

E-learning @ Divine Word University: Use of Moodle

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Abstract

Many universities and higher educational institutions throughout the world are using e-learning technologies to support and facilitate their teaching and learning activities, a development made possible by the rapid expansion of Internet technologies. These institutions are using some kind of course management or learning management system to enable e-learning. Divine Word University (DWU) uses the Moodle e-learning platform. Moodle provides a rich collection of tools that can be used to manage an e-learning site and courses, although not all the tools are presently used at DWU. However, when used effectively, Moodle can enhance the teaching and learning processes within the university.

Key words: Course management system, learning management system, virtual learning environment, e-learning, Moodle, course, unit, platform, pedagogy.

Introduction

The rapid expansion of Internet technologies has enabled the prevailing use of e-learning to support and enhance teaching and learning activities in educational and training institutions in different parts of the world. Normally, some kind of web-based learning tool known as a Course Management System (CMS) or Learning Management System (LMS) is used to deliver e-learning courses. E-learning has been variously defined such as “the use of information and communication technology (ICT) to enhance and facilitate teaching and learning” (Iahad, Madar, Oye, & Rahim, 2012, p. 121). Again it has been defined as “instruction delivered electronically via the Internet, Intranets, or multimedia platforms” (Smart & Cappel, 2006, p.201). The definition that will be used in this paper is “the use of Information Communication Technologies (ICT) and CMS to enhance and support teaching and learning activities”. It should be noted that e-learning can ultimately be used to deliver courses entirely online without the physical presence of an instructor, a practice the educational value of which is currently being questioned (Anderson, 2013).

DWU is embracing the use of e-learning platform technology through the adoption of a CMS known as Moodle (Modular Object Oriented Dynamic Learning Environment, version 2.4) to support, facilitate and enhance its teaching and learning processes. While MOODLE is an acronym it is commonly written as Moodle and will be used in this form in the remainder of the paper. The purpose of this paper is to consider features provided by the standard Moodle installation and which of those features are presently being used within the DWU university academic environment.

Moodle and social constructionism pedagogy

Moodle supports social constructionism learning theory. This learning theory:

asserts that learning is particularly effective when constructing something for others to experience. Social constructivism extends constructivism into social settings, wherein groups construct knowledge for one another, collaboratively creating a small culture of shared artifacts with shared meanings. When one is immersed within a culture like this, one is learning all the time about how to be a part of that culture, on many levels (Moodle, 2013).

In a collaborative learning environment, participants have the ability to become both teachers and learners. People learn well when they construct something for others to learn from. That also means that people learn by seeing, hearing or reading what others are doing, saying or writing. In order to meet the needs of the participants within a learning environment, that environment needs to be flexible and adaptable. Moodle activities such as forums and wikis are designed to allow participants to interact and take control of what they place in them. They provide a way for participants to construct and share their knowledge with others. Moodle blocks such as recent activities and latest news allow participants to see the activities of others so that they can learn from them. Moodle also provides tools such as a course learning space, navigation and site appearance to respond to the changing needs of participants.

Course management systems

A CMS is an e-learning platform that provides an environment with a rich collection of tools for supporting teaching and learning activities. These tools enable teaching staff to upload teaching and learning materials including unit outlines, lectures notes and reading resources for students to download. They allow staff to create assignments through which students can post their work, create forums, chats and threaded discussions for staff and students to communicate, grade book for recording and viewing grades and email tool for sending email messages (Center for Teaching, Vanderbilt University, 2013).

Moodle course management system

As previously noted, Moodle is variously referred to as a Learning Management System, a Course Management System or a Virtual Learning Environment (VLE). It is an open source system that can be downloaded and installed for free from the Internet and enhanced with additional features. It is being used by universities, schools, colleges, training organisations, educators, as well as by individual trainers and instructors to create online course content for accessibility on the Web. It provides a set of tools and resources that allow course providers to create online courses, post materials such as course outlines and resources for participants, create assignments for participants to post their work, conduct online quizzes, monitor student performance, and communicate

with students through forums and threaded discussions (Cole & Foster, 2008; Moodle, 2013). A course in Moodle provides a teaching and learning space where resources, activities and blocks are added for students to download and interact with. It is created by an administrator, course creators or other users with roles having appropriate privileges.

Activities

An activity enables students to interact with teachers or other students. Moodle provides a standard set of activities which can be added to a course including Assignment, Chat, Choice, Database, External Tool, Forum, Glossary, Lesson, Quiz, SCORM package and Wiki (Figure 1). Chats are used for real-time synchronous communication. Choices can be used for collecting views. Databases can be used for keeping record entries and feedback for conducting surveys. Forums are for posting news and asynchronous threaded discussions. Glossaries can be used for maintaining vocabulary and definitions, Wikis for maintaining collaborative web pages and Workshops for peer assessment. Lessons can be used for maintaining flexible lessons and quizzes for taking online tests which can be automatically marked and graded by the system. Surveys can be used to conduct general evaluations and External Tools to interact with other learning resources and activities on other Web sites (Cole & Foster, 2008; Moodle, 2013; Moodle, 2013).

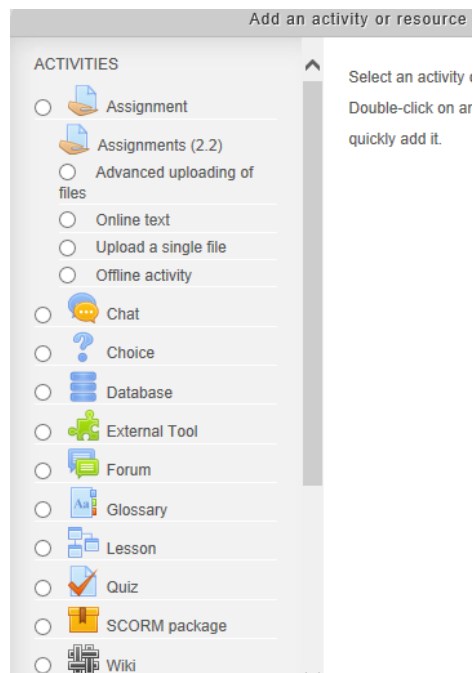


Figure 1: Different type of activities can be added in a course on Moodle.

Forums

“Forums are a powerful communication tool within a Moodle course” (Cole & Foster, 2008, p.69). They are similar to online discussion boards where course participants can communicate with each other by posting messages. Forums allow participants to communicate anytime, anywhere as long as they have an Internet connection. Participants can post a topic of interest related to the course and other participants can post replies to that topic at anytime. They do not need to log in at the same time to participate in online forums. The term used for this mode of communication is called asynchronous. This provides enough time for participants to frame and edit their replies before posting on the forum. Forums also allow users to track replies of other participants. The Forum module provides capabilities that can be used to view discussions, view hidden times posts, start new discussions, reply to posts, add news, reply to news, view ratings, view any ratings, rate posts, create attachments, delete own posts, delete any posts, split discussions, move discussions, edit any post, see questions and answer posts, view subscribers, manage subscriptions, initialise subscription and throttle applies (Cole & Foster, 2008).

Chats

Chats are another powerful communication tool. With forums participants do not need to log in simultaneously to communicate. However with chats everyone needs to log in simultaneously in order to communicate. This type of communication is referred to as a synchronous mode of communication and occurs in real time. When using Chats, participants need to set a time when they would like to communicate, a time that is suitable and mutually convenient. The Chat module provides capabilities that can be used to talk in a chat, read chat logs and delete chat logs (Cole & Foster, 2008).

Messaging

Messaging is yet another powerful communication tool. However, unlike Forums and Chats, it is a private communication tool between two participants. With Forums and Chats, any number of participants can communicate. With Messaging, only two participants can communicate; the messages they communicate with each other are secret and private (Cole & Foster, 2008). This is useful when one participant needs to communicate with another on a topic only of interest to both. For example, Messaging can be used to discuss an assignment that both are working on. The Messaging module provides capabilities that can be used to read all messages and send messages to people on the participant list.

Quizzes

“Feedback on performance is a critical part of a learning environment, and assessment is one of the most important activities in education” (Cole & Foster, 2008, p.95). We can never know how students are performing academically unless we assess them systematically. Quizzes are one way of achieving this. A well designed quiz, even one which comprises only multiple choice questions, can provide valuable information and insight into a student’s progress. A Quiz is a powerful module that can include multiple-choice questions, short-answer questions, true-false questions and randomized questions and answers. Quizzes

can be set so that students can take them multiple times and be automatically marked and graded by the system. Providing immediate feedbacks gives students the opportunity to quickly reflect and improve on and maintain their performance, something that is difficult to achieve using paper-based quizzes. The Quiz module provides capabilities that can be used to view quiz information, attempt quizzes, manage quizzes, preview quizzes, grade quizzes manually, view quiz reports, delete quiz attempts and ignore time limits on quizzes (Cole & Foster, 2008).

Assignments

An Assignment is yet another powerful but simple tool that can be used to collect students' digital work. Once an assignment is created and the link to it opened, students can upload digital work files such as documents, presentations and spreadsheets. Offline assignments can also be created for students to enter their work directly into the assignments rather than uploading files. Their work can then be marked and the grades entered into the Moodle course. "Assignments are a useful tool you can use in creative ways to collect more authentic responses from your students than is possible with the quiz engine" (Cole & Foster, 2008, p.123). The Assignment module provides capabilities that can be used to view assignment, submit assignment and grade assignment.

Glossaries

"Part of becoming an expert in any field is learning the vocabulary used by practitioners. Experts in an area of study develop new language and word usage to communicate new ideas or subtle variations of old ones" (Cole & Foster, 2008, p.131). It is, therefore, vitally important to learn new vocabulary so that participants can communicate effectively. The Glossaries module, simple but yet powerful, provides a tool that allows participants to develop and share vocabulary that they can learn and use to communicate effectively within the Moodle system. Glossary module provides functionalities to create new entries, manage entries, manage categories, create comments, manage comments, import entries, export entries, approve unapproved entries, rate entries and view entries (Cole & Foster, 2008).

Lessons

A Lesson provides a flexible way for teachers to post content and provide a set of activities for students to perform. It can consist of a set of pages with relevant content or a step by step set of activities. These pages can contain different types of questions from multiple choices to short answers. Using the answers, the lesson can take students back to the previous page or next pages within the lesson.

Wikis

A Wiki is a set of web pages created by authors in collaboration with other authors based on related topics of interest they would like to write about. A Wiki module allows a participant to start a page as the front page for the wiki. The front page can then be updated by other participants or new pages added to the wiki. Links can then be created to those new pages (Cole & Foster, 2008). "Wikis can be a powerful tool for collaborative work. The entire class can edit

a document together, or you can create group wikis which are only editable by group members” (Cole & Foster, 2008, p.157). The Wiki module provides capabilities that can be used to edit wiki pages, manage wiki settings and override locked pages.

Blogs

A Blog is short for ‘web log’. “Blogs are a form of online journal that millions of people around the world use for self-expression and communicating with family and friends” (Cole & Foster, 2008, p.167). Unlike a Wiki which has several authors who collaboratively author a set of web pages, a Blog usually has one central author. The author of the Blog would normally arrange postings in chronological order. Blogs can be used for different reasons such as keeping in touch with family and friends, communicating with customers and interested third parties and communicating your views and opinions. The Blog module provides capabilities that can be used to view blog entries, create new blog entries, edit and manage entries, manage personal tags and manage official tags (Cole & Foster, 2008).

Databases

“The database module provides a tool for collaborative development of a database within the course” (Cole & Foster, 2008). It enables multiple participants to add structured data within a Moodle course so that the participants can share that data resource. Glossaries, maps and catalogues are normally created with forms that participants can use to supply shared data. The Database module provides capabilities that can be used to view entries, write entries, write comments, view ratings, rate entries, approve unapproved entries, manage entries, manage comments, manage templates, view presets from all users and manage all template presets (Cole & Foster, 2008).

Surveys and choices

“Moodle has two tools specifically designed for collecting ungraded feedback from your students: surveys and choices” (Cole & Foster, 2008, p.203). Both Surveys and Choices are used to get valuable information about what students think about the course. Three types of surveys can be given to students: COLLES (Constructivist On-Line Learning Environment Survey), ATTLS (Attitudes to Thinking and Learning Survey) and Critical Incidents. The Survey module provides capabilities that can be used to respond to a survey, view responses and download responses. The Choice module provides capabilities that can be used to record a choice, read responses, delete responses and download responses (Cole & Foster, 2008).

Resources

Moodle provides capabilities that can be used to add and update resources in a course learning space to support teaching and learning. It supports different types of resources including book, file, folder, IMS content package, label, page and URL (figure 2). Books are resources containing multiple pages in a book-like format. Labels are words or images displayed to create sections between different resources and activities within a topic or weekly area in a

course. A page contains content written with a HTML editor. Moodle provides a HTML editor that can be used to create a web page with some content. URL is an address of a Website. Files include any supported file format including word documents, power point presentations, spreadsheets, audio and videos. A folder consists of a collection of related files. IMS content packages are resources in the IMS content package format. They are resources packaged to an agreed specification, making it possible for a package to be reused in different systems without needing to convert it to a different format (Cole & Foster, 2008; Moodle, 2013).

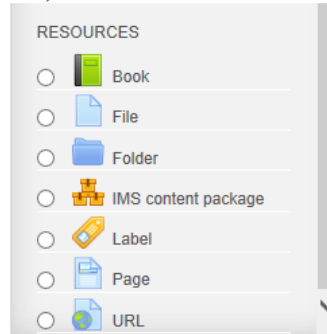


Figure 2: Types of resources can be added in a course on Moodle.

Blocks

A Block is an item used to add additional functionality within the course. Moodle provides a standard set of blocks including activities, admin bookmarks, administration (new name for settings block), blog menu, blog tags, calendar, comments, community finder, course completion status, course overview, course/site summary, courses, feedback, flickr, html, latest news, logged in user, login, main menu, mentees block, messages, my latest badges (new in 2.5), my private files, navigation (figure 3), network servers, online users, people, quiz results, random glossary entry, recent activity, recent blog entries, remote rss feeds, search forums, section links, self completion, social activities, tags, upcoming events and you-tube. Third-party blocks can be downloaded from the Moodle.org (Moodle, 2013).

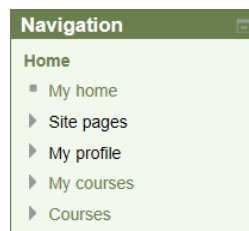


Figure 3: Navigation block allows users to access different parts of the site.

Questions

A question bank contains a set of questions which can be added and then used in quizzes and lessons within a course. Moodle supports different types of questions including calculated, simple calculated, calculated multi-choice, description, essay, matching, embedded answers (cloze), multiple choice, short-answer, numerical, true/false and third party question types (Moodle, 2013).

Course enrolment

Moodle provides capabilities for registering and unregistering users such as users with student role to a course. It supports three types of enrolment methods including self and manual enrolment. If self-enrolment is made available, users can enrol themselves automatically; otherwise, the manual enrolment is used. With self-enrolment an enrolment key can be set and given to students to use when enrolling. Once enrolled students are able to access resources such as lecture slides and participate in activities such as quizzes. If a student drops a class, withdraws or is terminated, that student can be unenrolled from the course because leaving them as enrolled will make grading and class management more difficult. Other users with roles such as course creators can be assigned to the course at the category or site level. Within a course, groups can be created and participants added to their groups (Cole & Foster, 2008; Moodle, 2013).

Grades

Some kind of method is normally used to determine success in a course. Grades serve as the “primary measure of success in a course” (Cole & Foster, 2008, 193). Moodle provides this tool to record student scores and calculate grades for their scores and track those grades. The Grade module also provides the capability for students to view their scores and grades. Moodle also provides a Scales tool that can be used to provide non-numeric feedback to students on their performance (Cole & Foster, 2008).

Course setting

Course setting enables teachers or others assigned with appropriate privileges to edit the settings of the course. These settings include the full name of the course, course category, course start date, course description, course format, maximum upload size, number of sections and group mode.

Managing a Moodle site

Moodle provides many features that enable a user with the administrator role to manage a site, including customising and improving the site’s performance to make it function exactly as required. Other administrative tasks can be delegated to users with roles having appropriate privileges. These features include managing users, courses, grades, location, language, plug-in, security,

appearance, front page, server, reports and development (Cole & Foster, 2008, Learning hub, 2013).

User management

User management includes accounts and permissions. Account management enables the administrator to create an account for a new user, update an account for an existing user, upload a user and browse a list of users. Permissions enable the administrator to define different types of roles including course creators, teachers and students. Different roles can then be assigned one or more of these roles.

Course management

Course management includes adding and editing courses, editing course default and backup settings. Using the enrolment function within the Moodle course, users can then be assigned as teachers to the course, who will then enrol their students. Moodle also provides a backup system that can be run to back up course contents for the site (Cole & Foster, 2008).

Grade, location and language settings

The Grade option is used to edit different settings including grades, grade categories, scales, grade letters and grade reports. The Location option is used to change settings such as default time zone and country. The Language option is used to change language settings such as default language, a word or phrase and install languages to be used on the site (Cole & Foster, 2008; Learning hub, 2013).

Modules and plug-ins

Moodle, being modular object oriented, provides a modular design. That means it provides a rich collection of modules in its standard download. Additional third-party modules and plug-ins can be downloaded from the Moodle.org site and installed for additional capabilities. These modules include activities, blocks and filters. Activity modules include assignment, quiz, chat, choice, database, forum and glossary. Activities can be set to be hidden from or shown in the Moodle courses. Other activities such as exercise and journal are hidden by default. Modules can also be deleted from Moodle. It also provides a collection of blocks that can be added to Moodle courses. Blocks can be shown, hidden or deleted from Moodle courses (Cole & Foster, 2008). "Filters allow for the automatic transformation of entered text into different, often more complex forms" (Cole & Foster, 2008, p238). Moodle has standard filters and others which can be downloaded. The standard filters include activity names, database, glossary, resource names and wiki page autolinking, algebra notation, word censorship, email protection, multimedia plug-ins, Multilanguage content, TeX notation and tidy (Cole & Foster, 2008).

Security management

Security is an important part of any system and Moodle provides features that can help control some level of access to the Moodle system. Moodle security consists of site policies, HTTP security, Module security and anti-virus. Within the site policies page different options can be set including open to Google,

maximum uploaded file size, enable messaging system, as well as maximum time to edit posts and block visibility. The HTTP security enables you to set and use HTTPS for login. With module security, certain module activities can be disabled by hiding on the activities page (Cole & Foster, 2008).

Site appearance

Moodle provides a feature to manage the appearance of the site. Appearance management includes themes, calendar, filter settings, HTML editor, Moodle docs, my Moodle, Course managers and sticky blocks. Themes contain settings that are used to allow user themes and allow course themes and selector for choosing from a number of themes for the site (Cole & Foster, 2008).

Site front page

The front page management includes front page settings, front page roles, front page backup and site files. The front page setting contains options such as full site name, short site name, description, items when logged in such as news items and list of courses or categories, topic section and news items to show. Roles can be assigned for the front page so that users can participate in activities such as forum discussions on the front page (Cole & Foster, 2008).

Server management

Server management includes system paths, email, session handling, RSS, debugging, statistics, HTTP, maintenance mode, cleanup, environment, PHP info and performance. Paths to the zip and aspell program can be set on the system paths page for zipping, unzipping and spell checking. The email page contains options for setting SMTP host, username and password, no-reply address to emails send by Moodle private, allowed and denied email domains and hour to send digest emails (Cole & Foster, 2008).

Session management

Session handling is used to set timeouts for sessions and cookie prefix to customize cookie names if several Moodle sites are running on the same server. Reports management enables administrators to obtain reports and statistics about the entire site. It includes course overview, logs and statistics. These features are to view reports for active or some particular courses of interest, choose any combination of courses, participants and activities, and view reports about any activity such as logins, posts and discussions occurring on the site (Cole & Foster, 2008).

Moodle support

Miscellaneous and Moodle support contain information about experimental features and links to Moodle documentation, community discussion forums, and commercial support and other services (Cole & Foster, 2008).

e-learning at Divine Word University: Course structure

At DWU courses offered are called units. They are mainly categorised according to faculties, departments, year levels. Each unit has a corresponding course in Moodle (Figure 4).

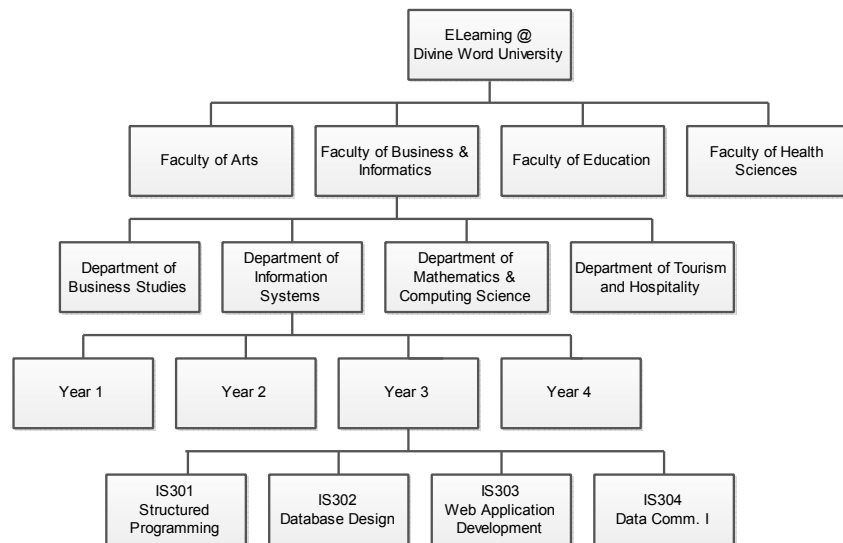


Figure 4: Structure of Moodle courses at DWU

Features used in e-learning at Divine Word University

DWU uses the Moodle e-learning platform, version 2.4+ in its attempt to enhance and support teaching and learning activities. This version provides a rich collection of features that supplement classroom interactions and allow course providers and participants to enhance their teaching and learning experience. The following sections discuss some of the features of Moodle presently used at DWU, both within Moodle site and courses.

Features within a Moodle course

DWU academic staff use Moodle to administer courses, add resources, activities and blocks to courses for units they are teaching. Students use it to view course related information, download resources, take quizzes and do assignments.

Course administration

Course administration feature provides teachers access to several functionalities for administering a course. Many staff use the course enrolment facility to set enrolment methods, enrol and unenrol students. Many staff allow students to self enrol to units they are studying while a few manually enrol their students. Some staff use the course setting facility to update course information such as course start and finish date, course layout and format, enrol or unenrol students and add or remove enrolment methods. A few used grades to record students grades and allow students to view their grades. It is rare to see staff using the other features such as filters, backup, import, publish and reset.

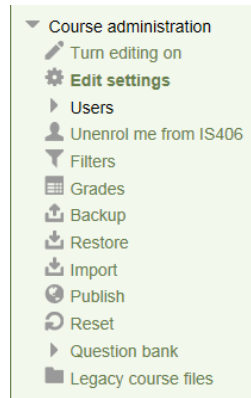


Figure 5: Settings block provides access to course administration features.

Resources and Activities

Staff responsible for a unit usually added resources and activities in a Moodle course (unit). The main resources added include labels, web pages, URLs to external sites and files such as lecture slides, PDFs, zips, word documents and spreadsheets. The main activities added include forums, assignments and quizzes. Staff rarely use books, folders, IMS package, chats, choices, databases, external tools, glossaries, lessons, SCORM packages and wikis.

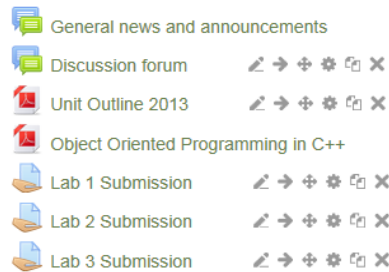


Figure 6: Weekly area in a Moodle course page showing some of the main resources and activities added to a Moodle course.

Blocks

Some staff use blocks for additional functionality within their Moodle courses. The blocks mainly used include activities, calendar, comments, course completion status, course overview, course/site summary, courses, latest news, logged in user, login, main menu, messages, navigation, online users, people, recent activity, settings and upcoming events. Figure 7 shows some of the mainly used blocks. These blocks are used to access different parts of the site, view latest news postings, upcoming events within the course, recent activity such as assignment postings and users currently online within the site. The block is used to access user profiles and change their password (Figure 8). Staff rarely used the other blocks including community finder, you tube and flickr.

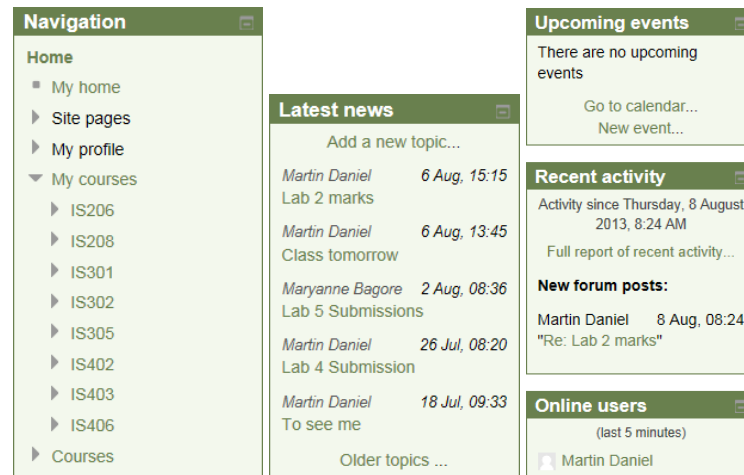


Figure 7: Some of the mainly used blocks.

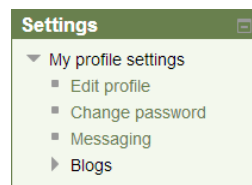


Figure 8: Settings block

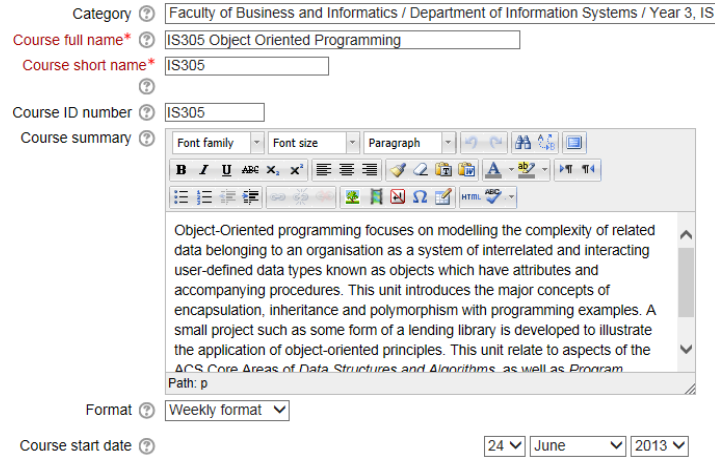
Features within the Moodle site

The administrator of the site has the highest privilege which allows many options available to manage the operation of the system. Moodle provides a site administration feature that provides administrators access to site administration functionalities. The most commonly used features include user and course management, grades and location settings, language and security settings, plugins, site appearance and front page settings, server settings and report management.

The user management facility is used to add, update and remove user accounts, define roles, assign system roles and site administrators. The course management facility is mainly used to add and update courses. Heads of departments are also assigned as course creators to their respective department course categories. This allows them to add and update course details within their respective departments, when required. Other academic staff are assigned as teachers to the units for which they are responsible so that they can administer their courses.

When adding or editing a course, certain information about the course are set, including course code, course name, course description, format of displaying

the course page, the number of weeks for the course, course start date, size of file that can be uploaded to the course and whether guests are allowed to access the course (Figure 8). Course categories are also created and courses added to their respective categories. Course default settings such as the number of weeks are also changed to reflect the administration of the courses in the university.



Category ? Faculty of Business and Informatics / Department of Information Systems / Year 3, IS

Course full name* ? IS305 Object Oriented Programming

Course short name* ? IS305

Course ID number ? IS305

Course summary ?

Format ? Weekly format

Course start date ? 24 June 2013

Figure 8: Adding/editing a course requires providing certain information about the course.

Administrators used the site appearance and front page facility to change the theme of the site and front page (home page) information such as the full name of the site and the site summary. There are several available themes including boxxie or formal white from which to choose. DWU e-learning currently uses the boxxie theme. Other features may be rarely used while others are used when its need arises.

Discussion

All academic staff within the university are encouraged to use the Moodle e-learning system. Moodle is designed to give both teachers and learners a constructionism learning experience by providing many tools that can be used for this purpose. However, only a few of the available tools are presently used by DWU academic staff. Many staff use it to upload resources, add assignments and quizzes whilst some staff may choose not use it at all. Many students use it to download resources, post digital work and take quizzes. It is important to understand the pedagogy behind the Moodle platform in order to use it effectively.

Staff and students rarely use forums and chats, preferring face-to-face communication and interactions. Even if a teacher posts a topic on the forum for discussion it would be quite rare for a student to find the time to discuss online. Again, they prefer face-to-face discussions, during lecture or tutorial sessions. It is, therefore, important to know what these tools are, what they are

used for and how they can and should be used to provide that learning experience.

There are several factors that impact upon the use of this e-learning platform. It is vitally important to understand what these factors are and deal with them so that the available tools can be used effectively to achieve a positive teaching and learning experience. For example, many students have different learning styles. Assuming that all students have one learning style and designing a Moodle course according to that style will definitely lose some level of quality in our teaching and learning effort. We also need to know what we can and can not do with this e-learning platform.

Using Moodle has several advantages in the DWU academic community. Assessments such as online quizzes are marked and graded by the system thus providing an immediate feedback to students giving them the opportunity to improve as early as possible. As a paperless university, Moodle is enabling academic staff to place teaching and learning resources online, reducing the need for paper printing. The paperless policy and the use of Moodle are fostered by the issue of laptops to students, which has enabled ready and rapid access to Moodle anytime, anywhere and has greatly improved the ICT skills of both students and staff.

There are also disadvantages which should be noted. For example many students are tending not to take notes during classes while some do not attend at all knowing that learning resources such as lecture slides, tutorial solutions and readings will be posted on Moodle. Uploading resources, downloading student resources and adding activities for students also requires a lot of staff time. That is why many academic staff may not be using the quiz facility available on Moodle. Adding questions and answers to quizzes is a very time consuming exercise and time is a luxury available to few. The use of Moodle also justifies students having laptops during lectures, but this is open to abuse whereby students surf the Internet or check emails during lectures.

Conclusion

E-learning technologies such as Moodle can greatly support and enhance teaching and learning activities. Moodle provides a rich set of features designed to allow participants learn by constructing and sharing their knowledge within a Moodle course learning space. Knowing what these features are for and knowing how to use them can greatly enhance student learning experiences in an academic environment such as Divine Word University. Many of these features are not presently being used at Divine Word University. If both teachers and students have a positive attitude and are teachers are encouraged to use Moodle, they will begin to use of these features and benefit from using such a tool in their teaching and learning environments.

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Glossary

CMS	Course Management System
LMS	Learning Management System
Moodle	Modular Object Oriented Dynamic Learning Environment
ICT	Information and Communication Technology
COLLES	Constructivist On-Line Learning Environment Survey,
ATTLS	Attitudes to Thinking and Learning Survey)
HTML	Hypertext Markup Language
URL	Uniform Resource Locator
PDF	Portable Document Format