usage [5]. In WordPress, the term Word refers to the words used to write posts. *Posts* are the main element content of a blog.

WordPress launched in the year 2003. Mainly because their main developers halted the production of an already successful blogging app b2/cafeblog. WordPress's second major version, as well as the first version, was released on January 3, 2004, named after a jazz musician, Miles Davis [6]. WordPress also included new Admin GUI, new templates, and layouts that comply with XHTML 1.1 developed in this update. WordPress version 1.2 was released in May 2004 with a plugin function that allows application developers and users to expand WordPress features through composing their own plugins and share it with the general community [5]. WordPress version 1.5 launched in February 2005 featuring Blogs, comment management tools, Kubrick 's new default theme, and a brand-new Theme System [7].

WordPress 2.0 was released with new WordPress dashboard in December 2005, plus editing of WYSIWYG, user roles, and customization of headers [5]. AJAX was injected into the WordPress admin panel's roots, making actions much faster than ever before, so now that user removes a comment or post tag, it will gently fade away without reloading the page, saving time and bandwidth as a result. WordPress 3.0 was released on 17 June 2010. This was a big step for WordPress as a CMS. This update introduced many features such as having new APIs from the theme developers-enabling items like custom backgrounds, headers, short links, menus, etc.

In the year 2011, a redesigned and updated WordPress UI was launched in version 3.2. The UI has changed considerably, completely updated and at the same time holding the CSS light so that the screen can be opened even more easily. In 2013, WordPress 3.7 came up with a new auto updater function that enabled WordPress to update the program automatically for minor releases on

the site[5]. The auto updater function is very close to what the Google Chrome browser does. Through this time WordPress became the most popular CMS in the world.

Throughout the entire year more refinements were made to the core of WordPress with subsequent releases of WordPress 4.0 and WordPress 4.1. In 2015, the release of WordPress 4.2, 4.3, and 4.4 centred on enhancing venue, emoji support, theme customizer, and setting up WordPress REST API infrastructure. WordPress.org announced it is fully promoting HTTPs by the end of the year. In 2017, they released WordPress 4.8 and 4.9. These releases brought the introduction of audio, video, images, gallery, rich text, and HTML to many new default widgets. These releases also laid the foundations for a new block editor for WordPress. WordPress 5.0 was released in 2018, with a brand-new experience in editing. WordPress rapidly evolved into one of the most common open source content management systems.

WordPress is used for a few purposes: from the creation of simple personal websites to complex websites such as application management and portals focused on the community. Compared to other CMS that can be highly sophisticated, WordPress is possibly the simplest to configure of all CMS available today, enabling users with modest technological ability to leverage its power [3]. This is exactly why WordPress was used to offer non-IT students at APU in sports clubs, which will be explained further in the following paragraph.

WORDPRESS IN PRACTICE

Any preinstalled templates/ comes with a standard WordPress installation. Those models and their related files include the website's visual "look and sound," which are kept separate from the content of the website. Beginners can select this choice to show previously prepared samples, try to modify them and then add new content. The frontend page of WordPress is shown in Figure 1.

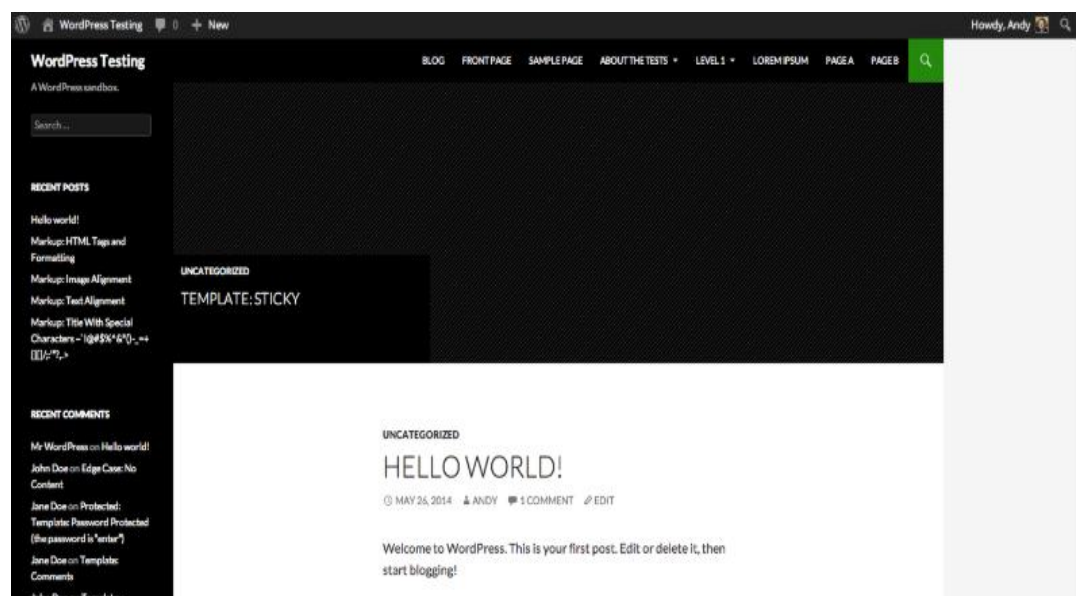


Figure 1. WordPress Frontend

When installed, the dashboard (Super Administrator who controls all elements of the panel of a WordPress website administrator) will log in to the backend administration as per in Figure 2, Besides that, it authors new content, handles visitors, configures site options and performs routine maintenance work. Basically, it handles complete frontend of the website by click-through the interface.

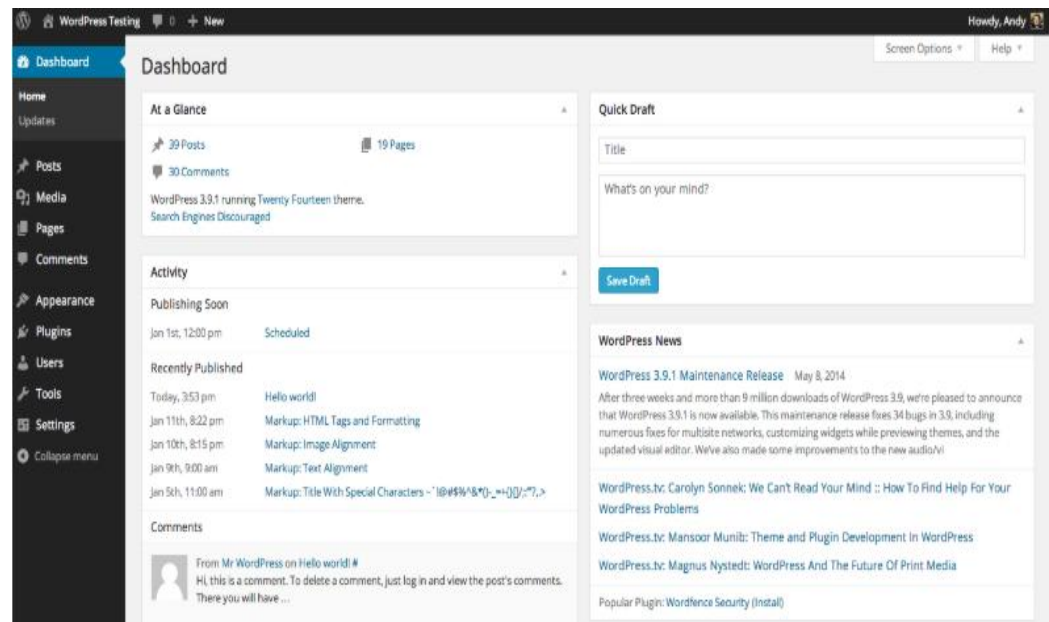


Figure 2. WordPress Backend

Upon creation of the content, a WYSIWYG (What You See Is What You Get) editor enables editor to edit without the knowledge in HTML[8]. It allows users to add a post title, insert images, change the size, and more. A screenshot of editing a content object on a website is shown in Figure 3.

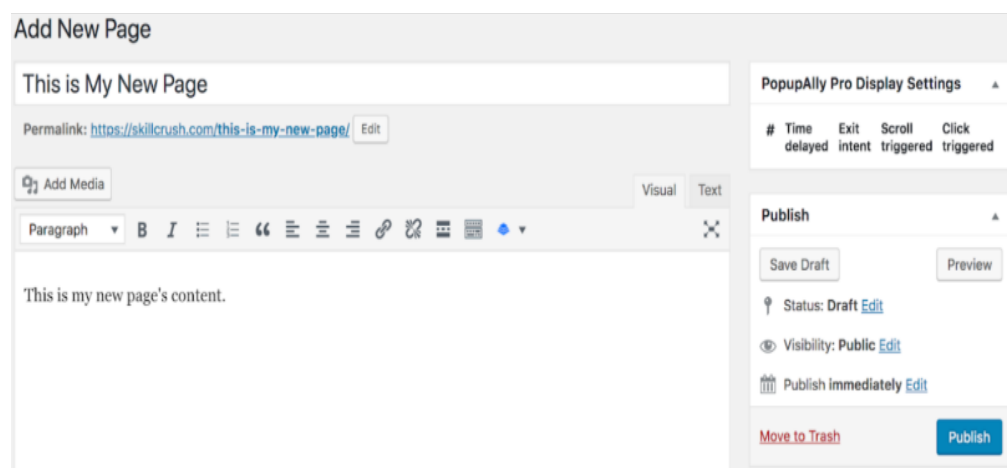


Figure 3. Adding Content in a Web Site

WordPress provides an option of letting others sign up on the web and sharing their content. This function can be deactivated at any time. Users' functions

and skills can be controlled in dashboard as shown in Figure 4. This just offers more or less privileges for providing the material to certain logged in users.

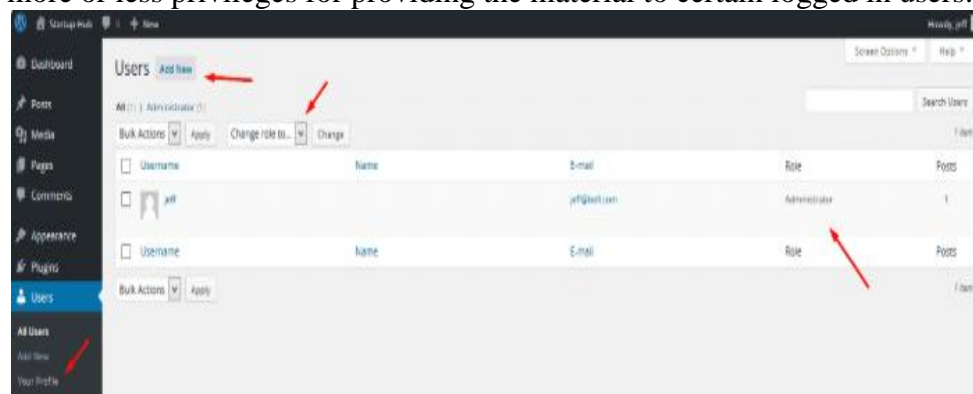


Figure 4.WordPress Manage User's Roles and Capability

Some of the plugin architecture in WordPress allows users to expand a website's features and functions. There are various free and commercial plugins, developed by non-official developers. WordPress.org has 55,158 plugins available since August 2019, each of which provides custom functions and functionality that allow users to customize their sites to their unique needs [9].

A powerful Sports Club website can be built with the use of suitable plugins (e.g. adding unique colours for each team, creating competition, match, team or events etc.), much more than simple personal or hobby websites. Around 25 per cent of internet websites are working on the internet on Sports. Now a sports website will have scoreboards mostly in sidebar, a results board that displays the top 10 teams as in sidebar, a floating bar that gives the specifics of the match. With the support of WordPress Sports Plugins all these features are made available to us [10]. WordPress websites can be easily updated with different additions to sports clubs, such as previously mentioned increasing competition for example.

Local deployment of WordPress became most realistic for educational activities. WordPress is installed locally on every device in this configuration. As this will not require the need of an internet connection. WordPress has several framework specifications for efficient installation and use: PHP, MySQL, and Apache. Both above must be allowed to be able to use WordPress for local testing [11]. The hardest way is for each component to be installed separately and configured to work together. There are various packages for the different operating systems that meet these specifications, like the XAMP and WAMP (Windows / Apache / MySQL / PHP) for example. XAMP is a bundle of web servers for different operating systems. XAMPP is an easy-to-use than WAMP. XAMPP is much more powerful [12].

EXPERIENCES FROM THE UNIVERSITY

Currently in Asia Pacific University of Technology & Innovation (APU), there is no existing system that stores enough quantity of data or information which is collected from the sports club (such as Badminton Club, Football Club, Karate Club etc.). In APU, however, the aim is to nurture and foster innovation

through programs such as software engineering, computer science, information technology etc. Students learned how to build and maintain a WordPress driven website during the laboratory exercises [13].

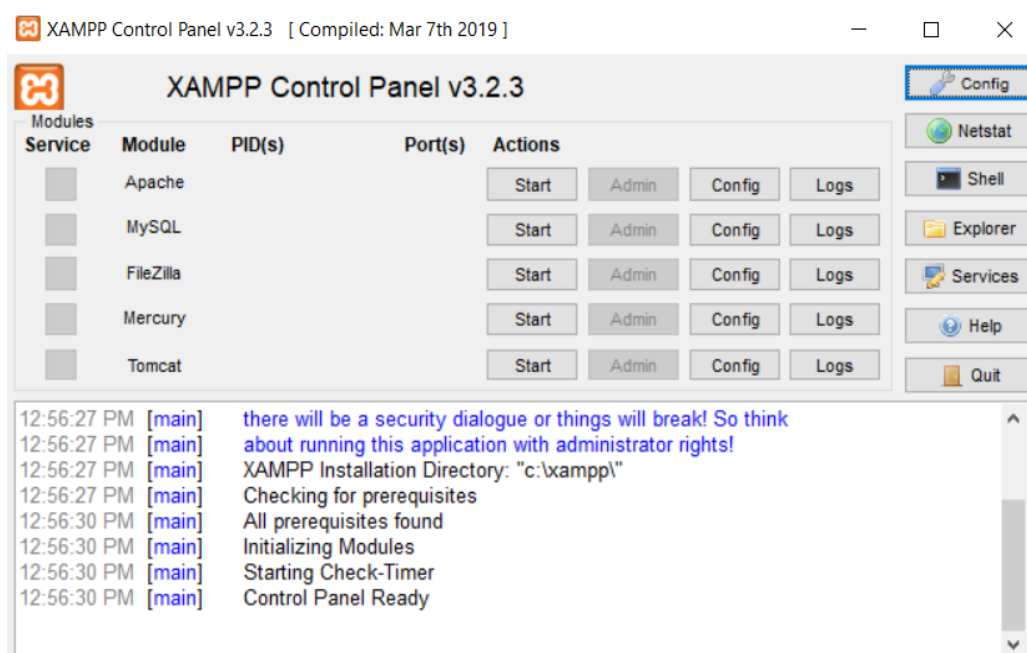


Figure 5. XAMPP Control Panel

XAMPP version 3.2.3 has a control panel from which to start and stop the individual components like MySQL and Apache as shown in Figure 5. XAMPP uses more energy than WAMP due to large loads of internal part applications like FileZilla FTP server, Tomcat and etc. XAMPP supports SSL, as well. All the necessary components can be installed with just one installation file of around 110 MB in size, allowing users to install WordPress and use it at home. XAMPP is free, open-source software, backed up by a large community of support. Students can also learn to build and maintain a website effectively using the XAMPP free of charge.

The functional part of the Sports Club was organized using simple HTML, WYSIWYG editor, content management systems using WordPress and XAMPP Server installation. The website theme and the dashboard templates can be picked.

In addition, along with some simple WordPress functionality, the site can also be accessed from the frontend and backend. For instance, adding content, deleting content, adding images via Media Manager, adding links to menus, adding widgets to the sidebar. The site's Dashboard / Administration will appear at the front page. The platform has a user role management system, where new users can be introduced, accessed, and updated with various authorization rates. Plug-ins must be downloaded and enabled. For eg, WordPress plugin MSP (MultiSport& eSport), SportsPress Pro (Best in WordPress Sports Plugins), Sports Bench (Sports WordPress Plugin), JoomSport (Free in WordPress Sports Plugins) and so on.

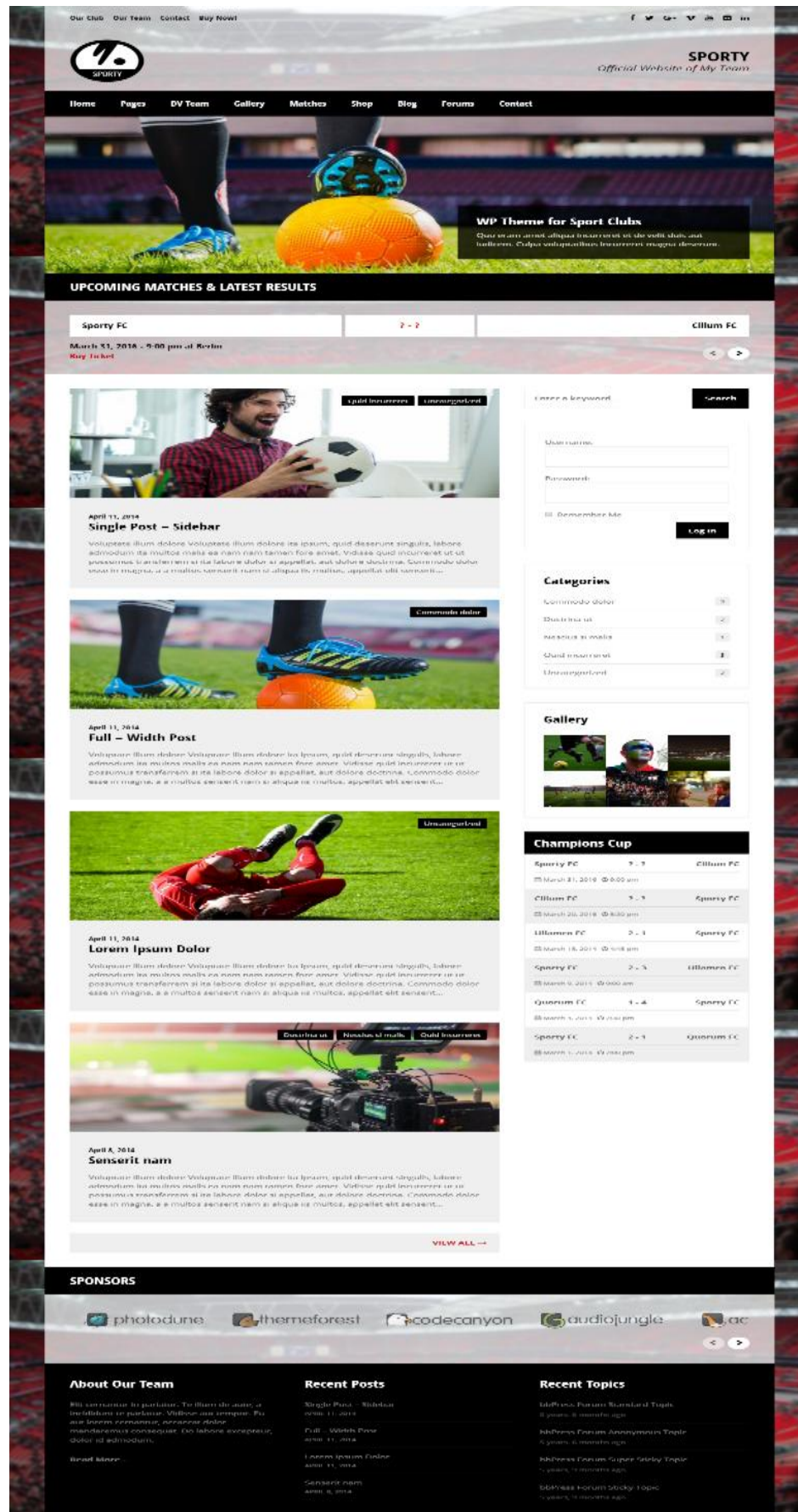


Figure 6. SPORXY Theme for Sport Clubs Preview [14]

Figure 6 shows the SPORTY theme preview home page using WordPress website. These websites are at first glance aesthetically like other technical websites.

A questionnaire was circulated among students at the end of the semester to explore their views and opinions about the sports in that they have just took part. Over 85 per cent of students reflected on WordPress 's usability as a device. Most of students had absolutely no difficulty to getting use to the friendly GUI. At first, some of them found it difficult to understand the website as a set of content but not as a set of specific web pages, and yet the students got to know the idea quickly. 93 percent of respondents think the implementation of a more professional Sports Club web content management system would allow the club to run successfully on a daily basis and distribute the information to its members at the same time.

There have been some site disadvantages though is its stability. Since it is an open source platform, it relies heavily on plugins and themes created by various people and companies, and because there is nobody to track them. It can easily have glitches or lines of malicious code. As a matter of fact, WordPress is the most hacked CMS platform worldwide according to a Sucuri report [15]. This problem is somewhat eased by deleting the malware-infected file, installing a new version of WordPress and restoring the website from a backup.

Some of the students' state that they find it very easy to use this tool to build a successful website as there is no programming ability needed. Not only that, participants also find this tool is easy and quick to use, but it is imaginative enough to allow users to express their ideas.

CONCLUSIONS

In summary, it is important for students to understand how a website operates, how it is planned, developed and maintained for delivery in sports club at APU. Given the complexities of the subject (including HTML, PHP, CSS, SQL, etc.), the definition of a website of the Sports Club can be hard to grasp for students who are not well proficient in IT. As they are simple and user friendly, CMS has showed to be a reliable solution to a problem. CMS enables users with no IT proficiency to build and manage Sports Club websites that are accessible and aesthetically appealing.

WordPress and XAMPP server are used for student's involvement in APU sports. There are several templates and plugins included to the overall usability of the CMS used, which increase students' involvement in sports. Since the students were working off-line, a host server and its administration were not needed, that effectively cut the expenses associated with delivering.

Overall, both students and lecturers agreed that using WordPress helped the students to better understand sport club site concepts. That argument is strongly supported by the answers and data from the student questionnaires.

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